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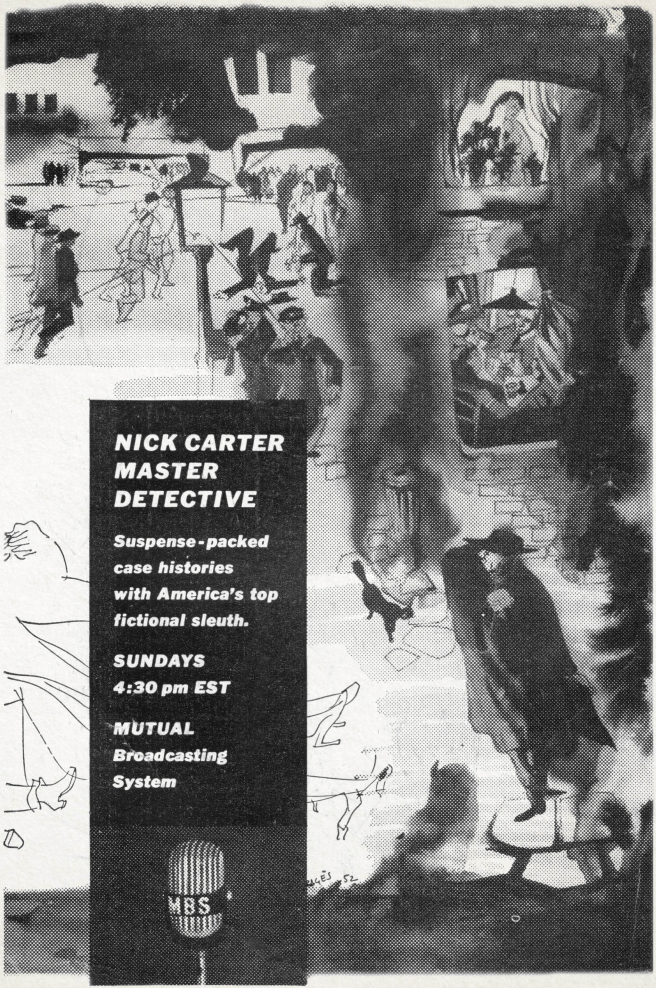
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EDITORIAL

THE FANATIC

At the time of writing, there is a very considerable collection of letters on the Donald Kingsbury article, "The Right to Breed." As the blurb introducing it stated, it was deliberately written on an Aristotelian yes-no basis, and you were invited to analyze its faults if you could.

The article was a consciously, deliberately contrived example of pure fanaticism. To make it effective, it was, obviously, necessary to take the standard fanatic's position—the position of taking a good idea much too far. Whereas any amateur fanatic does that in sincere misguidance, Kingsbury was being a professional fanatic . . . for a purpose. He was consciously using the standard fanaticism mechanisms, and doing it so thoroughly that, to date, not even one letter has been even mildly approving of his professed attitude.

Of all the attacks on his article, however, a very small number indeed recognized the basic flaw: every one of the ideas Kingsbury presented was perfectly sound. That's typical of the true fanatic's position. His logic was sound. That, too, is typical of the fanatic, and the paranoid. The flaw was that he carried both too far—he used the typical fanatic's proposition that you can't get too much of a good idea. That if it's a good idea it's an Absolutely Good Idea Without Limit.

Every Dogma, every fanaticism, is based on something fine, sound, and basically good. What makes it fanaticism is simply the effort at *unlimited* application. Kingsbury happened to pick the problem of population control as the subject for his study of the structure of fanaticism; it could as well have been the idea "Thou Shalt Not Kill." There appears to be no humanly conceivable idea that doesn't become nonsense, fanaticism, if carried out as an Unlimited Absolute. If "Thou Shalt Not Kill" is carried out in an unlimited absolute manner, then if a madman with a butcher's cleaver is starting to work on your wife and children . . . thou shalt not defend them.

Each of Kingsbury's arguments is logically sound . . . within limits. He simply ignored the rational limits, and went blundering staunchly ahead. Inevitably, such a line of action carries the fanatical thinker into defending the most obnoxious consequences of the unlimited extension of his idea as being "good for" people.

Whether it's the intemporate absolutism of the Temperance Society, or the bigoted absolutism of a Hitler, or a Marxist, or the absolutism of a primitive tribe's ritual-taboo cultural

pattern—the essence of fanaticism is the same.

It is perfectly true that there must be human sacrifice—that we must accept the loss of individuals who have genetic deficiencies. The concept of human sacrifice is implicit in the idea of *self*-sacrifice; how can we have self-sacrifice among human beings if we do not have human sacrifice? The absolute interdict on human sacrifice would be just as fanatic as the insanely fanatical position Kingsbury was blandly presenting in his article —that we must breed lots of children so we'll have plenty of human sacrificial victims available; it's *good* for you.

Matter of fact, we're going to have human sacrifice victims anyway, whether we like it or not. When the diphtheria antitoxin was first introduced, about the turn of the century, it was almost invariably successful in saving the stricken child to whom it was administered. Today, much improved antitoxin is available—but it isn't showing the same high percentage of success. Reason: children who had genetically poor resistance to diphtheria, who would have died before the days of antitoxin, were saved. Some of them lived to mate with similar children, and produce offspring with a double weakness to diphtheria. No immunity is absolute; no curative procedure is absolute—for fanaticism doesn't exist at the level of the real world. With a double weakness in the human patient, even the improved antitoxin isn't enough. The human race will continue to pay its appropriate toll to the Universe, despite the best medicine can do.

Penicillin is remarkably good stuff . . . yet now we have penicillin-resistant strains. And, of course, we have human beings who are sickened by penicillin; they will tend to be human-sacrifice victims by that very fact. I've read of a case of a man who had severe diabetes—and was uncontrollably allergic to insulin.

The one thing human beings seem unwilling to face is the simple statement "There is a limit." Henry Kuttner once did a story for the old *Unknown* in which there was a magic book. The book contained the answers to all possible human problems, reduced to fifty simple solutions. The one thing the possessor of the magic book had neglected to consider is that one of those solutions is "The End." If you have diabetes and are uncontrollably allergic to insulin . . . that's The End.

The very concept of self-sacrifice implies that there is a limit to a man's right to self-preservation. The fundamental concept of true democracy - as - we - Americans - understand-it, in which we so differ from the Russian concept, is the proposition that there is a limit to the right of the majority against the minority. I have no right to destroy the state to preserve my own comfort—there is a limit to my right of self-preservation. Equally, the state must limit its right to destroy those individuals who are irritating to it.

But this in turn implies another

limitation—a limit on the propriety of saving individuals. Many of the dear old horse-opera Westerns are based on the proposition that men must take any risk to save the girl. All right; suppose one American girl has been darned fool enough to get herself into the hands of Chinese Reds, and is slated for execution. Do we start a war involving the probability of an all-out nuclear-weapons war over her? If she happened to be your sister, daughter, or wife, you might well have a strong feeling that absolute measures should be taken—but do you have a right to feel that?

Kingsbury's article arrived at its fanatical structure by the simple process of ignoring limitations. True, he started off by proving—a damned neat proof too, I thought!—that there is an absolute limitation on what we mean by "the ability of technology to keep ahead of population requirements." But then he simply ignored rationality completely, and argued that *either* we limit children to two per couple and guarantee that all must live, *or* we indulge in unlimited breeding and unlimited slaughter.

But that leads to the utterly unacceptable idea of continuous war, and continuous preying on each other. With the typical fanaticism mechanism of defending the utterly unacceptable as being "good for us," he argued that unlimited slaughter is a fine and noble thing. That unlimited war and unlimited preying on each other is just what we need to breed a stronger, better race.

Of course, what he has there *is* valid . . . within limits. Early man did force himself to improve by that method, no doubt. But assuming that that's the *only* way is just a wee bit untenable.

The fanatic has a powerful tendency, when his unlimited application of an idea leads to an unacceptable situation, to hold that the unacceptable is "really" just what we need to make us better people. It's good for people to live in semistarvation; haven't you seen the reports of those tests that show that animals, when kept in semistarvation all their lives, outlive well-fed brothers? It's really good for people to have too much population per acre of arable land; it makes them live longer.

If you don't punish a child when he makes a mistake, he won't learn. Therefore, it is obviously good for children to be punished thoroughly every day, so they will learn more.

Check back on Kingsbury's article; you'll find, I think, that every single one of his points is, basically, a sound, valid concept, of real worth and importance to Mankind. But that he has, in almost every instance, carried each of those fundamentally sound ideas to a typical fanatical extreme.

And in each case, the inevitable consequences of the fanatical extreme has been cheerfully defended as being "good for" people.

The defenders of the late unlamented Prohibition held, you may recall, that the rise of bootleg criminal gangs was a benefit to the Nation, because it brought the hidden crimi-

nal tendencies of these vicious individuals into the open where they could be caught and stopped. That the people who were blinded, or poisoned by methanol-loaded bootleg liquor deserved it, because they were lawbreakers, and should be punished.

Does that in any way differ from Kingsbury's deliberate fanaticism-piece holding that we must breed lots of babies so we can have plenty of human sacrifices?

The principal difference is that Kingsbury overdid it clearly and skillfully enough so that not one letter has indicated that anybody fell for his fanatical argument. I think most of the acute unease Kingsbury's article stirred up is due to the fact that every one of us has been subjected to just such fanatical arguments—and forced to accept them seriously. It's enormously disturbing, because there *is no method of blocking the fanatic's arguments within the cultural logic-system.*

The assumption of Aristotelian logic, like the assumption of Euclidean geometry, is that the Universe is an infinite plane—that a line—or a line of argument—can be extended without limit in any direction without meeting itself. On that fundamental assumption—and it *is* the fundamental assumption necessary behind any argument that involves "all," "every," "always" or "never" —a Truth is an Eternal and Absolute and Unlimited Truth. A Good Thing is an Unlimited Absolute.

And the formal cultural logic *is* based on those absolute terms "all" and "always" and so on. If you try setting up a syllogism on "Most men are mortal. Socrates is a man. Therefore . . . eh . . . er . . . well, maybe he's mortal too, huh?" It doesn't have the clean-cut, satisfying inevitable assurance of a classical syllogism, does it?

Unfortunately, the universe is *not* Euclidean, and there are no absolute and unlimited truths so far discovered. But Aristotelian logic is the fuel on which fanatics feed—and the fuel is guaranteed them by the cultural approval of the Aristotelian logic system.

Kingsbury's article contains part of the answer, though. Actually, even a fanatic has some consciousness of limitation. If, instead of trying to force him to acknowledge limitation, you take his idea over, and extend it farther than even he can stomach . . . he will call *you* a fanatic, insist that there must be a limitation on the idea.

Once the *fanatic himself* has insisted there is a limitation on even his own pet idea—he's gone beyond logic to rationality. From there on, in his struggle to make you limit *your* apparent overenthusiasm, he will be drawing limitation lines on his own ideas.

If anyone can name any positive idea statement that has an absolute and unlimited invariant validity . . . I'd love to throw that into the magazine for discussion!

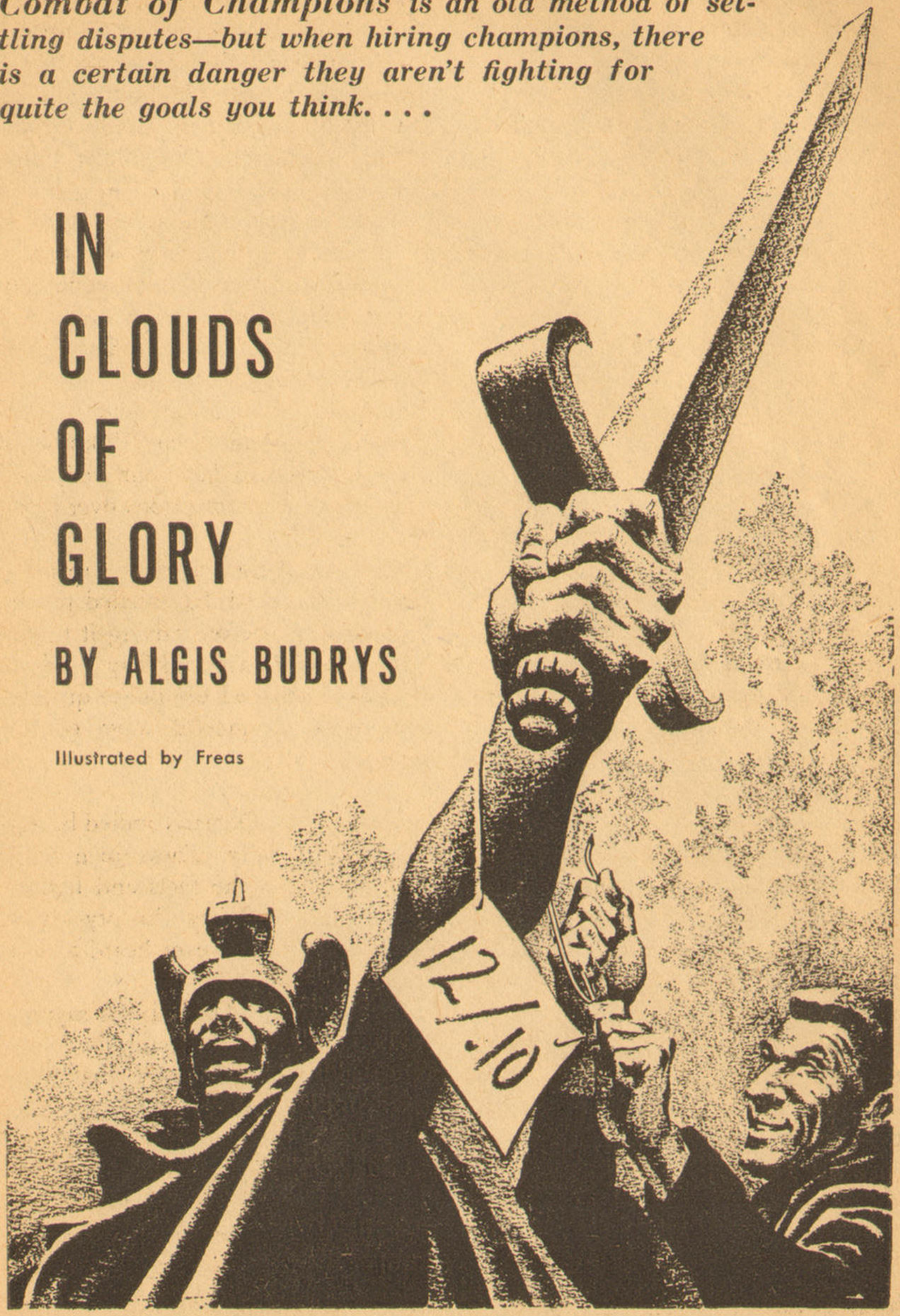
THE EDITOR.

Combat of Champions is an old method of settling disputes—but when hiring champions, there is a certain danger they aren't fighting for quite the goals you think. . . .

IN CLOUDS OF GLORY

BY ALGIS BUDRYS

Illustrated by Freas



"We are the men of the Agency—
We're steadfast, stout-hearted,
and brave.
For a buck we will duck
Through the worst that may come,
And argue the price of a grave.

"Oh, we are the Agency's bravos—
We peddle the wealth of our skill.
We will rescue your world or de-
stroy it,
Depending on who foots the bill."

ANONYMOUS.

I

The tidy little orchestra finished the dance set and broke up, leaving behind the quartet nucleus, which began Schubert's "Fourteenth." The party guests dispersed through the room, talking in groups while the servants passed among them with refreshments.

Thaddeus Demaris brooded solemnly in a heavy chair near the fireplace, half-listening to the two well-kept men conversing nearby. One of them was Walker Holtz, the hunter. The other was Captain Romney Oxford, of Her Canadian Majesty's Legation in Detroit.

Walker Holtz fingered the stem of his boutonniere and took a sip of his liqueur. He leaned against the mantelpiece, let his eyes flick negligently over the crowd, and resumed his conversation.

"My dear Captain Oxford, I'll grant you artillery. Artillery and, in certain circumstances, infantry. But not aircraft. The British had the quality and the Americans the quantity."

"I don't see how you can say that," Oxford countered. He took a gulp of his drink and set it down firmly. "What about the Trans-Polar Campaign?"

Holtz raised his eyebrows. "I think it's generally accepted that Vitkovsky was able to commit his reserve fighter wings only because the Alaskan Air Command of the Old United States Air Force was snowed in."

Oxford granted the point easily. "Quite so. And then Vitkovsky's transports would have suffered, say, sixty per cent interceptions over Quebec?"

"You're being generous, captain," Holtz rejoindered. He inhaled gently over his glass before raising it to his lips. "I would have said fifty."

Oxford brushed the polite quibble aside with a graceful wave of his hand.

In his chair, Demaris smiled bitterly and scornfully. These men with their heads for the facts and figures of ancient military history—how many of them had ever heard a shot fired in anger?

"Well, then," Oxford was saying, scoring his point, "I should like to remind you, Colonel Holtz, that Vitkovsky's plan necessarily allowed for seventy per cent interceptions. As it finally transpired, so many surplus troops landed in Illinois that an emergency quartermaster and clerical staff had to be flown in."

Holtz frowned, discomfitted.

Demaris stood up impatiently and snatched a liqueur from a passing servant's tray. The heavily flavored cordial bit at his tongue.

And for all the battles won in parlors and drawing rooms, where was Earth's frontier today?

His lip curled. He swung around and stabbed an extended forefinger at the startled Oxford. "I should like to point out," he bit off in the astonished man's face, "that what you have just cited was the USSR's suicidal policy of wasting men, *not* the superiority of its air arm, which was consistently hampered and eventually destroyed by a typical Russian insistence on trying to make a rapier do a bludgeon's work."

Holtz stepped between them, his temples throbbing and his nostrils white. "You are ungentle, sir."

Demaris looked at him coldly, a certain amount of anticipation tightening the curl of his fingers. "And you are a fool ass."

The muscles knotted at the corners of Holtz's thin jaw. He drew back his hand to slap. Demaris lifted his cheek a fraction of an inch, his head tilting to present a willing target. The buzz of conversation was dying in the room, smothering under a wave of rapt silence.

Oxford reached out hastily and pushed himself between Holtz and Demaris. "Eh . . . Colonel Holtz . . . I don't believe you've previously met Thaddeus Demaris. The introduction is my pleasure."

The pallid urgency in Oxford's eyes were mimicked by Holtz's sudden slackness of mouth. His arm lowered limply. "Ah? Uh . . . oh, no, Oxford, *my* pleasure, I'm sure—"

Demaris smashed the back of his hand across Holtz's face. The hunter stumbled back, one hand pressed to his nose. Oxford made a noise of protest. Demaris stood motionless, his face set.

Holtz regained his balance. "Really, Mr. Demaris," he mumbled, waving Oxford back, "My sincere apologies—"

Demaris looked at him with something much like disappointment. He spun on his heel and stalked off.

Even the night was dishonest. Laden with perfume, the artificially circulated air stirred a sham breeze across the balconade. A sickle of moon drifted among the gray-silver clouds. Behind him, Demaris could hear the last notes of "Death and the Maiden" fading politely away.

How far in the past was Oxford's and Holtz's war? Three hundred years. And after finishing that war, how far in the future did Man imagine his Empire of Earth lay, stretching out into the stars? One century? Two? With the interstellar drive and the Terrestrial Space Navy to ride it?

And where, now, was Earth's frontier, a full hundred years beyond that well-planned future?

Pluto. That's where it was. Just barely, Pluto.

All right. You could understand that. An empire only goes as far as its enemies will let it. A hundred years ago, the Vilks had drawn the line.

Demaris smashed his flat, horny palm down on the coping of the terrace. The slap of sound startled some of the strolling couples in the formal gardens, but it would have been ungentle for them to stare at him. He knew of their curiosity only by the fact that no face, among all those couples, turned toward him even at random.

His lips twitched back from the points of his teeth.

And with the Vilks fifty years gone in a pyrrhic war with Farla, you could expect the ships of Earth to be going out again. You could expect that.

You could die of the eating hunger in your stomach, expecting it. You could grow old, with strings for muscles and pudding for a brain, expecting it.

You could run up a string of successful, pointless duels. You could go to graceful, inbred gatherings in the elegant, bandbox mansions. You could listen to Schubert quartets and a lot of Lelius. But there was damned little Beethoven, and no Stravinsky. There was yearning, and no fulfillment. Not much of a desire for it. It was considered more gentle to simply yearn.

A servant touched his arm. "Your pardon, Messire—a Mr. Brown is on the vid."

Demaris fought to keep from spinning around violently. "Thank you," he said in a voice that, incredibly, was calm enough. He strolled back into the mansion. Brown! Thank God! He'd been going mad, waiting.

"We spill our all for the Agency—
(Our lives are excitingly gory.)
Pink or blue—any hue—
Save the red of our birth—
At the beck of crisp, green glory."

II

Brown was the code name. Kaempfert was the man. Blocky, with a square face and blunt fingertips, he was one of sixteen men who sat behind their crowded desks in the Agency's sparsely furnished Assignment Room.

"How are you, Bill?" Demaris said, shaking his hand. "How're Leni and the kids?"

"Fine, Thad. Getting healthier every day." He looked down at his stomach and chuckled. "All of us. Sit down. You got here fast. Champing at the bit, Thad?"

Demaris nodded expressively. "I can't take Earth any more." He grimaced distastefully. "Croquet, Mr. Demaris? Liqueur, Messire? Agh! Our society's like a translucent china dish, overlaid with gilt filigree and wrapped in cotton batting. It's beautiful, it's elegant, and safe—but you don't dare use it to eat from."

Kaempfert smiled, his eyes sparkling briefly. Then he flicked a hand toward the files on his desk.

"O. K., then—let's get you out where the red meat is. Briefly, here's the job:

"Farla's as good as gone. She may not know it, yet, but the only thing that's saved her for the time being is Marak's inability to move in without

first slapping down Genis—and vice versa.

"So, Marak's asked us for a man who'll keep Genis off balance until Marak can move in on Farla and consolidate. That's you. You'll handle strategy, maybe do some on-the-spot generaling."

Demaris nodded. "Sounds good." He grinned fiercely. "Sounds damn good!"

Kaempfert handed him a file. "Here's most of your poop. You get a full-scale briefing tomorrow at eight. That's Ante Meridiem, son. You're scheduled for Make-up and Indoctrination at eleven."

Demaris whistled softly. "Shooting me out in a hurry, huh?"

Kaempfert nodded, his face grave. "It's faster than I'd like. One day isn't enough to set up an air-tight job. But it's a hurry-up situation. We'll just have to take our chances. If you think somebody's spotted you, you're hereby authorized to take the most logical preventive steps under the circumstances."

Demaris nodded as though in echo to Kaempfert's expression. The necessity was obvious, but nevertheless, the Agency didn't often work that way.

Kaempfert broke the silence. "Well. That's that. Where're you staying tonight, Thad?"

Demaris shrugged. "Hotel of some kind, I guess. I got here straight from the airport. Still got my bags out in the front office."

"Well, how about staying over with us?" Kaempfert stared down at his fingertips.

Demaris laughed. "I guess that's one way of making sure I won't get into a fight before morning. Sure, Bill. Be glad to, and thanks."

Kaempfert looked up at him with the traces of guilt fading out of the corners of his eyes.

Demaris winked at him. "Where'd you get the idea I was the pugnacious type, Bill?"

Kaempfert grunted.

Demaris sprawled his bulk in an easy-chair, his feet thrust out atop a hassock. Cigarette smoke trickled slowly from his nostrils, then puffed out as he stretched and yawned. He felt free and relaxed for the first time in weeks. He'd eaten a quiet meal, unconstrained by any necessity for making intricate small-talk. Now he had a lazy evening to look forward to; something he hadn't had since the last time he'd known he was going out in the morning.

He whistled a snatch of "Heroes All" and chuckled softly.

Leni Kaempfert smiled fondly at her husband as she shut the nursery door behind her. "Adding a new verse, Thad?"

"Me? I never wrote that thing."

Leni's tongue bulged in her cheek. "No?"

"Why, no."

She shrugged agreeably. "O. K. But if Old Man Sullivan ever proves his suspicions, you'll be in deep trouble." She looked at Demaris with mock-solemnity. "The Agency is a serious business enterprise. Let us not go around making snide remarks."

Demaris took a gulp of his drink. "Sullivan!"

"It's his outfit, Thad," Bill Kaempfert reminded him. "We just work there. He runs things the way he wants them."

Demaris reached out spasmodically, as though unconsciously trying to seize hold of his fleeing peace. For an hour, he had forgotten the habitual tensity of his muscles. Now his jaw was hardening again.

"Yeah!" he spat out harshly. "He sits in an office somewhere, where nobody ever sees him, and he runs it. I just go out and bleed dollar bills for him." Demaris coiled his body into a tense crouch on the chair's edge.

"Now, come on," Kaempfert said, "it's not as bad as all that."

Demaris lashed out savagely. "Isn't it? If there were still a TSN—if there were even the faintest chance of working for Earth instead of messing up the stars for Sullivan's profit—would you stick with the Agency? Would you be selling yourself on every streetcorner, no reasonable offer refused?" He could see he was embarrassing the Kaempferts, but what he was saying was true.

Bill Kaempfert grinned uncomfortably. "That's a point, Thad," he admitted. "But you don't knock your bread and butter."

Demaris thumped his empty glass down on the side table. "Would we starve?" he asked. "Would we really wind up begging in the streets? You, especially; couldn't you get a job as a personnel manager with any company you wanted?"

Kaempfert shrugged. "Maybe. If I could think up some explanation for not having any references. It's been ten years since I've held a legal job."

"O. K. So you'd have a little trouble. But not that much. Besides, we're off the point."

Kaempfert raised his eyebrows inquiringly. Demaris jammed a fresh cigarette into his mouth and inhaled raggedly.

"Let's face it, Bill—we're bad enough off now, but we'd cut our throats if we gave it all up and tried to live in this teashop society. We just don't fit. Our personal frontier doesn't stop at Pluto." He grimaced at the rush of harsh smoke through his throat and jammed the cigarette out again.

"Here we sit. Two prime representatives of a race that used to have guts to spare—that scared the universe half-silly the first time we pushed a rickety tin can to Sirius. And here we sit now—the backwash of the Wave of the Future!"

Kaempfert put up a restraining palm. "Easy, Thad," he chuckled in an attempt at good-humored moderation. "Most people would figure Pluto was plenty far enough. Most people don't ever even leave Earth. And we may have scared the universe, but we sure didn't impress the Vilks."

Demaris brushed Kaempfert's palm down as effectively as though there'd been a physical contact. "All right. So the barbarians licked us. That was when the TSN was fifteen ships and a handful of cranky torpedoes. Now

the Vilks are gone for good. It was an Earthman that licked 'em, too."

Kaempfert nodded. "Old Connie Jones."

"*Exactly!* Connie Jones — an Agency man hired by Farla. So who got the territory an Earthman won? Who moved in where Earthmen should have been the conquerors? It would have been Farla, buying its military brains from an Agency run by Earthmen. It happened to work out that Farla bled itself to death. So who *does* move in? Who takes the territory that's open by default? Does Earth have even that much ambition?

"No, it has to be rabble like the Maraks, or the Geneiids! A pack of jackals. And what does Earth government do about it? Earth government isn't even interested. And what do individual Earthmen do—the ones who still care? Why," Demaris suddenly simpered, "*we* work for Mr. Sullivan's Agency, and *we'd* be only too happy to hire out to one of the jackals, wouldn't we? We're for sale; lock, stock, and barrel, soul, body, and birthright. We do the dirty work for every stinking little race in the galaxy, and meanwhile Earth government sits primly on its solar system and keeps its hoopskirts dry."

"Thad?"

"Yes, Leni?"

"Thad, what you're angry at is that Bill and I don't protest as much as you do. But we *aren't* arguing. Bill thinks you're right, and so do I, in your view of the Agency being a pretty shoddy outlet for our frustrations. Still, there's no way in which we can change the nature of Earth's present attitude, and we've at least got this substitute, cardboard though it may be, for the dream castles we'd like to see built.

"And tell me this, Thad—honestly, now, and no heroics—will you quit? Will you ever quit, and settle for a life here on Earth, going from one duel to the next until nobody dares associate with you and you eventually blow out your own brains for lack of some other man to fight?"

Demaris looked at her helplessly. "No," he admitted, the peak of his voice broken.

"Though we are men, at the Agency,
We fight in peculiar skins.
Aptly taught, we're not caught—
We've been thoroughly trained
In the lore of exotic sins."

III

The Agency building was dingy. Demaris and Kaempfert walked down the grimy hallway and up the splintered stairs to the second floor. They pushed through the chipped glass door labeled "Doncaster Industrial Linens" and were in the Agency's front office.

Demaris still felt the memories of last night's adrenalin irritating his system. He looked around and shook his head. "There's no place like home sweet home—even if it's a false beard."

Kaempfert shrugged. "Even our customers don't know where their cash-and-carry heroes come from.

Why should Earth government? Besides, I can just hear what the government would have to say about its nationals fighting alien battles and chancing all sorts of international complications if their origin is discovered."

"Government could use a jolt," Demaris growled.

"Your briefing room's down the hall," Kaempfert said pointedly. "You're due there."

Demaris nodded. "Uh-huh." He put out his hand. "Bill—I'm sorry I'm such a pop-off. I didn't really mean to give you a rough time last night. Be seeing you, huh?"

"Sure, Thad. Come home—nothing to forgive."

They shook hands, tapped each other on the biceps, and separated. Demaris walked down the hall, and Kaempfert went through the front office to his desk.

He'd memorized his Marak file. Now he turned it in to the technician at the door of the briefing room, who tagged it with his code name and dropped it into a similarly labeled filing cabinet.

"Strip," the technician said in a bored voice.

Demaris had already begun climbing out of his clothes. He handed the bundle to the technician, who tagged it and put it in a locker. "Stand still, please . . . no facial expression, if you please . . . hold it . . . thank you." The front and sideview photographs were clipped to Demaris' check card, and the card was handed to him. "Medical examination over in that corner, please."

Demaris bobbed his head impatiently. The doctor, standing beside his equipment, was thin, but not invisible.

He was given a complete physical, with results noted on his card, and returned to the technician, who wordlessly handed him a set of light coveralls, noted their issue on his card, returned the card, and then nodded him over to the desk where his briefing officer had been sitting all this time.

"Mr. Blue?" the briefing officer said as Demaris came over, addressing him by his code name, "My name's Puce." He smiled slightly. "Sit down, please. May I have your card, please? Thank you."

Demaris handed the card over.

"You've studied your file?"

"Memorized it."

"Yes, yes, of course, Mr. Blue. Just a routine question. You know how it is—mass production. We treat everybody the same way—old hand, newcomer, special recruit; whatever he may be. It's not as informal as it might be, but—"

"I know."

"Uh. Well. Now, Mr. Blue—if your rank were that of Tjetlyn in the Marakian Interstellar Air Fleet, and I were a Klowdil, which of us would salute first?"

"Neither of us. You'd be my inferior, so I'd pretend to ignore you. If I wanted anything from you, I'd say so. The salute, as such, is unknown on Marak."

Demaris gave the answer in a bored voice.

"Yes. Well—as a Tjetlyn, you might conceivably be invited to official functions at the homes of Chiefs of State. Would it be proper for you to drink three portions of *drasos?*"

"It would be mandatory—three and as many more as I could hold."

"Good. Very good, Mr. Blue. Now, assuming that you were on leave and fell into the company of a perfectly respectable but not hostile young *pavoja*: What would be your course of action?"

"I'd pretend it was Eileen deFleur—up to the point at which my normal Marakian biological urges would, unfortunately, suffer frustration due to accidental circumstances over which no one could possibly prove I had any control."

Mr. Puce chuckled. "Very good. Now, supposing—"

And so forth, through a veritable nightmare of possible pitfalls which might betray his un-Marakian nature. Demaris threaded his deliberate way through all the vicissitudes which Mr. Puce could conjure up for him, and emerged unchallenged—and angry at the redundance of going through this college entrance examination when he knew that Indoctrination would supply him with the unconscious awareness of all these things, driving the knowledge not into his information banks but into his reflexes.

Still and all, he could not deny that the Agency had remained undetected only because of this kind of thoroughness—and that in this case, especially, with no time for the usual three days' checking to be sure, every possible precaution still might leave some chink unguarded.

"All right, Mr. Blue," Puce was saying, "I think that about covers it. Now, if you'll just sketch out a situation map on this board, I think that'll be all—except for Make-up and Indoctrination, of course."

Yes— Except for that mere trifle. Demaris twitched his upper lip as he picked up Puce's stylus and laid out the map.

Farla was a cluster of stars shaped like a badly pitted furnace clinker. Adjoining it on the side away from Earth—which he represented by a contemptuous, zero-shaped speck at the foot of the board—was Marak, with its stars grouped like a rat's head, sniffing at the clinker. To Farla's right, Genis and her stars were a twisted, mold-eaten orange peel. Working quickly, he sketched in the profile view, which included such scattered breadcrumbs as Ruga, Dilpo, and Stain, all inextricably jumbled in by the fact that stars, unfortunately for diagramatics, occupied three dimensions, were anything but stationary, and were governed by countless dozens of little pocket empires that had seized in any and all possible directions once the Vilk yoke was taken off them.

The pure white stars, he thought—the pure white stars live in a garbage heap.

He turned the board around and

pushed it toward Puce, who nodded approval. "Yes, that's fine. All right, that does it. Thank you, and good luck, Mr. Blue."

Demaris grunted and stood up, taking his card. Of all the clerks at the Agency, Bill Kaempfert was the only one he could stomach, because Kaempfert was the only one who'd actually done any fighting. He almost turned around to club Puce as the man tried to prove something or the other about himself by loudly—and anything but absently—humming a chorus of "Heroes All."

Then he shrugged and let it go. The fool was proving his adolescence by somehow making the rollicking tune acquire heroic chords.

Demaris walked into Make-up and Indoctrination to the accompaniment of his own misinterpreted music.

Make-up peeled off his skin as neatly as a glove, and put it away for his return. Scalpels clicked against his bones. Weapons sent over a last-resort personal arm that the surgeons buried in his rib cage. Make-up delved into its resources and so disguised the weapon's unavoidable metal that only the most careful comparative fluoroscopy would detect it.

And the Monster chugged on its

dolly beside the operating tank, revamping his brain.

When he emerged, at eleven o'clock that night, he spoke English with difficulty. His tongue and vocal cords were not adapted to the language.

The Earthman—the *dakta*—nodded in satisfaction as Demaris sat up groggily.

"Nice control," the *dakta* said to himself, noting the weak but sure movements of Demaris' limbs. Demaris, who had to translate from English to Marakian before he could be sure of the *dakta's* exact meaning, was only a bit slower in reaching the same conclusion. He tested the flexibility of his double-jointed fingers, and worked his double-opposed thumbs for a moment.

"Oh, they'll work fine," the *dakta* assured him. "'Fdoo seisomysell."

Demaris groped for the meaning of the idomatic phrase, which, like most such, had been tossed off casually. "Par-don," he said, "Would you please speak more slowly?"

"I say—'If I do say so myself.'"

"Oh, yes. Of course. Everything seems to be all right."

"That's quite an accent," the *dakta* apologized, obviously not having caught Demaris' statement.

Demaris strained for clarity. "I say—'Everything seems O. K.'"

"Oh! Oh, yes, sure. We really piled it on—much more thorough than usual. A matter of costuming to lend reality to an actor who might not have learned his part too well."

Demaris shook his head with annoyance at his own incomprehension. He sorted out the *dakta's* syllables in his mind, trying to extract their meaning.

"Would you like me to repeat?" the *dakta* volunteered.

Demaris shook his head in disgust. There was really no point in this clumsy communication. The Monster had superimposed a Marakian personality where an Earthman had been, and there was not much that Earthmen and Marakians had to say to each other.

"Never mind," he said, enunciating as clearly as possible.

"We do or die for the Agency—
As much of the first as we can—
Heroes who, mashed to glue,
Spent their saved-up back pay,
Are strange to the mem'ry of man."

IV

The trip out to Marak in the Agency ship took about a week, T.S.T. In that time Demaris recuperated completely, until, by the time the ship ducked down on Marak's nightside, he was at his physical peak. He grinned with delight at the steel-hard claws which sprang out from his fingertips at will. He paced his cabin relentlessly, a constant growl of satisfaction rumbling up his throat as he felt his supple tendons coiling and uncoiling in fluid motion.

Yet, the bitterness was still there. Paradoxically, it was sprung from the same source as his satisfaction. If Earthmen could take one of their own kind and turn him into a dupli-

cate of any other bipedal, bilaterally symmetrical being—if they had learned so much, and mastered biology to such a point—why did Earthmen have to wear disguises at all? Why did Earth's fighting men have to fight for every race but their own, and why was Earth itself so helpless?

No, not helpless—spineless.

Some day. Some day, maybe, things would be different.

The growl in Demaris' alien throat became a caged cough of rancor.

The ship dropped him in a sparse area, flitting down and leaping back to the sky as soon as his contact turned up. Demaris watched it dwindle, and only after it was gone did he notice his contact's hungry eyes following it.

"I haven't been home in a long time," the contact apologized in perfect Marakian. "I've got another three years to go here."

Demaris grunted. "Believe me—six months and you'll be begging to sign up for a new tour."

"I suppose so," the contact agreed. "I don't guess it's changed much?"

"Not the slightest."

The contact expressed himself in listless oaths. "Well," he said with a final profane twitch of his mouth, "let's put the show on the road. I've got a car stashed out in some shrubbery down there."

Demaris fell in behind him. Neither of them spared any particular attention to the thoroughly familiar countryside. They threaded their way through the broken thickets, automatically keeping clear of shrubs which would have left cockleburrs in their glossy fur.

The Marakian Overchief was growing old. His fur was beginning to lose its sheen, and his skin hung loosely around his neck. Nevertheless, his eyes were incisive and his voice was penetrating. He studied Demaris thoroughly for several moments before he said anything beyond a perfunctory greeting. Then he grunted with satisfaction.

"Good. You look as though you can handle things. I don't know where Resvik dug you out, but that's unimportant."

The contact, standing beside Demaris, made a noncommittal gesture. "As I've said from the beginning, we're not prepared to go deeply into Koil's past activities. Some of them might be interpreted as having been extra-legal. But he's thoroughly familiar with all the aspects of what's expected of him, and he's got the training required."

The Overchief surveyed Demaris again, and shook his head in agreement. "He looks it. He ought to, for the price you're asking."

"It's fair," the contact said.

"Oh, yes—I'll grant you that. Well—is there anything else, Resvik?"

"No, sir. I'll get back to my duties. It's been a pleasure, Overchief. Good luck, Koil." He slipped out of the office, closing the door gently behind him.

The Overchief gestured toward a bench, and Demaris sat down, quietly watching the Overchief stalk back

and forth behind his desk. The first actual contact with the head of an alien culture was usually the most ticklish part of one of these things. But, again as usual, it seemed to be going smoothly.

"Now—what's your full name?" the Overchief asked.

"Call me Todren Koil," Demaris answered.

The Overchief grinned thinly. "All right, we'll call you that. What we want you to do is harry Genis. Within reason, you can do it your own way. I want their navy kept busy—too busy to deploy against our main push. If you do your job right, they shouldn't even suspect we're moving in on Farla until we're well on our way. I have no expectation that you'll be able to keep their fleet completely tied down after we make our move, but you should be able to hamper them somewhat. That's all we need—an edge. Your job's done the day we put a ship on Farla itself. By then we'll have the old Farlan perimeter well enough defended so that anything they do won't catch us with our fur wet. Clear?"

Demaris gestured affirmatively.

"I don't suppose you're wondering why we hired you?" the Overchief asked. "No. I can see that. Resvik's undoubtedly informed you on the"—he coughed—"high quality of our military leadership. I *don't* expect an affirmative comment from you," he added, not without a strong trace of the bitterness he must have felt. Resorting to mercenaries after his own officer-training system has proved deficient is never pleasant for a military leader. "All right," he said with a savage rumble, "what will you need, offhand?"

"Some light, mobile stuff. Not much of it. A squadron of *Pira* Class boats ought to do it. I'll do all my work through your intelligence agency. I'll need liaison and authorization. We may have to supplement their demolitions and infiltrations groups—I'll see how their existing forces work out under my methods. I think I can get in a lot of damage before Genis even begins any full-scale retaliation. Give me about fifteen days to start the operation rolling. By then, I'll know whether I need to ask for anything else."

"Done." The Overchief touched the switches of his desk communicator. "Send in Tjetlyn Faris," he said.

Demaris felt the tension oozing away from him in direct proportion to his mounting excitement. He could feel himself settling into the old, familiar state of pleasant anticipation. It might not be for Earth's sake, but for Mammon's. It might extend the Agency's reputation, instead of Earth's. It might be for cash on delivery—but it was action, nevertheless—action, and, in war, the only peace he could hope to have.

He looked up at Tjetlyn Faris with quicksilver burning through his veins.

Faris was a youngish Marakian of about his own age. He came in the door and stood waiting for the Overchief to speak.

"Sath, this is Tjetlyned Todren Koil," the Overchief said, indicating Demaris. "Todren, Faris Sath. He's your liaison and Second in Command. He'll take you down to our intelligence offices and introduce you to the existing routine. Your authorization will be there ahead of you. From here on, it's your operation to work out between you."

Demaris acknowledged Sath's presence with a shake of his head. The Overchief had made him the Tjetlyn's superior by one grade, but Demaris had no illusions about that. No Agency man ever worked without his employer's setting a watchdog over him.

Deep within the Marakian interior, the Earthman smiled. That didn't always work out the way it was meant to. Old Connie Jones, for instance, working with Farla's paranoid culture, had so maneuvered his personal watchdog assassin that, in the end, the assassin had seen the expediency not only of not killing Jones but of taking the victorious fleet back to Farla and staging a revolution.

Quis custodiet— But that wouldn't work here, nor was it necessary. Marak was not Farla, though the two races were descended from the same ancestor. There was no danger here of the mercenary's being killed once he'd done his work.

Demaris wasn't sure he wouldn't have welcomed that added fillip.

"At your orders, Tjetlyned," Sath said. Demaris shot a look past him at the Overchief and saw that he was pointedly ignoring both of them.

Ugh. He'd been daydreaming at the wrong time. He nodded quickly to Sath, and they slipped out the door together.

"Ah, we are the Agency's offspring,
The brood of a sinful old maid.
There isn't one chance that she'd sell
us out—
Unless things were such that it
paid."

(alternate chorus)

V

Three months later, Sath laid a fresh set of reports on Demaris' desk. "Here we are, Koil. Top sheet's the summary." He dropped down on the bench beside the desk and wearily dug a flask out of his belt. "Have some?" he offered, holding up the flask.

Demaris twitched an ear negatively, and took his own brand out of a drawer. "Can't stand that gunk you use." He tilted the flask and touched his tongue to the wild stimulant. Recapping the flask, he yawned broadly. He looked at the report in disgust.

"Same thing?"

Sath nodded. "Yep. In the past fifteen days, our demolitions teams have immobilized such-and-such a tonnage of Geneiid naval vessels. Our infiltrators have immobilized this-and-that additional tonnage by mis-routing supplies, disrupting communications, altering fleet orders, et cetera. We can truthfully report that our organization has been doing an excel-

lent job, and that we are performing far above the expectations set down by Staff."

Demaris grimaced. "And how far behind schedule is the push against Farla?"

Sath coughed. "Well, if you plotted the curve of Staff's failure against our curve of success, they'd be almost superimposed."

Demaris shook his head. "Still the same trouble?"

"Yep. Seems like Genis has just as good an intelligence service as we do. Tit for tat, right down the line."

Demaris clicked his fingertips against the surface of his desk. The situation stank. For every boat that shipped a team of saboteurs into Genis, a Geneiid boat dropped its cargo down on Marak's planets. Like two giants stabbing pins through each other's ganglia, Marak and Genis were immobilizing each other.

War in space—war in terms of planetary englobements, massive landings, and blockades—was impossible. The problem of supply and reinforcement became insurmountable over interstellar distances. As the attacker's supply lines lengthened, the defender's shortened, until eventually the attrition on the attacker became too great. You could only stage a mass attack on a hopelessly weak foe—such as Farla. Otherwise, it was your infiltrators and demolitions men, crippling your enemy at home, who first had to weaken him. And if your sabotage was balanced by equally effective enemy action, then both of you slowly bled away, matching each other corpuscle for corpuscle, neither ever gaining a relative upper hand.

Demaris wondered how long this could keep up. Agency men weren't supermen. Man for man, there was no reason why they should be any better than their opposite numbers. The Agency's selling point was the right man in the right place, at the right time.

Well, so far he was holding his own. But how much longer would the Overchief be satisfied wtih that?

