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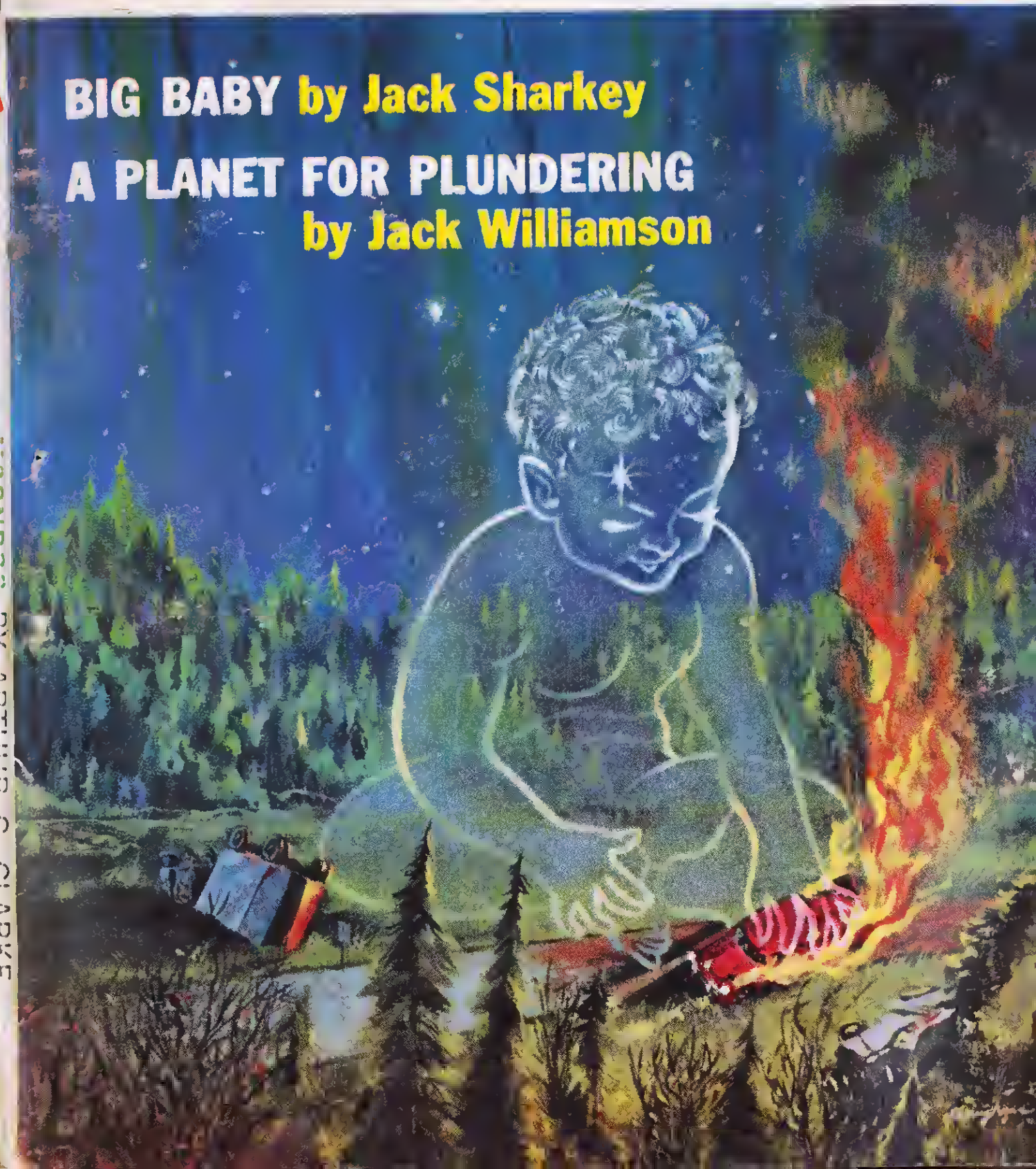

BIG BABY by Jack Sharkey

A PLANET FOR PLUNDERING by Jack Williamson

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MOONDOG BY ARTHUR C. CLARKE

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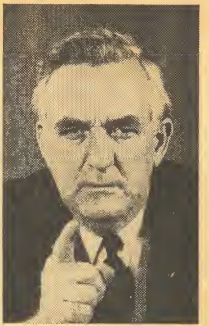

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Galaxy
MAGAZINE

APRIL, 1962 • VOL. 20 NO. 4

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Cover by GAUGHAN, illustrating **BIG BABY**

Next issue (June) on Sale April 12th

A Galaxy in Coma Berenices. Our own Galaxy, seen edge-on, looks just like this. Earth lies outside the central bulge, in the spiral arms, seen here as a line.

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FOOTNOTES UP FRONT

JULES VERNE, who got a going-over at the hands of Theodore L. Thomas in these pages a few months ago, is not without friends. If you doubt it, you should see our mail.

Thomas's article was a thoughtful second look at *Twenty Thousand Leagues Under the Sea* from the vantage point of what we have since its writing learned about underwater facts of life. The article was entitled *The Watery Wonders of Captain Nemo,* and it pointed out that many of the "astonishingly detailed predictions" Verne made in this first of submarine stories — just ain't so. For instance, there's the hoary old fabrication about how the first man who actually built a submarine periscope was refused a patent because Verne had already "invented" the device in his novel. This is a most appetizing fable for science-fiction readers like ourselves to enjoy; your editor has heard it broadcast at least twice in speeches at science-fiction conventions. But it's not true, sad to say. Verne not only didn't describe the periscope "accurately" — his *Nautilus* didn't have any periscope at all!

This struck us as so astonishing that we went down to the library and reread the old classic to see with our own eyes. True enough. The closest Verne came to it was a "glazed enclosure" — evidently a sort of retractable pilothouse — which is a horse of a quite different breed.

Still, nobody can deny that Verne's crystal ball gave a very good picture on at least some of its channels. As Samuel A. Peeples (himself a

writer of considerable attainments — as those who watch the credits of their favorite television shows know well) writes us, in Verne's novel "there is depicted the practical use of the following items (none of which existed as a functioning practicality at the time the story was written):"

1. An operating submarine.
2. Electric lights with controlled degrees of light.
3. Electric diving motors.
4. Electric hoists.
5. Electric elevators (the conning tower rose and lowered.)
6. Double-hulled steel vessel for strength and safety against damage.
7. The manufacture of food and other articles from seaweed, etc.
8. Luminescent lighting (panels in ceiling.)
9. Artificial manufacture of air (which Captain Nemo felt unnecessary.)
10. Electric centrifugal pumps.
11. Electric clocks (unknown in 1866) even to a full description of their accuracy.
12. Underwater speedometer.
13. Electric stove for cooking.
14. Electric water heater.
15. Streamlined ship hull to reduce friction.
16. Electric floodlights.
17. Neon lights (electricity through glass tubes filled with gas for even white light.)
18. Pneumatic underwater rifle.
19. Auto-loading rifle.
20. Airlock, complete to electrical pumps.
21. Electric fence — to shock trespassers.

We're grateful to Sam Peeples for the list — even if, maybe, one or two of the items aren't entirely beyond argument. (The Japanese particularly were getting Nemo-like food from the sea long before 1866. An "operating submarine" existed as early as the War of the American Revolution, and again in the Civil War.)

But we still say that periscope just isn't there!

WE appreciate hearing from all of you, you know. Galaxy doesn't run a letter column, but that doesn't mean that your letters aren't read — and much appreciated. They furnish the only day-by-day guide we have to help us make the magazine what you like best. If it's humanly possible, we'll usually try to do what you want... that's what we're in business for!

We have at least one reader who we don't seem to have convinced of that. A young lady from the state of Washington writes that she wants us to publish a letter column; what's more, she writes, "I am beginning to get angry; either publish the letter column (which is what *we* want) or kindly admit that it is your magazine and you don't give a hollow hoot what your readers want... There is a comparatively recent word in the English language that fits this situation: Boycott. This is a group action, but just in case you didn't know there is a group that just might be prepared to take this action... However... it's doubtful if enough readers could be persuaded to boycott to do any good; Galaxy is too good a magazine, and I'm afraid that backsliding would be rife."

Dear reader, we appreciate the compliments and weigh your request. If there is any such large group of readers who want a letter column, we'd be pleased to hear from them. But you have to excuse us for doubting they exist.

You point out that other science-fiction magazines have letter columns, which is true enough; but it hasn't ever been Galaxy's policy to be just like all other science-fiction magazines. Galaxy's policy is very simple. We try to put out the best science-fiction magazine we possibly can.

Does that mean we should print letters in every issue? Our best guess at this moment is no. In a postscript to your letter you add: "Bet most of your letters are on this subject. Embarrassing, what?" We're afraid you lose that bet; of all the letters Galaxy received on the last three or four issues, at least, there was exactly *one* letter asking for a letter column. Yours.

— THE EDITOR

A PLANET

YOUNG man wanted, to travel sixty light-years and judge the life or death of a dozen worlds. Must have one hundred years experience in the quarantine service, and psionic classification five or better. Pay — well, an enterprising deputy warden with planets to sell could set his own price.

The memo from the district office was not quite so bald, but those were the terms in which Wain Scarlet summed up the situation for his own benefit. He had spent a tedious century at the regional headquarters on Denebola IV, waiting for just such an opening. He jumped at it.

The jump wasn't easy.

His own face was the first great barrier. He was a scrawny, red-freckled runt, in a world where such needless ugliness was shocking. His half-conditioned parents had refused to meddle with nature. Then, before he himself was old enough to arrange his own aesthetic surgery, he had come to enjoy a cruel satisfaction in the pain he could inflict upon the beautiful beings around him, with the bulge of his low forehead and the jut of his rodent teeth and the defiant stare of his yellow eyes.

The other barriers he had built upon that one, within his own mind. A habit of suspicion.

By JACK WILLIAMSON Illustrated by FINLAY

It seemed that half the Galaxy was interested in Earth. The criminals sought to loot it; the better class merely wanted it destroyed by fire!

FOR PLUNDERING

A pattern of unprovoked aggression and unnecessary flight. Although he had used the time-contracting neutrionic ships of the service to put a dozen different worlds behind him forever, he had not escaped his gnawing need to strike and run again.

This time he was going to strike harder, and run farther.

His goal was the galactic frontier, the fast-expanding bubble of new planetary systems claimed and conquered. Out there, a thousand or ten thousand light-years beyond the utmost outposts of the service, all men were human. Perhaps, with the price of planets to spend, he could buy one last escape from everything he feared.