Demaris grinned to himself, at himself. Face it. What galled him most was his inabiilty to beat his Geneiid adversary. The Agency and its considerations were secondary.

"So, anyway—" Sath was saying, "I just got a call from the Overchief. He wants to see us."

Demaris inhaled slowly.

The Overchief was showing the strain. Farla should have been penetrated and taken by now. Instead, the Marakian fleet lay hamstrung in its berths. That the Geneiids were racked by the same frustration was of little comfort to him.

He waved them to benches with a nervous gesture of his arm. Demaris sat down carefully. For the first time since he'd landed on Marak, he became consciously aware of the weapon buried in his chest. Cautiously, he put a slight bit of pressure on his shooulder muscles, and held his breath. He felt the weapon's barrels slip forward. Then he relaxed. No. If this was a showdown, here, he had no right to fight for his life. The manner

of an Overchief's death would be too carefully investigated. If he were caught now, in these circumstances, the weapon's other characteristic was his own only escape. He'd have to detonate its charge.

He realized his mind was making mountains out of molehills, and fought down his apprehension. The Overchief might find fault with Todren Koil, and Todren Koil would react accordingly. But the Overchief had no possible reason to think that Todren Koil had ever been a weak, pink-skinned monster whose only real weapon against the universe was the intricacy of his mind.

The Overchief looked up from his desk. "Glad to see you, Todren, Faris. You're not here for reprimand."

Demaris heard Sath's breathing deepen deside him. His own diaphragm relaxed.

"If it wasn't for you," the Overchief went on, "we'd be in much worse trouble." He got up and began to stalk back and forth. "Genis, as we've found out, just happened to produce a good intelligence man of its own. We didn't expect it—we had no reason to. They're generally no luckier with their officers than we are." He slapped a thigh with an irritated hand. "We've got to remove that officer, or those officers, though the latter possibility gives Geneiid luck altogether too much credit. I want you two to lay out an operation which will accomplish the purpose. I shouldn't even have to say that any resource, short of a fleet action, is yours to call on. All right, I want a summary of your ideas by tomorrow. Faris, I'll speak further to Tjetlyned Todren alone."

Sath inclined his head affirmatively, rose, and slipped out. Demaris looked inqiuringly at the Overchief, who was standing with his back to him.

The Overchief turned around. "Todren," he said softly, "this Geneiid intelligence officer—he seems to have popped up out of the ground. We have no dossier on him. Might he be some relative of yours?"

Demaris had been expecting the question for a full minute. He looked steadily at the Overchief. "I have no relatives."

The Overchief stared back, his eyes equally unwavering. Finally, he said: "Well, that is as it may be. I suggest that you devote all possible effort to clearing up the situation."

"Yes, sir."

He slipped out of the Overchief's room and joined Sath. They walked down the hall together.

Just how far, he was wondering, did Old Man Sullivan go in his pursuit of a dollar?

"We fight for the Agency's money—
We draw out our pay with a smile.
For our gold, we've been told,
We should barter ourselves
In truly professional style."

VI

It did not take a fleet action. Not quite. It took a combined operation

of all infiltrators and demolitions teams on Genis itself, and the services of a fast cruiser.

The infiltrators pin-pointed the Geneiid intelligence director and cut him off from communication with possible help. The demolitions men blew their way into his headquarters. A *Pira* boat shuttled him up to the cruiser, and the cruiser, ultimately, delivered him to Demaris. The maneuver completely disrupted the normal schedule of activities against Genis, but Demaris, looking across the room at the captured Geneiid, calculated that it was cheap at the price.

"Well, there he is," Sath commented.

"So he is," Demaris agreed, looking dispassionately at the drugged Geneiid. For the life of him, he could see no trace of Make-up's scalpels on that leathery hide—but then, where were his own scars?

"What now?" Sath asked.

"I'd suggest we put our program back into shape as quickly as possible —and make sure Genis doesn't try to pull on us what we did to them."

"I've already set up defenses against that kind of stunt. You're right—I'll get us straightened out while you handle this beastie." Sath went over to his own desk and got to work. Half the organization had been lost or compromised in the kidnaping. He had to reassemble and reinforce what was left. But it was downhill work, now. Marak had her edge.

Demaris jerked his head at the medical technicians. One of them jammed a hypodermic through the Geneiid's skin and shot in a neutralizer. Demaris stood idly by, whistling between his teeth.

It was a touch-and-go business. He'd tried to put himself in the Geneiid's place, and he'd decided that if he were suddenly kidnaped, he wouldn't use his Agency weapons until it became completely obvious that there was no other resort.

So far, so good. The Geneiid—if he wasn't a Geneiid—was still alive, and he'd been taken with no more trouble than you'd expect. But the man might revive in a panic.

He whistled a bit more loudly.

"Oh, we are the Agency's bravos—
We peddle the wealth of our skill—"

The Geneiid's eyelids fluttered upward. It seemed to Demaris that the man looked at him with an intensity peculiar for even these circumstances.

"Ah, we are the Agency's offspring,
The brood of a sinful old maid—"

The Geneiid sat up and stared malevolently at Demaris. "How did this happen?" he asked in passable Marakian. The technicians giggled. Sath, looking up from his desk, grinned coldly. Demaris smiled without humor.

". . . Unless things were such that it paid."

The Geneiid looked around the office in dawning comprehension that

meant one thing to everyone else and something quite different to Demaris. "I see—" he said slowly. "What now?"

Demaris reflected that there was the best question he'd heard in a long time. He wondered if the other man thought Demaris was in on a deliberate double-cross. If he did, almost anything might happen. He had no idea how he'd react in similiar circumstances.

"I fear, my friend," Demaris said in passable Geneiian, "that the Fates, which might just as easily have conspired against me, have seen fit to trip you up, instead." It wasn't a bad start. From an observer's point of view, it was the kind of dialogue you might expect from two opposed professional men in the apparent circumstances.

Well, it was, Lord knew—it was. No matter what your concept of the circumstances might be.

The Geneiian looked at the floor in glum anger. Demaris could understand that. It was only by the grace of making the first move that he himself was not sitting in a Geneiian office somewhere, slowly digesting the fact that he was one of two ends being played against Old Man Sullivan's middle.

"All right," Demaris said. He turned to Sath. "Think there's anything we need to know from him right now?"

Sath shook his head negatively. "Not immediately. I suggest we save him for later. We've got lots of work to do."

Demaris gestured to a couple of armed guards. "Put him away where he'll keep." He looked the Geneiian in the eyes. "I'll be talking to you later."

The man lifted his eyes off the floor, agreeing wordlessly. Rising, he went with his guards.

Demaris plunged into the work of shaping the battered organization for the final, crippling blow. He entertained no thoughts of not completing his job. Mr. Sullivan would not be handed the weapon of a broken contract to wield when Demaris returned to New York and his revenge.

Only gods and television audiences see the pattern of human events. What he did in his office touched on the histories of four races, but, for Demaris, the movement of men and armed forces translated itself into the shifting of reports from IN to HOLD to OUT, and the roar of rockets became the rattle and ping of bookkeeping machines.

For two days, he and Sath reassigned, regrouped, deployed, redeployed, canceled, substituted, implemented, and supplied. Only the games-like transposition of figures from one table of organization to another furnished its own synthetic excitement.

Demaris wondered, in a few brief snatches of stolen relaxation, whether he hated Mr. Sullivan most for double-crossing him or for placing him in a position where the outcome of the battle became a foregone conclusion, now that his personal opponent

was prematurely taken. From a strategist, he had descended to a clerk. It was war, but it was not magnificent.

Well, at least it was over at the end of the second day. Between them, he and Sath had shaped Marak's intelligence service into the means for completely hamstringing Genis, now that her own expert was gone.

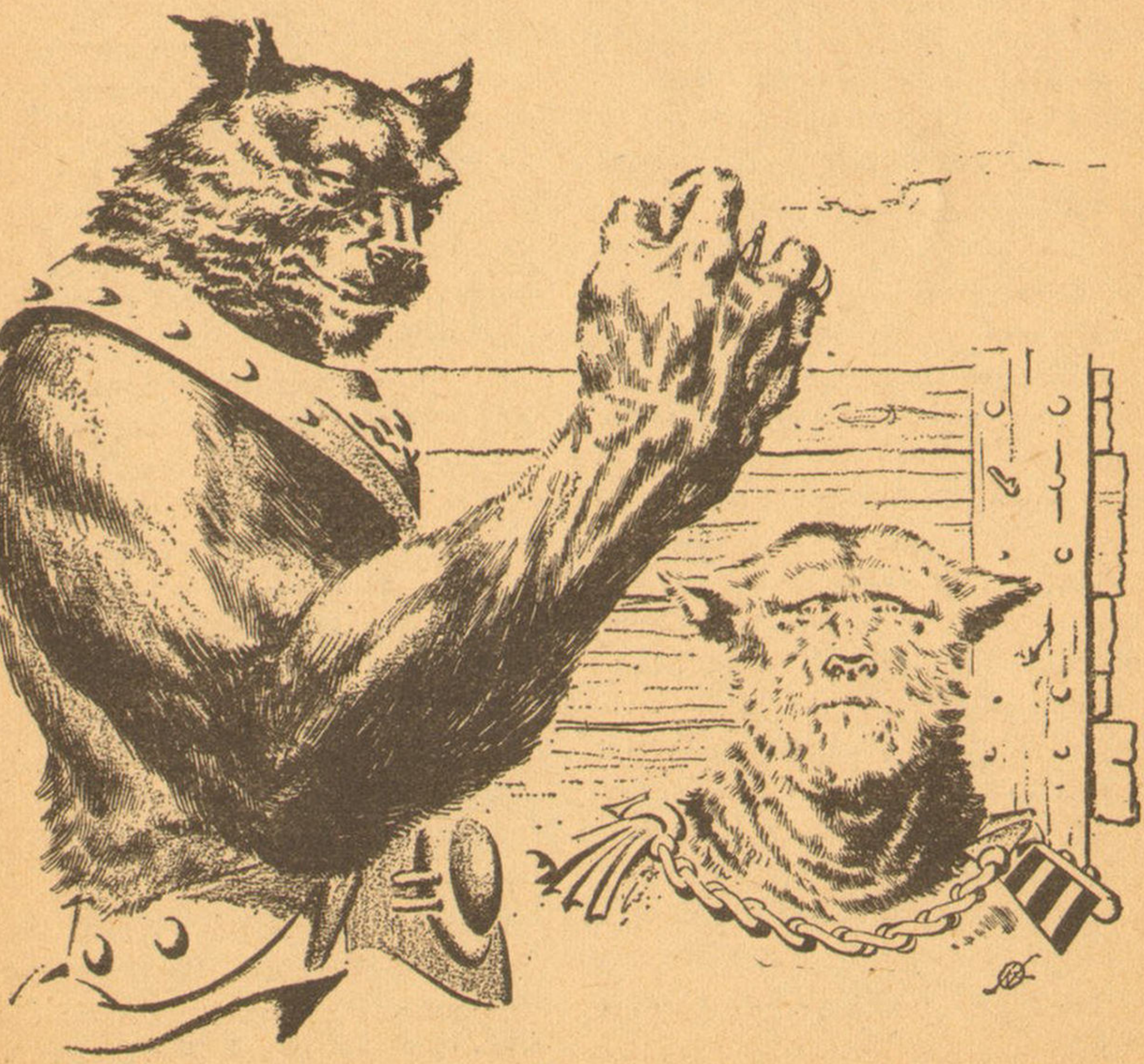
Certainly, her own expert. As much as he was Marak's own.

Demaris felt his mouth curl sardonically.

Sath dropped the last order into his OUT box, pushed his bench away from his desk, and stretched. Demaris rubbed a hand across his tired eyes.

"It's done," Sath said with relieved finality. "All over."

Demaris growled agreement with his Second's mood. Blinking, he peered around at the office. Half the subordinate staff was asleep on cots pushed into dimmer corners. The other shift half-slumped over its desks. No one had left the office since the Geneiid's capture. Given enough breathing space, Genis might have been able to throw out a desperate taskforce to intercept the Marakian fleet,



which had set out for Farla the moment the Geneiian saboteurs lost direction and purpose.

"Call up the Overchief and let him know, will you?" Demaris said to Sath. He felt washed-out. The job was done, and soon he'd be back on Earth.

And this time, after he got through with Mr. Sullivan—provided he could dig him out of this sanctum—there might not even be any more Agency jobs.

Hunting? Police work of some kind? Demaris didn't know. Uselessness was a bitter strain in his throat.

Sath put his phone back on his desk and looked puzzledly at Demaris. "Something's wrong," he said. "I told the Overchief we were set. He just mumbled perfunctory thanks. Then he said it wasn't our fault, but we weren't going into Farla. He wants to see us."

Demaris sucked in his lower lip and scowled. Possibly he was becoming a monomaniac, but he nevertheless wondered what Old Man Sullivan had done now.

"There's something that's cute in the
Agency—
Some sweet little winning appeal.
For its dough it will go
Through your pockets at night,
And what's not glued in it will
steal."

VII

The Overchief sat behind his desk, half facing the boarded-up window shattered in night-before-last's abortive Geneiid attempt to get their man back.

He moved his hands in an unsettled gesture. "I don't understand how they knew," he repeated, and dropped his hands into his lap.

Demaris, mystified, stared across the room at Resvik, the contact, who had been there when he and Sath came in. Beside him, Sath was also frowning, trying to make sense out of the situation. Resvik was impassive.

The Overchief seemed not to realize that Demaris and Sath had no idea of what he meant. He rambled on.

"Almost exactly to the moment. As soon as we and Genis became preoccupied with each other."

Sath cleared his throat and ventured the question. "Sir—I'm sorry, but I'm afraid I'm a bit fagged out. May I ask you to repeat what's happened?"

The Overchief turned toward Sath. His gaze was weak and unsteady. He squinted across the room. "What? Oh, Sath— Yes. It's Stain. I just got word. Their ships have been in Farla for the past month." He gestured again, his palms slapping down on his thighs. "There is no more Farla."

Demaris felt his facial muscles twitch in an uncontrollable surprise reaction. Then he became expressionless. Beside him, Sath was breathing erratically.

Demaris looked at Resvik with careful deliberation. They were both in immediate, pressing danger. The Overchief's previous line of specula-

tion about him had been very close to truth. But the contact seemed unconcerned.

"They moved in against almost no opposition," the Overchief was continuing. "What they did meet was hopelessly indecisive, unorganized, and lacked any initiative whatsoever. They moved in rapidly, set up bases, and are now completely consolidated. It would take years to undermine them to the point where we could hope to engage them successfully."

Sath had obviously gotten well past his initial shock, and his mind had been working rapidly. "Well, sir, that is a setback, of course. But we have an efficient and well-directed staff, apportioning credit to Tjetlyned Todren, who deserves it. It seems to me that the immediate institution of a vigorous program would—"

The Overchief cut him off with a muddy waving of his hand. "No, no, I appreciate your enthusiasm, Tjetlyn Faris, but this is a defeat . . . a defeat—" he repeated in a barely audible mutter. "We have been bested—"

"But, sir—"

Oddly enough, the Overchief displayed no surprise or anger at Sath's repeated overreachings of privilege. He merely shook his head hopelessly, and Sath must have realized there was no purpose in pressing the point. He shot Demaris a baffled look, but found no help there.

Resvik addressed himself to the Overchief. "Sir, if you'll find the time to conclude that business we spoke of—"

The Overchief started at the sound of his voice. Obviously, he'd completely forgotten the man was there. He stared bewilderedly at Resvik for a moment before he collected himself.

"Yes, yes, of course— Tjetlyn Faris, I'll speak further to Griol Resvik and Tjetlyned Todren."

"Yes, sir." Plainly baffled and shocked at the Overchief's irresolution, Sath slipped out after one more fruitless look at Demaris.

Demaris continued not to speak, mainly because he had no idea of what to say. The Overchief had become incomprehensible, and Resvik's position was totally unclear to him, The fact that this was the working of still another scheme of Old Man Sullivan's no longer struck him with much novelty. He wondered, briefly, if he would ever discover just exactly where and how far all of the Agency's tentacles extended.

Resvik stood up and came over to him. "Well," he said, "that's that. We're wound up here. I've got the pickup ship coming tonight. You and I and Holtz—"

"*Walker* Holtz?"

"Sure. The Geneiid." The contact grinned cynically. "We can't leave him here for that Faris hot-shot to question, can we? It's a shame he got out of here so fast," he mused.

Demaris rolled his eyes frantically toward the Overchief. Had the contact gone out of his head?

Resvik followed the direction of the glance and sniffed contemptuously. "Him!" He flexed the muscles of his forearm and the nose of a hypo-

dermic pistol slipped out between his fingers. "Four cc of lobotomol, right into the forebrain. What's he going to pay attention to?"

Demaris stared at the contact. Almost unconsciously, he reached out and eased Resvik's forearm aside until he was out of the line of fire.

VII

Holtz laughed pleasantly as the three of them sat in the pickup ship's lounge. The sound came out of his Geneiian throat with very little of its Terrestrial urbanity.

"I'd say it was quite admirable of Old Man Sullivan," he commented in his barbarous accent. He laughed again. "Picture the complexity—the intricacy of the organization. Mr. Black is planted on the capital planet of an empire—" Holtz's bow toward Resvik, attempted with a Geneiian spinal column, was grotesque. "He is assimilated into the imperial government, probably with the aid of that ingenious instrument in his hand, and thereafter devotes himself to the groundwork of systematically lobotomizing such key figures as display any inordinate talent. When a crisis arrives—as, with Old Man Sullivan's obiquitous help, it inevitably must—Mr. Black offers to supply the talent so unfortunately lacking in the native personnel. Then you, Mr. Demaris, and I, perform our duties—and Old Man Sullivan grows richer, and richer, and richer. Fabulous! And what a sublime disregard for human decency!"

Resvik shrugged. Since the three of them had come aboard the ship, five T.S.T. days ago, he had talked only when spoken to. Most of the conversation had been between Holtz, whose attitude was manifest, and Demaris, who had gleaned as much as he could and was now becoming impatient and irritated as Holtz's personality wore thin.

"But can you *picture* it, man!" Holtz demanded. "The intricacy of the enterprise—the beautifully working plan, endlessly repeated with every race that an Earthman can possibly be made to resemble! I need hardly point out that this means practically every race with which terrestrial minds can communicate at all! Beautiful! Beautiful! And if not for your commendable enterprise, Mr. Demaris, neither of us would ever have been in a position to realize it. Why, not even Mr. Black, here, is anything but another cog in this lovely machine—"

Resvik—Mr. Black, if you prefer the other *nom de guerre*—stood over Holtz. "I think that's about enough," he said flatly. He looked from Holtz to Demaris and back again, spreading his contempt between them. "What are you, anyway?" he said at Holtz. "A misfit hunter, trying to find a new kind of quarry to kill. And you"—he turned to Demaris—"a thug, half a cut below an assassin. You stink with neuroses, both of you. You're misfits. There isn't room for you on Earth. Where else would you go, if there was no Agency?"

"Funny," Demaris said, looking

up at him evenly. "Here I am, a thug. When I'm not dressed up for one of these things, I look like a killer. I act like one. And the charming Mr. Holtz is the prototype of all gentleman pickers-off of lowlier life. But you, my friend—I'll bet you don't in the least resemble Machiavelli."

Resvik sat down suddenly, hate brooding out of his eyes at Demaris.

Demaris smiled as well as his Marakian jaws would let him. "I'd add a nice word about the efficiency of Old Man Sullivan's recruitment teams, if I were you," he said to Holtz.

His hide itched. He scratched fiercely and uselessly at his forearms, then steeled himself by an effort of will and kept his hands motionless. He was having trouble with his vision, too—he'd become accustomed to a slight turn of the head for direct seeing.

"Why do you want to see Old Man Sullivan?" Bill Kaempfert asked.

Demaris set his jaw stubbornly. "I think you've got a pretty fair idea."

Kaempfert began a gesture, exhaled in frustration, and thumped his hands on the edge of his desk. "What am I going to do with you?" he asked, more to himself than to Demaris. He looked exasperatedly at his friend. "Look—do you want me to go to Old Man Sullivan and tell him one of his employees disapproves of his business methods, and would like an hour's time to tell him so?"

"I disapprove of being put in an unnecessarily dangerous position!" Demaris corrected him. "Suppose Genis had decided to pick off the opposition first? That ninny, Holtz, would never have issued instructions to kidnap, instead of kill. What am I—a tin soldier for Sullivan to move about as he pleases?"

"Have you read your contract lately?"

Demaris looked across the desk. "So that's the policy, is it?"

Kaempfert did not drop his eyes. "The policy is to execute each operation with no avoidable casualties to Agency personnel. This was a toughie. You were warned of that from the beginning. One of these three-way switches is always precarious."

"Precarious? Is that the word?" Demaris looked around at the other supervisors in the room, leaned forward, and lowered his voice. "Bill, I've already decided you couldn't refuse to ship me out into that squeeze-play. That's understandable. What it does to our friendship, neither of us can say as yet. Nothing, I hope. But that's beside the point. Look—this has been nagging at me. You know, and I know, that the Agency started a long time ago. We know it was somehow illegal in nature then, though nobody knows precisely how. We both know what Earth government's like. But, look—is there a chance, any chance, no matter how slim, that it's gradually drifted over and become a secret government arm? I could understand this sort of thing, then."

Kaempfert looked at him silently for a minute. His eyes were weighing something, and at the same time they were aware of all the things Demaris

had said, that night before he was shipped out. Then he shook his head slowly. "No. No chance at all."

Demaris sighed and sat back in his chair for a moment. Then the anger returned to his face. "Well, then—"

"Thad," Kaempfert said, "I want to show you something." He got up from his desk. "Come on." He squeezed between his desk and the next, and walked out into the front office with Demaris following him. He fumbled in his pocket and took out a key ring.

Demaris watching him, frowning, as he unlocked a door.

"Come on in," Kaempfert said. Demaris walked through the door. They were in an empty closet. Kaempfert selected a new key, moved a section of molding, and unlocked the concealed door at the back of the closet.

Demaris stepped through the door. He was in a small, bare office. There was no window. Kaempfert turned on the light.

The office was stale and musty. Dust lay thick and furry on the desk, the chair behind it, and the floor.

Demaris spent a minute looking at it. Then he turned to Kaempfert. "So. There is no Old Man Sullivan."

Kaempfert shook his head. "Not any more—not for fifteen years. That's when I quit being an operative. I'm the guy you mean when you talk about Sullivan."

"I don't get it—"

"Sullivan was everything you've called him," Kaempfert interrupted. "And the Agency never was, and is not now, constituted to be anything but a private, money-making enterprise. I run it."

Demaris shook his head and looked at Kaempfert without a trace of recognition. He began to speak, but Kaempfert cut him off again.

"You'll get your chance. Now you tell me what the Agency does."

"I don't follow you."

"The Agency," Kaempfert explained patiently, "supplies Earthmen to do the military planning for all those races which can be reached by us. Right?"

"Yes—"

"What's our military record?"

"Perfect."

Kaempfert smiled wanly. "Not quite. But close enough. All right, next question: What has the Agency done for you?"

"Given me a job."

"All right, it's given you a job. It's also provided an outlet for all the drives and irascibilities that make life on Earth a chancy proposition for you. You're antisocial. You don't fit. The Agency puts you where you *do* fit."

"Sure. I've admitted that. But—"

"You're one of hundreds. We located you—which isn't hard, considering that all you misfits, myself included, kick up such a row. We trained you, we put you in the best kind of Agency jobs for your personality, and we shipped you out. Right?"

"Admitted. But that doesn't give you the right to make our lives more dangerous than necessary!"

"I could argue about necessities,

but I won't. I gather that what you want is a private hunting preserve."

"*No!* Look, I'm no killer. If I can change something with my brain instead of my gun, I damn well will!"

"O. K. Then mull this over in your brain: *With* our 'perfect' military record, and *with* Sullivan's efficient system, which I don't dare monkey with —how much have the other races in the universe progressed?"

"Plenty! Stain's a major power, just because of you."

"Oh, yeah? And next year, is it still going to be? What about Farla, that inherited the Vilk empire? Charging back and forth isn't progress. Small but steady forward motion is. You don't fight wars in space—not big, slam-bang fleet actions, you don't. But you do infiltrate, and you do sabotage. And next year, the guy you skunked sabotages *you*. How far do you get, working that way?

"Thad, you've been griping about Earth government not moving out of the Solar System. Even if their motives are bad, they're right, in a way.

"Except that you, and I, and hundreds of others can't take it. So we're all in the Agency, with new ones joining up every day. And now you tell me—what do you call an outfit that pushes forward when the government wants to stay home? What do you call an organization that operates beyond the accepted frontier, that has its force of fighting men, its politicians, and its board of directors? What do you call an organization set up to penetrate foreign territory, to indulge in extra-national politics, to support its employees? Well you might call it The British East India Company, or the Hudson's Bay Fur Company, or Mr. Sullivan's Agency. But I call it a private government. And I say this is the one kind of government that's set up to clear the road for the day Earth—all of Earth, under its own government—steps out into the stars again."

Demaris had been trying to interrupt at Kaempfert's every pause for breath. Now he realized that he was out of breath himself—and that he suddenly had no real points to argue. The Agency was a business. It ran for profit, and the system was designed for profit only.

He looked around the office again. With a little cleaning up, it wouldn't be half-bad—

No. The head of an outfit like this was too used to, and too much in need of, protective coloration.

"Well," he said. "Well, Bill, let's lock it up and see if we can find me some desk space out in Assignments."

"So, we are the Agency's boy scouts—
We do our good deeds every day.
Remember our names to our kids, my boys,
When we have drifted away.
And teach 'em that crime doesn't pay, my boys,
Except every thirtieth day, my boys,
And hold out for raises in pay."

THE END

EARTH, AIR, FIRE AND WATER

BY ROBERT SHECKLEY

The best way to use anything is the way it will do you the most good in the situation you happen to be in. Sometimes that's not at all the way it was intended to be used. . . .

Illustrated by van Dongen

No spaceship radio ever worked properly, and Jim Radell's set on board the *Algonquin* was no exception. He had been talking with Con Electric, back on Earth. But reception faded, and suddenly the tiny pilot's compartment was filled with voices.

"Not *grapple hooks!*" the radio blared. "I wanted *candy bars!*"

"Isn't this Mars Station?" someone asked.

"No, this is Luna. Get the hell off my frequency."

"What am I supposed to do with three gross of grapple hooks?"

"Wear 'em in your nose. Hello, Luna?"

Radell listened for a while. The radio gave him the reassuring impression that space was filled with people, tremendously alive and vital, crowding the planets for room. He had to remind himself that all the noise was made by less than fifty men, specks of dust in the spaces around Earth.

The radio blared static for a few moments, then hummed steadily. Radell switched to standby and strapped himself down. The *Algonquin* was in deceleration orbit, slipping toward the cloudy surface of Venus. He could read a book or take a nap until the ship landed itself.

He had two jobs. One concerned itself with an unmanned ship that Con Electric had sent to Venus five years ago. The ship contained automatic recording instruments. One of Radell's jobs was to return those instruments to Earth.

The *Algonquin* spiraled toward

the cold, storm-swept surface of Venus, homing automatically on the grid location of the robot ship. The hull glowed dull red as the *Algonquin* cut through Venus' blanketing atmosphere, slowing, dropping, adjusting itself. Snow flurried around the ship as it turned over, tail jets flaring. Then it settled gently to the ground.

"Sweet landing, baby," Radell told the ship. He unstrapped himself and switched the radio contact to his spacesuit. His dials showed the robot ship two and a half miles away; not far enough to bother lugging provisions. He would just walk over, pick up the instruments, and then go on home.

"Probably be back in time for the Series," he said out loud. He gave the suit a final check, and undogged the first hatch.

The spacesuit was Radell's second, and most important job.

Mankind was pushing out. On a cosmic scale, the race was scarcely born. And yet, yesterday's cave-dweller and dreamer of the stars was leaving Earth behind. Yesterday he had been naked, pitifully soft, hopelessly vulnerable. Today, encased in steel, propelled on incandescent jets, he had reached Luna, Mars and Venus.

Spacesuits were a link in the technological chain that spanned the planets.

Prototypes of the suit Radell was wearing had been subjected to every test an ingenious laboratory could devise. They had come through intact. Now the suit was receiving its final test in the field.

"Stay right here, baby," Radell told the ship. He stepped out the last hatch and climbed down *Algonquin's* ladder, wearing the best and most expensive spacesuit that man had ever devised.

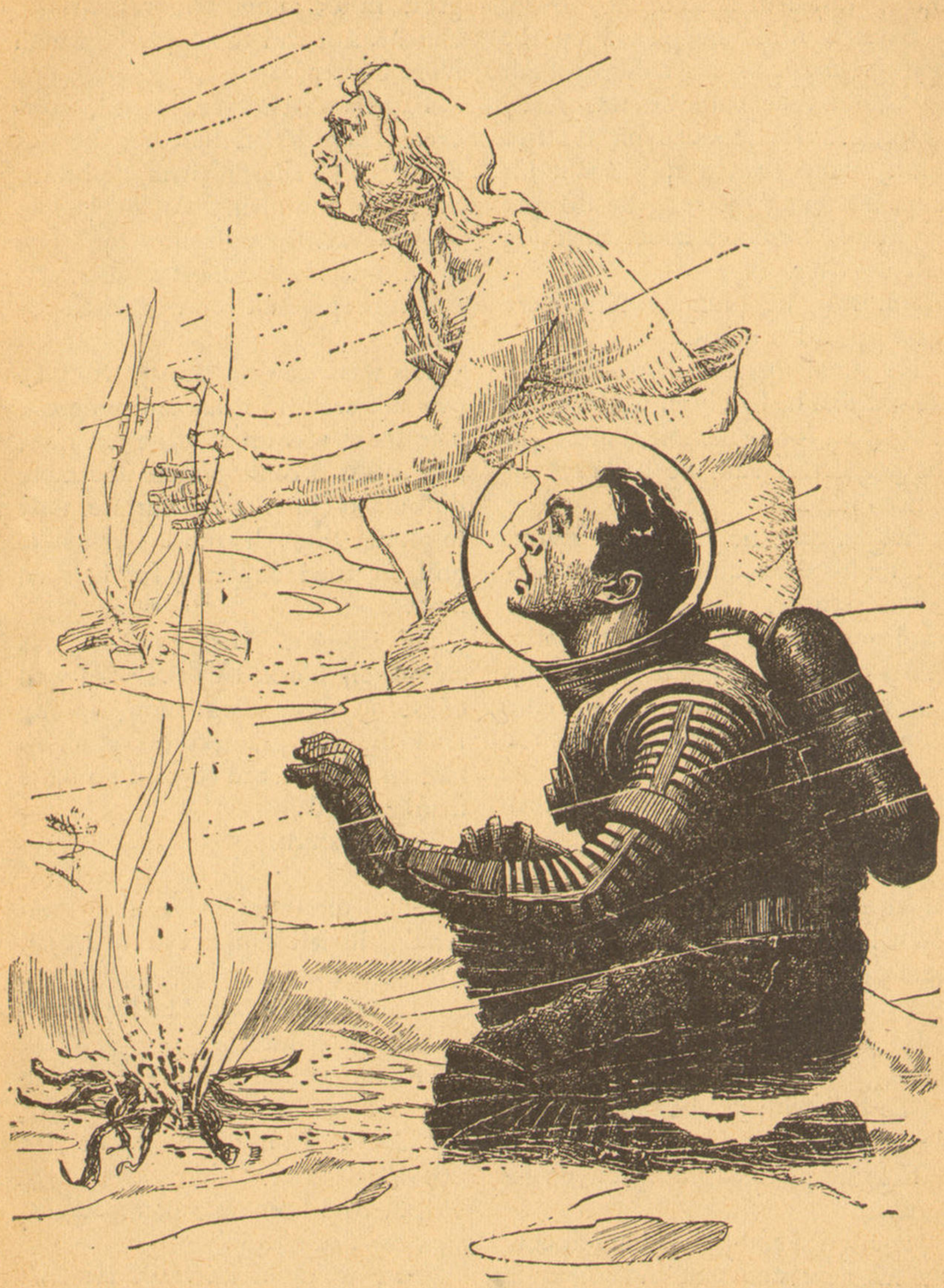
He followed his radiocompass, moving easily through a thin layer of snow. Very little of the landscape around him was visible. It was hidden in the gray twilight of Venus. Underfoot were thin, springy plants, sparsely scattered through the snow. They were the only living things in sight.

He adjusted the radio in his suit, hoping that someone would broadcast the major league baseball scores. But all he got was the end of a weather broadcast from Mars.

Snow began to fall again. It was cold; the dial on his wrist showed it, because no chilled air could creep through his suit. And although Venus had an oxygen atmosphere, he didn't have to breathe it. A plastic helmet sealed him into a tiny, man-made world of his own. Within it, he couldn't even feel the cold, stiff wind which pushed steadily against him.

As he walked, the snow became deeper. He glanced back. His ship was completely hidden in the gray twilight, and progress was becoming more difficult.

"If they put down a colony here," he said to himself, "they sure won't get *me* to homestead on it!" He



turned up more oxygen and shuffled through the drifts.

After a while he picked up the ghost of music on his radio, so faint he couldn't be sure he was really hearing it. He plodded on for two hours, more than a mile from his ship, humming the song he thought he heard, thinking about anything except Venus.

Suddenly he plunged into loose snow up to his knees.

He stood up and shook himself. He saw that he had been walking in a snowstorm for some time. Encased in the wonderful suit, he hadn't even noticed it.

But he saw no cause for alarm. Within his spacesuit there was a marvelous security. The screech of the wind was filtered to him only faintly. Bursts of hail rattled harmlessly against his plastic helmet, and the sound made him think of rain on a tin roof.

He plunged on, into the crust that was forming over deep snow.

More snow fell in the next hour. Radell noticed that the wind had increased almost to gale velocity. Drifts were piling up around him, crusting over in the freezing temperature.

He had no intention of turning back.

"To hell with it," he said. "Nothing gets inside this suit."

Then he plunged into snow up to his waist.

He grinned and pulled himself out. But his next step sent him through the thin crust again.

He tried to wade through, but the resistance of snow and crust was too great. In ten minutes he was winded, and his suit had to supply him with more oxygen.

Radell was not frightened, however. He knew that there were no real dangers on Venus, no men, no beasts, no poisonous plants. All he had to do was walk through snow for a few miles, wearing the most modern and efficient spacesuit ever devised by man.

He was growing thirsty. And he couldn't seem to make any progress. The snow was up to his chest now, and it was becoming more and more difficult to climb to the surface, only to plunge through with his first step. Still, he tried doggedly for half an hour.

He stopped. His visibility was completely blocked by the solid wall of softly descending snow, falling from the dull gray sky overhead. In half an hour he had covered no more than ten yards.

He was stuck.

Interplanetary radio was always uncertain. Radell couldn't seem to get a message through.

"This is *Algonquin,*" he broadcast. "Calling Con Electric."

"Right, got the green, I'm coming in."

"Would I lie? He broke his arm—"

". . . And four cases of asparagus. Sign my name to it."

"Sure we're in free-fall. He *still* broke his arm."

"This is *Algonquin* calling—"

"Hey, Control, let me in, I'm on the green."

"Priority," Radell called. "Calling Con Electric. I'm stuck in snow. Can't get back to ship. What do I do now?"

The radio blared static.

Radell sat down in the snow to await instructions. He considered the snowfall an imposition. Was he supposed to be an eskimo or something? Con Electric had gotten him into this. Let them get him out.

The suit maintained its even steady warmth. Radell managed to forget his hunger and thirst. As the drifts grew higher, he dozed off.

He awoke in a few hours, thirstier than ever. The radio hummed emptily. Radell realized that he would have to help himself. If he didn't get back to his ship soon, he might become too weak to do anything. The wonderful protective qualities of the suit wouldn't help him then.

He stood up, his throat aching from thirst, and wished that he had packed provisions. But how could he have known he would need them just to walk five miles and wearing such a suit?

He needed a means of locomotion over the thin crust. Snowshoes. What were snowshoes made from on Earth? Hickory? He knelt and examined one of the thin, pliant plants growing through the snow. This would do as well.

He tried to break one. It was tough and oily. Radell's gloved hands slid right off.

If only he had a knife. But there was no reason for a knife on a spaceship. It was as useless as a spear, or fishhooks.

He tugged again at the plant, then pulled off his gloves and searched his pockets for some sharp instrument. He found nothing except a dog-eared copy of "Planetary Landing Rules for Commercial Ships of More than 500 Gross Tons." He shoved it back in his pocket.

Already his hands were numb. He pushed the gloves back on.

He had an idea. Unzipping the front of his suit, Radell leaned forward and used one side of the zipper as a saw. A cut began to form on the plant, and a blast of wind swept through the opened suit. Radell stepped up the suit's heat output and continued sawing.

By the time he had cut three plants, he found the zipper teeth too dull to use. They should have used a harder alloy, he thought. He opened a zipper in his sleeve and continued sawing.

Finally he had his lengths of plant. He tried to close the zippers, but they were jammed with gum and wood fibers. Radell wrapped the edges as best he could and pushed his heat output of the maximum.

Now to make snowshoes. The plants bent easily, and snapped back easily. He had no way of joining them.

"What a stupid situation," he said out loud. He had no string, no twine, no rope. Nothing.

"What should I do now?" he asked himself.

"Never saw such reception in my life," someone on the radio was saying.

"This is *Algonquin* calling Earth," Radell said hoarsely, for the thousandth time.

"Hello, Mars?"

"Con Electric calling *Algonquin*—"

"Maybe it's the solar corona."

"Cosmic ray output, more likely. Who's that?"

"This is Con Electric. Our ship is delayed—"

"*Algonquin* speaking!" Radell shouted.

"Radell? What are you doing? You're not an explorer and this is no time for sightseeing. Pick up that stuff and get back here."

"This is Luna Station Two—"

"Stay out of this, Luna!" Radell shrieked. "Listen, I'm in a jam. Stuck. Stuck in the snow. Need snowshoes. Snowshoes! Do you hear me?"

The radio growled static. Radell turned back to the problem of snowshoes.

The plants had to be lashed together. The only way Radell could find to do it was by using the wires connecting his radio, or his heating unit. Which should he sacrifice?

It was an uncomfortable choice to make. He needed the radio. But he was cold now, even with the steady work of the heating unit. To destroy that would leave him with just the insulated suit against the cold of Venus.

The radio would have to go, he decided.

". . . Tell her that, will you?" the radio said abruptly. "And on my next leave—" It faded again.

Radell found he couldn't part with the radio, and the voices it brought into the lonely, civilized world of his spacesuit. Dizzy, tired, his throat parched with thirst, he felt that as long as he could hear the reassuringly mechanical hum of static, he was not alone.

Besides, if the snowshoes didn't work, he would really be stuck without the radio to bring help.

Quickly, before he could change his mind, he ripped out the heating unit, stripped off his gloves, and went to work.

It wasn't as simple as he had thought. He could hardly see, for his plastic helmet fogged with steam, now that the defroster was out of order. The knots he tied in the slippery, plastic-insulated wire pulled out. He tied more complicated knots, and still they pulled out. By trial and error he found one that would hold.

And even then, the plants slipped through the bindings. He had to rough them against the zippers before they would grip.

With one snowshoe partially finished, a wave of dizziness made him stop. He had to have something to drink.

He stripped off his helmet and stuffed a handful of snow into his mouth. It eased his thirst somewhat.

With the helmet off, he could see better. His fingers and toes were dead, and numbness was creeping through his limbs.

It didn't hurt. As a matter of fact, it was quite comfortable. He was very sleepy, he found. Never had he been so sleepy.

He decided to take a very short nap, and then begin again.

"Emergency priority. Emergency priority, Con Electric, calling *Algonquin.* Come in, *Algonquin.* What's wrong *Algonquin?*"

"Snowshoes. Can't get to ship," Radell muttered, half asleep.

"What happened, Radell? Mechanical breakdown? Something wrong with the ship?"

"Ship's all right."

"The suit! Did the suit break down?"

"No—" Radell was very drowsy. He didn't know how to explain what had happened, because he wasn't sure himself. Somehow, he had been taken out of civilization and plunged back a million years, to a time when men lived against the elements. Only a little while ago he had been encased in steel, and fires had spurted at his fingertips. Now he lay against the earth, and his battle was with the forces of fire, air and water.

"Can't explain. Just get me out of here," Radell said.

It suddenly struck him that in all the time of mankind, nothing had changed. Perhaps the cave was a little bigger, the flints a little better, but man himself was no bigger, no tougher, no better fit. Outside, the storm still raged, the elements were supreme.

He shook himself fully awake and staggered to his feet, sure that he had made an important discovery. For the first time, he understood that he was fighting for his life, exactly as billions of his race had fought since the dawn of time, and as they would fight, no matter how well they build their spaceships.

He wasn't going to die. Not easily, anyhow.

He had to have a fire, at once. There was a book of matches in his pants pocket.

Quickly he stripped off his spacesuit to get at them, and stood in the snow in pants and shirt. Next, he built a windbreak out of snow, scooping a hole down to the ground. He arranged branches carefully, and added leaves from the dog-eared "Planetary Landing Rules." He touched a match to it.

If it didn't burn—

But it did burn! The oil in the branches caught at once, and they blazed up, melting the snow around them.

Radell filled his plastic helmet with snow and placed it near the fire. He would have some water now!

He hugged himself close to the blazing branches, scorching his shirt. Already the fire was burning low. He added all the branches he had left.

They weren't enough. Even with the half-finished snowshoe, his fire could last only a little while.

"Do you know what she said to me? Do you really want to know what she said to me? She said—"

"Priority! Emergency priority. Get off the air, everybody. Listen, Radell, this is Con Electric. A ship is putting out from Luna for you. Can you hear me?"

"I can hear you. How soon will it be here?" Radell asked.

"Can't you hear us, Radell? Are you all right? Answer if you can."

"I can hear you. How soon will the ship—"

"You're not coming through. Anyhow, we're assuming that you're still alive. The ship will be there in about ten hours. Hang on, Radell."

Ten hours! His fire was almost gone. Furiously, Radell sawed off more plants. But he couldn't gather them fast enough to keep the fire going.

His water was melted. He gulped it down and burrowed lower, as close to the earth as he could get. He wrapped the suit around him and leaned close to the fading fire.

Ten hours!

He wanted to tell them that the spacesuit was fine. The only trouble was, Venus had pulled him out of it.

The wind roared over his head, deflected by the windbreak. The fire died to a tiny flame. Radell looked wildly around the white landscape, looking for something, anything to burn.

"Hang on, fella. We're coming down. Made it in seven and a half hours. Burnt up all our fuel. They'll have to send a fuel ship out to us. But we got here."

A bright flame blossomed in Venus' gray sky, and sank toward the silent hulk of the *Algonquin*.

"Can you hear us, boy? Are you still alive? We're almost down."

The ship landed on its tail within a hundred yards of the *Algonquin*. Three men climbed out, into the deep snow. A fourth man brought down several pairs of snowshoes.

"He was sure right about those snowshoes, you know?"

They grouped together and examined a dial on one man's wrist.

"His radio's still on. This way!"

They pushed over the snow, stumbling over each other in their haste. After a mile they were moving slower, but still homing steadily toward the radio signal.

They found Radell crouched over a small fire. His radio lay a few yards from him, where, apparently, he had thrown it. He looked up as the men approached and tried to grin.