If his plans seemed somewhat large for a common clerk in regional personnel, they had been growing for a hundred years, while he patiently endured all the incessant psionic indoctrination in the glorious traditions and the lofty obligations of the service, and carefully concealed his rankling resentment of all the handsome men around him.

When chance struck, he was ready.

THE instrument of luck was Warden Thornwall, an innocent dark youth whom he secretly despised for his dark beauty and his frank friendship and his well-conditioned intelligence.

"Wain, here's a case that ought to interest you." The warden tossed a little packet of documents into the action basket on his desk. "A savage planet out the far side of nowhere, about to reach a contact crisis. The natives are playing with rockets and atomic theory. Our watchers report that they will soon discover us. That means the end of our rights and duties under the Covenants of Non-Contact. If the natives really qualify, we'll have to usher them into civilization."

"I won't hold my breath till they do." Scarlet made a painful effort to reflect Thornwall's open smile. "I've seen contact crises before. The new races usually need several generations of supervised psionic training before we can certify human status."

"Sol III will be no exception." The lovely youngster nodded, unaware of Scarlet's veiled aversion. "You'll find all the old arguments for extending the quarantine and for lifting it today—advanced by fussy old zoo-keepers and by pirates who want an open planet to loot and by social workers who need a new world to save. But this case gives us a novel complication."

Scarlet looked hastily down at the documents, trying to hide the flicker of illicit hope in his tawny eyes. Cunning enough to know his own mental handicaps, he did his best to hide them from the rest of the world.

"You'll see a notice from the signal service," the warden explained. "They want to use Sol for the first unit of their new intergalactic blinker. They're asking us to evacuate all human beings from its vicinity, before they begin transmission."

"Must they use Sol?" Scarlet peered up at Thornwall, privately wondering how the demolition of a solar system might be turned into personal profit. "Aren't there desert suns enough?"

"Sol is a desert sun." The beautiful man smiled serenely. "Even after five thousand years under our supervision, the native anthropoids have failed to qualify for galactic citizenship. Their progress reports arouse doubts that they ever will."

"Yet they're alive."

"Any star you point at has half a dozen planets with life of some sort. The signal people have made a scientific survey of the stars available for their initial project. They need eight thousand stars of the right spectral type, located here at the Center. Sol is first on their list."

"There will be protests." Scarlet squinted shrewdly. "Even from old hands in the service."

"I knew the case would interest you." Thornwall glowed with executive assurance. "Why don't you look over the memo? I'll have to check with the record section, but I believe you're in line for the assignment if you want it."

SCARLET murmured a few polite words of praise for his rivals in the office, but he knew what the records section would say. Once, sixty years before, another beautiful and innocent young warden had gone sun-diving, trusting Scarlet with the records. Since then the records said what Scarlet wanted them to.

He fumbled quickly through the documents, trying to cover the sudden flare of triumph in his yellow eyes.

"You'll have three possible decisions," Thornwall went on. "You may decide that the inhabited planet needs a few more centuries to mature its native culture, under our care. If so, you may act within the limits of the Covenants to delay the contact and extend the quarantine."

Scarlet nodded, without much interest. Such a decision might please the cautious old heads in the service, but it offered no profit to him.

"On the other hand, you may find that the natives are ready for admission to civilization," the warden said. "In that case, you may open the planet to traffic with the stars under any supervision you see fit to impose."

Scarlet brightened, scenting money. Every contact crisis brought outsiders swarming from all the worlds around, drawn by a hundred motives to welcome the new race into the dangerous freedoms of galactic civilization. Surely *somebody* would pay what he wanted!

"Or, finally, you may decide that the anthropoids will never qualify," Thornwall finished. "If so, you may overrule the protests against the blinker project and order the evacuation of every galactic citizen within a light-year of Sol."

Scarlet frowned, considering that. The signal service was unlikely to offer bribes. But there were many ways that a clever man might take toward the free-living frontiers. The first flash of the intergalactic beacon might be the signal of his fortune. His tawny eyes flared again.

"I thought you would be interested," the warden said. "Let me speak to the director."

Even after that assurance, the actual orders seemed a long time coming. Scarlet sat for three days grimly pretending to work, fighting a cold fear that his tampering with the records had been discovered. When at last Thornwall came up and clapped him on the back, he gasped with terror in spite of himself.

"Uh—" He caught a quick breath and captured control of himself. "Yes, sir?"

"The director wants to see you." A luminous smile reassured him. "You're going to get the break I spoke of. About time, too!"

YET his knees were trembling when he walked in to face the director, whose muscular perfection gleamed through a film of steely dust. He wanted to sit down, but the sleek metallic god kept him standing half a minute, probing him with keen gray eyes which glinted with the passionless authority of perfect psionic conditioning. He couldn't help cringing.

"Nervous, Scarlet?"

He nodded, grinning stiffly through his secret misery.

"Not that I blame you." With a cool steel smile, the giant allowed him to sit. "After all your years in this easy berth, you must dread being uprooted."

His greater fear was that he might appear too eager.

"I have been very happy here, sir," he agreed, in a voice which he tried to make regretful. "I hate to leave my marriage group, and I've a number of hobbies that I don't like to interrupt."

The metal god nodded sympathetically.

"Sun-diving, for one." Actually, he detested the sport because his imperfect integration had left him dangerously inept with the psionic diving gear. But a nervous compulsion drove him on. "Just bought an outfit from a friend who got transferred. He's been diving into sunspots, looking for the famous living lights. He had a theory they're intelligent—"

"Perhaps they are." The director's nod froze his apologetic grin. "I don't know how any complex of ions and electromagnetic energy can support intelligence, but I've brought back some queer psiographs from my own dives."

"Anyhow, I'll be selling my gear." Alarmed, Scarlet retreated as hastily as if the director had suddenly become a hissing solar fireball. "I wasn't quite prepared for such a mission. But the service comes first."

"We're living for the worlds we watch." The steel man intoned that old slogan so solemnly that Scarlet felt an uncomfortable prickling at the back of his neck. "We left our own worlds behind once and for all when we took the service oath."

"I'm not looking back, sir." His palms were clammy from a sudden fear that he had overdone his appearance of reluctance, but his eyes were on the new worlds ahead. "Though I suppose I've been here a little too long. I had almost forgotten how it feels to board a neutrionic flyer to skip down across a dozen or a hundred years, knowing that you can't come back."

"That's our destiny." The magnificent man paused to study the records Scarlet had altered, so closely that he shuddered. "A bad situation, out there on Sol III. Frankly, Scarlet, I was hesitant to send a man of your incomplete conditioning. Especially one without field experience. But we've too many planets to watch, and too few dedicated men."

SCARLET gulped and decided not to trust his voice. He sat sweating, trying not to think of the rivals who should have ranked above him.

"I'm a little surprised that we've kept you here so long." The director gave him a quicksilver smile. "But this situation is apt to call for all you've learned in these hundred years."

Scarlet scanned the little stack of psionic dispatches that he pushed across the desk, trying to absorb them as swiftly as if he really rated five. Thornwall's briefing helped him decide upon a troubled frown.

"This last report from Sol III is already fifty years old." His concern grew swiftly genuine. "I'll be at least that long getting there by the regular routes. What can I expect to find?"

"Your problem, Warden." The director was already turning,

reaching for another stack of dispatches. "The finite speed of our communications is all that makes your mission necessary. In a contact crisis, we must have a responsible man on the spot."

"Trust me, sir." Scarlet spoke with a pious gratitude for that finite limite upon the velocity of every sort of signal, even upon the flash of the intergalactic blinker. By the time any report of his decision could come back here, he would be so far beyond Sol that no possible pursuit could ever overtake him. "I'll be on guard."

"You'll need to be," the steel man admonished him. "A contact crisis draws all sorts of people. Some pure as light. Some more savage than the savages we guard."

He boarded the supply ship next morning, carrying most of his material possessions in one small bag. The true rewards of the service were the joys of service itself. So they said. Certainly he had received very little besides.

He was glad enough to abandon what he had to leave behind, the too-risky sun-diving and the dabbling in psionic art and the aimless multiculture with which he had tried to kill the idle years. He couldn't help feeling a secret relief even at the separation from his marriage group, although he tried to make a convincing display of regret.

He even asked Glade to come with him. She was the sultry if somewhat shallow blonde who had always insisted that she was simply fascinated with his phenomenal ugliness, but now he was not surprised when she chose to remain with her more handsome husbands and the civilized amenities of the station.

THE flyer caught the neutrionic streams, the vast winds of invisible neutrinos that burst from the novas and blow through the galaxies at almost the speed of light. Velocity foreshortened time. A long quarter-century on the planets ahead and behind was only a few weeks for Scarlet.

He was still elated with the wine of one more triumphant escape from all the perfection he hated, when the flyer touched at Procyon Station.

In the spaceport bar, he bought a drink for a service courier from the Regulus region and asked for news of Earth.

"Light's so damned slow," he grumbled, disguising the casual boast about his mission. "A contact crisis comes up on a world like Earth, and it's out of hand before you can get there to do anything about it. What about Earth?"

The courier looked blank.

"Sol III," Scarlet said.

"Oh, we touched there." The courier grinned maliciously. "Better take along a durable woman and a good library, if you're waiting for those quarrelsome apes to civilize themselves."

"Huh?" Scarlet downed his drink uncomfortably. "Aren't they near contact?"

"Not that I heard about."

"They were firing military rockets a hundred years ago." he protested hopefully. "They'll be getting into space."

"But not for any peaceful purpose. They were groping toward fusion bombs, when we picked up those dispatches. They'll soon be blowing the crust off their grubby little planet. Even if they do blunder into our outpost, it doesn't mean that they're fit for civilized society.

"Time for another?"

Scarlet blinked at his time ring. "Thanks, but my ship will be lifting."

He hurried back aboard, frowning gloomily.

After a few worried weeks of ship time, he watched Sirius flare out ahead like a natural nova. The news of Sol III was twenty years fresher, but still distressing.

"Larger tribes are fighting bigger wars with better weapons." The post communications officer grinned sardonically. "If they do make contact, they'll probably attack us with fusion bombs. We're the ones who need protection!"

"They may be troublesome." Slowly tightening muscles accented the ugliness of Scarlet's pinched and chinless face, until the better-integrated man looked uncomfortably away. "But I'll civilize them," he muttered defiantly. "If they are human at all!"

Perhaps they were not, he reflected silently. Perhaps he would have to approve the blinker project, after all. But, before he decided to let the supernova flash, he intended to be well paid for his decision. His first concern was the source of his payment.