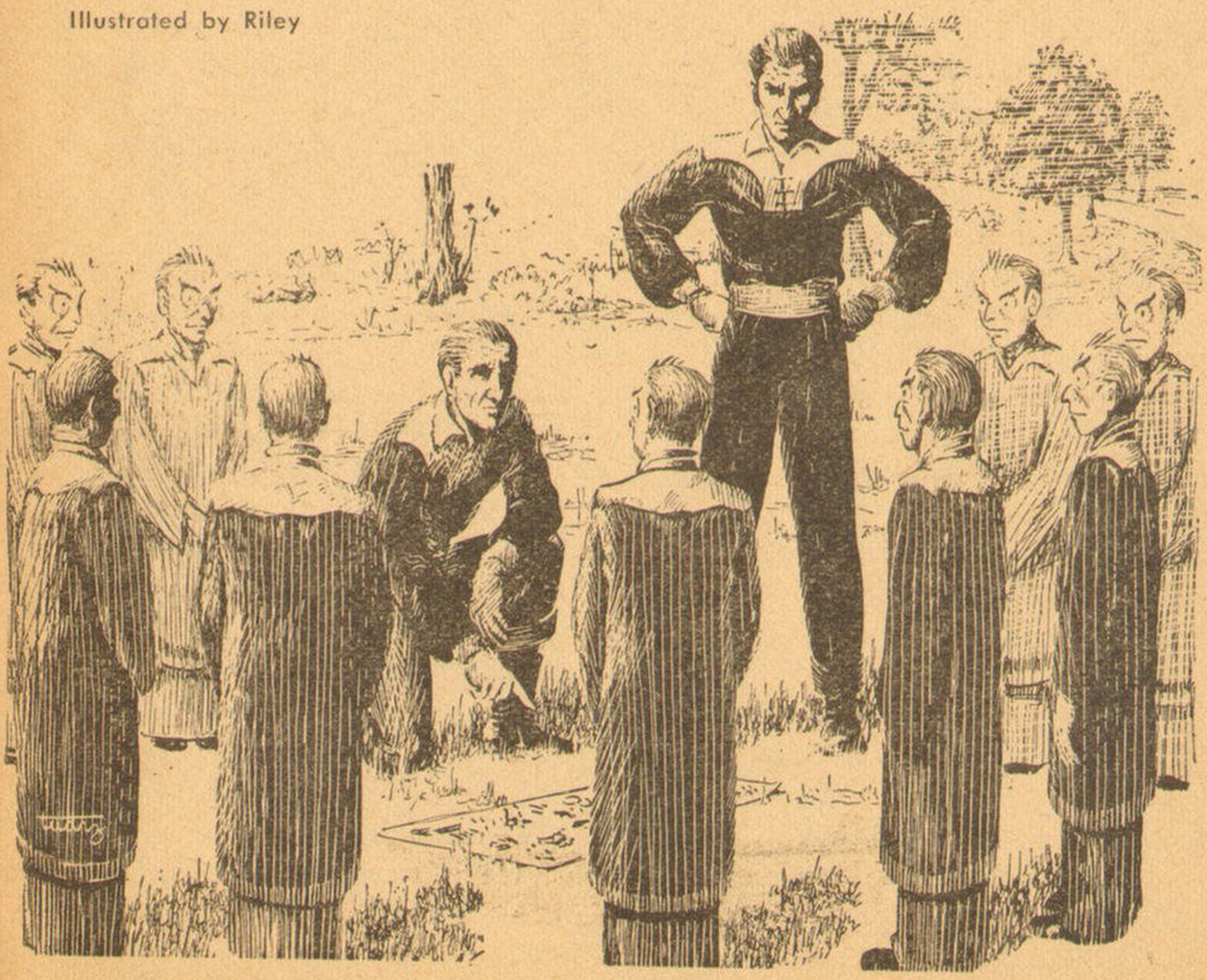
They saw his spacesuit on the ground, ripped open. Radell was feeding his fire with chunks of lining from the best and most expensive spacesuit man had ever devised.

THE WAITABITS

BY ERIC FRANK RUSSELL

There are a lot of reasons why a race might be unconquerable. Sometimes it isn't that you haven't the courage to do it, but something quite different. . . .

Illustrated by Riley



He strode toward the Assignment Office with quiet confidence born of long service, much experience and high rank. Once upon a time a peremptory call to this department had made him slightly edgy exactly as it unnerved the fresh-faced juniors today. But that had been long, long ago. He was gray-haired now, with wrinkles around the corners of his eyes, silver oak-leaves on his epaulettes. He had heard enough, seen enough and learned enough to have lost the capacity for surprise.

Markham was going to hand him a tough one. That was Markham's job: to rake through a mess of laconic, garbled, distorted or eccentric reports, pick out the obvious problems and dump them squarely in the laps of whoever happened to be hanging around and was considered suitable to solve them. One thing could be said in favor of this technique: its victims often were bothered, bedeviled or busted but at least they were never bored. The problems were not commonplace, the solutions sometimes fantastic.

The door detected his body-heat as he approached, swung open with silent efficiency. He went through, took a chair, gazed phlegmatically at the heavy man behind the desk.

"Ah, Commodore Leigh," said Markham pleasantly. He shuffled some papers, got them in order, surveyed the top one. "I am informed that the *Thunderer's* overhaul is complete, the crew has been recalled and everything is ready for flight."

"That is correct."

"Well now, I have a task for you." Markham put on the sinister smile that invariably accompanied such an announcement. After years of reading what had followed in due course, he had conceived the notion that all tasks were funny except when they involved a massacre. "You are ready and eager for another trip, I trust?"

"I am always ready," said Commodore Leigh. He had outgrown the eagerness two decades back.

"I have here the latest consignment of scout reports," Markham went on. He made a disparaging gesture. "You know what they're like. Condensed to the minimum and in some instances slightly mad. Happy the day when we receive a report detailed with scientific thoroughness."

"You'll get that only from a trained mind," Leigh commented. "Scouts are not scientists. They are oddities who like roaming the loneliest reaches of space with no company but their own. Pilot-trained hoboes willing to wander at large, take brief looks and tell what they've seen. Such men are useful and necessary. Their shortcomings can be made up by those who follow them."

"Precisely," agreed Markham with suspicious promptness. "So this is where we want you to do some following."

"What is it this time?"

"We have Boydell's latest report beamed through several relay stations. He is way out in the wilds." Markham tapped the paper irritably. "This particular scout is known as

Gabby Boydell because he is anything but that. He uses words as if they cost him fifty dollars apiece."

"Meaning he hasn't said enough?" asked Leigh, smiling.

"Enough? He's told us next to nothing!" He let go an emphatic snort. "Eighteen planets scattered all over the shop and not a dozen words about each. He discovers a grand total of eighteen planets in seven previously unexplored systems and the result doesn't occupy half a page."

"Going at that speed, he'd not have time for much more," Leigh ventured. "You can't write a book about a world without taking up residence for a while."

"That may be. But these crackpot scouts could do better and it's time they were told as much." He pointed an accusative finger. "Look at this item. The eleventh planet he visited. He has named it Pulok for some reason that is probably crazy. His report employs exactly four words: 'Take it and welcome.' What do you make of that?"

Leigh thought it over carefully. "It is inhabitable by humankind. There is no native opposition, nothing to prevent us grabbing it. But in his opinion it isn't worth possessing."

"Why, man, why?"

"I don't know, not having been there."

"Boydell knows the reason." Markham fumed a bit and went on, "And he ought to state it in precise, understandable terms. He shouldn't leave a mystery hanging in midair like a bad smell from nowhere."

"He will explain it when he returns to his sector headquarters, surely?"

"That may be months hence, perhaps years, especially if he manages to pick up fuel and replacement tubes from distant outposts. Those scouts keep to no schedule. They get there when they arrive, return when they come back. Galactic gypsies, that's how they like to think of themselves."

"They've chosen freedom," Leigh offered.

Ignoring that remark, Markham continued, "Anyway, the problem of Pulok is a relatively minor one to be handled by somebody else. I'll give it to one of the juniors; it will do something for his education. The more complicated and possibly dangerous tangles are for older ones such as yourself."

"Tell me the worst."

"Planet fourteen on Boydell's list. He has given it the name of Eterna and don't ask me why. The code formula he's registered against it reads $0/^{1}.^{1}/D.\ 7$. That means we can live on it without special equipment, it's an Earth-type planet of one-tenth greater mass and is inhabited by an intelligent life form of different but theoretically equal mental power. He calls this life form the Waitabits. Apparently he tags everything and everybody with the first name that pops into his mind."

"What information does he offer concerning them?"

"Hah!" said Markham, pulling a face. "One word. Just one word." He paused, then voiced it. "Unconquerable."

"Eh?"

"Unconquerable," repeated Markham. "A word that should not exist in scout-language." At that point he became riled, jerked open a drawer, extracted a notebook and consulted it. "Up to last survey, four hundred twenty-one planets had been discovered, charted, recorded. One hundred thirty-seven found suitable for human life and large or small groups of settlers placed thereon. Sixty-two alien life forms mastered during the process." He shoved the book back. "And out there in the dark a wandering tramp picks a word like unconquerable."

"I can think of only one reason that makes sense," suggested Leigh.

"What is that?"

"Perhaps they really are unconquerable."

Markham refused to credit his ears. "If that is a joke, commodore, it's in bad taste. Some might think it seditious."

"Well, can you think up another and better reason?"

"I don't have to. I'm sending you there to find out. The Grand Council asked specifically that you be given this task. They feel that if any yet unknown aliens have enough to put the wind up one of our own scouts then we must learn more about them. And the sooner the better."

"There's nothing to show that they actually frightened Boydell. If they had done so he'd have said more, much more. A genuine first-class menace is the one thing that would make him talk his head off."

"That's purely hypothetical," said Markham. "We don't want guesses. We want facts."

"All right."

"Consider a few other facts," Markham added. "So far no other life form has been able to resist us. I don't see how any can. Any creatures with an atom of sense soon see which side their bread is buttered, if they eat bread and like butter. If we step in and provide the brains while they furnish the labor, with mutual benefit to both parties, the aliens are soon doing too well for themselves to complain. If a bunch of Sirian Wimpots slave all day in our mines, then fly in their own helicopters back to homes such as their forefathers never owned, what have they got to cry about?"

"I fail to see the purpose of the lecture," said Leigh, dryly.

"I'm emphasizing that by force, ruthlessness, argument, persuasion, precept and example, appeal to common sense or any other tactic appropriate to the circumstances we can master and exploit any life-form in the cosmos. That's the theory we've been using for a thousand years—and it works. We've proved that it works. We have *made* it work. The first time we let go of it and admit defeat we're finished. We go down and disappear along with all the other vanished hordes." He swept his papers to one side. "A

scout has admitted defeat. He must be a lunatic. But lunatics can create alarm. The Grand Council is alarmed."

"So I am required to seek soothing syrup?"

"Yes. See Parrish in the charting department. He'll give you the coördinates of this Eterna dump." Standing up, he offered a plump hand. "A smooth trip and a safe landing, commodore."

"Thanks."

The *Thunderer* hung in a balanced orbit while its officers examined the new world floating below. This was Eterna, second planet of a sun very much like Sol. Altogether there were four planets in this particular family but only the second harbored life in any detectable form.

Eterna was a pretty sight, a great blue-green ball shining in the blaze of full day. Its land masses were larger than Earth's; its oceans smaller. No vast mountain ranges were visible, no snow-caps either, yet lakes and rivers were numerous. Watersheds lay in heavily forested hills that crinkled much of the surface and left few flat areas. Cloud-banks lay over the land like scatterings of cotton-wool, small in area, widely dispersed, but thick, heavy and great in number.

Through powerful glasses towns and villages could be seen, most of them placed in clearings around which armies of trees marched down to the rivers. There were also narrow, winding roads and thin, spidery bridges. Between the larger towns ran vague lines that might be railroad tracks but lacked sufficient detail at such a distance to reveal their true purpose.

Pascoe, the sociologist, put down his binoculars and said, "Assuming that the night side is very similar, I estimate their total strength at no more than one hundred millions. I base that on other planetary surveys. When you've counted the number of peas per bottle in a large and varied collection of them you develop the ability to make reasonably accurate guesses. One hundred millions at most."

"That's low for a planet of this size and fertility, isn't it?" asked Commodore Leigh.

"Not necessarily. There were no more of us in the far past. Look at us now."

"The implication is that these Waitabits are comparatively a young species?"

"Could be. On the other hand they may be old and senile and dying out fast. Or perhaps they're slow breeders and their natural increase isn't much."

"I don't go for the dying out theory," put in Walterson, the geophysicist. "If once they were far bigger than they are today, the planet should still show signs of it. A huge inheritance leaves its mark for centuries. Remember that city-site we found on Hercules? Even the natives didn't know of it, the markings being visible only from a considerable altitude."

They used their glasses again, sought for faint lines of orderliness in wide tracts of forest. There were none to be seen.

"Short in history or slow to breed," declared Pascoe. "That's my opinion for what it's worth."

Frowning down at the blue-green ball, Leigh said heavily, "By our space-experienced standards a world of one hundred millions is weak. It's certainly not sufficiently formidable to turn a hair on a minor bureaucrat, much less worry the Council itself." He turned, lifted a questioning eyebrow as a signals-runner came up to him. "Well?"

"Relay from Sector Nine, sir."

Unfolding the message, he found it duly decoded, read it aloud.

19.12. ex Terra. Defense H.Q. to C.O. battleship Thunderer. *Light cruiser* Flame, *Lieut. Mallory commanding, assigned your area for Pulok check. Twentieth heavy cruiser squadron readied Arlington port, Sector Nine. This authorizes you to call upon and assume command of said forces in emergency only. Rathbone. Com. Op. Dep. D.H.Q. Terra.*

He filed the message, shrugged and said, "Seems they're taking few chances."

"Yes," agreed Pascoe, a trifle sardonically. "So they've assembled reinforcements near enough to be summoned but too far away to do us any good. The *Flame* could not get here in less than seven weeks. The ships at Arlington couldn't make it in under nineteen or twenty weeks even at superdrive. By then we could be cooked, eaten, burped and forgotten."

"I don't see what all this jumpiness is about," complained Walterson. "That scout Boydell went in and came out without losing his edible parts, didn't he? Where one can go a million can follow."

Pascoe regarded him with pity. "A solitary invader rarely frightens anyone. That's where scouts have an advantage. Consider Remy 11. Fellow name of James finds it, lands, makes friends, becomes a blood brother, finally takes off amid a huzzah of fond farewells. Next, down comes three shiploads of men, uniforms and guns. That's too much for the locals to stomach. In Remitan psychology the number represents critical mass. Result: the Remy war which—if you remember your history—was long, costly and bitter."

"I remember history well enough to recall that in those primitive days they used blockheaded space-troopers and had no specially trained contactmen," Walterson retorted.

"Nevertheless, what has happened before can happen again."

"That's my problem right now," Leigh interjected. "Will the sight of a battleship a mile in length cause them to start something that can't be finished without considerable slaughter? Had I better risk the crew of a lifeboat in effort to smooth the introduction? I wish Boydell had been a little more informative." He chewed his bottom lip with vexation, picked up the intercom phone, flip-

ped the signals-room switch. "Any word from Boydell yet?"

"No, commodore," responded a voice. "Sector Nine doesn't think there will be any, either. They've just been through saying he doesn't answer their calls. They believe he's now out of range. Last trace they got of him showed him to be running beyond effective communication limits."

"All right." He dumped the phone, gazed through the port. "Seven hours we've waited. Nothing has come up to take a look at us. We can detect no signs of excitement down there. Therefore it's a safe bet that they have no ships, perhaps not even rudimentary aircraft. Neither do they keep organized watch on the sky. They're not advanced in our sense of the term."

"But they may be in some other sense," Pascoe observed.

"That is what I implied." Leigh made an impatient gesture. "We've hung within telescopic view long enough. If they are capable of formidable reaction, we should be grimly aware of it by now. I don't feel inclined to test the Waitabits at the expense of a few men in an unarmed lifeboat. We'll take the *Thunderer* itself down and hope they're sane enough not to go nuts."

Hastening forward to the main control-cabin he issued the necessary orders.

The landing place was atop a treeless bluff nine miles south of a large town. It was as good a site as any that could have been chosen. The settling of great tonnage over a mile-long area damaged nobody's property or crops, the ground was solid enough not to furrow under the ship's weight, the slight elevation gave a strategic advantage to the *Thunderer's* guns.

Despite its nearness the town was out of sight, being hidden by intervening hills. A narrow road ran through the valley but nothing moved thereon. Between the road and the base of the bluff lay double railroad tracks of about twenty-inch gauge with flat-topped rails of silvery metal. The rails had no spikes or ties and appeared to be held firmly in position by being sunk into long, unbroken ridges of concrete or some similar rocklike substance.

The *Thunderer* reposed, a long, black, ominous shape with all locks closed and gun-turrets open, while Leigh stared speculatively at the railroad and waited for the usual call from the metering lab. It came within short time. The phone rang, he answered it, heard Shallom speaking:

"The air is breathable, commodore."

"We knew that in advance. A scout sniffed it without dropping dead."

"Yes, commodore," agreed Shallom, patiently. "But you asked for an analysis."

"Of course. Because we don't know how long Boydell was here. Perhaps a day, perhaps a week. Whatever it was, it wasn't enough. He

might have curled up his toes after a month or two. In his brief visit he'd have avoided any long-term accumulative effect. What we want to know is whether this atmosphere is safe for keeps."

"Quite safe, commodore. It's rather rich in ozone and argon but otherwise much like Earth's."

"Good. We'll open up and let the men stretch their legs."

"There's something else of interest," Shallom went on. "Preliminary observation time occupied seven hours and twenty-two minutes. Over that period the longitudinal shift of a selected equatorial point amounted to approximately three-tenths of a degree. That means this planet's period of axial rotation is roughly equivalent to an Earth-year. Its days and nights are each about six months long."

"Thanks, Shallom." He cut off without surprise, switched the intercom, gave orders to Bentley in the main engine room to operate the power locks. Then he switched again to Lieutenant Harding, officer commanding ground forces, gave permission for one-quarter of his men to be let out for exercise providing they bore arms and did not stray beyond direct cover of the ship's guns.

That done, he swiveled his pneumatic chair to face the port, put his feet up with heels resting on a wall-ridge and quietly contemplated the alien landscape. Walterson and Pascoe mooched around the room in the restless manner of men waiting for a possibly burning fuse to reach a hypothetical gunpowder barrel.

Shallom phoned again, recited gravitational and magnetic field readings, went off. A few minutes later he came through once more with details of atmospheric humidity, barometric variations and radioactivity. Apparently he cared nothing for what might be brewing beyond the hills so long as it failed to register on his meters and screens. To his mind no real danger could exist without advertising itself through a needle-waggling or a fluourescent blip.

Outside, two hundred men scrambled noisily down the edge of the bluff, reached soft green sward that was not grass but something resembling short, heavily matted clover. There they kicked a ball around, wrestled, leapfrogged or were content to lie full length on the turf, look at the sky, enjoy the sun. A small group strolled half a mile to the silent railroad, inspected it, trod precariously along its rails with extended arms jerking and swaying in imitation of tightrope walkers.

Four of Shallom's staff went down, two of them carrying buckets and spades like kids making for the seashore. A third bore a bug-trap. The fourth had a scintilloscope. The first pair dug clover and dirt, hauled it up to the ship for analysis and bacteria-count. Bug-trap dumped his box, went to sleep beside it. Scintilloscope marched in a careful zigzag around the base of the bluff.

After two hours Harding's whistle recalled the outside lotus-eaters who responded with reluctance. They slouched back into the gigantic bottle that already had contained them so long. Another two hundred went out, played all the same tricks including the tightrope act on the rails.

By the time that gang had enjoyed its ration of liberty the mess bells announced a main meal ready. The crew ate, after which Number One Watch took to its berths and the deepest sleep within memory. A third freedom party cavorted on the turf. The indefatigable Shallom passed along the news that nine varieties of flea-sized bugs were awaiting introduction to Garside, the entomologist, whenever that worthy gentleman deigned to crawl out of bed.

By the time the fourth and last section of the crew returned from its two-hours spree, Pascoe had had enough. He was baggy-eyed from lack of slumber, disappointed with having curiosity left unsatisfied.

"More than seven hours waiting in the sky," he complained to Leigh, "and another eight down here. That's over fifteen hours all told. Where has it got us?"

"It has given the men a badly needed break," Leigh reproved. "The first rule of captaincy is to consider the men before considering an exterior problem. There is no real solution to any predicament unless there is also the means to apply it. The men are the means and more so than is the ship or any part of it. Men can build ships but ships cannot manufacture men."

"All right. They've had their outing. They are refreshed and their morale is boosted, all in accordance with the best psychological advice. What next?"

"If nothing turns up it will enable them to catch up on their sleep. The first watch is snoring its collective head off right now. The other two watches are entitled to their turn."

"But that means sitting idle for another eighteen hours," Pascoe protested.

"Not necessarily. The Waitabits may arrive at any time, in unguessable number, with unknown intentions and with unknown means of enforcing them. If so, everyone will have a rude awakening and you may get enough action to last you a lifetime." Leigh jerked a thumb toward the door. "Meanwhile, take to bed while the going is good. If trouble starts, it's likely to be days before you get another chance. Exhausted men are crippled men in a situation such as this."

"What about you?"

"I intend to slump into sweet dreams myself as soon as Harding is ready to take over."

Pascoe snorted with impatience, glanced at Walterson, gained no support from that quarter. Walterson was dozing on his feet at mere mention of bed. Pascoe snorted again, more loudly this time, departed with the other following.

They returned within ten hours,

found Leigh freshly shaved and spruced. A look through the port revealed the same landscape as before. Some two dozen of the crew were fooling around outside, beneath a sun that had not visibly changed position in the sky. The road still wound through the valley and over the hills without a soul upon it. The railroad track still reposed with all the impassive silence of a long abandoned spur.

Pascoe said, thoughtfully, "This is a good example of how one can deduce something from nothing."

"Meaning what?" inquired Leigh, showing interest.

"The town is nine miles away. We could walk there in about two hours. They've had several times that long in which to sound the alarm, summon the troops, launch an assault." He gestured toward the peaceful scene. "Where are they?"

"You tell us," Walterson prompted.

"Any life form capable of constructing roads and rails obviously must have eyes and brains. Therefore it is pretty certain that they've seen us either hanging above or coming down. I don't believe that they remain unaware of our existence." He studied his listeners, went on, "They haven't shown up because they're deliberately keeping away from us. That means they're afraid of us. And that in turn means they consider themselves far weaker, either as result of what they've seen of us so far or maybe as result of what they learned from contact with Boydell."

"I don't agree with that last bit," opined Leigh.

"Why not?"

"If they saw us either up above or coming down, what did they actually see? A ship and nothing more. They observed nothing to indicate that we are of Boydell's own kind though it would be reasonable to assume it. Factually, we're still a bunch of unknowns to them."

"That doesn't make hay of my reasoning."

"It spoils it on two counts," Leigh insisted. "Firstly, not having weighed and measured us, how can they tell that they're weaker? Secondly, Boydell himself called them unconquerable. That suggests strength. And strength of a redoubtable order."

"Look," said Pascoe, "it doesn't really matter whether they're stronger or weaker in their own estimation.

In the long run they can't buck the power of the human race. The cogent point right now is that of whether they are friendly or antagonistic."

"Well?"

"If friendly, they'd have been around dickering with us hours ago. There's no sign of them, not a spit or a button. Ergo, they don't like us. They've crawled into a hole because they lack the muscle to do something effective. They've ducked under cover hoping we'll go away and play some place else."

"An alternative theory," put in Walterson, "is that they're tough and formidable just as Boydell implied. They have kept their distance because they're wise enough to fight on ground of their own choosing and not on ours. If they refuse to come here, we've got to go there or accept stalemate. So they are making ready for us to walk into their parlor, after which"—he wiped a forefinger across his throat—"*skzzt!*"

"Bunk!" said Pascoe.

"We'll soon learn where we stand one way or the other," Leigh informed. "I've ordered Williams to get the helicopter out. The Waitabits can't avoid seeing that thing whooshing around. We'll learn plenty if they don't shoot it down."

"And if they do shoot it down?" inquired Pascoe.

"That question will be answered if and when it arises," Leigh assured. "You know as well as I do the law that hostility must not be accepted until demonstrated."

He went to the port, gazed across the scene to the tree-swathed hills beyond. After a while he reached for his binoculars, focused them upon the mid-distance.

"Holy smoke!" he said.

Pascoe ran to his side. "What's the matter?"

"Something's coming at last. And it's a train, no less." He handed over the glasses. "Take a look for yourself."

A dozen crewmen were on the track industriously filing from a rail sufficient metallic powder to be analyzed in the lab. They straightened up as the line conducted sounds of the newcomer's approach. Shading their eyes, they stood like men paralyzed while they gaped toward the east.

A couple of miles away the streamlined express came tearing around the base of a hill at nothing less than one and a half miles per hour. The men remained staring incredulously for ten minutes during which time the phenomenon covered a full quarter mile.

The *Thunderer*'s siren wailed a warning, the sample-takers recovered their wits and without undue exertion made more speed up the forty-degree bluff than the possible menace was doing on the flat. The last of them had sufficient presence of mind to bring with him an ounce of dust that Shallom later defined as titanium alloy.

Monstrous and imposing, the *Thunderer* sat waiting for first official contact. Every port held at least

three expectant faces watching the track and the train. Every mind took it for granted that the oncoming machine would halt at the base of the bluff and things weird in shape emerge therefrom in readiness to parley. Nobody thought for a moment that it might pass on.

It did pass on.

The train consisted of four linked metal coaches and no locomotive, the source of power not being evident. The tiny cars, less than the height of a man, rolled by holding a score of crimson-faced, owl-eyed creatures some of whom were looking absently at the floor, some at each other, out the sides, anywhere, but directly at the great invader atop the bluff.

From the time the train was first observed until realization dawned that it was not going to stop occupied precisely one hour and twenty-four minutes. That was its speed record from the eastward hill to the bluff.

Lowering his binoculars, Commodore Leigh said in baffled tones to Pascoe, "Did you get a clear, sharp view of them?"

"Yes. Red-faced with beak noses and blinkless eyes. One had his hand resting on a window ledge and I noticed it was five-fingered like ours but with digits more slender."

"Far less than walking pace," commented Leigh. "That's what it's doing. I can amble faster even with corns on both feet." He had another puzzled look outside. The train had gained forty yards in the interval. "I wonder whether the power Boydell attributed to them is based on some obscure form of cunning."

"How do you mean?"

"If they cannot cope with us while we hold the ship in force, they've got to entice us out of it."

"Well, we aren't out of it, are we?" Pascoe countered. "Nobody has developed a mad desire to catch that train. And, if anybody did, he'd overtake it so fast he'd get wherever it's going before he had time to pull up. I don't see how they can bait us into being foolhardy merely by crawling around."

"The tactic would be according to their own logic, not ours," Leigh pointed out. "Perhaps on this world to crawl is to invite attack. A wild-dog pack reacts that way: the animal that limps gets torn to pieces." He thought it over, continued, "I'm suspicious of this episode. I don't like the ostentatious way in which they all kept their eyes fixed on something else as they went past. It isn't natural."

"Hah!" said Pascoe, prepared to argue.

Leigh waved him down. "I know it's a childish blunder to judge any species by the standards of our own, but I still say it isn't natural to have eyes and not use them."

"On Terra," chipped in Walterson, seriously, "some folk have arms, legs, eyes and even brains that they don't use. That's because they have the misfortune to be incurably afflicted, as you know." He went on, encouraged by the other's silence.

"What if this track is a connecting link between the town and a sanatorium or hospital? Maybe its sole purpose is to carry sick people."

"We'll soon find out." Leigh resorted to the intercom. "Williams, is the 'copter ready yet?"

"Assembled and now being fueled, commodore. It can take off in ten minutes' time."

"Who is duty pilot?"

"Ogilvy."

"Tell him to fly ahead of that train and report what's at the other end of the tracks. He's to do that before taking a look at the town." He turned to the others, added, "Shallom should have a panorama of the whole area taken on the way down, but it won't provide the details Ogilvy can get us."

Pascoe, again standing at the port, asked, "How much slower is slower?"

"Eh?"

"When a thing is already creeping as though next year will do, how can you tell that it has decided to apply the brakes?" He elucidated further, "It may be my imagination but I fancy that train has reduced velocity by a few yards per hour. I hope none of its passengers suffered injury by being slung from one end to the other."

Leigh had a look. The train had now gone something less than half a mile from his observation point. The tedious speed and slight foreshortening made it impossible to decide whether or not Pascoe was correct. He had to keep watch a full fifteen minutes before he too agreed that the train was slowing down.

During that time the helicopter took off with a superfast *whoosh-whoosh* from whirling vanes. Soaring over the track, it fled ahead of the train, shrank into the hills until its plastic-egg cabin resembled a dewdrop dangling from a spinning sycamore seed.

Contacting the signals room, Leigh said, "Put Ogilvy's reports through the speaker here." He returned to the port, continued watching the train. All the crew not asleep or on duty were similarly watching.

"Village six miles along line," blared the speaker. "A second four miles farther on. A third five miles beyond that. Eight thousand feet. Climbing."

Five minutes later, "Six-coach train on tracks, headed eastward. Appears stalled from this height, but may be moving."

"Coming the other way and at a similar crawl," remarked Pascoe, glancing at Walterson. "Bang goes your sick people theory if that one also holds a bunch of zombies."

"Altitude twelve thousand," announced the loud-speaker. "Terminal city visible beyond hills. Distance from base twenty-seven miles. Will investigate unless recalled."

Leigh made no move to summon him back. There followed a long silence. By now the train was still less than a mile away and had cut progress down to about one yard per

minute. Finally it stopped, remained motionless for a quarter of an hour, began to back so gradually that it had inched twenty yards before watchers became certain that it had reversed direction. Leigh leveled powerful glasses upon it. Definitely it was returning to the base of the bluff.

"Funny thing here," bawled Ogilvy from the wall. "Streets full of people all struck stiff. It was the same in those villages now that I come to think of it. I went over them too fast for the fact to register."

"That's crazy," said Pascoe. "How can he tell from that height?"

"I'm hovering right over the main stem, a tree-lined avenue with crowded sidewalks," Ogilvy continued. "If anyone is moving, I can't detect it. Request permission to examine from five hundred."

Using the auxiliary mike linked through the signals room, Leigh asked, "Is there any evidence of opposition such as aircraft, gun emplacements or rocket pits?"

"No, commodore, not that I can see."

"Then you can go down but don't drop too fast. Sheer out immediately if fired upon."

Silence during which Leigh had another look outside. The train was continuing to come back at velocity definable as chronic. He estimated that it would take most of an hour to reach the nearest point.

"Now at five hundred," the loudspeaker declared. "Great Jupiter, I've never seen anything like it. They're moving all right. But they're so sluggish I have to look twice to make sure they really are alive and in action." A pause, then, "Believe it or not, there's a sort of street-car system in operation. A baby eighteen months old could toddle after one of those vehicles and catch it."

"Come back," Leigh ordered sharply. "Come back and report on the nearby town."

"As you wish, commodore." Ogilvy sounded as if he were obeying with reluctance.

"Where's the point of withdrawing him from there?" asked Pascoe, irritated by this abrupt cutting-off of data. "He's in no great danger. What will he learn from one place that he cannot get from another?"

"He can confirm or deny the thing that is all-important, namely, that conditions are the same elsewhere and are not restricted to one locale. When he's had a look at the town I'll send him a thousand miles away for a third and final check." His gray eyes were thoughtful as he went on, "In olden times a Martian visitor could have made a major blunder if he'd judged Earth by one of its last remaining leper colonies. Today we'd make precisely the same mistake if this happens to be a quarantined area full of native paralytics."

"Don't say it," put in Walterson, displaying some nervousness. "If we've sat down in a reservation for the diseased, we'd better get out mighty fast. I don't want to be smitten by any alien plague to which I've no natural resistance. I had a narrow

enough escape when I missed that Hermes expedition six years ago. Remember it? Within three days of landing the entire complement was dead, their bodies growing bundles of stinking strings later defined as a fungus."

"We'll see what Ogilvy says," Leigh decided. "If he reports what we consider more normal conditions elsewhere, we'll move there. If they prove the same, we'll stay."

"Stay," echoed Pascoe, his features expressing disgust. "Something tells me you picked the right word—*stay.*" He gestured toward the port beyond which the train was a long time coming. "If what we've seen and what we've heard has any meaning at all, it means we're in a prize fix."

"Such as what?" prompted Walterson.

"We can stay a million years or go back home. For once in our triumphant history we're well and truly thwarted. We'll gain nothing whatever from this world for a good and undefeatable reason, namely, life's too short."

"I'm jumping to no hasty conclusions," said Leigh. "We'll wait for Ogilvy."

In a short time the loud-speaker informed with incredulity: "This town is full of creepers, too. And trolleys making the same speed, if you can call it speed. Want me to go down and tell you more?"

"No," said Leigh into the mike. "Make a full-range sweep eastward. Loop out as far as you can go with safety. Watch especially for any radical variation in phenomena and, if you find it, report at once." He racked the microphone, turned to the others. "All we can do now is wait a bit."

"You said it!" observed Pascoe pointedly. "I'll lay odds of a thousand to one that Boydell did no more than sit futilely around picking his teeth until he got tired of it."

Walterson let go a sudden laugh that startled them.

"What's the matter with you?" demanded Pascoe, staring at him.

"One develops the strangest ideas sometimes," said Walterson apologetically. "It just occurred to me that if horses were snails they'd never be compelled to wear harness. There's a moral somewhere but I can't be bothered to dig it out."

"City forty-two miles eastward from base," called Ogilvy. "Same as before. Two speeds: dead slow and slower than dead."

Pascoe glanced through the port. "That train is doing less than bug-rate. I reckon it intends to stop when it gets here." He thought a bit, finished, "If so, we know one thing in advance: they aren't frightened of us."

Making up his mind, Leigh phoned through to Shallom. "We're going outside. Make a record of Ogilvy's remarks while we're gone. Sound a brief yelp on the alarm-siren if he reports rapid movement any place." Then he switched to Nolan, Hoffnagle and Romero, the

three communications experts. "Bring your Keen charts along in readiness for contact."

"It's conventional," reminded Pascoe, "for the ship's commander to remain in control of his vessel until contact has been made and the aliens found friendly or, at least, not hostile."

"This is where convention gets dumped overboard for once," Leigh snapped. "I'm going to pick on the load in that train. It's high time we made some progress. Please yourselves whether or not you come along."

"Fourteen villages so far," chipped in Ogilvy from far away over the hills. "Everyone in them hustling around at the pace that kills—with boredom. Am heading for city visible on horizon."

The communicators arrived bearing sheafs of colored charts. They were unarmed, being the only personnel forbidden to wear guns. The theory behind this edict was that obvious helplessness established confidence. In most circumstances the notion proved correct and communicators survived. Once in a while it flopped and the victims gained no more than decent burial.

"What about us?" inquired Walterson, eying the newcomers. "Do we take weapons or don't we?"

"We'll chance it without any," Leigh decided. "A life form sufficiently intelligent to trundle around in trains should be plenty smart enough to guess what will happen if they try to take us. They'll be right under the ship's guns while we're parleying."

"I've no faith in their ability to see reason as we understand it," Pascoe put in. "For all their civilized veneer they may be the most treacherous characters this side of Sirius." Then he grinned and added, "But I've faith in my legs. By the way these aliens get into action I'd be a small cloud of dust in the sunset before one of them could take aim."

Leigh smiled, led them through the main lock. Every port was filled with watching faces as they made their way down to the track.

Gun-teams stood ready in their turrets grimly aware that they could not beat off an attempted snatch except at risk of killing friends along with foes. But if necessary they could thwart it by wrecking the rails behind and ahead of the train isolating it in readiness for further treatment. For the time being their role was the static one of intimidation. Despite this world's apparent lack of danger there was a certain amount of apprehension among the older hands in the ship. A pacific atmosphere had fooled humans before and they were wary of it.

The six reached the railroad a couple of hundred yards in advance of the train, walked toward it. They could see the driver sat behind a glasslike panel in front. His big yellow eyes were staring straight ahead, his crimson face was without expression. Both his hands rested on knobbed levers and the sight of half a dozen other-worlders on the lines

did not make him so much as twitch a finger.

Leigh was first to reach the cab door and stretch out a hand to grasp incurable difficulty number one. He took hold of the handle, swung the door open, put a pleasant smile upon his face and uttered a cordial, "Hello!"

The driver did not answer. Instead, his eyeballs began to edge round sidewise while the train continued to pelt along at such a rate that it started pulling away from Leigh's hand. Perforce, Leigh had to take a step to keep level. The eyes reached their corners by which time Leigh was compelled to take another step.

Then the driver's head started turning. Leigh took a step. More turn. Another step. Behind Leigh his five companions strove to stay with him. It wasn't easy. In fact it was tough going. They could not stand still and let the train creep away. They could not walk without getting ahead of it. The result was a ludicrous march based on a hop-pause rhythm with the hops short and the pauses long.

By the time the driver's head was halfway round the long fingers of his right hand had started uncurling from the knob it was holding. At the same overstretched instant the knob commenced to rise on its lever. He was doing something, no doubt of that. He was bursting into action to meet a sudden emergency.

Still gripping the door, Leigh edged along with it. The others went hop-pause in unison. Pascoe wore the pained reverence of one attending the tedious funeral of a rich uncle who has just cut him out of his will. Imagination told Leigh what ribald remarks were being tossed around among the audience in the ship.

He solved the problem of reclaiming official dignity by simple process of stepping into the cab. That wasn't much better, though. He had avoided the limping procession but now had the choice of standing half-bent or kneeling on the floor.

Now the driver's head was right round, his eyes looking straight at the visitor. The knob had projected to its limit. Something that made hissing noises under the floor went silent and the train's progress was only that of its forward momentum against the brakes. A creep measurable in inches or fractions of an inch.

"Hello!" repeated Leigh, feeling that he had never voiced a sillier word.

The driver's mouth opened to a pink oval, revealed long, narrow teeth but no tongue. He shaped the mouth and by the time he'd got it to his satisfaction the listener could have smoked half a cigarette. Leigh perked his ears for the expected greeting. Nothing came out, not a sound, a note, a decibel. He waited a while, hoping that the first word might emerge before next Thursday. The mouth made a couple of slight changes in form while pink palps

at the back of it writhed like nearly dead worms. And that was all.

Walterson ceased ultraslow mooching on the tangled clover and called, "It has stopped, commodore."

Stepping backward from the cab, Leigh shoved hands deep into pockets and gazed defeatedly at the driver whose formerly blank face was now acquiring an expression of surprised interest. He could watch the features registering with all the lackadaisical air of a chameleon changing color and at about the same rate.

"This is a hell of a note," complained Pascoe, nudging Leigh. He pointed at the row of door handles projecting from the four cars. Most of them had tilted out of the horizontal and were moving a degree at a time toward the vertical. "They're falling over themselves to get out."

"Open up for them," Leigh suggested.

Hoffnagle, who happened to be standing right by an exit, obligingly twisted a handle and lugged the door. Out it swung complete with a clinging passenger who hadn't been able to let go. Dropping his contact charts, Hoffnagle dexterously caught the victim, planted him on his feet. It took forty-eight seconds by Romero's watch for this one to register facial reaction which was that of bafflement.

After this, doors had to be opened with all the caution of a tax collector coping with a mysterious parcel that ticks. Pascoe, impatient as usual, hastened the dismounting process by lifting aliens from open doorways and standing them on the green sward. The quickest witted one among the lot required a mere twenty-eight seconds to start mulling the problem of how he had passed from one point to another without crossing intervening space. He would solve that problem—given time.

With the train empty there were twenty-three Waitabits hanging around. None exceeded four feet in height or sixty pounds Eterna-weight. All were well-clothed in manner that gave no clue to sex. Presumably all were adults, there being no tiny specimens among them. Not one bore anything remotely resembling a weapon.

Looking them over Leigh readily conceded that no matter how sluggish they might be they were not dopey. Their outlandishly colored features held intelligence of a fairly high order. That was already self-evident from the tools they made and used, such as this train, but it showed in their faces, too.

The Grand Council, he decided, had good cause for alarm in a way not yet thought of by its members. If the bunch standing before him were truly representative of their planet, then they were completely innocuous. They embodied no danger whatsoever to Terran interests anywhere in the cosmos. Yet, at the same time, they *implied* a major menace of which he hated to think.

With their easily comprehensive charts laid out on the ground the three communicators prepared to ex-

plain their origin, presence and purposes by an effective sign-and-gesture technique basic for all first contacts. The fidgety Pascoe speeded up the job by arranging Waitabits in a circle around the charts, picking them up like so many lethargic dolls and placing them in position.

Leigh and Walterson went to have a look at the train. If any of its owners objected to this inspection, they didn't have enough minutes in which to do something about it.

The roofs of all four cars were of pale yellow, transparent plastic extending down the sides to a line flush with the door-tops. Beneath the plastic lay countless numbers of carefully arranged silicon wafers. Inside the cars, beneath plates forming the center aisles, were arrays of tiny cylinders rather like nickel-alloy cells. The motors could not be seen, they were hidden beneath small driving-cabs of which there was one to each car.

"Sun power," said Leigh. "The prime motive force is derived from those solar batteries built into the roofs." He paced out the length of a car, made an estimate. "Four feet by twenty apiece. Including the side-strips, that's six-forty square feet of pickup area."

"Nothing marvelous about it," ventured Walterson, unimpressed. "They use better ones in the tropical zones of Earth and have similar gadgets on Dramonia and Werth."

"I know. But here the nighttime lasts six months. What sort of storage batteries will last that long without draining? How do they manage to get around on the night-side? Or does all transport cease while they snore in bed?"

"Pascoe could make a better guess at their boudoir habits. For what it's worth, I'd say they sleep, six months being to them no more than a night is to us. Anyway, why should we speculate about the matter? We'll be exploring the night-side sooner or later, won't we?"

"Yes, sure. But I'd like to know whether this contraption is more advanced in any single respect than anything we've got."

"To discover that much we'd have to pull it to pieces," Walterson ob-

jected. "Putting Shallom and his boys on a wrecking job would be a lousy way of maintaining friendship. These Waitabits wouldn't like it even though they can't stop us."

"I'm not that hamhanded," Leigh reproved. "Apart from the fact that destruction of property belonging to nonhostile aliens could gain me a court-martial, why should I invite trouble if we can get the information from them in exchange for other data? Did you ever hear of a genuinely intelligent life form that refused to swap knowledge?"

"No," said Walterson. "And neither did I ever hear of one that took ten years to pay for what it got in ten minutes." He grinned with malicious satisfaction, added, "We're finding out what Boydell discovered, namely, that you've got to give in order to receive—and in order to receive you've got to wait a bit."

"Something inside of me insists that you're dead right." Leigh shrugged and went on, "Anyway, that's the Council's worry. Right now we can do no more until the contact men make their report. Let's get back to the ship."

They mounted the bluff. Seeing them go, Pascoe hastened after them, leaving the trio of communicators to play with Keen charts and make snakes of their arms.

"How's it going?" Leigh inquired as they went through the lock.

"Not so good," said Pascoe. "You ought to try it yourself. It would make you whirly."

"What's the trouble?"

"How can you synchronize two values when one of them is unknown? How can you make rhythm to a prolonged and completely silent beat? Every time Hoffnagle uses the orbit-sign he is merely demonstrating that the quickness of the hand deceives the eye so far as the audience is concerned. So he slows, does it again and it still fools them. He slows more." Pascoe sniffed with disgust. "It's going to take those three luckless characters all of today and maybe most of a week to find, practice and perfect the quickest gestures that register effectively. They aren't teaching anybody anything—they're learning themselves. It's time-and-motion study with a vengeance."

"It has to be done," Leigh remarked quietly. "Even if it takes a lifetime."

"*Whose* lifetime?" asked Pascoe, pointedly.

Leigh winced, sought a satisfactory retort, failed to find one.

At the corner of the passageway Garside met them. He was a small, excitable man whose eyes looked huge behind thick spectacles. The great love of his life was bugs, any size, shape, color or origin so long as they were bugs.

"Ah, commodore," he exclaimed, bubbling with enthusiasm, "a most remarkable discovery, most remarkable! Nine species of insect life, none really extraordinary in structure, but all afflicted with an amazing lassitude. If this phenomenon is common to all native insects, it

would appear that local metabolism is—"

"Write it down for the record," advised Leigh, patting him on the shoulder. He hastened to the signals room. "Anything special from Ogilvy?"

"No, commodore. All his messages have been repeats of his first ones. He is now most of the way back and due to arrive here in about an hour."

"Send him to me immediately he returns."

"As you order, sir."

Ogilvy appeared in the promised time. He was a lanky, lean-faced individual given to irritating grins. Entering the room he held hands behind his back, hung his head and spoke with mock shame.

"Commodore, I have a confession to make."

"So I see from the act you're putting on. What is it?"

"I landed, without permission, right in the main square of the biggest city I could find."

Leigh raised his eyebrows. "And what happened?"

"They gathered around and stared at me."

"Is that all?"

"Well, sir, it took them twenty minutes to see me and assemble, by which time the ones farther away were still coming. I couldn't wait any longer to discover what they'd do next. I estimated that if they fetched some rope and tied down my landing gear they'd have the job finished about a year next Christmas."

"Humph! Were things the same everywhere else?"

"Yes, sir. I passed over more than two hundred towns and villages, reached extreme range of twelve fifty miles. Conditions remained consistent." He gave his grin, continued, "I noticed a couple of items that might interest you."

"What were those?"

"The Waitabits converse with their mouths but make no detectable noises. The 'copter has a supersonic converter known as Bat-ears which is used for blind flying. I tuned its receiver across its full range when in the middle of that crowd but didn't pick up a squeak. So they're not talking high above us. I don't see how they can be subsonic either. It must be something else."

"I've had a one-sided conversation with them myself," Leigh informed. "It may be that we're overlooking the obvious while seeking the obscure."

Ogilvy blinked and asked, "How d'you mean, sir?"