II

HE was alert for the scent of money when the flyer touched at Proxima Station. He got off to sniff for it, and caught only the odor of trouble. The restless anthropoids had fired rockets into space, but the radiation zones had slowed their efforts to reach the satellite of Earth.

Wandering unhappily back to the flyer, he found a girl at the lock ahead of him. A deck officer had blocked her way. She was protesting in some liquid-toned tongue he had never heard before, so vehemently that he snapped on his psionic translator.

"—unconditioned blunder!" The sense of her ringing words came suddenly through. "You can see that my passage was cleared

through your own transportation office."

"You may come." The officer nodded grudgingly. "But not your rubbish."

Scarlet heard the indignant catch of her breath, as the officer gestured stubbornly at a mountain of packing cases stacked beside the ramp. In response to his glance, their blank labels flashed with words that he could read as if in his native tongue:

CONTENTS: PSIONIC CONDITIONING EQUIPMENT

CONSIGNOR: BRIARSTONE MISSION

CUSTODIAN: CORAL FELL

DESTINATION: SOL III

The labels faded as his eyes went back to Coral Fell.

"It isn't rubbish and it isn't mine," she was warmly informing the officer. "It belongs to the people of Sol III. They're near a contact crisis. The moment the quarantine is raised, they'll need help. I'm going out there to open a psionic training center, to help them make the difficult jump to civilization. All this is just the barest essential equipment for our first clinic—"

"No matter if it's a captive living light, this is not a common carrier," the officer snapped. "Our limited cargo space is already filled with supplies for Sol Station. Wait for a freighter."

"But there won't be any freighters." A sob shattered her well-conditioned confidence. "Not till the quarantine is raised. Nor another supply ship for three whole years—"

"Too bad." He shrugged unsympathetically. "But we're lifting off."

"Wait!" Her desperate voice fell, but the translator still caught her words. "I've funds of my own. Maybe we can reach some private understanding."

"I'm the wrong man to bribe!" The officer recoiled in indignation. "I can see to it that you aren't allowed off any ship at Sol Station!"

SHE turned, and Scarlet shrank from her angry loveliness. Her long hair shone with blue psionic moons, and her mouth was a quivering golden slash across her exquisite lean face. With tears burning in her violet eyes, she stalked toward him blindly.

"Warden Scarlet!" The deck officer moved to meet him with an unexpected graciousness. "So you're already seen the sights of Proxima—"

"You're a service executive?" Suddenly she saw him—but somehow not his ugliness. Her smile illuminated him. "Could you help me?"

"Perhaps I can." He turned briskly to the officer. "When the quarantine is lifted, the natives will need all the help they can get. We're taking Coral Fell and all her cargo. In my own suite, if necessary."

"Yes, sir." The officer had become somewhat purple, but he nodded stiffly. "I'll arrange the space, sir."

"Thank you, Warden!" Her kiss took his breath, before he had time to reflect that she must have come from a world of more casual conventions than his own. "How can I ever repay you?"

"I wish no pay." Uncomfortably, he disengaged himself. In his judiciary position, he could hardly ask outright for the bribe the deck officer had refused. Dealing with her was going to require a delicate tact. "But—uh—shall we meet aboard for dinner?"

She met him for dinner, wondrous in a gown of woven psionic filaments that reflected all his thoughts and moods in their flow of patterned color, and always amplified his responses to her beauty. She was far more, he soon discovered, than merely a dedicated missionary.

He cringed from her shimmering perfection, with his old uneasy defiance, but she was somehow neither fascinated nor repelled by his total ugliness. She simply failed to notice. Perhaps, he thought, she had lived on some frontier where aesthetic surgery was not the fashion. Or perhaps his very deformity appealed to the same generosity that had brought her to aid the natives of Earth.

"So the whole future of these planets is yours to decide?" Her warm admiration overwhelmed his remaining defenses. "Isn't that an awfully important decision to be left to just one man?"

He caught his breath to assure her that he had been long trained for his task, and his fitness carefully tested. But when he remembered how he had secretly insured his own selection, a wave of shame submerged him.

Fortunately, their food was being served. There were dishes he had never seen before, and by the time she had informed him that these were multicultured bioforms from Proxima II, he had begun to recover from his unexpected confusion.

"THE service is a volunteer organization," he muttered awkwardly. "Though of course we do have official status. Our trouble is that so few people ever volunteer to leave their own times and planets, to go voyaging down through strange worlds and ages, giving their lives to guard ignorant savages. We never have men enough. But we do what we can."

"We are volunteers, ourselves." She nodded sympathetically. "I joined the mission because of my

father. A galactic buccaneer, my mother used to call him. He owned a great fleet of neutrionic flyers. He used to operate out toward the Edge, looting new worlds of everything portable, using his profits to build more flyers and loot more worlds. All legal enough, but Mother taught me not to like it. When I inherited his fortune, I came back to these forgotten worlds at the Center, to return what he had taken."

Inwardly elated at this news of all she had to give away, Scarlet began cautiously trying to convey the idea that he would be receptive. He admitted over the wine that he had long ago lost the youthful illusions that led him to volunteer.

"I can remember when the feeling of it made me tingle all over," he told her. "Skipping down the centuries, watching over all the retarded worlds as they clamber up out of the jungle. The trouble is, they take too long. They stumble too often, and fall back too far. We've been guarding Earth for five thousand years."

He tingled again, in her admiring glow.

"Frankly, Coral, I have decided to leave the service as soon as I can afford it. I'm sick of the discipline, the long monotony, all the sacrifices. I want a decent living and a permanent family."

As she smiled, the psionic fibers of her gown made a veil of rosy flame in which their reflected pleasures in each other flowed into a mingled radiance. He thought for an instant that he had made his point.

"To your new future!" She clinked her glass against his. "I think you're wise to resign, because I've never agreed with the quarantine philosophy. It seems almost criminal to let a world like Earth stumble in the dark for five thousand years, when psionic training could civilize it in two or three generations."

"To your mission on Earth!" He drained the wine, trying not to think of all the young civilizations that had been destroyed by premature contact. "*If* I can lift the quarantine."

That was as plain as he dared to be, but still she failed to understand. His own dismay quenched all the burning glory of her gown, leaving her nearly nude beneath the dead gray filaments, as she leaned to kiss his glass again with her own.

"To *our* new Earth!" she breathed. "Let's make it that! You'll find yourself again, in the exciting work of civilizing the planet. You and I, together—"

Panic shook him.

"Wait for my decision!" he muttered desperately. "You're forgetting that Sol III has not yet qualified for civilization. Unless I find

grounds for granting galactic citizenship, the planet will be incinerated."

III

HER glowing gown faded pale with shock, when he told her about the blinker project.

"Wain, how can you consider that?" Her widened eyes were black. "The murder of a world? Murder multiplied three billion times!"

"The extinction of the native culture may appear deplorable," he told her. "But it won't be murder, really. Not unless the natives are granted human status."

"But they are *people*, Wain!" Her face glowed again, with a pleading urgency. "One social worker from our mission spent months there, bundled up in their horrid fiber clothing, disguised as a medical student. He examined hundreds of them. Physically, they're as fully human as we are."

"Human status depends on mental attainments," he reminded her craftily. "Or, to be more accurate, it depends in this particular case upon my own considered judicial decree."

Even then, she didn't understand. To her well-conditioned innocence, a deputy warden stood far above any possibility of corruption. Her pure illusions were immune to the boldest hints he dared to make, as red Proxima dimmed behind and died.

The bribe he wanted, she might never pay. But all her innocence failed to restrain her from using the arts of psionics to press upon him another kind of bribe, which included herself. She seemed to mind neither the jut of his rodent teeth nor the squint of his yellow eyes nor even his own sadly botched conditioning.

All the way to Sol, she talked of her magnificent plans for Earth. The equipment he had rescued would barely fit out the first psionic training center. But she had funds to purchase more. Her staff would be pitifully inadequate at first, even if he decided to join her mission, but the natives they trained would soon be scattering out to open new centers in every jungle village.

At the end of the flight, they were sitting together in the ocular dome when the airless satellite eclipsed the driving glare of Sol. Earth still burned in the black space ahead: a thin, green-veined crescent, one horn tipped with a dazzle of ice. Watching, Coral caught her breath with a tiny gasp of pure delight.

"So beautiful!" she breathed. "So wonderful and new! Every opportunity I've come so far to find!"

Scarlet nodded, but his eyes hardly left her. With an ultimate

missionary zeal, she had rinsed her hair with a psionic wash that came to flaming life with her joy, and powdered her body with a dust that caught and amplified all his feelings of desire in a glitter of diamond points.

"Say you'll stay, Wain!" She caught his hand. "In a couple of hundred years, we'll have civilization blooming here!"

"But I'm not— uh—completely conditioned," he reminded her uncomfortably. "In that time, I'd be getting into— uh—middle age." Watching her hair turn dull with his own discomfort, he muttered bleakly, "I'm getting out where life is worth living, as soon as my duty here is done."

"But, Wain!" The psionic dust turned cold and blue upon her, reflecting her distress. "I can't just abandon the mission. And you know that our work here will take a good two or three hundred years."

"Your work," he said unhappily.

HOWEVER magical it might seem to those without it, psionic training required toil and time. To become fully effective, the pre-conditioning had to begin at the instant of conception, guided by pre-conditioned parents. The first generations were always awkward half-things, lost between worlds, as he himself had been. He wanted no more of their hopeless yearnings and inevitable defeats.

"Stay!" She leaned toward him, bathed in a sudden glow of devotion. "We'll be married the day you leave the service. My own conditioning will help complete yours. And you will find our work worth everything. A thousand years on Earth won't be too long, now that we're in love."

In spite of himself, he almost took her in his arms.

Less than half conditioned, he had little immunity to her psionic lure. Yearning to kiss the cold green blaze of her mouth, he shivered with despair. He thought everything was lost.

But darkness fell across the dome. He looked out to see the black-toothed rim of the moon rising to gnaw the jeweled Earth away, as the flyer fell to land. Grateful for the interruption, he squirmed desperately away.

"What's wrong, Wain?"

Her wounded voice tore at him, but he refused to look back at her psionic charms. He stood watching the crescent Earth until its last glitter was gone.

"Tell me, dear," she begged him. "Whatever's wrong, I want so to help you. But your late conditioning disturbs your reactions. You're hard for me to understand."

He felt grimly thankful for that dark veil across his mind. He couldn't tell her, but he was getting back his balance. She had swayed him dangerously, but he would surely find other lovely women glad enough to overlook his ugliness after he was rich. He had already squandered far too much of his short life for the hollow rewards of the service; he didn't intend to give up the rest of his youth for her. Surely, somebody else would pay him to raise the quarantine.

"Darling—" Alarm caught her voice. "Don't ever think I feel above you!"

"Of course I don't." He stared into the dark, afraid to look at her. "But we're landing now. I've— I've just recalled my duty."

"I don't see—"

"I am a deputy warden." He was deliberately gruff. "I have come here to decide the future of a planet. The rules and traditions of the service do not allow me to become intimate with anyone who has a special interest in my decision."

"Is that all?" She laughed breathlessly. "You silly dear! You don't know how much you need re-conditioning. But I do respect your principles. I'll stop pestering you until Earth has been admitted to civilization."

He gave her an uneasy glance, and found her only normally alluring. The flyer lurched and swayed, settling upon the satellite. They turned together to look for Sol Station. Here it was night. As his eyes adjusted to the cold starlight, apprehension touched him.

UPON the dead plain, a few small hummocks of naked stone stood clustered around a cruel black peak. Far away, a curving wall of ragged rock closed them in.

He saw nothing else.

"It's all magnificent!" she whispered, before her first delight was clouded with bewilderment. "But where is the station?"

"Still camouflaged." He pointed. "Those rock hummocks are painted membranes, if you know how to look, inflated to hide the neutrionic flyers on the field. The main installations are in that peak, and underneath. See!"

He nodded toward a glint of moving metal in a dummy craterlet. A hidden airlock opened. Belted spacemen rose into view, riding the arms of a multiple crane, hoisting billowing membranes.

"What are they doing?"

"Rigging a screen to hide us," he told her. "We'll be getting off as soon as it's inflated."

She said she had to go below to finish packing, and then lingered in the dome, watching him so sharply that he stiffened. Al-

though he understood that advanced conditioning included a taboo against uninvited mental prying, he couldn't help an uneasy resentment of her psionic superiority.

"Go ahead," he snapped. "I'll meet you down at the lock."

"You're worried, Wain." Her warm concern assured him that she had not been picking any guilty secrets from his mind. "Why?"

"That camouflage." He gestured at the hummocks clumped below the mountain. "It's too good. The station is still concealed. I see no native rockets. I'm afraid we're here too soon."

When he walked down the ramp from the lock, a few minutes later, into the cavernous tent that had been rigged to hide the flyer, the station commandant was waiting to greet him with the formalities due his rank and mission.

Commander Newbolt was a lean blond giant, who enhanced his virile presence with a liberal use of psionic cosmetics. Scarlet heard the sharp intake of Coral's breath when she first saw the shining mantle of magnified masculinity that revealed his muscular beauty, and hated him instantly.

Had Earth made contact?

Scarlet was asking that urgent question, with every anxious glance at everything around him, but he refused to speak it. He answered each austere formality in kind, until Newbolt had completed the ritual.

"Your accommodations are ready, sir. Down in Tunnel Seven. I hope you find them adequate, because I believe you're going to be here for some time."

"The crisis?" He couldn't stop the question now. "Have the natives arrived?"

"Not yet, sir."

"Why not?" He tried to gulp his panic down. "They were reported entering a contact crisis a hundred years ago. I expected to find their rockets here."

REVULSION from his ugliness and contempt for his judgment was thinly veiled behind the smug satisfaction of Newbolt's thin-lipped smile.

"I'm afraid you'll discover that my predecessor was badly mistaken when he prepared for such an early crisis here. I urged him at the time not to send for you."

Scarlet glared up at the towering commander, bracing himself for trouble. He could already see that Newbolt was stupid enough to take a very dangerous attitude toward bribery.

"How's that?" he rapped. "Weren't the natives about to reach this satellite."

"They have crashed their clumsy litle rockets here." Newbolt nodded contemptuously. "But even if they ever lived to discover us, they aren't fit for civilization. Their culture is sick with a pathological militarism."

"I'll give due weight to your opinion," Scarlet jabbed. "When I come to judge their fitness."

Newbolt remained undevastated.

"We have been assembling evidence for Your Equity's consideration. When your flyer was sighted, I ordered all human beings in the solar system to gather for your inquiry."

"Thank you."

"My own recommendation will be that you approve the signal project," Newbolt added. "I'm convinced that our long vigil here has been a waste of time. The natives have been growing more numerous and more destructive, but hardly more human."

"I'll ask for your advice when I require it," Scarlet told him. "Please have my luggage taken to my quarters. Arrange for the hearing to begin without delay."

"Yes, Your Equity."

"Wain!" Coral Fell came floating toward them in a pink glow of admiration, her wide eyes fixed on Newbolt. "I want to meet the commander."

"I don't think you'll like him," Scarlet warned her. "He is advising me to approve the blinker project."

"Is he, though?"

Unhappily, Scarlet introduced them. Her psionic powder shone like galactic dust, reflecting her delight and Newbolt's manly pleasure. When she asked to go with them to the hearing, Newbolt agreed without waiting for Scarlet's permission.

A crude mechanical elevator dropped them from the lock tower into the moon, so fast that Scarlet, not yet used to the light gravitation, had to snatch at a hand rail to keep his feet on the floor.

A mile below, Newbolt escorted them briskly through a long gallery that was a museum of the guarded planet. Crystal cases stood filled with stone axes, rust-eaten blades and primitive robot missiles.

"Our newest exhibit." Newbolt paused at a niche where a sleek aluminum rocket hung against star-dusted emptiness above the ice-gemmed splendor of the crescent planet. "The first space ship from Earth."

"How'd you get it here?"

"We followed it out from Earth. The natives were trying for the moon, but they ran into a burst of solar radiation too hot for their shielding. After they were dead, we salvaged their equipment." He chuckled. "If they had known how closely we were watching—"

"You let them die?" Scarlet

interrupted. "Out here in space?"

"You know the Covenants." Newbolt shrugged, not very respectfully. "They had failed to make contact. Consequently, we couldn't interfere."

IV

EIGHTY-SEVEN galactic citizens had responded to his call. Most of them were attached to the quarantine service, but others had sought these wilderness worlds for ends as varied as their interstellar culture. A trio of prospectors had been sifting through the asteroids. A primitive artist had been recording an epic fantasy of a wrecked flyer down on a rocky moon of Saturn, surrounded by the "phantom lights" of space legend. A mystic on Pluto had interrupted a hundred years of solitary contemplation, to attend the hearing. An archeologist had abandoned a dig on Mars. Half a dozen outside agents had hastily discarded their disguises as inhabitants of Earth.

Waiting under the old stone dome of the little auditorium, these legally human beings had sorted themselves into three contending factions.

"Beasts of prey!" Newbolt gave the nearest group a snarl of contempt. "Rumors of the crisis have been spreading out through space for a century now. These wolves have come swarming in, howling for leave to loot the planet." He chuckled. "The signal project serves them properly!"

Scarlet made no answer. Robed in his blue official light, he mounted to his bench and waited sternly for Newbolt to silence the chamber. His feral eyes narrow with his most judicial scowl, he studied the three hostile factions.

Newbolt was marching toward the neatly seated contingent from the quarantine station. Coral shimmered beside him, clad in golden dust and the cascade of psionic fire falling from her waist. Scarlet tightened his bony jaws, turning painfully away from her magnified allure.

The hermit, his detached head blind and cadaverous in its crystal cell, had wheeled himself to join the three lean young men in the plain space dress of the signal service. Scarlet frowned disapprovingly at their contented poverty, and looked for the beasts of prey.

The straggling group down at his left included the bearded artist and the spaceworn prospectors, among half a dozen others. They looked like feeble beasts. He saw no evidence of the wealth he wanted.

HUNCHED and ugly on the bench, he droned the official formula which invoked the olden justice of man. His voice was as ugly as his knobby angularity, slurred and harsh and high.

"A routine affair," he rasped, and paused again to savor the pain of the beautiful men. "We'll dispense with formality, to get at the facts. I'll summarize the briefs. The natives of Sol III are reported near contact crisis. Social workers are waiting to usher them into civilization. Their qualifications for human status have been challenged, however, and the signal service has filed notice of intention to appropriate Sol for use as an intergalactic beacon." Looking sourly for Coral, he found her now at the back of the room, glowing over a stooped little stranger. "A few individuals have seen fit to protest—"

"Certainly we protest!" She started toward the bench, towing the stranger. "Because Sol is not a barren star. Earth has three billion native inhabitants, whose human rights must be protected."

"Human?" He let his voice grate unpleasantly. "I understand that all human beings on these threatened planets were ordered to assemble here. I don't count three billion."

"Of course they can't obey psionic orders, because they don't know psionics! But now I know they're human." She hauled the wispy stranger toward him. "This is Mark Whitherly, the anthropologist. He found on Mars—"

"Please, Miss Fell!" Newbolt intercepted her. "You're here as a guest. You can't interrupt the proceedings."

"Never mind, Commander." Scarlet smiled to welcome a possible bribe. "I won't be bound by any red tape. I intend to explore every source of evidence."

Newbolt muttered and sat down.

Scarlet waited, watching Coral and her discovery. The anthropologist, with his shuffling gait and his trembling hands and his dry yellow skin drawn tight over fine old bones, looked a good five hundred years overdue for euthanasia. The dull blue dust of his scholarly robe reflected nothing of Coral's bright excitement.

"Listen, Wain!" she was bubbling. "Mark has found evidence —proof you can't ignore! Now you will have to lift the quarantine at once. And you will disapprove the blinker project."

"I'll listen." Scarlet frowned doubtfully. "To any actual evidence."

"I DO have evidence." The old scholar spoke slowly but clearly, in a child's high voice. "Your Equity, I have been watching this planet at intervals for two thousand years. It is my great experiment."

"What sort of experiment?"

"A study in cultural collision." The dull dust brightened now with an eagerness that made the old man seem oddly boyish. "You hear a lot of theories about what happens when our galactic civilization impinges upon primitive societies. You hear that the primitives are usually benefited, and you hear that they are usually destroyed. I have been waiting for this crisis, preparing to settle that question scientifically. Now that the moment has come—"

"Has it come?"

"It has!" A single comic lock of yellow hair waved above old Whitherly's bobbing head. "I have been watching the natives fumble closer to contact. They have observed our psionic monitors—which they call dirigible dishes. They have written books about us. Their rockets have reached this satellite. All they lack is your formal recognition of their human status."

"Your Equity, I object!" The signal officer was alertly on his feet, tanned and handsome even though he wore no cosmetics, almost insolent. "I must inform you that our corps did not select suns at random for the intergalactic beacon. We traced the records of early migration, and chose a sector which was evidently bypassed. If Whitherly is a real authority, I challenge him to show you one shard of evidence that human colonists ever landed anywhere on Earth."