"They're not necessarily employing some unique faculty such as we cannot imagine. It is quite possible that they communicate visually. They gaze into each other's gullets and read the waggling palps. Something like you semaphoring with your tonsils." He dismissed the subject with a wave of his hand. "And what's your other item?"

"No birds," replied Ogilvy. "You'd think that where insects ex-

ist there would also be birds or at least things somewhat birdlike. The only airborne creature I saw was a kind of membrane-winged lizard that flaps just enough to launch itself then glides to wherever it's going. On Earth it couldn't catch a weary gnat."

"Did you make a record of it?"

"No, sir. The last magazine was in the camera and I didn't want to waste strip. I didn't know if anything more important might turn up later."

"All right."

Leigh watched the other depart, picked up the phone, said to Shallom, "If those 'copter reels prove sharp enough for long-range beaming, you'd better run off an extra copy for the signals room. Have them boost it to Sector Nine for relay to Earth."

As he put down the phone Romero entered looking desperate. "Commodore, could you get the instrument mechs to concoct a phenakistoscope with a revolution-counter attached?"

"We can make anything, positively anything," chimed in Pascoe from near the port. "Given enough centuries in which to do it."

Ignoring the interruption, Leigh asked, "What do you want it for?"

"Hoffnagle and Nolan think we could use it to measure the precise optical register of those sluggards outside. If we can find out at what minimum speed they see pictures merge into motion it would be a great help."

"Wouldn't the ship's movie projector serve the same purpose?"

"It isn't sufficiently variable," Romero objected. "Besides, we can't operate it independently of our own power supply. A phenakistoscope can be carried around and cranked by hand."

"This becomes more fascinating every moment," Pascoe interjected. "It can be cranked. Add a few more details and I'll start to get a hazy idea of what the darned thing is."

Taking no notice of that either, Leigh got through to Shallom again, put the matter to him.

"Holy Moses!" ejaculated Shallom. "The things we get asked for! Who thought up that one?" A pause, followed by, "It will take two days."

"Two days," Leigh repeated to Romero.

The other looked aghast.

"What's eating you?" asked Pascoe. "Two days to get started on measuring visual retention is mighty fast in this world. You're on Eterna now. Adapt, boy, adapt!"

Leigh eyed Pascoe carefully and said, "Becoming rather pernickety this last hour or two, aren't you?"

"Not yet. I have several dregs of patience left. When the last of them has trickled away you can lock me in the brig because I'll be nuts."

"Don't worry. We're about to have some action."

"Haha!" said Pascoe disrespectfully.

"We'll drag out the patrol wagon, go to town and have a look around in the middle of them."

"About time, too," Pascoe indorsed.

The armored, eight-seater car rumbled down the ramp on heavy caterpillars, squatted in the clover. Only a short, flared nozzle in its bonnet and another in its tail revealed the presence of button-controlled snort-guns. The boxed lens on its roof belonged to an automatic camera. The metal whip atop the box was a radio antenna.

They could have used the helicopter which was capable of carrying four men with equipment but, once landed, that machine would be of little good for touring the streets.

Leigh shared the front seat with Lieutenant Harding and the duty driver. Behind him were two of Harding's troop and Pascoe. At back sat the radio operator and the snort gunner. Walterson, Garside and all the other specialists remained with the ship.

Rolling forward, they passed the circle of Waitabits who were now sitting cross-legged in the turf and staring at a Keen chart which Nolan was exhibiting with an air of complete frustration. Nearby, Hoffnagle was masticating his nails while trying to decide how much of the lesson was being absorbed and how much missed. Not one of this bunch showed slightest surprise when the car charged down the steep bluff and clattered by them.

With jerks and heaves the car crossed the lines behind the stalled train, gained the road. Here the surface proved excellent, the running smooth. The artery would have done justice to a Terran racing-track. Before they had gone five miles they encountered an alien using it for exactly that.

This one half-sat, half-reclined in a long, narrow, low-slung single-seater that had "hot-rod" written all over it. He came along like a maniac, face strained, eyes popping, hands clinging firmly to the wheel. According to the photoelectric telltale on the patrol wagon's instrument board he roared past them at fifty-two and a quarter miles per hour. Since the speedometer on the same board recorded precisely fifty, it meant that the other was going all out at a harrowing two and a quarter.

Twisting his head to gaze through the rear window, Pascoe said, "As a sociologist I'll tell you something authoritatively; some of this crowd are downright reckless. If that lunatic is headed for the city now about thirty miles away he'll make it in as little as twelve hours." Then he frowned, became serious as he added, "Seeing that their reactions are in keeping with their motions, one being as tedious as the other, it wouldn't surprise me if they have traffic problems comparable with those of any other world."

Nobody got a chance to comment on that. The entire eight bowed in unison as the brakes went on They were entering the suburbs with pedestrians, cars and trolleys littering the streets. After that it was strictly

bottom gear work; the driver had to learn a completely new technique and it wasn't easy.

Crimson-faced people in the same sexless attire ambled across the roads in manner suggesting that for two pins they'd lie down and go to sleep. Some moved faster than others but the most nimble ones among the lot were an obstacle for an inordinate while. Not one halted and gaped at the invading vehicle as it trundled by, but most of them stopped and took on a baffled expression by the time they'd been left a mile behind.

To Leigh and his companions there was a strong temptation to correlate slowness with stupidity. They resisted it. Evidence to the contrary was strong enough not to be denied.

The streets were level, straight and well-made, complete with sidewalks, gulleys and drains. No buildings rose higher than sixty feet but all were solidly built and far from primitive. Cars were not numerous by Terran standards but had the appearance of engineering jobs of no mean order. The street-trolleys were small, sun-powered, languidly efficient and bore two dozen passengers apiece.

For a few minutes they halted near a building in course of construction, maintained attention upon a worker laying a brick, estimated that the job required twenty minutes. Three bricks per hour.

Doing some fast figuring, Leigh said, "Taking their days and nights as six months apiece and assuming they put in the equivalent of an eight-hour day, that fellow is laying something over a thousand bricks per hour." He pursed his lips, gave a brief whistle. "I know of no life form capable of building half as fast. Even on Earth it takes a robot to equal it."

The others considered that aspect of the matter in silence. The patrol wagon moved on, reached a square in which was a civic car-park containing some forty machines. The sight was irresistible. Driving straight in past two uniformed attendants they lined their vehicle neatly at the end of a row. The attendants' eyeballs started edging around.

Leigh spoke to the driver, radioman and gunner. "You three stay here. If anyone interferes, pick him up, put him down a hundred yards away and leave him to try all over again. If they show signs of getting organized to blow you sky-high, just move the wagon to the other end of the park. When they catch you up, move back here."

"Where are you going?" inquired Harding.

"Over there." He pointed toward an official-looking building. "To save time I'd like you, your men and Pascoe to try the other places. Take one apiece, go inside, see if you can learn anything worth picking up." He glanced at his watch. "Be back promptly at three. No dallying. The laggard will be left to take a nine-mile walk."

Starting off, he found an attendant

twenty yards away and moving toward him with owl-eyes wide. Going boldly up to him, he took the book of tickets from an unresisting hand, tore one off, pressed the book back into crimson fingers, added a silver button by way of payment and passed on. He derived amused satisfaction from that honest gesture. By the time he'd crossed the square and entered the building the recipient had got around to examining the button.

At three they returned to find chaos in the square and no sign of the patrol wagon in the park. A series of brief wails on its siren drew them to a side street where it was waiting by the curb.

"Slow as they may be they can get places given long enough," said the driver. "They started creeping around us in such numbers that we looked like being hemmed in for keeps. We wouldn't have been able to get out without running over fifty of them. I beat it while there was still a gap to drive through." He pointed through the windshield. "Now they're making for here. The tortoise chasing the hare."

One of Harding's men, a grizzled veteran of several space-campaigns, remarked, "It's easier to cope when you're up against guppies that are hostile and fighting mad. You just shoot your way out." He grunted a few times. "Here, if you sit around too long you've got to let yourself be trapped or else run over them in cold blood. That's not my idea of how to do things." Another grunt. "Hell of a planet. The fellow who found it ought to be made to live here."

"Find anything in your building?" Leigh asked him.

"Yes, a dozen cops."

"What?"

"Cops," repeated the other. "It was a police station. I could tell because they all had the same uniforms, all carried duralumin bludgeons. And there were faces on the wall with queer printing beneath. I can't recognize one face from another. They are all alike to me. But something told me those features hadn't been stuck to the wall to commemorate saintliness."

"Did they show any antagonism toward you?"

"They didn't get the chance," he said with open contempt. "I just kept shifting around looking at things and that had them foxed."

"My building was a honey," informed Pascoe. "A telephone exchange."

Leigh twisted around to stare at him. "So they are supersonic speakers after all?"

"No. They use scanners and three-inch visiscreens. If I've looked down one squirming gizzard, I've looked down twenty. What's more, a speaker sometimes removes his palps from the screen and substitutes a sort of slow-motion display of deaf-and-dumb talk with his fingers. I have a vague idea that some of those digital acrobatics represented vitriolic cussing."

The driver put in nervously, "If

we squat here much longer the road will be blocked both ends."

"Then let's get out while there's time."

"Back to the ship, sir?"

"Not yet. Wander around and see if you can find an industrial area."

The car rolled forward, went cautiously past a bunch of oncoming pedestrians, avoided the crowded square by trundling down another side street.

Lying back in comfort, Pascoe held hands together over his stomach and inquired interestedly, "I suppose none of you happened to find himself in a fire station?"

Nobody had.

"That's what I'd give a thousand credits to see," he said. "A couple of pumps and a hook-and-ladder squad bursting out to deal with a conflagration a mile away. The speed of combustion is no less on this world than on our own. It's a wonder to me the town hasn't burned down a dozen times."

"Perhaps it has," offered Harding. "Perhaps they're used to it. You can get accustomed to anything in the long run."

"In the long run," agreed Pascoe. "Here it's long enough to vanish into the mists of time. And it's anything but a run." He glanced at Leigh. "What did you walk into?"

"A public library."

"That's the place to dig up information. How much did you get?"

"One item only," Leigh admitted with reluctance. "Their printed language is ideographic and employs at least three thousand characters."

"There's a big help," said Pascoe, casting an appealing glance heavenward. "Any competent linguist or trained communicator should be able to learn it from them. Put Hoffnagle on the job. He's the youngest among us and all he needs is a couple of thousand years."

The radio burped, winked its red eye, and the operator switched it on. Shallom's voice came through.

"Commodore, an important-looking specimen has just arrived in what he probably thinks of as a racing car. It may be that he's a bigwig appointed to make contact with us. That's only our guess but we're trying to get confirmation of it. I thought you'd like to know."

"How's progress with him?"

"No better than with the others. Possibly he's the smartest boy in college. Nevertheless, Nolan estimates it will take most of a month to convince him that Mary had a little lamb."

"Well, keep trying. We'll be returning shortly." The receiver cut off and Leigh added to the others, "That sounds like the road-hog we passed on the way here." He nudged the driver, pointed leftward. "That looks like a sizable factory. Stop outside while I inspect it."

He entered unopposed, came out after a few minutes, told them, "It's a combined flour-mill, processing and packaging plant. They're grinding up a mountain of nut-kernels, probably

from surrounding forests. They've a pair of big engines down in the basement that beat me. Never seen anything like them. I think I'll get Bentley to come and look them over. He's the expert on power supplies."

"Big place for a mill, isn't it?" ventured Harding.

"They're converting the flour into about twenty forms. I took a lick at some of it."

"What did it taste like?"

"Bill-sticker's paste." He nudged the driver again. "There's another joint." Then to Harding, "You come with me."

Five minutes later they returned and said, "Boots, shoes and slippers. And they're making them fast."

"Fast?" echoed Pascoe, twitching his eyebrows.

"Faster than they can follow the process themselves. The whole layout is fully automatic and self-arresting if anything goes wrong. Not quite as good as we've got on Earth but not so far behind, either." Leigh sat with pursed lips, musing as he gazed through the windshield. "I'm going back to the ship. You fellows can come for further exploration if you wish."

None of them registered enthusiasm.

There was a signal waiting on the desk, decoded and typed.

C.O. Flame *to C.O.* Thunderer. *Atmosphere Pulok analyzed good in fact healthy. So instruments insist. Noses say has abominable stench beyond bearing. Should be named Puke. Proceeding Arlington Port 88.137 unless summoned by you. Mallory.*

Reading it over Leigh's shoulder, Pascoe commented, "That Boydell character has a flair for picking ugly ones right out of the sky. Why doesn't someone choke him to death?"

"Four hundred twenty-one recorded in there," reminded Leigh, tapping his big chart book. "And about two-thirds of them come under the heading of ugly ones."

"It would save a lot of grief if the scouts ignored those and reported only the dumps worth having."

"Grief is the price of progress, you know that." Leigh hurriedly left his desk, went to the port as something whirred outside. He picked up the phone. "Where's the 'copter going?"

"Taking Garside and Walterson some place," replied a voice. "The former wants more bugs and the latter wants rock-samples."

"All right. Has that film been finished yet?"

"Yes, commodore. It has come out good and clear. Want me to set it up in the projection room?"

"You might as well. I'll be there right away. Have somebody get to work on the magazine in the patrol wagon. About half of it has been exposed."

"As you order, sir."

Summoning the rest of the specialist staff, of whom there were more than sixty, he accompanied them to the projection room, studied the record of Ogilvy's survey. When

it had finished the audience sat in glum silence. Nobody had anything to say. No comment was adequate.

"A nice mess," griped Pascoe after they had returned to the main cabin. "In the last one thousand years the human race has become wholly technological. Even the lowest ranking space-marine is considerably of a technician, especially by standards of olden times."

"I know." Leigh frowned futilely at the wall.

"We are the brains," Pascoe went on, determined to rub salt into the wounds. "And because we're the brains we naturally dislike providing the muscle as well. We're a cut above the mere hewing of wood and drawing of water."

"You're telling me nothing."

Down to telling it anyway, Pascoe continued, "So we've planted settlers on umpteen planets. And what sort of settlers are they? Bosses, overseers, boys who inform, advise, point and tell while the less advanced do the doing."

Leigh offered no remark.

"Suppose Walterson and the others find this lousy world rich in the things we need," he persisted. "How are we going to get at the stuff short of excavating it ourselves? The Waitabits form a big and probably willing labor force but what's the use of them if the most rudimentary job gets completed ten, twenty or fifty years hence? Who's going to settle here and become a beast of burden as the only way of getting things done in jig time?"

"Ogilvy went over a big dam and what looked like a hydroelectric plant," observed Leigh, thoughtfully. "On Earth the entire project might have cost two years at most. How long it required here is anyone's guess. Two hundred years perhaps. Or four hundred. Or more." He tapped fidgety fingers on his desk. "It worries me."

"We're not worried. We're frustrated. It's not the same thing."

"I tell you I'm worried. This planet is like a lighted fuse long ignored but now noticed. I don't know where it leads or how big a bang is waiting at the other end."

"That's frustration," insisted Pascoe, completely missing the point because he hadn't thought of it yet. "We're thwarted and don't like it. We're the irresistible force at long last meeting the immovable object. The bang is within our own minds. No *real* explosion big enough to shake us can ever come from this world's life forms. They're too slow to catch cold."

"I'm not bothered about them in that respect. They worry me by their very existence."

"There always have been sluggards, even on our own world."

"Precisely!" indorsed Leigh with emphasis. "And that is what's raising my hackles right now."

The loud-speaker interrupted with a polite cough and said, "Ogilvy here, sir. We've picked up granite chippings, quartz samples and other stuff. At the moment I'm at sixteen thousand feet and can see the ship in the

distance. I don't like the looks of things."

"What's the matter?"

"The town is emptying itself. So are nearby villages. They've taken to the road in huge numbers and started heading your way. The vanguard should reach you in about three hours." A brief silence, then, "There's nothing to indicate hostile intentions, no sign of an organized advance. Just a rabble motivated by plain curiosity as far as I can tell. But if you get that mob gaping around the ship you won't be able to move without incinerating thousands of them."

Leigh thought it over. The ship was a mile long. Its lifting blasts caroomed half a mile each side and its tail blast was equally long. He needed about two square miles of clear ground from which to take off without injury to others.

There were eleven hundred men aboard the *Thunderer*. Six hundred were needed to attend the boost. That left five hundred to stay grounded and keep the mob at bay around the perimeter of two square miles. And they'd have to be transferred by 'copter, a few at a time, to the new landing place. Could it be done? It could—but it was hopelessly inefficient.

"We'll move a hundred miles before they get here," he informed Ogilvy. "That should hold them for a couple of days."

"Want me to come in, sir?"

"Please yourself."

"The passengers aren't satisfied and want to add to their collections. So I'll stay out. If you drop out of sight I'll home on your beacon."

"Very well." Leigh turned to the intercom. "Sound the siren and bring in those yaps outside. Check crew all present and correct. Prepare to lift."

"Rule Seven," said Pascoe, smirking. "Any action causing unnecessary suffering to nonhostile life will be deemed a major offense under the Contact Code." He made a derisive gesture. "So they amble toward us like a great army of sloths and we have to tuck in our tails and run."

"Any better solution?" Leigh asked, irritably.

"No. Not one. That's the devil of it."

The siren yowled. Soon afterward the *Thunderer* began a faint but steady shuddering as combustion chambers and venturis warmed up. Hoffnagle rushed into the cabin. He had a roll of crumpled Keen charts in one fist and a wild look in his eyes.

"What's the idea?" he shouted, flourishing the charts and forgetting to say "sir." "Two successive watches we've spent on this, given up our off-duty time into the bargain, and have just got one of them to make the orbit-sign. Then you recall us." He waited, fuming.

"We're moving."

"Moving?" He looked as if he'd never heard of such a thing. "Where?"

"A hundred miles off."

Hoffnagle stared incredulously, swallowed hard, opened his mouth, closed it, opened it once more. "But that means we'll have to start over again with some other bunch."

"I'm afraid so," agreed Leigh. "The ones you've been trying to talk to could come with us but it would take far too long to make them understand what's wanted. There's nothing for it but to make a new start."

"No!" bawled Hoffnagle, becoming frenzied. "Oh, no! Anything but that!"

Behind him, Romero barged in and said, "Anything but what?" He was breathing heavily and near the end of his tether.

Trying to tell him the evil news, Hoffnagle found himself lost for words, managed no more than a few feeble gestures.

"A communicator unable to communicate with another communicator," observed Pascoe, showing academic interest.

"They're shifting the ship," Hoffnagle got out with considerable effort. He made it sound dastardly.

Releasing a violent, *"What?"* Romero went two shades redder than the Waitabits. In fact, for a moment he looked like one as he stood there pop-eyed and half-paralyzed.

"Get out," snapped Leigh. "Get out before Nolan comes in and makes it three to two. Go some place where you can cool down. Remember, you're not the only ones caught in this fix."

"No, maybe we aren't," said Hoffnagle, bitterly. "But we're the only

ones carrying the entire onus of—"

"Everybody's carrying onuses of one sort or another," Leigh retorted. "And everybody's well and truly bollixed by them. Beat it before I lose my own temper and summon an escort for you."

They departed with unconcealed bad grace. Leigh sat at his desk, chewed his bottom lip while he tended to official papers. Twenty minutes went by. Finally, he glanced at the wall chronometer, switched the intercom, spoke to Bentley.

"What's holding us up?"

"No signal from control room, sir."

He re-switched to control room. "What are we waiting for?"

"That bunch from the train is still lounging within burning distance, commodore. Either nobody's told them to go back or, if they have been told, they haven't got around to it yet."

Leigh seldom swore but he did it this time, one potent word uttered with vigor. He switched a third time, got Harding.

"Lieutenant, rush out two platoons of your men. They are to return all those alien passengers to their train. Pick them up, carry them there, tuck them into it and return as quickly as possible."

He resumed with his papers while Pascoe sat in a corner nibbling his fingers and grinning to himself. After half an hour Leigh voiced the word again and resorted to the intercom.

"What is it now?"

"Still no signal, commodore," said Bentley in tones of complete resignation.

On to the control room. "I gave the order to lift immediately there's clearance. Why haven't we done so?"

"One alien is still within the danger area, sir."

Next to Harding. "Didn't I tell you to get those aliens onto their train?"

"Yes, sir, you did. All passengers were restored to their seats fifteen minutes ago."

"Nonsense, man! They've left one of them hanging around and he's holding up the entire vessel."

"That one is not from the train, sir," said Harding, patiently. "He arrived in a car. You gave no order concerning him."

Leigh used both hands to scrabble the desk, then roared, "Get him out of it. Plant him in his contraption and shove it down the road. At once." Then he lay back in his chair and muttered to himself.

"How'd you like to resign and buy a farm?" Pascoe asked.

The new landing-point was along the crest of the only bald hill for miles around. Charred stumps provided evidence of a by-gone forest fire which had started on the top, spread down the sides until halted, probably by heavy rain.

Thickly wooded hills rolled away in every direction. No railroad tracks ran nearby but there was a road in the valley and a winding river be-

yond it. Two villages were visible within four miles distance and a medium-sized town lay eleven miles to the north.

Experience of local conditions enabled a considerable speed-up in investigation. Earnshaw, the relief pilot, took out the 'copter with Walterson and four other experts crowded inside. The patrol wagon set off to town bearing a load of specialists including Pascoe. Three botanists and an arboriculturalist took to the woods accompanied by a dozen of Harding's men who were to bear their spoils.

Hoffnagle, Romero and Nolan traipsed cross-country to the nearest village, spread their explanatory charts in the small square and prayed for a rural genius able to grasp the meaning of a basic gesture in less than a week. A bunch of ship's engineers set forth to examine lines strung on lattice masts across hills to the west and south.

A piscatorial expert, said to have been conditioned from birth by the cognomen of Fish, sat for hours on the river bank dangling his lines without knowing what bait to use, what he might catch, or whether it could be caught in less than a lifetime.

Leigh stayed by the ship during this brief orgy of data-gathering. He had a gloomy foreboding concerning the shape of things to come. Time proved him right. Within thirty hours Earnshaw had handed over to Ogilvy twice and was flying for the third time. He was at fifteen thousand above the *Thunderer* when he called.

"Commodore, I hate to tell you this, but they're coming again. They seem to have caught on quicker. Maybe they were warned over that visi-screen system they've got."

"How long do you give them?"

"The villagers will take about two hours. The mob from the town want five or six. I can see the patrol wagon heading back in front of them."

"You'd better bring in whoever you're carrying and go fetch those three communicators right away," said Leigh. "Then pick up anyone else on the loose."

"All right, sir."

The siren moaned eerily across the valleys. Over in the village Hoffnagle suddenly ceased his slow-motion gesturing and launched into an impassioned tirade that astonished the Waitabits two days later. Down in the woods the arboriculturalist fell off a tree and flattened a marine who also became vocal.

It was like the ripple effect of a stone cast into a pond. Somebody pressed an alarm-stud and a resulting wave of adjectives spread halfway to the horizon.

They moved yet again, this time to within short range of the terminator. At least it served to shift the sun which had hung stubbornly in mid-sky and changed position by no more than one degree per Earth-day.

The third watch took to bed, dog-tired and made more than ready for slumber by semblance of twilight. Data-hunters went out feeling that

paradoxically time was proving all too short on a planet with far too much of it. Ogilvy whirred away for first look at the night-side, discovered half a world buried in deep sleep with nothing stirring, not a soul, not a vehicle.

This situation lasted twenty-one hours at the end of which all natives for miles around had set out for the circus. Once more the siren stimulated enrichment of Earth-language. The *Thunderer* went up, came down four hundred miles within the night-side.

That tactic, decided Leigh, represented a right smart piece of figuring. Aroused aliens on the day-side would now require about twelve days to reach them. And they'd make it only if some insomniac had spotted and phoned the ship's present location. Such betrayal was likely enough because the *Thunderer*'s long rows of ports poured a brilliant blaze into the darkness and caused a great glow in the sky.

It wasn't long before he gained assurance that there was little danger of a giveaway. Nolan entered the cabin and stood with fingers twitching as if he yearned to strangle someone very, very slowly, much as a Waitabit would do it. His attitude was accentuated by possession of unfortunate features. Of all the personnel aboard the *Thunderer* nobody better resembled the popular notion of a murderer.

"You will appreciate, commodore," he began, speaking with great restraint, "the extreme difficulty of knocking sense into or getting sense out of creatures that think in hours rather than split-seconds."

"I know it's tough going," Leigh sympathized. He eyed the other carefully. "What's on your mind?"

"What is on my mind," informed Nolan in rising tones, "is the fact that there's one thing to be said in favor of previous subjects." He worked the fingers around. "At least they were awake."

"That is why we had to move," Leigh pointed out. "They're no nuisance to us while dead abed."

"Then," Nolan burst forth, "how do you expect us to make contact with them?"

"I don't. I've given it up. If you wish to continue trying, that's your affair. But you're under no compulsion to do so." Crossing the room, he said more gently, "I've sent a long signal to Earth giving full details of what we're against. The next move is up to them. Their reply should come in a few days' time. Meanwhile, we'll sit tight, dig out whatever information we can, leave what we can't."

Nolan said morbidly, "Hoff and I went to a hamlet far down the road. Not only is everyone asleep but they can't be wakened. They can be handled like dolls without stirring in their dreams. The medics came and had a look at them after we'd told them about this wholesale catalepsy."

"What did they say?"

"They're of the opinion that the

Waitabits are active only under stimulus of sunlight. When the sun goes down they go down with it." He scowled at his predicament, suggested hopefully, "But if you could run us a power line out there and lend us a couple of sunray lamps, we could rouse a few of them and get to work."

"It isn't worth it," said Leigh.

"Why not?"

"Chances are that we'll be ordered home before you can show any real progress."

"Look, sir," pleaded Nolan, making a final effort. "Everyone else is raking in results. Measurements, meterings and so forth. They've got bugs, nuts, fruits, plants, barks, timber-sections, rocks, pebbles, soil-samples, photographs, everything but shrunken heads. The communicators are the only ones asked to accept defeat and that's because we've not had a fair chance."

"All right," Leigh said, taking up the challenge. "You fellows are best placed to make an accurate estimate. So tell me: how long would a fair chance be?"

That had him tangled. He shuffled around, glowered at the wall, examined his fingers.

"Five years?" prompted Leigh.

No answer.

"Ten maybe?"

No reply.

"Perhaps twenty?"

Nolan growled, "You win," and walked out. His face still hankered to create a corpse.

You win, thought Leigh. Like heck he did. The winners were the Waitabits. They had a formidable weapon in the simple, incontrovertible fact that life can be too short.

Four days later Sector Nine relayed the message from Earth.

37.14 ex Terra. Defense H.Q. to C.O. battleship Thunderer. *Return route D9 calling Sector Four H.Q. Leave ambassador if suitable candidate available. Position in perpetuity. Rathbone. Com. Op. Dep. D.H.Q. Terra.*

He called a conference in the long-room amidships. Considerable time was spent coördinating data ranging from Walterson's findings on radio-active life to Mr. Fish's remarks about creeping shrimps. In the end three conclusions stood out clearly.

Eterna was very old as compared with Earth. Its people were equally old as compared with humankind, estimates of life-duration ranging from eight hundred to twelve hundred for the average Waitabit. Despite their chronic sluggishness the Waitabits were intelligent, progressive and had advanced to about the same stage as humankind had reached a century before the first jump into space.

There was considerable argument about whether the Waitabits would ever be capable of a short rocket-flight even with the aid of automatic, fast-functioning controls. Majority opinion was against it but all agreed that in any event none would live to see it.

Then Leigh announced, "An

Earth Ambassador is to be left here if anyone wants the job." He looked them over, seeking signs of interest.

"There's little point in planting anybody on this planet," someone objected.

"Like most alien people, the Waitabits have not developed along paths identical with our own," Leigh explained. "We're way ahead of them, know thousands of things that they don't, including many they'll never learn. By the same token they've picked up a few secrets we've missed. For instance, they've types of engines and batteries we'd like to know more about. They may have further items not apparent in this first superficial look-over. And there's no telling what they've got worked out theoretically. If there's one lesson we've learned in the cosmos it's that of never despising an alien culture. A species too big to learn soon goes small."

"So?"

"So somebody's got to take on the formidable task of systematically milking them of everything worth a hoot. That's why we are where we are: the knowledge of creation is all around and we get it and apply it."

"It's been done time and again on other worlds," agreed the objector. "But this is Eterna, a zombie-inhabited sphere where the clock ticks about once an hour. Any Earthman marooned in this place wouldn't have enough time if he lived to be a hundred."

"You're right," Leigh told him. "Therefore this ambassadorial post will be strictly an hereditary one. Whoever takes it will have to import a bride, marry, raise kids, hand the grief to them upon his deathbed. It may last through six generations or more. There is no other way." He let them stew that a while before he asked, "Any takers?"

Silence.

"You'll be lonely except for company provided by occasional ships but contact will be maintained and the power and strength of Terra will be behind you. Speak up!"

Nobody responded.

Leigh consulted his watch. "I'll give you two hours to think it over. After that, we blow. Any candidate will find me in the cabin."

At zero-hour the *Thunderer* flamed free leaving no representative on the world. Some day there would be one, no doubt of that. Some day a willing hermit would take up residence for keeps. Among the men of Terra an oddity or a martyr could always be found.

But the time wasn't yet.

On Eterna the time never was quite yet.

The pale pink planet that held Sector Four H.Q. had grown to a large disk before Pascoe saw fit to remark on Leigh's meditative attitude.

"Seven weeks along the return run and you're still broody. Anyone would think you hated to leave that place. What's the matter with you?"

"I told you before. They make me feel apprehensive."

"That's illogical," Pascoe declared. "Admittedly we cannot handle the slowest crawlers in existence. But what of it? All we need do is drop them and forget them."

"We can drop them, as you say. Forgetting them is something else. They have a special meaning that I don't like."

"Be more explicit," Pascoe suggested.

"All right, I will. Earth has had dozens of major wars in the far past. Some were caused by greed, ambition, fear, envy, desire to save face or downright stupidity. But there were some caused by sheer altruism."

"Huh?"

"Some," Leigh went doggedly on, "were brought about by the unhappy fact that the road to hell is paved with good intentions. Big, fast-moving nations tried to lug small, slower moving ones up to their own superior pace. Sometimes the slow-movers couldn't make it, resented being forced to try, started shooting to defend their right to mooch. See what I mean?"

"I see the lesson but not the point of it," said Pascoe. "The Waitabits couldn't kill a lame dog. Besides, nobody is chivvying them."

"I'm not considering that aspect at all."

"Which one then?"

"Earth had a problem never properly recognized. If it had been recognized, it wouldn't have caused wars."

"What problem?"

"That of pace-rate," said Leigh. "Previously it has never loomed large enough for us to see it as it really is. The difference between fast and slow was always sufficiently small to escape us." He pointed through the port at the reef of stars lying like sparkling dust against the dark. "And now we know that out there is the same thing enormously magnified. We know that included among the numberless and everlasting problems of the cosmos is that of pace-rate boosted to formidable proportions."

Pascoe thought it over. "I'll give you that. I couldn't argue it because it has become self-evident. Sooner or later we'll encounter it again and again. It's bound to happen somewhere else eventually."

"Hence my heebies," said Leigh.

"You scare yourself to your heart's content," Pascoe advised. "I'm not worrying. It's no hair off my chest. Why should I care if some loony scout discovers life forms even slower than the Waitabits? They mean nothing whatever in my young life."

"Does he have to find them slower?" Leigh inquired.

Pascoe stared at him. "What are you getting at?"

"There's a pace-rate problem, as you've agreed. Turn it upside-down and take another look at it. What's going to happen if we come up against a life form twenty times *faster* than ourselves? A life form that views us much as we viewed the Waitabits?"

Giving it a couple of minutes, Pascoe wiped his forehead and

said, unconvincingly, "Impossible!"

"Is it? Why?"

"Because we'd have met them long before now. They'd have got to us first."

"What, if they've a hundred times farther to come? Or if they're a young species one-tenth our age but already nearly level with us?"

"Look here," said Pascoe, taking on the same expression as the other had worn for weeks, "there are troubles enough without you going out of your way to invent more."

Nevertheless, when the ship landed he was still mulling every possible aspect of the matter and liking it less every minute.

A Sector Four official entered the cabin bearing a wad of documents.

"Lieutenant Vaughan, at your service, commodore," he enthused. "I trust you have had a pleasant and profitable run."

"It could have been worse," Leigh responded.

Radiating good will, Vaughan went on, "We've had a signal from Markham at Assignment Office on Terra. He wants you to check equipment, refuel and go take a look at Binty."

"What name?" interjected Pascoe.

"Binty."

"Heaven preserve us! Binty!" He sat down hard, stared at the wall. "Binty!" He played with his fingers, voiced it a third time. For some reason best known to himself he was hypnotized by Binty. Then in tones of deep suspicion he asked, "Who reported it?"

"Really, I don't know. But it ought to say here." Vaughan obligingly sought through his papers. "Yes, it does say. Fellow named Archibald Boydell."

"I knew it," yelped Pascoe. "I resign. I resign forthwith."

"You've resigned forthwith at least twenty times in the last eight years," Leigh reminded.

"I mean it this time."

"You've said that, too." Leigh sighed.

Pascoe waved his hands around. "Now try to calm yourself and look at this sensibly. What space-outfit which is sane and wearing brown boots would take off for a dump with a name like Binty?"

"We would," said Leigh. He waited for blood pressure to lower, then finished, "Wouldn't we?"

Slumping into his seat Pascoe glowered at him for five minutes before he said, "I suppose so. God help me, I must be weak." A little glassy eyed, he shifted attention to Vaughan. "Name it again in case I didn't hear right."

"Binty," said Vaughan, unctuously apologetic. "He has coded it 0/0.9/E5 which indicates the presence of an intelligent but backward life form."

"Does he make any remark about the place?"

"One word," informed Vaughan, consulting the papers again. "Ugh!"

Pascoe shuddered.

THE END

TIELINE

When you've got to put a lone man on a beacon-operator job, ten dozen solar systems away from any other human—he needs an emotional tieline to Earth. But finding one isn't always easy.

BY DUNCAN H. MUNRO

Illustrated by van Dongen

He watched the needle of the output meter jump, wiggle and fall back. Thirty seconds later the same again, a rise, quiver and fall. It had been going on for weeks, months, years.

Outside the fused-stone building a lattice mast rose high into the air and pointed a huge cup at the stars. And from the cup, at half-minute intervals, there squirted a soundless, long-range voice.

"Bunda One. *Eep-eep-bop!* Bunda One. *Eep-eep-bop!*"

From eight synchronized repeater-stations on lonely islands around the planet's belly the same call went forth, radiating like the spokes of a wheel as slowly the world turned on its axis.

Out there, in the inter-nebular chasm where dark bodies lurked unaccompanied by revealing suns, an occasional ship would hear the voice, change course in its own horizontal or vertical plane and thunder steadily onward.

How often that happened he'd no way of telling. He remained in awful solitude, pointing the way to those who never said, "Thanks!" Too small and fleeting ever to be seen, their flame-trails flickered briefly in the gap between star-whorls and then were gone. The ships that pass in the night.

Bunda One. A lighthouse of space. A world with Earthlike atmosphere but little land. A sphere of vast oceans dotted with craggy islands on which lived nothing that was company and comfort for anything in human form.

This very island was the largest solid foothold on a world of watery wastes. Twenty-two miles long by seven wide. A veritable continent in Bunda-terms. No trees, no animals, no birds, no flowers. There were low, twisted shrubs, lichens and tiny fungi. There were fifty species of amphibious insects that maintained balance by warring upon each other. And nothing else.

Over all the planet lay a dreadful silence. That was the horror of it:

the silence. Winds were gentle, consistent, never descended to a sigh or raised to a howl. The seas swelled lazily, crawled ten sluggish inches up the rocks, slid ten inches down without a thump, a splash, a rattle of flung spray. The insects were noiseless, without a chirp or squeak among the lot. The pale lichens and distorted shrubs stood unmoving like bizarre entities paralyzed by eternal quiet.

Behind the building lay a garden. When the beacon-constructors first set up the place they had dessicated half an acre of hard rock, turning it into cultivatable dirt, planting Earthborn roots and seeds therein. No flowers had come up but some vegetables flourished. Beetroot, spinach and broccoli, he had fifty rows of those. And he had onions the size of footballs.

At no time did he eat an onion. He detested the things. But he kept them along with the rest, tending them carefully for the sake of varying routine and for the pleasure of hearing the gritty thrust of a spade, the steady clunk of a hoe.

The needle jumped, wiggled, fell back. If watched too often and too long it became hypnotic. There were times when he developed an insane desire to change its characteristic wiggle into something idiotic but refreshingly new, to tear out the great transmitter's key-code and substitute an imbecility that the cup antenna would squirt at astounded stars.

"Wossop na bullwacka. *Bammer-bam-whop!* Wossop na bullwacka. *Bammer-bam-whop!*"

It had happened before and some day would happen again. Wasn't so long since a light cruizer had bolted to a Wolf-group station after its beacon had lapsed into incoherencies. One man's madness had endangered a liner bearing two thousand. Put out the light and there is stumbling in the dark.

To join the Beacon Service was to accept ten years of solitary confinement for very high pay and the satisfaction of fulfilling a public need. The prospect looked enticing when young, adaptable and still standing four-square upon good old Earth. The reality was grim, forbidding, and had proved too much for some. Man was not meant to live alone.

"So you're from the Western Isles, eh? Just the sort of man we want! We've a station called Bunda One that's made to measure for you. You'll be able to tolerate it far better than most. City fellows aren't much use for a place like that no matter how excellent their technical qualifications. Sooner or later they tend to go cracked for sheer lack of the bright lights. Yes, a man from the Western Isles is cut to size for Bunda One. You don't miss what you've never had. Bunda One's got all you're used to: rocky islands and great seas, just like home."

Just like home.

Home.

Down there on the waveless beach

were pebbles and pretty shells and creeping things like tiny crabs. In the ocean swayed acres of seaweed through which darted vast shoals of fish, big and small, exactly like the fish of Earth. He knew, for he had cast lines from the shore, caught them, unhooked them and thrown them back to the freedom that he lacked.

But no worn stone jetty projected into the green waters, no tough and rusty little steamers rolled across the bay, nobody on the beach busied themselves with tar-pots or mended nets. No barrels rolled and clattered from the cooperage, no shining blocks slithered out of the ice plant, no silver horde flopped and jerked under the hatches of full holds. And at eventide no voices in the chapel prayed for those in peril on the sea.

Back there on Earth the scientific bigbrains were topnotch when it comes to dealing with purely technical problems. The Bunda One master-station was semiautomatic, its eight slave-beacons fully automatic, and they drew power from atomic generators that could run untended for a century or more. The strength of the warning voice was enough to boost it across a mighty chasm between clusters of uncountable suns. All that was needed to create one hundred per cent efficiency was a watching eye backed by knowledge, ability and initiative, an emergency-mechanism that would make the beacon a self-servicing unit. In other words, one man.

That's where their ingenuity fell short. One man. A man is not a gadget. He cannot be assessed as a gadget, be treated like one, be made to function like one.

Somewhat belatedly they'd recognized the fact after the third lunatic had been removed from his post. Three mental breakdowns in an organization numbering four hundred isolated stations is not a large proportion—less than one per cent. But it was three too many. And the number might grow larger as time caught up with those slower to break. They'd cogitated the problem. Ah, they'd exclaimed, preconditioning is the answer.

So the next candidates had been put through a scientifically designed mill, a formidable long-term course calculated to break the breakable and leave a tough residue suitable for service. It hadn't worked out. The need for men was too great, the number of candidates too few, and they'd broken too many.

After that they'd tried half a dozen other theories with no better luck. Precept and practice don't always accord. The boot fits ill when fastened on the other foot. The bigbrains could have done with a taste of reality themselves.

Their latest fad was the tieline theory. Man, they asserted, is born of Earth and needs a tieline to Earth. Give him that and he's fastened to sanity. He can hang on through ten years of solitary confinement.

What's a tieline?

Cherchez la femme, suggested one, looking worldly-wise over his

spectacles. They'd discussed it, dismissed it on a dozen counts. Imaginable complications ranged all the way from murder to babies. Besides, it would mean the periodic haul of supplies doubled in mass for the sake of a nontechnical entity.

A dog, then? All right for those few worlds on which a dog can fend for itself. But what about other worlds, such as Bunda? Space-loads are estimated in ounces, not tons, and the time is not yet for shipping loads of dog food around the cosmos for the benefit of single, widely-scattered mutts.

The first attempted tieline was makeshift and wholly mechanical and did have the virtue of countering the silence that was the curse of Bunda. The annual supply ship dropped its load of food along with a recorder and a dozen tapes.

For the next month he had noise, not only words and music, but also characteristic Earth-sounds: the roar of holiday traffic along a turnpike, the rumble of trains, the chimes of Sunday morning bells, the high-pitched chatter of children pouring out of school. The aural evidence of life far, far away. At the first hearing he was delighted. At the twentieth he was bored. There was no thirtieth time.

The output needle jumped, wiggled, fell back. The recorder stood abandoned in a corner. Out there in the star-mists were his lonely brothers. He could not talk even to them, or listen to them. They were out of radio-reach and their worlds turned like his. He sat and watched the needle and felt Bunda's awful hush.

Eight months ago, Earth-time, the supply ship had brought evidence that they were still fooling with the tieline theory. It had dropped the annual stores along with a little box and a small book before flaring away into the chasm.

Detaching the box from its small 'chute, he'd opened it, found himself confronted by a bug-eyed monster. The thing had turned its triangular head and stared at him with horrid coldness. Then it had moved long, awkward limbs to clamber out. He'd shut the box hurriedly and consulted the book.

This informed him that the new arrival's name was Jason, that it was a praying mantis, tame, harmless and fully capable of looking after itself on Bunda. Jason, they said, had been diet-tested on several species of Bunda insects and had eaten them avidly. In some parts of Earth the mantis was a pet of children.

That showed how their stubbornly objective minds worked. They'd now decided that the tieline must be a living creature, a natural-born Terran. Also that it must be capable of sustaining itself on an alien planet. But, being in armchairs and not lost in the starfield, they'd overlooked the essential quality of familiarity. They'd have done better to have sent him an alley cat. He didn't like cats and there was no milk, but at least the seas were full of fish. Moreover,

cats make noises. They purr and yowl. The thing in the box was menacing and silent.

Who in the Western Isles had ever encountered a praying mantis? He'd never seen one in his life before. It resembled the nightmare idea of a Martian.

He never handled it once. He kept it in its box where it stood on long legs, eerily turning its head, watching him icy-eyed and never uttering a sound. The first day he gave it a Bunda hopper caught among the lichens, was sickened by the way it bit off the victim's head and chewed. A couple of times he dreamed of a gigantic Jason towering over him, mouth opening like a big, hungry trap.

After a couple of weeks he'd had enough. Taking the box six miles to the north, he opened it, tilted it, watched Jason scuttle into the shrubs and lichens. It favored him with one basilisk stare before he went away. There were two Terrans on Bunda and they were lost to each other.

"Bunda One. *Eep-eep-bop!*"

Jump, wiggle, fall. No word of acknowledgment from an assisted ship fleeing through the distant dark. No sounds of life save those impressed on a magnetic tape. No reality within an alien reality daily growing more dreamlike and elusive.

Might be worth sabotaging the station for the sake of repairing it and getting it back into action, thus creating pretended justification for one's own existence. But a thousand life-forms on one ship might pay for it with death. The price of monotony-busting amusement was too dear.

Or he could spend off-duty hours making a northward search for the tiny monster, calling, calling and hoping not to find it.

"Jason! Jason!"

And somewhere among the crags and crevices a pointed, bulgy-eyed head turning toward his voice—and no reply coming back. If Jason had been capable of chirruping like a cricket maybe he could have endured the creature, grown to love it knowing that the squeaks were mantis-talk. But Jason was as grim and silent as the hushed, forbidding world of Bunda.

He made final check of the transmitter, monitored its eight slaves calling in the distance, went to bed, lay there wondering for the thousandth time whether he would see the ten years through or whether he was doomed to crack before the end.

If ever he did go nuts the scientists on Earth would promptly use him as a guinea pig, a test-piece for them to work upon in an effort to determine cause and cure. Yes, they were clever, very clever. But there were some things about which they weren't so hot. With that thought he fell into uneasy sleep.

Seeming stupidity sometimes proves to be cleverness compelled to take its time. All problems can be worked out given weeks, months or years instead of seconds or minutes. The time for this one was now.

The tramp ship *Henderson* rolled out of the starfield, descended on wheezy antigravs, hung momentarily two thousand feet above the beacon. It lacked power reserves to land, take off and still make its appointed rounds. It merely paused, dropped the latest tieline thought up by the bigbrains and beat it back into the dark. The cargo swirled down into the Bunda-night like a flurry of big gray snowflakes.

At dawn he awoke unconscious of the visit. The supply ship was not due for another four months. He glanced bleary-eyed at his clock, frowned with bafflement over what had caused him to wake so early. Something, a vague something that had intruded in his dreams. Annoying, when dreams are your chief enjoyment.

What was it?

A sound. A noise!

He sat up, listened. There again, outside, muffled by distance. The wail of an abandoned cat. No, not that. More like the cry of a lost baby.

Imagination. The cracking process must be starting already. He'd lasted four years. Some other hermit would put in the remaining six. He was hearing things and that's a sure sign of mental unbalance.

Again the sound.

Getting out of bed, he dressed himself, examined himself in the mirror. It wasn't an idiot face that looked back at him. A little strained, perhaps, but otherwise normal. He went to the control room, studied the instrument board. Jump, wiggle, fall.

"Bunda One. *Eep-eep-bop!*"

Everything all right there. He returned to his own room, stretched his ears, listened. Somebody—some *thing*—was out there wailing in the dawnlight by the swelling waters. What?

Unfastening the door with nervous fingers, he looked out. The sound boosted, poured around him, all over him, flooded through his soul. He stood there a long time, hands trembling. Then gathering himself together he raced to the storeroom, stuffed his pockets with biscuits, filled both hands.

He stumbled with sheer speed as he bolted out the door. He ran headlong down to the shingly beach, loaded hands held out, his breath coming in glad gasps.

And there at the lazy ocean's edge he stood with shining eyes, arms held wide as seven hundred seagulls swirled around him, took biscuit from his fingers, strutted between his feet.

All the time they screamed the hymn of the islands, the song of the everlasting sea, the wild, wild music that was truly Earth's.

THE END

IS BODE'S LAW A COINCIDENCE?

BY ROY MALCOLM

That Bode's Law works is a fact; what that means, however, is something else again. There's never been any explanation of why it works. Does it imply that there are still-unknown laws that cause stars to form planetary systems as inevitably as nuclei have electron-shells? Or is it just chance. . . ?

The possibility that the distances of the planets from the Sun conform to some law has always fascinated astronomers, amateur and professional. Literally dozens of attempts have been made to find such a law; for example it was a poor year in the journal *Popular Astronomy* if two or three such laws did not appear!

The best known of these laws is the one attributed to Bode of Berlin, though actually Titius of Wittemberg discovered the same law earlier, in 1766.

If we take the numbers

0 3 6 12 24 48 96 192 384 768

each of which is double the preceding—the second excepted—and add to each the number 4, we obtain

4 7 10 16 28 52 100 196 388 772.

The actual distances of the planets from the Sun, taking the radius of the Earth's orbit as 10, are

3.87, 7.23, 10, 15.23, 27.7, 52.03, 95.39, 191.83, 300.37, 390.

It is seen that at the time Bode published this law, namely 1772, the distances of the known planets fitted it very well. Uranus, Neptune, Pluto

and the asteroids were unknown then and Bode noticed the void between 16 and 52. He, therefore, ventured to predict the discovery of new planets. Kepler too, incidentally, had noticed that a planet seemed to be missing between Mars and Jupiter and suggested that there had been such a planet but that it had been destroyed by Divine agency because of the wickedness of its inhabitants. Nowadays we are more inclined to suppose that its hypothetical inhabitants were tampering with thermonuclear reactions!

The discovery of Uranus in 1781 by Sir William Herschel lent weight to the theory of the existence of a planet between Mars and Jupiter, for it was seen that Uranus also fitted Bode's law. At the end of the Eighteenth Century, therefore, a number of astronomers decided to make a search for the unknown planet. The result, as we all know, was the discovery of the first of the minor planets by Piazzi in January 1801. The discovery of others soon followed. Now, thousands of these vermin of the skies, as R. H. Richardson so aptly christened them, are known. The mean of their distances is about 27.7, in close agreement with the position predicted by Bode's law.

It is thus not surprising that both Adams and Leverrier, when they were searching mathematically for the position of the unknown planet they believed to be disturbing Uranus, assumed the mean distance of the object of their search to be the distance given by Bode's law. But when Neptune was discovered it was found that its actual mean distance does not agree with Bode's law distance. Again, Pluto disagrees even more than Neptune with the law.

Bode's law can be put in the form

$$D = a + bc^n,$$

by putting $n = -\infty$ for Mercury, $n = 0$ for Venus, $n = 1$ for Earth, et cetera, with $a = 4$, $b = 3$, and $c = 2$. It is essentially a geometric progression and most other versions of it by Wurm, Gaussin, Belot, and others retain this property. Many of these laws give better agreement, but are like Bode's law itself in that their choice of constants is quite empirical with no theoretical foundation. Some investigators have studied the satellite systems of Jupiter, Saturn and Uranus in attempts to find laws relating the satellites' distances to their primaries. For example, we have the pseudo-Bode's law for Saturn's system:

Take the series:

0 1 2 4 8 16 32 64.

Add 4 to each:

4 5 6 8 12 20 36 68.

The actual distances are:

4.00, 5.12, 6.36, 8.16, 11.4, 26.4, 32.0, 76.

Mimas Tethys Rhea Hyperion Enceladus Dione Titan Iapetus.

Once again it is to be noted that this is essentially a geometric progression.

The laws referred to above make no pretense to having any physical meaning. Indeed most astronomers

have believed the Bode's law and its variants are simply harmless and amusing coincidences. But of late three well-known astronomers, an American, a German and a Russian, have given versions of Bode's law which are based on theories of the origin of the Solar System.

(a) G. P. Kuiper, considering the process of planet formation, suggests that a flattened disk, in nearly circular motion about the Sun, would have been broken up by gravitational and hydrodynamical forces, giving rise to the formation of proto-planets. Excluding from consideration objects with retrograde orbits or high inclinations, he obtains a law that holds, not only for the planetary system, but also for the satellite systems. For two consecutive planets or satellites, the relative distance D_{12} is a function of the masses only:

$$\log m_{12} = 2.5 \log D_{12}{}^{3} - A,$$

where m_{12} is the average mass of the planets or satellites in terms of their primary while the constant A equals 1.8 for planets of comparable mass and 3.6 for planets of very unequal mass.

Kuiper also draws attention to the existence of two classes of satellites, analogous to the classes "major" and "minor" among the planets.

(b) C. F. von Weizsäcker begins by considering a primitive Sun surrounded by a rotating shell which, he goes on to show, will in time assume the form of an equatorial disk. Von Weizsäcker proposes a mechanism for planet formation, that of interference of "allowed" streams of material. He suggests a rough analogy to quantized Bohr orbits but, of course, only from the standpoint of illustration. The Bode relation

$$D = a + b.2^{n}$$

is shown to follow. The constant 2 represents a particular case. Other constants are possible, and Gamow and Hynek, whose report I am quoting, suggest that it is tempting to suppose that, if the planets were formed in this way, other stars may have planetary systems of a wide variety of types. Indeed the emphasis of present-day astronomers on process origins of the Solar System rather than on relatively improbable collision theories increases the hope that planetary systems may be quite common in the galaxy.

(c) O. J. Schmidt suggested in one of a series of papers that the Solar System originated when the Sun, in passing through a meteoric cloud of interstellar matter, captured particles from the cloud. After capture this meteoric material assumed a lens-shape and ultimately formed the planets. In his attempt to explain Bode's law, Schmidt divides the planets into two groups, the terrestrial ones and the major ones, and finally derives the following law: For any pair of successive planets the difference between the square roots of their distances from the Sun is a constant. This can be written as:

$$\sqrt{R}_{n} = a + bn,$$

where R_{n} is the distance of the nth planet from the Sun, a is $\sqrt{R^{n}}_{0}$ and b

is the constant difference between the successive square roots.

For the major planets b= 1.00, $a = \sqrt{R}_{Jup}$; for the terrestrial planets b = 0.20 and $a = \sqrt{R}_{Mer}$. Schmidt obtains quite good agreement with the observed distances.

	M	V	E	M	J	S	U	N	P
R cal.	0.39x	0.67	1.04	1.49	5.20x	10.76	18.32	27.88	39.44.
R obs.	0.39	0.72	1.00	1.52	5.20	9.54	19.19	30.07	39.52.

x By assumption.

These explanations of Bode's law go back to the beginning of the Solar System. But it appears that there may be a quite different explanation.

Some time in 1913, an Oxford astronomer, Miss M. A. Blagg, reconsidered this problem of the law of planetary distances. On analyzing the orbits of the planetary system and of the satellite systems of Jupiter, Saturn and Uranus, she obtained a formula concerning the distances of planets and satellites from their primaries. This formula is:

$$D = A\,(1.7275)^{n}(B + f\,(a + nb)), \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ (1)$$

where n is a positive or negative integer, D is the distance of a body from its primary, A,B, ab are parameters having different values for the Solar System, the Jovian System, Saturn's System and Uranus' System and f (a + nb) is an empirical function. Miss Blagg's paper, "On a Suggested Substitute for Bode's Law," appeared in the Monthly Notices of the Royal Astronomical Society for 1913 and was promptly forgotten—until 1953 when A. E. Roy at Glasgow University Observatory came across it while hunting for a paper dealing with another research problem. Being a Bode's law addict, Roy read the paper, noting with interest Miss Blagg's suggestion that her formula, if correct, should give the approximate mean distances of bodies unknown in the year 1913. Remembering that no less than six bodies in three of the systems treated by Miss Blagg had been discovered since then, namely Pluto, Jupiter IX, X, XI, XII, and Uranus V, Roy sat down with an almanac to find out whether or not the six bodies conformed to the formula.

He found that not only did all six fit very closely positions given by her formula, but other significant facts had arisen. In her paper, Miss Blagg had predicted that where the sections of greatest gradient occurred in the curve (1) more bodies than one might be found at nearly the same distance from the primary. Now no less than seven of Jupiter's satellites cluster about two positions of steep slope, four of them being discovered since 1913. Again, the formula predicted that if a transplutonian planet existed, it would be found about sixty-eight Astronomical Units from the Sun. Roy knew that according to a paper by C. H. Schuette in Popular Astronomy, there is a family of comets with their aphelia about eighty A.U. from the Sun and it is noteworthy that the

families of comets associated with known planets have their aphelia somewhat further from the Sun than the associated planet.

But there are two other ways in which Miss Blagg's formula may be useful.

If, as has been suggested, the outermost satellites of Jupiter are asteroids captured by Jupiter, it is all the more remarkable that they cluster about a position given by the formula. It almost looks as if they have found their way to a position of relative stability, suggesting that the present orbits of the planets and satellites are stable ones to which they have drifted since their formation under the complex gravitational "tides" of the Solar System.

In addition, in the systems of Jupiter, Saturn and Uranus, there remain gaps corresponding to certain values of n in the formula, making it possible that any satellites yet undiscovered will be found.

Thus this restoration of Bode's law—or a variant of it—to favor may yet shed new light on the structure of the Solar System and on the probable number of planetary systems in the universe.

THE END

THE ANALYTICAL LABORATORY

The number of letters received on the April issue was far higher than usual—but the number of story-votes was lower than normal. The reason: Donald Kingsbury's article, "The Right to Breed." Everyone was busy fulminating against the article, and many neglected to vote.

Incidentally, Kingsbury's article maintains its unique record; for the first time in history, a discussion of that highly controversial topic, birth control, evoked a 100% unanimous reaction from the audience. Everybody, without exception, rejected Kingsbury's professed viewpoint. It seems quite clear that the readership of Astounding, at least, refuses to be trapped into irrationality by simple logic.

However, I don't quite know how to rate such a response in the An Lab figures! The stories, however, scored this way:

PLACE	STORY	AUTHOR	POINTS
1.	The Long Way Home (Pt. 1)	Poul Anderson	1.63
2.	The Players	Everett B. Cole	2.16
3.	The Stutterer	R. R. Merliss	2.69
4.	The Plains of San Augustine	Lee Correy	3.00

THE EDITOR.

RAT RACE

BY FRANK HERBERT

The detective suspected somebody was playing fancy games—leading them around on a rat race. True; perfectly true. But he misinterpreted the meaning of the phrase "rat race."

Illustrated by Riley

In the nine years it took Welby Lewis to become chief of criminal investigation for Sheriff John Czernak, he came to look on police work as something like solving jigsaw puzzles. It was a routine of putting pieces together into a recognizable picture. He was not prepared to have his cynical police-peopled world transformed into a situation out of H. G. Wells or Charles Forte.

When Lewis said "alien" he meant non-American, not extraterrestrial. Oh, he knew a BEM was a bug-eyed monster; he read some science fiction. But that was just the point—such situations were *fiction,* not to be encountered in police routine. And certainly unexpected at a mortuary. The Johnson-Tule Mortuary, to be exact.

Lewis checked in at his desk in the sheriff's office at five minutes to eight of a Tuesday morning. He was a man of low forehead, thin pinched-in Welsh face, black hair. His eyes were like two pieces of roving green jade glinting beneath bushy brows.

The office, a room of high ceilings and stained plaster walls was in a first floor corner of the County Building at Banbury. Beneath one tall window of the room was a cast-iron radiator. Beside the window hung a calendar picture of a girl wearing only a string of pearls. There were two desks facing each other across an aisle which led from the hall door to the radiator. The desk on the left belonged to Joe Welch, the night man. Lewis occupied the one on the right, a cigarette-scarred vintage piece which had stood in this room more than thirty years.

Lewis stopped at the front of his desk, leafed through the papers in the *incoming* basket, looked up as Sheriff Czernak entered. The sheriff, a fat man with wide Slavic features and a complexion like bread crust, grunted as he eased himself into the chair under the calendar. He pushed a brown felt hat to the back of his head, exposing a bald dome.

Lewis said, "Hi, John. How's the wife?" He dropped the papers back into the basket.

"Her sciatica's better this week," said the sheriff. "I came in to tell you to skip that burglary report in the basket. A city prowler picked up two punks with the stuff early

this morning. We're sending 'em over to juvenile court."

"They'll never learn," said Lewis.

"Got one little chore for you," said the sheriff. "Otherwise everything's quiet. Maybe we'll get a chance to catch up on our paper work." He hoisted himself out of the chair. "Doc Bellarmine did the autopsy on that Cerino woman, but he left a bottle of stomach washings at the Johnson-Tule Mortuary. Could you pick up the bottle and run it out to the county hospital?"

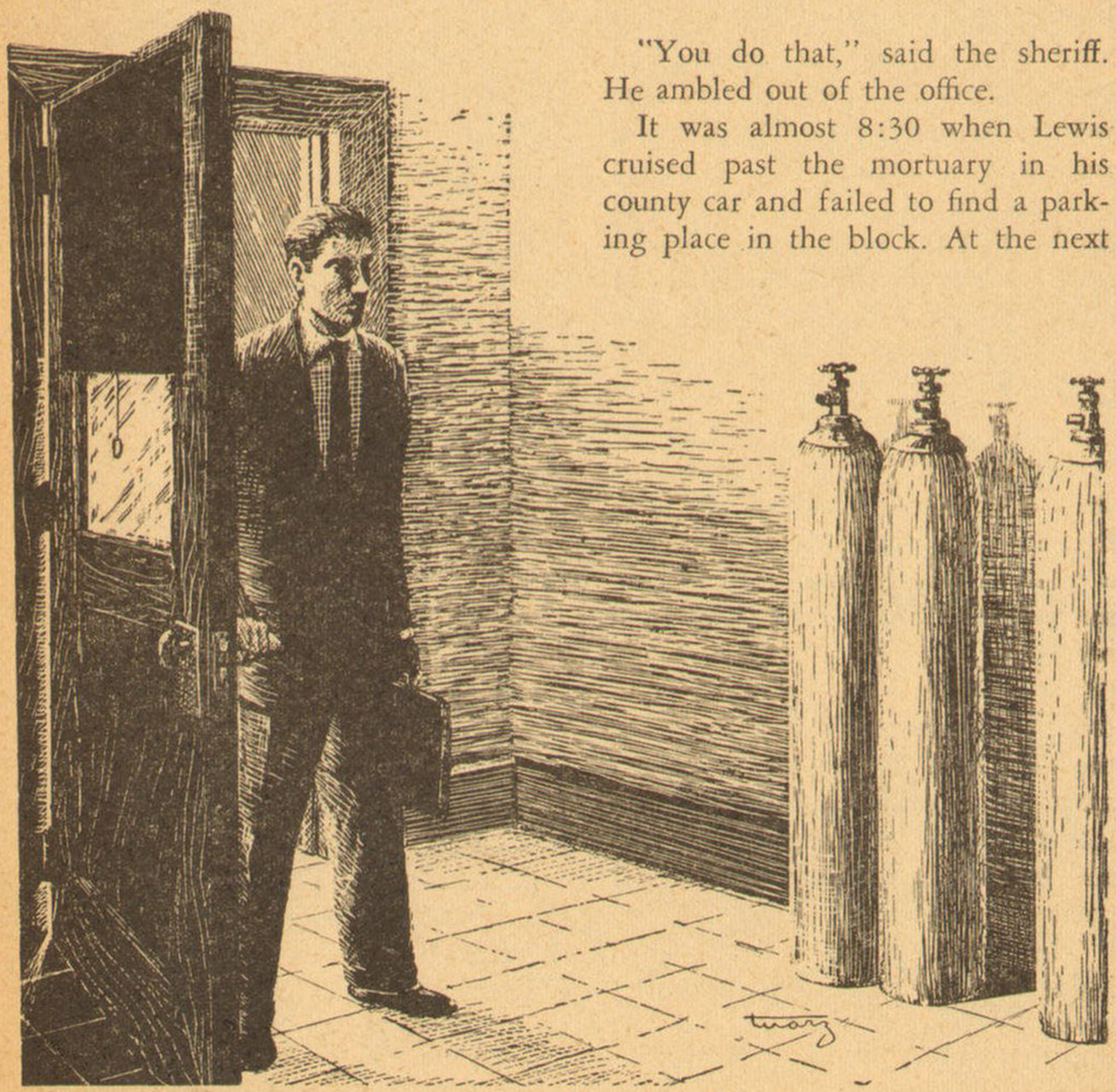
"Sure," said Lewis. "But I'll bet her death was natural causes. She was a known alcoholic. All those bottles in her shack."

"Prob'ly," said the sheriff. He stopped in front of Lewis' desk, glanced up at the calendar art. "Some dish."

Lewis grinned. "When I find a gal like that I'm going to get married," he said.

"You do that," said the sheriff. He ambled out of the office.

It was almost 8:30 when Lewis cruised past the mortuary in his county car and failed to find a parking place in the block. At the next



corner, Cove Street, he turned right and went up the alley, parking on the concrete apron to the mortuary garage.

A southwest wind which had been threatening storm all night kicked up a damp gust as he stepped from the car. Lewis glanced up at the gray sky, but left his raincoat over the back of the seat. He went down the narrow walk beside the garage, found the back door of the mortuary ajar. Inside was a hallway and a row of three metal tanks, the tall kind welders use for oxygen and acetylene gas. Lewis glanced at them, wondered what a mortuary did with that type of equipment, shrugged the question aside. At the other end of the hall the door opened into a carpeted foyer which smelled of musky flowers. A door at the left bore a brass plate labeled OFFICE. Lewis crossed the foyer, entered the room.

Behind a glass-topped desk in the corner sat a tall blond individual type with clear Nordic features. An oak frame on the wall behind him held a colored photograph of Mount Lassen labeled PEACE on an embossed nameplate. An official burial form—partly filled in—was on the desk in front of the man. The left corner of the desk held a brass cup in which sat a metal ball. The ball emitted a hissing noise as Lewis approached and he breathed in the heavy floral scent of the foyer.

The man behind the desk got to his feet, put a pen across the burial form. Lewis recognized him—Johnson, half owner of the mortuary.

"May I help you?" asked the mortician.

Lewis explained his errand.

Johnson brought a small bottle from a desk drawer, passed it across to Lewis, then looked at the deputy with a puzzled frown. "How'd you get in?" asked the mortician. "I didn't hear the front door chimes."

The deputy shoved the bottle into a side pocket of his coat. "I parked in the alley and came in the back way," he said. "The street out front is full of Odd Fellows cars."

"Odd Fellows?" Johnson came around the desk.

"Paper said they were having some kind of rummage sale today," said Lewis. He ducked his head to look under the shade on the front window. "I guess those are Odd Fellows cars. That's the hall across the street."

An ornamental shrub on the mortuary front lawn bent before the wind and a spattering of rain drummed against the window. Lewis straightened. "Left my raincoat in the car," he said. "I'll just duck out the way I came."

Johnson moved to his office door. "Two of our attendants are due back now on a call," he said. "They—"

"I've seen a stiff before," said Lewis. He stepped past Johnson, headed for the door to the rear hall.

Johnson's hand caught the deputy's shoulder. "I must insist you go out the front," said the mortician.

Lewis stopped, his mind setting up a battery of questions. "It's raining out," he said. "I'll get all wet."

"I'm sorry," said Johnson.

Another man might have shrugged and complied with Johnson's request, but Welby Lewis was the son of the late Proctor Lewis, who had been three times president of the Banbury County Sherlock Holmes Round Table. Welby had cut his teeth on *logical deduction* and the logic of this situation escaped him. He reviewed his memory of the hallway. Empty except for those tanks near the back door.

"What do you keep in those metal tanks?" he asked.

The mortician's hand tightened on his shoulder and Lewis felt himself turned toward the front door. "Just embalming fluid," said Johnson. "That's the way it's delivered."

"Oh." Lewis looked up at Johnson's tightly drawn features, pulled away from the restraining hand and went out the front door. Rain was driving down and he ran around the side of the mortuary to his car, jumped in, slammed the door and sat down to wait. At 9:28 A. M. by his wrist watch an assistant mortician came out, opened the garage doors. Lewis leaned across the front seat, rolled down his right window.

"You'll have to move your car," said the assistant. "We're going out on a call."

"When are the other fellows coming back?" asked Lewis.

The mortician stopped halfway inside the garage. "What other fellows?" he asked.

"The ones who went out on that call this morning."

"Must be some other mortuary," said the assistant. "This is our first call today."

"Thanks," said Lewis. He rolled up his window, started the car and drove to the county hospital. The battery of unanswered questions churned in his mind. Foremost was—*Why did Johnson lie to keep me from going out the back way?*

At the hospital he delivered the bottle to the pathology lab, found a pay booth and called the Banbury Mortuary. An attendant answered and Lewis said, "I want to settle a bet. Could you tell me how embalming fluid is delivered to mortuaries?"

"We buy it by the case in concentrated form," said the mortician. "Twenty-four glass bottles to the case, sixteen ounces to the bottle. It contains red or orange dye to give a lifelike appearance. Our particular brand smells somewhat like strawberry soda. There is nothing offensive about it. We guarantee that the lifelike—"

"I just wanted to know how it came," said Lewis. "You're sure it's never delivered in metal tanks?"

"Good heavens, no!" said the man. "It'd corrode them!"

"Thanks," said Lewis and hung up softly. In his mind was the Holmsian observation: *If a man lies about an apparently inconsequential thing, then that thing is not inconsequential.*

He stepped out of the booth and bumped into Dr. Bellarmine, the autopsy surgeon. The doctor was a tall, knobby character with gray hair,

sun-lamp tan and blue eyes as cutting as two scalpels.

"Oh, there you are, Lewis," he said. "They told me you were down this way. We found enough alcohol in that Cerino woman to kill three people. We'll check the stomach washings, too, but I doubt they'll add anything."

"Cerino woman?" asked Lewis.

"The old alcoholic you found in that shack by the roundhouse," said Bellarmine. "You losing your memory?"

"Oh . . . oh, certainly," said Lewis. "I was just thinking of something else. Thanks, Doc." He brushed past the surgeon. "Gotta go now," he muttered.

Back at his office Lewis sat on a corner of his desk, pulled the telephone to him and dialed the Johnson-Tule Mortuary. An unfamiliar masculine voice answered. Lewis said, "Do you do cremations at your mortuary?"

"Not *at* our mortuary," said the masculine voice, "but we have an arrangement with Rose Lawn Memorial Crematorium. Would you care to stop by and discuss your problem?"

"Not right now, thank you," said Lewis and replaced the phone on its hook. He checked off another question in his mind—the possibility that the tanks held gas for a crematorium. *What the devil's in those tanks?* he asked himself.

"Somebody die?" The voice came from the doorway, breaking into Lewis' reverie. The deputy turned, saw Sheriff Czernak.

"No," said Lewis. "I've just got a puzzle." He went around the desk to his chair, sat down.

"Doc Bellarmine say anything about the Cerino dame?" asked the sheriff. He came into the room, eased himself into the chair beneath the calendar art.

"Alcoholism," said Lewis. "Like I said." He leaned back in his chair, put his feet on the desk and stared at a stained spot on the ceiling.

"What's niggling you?" asked the sheriff. "You look like a guy trying to solve a conundrum."

"I am," said Lewis and told him about the incident at the mortuary.

Czernak took off his hat, scratched his bald head. "It don't sound like much to me, Welby. In all probability there's a very simple explanation."

"I don't think so," said Lewis.

"Why not?"

Lewis shook his head. "I don't know. I just don't think so. Something about that mortuary doesn't ring true."

"What you think's in them tanks?" asked the sheriff.

"I don't know," said Lewis.

The sheriff seated his hat firmly on his head. "Anybody else I'd tell 'em forget it," he said. "But you—I dunno. I seen you pull too many rabbits out of the hat. Sometimes I think you're a freak an' see inside people."

"I am a freak," said Lewis. He dropped his feet to the floor, pulled

a scratch pad to him and began doodling.

"Yeah, I can see you got six heads," said the sheriff.

"No, really," said Lewis. "My heart's on the right side of my chest."

"I hadn't noticed," said the sheriff. "But now you point it out to me—"

"Freak," said Lewis. "That's what I felt looking at that mortician. Like he was some kind of a creepy freak."

He pushed the scratch pad away from him. It bore a square broken into tiny segments by zigzag lines. Like a jigsaw puzzle.

"Was he a freak?"

Lewis shook his head. "Not that I could see."

Czernak pushed himself out of his chair. "Tell you what," he said. "It's quiet today. Why'ncha nose around a little?"

"Who can I have to help me?" asked Lewis.

"Barney Keeler'll be back in about a half hour," said Czernak. "He's deliverin' a subpoena for Judge Gordon."

"O. K.," said Lewis. "When he gets back tell him to go over to the Odd Fellows Hall and go in the back way without attracting too much attention. I want him to go up to that tower room and keep watch on the front of the mortuary, note down everybody who enters or leaves and watch for those tanks. If the tanks go out, he's to tail the carrier and find out where they go."

"What're you gonna do?" asked the sheriff.

"Find a place where I can keep my eye on the back entrance. I'll call in when I get set." Lewis hooked a thumb toward the desk across from his. "When Joe Welch comes on, send him over to spell me."

"Right," said Czernak. "I still think maybe you're coon-doggin' it up an empty tree."

"Maybe I am," said Lewis. "But something shady about a mortuary gives my imagination the jumps. I keep thinking of how easy it could be for a mortician to get rid of an inconvenient corpse."

"Stuff it in one of them tanks, maybe?" asked the sheriff.

"No. They weren't big enough." Lewis shook his head. "I just don't like the idea of the guy lying to me."

It was shortly after 10:30 A. M. when Lewis found what he needed —a doctor's office in the rear of a building across the alley and two doors up from the mortuary garage. The doctor had three examining rooms on the third floor, the rear room looking down on the mortuary back yard. Lewis swore the doctor and his nurse to secrecy, set himself up in the back room with a pair of field glasses.

At noon he sent the nurse out for a hamburger and glass of milk for his lunch, had her watch the mortuary yard while he called his office and told the day radio operator where he was.

The doctor came into the back room at five o'clock, gave Lewis an extra set of keys for the office, asked him to be certain the door was locked when he left. Again Lewis warned the doctor against saying anything about the watch on the mortuary, stared the man down when it appeared he was about to ask questions. The doctor turned, left the room. Presently, a door closed solidly. The office was silent.

At about 7:30 it became too dark to distinguish clearly anything that might happen in the mortuary back yard. Lewis considered moving to a position in the alley, but two floodlights above the yard suddenly flashed on and the amber glow of a night light came from the window in the back door.

Joe Welch pounded on the door of the doctor's office at 8:20. Lewis admitted him, hurried back to the window with Welch following. The other deputy was a tall, nervous chain-smoker with a perpetual squint, a voice like a bassoon. He moved to a position beside Lewis at the window, said, "What's doing? Sheriff John said something about some acetylene tanks."

"It may be nothing at all," said Lewis. "But I've a feeling we're onto something big." In a few short sentences he explained about his encounter with the mortician that morning.

"Don't sound exciting to me," said Welch. "What you expecting to find in those tanks?"

"I wish I knew," said Lewis.

Welch went into the corner of the darkened room, lighted a cigarette, returned. "Why don't you just ask this Johnson?"

"That's the point," said Lewis. "I did ask him and he lied to me. That's why I'm suspicious. I've been hoping they'd take those tanks out and we could trail them to wherever they go. Get our answer that way."

"Why're you so sure it's the tanks he didn't want you to see?" asked Welch.

"That was a funny hallway," said Lewis. "Door at each end, none along the sides. Only things in it were those tanks."

"Well, those tanks might already be gone," said Welch. "You didn't get on this end until about 10:30 you said and Keeler wasn't on the front until about eleven. They could've been taken out then if they're so all-fired important."

"I've had the same thought," said Lewis. "But I don't think they have. I'm going out to grab a bite to eat now, then I'm going down in the alley for a closer look."

"You won't get very close with all them lights on the yard," said Welch.

Lewis pointed to the garage. "If you look close you can see a space along the other side; in the shadow there. The light's on in the back hall. I'll try to get close enough for a look through the window in that rear door. They're tall tanks. I should be able to see them."

"And if they've been moved some place else in the building?" asked Welch.

"Then I'll have to go in and brace Johnson for a showdown," said Lewis. "Maybe I should've done that in the first place, but this is a screwy situation. I just don't like a mystery in a mortuary."

"Sounds like the title of a detective story," said Welch. " 'Mystery In a Mortuary.' "

Welch sniffed. "There's already death inside there," he said. "This could be something mighty unpleasant."

Welch lighted a new cigarette from the coal of the one he had been smoking, stubbed out the discard in a dish Lewis had been using for an ash tray. "You may be right," said Welch. "The only thing impresses me about this shebang, Welby, is like Sheriff John said— I've seen you pull too many rabbits out of the hat."

"That's what he told you?" asked Lewis.

"Yeah, but he thinks maybe you're gonna pull a blank this time." Welch stared down at the mortuary. "If you go inside, do you want me to round up a few of my men and smother the place if you don't come out by some set time?"

"I don't think that'll be necessary," said Lewis. "Don't take any action unless you see something suspicious."

Welch nodded his head. "O. K.," he said. He looked at the glowing tip of his cigarette, glanced down at the yard they were watching. "Mortuaries give me the creeps anyway," he said.

Lewis bolted a hot beef sandwich at a cafe two blocks from the mortuary, returned along a back street. It was cold and wet in the alley. A perverse wind kept tangling the skirts of his raincoat. He hugged the shadows near the mortuary garage, found the row of boards which had been nailed across the area he was going to use. Lewis clambered over the boards, dropped to soft earth which was out of the wind but under a steady dripping from ungutttered eaves. He moved quietly to the end of the shadow area and, as he had expected, could see inside the window on the rear door of the mortuary. The tanks were not visible. Lewis cursed under his breath, shrugged, stepped out of the shadows and crossed the lighted back yard. The door was locked, but he could see through the window that the hallway was empty. He went around to the front door, rang the night bell.

A man in a rumpled black suit which looked as though he had slept in it answered the door. Lewis brushed past him into the warm flower smell of the foyer. "Is Johnson here?" he asked.

"Mr. Johnson is asleep," said the man. "May I be of service?"

"Ask Mr. Johnson to come down, please," said Lewis. "This is official business." He showed his badge.

"Of course," said the man. "If you'll go into the office there and have a seat, I'll tell Mr. Johnson you're here. He sleeps in the quarters upstairs."

"Thanks," said Lewis. He went into the office, looked at the colored photograph of Mount Lassen until the night attendant had disappeared up the stairs at the other end of the foyer. Then Lewis came out of the office, went to the doorway leading into the hall. The door was locked. He tried forcing it, but it wouldn't budge. He moved to the hinge side, found a thin crack which gave a view of the other end of the hall. What he saw made him draw in a quick breath. The three metal tanks were right where he had expected them to be. He went back to the office, found a directory and looked up the number of the doctor's office where Welch was waiting, dialed the number. After a long wait Welch's voice came on the line, tones guarded. "Yes?"

"This is Welby," said Lewis. "Anything come in the back?"

"No," said Welch. "You all right?"

"I'm beginning to wonder," said Lewis. "Keep your eyes peeled." He hung up, turned to find Johnson's tall figure filling the office doorway.

"Mr. Lewis," said Johnson. "Is something wrong?" He came into the office.

"I want to have a look at those metal tanks," said Lewis.

Johnson stopped. "What metal tanks?"

"The ones in your back hall," said Lewis.

"Oh, the embalming fluid," said Johnson. "What's the interest in embalming fluid?"

"Let's just have a look at it," said Lewis.

"Do you have a warrant?" asked Johnson.

Lewis' chin jerked up and he stared at the man. "I wouldn't have a bit of trouble getting one," he said.

"On what grounds?"

"I could think of something that'd stick," said Lewis. "Are we going to do this the easy way or the hard way?"

Johnson shrugged. "As you wish." He led the way out of the office, unlocked the hall door, preceded Lewis down the hallway to the three tanks.

"I thought embalming fluid came in sixteen-ounce glass bottles," said Lewis.

"This is something new," said Johnson. "These tanks have glass inner liners. The fluid is kept under pressure." He turned a valve and an acrid spray emerged from a fitting at the top.

Lewis took a shot in the dark, said, "That doesn't smell like embalming fluid."

Johnson said, "It's a new type. We add the masking perfumes later."

"You just get these filled?" asked Lewis.

"No, these were delivered last week," said Johnson. "We've left them here because we don't have a better place to store them." He smiled at Lewis, but the eyes remained cold, watchful. "Why this interest?"

"Call it professional curiosity," said Lewis. He went to the rear door, unlatched it and locked the latch in the open position, stepped outside, closed the door. He could see the tanks plainly through the window. He came back into the hallway.

He's still lying to me, thought Lewis. *But it's all so very plausible.* He said, "I'm going to give your place a thorough search."

"But why?" protested Johnson.

"For no good reason at all," said Lewis. "If you want, I'll go out and get a warrant." He started to brush past Johnson, was stopped by a strong hand on his shoulder, something hard pressing into his side. He looked down, saw a flat automatic menacing him.

"I regret this," said Johnson. "Believe me, I do."

"You're going to regret it more," said Lewis. "I have your place watched front and back and the office knows where I am."

For the first time he saw a look of indecision on Johnson's face. "You're lying," said the mortician.

"Come here," said Lewis. He stepped to the back door, looked up to the black window where Welch stood. The glow of the deputy's cigarette was plainly visible, an orange wash against the blackness. Johnson saw it. "Now let's go check the front," said Lewis.

"No need," said Johnson. "I thought you were playing a lone hand." He paused. "You came in the back yard again and had a look in the window, didn't you?"

"What do you think?" asked Lewis.

"I should've anticipated that," said Johnson. "Perhaps I was too anxious to have things appear just as they were. You startled me coming in here at night like this."

"You saw me come in the front?" asked Lewis.

"Let us say that I was aware you were downstairs before the attendant told me," said Johnson. He gestured with his gun. "Let's go back to the office."

Lewis led the way down the hall. At the foyer door he glanced back.

"Turn around!" barked Johnson.

But the one glance had been enough. The tanks were gone. "What was that humming sound?" asked Lewis.

"Just keep moving," said Johnson.

In the front office, the mortician motioned Lewis to a chair. "What were you looking for?" asked Johnson. He slid into the chair behind his desk, rested his gun hand on the desk top.

"I found what I was looking for," said Lewis.

"And that is?"

"Evidence to confirm my belief that this place should be taken apart brick by brick."

Johnson smiled, hooked the telephone to him with his left hand, took off the receiver and rested it on the desk. "What's your office number?"

Lewis told him.

Johnson dialed, picked up the phone, said, "Hello, this is Lewis."

Lewis came half out of the chair. His own voice was issuing from Johnson's mouth. The gun in the mortician's hand waved him back to the chair.

"You got the dope on what I'm doing?" asked Johnson. He waited. "No. Nothing important. I'm just looking." Again he paused. "I'll tell you if I find anything," he said. He replaced the phone in its cradle.

"Well?" said Lewis.

Johnson's lips thinned. "This is incredible," he said. "A mere human—" He broke off, stared at Lewis, said, "My mistake was in telling you a plausible lie after that door was left open. I should have—" He shrugged.

"You couldn't hope to fool us forever," said Lewis.

"I suppose not," said Johnson, "but reasoning tells me that there is still a chance." The gun suddenly came up, its muzzle pointing at Lewis. "It's a chance I have to take," said the mortician. The gun belched flame and Lewis was slammed back in his chair. Through a dimming haze, he saw Johnson put the gun to his own head, pull the trigger, slump across the desk. Then the haze around Lewis thickened, became the black nothing of unconsciousness.

From a somewhere he could not identify Lewis became aware of himself. He was running through a black cave, chased by a monster with blazing eyes and arms like an octopus. The monster kept shouting, "A mere human! A mere human! A mere human!" with a voice that echoed as

though projected into a rain barrel. Then, above the voice of the monster, Lewis heard water dripping in a quick even cadence. At the same time he saw the mouth of the cave, a round bright area. The bright area grew larger, larger, became the white wall of a hospital room and a window with sunshine outside. Lewis turned his head, saw a metal tank like the ones in the mortuary.

A voice said, "That brought him around."

Vertigo swept over Lewis and for a moment he fought it. A white clad figure swam into his field of vision, resolved itself into a county hospital intern whom Lewis recognized. The intern held a black oxygen mask.

The sound of the dripping water was louder now and then he realized that it was a wrist watch. He turned toward the sound, saw Sheriff Czernak straighten from a position close to his head. Czernak's Slavic face broke into a grin. "Boy, you gave us a scare," he said.

Lewis swallowed, found his voice. "What—"

"You know, you are lucky you're a freak," said Czernak. "Your heart being on the right side's the only thing saved you. That and the fact that Joe heard the shots."

The intern came around beside the sheriff. "The bullet nicked an edge of your lung and took a little piece out of a rib at the back," said the intern. "You must've been born lucky."

"Johnson?" said Lewis.

"Deader'n a mackerel," said Czernak. "You feel strong enough to tell us what happened? Joe's story don't make sense. What's with these tanks of embalming fluid?"

Lewis thought about his encounter with the mortician. Nothing about it made sense. He said, "Embalming fluid comes in sixteen-ounce bottles."

"We got those three tanks from the hallway," said Czernak, "but I don't know what we're doing with them."

"From the hall?" Lewis remembered his last look at the empty hall before Johnson had ordered him to turn around. He tried to push himself up, felt pain knife through his chest. The intern pushed him gently back to the pillow. "Here now, none of that," he said. "You just stay flat on your back."

"What was in the tanks?" whispered Lewis.

"The lab here says it's embalming fluid," said the sheriff. "What's so special about it?"

Lewis remembered the acrid odor of the spray Johnson had released from the tank valve. "Does the lab still have some of that fluid?" he asked. "I'd like to smell it."

"I'll get it," said the intern. "Don't let him sit up. It could start a hemorrhage." He went out the door.

"Where were the tanks when you found them?" asked Lewis.

"Down by the back door," said Czernak. "Where you said they were. Why?"

"I don't really know yet," said

Lewis. "But I've something I wish you'd do. Take a—"

The door opened and the intern entered, a test tube in his hand. "This is the stuff," he said. He passed the tube under Lewis' nose. It gave off a musklike sweet aroma. It was not what he had smelled at the tanks. *That explains why the tanks disappeared,* he thought. *Somebody switched them. But what was in the others?* He looked up at the intern, said, "Thanks."

"You were sayin' something," said the sheriff.

"Yes," said Lewis. "Take a crew over to that mortuary, John, and rip out the wall behind where you found those tanks and take up the floor under that spot."

"What're we supposed to find?" asked Czernak.

"Damned if I know," said Lewis, "but it sure should be interesting. Those tanks kept disappearing and reappearing every time I turned my back. I want to know why."

"Look, Welby, we've got to have something solid to go on," said the sheriff. "People are running around that mortuary like crazy, saying it's bad for business an' what all."

"I'd say this was good for business," said Lewis, a brief smile forming on his lips. His face sobered. "Don't you think it's enough that somebody tried to kill one of your men and then committed suicide?"

The sheriff scratched his head. "I guess so, Welby. You sure you can't give me anything more'n just your hunch?"

"You know as much about this as I do," said Lewis. "By the way, where's Johnson's body?"

"They're fixin' it up for burial," said Czernak. "Welby, I really should have more'n just your say so. The D. A. will scream if I get too heavy handed."

"You're still the sheriff," said Lewis.

"Well, can't you even tell me why Johnson killed himself?"

"Say he was mentally unbalanced," said Lewis. "And John, here's something else. Get Doc Bellarmine to do the autopsy on Johnson and tell him to go over that body with a magnifying glass."

"Why?"

"It was something he said about mere humans," said Lewis.

"Askin' me to stick my neck out like this," said Czernak.

"Will you do it?" asked Lewis.

"Sure I'll do it!" exploded Czernak. "But I don't like it!" He jammed his hat onto his head, strode out of the room.

The intern turned to follow.

Lewis said, "What time is it?"

The intern stopped, glanced at his wrist watch. "Almost five." He looked at Lewis. "We've had you under sedatives since you came out of the operating room."

"Five A. M. or five P. M.?" asked Lewis.

"Five P. M.," said the intern.

"Was I a tough job?" asked Lewis.

"It was a clean wound," said the intern. "You take it easy now. It's

almost chow time. I'll see that you're served in the first round and then I'll have the nurse bring you a sedative. You need your rest."

"How long am I going to be chained to this bed?" asked Lewis.

"We'll discuss that later," said the intern. "You really shouldn't be talking." He turned away, went out the door.

Lewis turned his head away, saw that someone had left a stack of magazines on his bed stand. The top magazine had slipped down, exposing the cover. It was done in garish colors—a bug-eyed monster chasing a scantily clad female. Lewis was reminded of his nightmare. *A mere human . . . A mere human . . . A mere human.* The words kept turning over in his mind. *What was it about Johnson that brought up the idea of a freak?* he wondered.

A student nurse brought in his tray, cranked up his bed and helped him eat. Presently, a nurse came in with a hypo, shot him in the arm. He drifted off to sleep with the mind full of questions still unanswered.

"He's awake now," said a female voice. Lewis heard a door open, looked up to see Czernak followed by Joe Welch. It was daylight outside, raining. The two men wore damp raincoats which they took off and draped over chairs.

Lewis smiled at Welch. "Thanks for having good ears, Joe," he said.

Welch grinned. "I opened the window when I saw you come out the back door," he said. "I thought maybe you was going to holler something up to me. Then when you went right back inside, I thought that was funny; so I left the window partly open or I'd never've heard a thing."

Czernak pulled a chair up beside Lewis' bed, sat down. Welch took a chair at the foot.

Lewis turned his head toward the sheriff. "Is the D. A. screaming yet?"

"No," said Czernak. "He got caught out in that rainstorm the other day and he's home with the flu. Besides, I'm still sheriff of this county." He patted the bed. "How you feeling, boy?"

"I'm afraid I'm gonna live," said Lewis.

"You better," said Welch. "We got a new relief radio gal who saw your picture in the files an' says she wants to meet you. She's a wow."

"Tell her to wait for me," said Lewis. He looked at the sheriff. "What'd you find?"

"I don't get it, Welby," said Czernak. "Right behind where them tanks was there was this brick wall covered with plaster. We took away the plaster and there's all these wires, see."

"What kind of wires?"

"That's just it. Keeler's old man is a jeweler and Keeler says this wire is silver. It's kind of a screen like, crisscrossed every which way."

"What were they hooked up to?"

"To nothing we could find," said Czernak. He looked at Welch. "Ain't that right?"

"Nothing there but this wire," said Welch.

"What did you do with it?" asked Lewis.

"Nothing," said Czernak. "We just left it like it was and took pictures."

"Anything under the floor?"

Czernak's face brightened. "Boy, we sure hit the jackpot there!" He bent his head and peered closely at Lewis. "How'd you know we'd find something under there?"

"I just knew those tanks kept appearing out of nowhere," said Lewis. "What was under there?"