Scarlet looked inquiringly at the worn old man.

"I can't do that," Whitherly said.

"Then how can you claim human status for these filthy anthropoids?" Smugly confident, the tall signalman turned to Scarlet. "Your Equity, since Whitherly admits that he has discovered no evidence of biological relationship, which is the first essential qualification for human status, I move that this inquiry be closed with a formal order approving our signal project."

"Wain, wait!" Blue alarm shivered around Coral. "You haven't heard about Mark's great discovery."

Scarlet looked impatiently back at the lean old man, noting sourly that he looked too poor to pay for the least satellite of these worlds he wished to save.

"Penwright jumped to a false conclusion." Whitherly nodded feebly toward the signal officer. "I do have proof that the natives of Earth are our human kin. If no colonists ever landed here, that is simply because the movement was in the other direction."

A PUZZLED hush whispered through the chamber.

"Listen, Wain!" Coral breathed. "The first civilized observers here noted the odd fact that all life on Earth appears to have sprung from a single family tree," Whitherly's high voice resumed. "Now I know why. All my evidence supports the obvious explanation that this world is where human life evolved."

Swaying unsteadily, he paused for breath.

"Tell them!" Flickering with a purple urgency, Coral caught his sticklike arm. "Tell them what you found on Mars."

"In the last few centuries," he labored slowly on, "I have extended my search to the desert planets. On Mars I found a buried human site, dating from more than twenty thousand years ago. My excavations reveal that primitive neutrionic flyers landed at the site. Some of them remained there, abandoned. But some of them went on, after they had been refitted to cross interstellar distances."

The blue dust glowed around him.

"The first neutrionic ships!" he whispered thinly. "They had brought primitive men from Earth to Mars. They carried our ancestors out to claim the galaxy." Unsteadily defiant, Whitherly blinked at Penwright. "You can't be allowed to murder our mother world!"

"That is loaded language." Penwright chuckled tolerantly. "Your Equity, I submit that every planet within two hundred light-years has been claimed as the original cradle of mankind. On none of them, unfortunately, has any reliable evidence survived. The wave of migration has left these Center worlds too far behind. The few that were ever civilized have been abandoned for twenty thousand years."

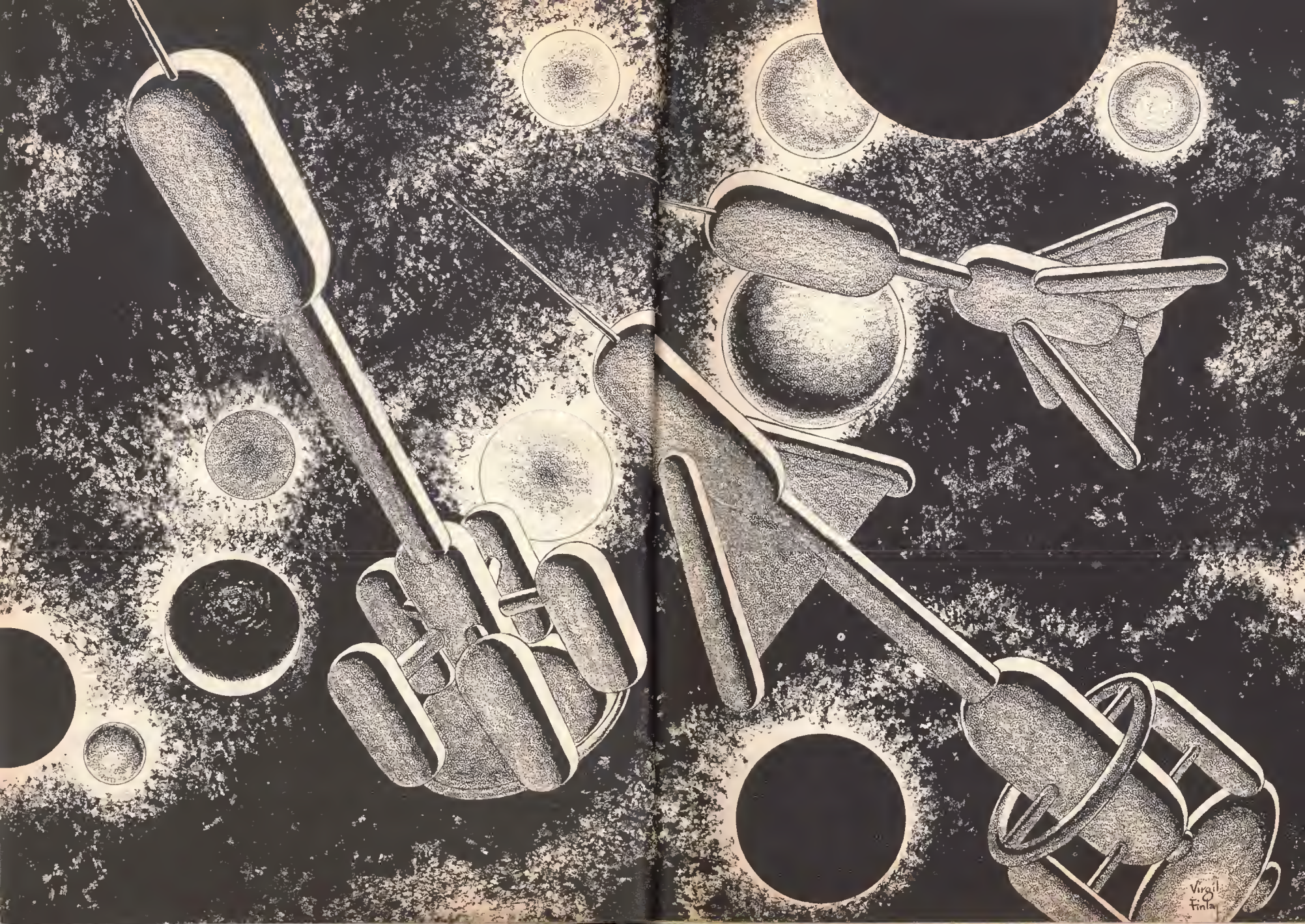
"I know galactic history," Scarlet reminded him frostily. "I am competent to rule upon the evidence."

"You will act promptly?" Old Whitherly peered up anxiously. "You can see that my own time is running out. My younger associates scattered when they heard of the blinker project. If there is any long delay, my chance to observe the crisis will be lost."

"Your own misfortunes are irrelevant."

"But, Wain! Why wait?" Coral's urgency washed her with rainbow opalescence. "Since the natives are our proven kinsmen, and since they are already landing their rockets on the moon, can't you end the quarantine now?"

Sadly, Scarlet shook his head. Whitherly's sociological research, like her own educational program and Penwright's signal project, seemed inconsistent with bribery. Their noble claims might make a useful cover for him when he came to pronounce his decision,


Virgil
Finlay

but that would have to wait until he had found a purchaser for Earth.

"No." He frowned severely at Coral. "Not yet."

"Not for a thousand years, my dear." Newbolt's smile beamed through rosy sparks of virile confidence. "Never, in my own opinion. If the blinker project is not approved, we shall have long centuries here to while away—"

"Wrong, Newbolt!" That loud hail boomed from the back of the dome, and Scarlet swung to see a big stranger stalking in. "I'm just up from Earth, with news about the crisis." He paused, staring boldly up at Scarlet. "Your Equity, I have come to inform you that the natives are about to make a contact that can't be ignored. They'll be here in exactly twenty hours!"

V

SCARLET stood smiling down at the stranger, captured by an unrepaired ugliness more violent than his own. Long-chinned and broken-nosed, the man was bald as a boulder, burned dark as weathered copper, splotched with livid scars where wounds must have been sewed up by savage surgeons. Sheer muscular bulk made him look grotesquely short. Almost nude, he required no psionic cosmetics to amplify his powerful animal vitality.

Beckoning Newbolt to the bench, Scarlet whispered, "Who is he?"

"Nobody with any right to waste our time." The commander gave the stranger one contemptuous glance. "Another of these beasts of prey waiting for the quarantine to end—and alarmed now because the blinker project is about to vaporize the planet he came to devour."

Scarlet nodded silently, fascinated by the barbaric blaze of priceless natural diamonds at the stranger's dark throat and on his gigantic hands.

"An insterstellar pirate, who calls himself a trader." Although the man was coming near, Newbolt refused to lower his scornful voice. "Dirk Flintledge. A loud-mouthed nuisance, but I'll soon dispose of him!"

"Wait! If he has news about the crisis—"

"He's lying." The commander glared at Flintledge, who had been intercepted by Coral Fell, her makeup all aglow with pink admiration. "My agents have infiltrated the native centers of space research. They report no new flight attempts since the loss of the rocket we salvaged."

"But this man has been on Sol III?"

"Unfortunately, yes." Indignantly, he turned his back on Coral and the trader. "Though not through any fault of mine. He arrived here before I relieved Commander Rivers, and was permitted to begin an undercover commercial survey of the planet. A glaring indiscretion, I believe. I don't trust such men to respect the Covenants."

"Let me talk to him."

"Wain, this is wonderful news!" Haloed with glowing elation, Coral led the trader toward the bench. "Dirk says there is a native rocket coming to this very spot!"

"Commander Newbolt questions that information."

"His own information is incomplete." Flintledge turned a hideous grin upon the startled commander. "This new rocket was built at a secret military installation which his quarantine agents had failed to penetrate. It was launched before I left the planet. It is already halfway to the moon. Its arrival will present you with a full-blown contact crisis."

FLINTLEDGE licked his naked lips.

"You see, some of the savage tribes are fighting what they call a cool war, which is forcing the development of space weapons. Native spies have been feeding each faction disturbing reports about the progress of the others. One tribe was told that it was in danger from an enemy space base on the moon. This rocket is the reply to that report." His grin grew frightening. "Unfortunately for Newbolt's policies, their planned impact point coincides with the location of this station."

"He's lying!" Newbolt turned pale before his vicious ugliness. "He's attempting to influence Your Equity."

"Wait and see." The scarred man remained as cheerfully monstrous as a black stone god rotting in some jungle temple. "But I must inform you that the savages have armed their space ship with what they classify as fifty-megaton fusion missiles."

Newbolt's bright attire flickered.

"A moment, Your Equity." He bent over his wrist communicator. "Let me check my monitors."

Scarlet waited, watching the trader, weighing his wealth, until Newbolt spoke stiffly through a haze of angry blue. "Our monitors have detected an object moving out from Sol III. Its emanations indicate both nuclear devices and living bodies. Its trajectory will bring it toward this side of the satellite."