Czernak straightened. "Well, a whole section of the hall floor was an elevator and down below there was this big room. It stretched from under the hall to clear under the embalming room and there was a section of the embalming room floor where a bunch of tiles come up in one piece and there was a trapdoor and a stairway. Hell! It was just like one of them horror movies!"

"What was down there?"

"A buncha machinery," said Czernak.

"What kind?"

"I dunno." Czernak shook his head, glanced at Welch.

"Craziest stuff I ever saw," said Welch. He shrugged.

"Doc Bellarmine came down and had a look at it after the autopsy last night," said Czernak. "He said he'd be in to see you this morning."

"Did he say anything about the autopsy?" asked Lewis.

"Not to me," said Czernak.

Welch hitched his chair closer to the foot of the bed, rested an arm on the rail. "He told me it was something about the autopsy made him come down to have a look at the mortuary," he said. "He didn't say what it was, though."

"What about the mortuary staff?" asked Lewis. "Did they say anything about the secret room?"

"They swear they never even knew it was there," said Czernak. "We took 'em all into custody anyway, all except Tule and his wife."

"Tule?"

"Yeah, the other partner. His wife was a licensed mortician, too. Ain't been seen since the night you were shot. The staff says that Johnson, Tule and the wife was always locking doors around the building for no good reason at all."

"What did this machinery look like?"

"Part of it was just an elevator for that section of floor. The other stuff was hooked up to a bunch of pipes coming down from the embalming table upstairs. There was this big—" Czernak stopped as the door opened.

Dr. Bellarmine's cynical face peered into the room. His eyes swept over the occupants, he entered, closed the door behind him. "The patient's feeling better, I see," he said. "For a while there I thought this would be a job for me in my official capacity."

"This guy'll outlive all of us," said Welch.

"He probably will at that," said the doctor. He glanced down at

Lewis "Feel like a little conversation?"

"Just a minute, Doc," said Lewis. He turned to Czernak. "John, I have one more favor," he said. "Could you get one of those tanks of embalming fluid to a welding shop and have it cut open with a burner. I want to know how it's made inside."

"No you don't," said Czernak. "I'm not leavin' here without some kind of an explanation."

"And I don't have an explanation," said Lewis. "All the pieces aren't together yet. I'm tied to this bed when I should be out working on this thing. I've ten thousand questions I want answered and no way of answering them."

"Don't excite yourself," said Bellarmine.

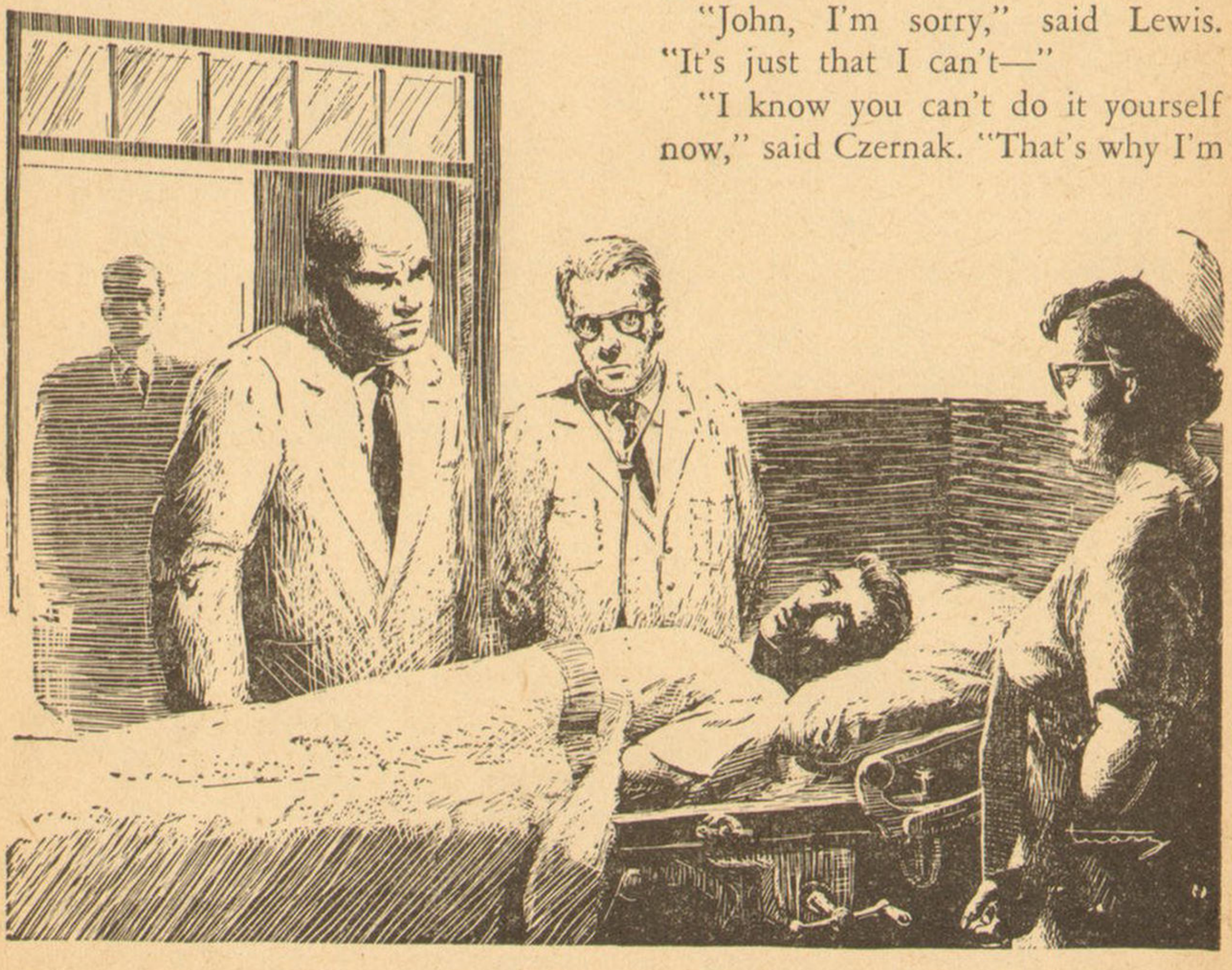
"Yeah, Welby, take it easy," said Czernak. "It's just that I'm about ready to pop with frustration. Nothing makes sense here. This guy tries to kill you for no apparent reason and then commits suicide. It seems to be because you wanted to look inside them tanks, but they're just embalming fluid. I don't get it."

"Would you have those tanks cut open for me?" asked Lewis.

"O. K., O. K." Czernak hoisted himself to his feet. Welch also arose. "Come on, Joe," said the sheriff. "We're nothin' but a couple of leg men for Sherlock here. Let's take them—"

"John, I'm sorry," said Lewis. "It's just that I can't—"

"I know you can't do it yourself now," said Czernak. "That's why I'm



doing it. You're the best man I got, Welby; so I'm countin' on you to put this together. Me, I gave up when I saw that machinery." He left the room, muttering, followed by Welch, who stopped at the door, winked at Lewis.

Bellarmine waited until the door closed, sat down on the foot of the bed. "How'd you get onto them?" he asked.

Lewis ignored the question. "What'd you find in that autopsy?" he asked.

The surgeon frowned. "I thought you were nuts when the sheriff told me what you wanted," he said. "Any fool could see Johnson died of a gunshot wound in the head. But I guessed you had a reason; so I did my cutting carefully and it was a lucky thing I did."

"Why?"

"Well, this is the kind of case an autopsy surgeon sloughs off sometimes. Visible wound. Obvious cause. I could've missed it. The guy looked to be normal."

"Missed what?"

"His heart for one thing. It had an extra layer of muscles in the cardiac sheath. I experimented with them and near dropped my knife. They work like that automatic sealing device they put in airplane fuel tanks. Puncture the heart and this muscle layer seals the hole until the heart's healed."

"Damn!" said Lewis.

"This guy was like that all over," said Bellarmine. "For a long time doctors have looked at the human body with the wish they could redesign certain things to better specifications. Johnson looked like our wish had come true. Fewer vertebrae with better articulation. Pigment veins into the pupil of the eye which could only be some kind of filter to—"

"That's it!" Lewis slapped the bed with the palm of his hand. "There was something freakish about him and I couldn't focus on it. The pupils of his eyes changed color. I can remember seeing it and—"

"You didn't see anything," said Bellarmine. "His pelvic floor was broader and distributed the weight more evenly to the legs. The feet had larger bones and more central distribution of weight over the arch. There was an interlaced membranous support for the viscera. His circulatory system had sphincter valves at strategic points to control bleeding. This Johnson may have looked human on the outside, but inside he was superhuman."

"What about that machinery in the mortuary basement?" asked Lewis.

Bellarmine stood up, began to pace the floor, back and forth at the foot of the bed. Presently, he stopped, put his hands on the rail, stared at Lewis. "I spent half the night examining that layout," he said. "It was one of the most beautifully designed and executed rigs I've ever seen. Its major purpose was to take cadaver blood and fractionate the protein."

"You mean like for making plasma and stuff like that?" asked Lewis.

"Well, something like that," said Bellarmine.

"I didn't think you could use the blood of a corpse for that," said Lewis.

"We didn't either," said the surgeon. "The Russians have been working on it, however. Our experience has been that it breaks down too quickly. We've tried—"

"You mean this was a Communist setup?"

Bellarmine shook his head. "No such luck. This rig wasn't just foreign to the U.S.A. It was foreign to Earth. There's one centrifugal pump in there that spins free in an air blast. I shudder every time I think of the force it must generate. We don't have an alloy that'll come anywhere near standing up to those strains. And the Russians don't have it, either."

"How can you be sure?"

"For one thing, there are several research projects that are awaiting this type of rig and the Russians have no more results on those projects than we have."

"Then something was produced from cadaver blood and was stored in those tanks," said Lewis.

Bellarmine nodded. "I checked. A fitting on the tanks matched one on the machinery."

Lewis pushed himself upright, ignoring the pain in his chest. "Then this means an extraterrestrial in—" The pain in his chest became too much and he sagged back to the pillow.

Dr. Bellarmine was suddenly at his side. "You fool!" he barked. "You were told to take it easy." He pushed the emergency button at the head of the bed, began working on the bandages.

"What's matter?" whispered Lewis.

"Hemorrhage," said Bellarmine. "Where's that fool nurse? Why doesn't she answer the bell?" He stripped away a length of adhesive.

The door opened and a nurse entered, stopped as she saw the scene.

"Emergency tray," said Bellarmine. "Get Dr. Edwards here to assist! Bring plasma!"

Lewis heard a drum begin to pound inside his head—louder, louder, louder. Then it began to fade and there was nothing.

He awoke to a rustling sound and footsteps. Then he recognized it. The sound of a nurse's starched uniform as she moved about the room. He opened his eyes and saw by the shadows outside that it was afternoon.

"So you're awake," said the nurse.

Lewis turned his head toward the sound. "You're new," he said. "I don't recognize you."

"Special," she said. "Now you just take it easy and don't try to move." She pushed the call button.

It seemed that almost immediately Dr. Bellarmine was in the room bending over Lewis. The surgeon felt Lewis' wrist, took a deep breath.

"You went into shock," he said. "You have to remain quiet. Don't try to move around."

His voice low and husky, Lewis said, "Could I ask some questions?"

"Yes, but only for a few minutes. You have to avoid any kind of exertion."

"What'd the sheriff find out about the tanks?"

Bellarmine grimaced. "They couldn't open them. Can't cut the metal."

"That confirms it," said Lewis. "Think there are any other rigs like that?"

"There have to be," said Bellarmine. He sat down on a chair at the head of the bed. "I've had another look at that basement layout and took a machinist with me. He agrees. Everything about it cries out mass production. Mostly cast fittings with a minimum of machining. Simple, efficient construction."

"Why? What good's the blood from human cadavers?"

"I've been asking myself that same question," said Bellarmine. "Maybe for a nutrient solution for culture growths. Maybe for the antibodies."

"Would they be any good?"

"That depends on how soon the blood was extracted. The time element varies with temperature, body condition, a whole barrel full of things."

"But why?"

The surgeon ran a hand through his gray hair. "I don't like my answer to that question," he said. "I keep thinking of how we fractionate the blood of guinea pigs, how we recover vaccine from chick embryos, how we use all of our test animals."

Lewis' eyes fell on the dresser across his room. Someone had taken the books from his night stand and put them on the dresser. He could still see the bug-eyed monster cover.

"From what I know of science fiction," said Lewis, "that silver grid in the hall must be some kind of matter transmitter for sending the tanks to wherever they're used. I wonder why they didn't put it downstairs with the machinery."

"Maybe it had to be above ground," said Bellarmine. "You figure it the same way I do."

"You're a hard-headed guy, Doc," said Lewis. "How come you go for this bug-eyed monster theory?"

"It was the combination," said Bellarmine. "That silver grid, the design of the machinery and its purpose, the strange metals, the differences in Johnson. It all spells A-L-I-E-N, alien. But I could say the same holds for you, Lewis. What put you wise?"

"Johnson. He called me a *mere human*. I got to wondering how alien a guy could be to separate himself from the human race."

"It checks," said Bellarmine.

"But why guinea pigs?" asked Lewis.

The surgeon frowned, looked at the floor, back to Lewis. "That rig had a secondary stage," he said. "It could have only one function—passing live virus under some kind of bombardment—X-ray or beta ray or whatever—and depositing the mutat-

ed strain in a little spray container about as big as your fist. I know from my own research experience that some mutated virus can be deadly."

"Germ warfare," whispered Lewis. "You sure it isn't the Russians?"

"I'm sure. This was a perfect infecting center. Complete. Banbury would've been decimated by now if that's what it was."

"Maybe they weren't ready."

"Germ warfare is ready when one infecting center is set up. No. This rig was for producing slight alterations in common germs or I miss my guess. This little spray container went into a . . ."

"Rack on Johnson's desk," said Lewis.

"Yeah," said Bellarmine.

"I saw it," said Lewis. "I thought it was one of those deodorant things." He picked a piece of lint off the covers. "So they're infecting us with mutated virus."

"It scares me," said Bellarmine.

Lewis squinted his eyes, looked up at the surgeon. "Doc, what would you do if you found out that one of your white rats was not only intelligent but had found out what you were doing to it?"

"Well—" Bellarmine looked out the window at the gathering dusk. "I'm no monster, Lewis. I'd probably turn it loose. No—" He scratched his chin. "No, maybe I wouldn't at that. But I wouldn't infect it anymore. I think I'd put it through some tests to find out just how smart it was. The rat would no longer be a simple test animal. Its usefulness would be in the psychological field, to tell me things about myself."

"That's about the way I had it figured," said Lewis. "How much longer am I going to be in this bed?"

"Why?"

"I've figured a way for the guinea pigs to tell the researchers the jig's up."

"How? We don't even know their language. We've only seen one specimen and that one's dead. We can't be sure they'd react the same way we would."

"Yes they would," said Lewis.

"How can you say that? They must already know we're sentient."

"So's a rat sentient—to a degree," said Lewis. "It's all in the way you look at it. Sure. Compared to us, they're vegetables. That's the way it'd be with—"

"We don't have the right to take risks with the rest of humanity," protested Bellarmine. "Man, one of them tried to kill you!"

"But everything points to that one being defective," said Lewis. "He made too many mistakes. That's the only reason we got wise to him."

"They might dump us into the incinerator as no longer useful," said Bellarmine. "They—"

Lewis said, "They'd have to be pretty much pure scientists. Johnson was a field man, a lab technician, a worker. The pure scientists would follow our human pattern. I'm sure of it. To be a pure scientist you have to be able to control yourself. That

means you'd understand other persons'—other beings'—problems. No, Doc. Your first answer was the best one. You'd put your rats to psychological tests."

Bellarmine stared at his hands. "What's your idea?"

"Take a white rat in one of those little lab cages. Infect it with some common germ, leave the infecting hypo in the cage, put the whole works—rat and all—in front of that silver grid. Distort—"

"That's a crazy idea," said Bellarmine. "How could you tell a hypothetical something to look at your message when you don't even know the hypothetical language—how to contact them in the first place."

"Distort the field of that grid by touching the wires with a piece of metal," said Lewis. "Tie the metal to the end of a pole for safety."

"I've never heard a crazier idea," said Bellarmine.

"Get me the white rat, the cage and the hypo and I'll do it myself," said Lewis.

Bellarmine got to his feet, moved toward the door. "You're not doing anything for a couple of weeks," he said. "You're a sick man and I've been talking to you too long already." He opened the door, left the room.

Lewis stared at the ceiling. A shudder passed over his body. *Mutated virus!*

The door opened and an orderly and nurse entered. "You get a little tube feeding of hot gelatin," said the nurse. She helped him eat it, then, over his protests, gave him a sedative.

"Doctor's orders," said the nurse.

Through a descending fog, Lewis murmured, "Which doctor?"

"Dr. Bellarmine," she said.

The fog came lower, darkened. He drifted into a nightmare peopled by thousands of Johnsons, all of them running around with large metal tanks asking, "Are you human?" and collecting blood.

Sheriff Czernak was beside the bed when Lewis awoke. Lewis could see out the window that dawn was breaking. He turned toward the sheriff. "Mornin', John," he whispered. His tongue felt thick and dry.

"'Bout time you woke up," said Czernak. "I've been waiting here a coupla hours. Something fishy going on."

"Wind my bed up, will you?" asked Lewis. "What's happening?"

Czernak arose, moved to the foot of the bed and turned the crank.

"The big thing is that Doc Bellarmine has disappeared," he said. "We traced him from the lab here to the mortuary. Then he just goes *pffft!*"

Lewis' eyes widened. "Was there a white rat cage?"

"There you go again!" barked Czernak. "You tell me you don't know anything about this, but you sure know all the questions." He bent over Lewis. "Sure there was a rat cage! You better tell me how you knew it!"

"First tell *me* what happened," said Lewis.

Czernak straightened, frowning. "All right, Welby, but when I get through telling, then you better tell." He wet his lips with his tongue. "I'm told the Doc came in here and talked to you last night. Then he went down to the lab and got one of them white rats with its cage. Then he went over to the mortuary. He had the cage and rat with him. Our night guard let him in. After a while, when the Doc didn't come out, the guard got worried and went inside. There in the back hall is the Doc's black bag. And over where this silver wire stuff was he finds—"

"Was?" Lewis barked the word.

"Yeah," said Czernak wearily. "That's the other thing. Sometime last night somebody ripped out all them wires and didn't leave a single trace."

"What else did the guard find?"

Czernak ran a hand under his collar, stared at the opposite wall.

"Well?"

"Welby, look, I—"

"What happened?"

"Well, the night guard—it was Rasmussen—called me and I went right down. Rasmussen didn't touch a thing. There was the Doc's bag, a long wood pole with a tire iron attached to it and the rat cage. The rat was gone."

"Was there anything in the cage?"

Czernak suddenly leaned forward, blurted, "Look, Welby, about the cage. There's something screwy about it. When I first got there I swear it wasn't there. Rasmussen doesn't remember it either. My first idea when I got there was that the Doc'd gone out the back way, but our seal was still on the door. It hadn't been opened. While I was thinkin' that one over—I was standing about in the middle of the hall—I heard this noise like a cork being pulled out of a bottle. I turned around and there was this little cage on the floor. Out of nowhere."

"And it was empty?"

"Except for some pieces of glass that I'm told belonged to a hypo."

"Broken?"

"Smashed to pieces."

"Was the cage door open?"

Czernak tipped his head to one side, looked at the far wall. "No, I don't believe it was."

"And exactly where was this cage?" Lewis' eyes burned into the sheriff's.

"Like I said, Welby. Right in front of where the wires was."

"And the wires were gone?"

"Well—" Again the sheriff looked uncomfortable. "For just a second there when I turned around after hearing that noise—for just a second there I thought I saw 'em."

Lewis took a deep breath.

Czernak said, "Now come on and give, will you? Where's the Doc. You must have some idea, the way you been askin' questions."

"He's taking his entrance exams," said Lewis. "And we'd all better pray that he passes."

THE END

THE LONG WAY HOME

Conclusion. ***Sooner or later, every adult human being makes a discovery—or lives dissatisfied, unhappy. That there never was, and never will be, a way to go home . . . but there is always a way to make home.***

BY POUL ANDERSON

Illustrated by Freas

SYNOPSIS

In the Twenty-first Century, a physical effect was discovered which seemed to transport matter instantaneously from place to place and thus to permit interstellar travel. Unfortunately, the positioning control was very poor; therefore the United States Department of Astronautics outfitted a spaceship, the Explorer, *with the new "superdrive" and a*

small crew of scientists who were to get the bugs out of the system. Their method was to jump across light-years to test each change in the circuits, and in the course of a year they had completed the task and returned to Earth. The crew consisted of: Captain Edward Langley, pilot and engineer; electronician Robert Matsumoto; and physicist James Blaustein. A fourth man had died, but his place was taken by Saris Hronna of Holat.

Holat, a thousand light-years from Sol, had seemed a backward planet whose race—big otterlike creatures—were peaceful neolithic herders in spite of being carnivorous. But its world-wide civilization was highly developed along nonhuman lines, especially in the fields of psychology and philosophy. The Holatans were sensitive to neural currents, though not mind readers, and enjoyed a stabilizing emotional communion. They had been of considerable help in improving the superdrive, and Saris Hronna went along to Earth as their representative.

When the Explorer *returned, Earth was far off its expected position. Nevertheless Langley brought the ship in, noting that his world was strangely altered; the polar ice-caps were gone, the coastlines changed, cities he knew had disappeared and others arisen, the radio carried a wholly foreign language. Antigravity warships forced him down to a landing field in the New Mexico area, and the crew was arrested by uniformed men carrying unknown weapons. Saris nullified these and escaped into the agricultural countryside; the humans remained prisoners.*

Under hypnosis they revealed what they knew and learned the present language. Awakening, Langley was interviewed by Chanthavar Tang vo Lurin, chief field operative of Solar military intelligence, who explained the facts to him. The superdrive was only light-speed, a projection and recreation of de Broglie waves rather than a jump through "hyperspace," and in crossing five thousand light-years the Explorer *went five thousand years into the future. No better drive had been discovered, and only the nearer stars were normally visited; lost colonies were known to be scattered through the galaxy, but they lay beyond contact and by now had undoubtedly developed a wide variety of civilizations.*

For the past two thousand years, the Solar System had been unified under the Technate, a petrified society in which basic decisions were made by the Technon, a giant, hidden sociomathematical computer. Administration was in the hands of the Ministers, a class of genetically selected aristocrats; the army, like the police and most servants, were slaves, specially bred and trained; the Commoners lived relatively unsupervised lives in the lower-city levels, working for hire or as small entrepreneurs, but powerless, uneducated, and impoverished.

Sol's deadly rivals were the Cen-

taurians, descendants of early colonists on the habitable planets Thor and Freyja of the Alpha Centaurian System. They were mechanized semi-barbarians, divided into nobles, yeomen, and technicians, warlike and greedy for more land. They had fought an unsuccessful war with the natives of Thrym, a poisonous giant planet of Proxima, and later allied themselves with the wholly unhuman Thrymans. At present, sheer distance prevented war with Sol, but both sides were maneuvering for advantage and any upset in the balance of power could lead to space fleets bombarding the planets with ruinous effect.

Lord Brannoch dhu Crombar of Thor was not only the Centaurian ambassador to Sol, but the head of a spy ring. Through a Solar officer in his pay, he learned of the Explorer *and at once realized the significance of Saris' hitherto unknown powers. He had four Thrymans in a tank with him—or one, since they could hook up telepathically into a single unit—whose ability to read human minds was a closely guarded secret of immense value. But he got the idea for a campaign to catch Saris for himself: he would work through Langley, of whose personal effects he had obtained photographs. These included pictures of the spaceman's long-dead wife.*

Chanthavar was also anxious to get Saris, and asked Langley's help; the spaceman, stunned and heartsick, stalled till he could learn more by claiming he had no idea where Saris would go. Chanthavar took the Explorer *crew to a party, where they were a minor sensation and Langley got a further impression of Solar decadence and Centaurian ruthlessness. There he met Brannoch, as well as Goltam Valti, chief Solar factor of the Commercial Society. This was a nomad group, a civilization in its own right composed of many races, trading with all known planets and becoming ever more important as these used up their own resources. Both Brannoch and Valti hinted strongly that they would pay well to be told Saris' whereabouts: obviously both had agents in the Solar government.*

Meanwhile the Holatan, pursued by Technate police, was trying to hide till he could evaluate the new situation for himself. He was afraid his own planet, though far off, might become the prey of some chance conquistador; to aid it, he planned to play the various human factions off against each other. He used his brain's power of electromagnetic induction, which enabled him to control any electronic apparatus, to help him capture a police aircraft, and in this he went looking for a hiding place.

Chanthavar, endeavoring to make friends with them, took Langley, Blaustein, and Matsumoto on a tour of the capital city, Lora—meanwhile arguing that they should help the Technate, which stood for a peaceful status quo, *and not the ambitious warlords of Centauri. While they were in a pleasure house, a party of*

men assaulted them and kidnaped Blaustein and Matsumoto. Langley joined the pursuit, but still dazed by the pleasure-house drugs, wandered off by himself into the low-level slums. Near Etie Town, the section reserved for nonhuman visitors, he was captured by another group of men. But a third band, this one from the Society, took him away from these and brought him to Valti's headquarters.

Valti explained that Blaustein and Matsumoto were probably kidnaped by Centaurian agents, who hoped they would know where Saris was. He also pointed out the importance of the Holatan—not for himself but for scientific study of his powers, to find a means of artificially nullifying all electronic devices and, therefore, an irresistible weapon. He urged Langley to find Saris for the Society, the only humane and neutral power; but when the spaceman demurred, let him go, giving him a secret communicator with which to call if he decided to coöperate.

Brannoch had, indeed, engineered the raid, only to learn that his prisoners could not help; under mental probing, they had merely indicated that Langley would know Saris' whereabouts if anyone did. The Thrymans, actually Brannoch's superiors rather than his advisors, ordered him to have the prisoners killed. Langley visited the embassy in the hope of getting his friends released. Chanthavar had him too heavily guarded for another kidnaping, so Brannoch blandly denied any part in the affair and argued that Sol was not as peaceful as claimed. He also said he was having a gift sent to Langley's apartment. When the spaceman was gone, the Thrymans complained that they could not read his mind, his thoughts came through as gibberish. Brannoch had hopes for his own scheme.

The gift was a slave girl, Marin, who had been surgically made into a replica of Langley's wife. He did not have the heart to send her back, but neither was he so grateful as to be ready to help Brannoch. Chanthavar appeared, all but ordering Langley to find Saris under severe penalties; as a last resort, he would use mental probing, though it would be worse than useless if Langley really did not know. Seeing Marin, Chanthavar formed another plan instead.

That night the girl was kidnaped by unknowns, and Langley was nearly crazed by worry over her. But she was returned unharmed, with no memory of what had happened or any idea of the reason.

Sickened, Langley decided to aid Valti on condition the Society got him and Marin away from Sol. Among the lost colonies they might find a more agreeable world. The trader got them past both Solar and Centaurian agents. Langley, recalling conversations with Saris, told him the alien was probably hiding in Carlsbad Caverns.

There, indeed, they found him, and he agreed to help the Society in exchange for defenses for his own

planet. Valti took them all to his Himalayan hideaway prior to leaving Earth in the superdrive ship which, like all foreign agents, he had out in a secret orbit. He let slip that the true rulers of the Society, to whom he turned in his reports and from whom he got his orders, were unknown—even to himself. He thought this only a security precaution, but Langley wondered.

Brannoch and an armed party stormed the hideaway and captured all present. He had had Marin subconsciously conditioned to send him a call when Saris was found, and this she had unknowingly done over the radio. Learning that Blaustein and Matsumoto had been murdered, Langley was so shocked he wanted nothing further to do with her. Brannoch took all the prisoners to an African hideout.

There his conversation with the Thrymans showed Langley that these must be the real rulers of the Centaurian alliance. Locked away together, Langley and Saris had a secret language, English; and the alien explained that a telepath must know one's language to read one's mind, so that they were both immune to Thryman probing. His sensitivity also revealed to him that Marin had a small transmitter surgically embedded in her body, showing her whereabouts.

This was obviously the work of Chanthavar, who must have staged her kidnaping for that purpose. Langley was, therefore, not surprised when the stronghold was attacked.

PART 4

XVI

A siren hooted. As its echoes rang down the hall, the guards jerked about, frozen for a bare instant.

The door flew open and Saris Hronna was through. His tigerish leap smashed one man into the farther wall. The other went spinning, to fall a yard away. He was still gripping his weapon. He bounced to his feet, raising it, as Langley charged him.

The spaceman was not a boxer or wrestler. He got hold of the gun barrel, twisting it aside, and sent his other fist in a right cross to the jaw. The Thorian blinked, spat blood, but failed to collapse. Instead, he slammed a booted kick at Langley's ankle. The American lurched away, pain like a lance in him. The Centaurian backed, lifting the musket. Saris brushed Langley aside in a single bound and flattened the man.

"Iss you well?" he asked, wheeling about. "Iss hurt?"

"I'm still moving." Langley shook his head, tasting the acridness of defeat. "Come on . . . spring the rest. Maybe we can still make a break during the fracas."

Shots and explosions crashed through the other rooms. Valti stumbled forth, his untidy red head lowered bull-like. "This way!" he roared. "Follow me! There must be a rear exit."

The prisoners crowded after him, swiftly down the corridor to a door

which Saris opened. A ramp led upward to ground level. Saris hunched himself—anything might be waiting beyond. But there was no alternative. The camouflaged entrance flew up for him, and he bounded into a late daylight.

Black patrol ships swarmed overhead like angry bees. There was a flier near one of the buildings. Saris went after it in huge leaps. He was almost there when a blue-white beam from the sky slashed it in half.

Wheeling with a snarl, the Holatan seemed to brace himself. A police vessel suddenly reeled and crashed into another. They fell in flame. Saris sprang for the edge of the compound, the humans gasping in his wake. A curtain of fire dropped over his path. Valti shouted something, pointing behind, and they saw black-clad slave soldiers rushing from the underground section.

"Stop their weapons!" shrieked Langley. He had one of the muskets, he laid it to his cheek and fired. The crack of it and the live recoil were a glory to him. A man spun on his heel and fell.

"Too many." Saris lay down on the bare earth, panting. "Iss more than I can handle. I had little hope for escape anyhow."

Langley threw down his gun, cursing the day of creation.

The corpsmen ringed them in, warily. "Sirs, you are all under arrest," said the leader. "Please accompany us."

Marin wept, quietly and brokenly, as she followed them.

Chanthavar was in the plantation office. The walls were ringed with guards, and Brannoch stood gloomily to one side. The Solarian was immaculate, and his cheerfulness hardly showed at all.

"How do you do, Captain Langley," he said. "And Goltam Valti, sir, of course. Well, gentlemen, I seem to have arrived in the well-known nick of time."

"Go ahead," said the spaceman. "Shoot us and get it over with."

Chanthavar raised his brows. "Why such a flair for drama?" he asked.

An officer entered, bowed, and reeled off his report. The hideaway was taken, all personnel dead or under arrest, our casualties six killed and ten wounded. Chanthavar gave an order, and Saris was herded into a specially prepared cage and borne outside.

"In case you're wondering, captain," said the agent, "the way I found you was—"

"I know," said the spaceman.

"Oh? Oh . . . yes, of course. Saris would have detected it. I was gambling there; didn't think he'd realize in time what it was, and apparently he didn't. There were other tracing procedures in readiness, this happens to be the one which worked." Chanthavar's lips curved into his peculiarly engaging smile. "No grudges, captain. You tried to do what seemed best, I'm sure."

"How about us?" rumbled Brannoch.

"Well, my lord, the case clearly calls for deportation."

"All right. Let us go. I have a ship."

"Oh, no, my lord. We couldn't be so discourteous. The Technate will prepare transportation for you. It may take a while—even a few months—"

"Till you get a head start on the nullifier research. I see."

"Meanwhile, you and your staff will kindly remain in your own quarters. I shall post guards to see that you are not . . . disturbed."

"All right." Brannoch forced his mouth into a sour grin. "I have to thank you for that, I suppose. In your position, I'd have shot me down out of hand."

"Some day, my lord, your death may be necessary," said Chanthavar. "At present, though, I owe you something. This affair is going to mean a good deal to my own position, you understand—there are higher offices than my present one, and they will soon be open for me."

He turned back to Langley. "I've already made arrangements for you, captain. Your services won't be required any longer; we have found a couple of scholars who can talk Old American, and between them and the hypnotic machines Saris can be given a near-perfect command of the modern language in a few days. As for you, a position and an apartment at the university in Lora has been fixed up. The historians, archeologists, and planetographers are quite anxious to consult you. The pay is small, but you'll keep free-born rank."

Langley said nothing. So he was to be taken out of the game already. That was the end—back in the box with you, my pawn.

Valti cleared his throat. "My lord," he said pompously, "I must remind you that the Society—"

Chanthavar gave him a long stare through narrowed eyes. The smooth face had gone utterly expressionless. "You have committed criminal acts within the laws of Sol," he said.

"Extraterritoriality—"

"It doesn't apply here. At best, you can be deported." Chanthavar seemed to brace himself. "Nevertheless, I am letting you go free. Get your men together, take one of the plantation fliers, and go on back to Lora."

"My lord is most gracious," said Valti. "May I ask why?"

"Never mind why. Get out."

"My lord, I am a criminal. I confess it. I want a fair trial by a mixed tribunal as provided in Article VIII, Section 4, of the Treaty of Lunar."

Chanthavar's eyes were flat and cold. "Get out or I'll have you thrown out."

"I demand to be arrested!" shouted Valti. "I insist on my right and privilege of clearing my own conscience. If you won't book me, I shall complain directly to the Technon."

"Very well!" Chanthavar spat it out. "I have orders from the Technon itself to let you go scot-free. Why, I don't know. But it's an order; it came as soon as soon as I filed re-

port of the situation and of my intention to attack. Are you satisfied?"

"Yes, my lord," said Valti blandly. "Thank you for your kindness. Good day, gentlemen." He bowed clumsily and stumped out.

Chanthavar broke into a laugh. "Insolent old beetle! I didn't want to tell him, but he'd have learned it anyway in time. Now let him wonder along with the rest of us. The Technon gets mysterious now and then—a brain planning a thousand years ahead has to, I suppose." He rose and stretched. "Let's go. Maybe I can still make that concert at Salma tonight."

Langley blinked at the sunshine outside. The tropics of Earth had gotten still hotter in five thousand years. He saw a group of armed men boarding a military flier, and there was a sudden wrenching in his heart.

"Chanthavar," he asked, "can I say good-by to Saris?"

"I'm sorry." The agent shook his head, not without compassion. "I know he's your friend, but there have been too many risks taken in this business already."

"Well . . . will I ever see him again?"

"Perhaps. We aren't brutes, captain. We don't intend to mistreat him if he coöperates." Chanthavar waved to a smaller machine. "I think that's yours. Good-by, captain. I hope to see you again sometime if I get the chance." He turned and strode briskly off. The dust scuffed up under his buskins.

Langley and Marin entered the flier. One silent guard went along; he set the autopilot, they rose smoothly, and he sat down in front of them to wait with drilled patience.

The girl was mute for a long while. "How did they find us?" she asked at last.

The spaceman told her.

She didn't cry this time. There seemed to be no tears left. They said almost nothing during the hour of bulleting homeward flight.

Lora raised over a nighted horizon, like one huge fountain of soaring metal pride. The flier buzzed around, finding a ledge on one of the smaller towers on the north side. The guard nodded. "Your apartment is No. 337, right down the hall, sir," he stated. "Good evening."

Langley led the way. When the door opened for him, he saw a layout of four small rooms, comfortable but unostentatious. There was a service robot, but clearly his new position did not include live slaves.

Except—

He faced around to Marin, and stood looking at her for a minute. She returned his gaze steadily, but she was pale and there was a darkness in her eyes. This blanched creature was not Peggy, he thought.

The rage and bitterness rose in his throat like vomit. All over. *C'est fini.* Here ends the saga. He had tried, and all his hopes had been kicked down, and *she* was the one who had wrecked them!

"Get out," he said.

She lifted a hand to her mouth,

as if he had struck her, but no words would come.

"You heard me." He walked over the floor, it yielded ever so little as if it were of rubbery flesh, and stared through the window. "I'm giving you your freedom. You're not a slave now. Understand?"

She made no reply, not yet.

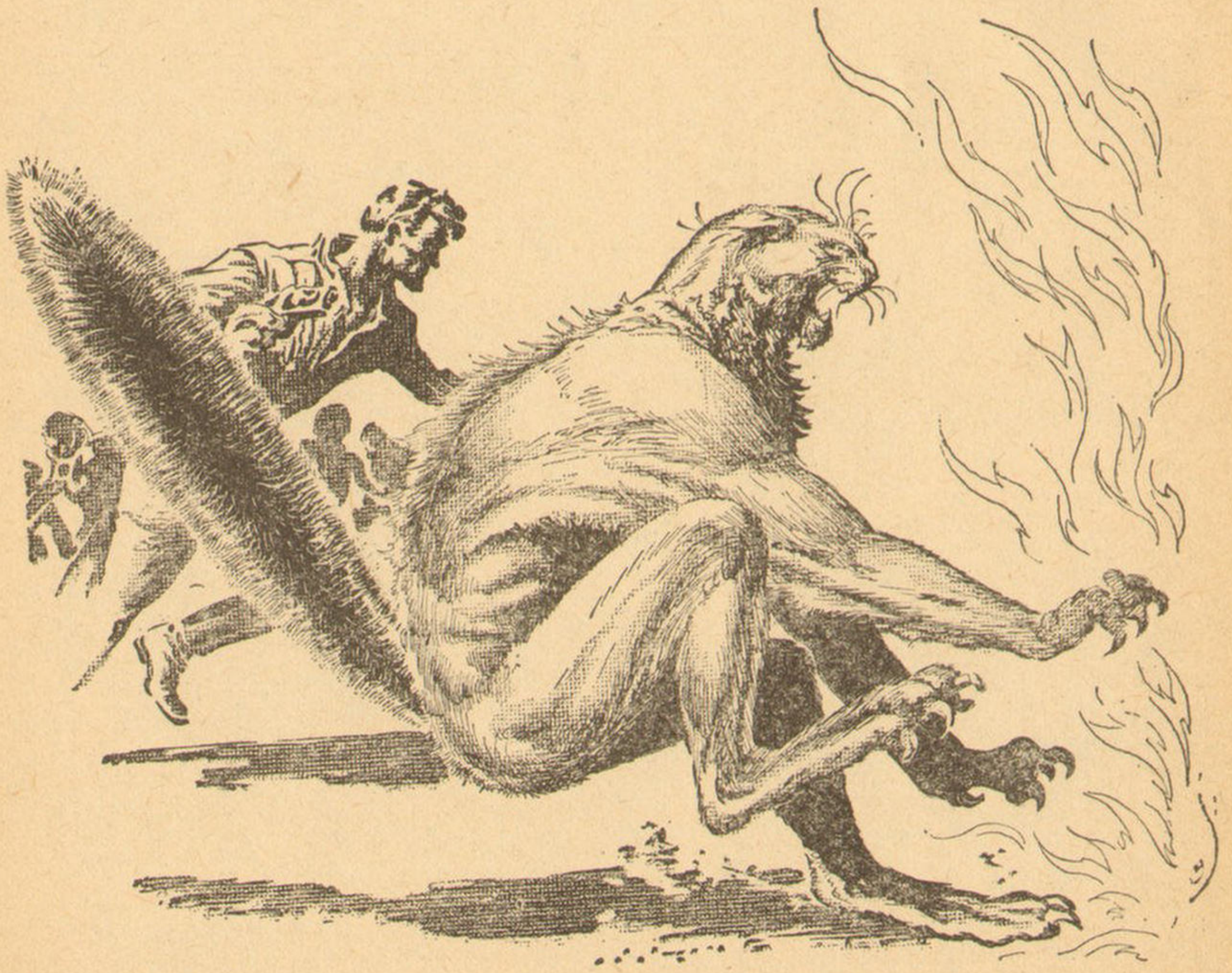
"Are there any formalities involved?" he asked.

She told him. There was no life in her voice. He dialed the records office and filed notice that he, sole owner of chattel slave No. Such-and-such, was hereby emancipating her. Then he turned, but he couldn't quite meet the green eyes.

"It wasn't your fault," he said thickly. There was a thundering in his temples, and his legs wobbled under him. "It wasn't anybody's fault, we're all poor little victims of circumstance, and I've had enough of that line. You were just a helpless tool, sure, I'm not condemning you. Nevertheless, I can't stand having you around any longer. There's too much failure in you. You have to go."

"I'm sorry," she whispered.

"So am I," he said insincerely. "Go on . . . get out . . . make something of yourself." With a barely conscious impulse, he unfastened his purse and threw it at her. "There.



Good bit of money in that. Take it—use it to establish yourself."

She looked at him with a bewilderment which slowly cleared. "Good-by," she said. Her back was straight as she walked out. It wasn't till much later that he noticed she'd left his purse where it fell.

XVII

Tomorrow and tomorrow and tomorrow. This is the way the world ends.

They were quiet, pleasant men in the university, they had grave good manners but little formality and they were considerate of the man from the past. Langley recalled his own college days—he'd been a graduate assistant for a while and had seen a bit of faculty life. Here there was none of the gossip and small intrigue and hypocritical teas he remembered; but neither was there any spirit of eagerness and intellectual adventure. Everything was known, everything settled and assured, it remained only to fill in the details. Back in the Twenty-first Century, masters' theses about the commas in Shakespeare had still been a subject for humor—today, the equivalent was a matter of course.

The library was magnificent and astonishing: a billion volumes reduced to magnetic patterns, any of them instantly located and copied by pressing a few buttons. The robots would even do your reading for you and make summaries, they would draw conclusions if you wanted them to: logical deductions with no hint of speculative imagination. The professors—they were called by a title which meant, roughly, "repository of information"—were mostly of commoner stock, a few petty aristocrats, all selected by tests which made no allowance for birth. The rules of their order kept them strictly out of politics. There were only a few students, some dilettantes and some earnest youngsters intending to become professors in their turn. The sons of Ministers went from private tutors to special academies; the university was a dying vestige of an earlier period, maintained simply because the Technon had not ordered its abolition.

Nevertheless, Langley found these graying, brown-robed men congenial company. There was one historian in particular, a little wizened man with a huge bald head, Jant Mardos, with whom he got quite friendly: the chap had enormous erudition and a refreshingly sardonic viewpoint. They used to spend hours talking, while a recorder took down everything which was said for later evaluation.

For Langley, it was the nights which were worst.

". . . The present situation was, of course, inevitable," said Mardos. "If a society is not to petrify, it must innovate, as yours did; but sooner or later a point is reached at which further innovation becomes impractical, and then petrifaction sets in anyway. For example, the unification of Earth was necessary if man was to survive, but in time that unifica-

tion destroyed the cultural variety and interplay which had been responsible for much progress up to then."

"Seems to me you could still make changes," said the spaceman, "Political changes, at least."

"What sort? You might as well face it, the Technon is the best possible device for government—if we wrecked it, we'd go back to corruption, incompetence, and internecine strife. We have those already, of course, but they don't matter very much, since policy is decided by a machine which is able, incorruptible, and immortal."

"Still, why not give the Commoners a break? Why should they have to spend their lives down on low-level?"

Mardos raised his brows. "My dear romantic friend, what else can they do? Do you think they're fit to share administrative responsibilities? The average IQ of the Commons is about 90, the average for the Ministerial class is closer to 150." He laid his fingertips carefully together. "To be sure, by automatizing all operations, it would be possible for every man in the Solar System to quit work: all his needs would be supplied free. But what, then, is your IQ-90 Commoner going to do with himself? Play chess and write epic poems?

"Even as things are, there isn't enough work to go around for the Ministers. That's why you see so many wastrels and so much politicking among them.

"Let's admit it: man in the known universe has exhausted the possibilities of his own culture. You wouldn't expect them to be infinite, after all. There are only so many shapes into which you can carve a block of marble; once the sculptors have made the best ones, their successors face a choice between dull imitation and puerile experiment. The same applies to all the arts, the sciences, and the permutations of human relationships. As for politics, our civilization today may be ossified, but it is at least stable, and the majority are content that it remain so. For the ordinary man, instability —change—means dislocation, war, uncertainty, misery, and death."

Langley shook his head. "The universe is bigger than we are," he said. "We can always find something new out there, always make a fresh start."

"Are you thinking of the lost colonies?" asked Mardos. He snorted. "Several bales of romantic nonsense have been written about them. But they were only people who couldn't make the grade at home and tried to escape. I doubt if they did any better out there."