"Toward contact!" Eager sparks swirled around Coral. "This is the crisis!"

"A false contact!" Newbolt glared at the trader. "These natives had failed to find their

own way through the radiation zones. They must have received illicit information—including our own location here." The blue dust glittered frostily. "Your Equity, I accuse Dirk Flintledge of a criminal violation of the Covenants."

"Now, sir." Flintledge remained undismayed. "Why should you suspect me?"

"Because you want to force a crisis," Newbolt rapped. "Because you have been down on the planet, among the builders of this rocket. Because I have received reports of your illegal methods in previous collisions with the quarantine service."

"Such circumstances are not proof—"

"I'll find proof." Newbolt blazed balefully. "Your Equity, I intend to convict and punish this criminal."

"He hasn't much time to assemble his evidence." Flintledge smirked insolently at Scarlet. "The natives will be here in twenty hours, with missiles that he can't ignore. If he decides to intercept them in space, that act itself will be contact."

"I'll rule on what is contact." Scarlet tried to match the savage ugliness of Flintledge with the harshness of his own slurred and strident voice. "I'll decide whether this man has violated the Covenants."

"But, Your Equity—"

Stern on the bench, Scarlet silenced Newbolt. He sat scowling judicially, wondering how to negotiate with Flintledge without exciting dangerous suspicions. Tension was breathing under the dome. Glowing with a delicious violet alarm, Coral wanted to know how the station could be protected from the savage attack—unless he recognized the contact and lifted the quarantine.

ABRUPTLY he recessed the inquiry, announcing that he wanted time to consider his ruling on the incident. He ordered Newbolt to monitor the savage rocket, but not to interfere with its flight. Ignoring the startled murmur in the chamber, he asked Newbolt about the trader's background.

"He's unconditioned." Newbolt dropped his eyes from Scarlet's own unconditioned ugliness, and hurried on. "Unconditioned and desperate. You see, he has made an unwise gamble on an early end of the quarantine. Now he is about to lose everything."

Watching from their small cell of silence, Scarlet saw Coral talking to Whitherly, whose aged admiration seemed still warm enough to light her psionic lures. Flintledge and the signal officer were both waiting for her, as if her green-lipped smile mattered more than the intergalactic beacon, the lives of three billion persons or the fate of Earth.

"Is Flintledge wealthy?" Scarlet asked.

"I suppose he has been." Newbolt shrugged disapprovingly. "Made a fortune cheating savages, I suppose, and lost most of it as they picked up enough psionics to match his tricks. When he learned that Sol III was getting ripe, he mortgaged his ship for the capital to pluck it. I learned that from the competent young man who has followed him from the Bank of Vega to collect the loan. The money is due in just ten years. He'd need that time to dig it out of the natives, even if you lifted the quarantine today. If you approve the blinker project, he'll have no time to look for another plum. He'll be erased."

"I see." Scarlet scowled to hide his elation. "Now please show me to my quarters."

He stopped outside the barrier to ask Coral to join him for dinner. Responsive colors lit her psionic snares, but she already had a dinner date with Penwright. When he turned hopefully to look for Flintledge, the trader had already gone. Disappointed, he let Newbolt take him down to his quarters.

The bare little cell, two miles below the lock tower, was adequate enough. The service cherished a tradition of austere simplicity; he was used to nothing better. Yet the thought of lonely centuries here, waiting for this world to fumble its own way toward a real contact, was enough to make him shiver.

The signalmen were welcome to broil the planet—unless Flintledge would pay to save it.

Too cautious to make the first overture, Scarlet killed time with his bath and depilation. He deliberately spun a new official robe. Still waiting, he hesitated over his own meager stock of psionic scents and powders, and decided once more that he needed the more powerful lure of wealth.

Disappointed when Flintledge did not call, he went dully up to eat alone. Mark Whitherly waylaid him outside the dining lounge. While he ate, the shriveled little anthropologist tried to brief him on the native culture, and tried to find out how soon he meant to lift the quarantine.

"THAT depends." He paused, even though he could see that the aged man was too high-minded to think of bribery. "I may be compelled to approve the signal project."

"You can't!" Whitherly's yelp held a satisfying anguish. "You can't let these rash young fools burn the mother world and all its people—just to generate one flash of light!"

"I'm aware of my duty in this situation." Scarlet drew himself up stiffly, concealing an inward grin. "I'll yield to no improper pressures."

"I'm not tryng to bribe you." Whitherly flushed and trembled with an agitation that alarmed Scarlet for his heart. "But I must remind you that your own superiors have approved my plan to observe this contact crisis."

"What sort of monster are you?" Certain now that the old scholar would never offer him money, Scarlet let indignation into his voice. "Would you risk destroying these people with a premature contact, simply for the opportunity to observe it?"

"Certainly." Whitherly gasped for his breath. "But I'm no monster. I'm simply a scientist, trained to exclude all emotional considerations from the field of research. I refuse to price truth in terms of anything material. Even if you can't understand that kind of idealism, perhaps you can understand in practical terms that what we learn from the sacrifice of this world can help us save a thousand others."

"I understand you," Scarlet said. "But the Covenants apply."

"You—"

Breathing unevenly, the old man contained whatever reckless words he had almost uttered. Scarlet crouched apprehensively, but Whitherly had been conditioned above any crude display of physical violence. Muttering something about the mother world, he shuffled unsteadily away.

Left alone, Scarlet sat fingering the blank disk of his wrist transceiver, anxious to call Flintledge, but yet afraid. He gasped when the crystal lit with the trader's image under his fingers, a bald and hideous doll.

"I suppose I shouldn't interrupt your delberations." The black beads of eyes glittered sardonically. "What with Penwright so anxious to light his blinker, and Coral Fell so eager to enlighten the native anthropoids, and old Whitherly dying to observe his contact crisis, your decision is already difficult enough."

"I am pleased that you called," Scarlet answered carefully. "I have been considering your own interest in the outcome of the crisis."

"If you care to come aboard for a drink," Flintledge suggested smoothly, "we might consider it together—unless you fear that contact with me might tarnish your equity."

"Uh, thanks." Scarlet could not help stiffening against the trader's familiarity, but he managed to put down his righteous resentment. "I should like very much to come."

Newbolt would disapprove, he knew, but then his whole object was to escape the disapproval of such people forever.

"My call must be brief," he added. "I'm resuming the hearing in two hours."

He put on a space belt in the lock tower, and hurried out to the flyer. He found Flintledge beneath the air lock, waving his arms and blustering at the men who had come with camouflage screens to turn the ship into a lunar peak.

"That fool Newbolt thinks we can hide here," he growled. "I know better. I don't intend for those attacking savages to catch me sitting—unless Your Equity can reassure me."

Scarlet followed him through the lock. The rich immensity of the interstellar vessel had taken his breath at first, but now it began whetting a resolution to ask for more than he had dared.

VI

IN the wanton luxury of the trader's stateroom, a dancing figurine caught his dazzled eye. Poised upon the gem-stone inlay that topped a dark block of polished wood, the tiny nude was featureless at first, an anonymous symbol of all feminine enchantment, cut with an exquisite economy from some limpid crystal. But it came to life as he looked, reflecting all his own images of woman's loveliness, refined and transfigured through the perceptions of the artist who had fashioned its psionic matrix. Suddenly it was Coral Fell, but younger and more tender than the actual Coral, not quite so firm about the mouth, smiling adoringly. Its stark beauty stabbed through him, leaving a haunting ache of unquenchable desire.

"Like it?"

Flintledge's question startled him. He tore his attention from the figurine, flushing self-consciously, before he could remind himself that its response to his mind had been a private thing. Even though he might suspect that Coral's charms had begun to color its reaction to the trader, too, they had not met to quarrel over her.

"Look around." Flintledge squinted at him frightfully. "Anything you want, just let me know."

He certainly wanted a great deal more than a psionic figurine. Looking appraisingly around the magnificent stateroom, he found two pictures that arrested him. Stereos, in twin crystal plaques, they were also psionic. His reflected thoughts brushed them with life and meaning, instantly.

Two men . . .

They made him shiver. One

was winning, one hideous. One was lean and young, a dashing smile on his hard brown face. The other was older, puffy, with sly cunning peering evilly through a pallor of fear. Yet somehow they were twins.

Both of them were he.

Shrinking in confusion, he turned to find the trader watching with an insolent amusement which angered him.

"Uh—what are they?"

"Perhaps I should apologize." The trader's chuckle was not apologetic. "Psionic mirrors, you might call them. They are matrixed to reflect the self you wish to show the world, and the one you don't. I like to watch my friends react."

Scarlet managed, with some effort, not to inquire how Flintledge saw himself.

"I like—like your reaction." The trader bellowed with coarse laughter. "But sit down." He struggled to contain his amusement. "I see that you need that drink."

THEY sat, while a psionic robot came with a strange bottle and two glasses of ice on a tray. Silently responsive to the trader's wishes, it poured a fuming distillation over the ice. Scarlet sat back to taste it cautiously. Recovering now from his surge of unconditioned resentment, he began to observe that Flintledge was no better conditioned than he himself was.

The bottle had come from Sol III. The savages called it whiskey, and there was nothing like it anywhere. As the trader declaimed about its rare aroma, Scarlet saw the glass shaking in his scarred, enormous fist. Gulping it too fast, he strangled.

"Won— Wonderful stuff!" Wheezing, he wiped at his eyes. "From a wonderful planet. I had discovered that, before our friends from the signal service got here with their incinerator. Wonderful wealth, that has never been touched!"

Scarlet sipped the burning liquid, waiting impatiently for their game to reach the monetary moves. Flintledge coughed and recovered his voice, but his loud enthusiasm had a hollow ring.

"Whole continents rich enough to mill!" His restless eyes stabbed at Scarlet, blades thrust through his jovial mask. "Oceans to export! We can scrape the planet a hundred miles deep!"

"I have studied some of the old surveys." Scarlet nodded cautiously. "I'm sure the natural resources are still untouched. We've been on guard. But don't they belong to the natives?"

"A miserable lot." Flintledge shrugged. "Too backward to make any trouble. We can soon dispose of their nuclear weapons. The survivors may even be useful around our new installations, after Coral has tamed them with a pinch of psionics."

"They are—uh—my responsibility." Scarlet scowled sternly. "You must convince me that this contact is the culmination of their unaided progress toward civilization."

"I was waiting for that one." Flintledge laughed too heartily again. "You knew that I'd infiltrated that tribal group, and you're acute enough to infer that I'd guided them toward this contact."

"So you admit that you have forced a premature contact?"