"You're pretty far from your own colonial period," said Langley. "In my time, though, we were still close to ours. I have a notion that progress, the new outlook on life, the fresh start, is mostly due to those same failures."

"So?" Mardos pricked up his ears. "What basis?"

"Oh . . . all the history I know. Take Iceland; I had a friend from there who explained it to me. The

first colonists were big men, even petty kings of a sort, who got kicked out of Norway when it was unified because they wouldn't knuckle under. They founded what was just about the first republic since Greek times; they wrote down some of the finest literature in the world; they made good tries at colonizing Greenland and America.

"Then the Americans themselves, my own people. Some of them were religious dissenters who couldn't get along with the churches at home. Some of them were deported criminals. The later immigrants were mostly impoverished bums, some few liberals who didn't like what was happening in Europe. And yet this bunch of malcontents and Commoners took over half a continent, gave republican government its first real start, led the parade in creating industry and technology, and grabbed the leadership in world affairs . . . no, wait, they didn't grab it, didn't really want it, but they had it thrust on them because nobody else could hold that particular potato.

"Then there were the early interplanetary colonies, which I saw with my own eyes. The personnel weren't exactly fugitives, they were planted there, but they were the sort who fitted best into the new environment and got quite unhappy if you sent them back to Earth. The average intelligence was pretty terrific."

"You might be right," said Mardos thoughtfully. "Perhaps some few of the lost colonies have found a better way. For instance, if a shipload of really high-caliber people went off, no morons to drag them down—"

"And most rebels are high-caliber," put in Langley. "They wouldn't be rebels if they were dumb enough and spineless enough to accept things as they are."

"Well, who wants to spend perhaps thousands of years external time looking for them? That's sheer escapism."

"I've got a hunch that history is made by that kind of escapist."

"The Commercial Society has ranged for hundreds of light-years and found nothing like what you dream of."

"Certainly not. A group which wanted to get away from what it considered an evil civilization would go further than that. And there's the idea of something hid behind the ranges—"

"Immature!"

"Of course. Don't forget, the immature human—or society—is in process of growing up. But speaking of *the* Society, I'd like to know more about it. I've got a kind of suspicion—"

"There isn't a great deal of information. They've been pretty secretive. They seem to have originated right here on Earth, a thousand or so years ago, but the history is obscure."

"It shouldn't be," said Langley. "Isn't the Technon supposed to keep complete records of everything important? And surely the Society is important—anyone could have fore-

seen they'd become a major factor."

"Go ahead," shrugged Mardos. "You can use the library as much as will amuse you."

Langley found himself a desk and asked for a bibliography. It was surprisingly small. By way of comparison, he got a reference list for Tau Ceti IV, a dreary little planet of no special value—it was several times as long as the first.

He sat for some minutes meditating on the effects of a static culture. To him, the paucity of information fairly screamed *Cover-up*. But these so-called savants around him merely noted that few books and articles were available, and proceeded to forget all about the subject.

He plunged doggedly into the task of reading everything he could find on the topic. Economic statistics; cases where the Society had interfered in local politics on one or another planet, to protect itself; discourses on the psychology produced by a lifetime aboard ship—and an item dated one thousand, ninety-seven years ago, to the effect that one Hardis Sanj, representing a group of interstellar traders—list of names attached—had applied for a special charter and that this had been granted. Langley read the charter: it was a sweeping document, its innocuous language gave powers which a Minister might envy. Three hundred years later, the Technon entered a recognition of the Society as an independent state; other planets had already done so, the rest soon followed suit. Since then there had been treaties and—

Langley sat very still, four days after his research had begun. It added up.

Item: The Technon had let the Society go without any argument, though otherwise its basic policy was frankly aimed at the gradual re-unification of the accessible galaxy.

Item: The Society had several hundred million members by now, including personnel from many nonhuman races. No one member of it knew more than a fraction of the others.

Item: The rank and file of the Society, up through ships' officers, did not know who their ultimate rulers were, but had been conditioned to obedience and a strange lack of curiosity about them.

Item: The Technon itself had ordered Chanthavar to release Valti without prejudice.

Item: The economic data showed that over long periods of time, more and more planets were becoming dependent on the Society for one or another vital element of their industry. It was easier and cheaper to trade with the nomads than to go out and get it for yourself: and the Society was, after all, quite neutral—

Like hell!

Langley wondered why no one else seemed to suspect the truth. Chanthavar, now— But Chanthavar, however intelligent, was conditioned too; his job was merely to carry out policy set by the machine, not to inquire deeply. Of course no Minister

could be permitted to know—such as did, from time to time, stumble on the facts, would disappear. Because if any unauthorized person found out, the secret could not be kept, it would soon be spread between the stars and the Society's usefulness would end.

Its usefulness to the Technon.

Of course! The Society was founded soon after the colonies had broken away. There was no hope of taking them over again in the foreseeable future. But a power which went everywhere and filed reports for an unknown central office—a power which everybody, including its own membership, believed to be disinterested and unaggressive—there was the perfect agent for watching and gradually dominating the other planets.

What a machine the Technon must be! What a magnificent monument, supreme final achievement of an aging science! Its creators had wrought better than they knew; their child grew up, became capable of thinking millennia ahead, until at last it *was* civilization. Langley had a sudden, irrational wish to see that enormous engine; but it could never be.

Was that thing of metal and energy really a conscious brain? No . . . Valti had said, and the library confirmed, that the living mind in all its near-infinite capacities had never been artificially duplicated. That the Technon thought, reasoned, within the limits of its own function, could not be doubted. Some equivalent of creative imagination was needed to run whole planets and to devise schemes like the Society. But it was still a robot, a super-computer; its decisions were still made strictly on the basis of data given it, and would be erroneous to the same degree that the data were.

A child—a great, nearly omnipotent, humorless child, fixing the destiny of a race which had abdicated its own responsibilities. The thought was not cheerful.

Langley struck a cigarette and leaned back. All right. He'd made a discovery which could shake an empire. That was because he came from an altogether different age, with a different way of living and thinking. He had the unsubmissive intellect of the free-born without their mental blinkers; his world had a history of steady, often violent evolution behind it, had made an idol of "progress," so he could observe today with more detachment than people who for the past two millennia had striven only for stasis.

But what to do with his facts?

He had a nihilistic desire to call up Valti and Chanthavar and tell them. Blow the whole works apart. But no—who was he to upset an apple cart holding billions of lives, and probably get himself killed in the process? He didn't have the judgment, he wasn't God—his wish was merely a reflex of impotent rage.

So I'd better just keep my mouth shut. If there was ever any suspicion of what I've learned, I wouldn't last

a minute. I was important for a while, and look what happened.

Alone in his apartment that night, he regarded himself in a mirror. The face had grown thin and lost most of its tan. The gray streaks in his hair had spread. He felt very old and tired.

Regret nagged him. Why had he shot that man in the African compound? It had been a futile gesture, as futile as everything he tried in this foreign world. It had snuffed out a life—or, at least, given pain—for no purpose at all.

He simply didn't belong here.

"She sat down beside me,
And taking my hand,
Said: 'You are a stranger,
And in a strange land.'"

She! What was Marin doing? Was she even alive? Or could you call it life, down there on low-level? He didn't think she would sell herself, she'd starve to death first with the angry pride he knew, but anything could happen in the Old City.

Remorse clawed at him. He shouldn't have sent her away. He shouldn't have taken out his own failure on her, who had only wanted to share his burden. His present salary was small, hardly enough to support two, but they could have worked something out.

Blindly, he dialed the city's main police office. The courteous slave face told him that the law did not permit free tracing of a Commoner who was not wanted for some crime. A special service was available at a price of—more money than he had. Very sorry, sir.

Borrow the money. Steal it. Go down to low-level himself, offer rewards, anything, but find her!

And would she even want to come back?

Langley found himself trembling. "This won't do, son," he said aloud, into the emptiness of the room. "You're going loco fast. Sit down and do some thinking for a change."

But all his thoughts scurried through the same rat race. He was the outsider, the misfit, the square peg, existing only on charity and a mild intellectual interest. There was nothing he could do, he had no training, no background; if it hadn't been for the university, itself an anachronism, he would be down in the slums.

Some deep stubbornness in him forbade suicide. But its other aspect, insanity, was creeping after him. This sniveling self-pity was the first sign of his own disintegration.

How long had he been here at the university? About two weeks, and already he was caving in.

He told the window to open. There was no balcony, but he leaned out and breathed hard. The night air was warm and damp. Even this high, he could smell the miles of earth and growing plants. The stars wavered overhead, jeering at him with remoteness.

Something moved out there, a flitting shadow. It came near, and he saw dully that it was a man in a spacesuit, flying with a personal anti-

gravity unit. Police model. Who were they after now?

The black armor swooped close. Langley jumped back as it came through the window. It landed with a thump that quivered in the floor.

"What the hell—" Langley stepped closer. One metal-gauntleted hand reached up, unfastened the blocky helmet, slapped it back. A huge nose poked from a tangle of red hair.

"Valti!"

"In the flesh," said the trader. "Quite a bit of flesh too, eh?" He polarized the window as he ordered it shut. "How are you, captain? You look rather weary."

"I . . . am." Slowly, the spaceman felt his heartbeat pick up, and there was a tautness gathering along his nerves. "What do you want?"

"A little chat, captain, merely a little private discussion. Fortunately, we do keep some regulation Solar equipment at the office—Chanthavar's men are getting infernally interested in our movements, it's hard to elude them. I trust we may talk undisturbed?"

"Ye-e-es. I think so. But—"

"No refreshment, thank you. I have to be gone as soon as possible. Things are starting to happen again." Valti chuckled and rubbed his hands together. "Yes, indeed. I knew the Society had tentacles in high places, but I never thought our influence was so great."

"C-c-c—" Langley stopped, took a deep breath, and forced himself into a chilly calm. "Get to the point, will you? What do you want?"

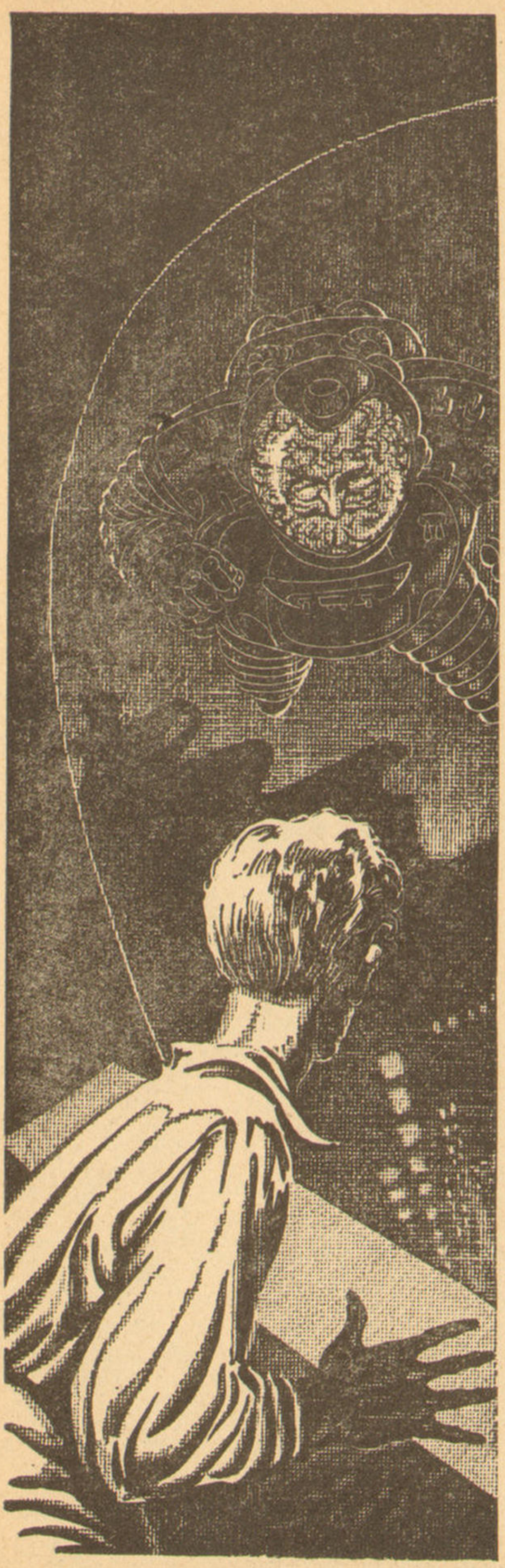
"To be sure. Captain, do you like it here? Have you quite abandoned your idea of making a new start elsewhere?"

"So I'm being offered that again. Why?"

"Ah . . . my chiefs have decided that Saris Hronna and the nullifier effect are not to be given up without a struggle. I have been ordered to have him removed from confinement. Believe it or not my orders were accompanied by authentic, uncounterfeitable credentials from the Technon. Obviously, we have some very clever agents high in the government of Sol, perhaps in the Servants corps. They were able to give the machine false data such that it automatically concluded its own best interests lay in getting Saris away from Chanthavar."

Langley went over to the service robot and got a stiff drink. Only after he had it down did he trust himself to speak. "And you need me," he said.

"Yes, captain. The operation will be hazardous in all events. If Chanthavar finds out, he will naturally take it on himself to stop everything till he can question the Technon further—then, in the light of such fresh data, it will order an investigation and learn the truth. So we must act fast. You will be needed as Saris' friend in whom he has confidence, and the possessor of an unknown common language with him—he must know ours already—so he will



know what we are about and coöperate with us."

The Technon! Langley's brain spun. What fantastic new scheme had that thing hatched now?

"I suppose," he said slowly, "we'll be going to Cygni first as you originally planned."

"No." The plump face tightened, and there was the faintest quaver in the voice. "I don't really understand. We're supposed to turn him over to the Centaurians."

XVIII

Langley made no reply. There didn't seem to be anything to say.

"I don't know why," Valti told him. "I often think that we, the Society, must have a Technon of our own. The decisions are sometimes incomprehensible to me, though they have always worked out for the best. It means war if either side gets the nullifier . . . and why should the Centaurian barbarians get the advantage?"

"Why indeed?" whispered Langley. The night was utterly still around him.

"I can only think that . . . that Sol represents a long-range menace to us. It is, after all, a rigid culture; if it became dominant, it might act against us, who cannot be fitted into its own static pattern. It's probably best in the light of history that the Centaurians take over for a while."

"Yeah," said Langley.

This tore it. This knocked everything he had thought into a ten-gal-

lon hat. Apparently the Technon was *not* the real boss of the nomads. And yet—

"I tell you this in all honesty," said Valti. "It might have been easier to keep you in ignorance, but that was a risk. When you found out what we were up to, you and Saris could make trouble between you. Best to get your free consent at the start.

"For your own help, captain, you are offered a manned spaceship in which you can find your own planet, if you don't like any known to us. Nor need you worry about betraying Saris; he'll be no worse off on Thor than on Earth, indeed you will be in a position to bargain and assure good treatment for him. But I must have your decision now."

Langley shook his head. This was too much, too suddenly. "Let me think a bit. How about Brannoch's gang? Have they been in touch with you?"

"No. I know only that we are supposed to get them out of the embassy tower, where they are being kept under house arrest, and provide transportation to Thor for them. I have papers from the Technon which will get us in there too, if we use them right."

"Haven't they contacted anybody?"

It couldn't be seen through the rigid spacesuit, but Valti must have shrugged. "Officially, no. Certainly not us. But in practice, of course, the Thrymans must have variable-frequency communicators secreted in their tank, where human police could hardly go to search. They must have been talking to their agents on Earth by that means, though what was said I don't know. Chanthavar realizes as much, but there's little he can do about it except to have the Thrymans destroyed, and that goes against the gentlemanly code. These high-ranking lords of different states respect each other's rights . . . they never know when they might find themselves in the same fix."

"So." Langley stood immobile, but the knowledge was rising in him and he wanted to shout it.

He hadn't been wrong. The Technon did rule the Society. But there was, there must be, an additional complication, and he thought he had grasped its nature.

"I ask you again, captain," said Valti. "Will you help?"

"If not," said the spaceman dryly, "I suppose your disappointment would be quite violent."

"I would infinitely regret it," murmured Valti, touching the blaster at his side. "But some secrets are rather important." His small pale eyes studied the other. "I will, however, accept your word if you do agree to help. You're that kind of man. Also, you could gain little or nothing by betraying us."

Langley made his decision. It was a leap into darkness, but suddenly he felt calm rising within himself, an assurance which was like a steadying hand. He was going somewhere again—it might only be over a preci-

pice, but he was out of the maze and walking like a man.

"Yes," he said. "I'll come along. *If.*"

Valti waited.

"Same terms as before. The girl Marin is to accompany us. Only first I've got to find her. She's been manumitted—down on low-level somewhere. When she's back here, I'll be ready to leave."

"Captain, it may take days to—"

"That's too bad. Give me a fistful of money and I'll make a stab at locating her myself."

"The operation is set for tomorrow night. Can you do it by then?"

"I think so—given enough money."

Valti emitted a peitous groan, but dug deep. It was a very fat purse which Langley clipped to his belt. He also held out for a small blaster, which he holstered beneath his cloak.

"Very well, captain," said the trader. "Good luck. I'll expect you to be in the Twin Moons at 2100 hours tomorrow night. If not—"

"I know." Langley drew a finger across his throat. "I'll be there."

Valti bowed, lowered his helmet, and left the same way he had come.

Langley could have wept and howled for sheer excitement, but there wasn't time. He went out of the apartment and down the halls. They were deserted at this hour. The bridgeway beyond was still jammed, but when he took a grav-shaft going down he was alone.

It brawled and shouted in the Commons, crowds milled about him, in his drab university gown he met little respect and had to push his way. Down to Etie Town.

It lay on the border of the slum section, but was itself orderly and well policed. There were some humans living in or near it, he knew, hired help. A nonhuman had no interest in a woman, except as a servant. It would be the safest place for a girl thrown out of high-level to go. At least, it was the logical place to begin his search.

He had been a clumsy amateur, grown mentally paralyzed by his own repeated failures in a world of professionals. That feeling was gone now. The magnitude of his determination lent an assurance which was almost frightening. This time nothing was going to get in his way without being trampled down!

He entered a tavern. Its customers were mostly of a scaly, bi-pedal race with snouted heads, who didn't need special conditions of atmosphere or temperature. They ignored him as he walked through the weird maze of wet sponge couches they favored. The light was dull red, hard to see by.

Langley went over to a corner where a few men in the livery of paid servants were drinking. They stared at him, it must be the first time a professor had come in here. "May I sit down?" he asked.

"Kind of crowded," snapped a sulky-looking man.

"Sorry. I was going to buy a round, but—"

"Oh, well, then, sit."

Langley didn't mind the somewhat constrained silence that fell. It suited him perfectly. "I'm looking for a woman," he said.

"Four doors down."

"No . . . a particular woman. Tall, dark red hair, upper-level accent. I think she must have come here about two weeks ago. Has anyone seen her?"

"No."

"I'm offering a reward for the information. A hundred solars."

Their eyes widened. Langley saw avarice on some of the faces, and flipped his cloak back in a casual way to reveal his gun. Its possession was a serious offense, but nobody seemed inclined to cry out for the police. "Well, if you can't help me I'll just have to try somewhere else."

"No . . . wait a minute, sir. Take it easy. Maybe we can." The sulky man looked around the table. "Anybody know her? No? It could be inquired about, though."

"Sure." Langley peeled off ten ten-solar notes. "That's to hire inquirers. The reward is extra. But it's no good if she isn't found inside . . . Hm-m-m . . . three hours."

His company evaporated. He sat down, ordered another drink, and tried to control his impatience.

Time dragged. How much of life went in simply waiting!

A girl came up with a suggestion. Langley sent her off to look too. He nursed his beers: now, as never before, he had to have a clear head.

In two hours and eighteen minutes, a breathless little man panted back to the table. "I've found her!"

Langley's heart jumped. He stood up, taking it slow. "Seen her?"

"Well, no. But a new maid answering her description did hire out to a Slimer—a merchant from Srinis, I mean—just eleven days ago. The cook told me that, after somebody else had tracked down the cook for me."

The spaceman nodded. His guess had been right: the servant class would still know more gossip than a regiment of police could track down. People hadn't changed so much. "Let's go," he said, and went out the door.

"How about my reward?"

"You'll get it when I see her. Control your emotions."

Five thousand years ago, a bibliophile acquaintance had made him read a tattered book some hundred years old—the Private Eye school—claiming it was something unique in the annals of pornography. Langley had been rather bored by it. Now, recognizing the prototype of his action-pattern, he grinned. But any pattern would do, in this amorphous world of low-level.

They went down a broad street full of strangeness. The little man stopped outside a door. "This is the place. I don't know how we get in, though."

Langley punched the scanner button. Presently the door opened, to reveal a human butler of formidable proportions. The American was quite prepared to slug a way past

him if necessary. But he wasn't a slave—aliens weren't permitted to own humans. He had been hired once, and could probably be hired again.

"Excuse me," said Langley. "Do you have a new maid, a tall redhead?"

"Sir, my employer values his privacy."

Langley ruffled a sheaf of large bills. "Too bad. It's worth a good deal to me. I only want to talk with her."

He got in, leaving his informant to jitter outside. The air was thick and damp, the light a flooding greenish yellow which hurt his eyes. The outworlders would employ live servants for prestige, but must have to pay rather well. The thought that he had driven Marin to this artificial swamp was like teeth in his soul.

She stood in a chamber full of mist. Droplets of fog had condensed to glitter in her hair. Unsurprised eyes watched him gravely.

"I've come," he whispered.

"I knew you would."

"I'm . . . can I say how sorry I am?"

"You needn't, Edwy. Forget it."

They returned to the street. Langley paid off his informant and got the address of a hotel. He walked there, holding her hand, but said nothing till they were safely alone.

Then he kissed her, half afraid that she would recoil from him. But she responded with a sudden hunger. "I love you," he said; it was a new and surprising knowledge.

She smiled. "That makes it mutual, I think."

Later, he told her what had happened. It was like turning on a light behind her eyes. "And we can get away?" she asked softly. "We can really start over? If you knew how I've dreamed of that, ever since—"

"Not so fast." The grimness was returning, it put an edge in his voice and he twisted his fingers nervously. "This is a pretty complicated situation. I think I know what's behind it—maybe you can help fill in the gaps.

"I've proven to myself that the Technon founded the Society and uses it as a spy and an agent of economic infiltration. *However*—the Technon is stuck away in a cave somewhere. It can't go out and supervise affairs; it has to rely on information supplied by its agents. Some of these agents are official, part of the Solar government; some of them are semiofficial, members of the Society; some are highly unofficial, spies on other planets.

"But two can play at the same game, you know. There's another race around which has a mentality much like the Technon's—a cold, impersonal mass-mind, planning centuries ahead, able to wait indefinitely long for some little seed to sprout. And that's the race on Thrym. Their mental hookup practice makes them that kind: an individual doesn't matter, because in a very real sense each individual is only a cell in one huge unit. You can see it operating in a

case like the League, where they've quietly taken over the key positions, made themselves boss so gradually that the Thorians hardly realize it even today."

"And you think they have infiltrated the Society?" she asked.

"I know they have. There's no other answer. The Society wouldn't be turning Saris over to Brannoch if it were truly independent. Valti tried hard to rationalize it, but I know more than he does. I know the Technon thinks it still owns the Society, and that it'd never give Centauri an advantage."

"But it has, you say," she protested.

"Uh-huh. Here's the explanation as I see it. The Society includes a lot of races. One of those races is Thryman. Probably they're not officially from Thrym. They could have been planted on a similar world, maybe with some slight surgical changes in their appearance, and passed themselves off as natives. They got members into the nomad bureaucracy by the normal process of promotion and, being very able, eventually these members got high enough to learn the truth—that the Technon was behind the whole show.

"What a windfall for them! They must have infiltrated the Society on general principles, to get control of still another human group, but found they'd also gotten a line into the Technon itself. They can doctor the reports it gets from the Society—not every report, but enough. That power has to be saved for special occasions, because the machine must have data-comparison units, it must be capable of 'suspicion,' to do its job. This is a special occasion.

"Chanthavar, Brannoch, and Valti were all acting at cross purposes because there hadn't been time to consult the Technon; otherwise it would normally have told Valti to keep hands off the affair, or at least to coöperate with Chanthavar. When it was informed, you know, it ordered Valti's release.

"But then the Thrymans got busy. Even imprisoned, they must have been in touch with their agents outside, including high-ranking Thrymans in the Society.

"I don't know exactly what story has been fed the Technon. At a guess, I'd suggest something like this: A trading ship has just come back with news of a new planet inhabited by a race having Saris' abilities. They were studied, and it turned out that there is no way to duplicate that nullifying effect artificially. The Thrymans are perfectly capable of cooking up such a report complete with quantitative data and mathematical theory, I'll bet.

"All right. This report, supposedly from its own good, reliable Society, reaches the Technon. It makes a very natural decision: let the Centaurians have Saris, let them waste their time investigating a blind alley. It has to look real, so that Brannoch won't suspect; therefore, work through Valti without informing Chanthavar.

"So . . . the end result is that

Centauri does get the nullifier! And the first news the Technon has of this is when the invading fleet arrives able to put every ship in the Solar System out of action!"

Marin made no reply for a while. Then she nodded. "That sounds logical," she said. "I remember now . . . when I was at Brannoch's, just before coming to you, he spoke with that tank, mentioned something about Valti being troublesome and ripe for assassination, and the tank forbade him to do it. Shall we tell Chanthavar?"

"No," said Langley.

"But do you want the Centaurians to win?"

"Emphatically not. I don't want a war at all, and letting this information out prematurely would be a sure way to start one. Can't you see the wild scramble to cover up, purge, strike at once lest you be further subverted?

"The fact that Brannoch himself is in the dark, that he knows nothing about this supremely important Society business, indicates to me that Thrym doesn't exactly have the interests of the League at heart either. The League is only a means to a much bigger and deadlier end."

He lifted his head. "So far, darling, my attempts to sit in on this game have been pretty miserable flops. I'm risking both our lives against what I think is the future of the human race. It sounds rather silly, doesn't it? One little man thinking he can change history all by his lonesome. A lot of trouble has been caused by that delusion.

"I'm gambling that this time, for once, it's not a mistake—that I really can carry off something worth while. Do you think I'm right? Do you think I even have a right to try?"

She came to him and laid her cheek against his. "Yes," she whispered. "Yes, my dearest."

XIX

Langley didn't exactly smuggle Marin back to his apartment—if she were noticed, it wouldn't excite much comment—but he did try to be discreet about it. Then he surprised himself by sleeping better than he had done for weeks.

On the following day, he took microcopies of all the library data on the Society, as well as having the robot prepare a summary, and stuck the spool in his purse. It was dismaying to reflect what a series of thin links his hopes depended on. Valti's character was one; he *thought* the trader could shake off a lifetime's conditioning enough to look a few facts and a little reasoning in the face, but was he sure?

Mardos had him in for another interview. The historian was getting eager, as one unknown datum after another emerged. Some of his careful cynicism dropped off: "Think of it! The very dawn of the technological and space-travel era—the most crucial epoch since man invented agriculture—and you lived in it! You know, you've already upset a

dozen well-established theories. We had no idea that there was so much cultural difference between nations, then, for instance. It explains a good many puzzling features of later history."

"So you'll write a book?" asked Langley. He was having a hard time keeping up the act, it was all he could do not to pace the floor and chain-smoke as he waited for evening.

"Oh, yes . . . yes." Mardos got a shy look on his face. "And yet . . . well, I started out with the notion that I might get some small fame and an upgrading out of this. Now I don't care. It's only the job itself, the learning, that matters. You . . . you've shown me a little of what it must have been like in your age, the feeling of discovery. I've never known what real happiness was before."

"Uh—"

"It'll take years to build up a coherent picture. What you can tell us will have to be correlated with the archeological evidence. No hurry, no need to rush you. Why not come to my place for dinner tonight? We'll relax, maybe have a few drinks and some music—"

"Uh . . . no. No, thanks. I'm busy."

"Tomorrow, then? My wife would like to meet you. Father knows I've been talking of nothing else at home."

"All right." Langley felt like a skunk. When the interview was over, he had to restrain himself from saying good-by.

The sun slipped down under the

horizon. Langley and Marin ate supper in the apartment without tasting it. Her eyes were thoughtful as they looked across a twilit world.

"Will you miss Earth?" he asked.

She smiled gently. "A little. Now and then. But not too much, with you around."

He got up and took a gown from the clothes chute for her. With its cowl over her hair, she had an appealing boyish look, a very youthful student. "Let's go," he said.

They went out the hall, to the flange and the moving bridgeway. A crowd laughed and chattered around them, gaily dressed, off on a restless hunt for pleasure. The lights were a hectic rainbow haze.

Langley tried to suppress the tension within himself. There was nothing to be gained by this jittering wonder about the forces leagued against him. Relax, breathe deep, savor the night air and the vision of stars and spires. Tomorrow you may be dead.

He couldn't. He hoped his wire-taut nerves weren't shown by his face. Walk slowly, gravely, as befits a man of learning. Forget that you have a gun under your arm.

The Twin Moons was a fairly well-known tavern of the slightly shady kind, nestled on the roof above low-level, just under the giant leap of metal which was Interplanetary Enterprises Tower. Walking in, Langley found himself in a Martian atmosphere, deep greenish-blue sky, a modern canal and an ancient fragment of red desert. There was a blur of scented smoke and the minor-key whine of a Martian folk song. Private booths were arranged along one wall with the appearance of caves in a tawny bluff; opposite was a bar and a stage, on which a shapely ecdysiast was going through her contortions in a bored fashion. The timeless hum and clatter of a well-filled inn was low under the music.

2045. Langley elbowed up to the bar. "Two beers," he said. The robot extended an arm with glasses, pumped them full from the arm itself, and sprouted a metallic hand for the money.

A man with the sun-darkened skin and gangling build of a Martian nodded at him. "Don't see many professors in a place like this," he remarked.

"It's our night out," said Langley.

"Mine, too, I suppose. Can't wait to get home again, though. This planet's too heavy. 'Course, Mars is all shot these days, too. We ran the Solar System once. Those were the good old days. Now we're just nice obedient children of the Technon, like everybody else—"

A black uniform came up behind. The Martian snapped his mouth shut and tried to look innocent.

"Excuse me, sir," said the policeman. He tapped Langley's shoulder. "They're waiting for you."

The spaceman's world buckled—just for a moment, then he recognized the now beardless face under the helmet. This man had pulled a

blaster on Brannoch's agents, down in the slums. It seemed very long ago.

"Of course," he said, and followed him. Marin trailed behind. They entered a booth.

It was full of uniforms. One bulky shape wore light combat armor; Valti's tones came through the helmet. "Good evening, captain, my lady. Is everything clear?"

"Yes. All set, I think."

"This way. I have an understanding with mine host." Valti pressed his finger to a spot on the decorative design. The rear wall opened, and the first stairs Langley had seen in this age led upward to a tiny room where two uniforms of Ministerial military officers were laid out. "Put them on, please," said Valti. "I think you can better act an aristocrat than a slave. But let me do the talking, except to Saris."

"O. K."

Marin shed her robe and climbed into the tunic with no sign of embarrassment. Hair drawn up under a light steel cap, cloak falling carelessly from her shoulders, she could pass for a teen-age Minister who had pulled rank to come along on this mission for a lark.

Valti explained the plan, then led the way down again, out the booth and into the street. The party numbered a score. It seemed very little to throw against all the might of Sol.

Nothing was said as the bridgeways carried them toward the military research center on the western edge of town. Langley wanted to hold Marin's hand, but that was impossible just now. He sat thinking his own thoughts.

Their destination was a tower jutting up from the sheer clifflike wall of the city; it stood somewhat apart from its neighbors, and there must be guns and armor behind its smooth plastic façade. As Valti's group got off onto a central flange and walked toward the entrance, three slave guards stepped from an offside niche. They bowed in unison, and one asked their business.

"Special and urgent," said Valti. The box over his head muffled his accent. "We are to remove a certain object of study secretly to a safer place. Here are our papers."

One of the guards trundled out a table bearing instruments. The authorization was scanned microscopically; Langley guessed that Technon documents had some invisible code number which was changed daily at random. The retinal patterns of several men were scanned and compared with those recorded on the papers. Then the chief sentry nodded. "Very good, sir. Do you require assistance?"

"Yes," said Valti. "Bring a police van around for us. We'll be out soon. And don't admit anyone else till we're gone."

Langley thought of automatic guns hidden in the walls. But the door dilated for him and he followed Valti down a corridor. They went past several pillbox rooms whose personnel did not interfere, then had to stop

at a second check point. After that they went on to Saris' prison; the papers told them where it was.

The Holatan lay on a couch behind bars. The rest of the chamber was an enigmatic jumble of laboratory equipment. There were sentries with mechanical as well as energy guns, and a pair of technicians working at a desk. They had to call up their boss for another discussion before they could release their captive.

Langley had gone up to the cell. Saris made no sign of recognition. "Hello," said the spaceman softly, in English. "Are you all right?"

"Yess. So far they iss only electrical and other measurementss made. But iss hard to be caged."

"Have you been taught the present language?"

"Yess. Wery well, better than English."

Langley felt weak with relief. His whole precarious plan had depended on this one assumption and on the amazing Holatan linguistic ability.

"I've come to get you out," he said. "But it'll take some doing; you'll have to coöperate and risk your neck."

Bitterness edged the bass purr: "My life? Iss all? That iss not much . . . now."

"Marin knows the facts and what my scheme is. Now you'll have to be told. But it'll be the three of us against everybody else." Swiftly, the man sketched out his knowledge and plans.

The golden eyes flared with a quick fierce light, and muscles bunched under the fur. But the voice said only: "Iss well. We will try it thus," in a careful tone of boredom and hopelessness.

Valti won his point with the supervisor. A long metal box with a few airholes was pushed in on an antigravity sled. Saris was prodded into it from his cell, and the lid locked over him. "Shall we go, my lord?" asked Valti.

"Yes," said the American. "The arrangements are complete."

Several men pushed the floating box back down the halls. Even with its weight nullified, the inertia was still considerable, and turning on the propulsion unit might set off automatic alarm. When they came back on the flange, a large black flier hovered waiting for them. Saris' crate was put into the rear compartment, the men piled in with it or into the cab, and Valti started it off for the Centaurian embassy.

Shoving back his helmet for a breath of air, the trader revealed a sweating face. "This is getting more ticklish by the minute," he complained. "If only we could go direct to my flitter! That superintendent back in the lab will be calling up Chanthavar soon, I'll bet my nose, and then the grease will be off the griddle!"

Langley debated trying his scheme now, before they took on the next enemy. By-passing Brannoch entirely— No. There wasn't time. And Saris was almost helpless behind a

mechanical lock. He bit his lip and waited.

The van stopped near the ambassadorial tower, of which the League had the upper third for apartments and offices. Valti led half his group toward the entrance. Again he had to produce papers and go through a check; Chanthavar was keeping the place heavily guarded. This time his ostensible orders were to remove certain key Centaurian personnel—he hinted that they were to be taken on a one-way ride, and the chief watchman grinned.

"Fetch the box in," reminded Langley.

"What?" asked Valti, astonished. "Why, my lord?"

"They may try something desperate. You never know. This will be a shock to them. Best to be prepared."

"But will the . . . device . . . function properly, my lord?"

"It will. I've tested it."

Valti teetered on the edge of decision, and Langley felt sweat start out on his palms. If the trader said no—!

"All right, my lord. It may be a good idea at that."

The box wavered slowly through an opened portal. There was no one in sight, the lesser fry must be sleeping in their own quarters. Brannoch's private door was ahead. It opened as they approached, and the Thorian loomed huge in it.

"What's this?" he asked coldly. His heavy form crouched under the wildly colored pajamas, ready for a final despairing leap at their guns. "I didn't invite you."

Valti threw back his helmet. "You may not be sorry for this call, my lord," he said.

"Oh . . . you. And Langley too, and— Come in!" The giant led them to his living room. "What's this, now?"

Valti explained. The triumph flaring in his face made Brannoch look inhuman.

Langley stood by the floating metal coffin. He couldn't speak to Saris, couldn't warn him of anything or tell him, *"Now."* The Holatan lay blind in an iron dark, only the senses and powers of his mind to reach forth.

"You hear that, Thrymka?" shouted Brannoch. "Let's go! I'll call the men—"

"No!"

Brannoch checked himself in midstride. "What's the matter?"

"Do not call them," said the artificial voice. "We have expected this. We know what to do. You go with them, alone; we will follow soon on our sled."

"What in all space—"

"Hurry! There is more at stake than you know. Chanthavar may come any instant, and we have much to do yet."

Brannoch wavered. Given a moment to think, he would remember Saris' abilities, notice the sudden slight accent of his Thrymans. But he had just been roused from sleep, he was used to obeying their orders—

Valti shoved him. Relief was obvious on the florid countenance. "They're right, my lord. It'd be devilish hard to get their tank out inconspicuously, and take minutes to collect all your men. Let us be gone!"

Brannoch nodded, kicked his feet into a pair of shoes, and went out the door between his supposed guards. Langley stole a glance at Marin, her face was white with strain. He hoped the crazy thunder of his own heart didn't show.

So far, so good. Stopping at the embassy had been unavoidable, but the extra opposition picked up there had been kept down to one man—and a man whom Langley's conscience required should be told the truth.

Saris had not only meant to take control of the Thryman microphones, but to short-out the circuits of their antigravity sled, leave them sitting helplessly behind. Had he done that —was he strong enough?

Perhaps!

It would be strange, though, if those shrewd and suspicious intelligences were content with an arrangement which would leave them the prisoners of any accident. There must be means for repairing the apparatus, robot tools controllable from inside the tank. There were surely means of calling up the entire ring of Centaurian spies and saboteurs, throwing them all away just to break through Chanthavar's men and get into a concealed spaceship and flee.

The Thrymans were going to escape. There was no way of preventing that. They were probably going to pursue. And Chanthavar wouldn't be peacefully asleep much longer, either. The question was whether Valti's group could get out of tracer range before one or the other party was in action.

It'll be interesting to find out, thought Langley.

XX

In his own forgotten world, they would never have accomplished this much. Somewhere along the line, there would have been a man with enough independence of mind to hold up the proceedings while he checked with his superiors. But a slave is not bred or trained to think for himself. This may be one reason why freedom, unstable, inefficient, stamped to oblivion again and again, still rises new through all history.

The van slipped swiftly across a darkened planet. Lora became a bright star cluster on the horizon, and then it was lost, only night could be seen. Langley doubted that he would ever look on that city again. It had flashed over his experience for a few weeks, but now it was as if it and all its millions had never been. It gave him some understanding of Valti's philosophy, his acceptance of the impermanent and the doomed as essential to the scheme of things.

Brannoch's sinewy face was etched against shadow by the dim light of the instrument panel. "Do you know

why the Society has decided to help us?" he asked.

"No, I don't, my lord," said the trader.

"There's money in it somewhere. Big money. Unless you plan some treachery—" For a moment, teeth gleamed white, then the Thorian laughed. "No. Why should you bother with me at all, if not for the purpose you stated?"

"Of course, my lord, the League will not be ungrateful for all my exertions?"

"Oh, yes, yes, you'll have your squeeze, never fear. I'll get it back from Earth. This does mean war, you know. There's no stopping the war now. But if I know these fat-gutted Ministers, they'll keep their fleet in this system to protect their own precious hides—long enough to give us a chance at the nullifier. We'll make a couple of heavy raids just to throw a scare into them." Brannoch stared darkly ahead of him. "I wonder what Thrymka wanted to stay for. I wonder how big their web really is. Some day I hope to do something about them too . . . the damned spiders!"

The van slanted toward a small clump of forest. When it grounded, Valti tumbled out. "I've got the flitter here. If you please, sirs!"

A blaster cut the lock on Saris' box. The Holatan emerged in one supple bound, and the party groped forward between trees.

"They iss all wit' energy weaponss here," murmured the alien in Eng-

lish. "All but one, the tall fellow there. Can you handle him?"

"I'd better be able to," said Langley between clenched jaws.

The flitter loomed huge in the grove, like a pillar of night. "Where are the rest of your gang?" asked Brannoch as he went up the ladder to the air lock.

"Snugly in bed, my lord," said Valti. His voice sounded loud and flat in the immense hush. Somewhere, far off, crickets were chirping. It would probably be the last time he heard crickets, thought Langley. "I'll have to get out of the Solar System, of course, but that's no reason to break up the rest of the organization."

Twenty men to capture.

This spaceboat was meant for velocity rather than comfort. A single long room held passenger chairs and the pilot's seat. Valti sloughed off his armor, planted his large bottom in the control chair, and moved thick fingers in an astonishingly graceful dance over the panel. The boat shivered, roared, and leaped for the sky.

Atmosphere fell behind. Earth rolled huge and lovely against a curtain of incandescent stars. Langley looked at her with a wrenching of farewell.

Good-by, Earth. Good-by, hill and forest, tall mountains, windy plains, great march of seas under the moon. Good-by, Peggy.

A computer chattered quietly to itself. Lights blinked on the panel. Valti locked a switch in place, sighed gustily, and turned around. "All right," he said, "she's on automatic, a high-acceleration path. We'll reach our ship in half an hour. You may as well relax."

"Easier said than done," grunted Brannoch.

It grew very still in the narrow metal chamber.

Langley threw a glance at Saris. The Holatan nodded, ever so faintly. Marin saw the gesture, and her own head bobbed. It was time.

Langley put his back to the wall near the controls. He drew his blaster. "Don't move," he said.

Someone cursed. A gun jumped up with blinding speed. It didn't fire.

"Saris has a grip on every weapon in here except mine and Marin's," said Langley. "You'd better sit still and listen— No, you don't!" He sent a beam roaring at the tall man with the old-style weapon. The trader howled as it fell from seared fingers.

"Sorry to do that." Langley spoke low. There was sweat trickling down his face. "I don't want to hurt anybody. But there are some pretty big issues involved. Will you give me a chance to explain?"

"Captain—" Valti shuffled closer. Marin waved him back with a ferocious gesture. Saris crouched in the after end of the room, shivering with effort.

"Listen to me." Langley felt a vague annoyance that his tone should be pleading. Wasn't the man with the gun supposed to be unquestioned boss? But Valti's little eyes were

shifting back and forth, watching for any chance at all. Brannoch's legs were gathered under his chair, ready to leap. The trader spacemen were snarling, building up courage for a rush to overwhelm him.

"I just want to tell you some facts," said Langley. "You've all been the dupes of one of the biggest, brassiest swindles in history. You think you're working for your own good—Valti, Brannoch—but I'm going to show you otherwise. You've got half an hour to wait in any event, so you might as well listen to me."

"Go ahead," said Brannoch thickly.

The American drew a shaky breath and launched into his account: the subversion of League and Technate and Society by a foreign and hostile power working for its own ends. He gave Valti the spool he had along, and the man put it in a scanner and studied it with maddening deliberation. A clock spun off lazy minutes, and Earth receded in the boat's wake. The room was hot and silent.

Valti looked up. "What are you going to do if I don't coöperate?" he asked.

"Make you." Langley waved his gun.

The bushy red head shook, and there was a curious dignity over the pot-bellied form. "No. I'm sorry, captain, but it won't go. You can't operate a modern spaceship, you don't know how, and my old carcass isn't worth so much that I'll do it for you."

Brannoch said nothing, but his eyes were chips of blue stone.

"Can't you see, man?" shouted Langley. "Can't you *think?*"

"Your evidence is very slender, captain. All the facts are susceptible of other interpretations."

"When two hypotheses conflict, choose the simpler one," said Marin unexpectedly.

Valti sat down. He rested his chin on one fist, closed his eyes, and looked suddenly old.

"You may be right," said Brannoch. "I've had my suspicions of those animated pancakes for a long time. But we'll deal with them later—after Thor is in a stronger position."

"No!" cried Langley. "You blind fool, can't you see? This whole war is being engineered by them. They must regard men as dangerous vermin. They can't conquer us by themselves, but they can get us to bleed each other white. Then *they* can mop up!"

A bell rang. Langley turned his head, and brought it around at Marin's scream. Brannoch was almost on him. He waved the Centaurian back, who grinned impudently, but let Valti go up to look at the instruments.

The trader faced them all and announced flatly: "Someone has slapped a tracer beam on us. We're being followed."

"Who? How far? How fast?" Brannoch snapped the questions out like an angry dog.

"I don't know. It may be your

friends from Thrym, it may be Chanthavar." Valti fiddled with some knobs and considered the readings of meters. "Good-sized ship. Overhauling us, but we'll get to ours about ten minutes ahead of them. It takes a while to warm up the generators for an interstellar jump, so we may have to fight during that time." His eyes were steady on Langley. "If the good captain will permit that."

The American drew a shuddering breath. "No. I'll let them blow us all up first."