"On the contrary." The trader's unnatural merriment subsided; he sat blinking at Scarlet with bold black eyes. "But even if I should, my own testimony would be irrelevant. As Your Equity is certainly aware, this contact is what you say it is."

Scarlet merely nodded, watching him.

Dull beads of sweat had come out on his unperfected face, betraying his incomplete integration. His battered fists clenched and trembled. He reached suddenly for another whiskey.

"Here, Your Equity!" Hastily draining the drink, he opened a file of bright psionic films. "I want to show you my plans to develop the planet."

COOLLY, Scarlet scanned his designs for enormous installations to harvest the guarded wealth of Earth. Dams to divert the excess oceans into export tanks. Mills to devour continents. A heat-exchanging neutrionic net, to cool the deeper crust for the processing machines. Compressing stations, for the surplus atmosphere. Ports for the trading fleets that would drain the plunder into space.

"Competent engineering." Scarlet nodded casually. "You ought to make some money."

"I expect to." His hoarse voice quivered with a tension that he could not completely contain. "In fact, I must. I have a large investment, in my flyer and my trade cargo and my terraforming machinery, which I must protect."

"I see." Scarlet turned cheerfully to a new survey of that wealthy room. "I suppose that any long delay would be expensive to you."

"It would kill me!" His harsh and sudden violence was startling, but then he grinned bleakly at the way Scarlet cringed. "I was talking to Coral," he added. "She tells me that you spoke of leaving the service."

"A foolish dream of my youth." Wistfully grave, Scarlet shook his head. "An old dream of a new life, out among the new stars of the galactic frontier. If I had the

means for a new start there, I'd quit the service today."

"Good." The trader's flinty grin began to soften. "I see that we can do business. With your service background, you're just the man I need to handle my affairs with these anthropoids. If you'll sign a contract with me for just a hundred years—"

"I won't," Scarlet said. "I've already thrown too many centuries away, pampering savages."

"What else do you want?"

"I—uh—" Scarlet checked himself, to peer uneasily at the strange luxury around him. His throat felt dry. His temples throbbed. For a moment he wished that he had been more securely integrated—but then, of course, his psionic maladjustment was his secret strength.

"We have privacy." Flintledge winked appallingly. "Neither of us is likely to violate it." He gestured for the robot. "Have another drink, and tell me what you want."

Weakly, Scarlet waved the robot away.

"I want the flyer." He gasped for his breath, blinking at his own audacity. "The flyer and half your cargo."

"If that is meant to be a joke—"

"That's my price."

The trader's dark face turned yellow. Wheezing alarmingly, he gulped another whiskey. His great, dark hands spread into grasping talons, reached out savagely, and slowly sank.

"You're an unconditioned fool!" he breathed at last. "Why should I pay you such a price?"

"If I had been better conditioned, I'd have nothing for sale," Scarlet reminded him. "As things stand, I have nine planets on the block, one of them half-terraformed and inhabited. I am offering you a bargain."

"If I refuse—"

"I'll approve the blinker project." Scarlet laughed as unpleasantly as possible. "You can look for another world to loot—if your Vegan bankers care to give you time."

"YOUR Equity is a hard trader!" Flintledge grinned, briefly revealing a pained admiration. "As two misfits, striving to heal our psionic scars with money, we ought to strike a reasonable bargain. But you know I can't give up this flyer."

"With planets to sell, you can buy a better one."

"You're unintegrated!" The trader's voice lifted vehemently. "You don't realize all the scheming, the waiting, the daring, the borrowing, the begging pretty men—"

"But I do realize." Scarlet rose. "That's how I know that you can't afford to let me approve the blinker."

"Sit down!" Flintledge yelped. "Let's have another drink, over a reasonable arrangement!"

"We have just concluded a reasonable arrangement," Scarlet said. "I am going back to reconvene the inquiry now. For the sake of appearances, I shall have to skim through the evidence, but I shall be forced to rule on the crisis before that savage ship arrives."

"Listen, Your Equity!" Flintledge was weeping. "Listen to reason!"

"If you want a favorable ruling," Scarlet interrupted him, "send your banker to the hearing. Let him bring formal legal conveyances to the ship, half the trade goods and half the terraforming gear. He can pass the documents up to me as a final packet of evidence."

"You have thought of everything!"

"I hope!" A pale smile showed Scarlet's rodent teeth. "I believe we understand each other. My ruling in your favor will not become final until I have actual possession of the flyer and my share of the cargo, with time for a start toward the stars."

"If Your Equity is absolutely unconditioned—"

"That's our bargain." Scarlet let his voice grate painfully. "Send me your banker." He nodded curtly at the dancing figurine. "By the way, I'm keeping her."

"I'll leave the others, too." Flintledge glanced sardonically at the two crystal plaques where Scarlet had seen his public and his private selves. "You will be needing them!"

Silently, avoiding those disturbing mirrors, Scarlet turned to go.

"I'll prepare the documents." Flintledge followed him anxiously toward the air lock. "I trust Your Equity to anticipate whatever difficulties may be created for us by Newbolt and old Whitherly and the signal crew—"

Clothed in the cold blue purity of his judicial light, Scarlet spun a sound barrier to shut out the trader's whining voice. He was drunk with elation, too drunk to fret with petty detail.

The frontier stars were in his grasp.

VII

THE hearing dome was crowded again, the contending groups as breathlessly tense as if they had never been conditioned. Even the signal officer wore a restless look. Coral flashed Scarlet a green, uneasy smile. Newbolt rose ominously to report that his monitors were still tracking the savage attacker, which was no more than halfway to the moon.

Concealing his elation, Scarlet resumed the inquiry with a request for additional relevant evidence.

Newbolt quickly offered a psionic tape recording the consequences of a casual illicit contact between a disguised quarantine officer and an unsuspecting native named Lenin. Scanning the tape in his most severe judicial manner, Scarlet found his wandering thoughts drawn unexpectedly back from the freedom of the frontier stars. In the unconditioned native, he somehow saw himself.

"Your Equity," Newbolt urged him, "this record shows the unreadiness of these savages for any kind of contact with civilization. A native boy talks briefly with a civilized outsider. Neither intends any harm. But the native picks up ideas more dangerous than atomic theory to his fellow savages!"

"I'll weigh the evidence." Scarlet paused to scowl. "Are there other exhibits?"

"Your Equity, please!" Coral fluttered brightly to the bench, bringing a tape from the frail ivory hands of old Mark Whitherly. "There have been other contacts, with less harmful results. Here is the record of a case which proves that the natives are as highly civilized as you are."

Scarlet scanned the report of another accidental contact. A royal yacht from Altair II had been wrecked in space. One passenger had found his way to Earth. Alone among the savages, he had learned to like them. When a rescue expedition reached him, he refused to leave his native friends.

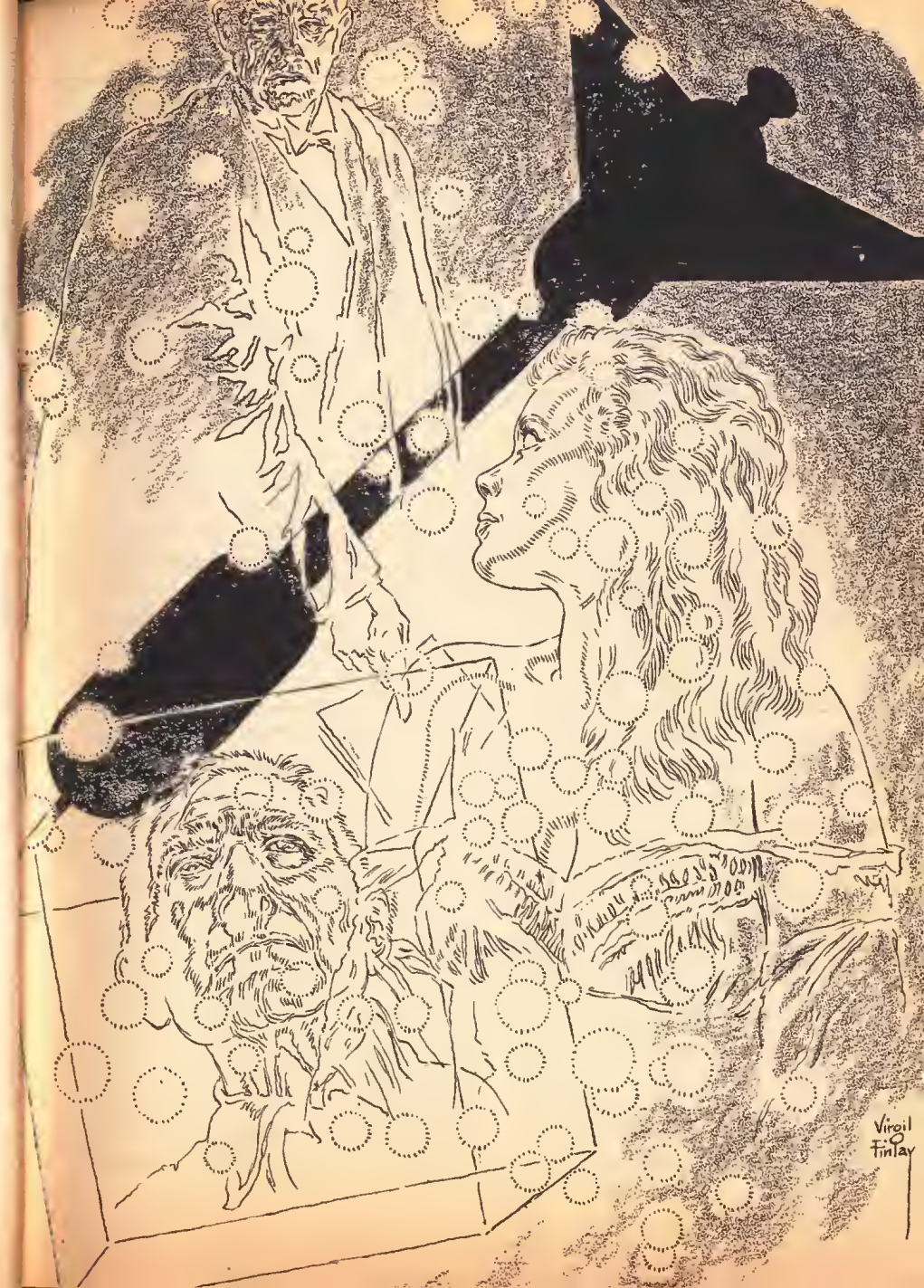
"A touching display of sentimental primitivism!" Penwright scoffed. "But the outcome is not surprising when you consider the dubiously human status of Altair II—which itself very narrowly escaped our signal project."