Valti chuckled. "Do you know, captain, I believe you. *And* your somewhat fantastic hypothesis."

"That you'll have to prove," said Langley.

"I shall. Men, please toss all your guns over here. The captain can mount guard on us if he won't find it boring."

"Wait a minute—" A nomad stood up. "Are you going against the orders of the chiefs?"

"I am—for the good of the Society."

"I won't!"

Valti's answer cracked like a pistol shot. "You will, sir, or I'll personally break your back across my knee. I'm your skipper this trip. Shall I read you the articles concerning obedience to the skipper?"

"I . . . yes, sir. But I'll file a complaint at—"

"Do so by all means," agreed Valti cheerfully. "I'll be right there in the office with you, filing my own."

The blasters clattered at Langley's feet. Saris lay down, trembling with exhaustion.

"Tie up Brannoch," said the American. "In God we trust, but I don't think he's God."

"Of course. You'll pardon the liberty, my lord? We'll leave you in the flitter, you can free yourself and scoot away."

Brannoch glared murder, but submitted.

"Are you satisfied, captain?" asked Valti.

"Perhaps. Why do you believe me now?"

"Partly the evidence you showed, partly your own sincerity. I respect your intelligence."

Langley shoved his blaster back into its sheath. "O. K.!"

It had seemed a chancy thing to do, but Valti only nodded and resumed the pilot's chair. "We've almost arrived," he said. "Time to put on the brakes and match velocities."

The spaceship grew enormously. She was a long black cylinder, floating through a wilderness of stars. Langley saw her gun turrets stark against the Milky Way. There was a slight shock, a noise of metal making contact, and the boat had joined air locks.

"Battle stations!" snapped Valti. "You may come with me, captain." He plunged toward the exit.

Langley stopped by Brannoch. The giant met his eyes and gave him a savage grin. "Good work," he said.

"Look," answered the spaceman,

"when you get loose, flit away from here but not too far. Listen in on any radio conversation. Think over what I've told you. Then, if you're wise, you'll get in touch with Chanthavar."

"I . . . may."

"God help you if you don't. Good-by, Brannoch."

Langley went through the air lock. He was the last man, and the ship's outer door clashed to behind him. He didn't know the layout of this cruiser, but followed his hunches as he ran down the corridors. There was a roaring of machines about him, the ship was making ready to fight.

He located the main control chamber in a few minutes. Valti sat there, with Marin and Saris hovering in the background. The vessel must be almost entirely automatic, a robot in her own right, for one man to guide her thus.

A stellar globe gave a simulacrum of the cold star-spattered dark outside. Valti located a moving speck on it and adjusted a telescreen for an enlarged view. The approaching ship was a steel sphere.

"Thryman make," said Valti. "I'd know those lines anywhere. Let's see what they have to say." He punched the radio keys.

Thryman! Then they must have escaped almost as soon as the others were gone, bulling through with the guns they doubtless had somewhere on their tank, reaching a hidden warship and taking it into space with nearly impossible speed. They would have known the orbit of Valti's craft from the Technon. Langley shivered, and Marin huddled close to him.

"Hello, Thrymka." Valti spoke almost casually into his set. Eyes and hands were still moving, punching buttons, adjusting dials, observing the ready lights which flashed on for one compartment after another through his vessel.

The machine voice crackled back: "You have been followed. If you are wise, you will surrender to us at once. The Solar patrols got a tracer on us, they are following close behind, and rather than let them have you, we will destroy everything."

Solar! Langley whistled. Chanthavar had been pretty quick on the draw too, it seemed. But, of course, the Thryman getaway would have alerted him if nothing else did.

"Party's getting sort of crowded," he muttered.

Valti threw down a switch. The celestial globe reflected tiny splotches of fire which must be earthshaking explosions.

"The ships fight themselves," he remarked calmly. "Our crew has little to do but stand by the emergency manual controls in case we take a hit."

The two craft maneuvered for position, hurling their own tonnage through the sky as lightly as a fencer dances. Nuclear missiles flashed out, to be hunted down and exploded by counter-missiles. Long-range energy beams probed heaven with lightning. All that Langley sensed was the howl of generators, the crazy dance

of sparks in the globe, and the busy clicking of the ship's robot brain.

Saris snarled hungrily. "Could I be out there myself!" he raged. "Could I get my teeth in them!"

Langley drew Marin to him. "We may be rubbed out before we can break free," he said. "I feel awfully helpless."

"You did wonderfully, Edwy," she answered.

"Well . . . I tried. I love you, Marin."

She sighed with a great happiness. "That is enough."

The walls trembled, and the air was filled with anger. A voice choked from the intercom: "Near miss at Seven, sir. Outer plates holed, radiation blast, no air loss yet."

"Carry on," said Valti.

Even a nuclear explosion had to be very close to do much damage in vacuum. But a single shell which did touch the ship before going off would make molten rain of her.

"Here comes Chanthavar," said Valti. "I have an idea. He'll be listening in on the radio, so—" He flipped the keys. "Hello, Thrymka. Hello, there. The Solarians are going to be on us in a minute. I like them even less than you, so let's settle our own differences later, shall we?"

There was no reply. The Thrymans never wasted speech, and they must see through such a transparent fraud.

But two Solar cruisers were sweeping in, and they had heard. The nearest turned in a graceful arc which would have been impossible without the gravity drive, and opened fire on the Thryman ship. Valti whooped and sent his vessel surging forward. One craft could not withstand the assault of two.

The screens did not show that eye-searing detonation. They refused the load, went blank, and when they functioned again a few seconds later the Thrymans were a rapidly expanding cloud of gas.

The two Solar warcraft circled cautiously, probing at the nomad with a few shells and beams. A siren hooted, Valti laughed aloud. "The superdrive is ready. We can pull out of here now."

"Wait," said Langley. "Call them up. I want to speak to them."

"But they may fall on us together while we parley and—"

"Man, Earth has got to know too! Call them!"

But it was Chanthavar who came in first. His voice snapped crisply from the communicator: "Hello, there, Society. Stand by to be boarded."

"Not so fast, buster." Langley leaned over Valti's shoulder, seeking the microphone. "We can pull a switch and be ten light-years away, but I've got something to tell you."

"Oh . . . you." Chanthavar's tone held something close to amusement. "You again! My respect for amateurs has gone up considerably tonight. I'd like to have you on my staff."

"You won't. Now listen." Langley rattled off what he knew as fast as he could.

There was a humming stillness. Then Chanthavar said slowly: "Can you prove this?"

"You can prove it to yourself. Study the same documents I did. Pull in all the Centaurian agents you can find and question them—the Thrymans must have some humans in their pay. Put the facts and the hypothesis before the Technon, ask it for a re-evaluation. It must be capable of adding two and two!"

"You . . . may be right, Langley. You may be right."

"You can bet I'm right. The Thrymans have no use for us. We're as monstrous to them as they are to us, and the war they had to fight convinced them we're dangerous to boot. Their aim must be nothing more or less than the extermination of the entire human race. Perhaps I'm wrong—but can you afford to take a chance on it?"

"No," said Chanthavar quietly. "It doesn't look that way."

"Get hold of Brannoch. He's floating around somewhere in this vicinity. You and he and the Society—all the planets—are going to have to bury your little ambitions. If you don't, you're through. Together you can face anything."

"We'll need that nullifier effect."

"No, you won't. You can't conquer a planet the size of Thrym, but you can drive its natives back and keep them there if you all combine forces. Afterward, it'll be a healthy knowledge for you that somewhere in the galaxy is a planet of free men who have a weapon you can't stop. It may even give you some ideas about freeing yourselves.

"Good-by, Chanthavar. Good luck!"

He switched off the radio and stood up, feeling a sudden enormous calm. "O. K.," he said. "Let's travel."

Valti gave him a strange look; only later, remembering, did he recognize it as the look a man gives his leader. "Best to go to Cygni first and let the Society—the *real* Society—know."

"Yes," agreed Langley. "Then to Holat, to build defenses for them as we promised. You're going home, Saris."

The great dark head rubbed against his knees.

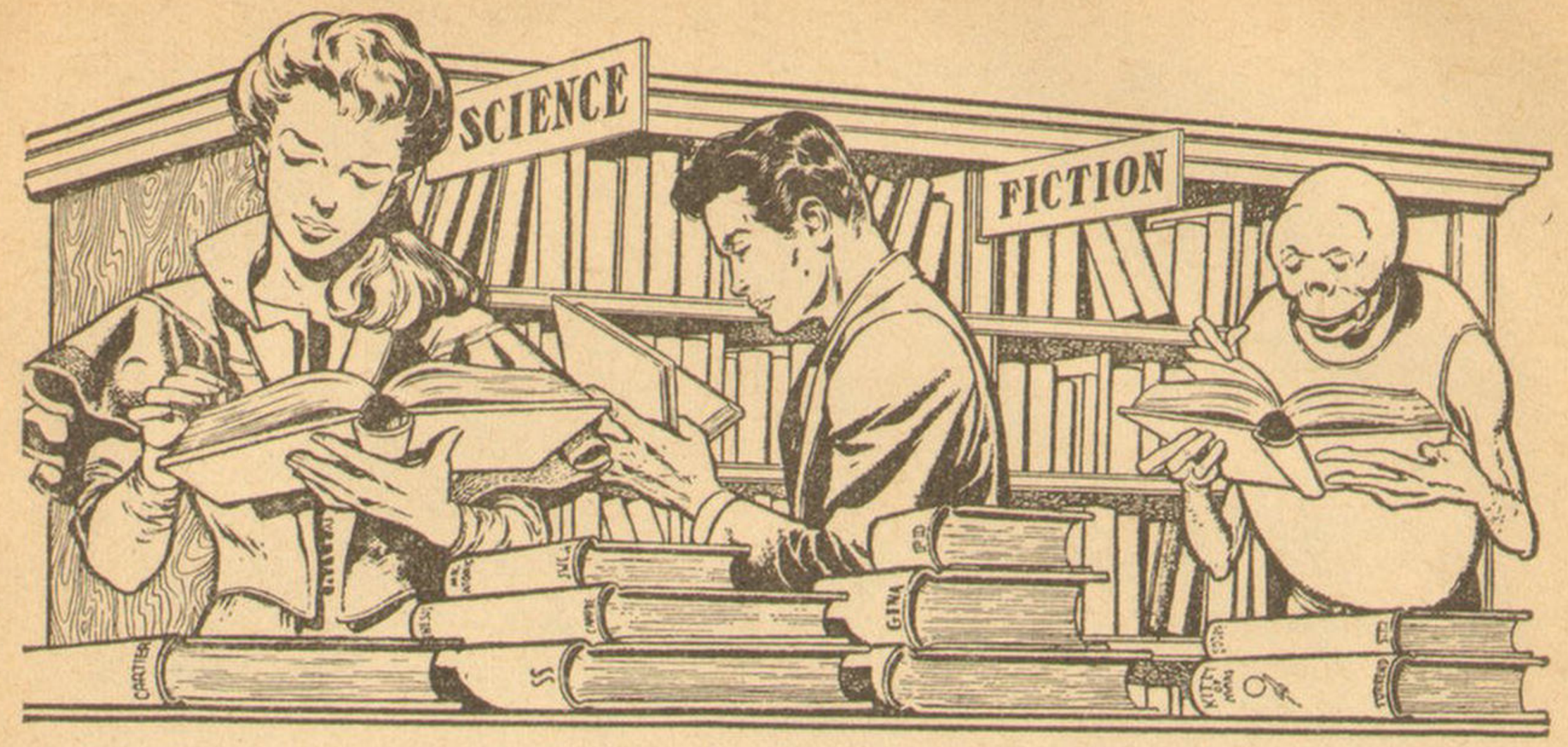
"And then?" asked Valti. His hands were setting up the control pattern for the jump.

"And then," said Langley with an exuberant laugh, "Marin and I are off to find us a world where *we* can feel at home!"

"Do you mind if I come along?" whispered Valti.

Marin gripped Langley's hand. They regarded each other, without eyes for anything else. And when they looked around them again, there was a new sun in the sky.

THE END



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BY P. SCHUYLER MILLER

MARS ASCENDANT

Studying Mars is a lot like watching the redhead across the street with an old-fashioned collapsible telescope, through a couple of layers of curtains and two sets of dirty windows. You can't pull your curtains—the Earth's atmosphere—out of the way, or the neighbors will catch on to your Peeping Tom activities. She doesn't take hers down either—Venus, that blonde next door, keeps the shade down all the time!—but occasionally she opens the window—and Mars' violet mist clears for a few hours or days.

To make the analogy a better parallel, you do a lot more than appreciate the redhead's anthropological aspects. You're trying to decide whether the hair is her own, and if not, what kind of dye she's using. You're determining whether she wears pancake make-up or is content with once over lightly . . . what precise colors and brands she uses . . . the day-by-day contours of her eyebrows . . . charting the progress of her suntan . . . tracking down the shop where she buys the exclusive negligees she wears most of the time. (After all, this is a family magazine, and Mars is a frustratingly modest planet, even if the least prudish in the solar system.)

With Mars at its closest in 1954 and especially 1956, the expected rash of books on the planet has started to appear, and another in the Ley-Bonestell-von Braun series launched

by *Collier's* and published by Viking Press is promised. What we have at hand are two completely different books, Robert S. Richardson's "Exploring Mars" (McGraw-Hill Book Co., New York. 1954. 261 p. $4.00) and "Physics of the Planet Mars" by the French astronomer, Gerard de Vaucouleurs (Macmillan, New York. 1955. 384 p. $10.00).

Let me say at once that the French book is fundamentally a reference book, and that it supplements and up-dates but does not replace such classics as E. M. Antoniadi's "La Planete Mars"—Paris, 1930—which Vaucouleurs calls "still the most complete and most representative summary of (the) analytical description of the surface of Mars." Antoniadi's great work, which describes and discusses the topography of the planet, feature by feature, is the essential reference work on areography —Martian geography. Vaucouleurs has supplemented it with what he calls "an introduction to aerophysics."

Richardson's book, on the other hand, is disappointing to me for what it doesn't say—and what we know wery well its author is capable of saying. Perhaps that is the publisher's fault. The best parts, actually, are the anecdotal descriptions of the problems of observing Mars. The rest is, of course, perfectly sound and well judged, but you keep wishing there were more.

The first five chapters of "Exploring Mars" are historical or discussions of the fundamentals of rocket flight and the benefits and drawbacks of putting an observatory on the Moon—there's quite a lot in the latter chapter that I'd never considered or seen in print: for example, the Moon's dizzy precession. With Chapter 6, "Mars—About Time," he gets down to his subject for four chapters, with a fifth on how to observe Mars yourself, aimed mainly at amateur astronomers. The last five chapters take up what is known of the other planets.

I don't have to tell you about Richardson's freshness of style and amiable pragmatism of approach. Here's an introductory book about Mars and the other planets which you can recommend to any novice, but I think both he and you will wish there were more about our red-surfaced neighbor. I had particularly hoped to see some of the tantalizing hints about Martian mountains and other surface features which Richardson has mentioned in passing in his articles for this and other magazines. But then, I hope to make myself a globe of Mars some day . . .

The Vaucouleurs book, on the other hand, won't make good bathtub reading but will stand with a few others as one of the all-time classics on Mars. The French edition apparently dates from 1949; the English edition was revised and brought up to the end of 1952, and this American edition adds footnote references through the middle of 1954.

"Physics of the Planet Mars" presents as clearly as possible, then evaluates as fairly as possible, all the

evidence we have on the principal problems of areophysics. How much atmosphere is there? What is it composed of (98.5% nitrogen, with a little argon and carbon dioxide, is the best guess)? What are the yellow, blue and white clouds that appear in observations? Is there water on Mars, and if so, how much? Is there oxygen? What is the mysterious blue-violet haze that seems to shroud the planet except for rare moments (usually at oppositions)?

What is the daily and seasonal range of temperature at various places on the Martian surface? What causes the "wave of darkening" which spreads from pole to pole and back with the seasons? What is the short-lived dark fringe that appears around the edge of the melting polar caps? Is it liquid water? What is the slow darkening that year after year moves along the same path from the pole toward the equator? What is the real color of the dark areas, and what are they? Is there—can there be—vegetation on Mars?

You will find all this and much more discussed in minute detail, with the evidence pro and con the various theories, in Vaucouleurs' book. You won't find any support for a Mars on which people can run around without helmets, breathing the free air and basking in a thin October sunlight. But your blood probably won't bubble away at body temperature—at the surface water will boil around 43°C or 109.4°F—so that you may be able to get around in a mask—except that, as Menzel pointed out way back in 1927, the temperature gradient between the ground and the air is so great that in the equatorial drylands at noon your feet will blister on the hot sand—or dust—while your ears freeze.

There's added hope for the first explorers who follow the route Richardson and others have charted: because of the lower gravitational attraction, the scanty Martian atmosphere extends farther out than our own: above about thirty kilometers or nineteen miles the pressure of the Martian atmosphere is greater than that of Earth. Hence a landing by gliding down from a space-station—one of the Martian moons, perhaps?—should be easier than getting back home from our own orbital fueling-station.

Both books have good illustrations, though only five of Richardson's—photographs of a Bonestell globe and with the Palomar 200-inch 'scope—are of Mars. Vaucouleurs has sixty-one text illustrations and a battery of photographs and drawings, including a map embodying the observations of leading French and American astronomers at the 1939 and 1941 close approaches. (Yes, some of the "canals" are there, though their nature is one subject the author leaves almost untouched.)

For comparison, perhaps you'd like a larger scale map based on the 1954 observations of members of the Association of Lunar and Planetary Observers. It's drawn by the ALPO's Mars Recorder, D. P. Avigliano, of 678 West Manzanita Avenue, Sierra

Madre, California. The price: $1.00 only, and well worth it. Mr. Avigliano also has a set of twelve 35-mm color slides, ten of them of Mars—three of a globe made by the ALPO in 1954—and one each of Jupiter and Saturn. They're fifty cents each, six for $2.50, twelve for $5.00, and I don't have mine yet or I'd describe them.

EARTHMAN, COME HOME, by James Blish. G. P. Putnam's Sons, New York. 1955. 239 pp. $3.50.

These tales of the "Okies"—the flying cities of deep space—are, I think, the science-fiction fan's science-fiction, in contrast to books which will or can have as great an appeal to the casual reader as to the initiate. This puts them in the category of George O. Smith's "Venus Equilateral" and Jack Williamson's "Seetee" stories—not at all a bad class to be in.

Three of the stories which have been woven into a running chronicle, first appeared here: "Okie," "Bindlestiff," and the closing episode, for which the book is named, in 1953. I'm ashamed to say that I can't, at the moment, recall the source of the fourth episode, which appeared in 1952 as "Sargasso of Lost Cities."

Hero of the book is Mayor John Amalfi of New York, who for a goodly portion of his round thousand years of life has been piloting his spindizzy-propelled flying metropolis and its immortal population through the reaches of the galaxy in search of profitable work. We watch him tangle with the Earth Police and the warring peoples of two planets, Utopia and Gort. We follow him into the Rift between two of the spiral arms of the galaxy, to come head on against a buccaneering "bindlestiff" city on the jungle world of He. The solution to that caper hurls him and his client across the rift, and he discovers and deals with the results of a cosmic depression—goes to the rescue of old Earth—unravels a galactic mystery—and finally brings a cosmic criminal to justice out in the Magellanic Clouds.

It's science-fiction of the space-sweeping E. E. Smith brand, with a distinctive Blish difference. You'll particularly like the little touches of contrast between the culture of the flying cities and those of the worlds where they pause. Best of them is the horror with which Amalfi and his cohorts endure fifty miles an hour in an automobile: in deep space, speed just isn't felt.

THE MOUSE THAT ROARED, by Leonard Wibberley. Little, Brown & Co., Boston. 1955. 280 pp. $3.50.

Here is a light-hearted little yarn, slightly expanded from the *Saturday Evening Post* serial—"The Day New York Was Invaded"—but lacking its illustrations. It presumably qualifies as borderline science-fiction,

since it is laid in the immediate future and involves something called the quadium bomb—one notch beyond tritium—which can *really* decimate the world if it goes off.

The 600-year-old five-by-three mile Duchy of Grand Fenwick, on the fringes of the Alps, undertakes to go to war with the United States in the hope of getting the generous and profitable treatment that other recent enemy nations have had. But Tully Bascomb, chief forest ranger of Fenwick's forest preserve, is an overenthusiastic and contrary young man who invades New York with twenty bowmen and three men-at-arms, routs a force of air-raid wardens, captures a general and four cops—and batters down the portals of Columbia University to seize the Q-bomb and its maker. So, at a stroke, Grand Fenwick becomes the key power in the world.

Perhaps the latter parts of the book get a bit too serious over mankind, but it's good fun which might make a good Danny Kaye movie. I do object, however, to the vicious libels against the good character of Carbon 14, which is so far from being a world-destroyer that its spray of electrons barely batter their way through a sheet of paper.

FALSE NIGHT, by Algis Budrys. Lion Books, New York. 1955. 127 pp. 25¢.

A *Galaxy* story, "Ironclad," has been blown up into this novel of America during the first few generations after the final world war. We begin with Matt Garvin as a hunted—and hunting—beast of prey in the shambles of New York. We see him begin a stable society, first in one house, then one neighborhood.

We see the nucleus grow, feeding on its neighbors, setting out to absorb the city-fortresses of the entire continent—while at home, one of Matt's sons is building a new kind of society for himself and his hangers-on.

Finally, in the third generation, we see the bizarre culture which has grown out of this past, and at the end the promise of still another society shaping itself.

That individuals and cities should be at each other's throats so soon, after centuries of the habit of interdependence, is unconvincing to me: let's hope I don't learn by watching it happen. Also, we're no longer so sure that the simple hunting-fishing-gathering groups were innately hostile to each other: archeologically, they're too much alike over great areas. But it is historically true that isolated communities develop individualized societies, and hence the theme of the book is sound: that a man may be a leader in his place and time, and an enemy when the culture changes.

Algis Budrys is one of the best of the newer writers. We'll be seeing more and better books from him.

THE CHAOS FIGHTERS, by Robert Moore Williams. Ace Book, New York. 1955. 160 pp. 25¢.

This is Pony League van Vogt, with at least three independent organizations entangled with each other over a sign that says: "FOR SALE—*Homo Sapiens,*" a red-headed girl who becomes a vanishing doll, a black curtain, a whispering voice in a man's head . . .

John Haldane, agent of Planetary Government Intelligence, is our hero, but who is who and on whose side, for what purposes, are questions which have to be unraveled as they come. Somehow it lacks the Van Vogt touch to make it convincingly impossible.

STORIES FOR TOMORROW, edited by William Sloane. Funk & Wagnalls, New York. 1954. 628 pp. $3.95.

The only reason I've put this anthology in a second-fiddle position to Judith Merril's "Beyond the Barriers of Space and Time" in the sweepstakes for best collection of '54 is that a fair number of the stories have been reprinted again and again —for the simple reason that they're among *the* classics of science fiction.

This hasn't mattered to the editor, and it shouldn't matter to you. He is not putting together a collection for the hardened fan; he is assembling a rich and varied assortment of the best and most representative stories he could find, to introduce science fiction to people who don't know it, but are curious and would like to learn. And all of the thirty stories are about ordinary people—about ourselves.

William Sloane, of course, is the editor and publisher who also wrote two of the all-time best science-fiction novels: "To Walk the Night," and "The Edge of Running Water." He has done a new short story for this collection, "Let Nothing You Dismay," which may not come up to some of his other selections but is worthy of the company it's in. And that includes such giants as Wilmar Shiras' "In Hiding," Kris Neville's "Bettyann," Eric Russell's "And Then There Were None," Julian May's "Dune Roller," Murray Leinster's "First Contact," and Raymond Jones' "Noise Level." It includes stories as simple as Anthony Boucher's "Starbride," as grim as Alfred Coppel's "The Exile," as moving as Ray Bradbury's "The Wilderness," or Mari Wolf's "Homeland," as technically tricky as James Blish's "Beep."

I won't extend the catalogue—but you'll find that a satisfying number of Mr. Sloane's selections are from these pages.

THE SUN AND THE EARTH AS A PLANET, edited by Gerard P. Kuiper. University of Chicago Press. 1954. 745 & 751 pp. $12.50 each.

This note is for information only: I can't possibly review these first two of a four-volume series, "The Solar System," with any kind of adequacy. The remaining two volumes will deal with "The Planets and Comets," and the whole series should add up to a compact encyclopedia and standard reference work on our solar system. It's the kind of work you should see to it that your library puts on its reference shelf. If you write science fiction or study astronomy as a serious hobby, you may want them yourself.

These books follow the policy set in Kuiper's "Atmospheres of the Earth and Planets," a few years ago: they are symposia of articles by specialists, organized to cover the whole field under discussion. You'll find much more than you want to know about the Sun and Earth in these books, but you'll also probably find what you do want to know, if you can locate it. (The index is skimpy, though there's a useful separate index of definitions. It will be years before I really find out what's in my copies.) The drawback is that you don't have the kind of smoothly logically, connected narrative of current fact and theory that you get in a textbook, or in one of R. S. Richardson's much too infrequent articles here.

Of the two, "The Earth as a Planet" is the one I suggest you may like to dip into. You'll find chapters on its motion as a planet, on what is known about its interior, its evolution, its oceans, its atmosphere. You'll find technical graphs, quite a bit of math, and some extraordinary illustrations. "The Sun," dealing with a more remote body, is more theoretical and technical in its treatment.

BEYOND THE BARRIERS OF SPACE AND TIME, edited by Judith Merril. Random House, New York. 1954. 295 pp. $2.95.

Until someone with brass knuckles overrules me, this is the best anthology of 1954, Judith Merril's best selection to date, and a bargain at a penny a page. With even more than her usual diligence, the editor has gleaned nineteen top stories of the psi phenomena—everything from simple telepathy to psychokinetic forces that can move starships—from far and wide, including five from this magazine. There's a startlingly fresh tale of precognition from Rhoda Broughton, niece of Sheridan Le Fanu, dated 1873. There's an unsurprising but surprisingly effective story of a medium from Agatha Christie. There are such moderns as Ray Bradbury, Walter M. Miller, Jr., Isaac Asimov, J. J. Coupling and Robert Sheckley, and a fine John Collier twist of ginger. Ted Sturgeon is missing, mainly because his best candidates have been so often reprinted in other collections, so he does a short introduction. And for good measure the book ends in a four-page bibliography and discus-

"The Devil was having wife trouble"

"HERE I AM, twenty-four years old and what have I done?" he had once written. But he was 53, and seared and toughened by years of Arctic struggle before he reached his ultimate goal.

On December 15, 1909, Robert E. Peary, standing where no man had set foot before, planted the American flag on the North Pole.

His return to his base was so uneventful one of his Eskimos said the Devil must either have been asleep or having trouble with his wife.

Actually, good luck was a rarity to Peary. He had failed six times before to reach the Pole, but he never gave up. He lived all his life by his personal motto: *I shall find a way or make one.*

Peary's was a motto we all find easy to understand. It typifies the "strike-out-for-yourself" spirit of the 160 million Americans who stand behind the United States Series E Savings Bonds. Perhaps that's why these Bonds are among the finest investments in the world. For your personal security—and your country's—why not invest in them regularly?

It's actually easy to save money— when you buy United States Series E Savings Bonds through the automatic Payroll Savings Plan where you work! You just sign an application at your pay office; after that your saving is done for you. And the Bonds you receive will pay you interest at the rate of 3% per year, compounded semi-annually, for as long as 19 years and 8 months if you wish! Sign up today! Or, if you're self-employed, invest in Bonds regularly where you bank.

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sion of other top-notch stories of the genre, in other books.

If you didn't grab this off the shelf the minute you saw it, it's your own lookout. I did—but it unfortunately didn't reach the local shelves until rather late. I think someone in the post office is reading my review copy.

SUN, SEA AND SKY, by Irving P. Krick & Roscoe Fleming. J. B. Lippincott Co., Philadelphia. 1954. 248 pp. Ill. $3.95.

Have you ever wondered how much of the spectacular weather which crops up on the far worlds of science fiction is actually possible, and how much is pure stage-setting? This panorama of the present meteorological picture, by a former Cal. Tech. weatherman—and present professional cloud-seeder—and a veteran newspaper man, may not tell the whole story or be a textbook of the subject, but it supplies a very clear foundation of fact and theory on the forces that make the weather what it is.

With science writers, generals and Congressmen making wild statements about what A-bomb and H-bomb tests are doing to the weather, you may be impressed by the simple estimate that a summer thundershower dissipates the energy of several A-bombs, and that the energies involved in a single storm-system are literally planetary. You'll be interested in the common sense of much hoary weather-lore. (Has anyone —maybe Hal Clement?—worked out the folk-sayings for another planet?). You'll be impressed by what forecasting might have done for Napoleon at Waterloo and did do for Eisenhower on D-day.

I'm sure there are better and more thorough studies of the weather, but this will do excellently until I find them.

THE HOBBIT, by J. R. R. Tolkien. Houghton, Mifflin Co., Boston. 315 pp. Ill. $2.50.

THE FELLOWSHIP OF THE RING, by J. R. R. Tolkien. Houghton, Mifflin Co., Boston. 1954. 423 pp. Maps. $5.00.

This is one of those rare fantasies, invented for children but taken over by adults, which become classic in their circle. If you like the blend of faerie and saga that is in Fletcher Pratt's "Well of the Unicorn" or Poul Anderson's "The Broken Sword," maybe you'll go for these oddly charming, oddly heroic adventure myths of a synthetic half-world ("Middle Earth") which stretches a bridge between the real North European mythology of elves, dwarves and dragons and Professor Tolkien's own inventions, the fur-footed, mild but heroic little folk he calls hobbits.

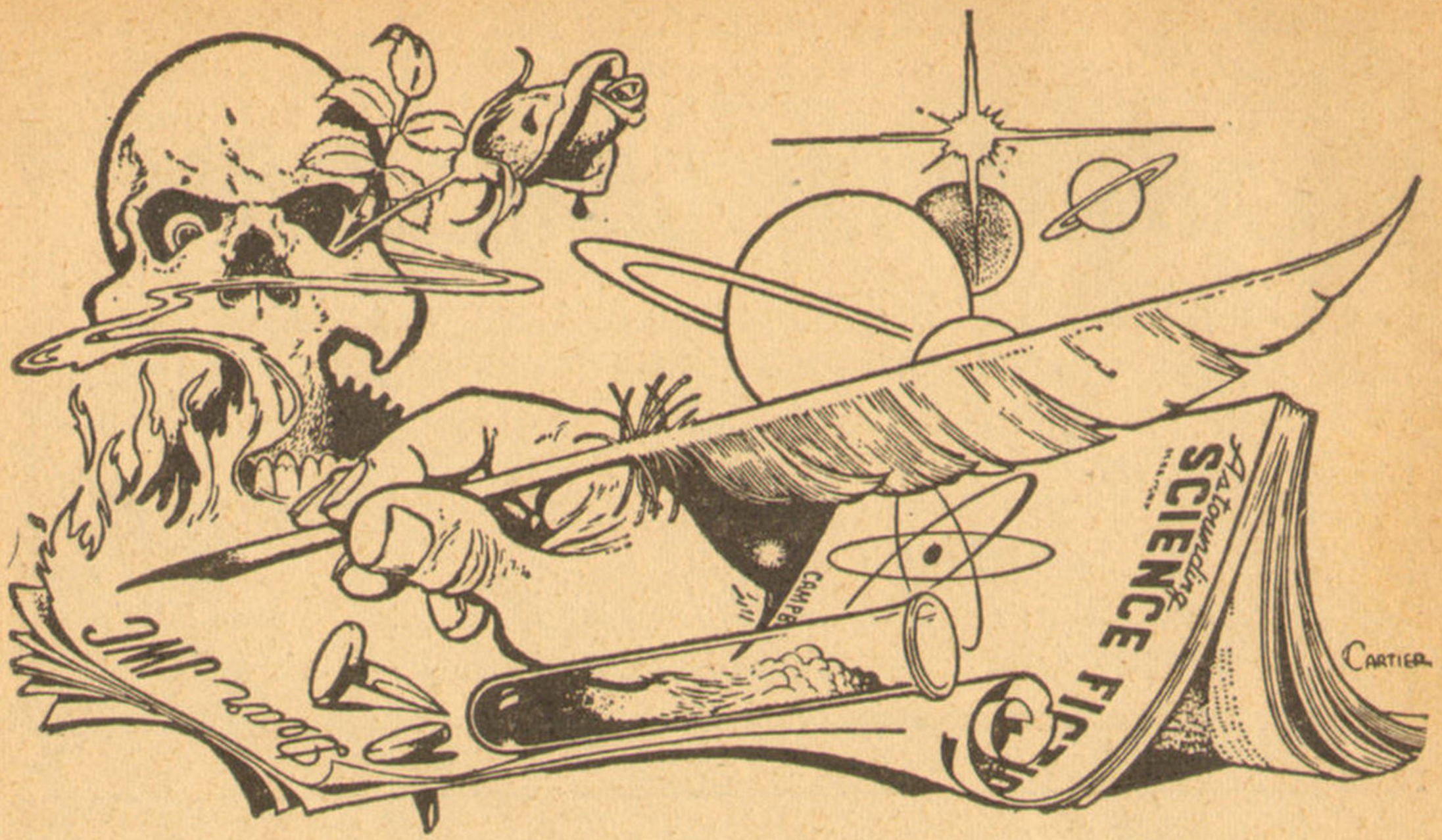
"The Hobbit," which appeared here in 1938, was intended for children and acclaimed by adults. Its

hero, the hobbit Bilbo Baggins of Bags End, was inviegled into a quest for dwarfish treasure, held by a particularly obnoxious dragon, the abominable Smaug. He rose to the occasion more easily and more often than anyone—especially he—would have supposed possible. And in the course of his adventures he came by a magic ring. (How he did so is a story that has been revised a bit between the 1938 edition and the present printing.)

Now Professor Tolkien, a British philologist and student of folklore, has put the ring into the hands of Bilbo's nephew Frodo and set a swarm of evil-doers on its track, while hobbits, dwarves, elves, wizards and other friendly folk try to get at the root of the puzzle. It will take them three fat, wonderful volumes to do so: "The Fellowship of the Ring," "The Two Towers" (already out in England), and "The Return of the King." It's pure fantasy and great fun, if expensive. Charming is probably the word for it. But I'm sure you'll enjoy that fascinating character, Tom Bombadillo, older than the world, and you'll admire the ease with which elves and hobbits can turn a ballad that's chantable. It's *not* science fiction, in spite of what eminent writers say about it on the jacket: so don't be fooled, but don't pass up something you may like.

THE END

★ ★ ★ ★ ★ ★



BRASS TACKS

The responses to the article "The Right to Breed," by Donald Kingsbury, completely swamped all other Brass Tacking. This is a very small sample of the total. In evaluating them, consider this: if a train going about 100 mph hits an automobile trying to beat it to the crossing, a number of comments can be made about the results. Wreckage is strewn for two hundred yards along the tracks. One man comes up, looks around, and says, "Hm-m-m . . . got a flat tire." Yes; that is quite true. The tire is indeed flat. Another comments, "Hm-m-m—carburetor bowl's cracked." Quite so; that, also, is true.

But each of these statements, while true, is inadequate.

Similarly, finding specific flaws in Kingsbury's article is surely possible. Yes, the tire *is* flat—but that's rather beside the point. The necessary comment involves a recognition that it contains so fundamental a flaw the wreckage is strewn across the landscape for hundreds of feet in all directions!

Dear Mr. Campbell:

Superficially, it seems that Mr. Kingsbury is trying to promote compulsory birth control by presenting a rather weak argument against it. Certainly, his miserable, barbaric future is anything but attractive—have you ever seen any starving children?—and most of his assumptions are on a

level with the idea that atomic radiations are probably genetically harmless "because we aren't fruit flies." Neither are we third-generation mice, born with imploded brains, but, by the time that we can make any study of the long-range effects of hard radiation on human genes, it may be too late to undo the damage caused by the next atomic war.

Just after he assumes that A-radiation mutations are harmless and nonviable, he decides that all other mutations are very bad and that they must be weeded out by the most drastic means. Let's assume, for the purposes of this argument, that he's right about the need to weed the human race, and that it's immoral not to plant the weeds in the first place. Are the factors of war, plague, and famine really weed-killers? Also, isn't the "Survival of the Fittest" doctrine related to Darwin's "Theory of Evolution"?

The notion that war, famine, and plague may serve to purify a race *is tempting*, especially when pepole live on a very primitive level, but it needs verification. Kingsbury admits that civilization is not especially favorable to the weeding-out process. Does that mean that savages breed supermen? Or do only superior savages survive? Or are savages merely better adapted to savagery? For that matter, aren't weeds usually hardier than the kind of plants which we want to grow? Maybe war, famine, and plague will tend to breed a superior race of weeds, thoroughly evil, even in our own sinful eyes. And, as for "compassion for the enemy," we weep crocodile tears for the horrible, inhuman enemy, especially if our stomachs are empty. No, Kingsbury must choose between a triple-A, top-priority, no-exceptions "Replenish the Earth" and an equally absolute "Thou Shalt Not Kill." I prefer the latter, with overtones of "Be Moderate in All Things." But, of course, there can be no argument against one's Faith, for Faith is the Ultimate Reason and

logic is the Devil's tool. Is that not right, Mr. Kingsbury? And the easiest way to solve any problem is to deny that there is a problem and to do nothing at all about it.

To sum up my own weak argument, I wish to venture the opinion that the 1.2% increase in population per year is probably affected by present birth-control practices and is subject to change over a period of years. Also, the proposed natural control of population will not work smoothly to maintain an even saturation of population. Plagues and famine follow war, and the trend will be toward global wars when population achieves its highest density. It is possible that an advanced technology might support a dense world population through one last period of relative prosperity, only to break down entirely under the impact of a final global war. The idea is trite as a S-F theme, but, even with today's weapons, we are capable of depopulating the world. Worse, man may manage to survive, while his religions, passed down by word of mouth, gradually become entirely unrecognizable and pagan. You may say that this is impossible, but there are many precedents and we haven't passed the final test. God could abandon us if He wished. In the meantime, let us hope that we don't propagate ourselves to death.—Charles W. Schmidt, Hotel Fort Barbee, St. Mary's, Ohio.

Mr. Schmidt is among those who named the essential error—the lack of moderation.

Dear Mr. Campbell:

You invite readers to pick to pieces, if they can, the article "The Right to Breed," by Donald Kingsbury, in the April ASTOUNDING. May you have many pickers! For among your readers there must be geneticists and evolutionists who, like me, find the article thoroughly entertaining but far closer to the world of fiction than to the world of science.

Perhaps Mr. Kingsbury is a specialist, writing tongue-in-cheek, for kicks? His charming pun "expotential," for the geometric aspect of population growth, arouses suspicions. As well as his solemn "We are not fruit flies, remember!"

May I list some factual errors found in his article:

First, he considers war an effective factor in control of human population density. Up to now, this has not been true. The population growth of India, alone, during World War II, more than offset the millions of war-deaths all over the world. Second, he states that death by competition results, in man, in survival of the better—from the human point of view—individuals and genes. This is presented as a fact, but it is actually one of the most tenuous speculations biologists have been guilty of making; indeed, it was a nonbiologist, Herbert Spencer, who popularized the circular fallacy that because, in his opinion, survival meant "survival of the fittest," therefore those who do survive must be "the fittest." Third, Mr. Kingsbury sets up a very peculiar form of birth control for his hypo-

thetical situation. He predicts an average of two offspring per "average woman," and bases much of his argument on the thesis of such a world-wide condition. Since it is extremely unlikely that the destitute, the sick, or even the poor, will insist on their "right to breed"—witness the eager reception given birth control "missionaries" by the people of Japan, Puerto Rico, and India—and rather likely that the more suitable and secure parents will prefer to raise more than two children, the author's hypothesis seems wobbly. I know of no actual proposal for compulsory birth control; this feature seems to be an original idea of the author's. I suspect he needed to invent an improbably stupid form of world birth control, in order to attack it successfully.

But how successfully, even so? Which leads me to the faults in the logical structure—would Aristotle praise or own it?—of the argument.

Man, says the author in effect, can conceivably reach the stars in his efforts to outrun his "expotential" function. With which I optimistically but enthusiastically agree. But, on the other hand, insists Mr. Kingsbury, man is unlikely to win control over the quality of his own genes! (Does anyone remember A. Huxley's first try at science fiction, the prophetic satire "Brave New World," which seemed too close to home to be very funny, even back in the thirties?) I thought all sober science-fiction readers had long been familiar with the idea of specially bred specialists for elevator-running, space-exploring, or just plain S-F writing! The author has taken a rigorously illogical look at man's future seeing only what he wants to see, giving Man the stars, but denying him control of his own chromosomes.

In another half-blind approach, the author admits that man is capable of world-wide birth control—something no other animal has done or can do—while at the same time he insists that man is ape, not essence, bound to Earth's "grim ecology." Thus, he denies man the right to exercise his human powers. Man, he urges, should follow a law of Nature, rather than laws of his own making. This sounds mystical to me, and maybe for that reason I cannot understand. To me, it makes no sense at all to say

that because Nature created and produced us, and made us different from the other animals, we should try to live exactly as the other animals do. I have a prejudice in favor of being human!

When an author as plausible and skillful as Mr. Kingsbury writes a piece like "The Right to Breed," I wonder why. May I, with apologies to him, who perhaps has had entirely different reasons, suggest the following explanation?

1. Mr. Kingsbury is terribly and rightly impressed with the Malthusian logic, the logic of surfaces and volumes, which, I agree, cannot be denied.
2. Mr. Kingsbury is faced, like the rest of us, with the awful responsibility of doing something about it, to prevent the wars, famines, and darkness that will smother the human genius if we breed to the limit.
3. Mr. Kingsbury, like most of us, escapes his duty by putting the problem in the lap of some father-image, for him, the God of Nature and Evolution.

In order to perform this logical Houdinism, he changes the facts of evolution a little; "Remember," he seems to say, "Man is really just another animal." He makes a few self-contradictory assumptions—man will find the stars, but lose his own genes; man can exercise rational control of population, but should continue, being a beast, to exercise no control. He makes a touching appeal for Man's future—but at what cost to Man's present, he does not say.—Arthur W. Jones, Associate Professor of Zoology, The University of Tennessee, Knoxville, Tennessee.

Wrong on the analysis of Kingsbury's motives! Kingsbury IS doing something about it—"it" being the basic problem of human fanaticism. May I suggest that that is, by all odds, the most dangerous—"ism"?

Dear Mr. Campbell:

Re "The Right to Breed," April, 1955, ASF. A few amendments are in order. Among them are: "Superficially it seems we are above the grim ecology," should read: "We are the grim ecology." "Science has let us down," should read: "We have let science down." The deduction that "it does appear that there will be war" is nothing short of brilliant. In fact, just as many types of bacteria cultures multiply so extensively in an agar dish that they literally kill themselves in their own toxins, so might we humans, on our agar ball, destroy ourselves in our own toxins.

In brief, the article is the worst I have ever seen in ASF. It is particularly obnoxious with hypocrisy, a subjectively anthropomorphic philosophy (?) garbed in the cloak of deism. —Ben Krie, 230 30th Street, Boulder, Colorado.

That last paragraph accurately describes the appearance of any fanaticism.

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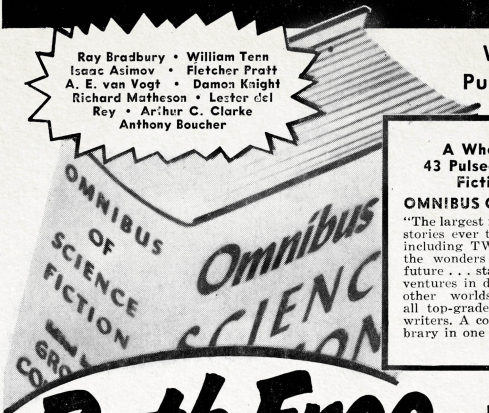

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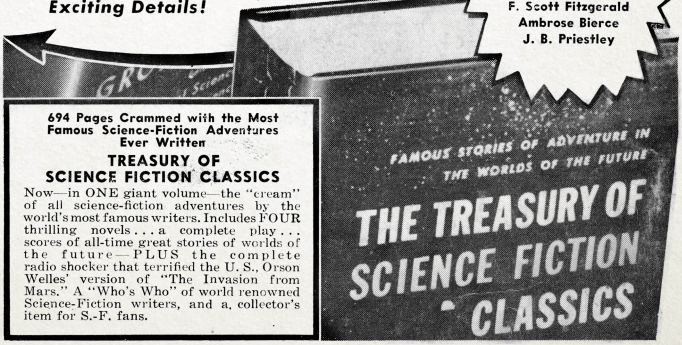

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