Lazily insolent, he brought another exhibit to the bench.

"Here, Your Equity, is evidence that contact with these verminous animals is full of unpredictable dangers—not only to them, but also to us!"

The tape recorded the fate of a big-nosed peddler from the frontier worlds, who came to Earth to satisfy an unconditioned thirst for whiskey, and died there of something called a cold.

"These sub-human worlds here at the Center face us with mysteries greater than the flying lights, and enemies deadlier than we have met on the frontier planets." The signalman radiated his cool, complacent beauty. "Your Equity must consider that the first flash of our beacon will sterilize all the malignant mutant micro-organisms that have been



breeding here for thirty thousand years."

"I'll consider everything."

SCARLET turned his carefully impatient frown upon old Mark Whitherly, who was wildly waving another psionic tape. Hiding his own growing concern about Flintledge, he watched Coral gliding to help the old man toward the bench.

A sudden stir among the worried quarantine people huddled at the door gave him a moment of hope that the trader or his banker had arrived at last, but the man who entered was only Newbolt, bringing a curt report that the savage rocket was drawing near the moon.

"We have your decision now." The commander's muscular shoulders lifted majestically, as if tossing off his tattered respect for Scarlet. "For our own safety, Your Equity, we must either recognize this contact and welcome our visitors into universal civilization—or else deny their human status and allow the blinker project to proceed."

"I'll decide," Scarlet rasped. "When I have weighed all the evidence."

He looked again for Flintledge, and decided that the trader was waiting to drive a harder bargain in another private meeting.

"The inquiry is recessed," he rapped abruptly. "Clear the chamber."

"Wait, Wain!" Coral snatched Whitherly's tape and rippled toward the bench. "Scan this before you decide." Bright excitement cascaded from the psionic moons in her hair. "It's more than proof that these people are human. It is proof that they are our own ancestral race. It's the clue that led Mark to the side of that prehistoric space port on Mars. Please take time to scan it!"

Ignoring the signals of contempt and alarm that were flickering between the cool signal officer and the boiling commander, Scarlet took the tape from Coral. It told of an old explorer who had gone down among the unsuspecting natives to search their history for the first decisive spark of human civilization. Fighting a skeptical quarantine inspector no better conditioned than Scarlet himself, the explorer had pierced the lost past far enough to glimpse the birth of the human mind, the invention of the scientific method, and the launching of the first neutrionic flyer.

"That was—us!" Coral whispered, when he looked up from the tape. "This is our home planet; the people on that flyer were our forefathers. You can't let anybody murder our mother race!"

"Please, Miss Fell!" Penwright reproved her with a hard bronze grin, and turned smoothly to the bench. "If Your Equity feel that we still have time for such entertainments, I have another exhibit to submit."

Scarlet glanced again at the empty doorway.

"Very well," he muttered.

THE tape reported the case of a native who had been illegally removed from Earth for exhibition in a galactic zoo. Inadequately adjusted, even by savage standards, he had violently destroyed the expensive reconstruction of his primitive habitat in which he had been displayed. Scarlet followed him to his fate with a reluctant and uncomfortable fascination, as if the unconditioned anthropoid had also been himself.

"Well?" Penwright leered at Coral. "Are you sure you can make civilized men out of such untamable animals?"

"That one was sick," she protested. "He was not typical."

"But what about this one?" Newbolt looked suddenly up from his wrist transceiver, glowering at the bench. "Your Equity, my monitors have just intercepted an electromagnetic signal from the savage rocket, beamed directly at this station. The sender appears as violent as that captive animal."

"Please translate the message."

"I shall, Your Equity."

Sound boomed into the dome, amplified through Newbolt's wrist instrument. For a moment it was utterly strange; then Scarlet distinguished a savage voice beneath the metallic distortion of the crude transmission system. In another moment, the psionic translator had given meaning to the roaring syllables.

"United States Aerospace Force Rocket Ship Four One, Major Tom Scoggins in command, calling unidentified base on lunar equator."

Scarlet heard a tremor in the voice and a breath quickly drawn; he caught a vivid sensation of the frightened but determined savage in the rocket, flying his crude craft toward a world unknown to him, crouching desperately over his battery of weapons, preparing to face hostility as violent as his own. Even though the savage was completely unconditioned, Scarlet felt a thrill of unexpected admiration.

"Identify yourselves!" The strained voice rang again through the crackle of static. "Establish your friendly intentions at once. Otherwise we shall be forced to take action to insure the safety of the United States!"

"WAIN, that's our contact!" Coral's voice lilted joyously. "You can tell that Major Tom Scoggins is desperately

afraid, but this message proves that he is human. How can we wait?"

"We— uh— we can't." Disturbed by a wave of unexpected emotion in himself, Scarlet turned uncertainly to Newbolt. "I— uh — I'm forced to instruct you to reply—"

"Your Equity!"

The shout drew his eyes to the doorway. The dapper young Vegan banker came bursting into the dome, waving a sheaf of psionic documents. Sight of them turned Scarlet giddy. Here was his long dream realized. Here was his escape forever from all the wounds and sneers that he had suffered from the beautiful people, escape from their false sympathy and their shallow pretense that he could ever be one of them. Here was glorious revenge for his unconditioned ugliness. He shut his eyes for an instant, trying to recover his mask of judicial severity.

"Your Equity!" The banker's urgent voice seemed far away. "Captain Flintledge wishes me to present these new exhibits in evidence. We are confident that they will persuade you to recognize the contact, disapprove the blinker project and open Earth to galactic commerce."

Hands trembling, Scarlet accepted the documents. Though his eyes were blurring, he quickly satisfied himself that they were what he had demanded—the neutrionic flyer and a fair half of its load of trade goods and terraforming machinery, legally conveyed to him.

"What kind of unconditioned aberration can delay your decision now?" Newbolt's contemptuous indignation reached him faintly. "May I remind Your Equity that our anthropoid attacker is already arming his fusion missiles?"

"I—I'm aware of the facts."

Scarlet rose unsteadily, gasping for his breath. The important facts were those in his hands. Even though his decision sacrificed one worn-out world, it would enable him to claim and colonize a hundred new ones when he reached the galactic frontier. For his own profit, perhaps; but also for the expanding community of human civilization.

Such facts were all that mattered. But others kept buzzing insanely in his mind. Louder than Newbolt's angry shout the earnest voice of the young savage Lenin echoed from the tape. The decision of the shipwrecked prince flamed brighter than the moons in Coral's hair. The breathless desperation of Major Tom Scoggins was somehow suddenly his own.

Stiffly, he gestured for silence in the chambers.

"I— uh— I have weighed the evidence."

Grinning at the splendid people waiting, he let his rodent teeth jut. He widened his yellow eyes. He was glad of his bent little body and the bulge of his low forehead and the red freckles splotched along his receeding jaw. Proud of all his unconditioned ugliness, he let them wait.

"I have— uh— given due consideration to all the claims which have been presented here." He let his slow voice rasp and whine offensively. "I have reviewed the Covenants of Non-Contact, and all the body of galactic law and custom relating to contact crises. I am ready— uh— to rule."

Snarling hideously, he let them wait again.

"I rule that no contact exists!"

CORAL gasped indignantly. Old Whitherly swayed and fell. The banker bellowed. Newbolt and the signal officer shouted their startled approval. The uproar drowned his voice.

In the breathless hush that followed that surprised outburst, he let them wait again. He picked his pointed noise, deliberately savoring their pain.

"The evidence convinces me that this native culture could not survive an uncontrolled contact." Ignoring the baleful rage of the banker, he studied the smug elation of Newbolt and Penwright, and paused again to relish what he meant to do to them. "However, I am equally convinced that they are human beings."

He let his voice drag and grate.

"Aware of my sworn duty under the Covenants, I therefore disapprove the signal project. I order Commander Newbolt and his successors to continue the quarantine of Earth until its native culture is declared ready for contact."

He stopped again to enjoy the sputtering deflation of the signal officer.

"Pursuant to that directive, I order Newbolt to intercept the savage Tom Scoggins without needless injury to him or his crew. I suggest that they be enlisted in the quarantine service, as undercover agents acting to prevent any future expeditions from Earth into space."

"Why, Wain? Why?" Coral stared up at him, the blue flame pale and cold and flickering furiously around her. "Why have you done this?"

He merely smiled at her with his offensive teeth, until she hissed and ran from the dome. Newbolt and the banker stalked after her. The signal officer turned to follow, but swung abruptly back.

"Your Equity?" His cold voice was ominous and slow. "May I ask why?"

"You have no right to ask." Scarlet paused to survey the signs of strain that marred his bronze mask of calm perfection. "I don't mind telling you, however, that I came here prepared to make a different decision. You yourself helped to change my first intention, with the evidence you offered about the people of Earth. Even the stories of their imperfections helped to persuade me that they are as human as I am. You seem surprised by my ruling. Perhaps I am, too. Surprised—and pleased!"

Penwright was no longer listening. His wrist screen had flashed. He scanned it, whispering. When at last he looked up again at Scarlet, his bronze mask was beautiful again.

"Your Equity," he murmured gently, "I have another surprise for you. I believe it means that your astonishing verdict will soon be reversed by a higher authority, in favor of our signal project."

"Careful!" Scarlet rapped. "You'll find yourself in contempt."

"I am in contempt." Penwright nodded serenely. "I can be candid about that, because we have just received a message from a passenger on another incoming service flyer. He's an old associate of yours, from the quarantine office on Denebola IV. Remember Warden Thornwall?"

"Why is he here?"

"There's something in your past." Penwright chuckled discreetly. "Some tampering with official records. Somebody discovered that you were inadequately conditioned for your mission here. The regional director sent Thornwall to replace you."

SCARLET stood staring blankly, speechless, with all his new resolutions shattering into panic. Following too close to the limiting velocity of light, his past had overtaken him. His gesture of help toward the people of Earth had cost him everything.

"Thornwall is an old school friend of mine." Penwright glowed with reminiscent pleasure. "Once I saved his life, when we were sundiving after the flying lights and he had got himself trapped in one of their magnetic nests. I think I can trust him to approve the blinker project."

"Perhaps he will," Scarlet rasped. "When he arrives!"

Still robed defiantly in his judicial light, he abandoned the bench and darted down to Mark Whitherly, who sat like a white and silent mummy wrapped in chill gray dust, alive only in his bright and bitter eyes.

"Where is Coral?" Scarlet shouted. "Where did she go?"

"Do you know what you have done?" The fading wisp of Whitherly ignored his own hoarse demand. "With your unconditioned blindness, you have killed my great chance to observe a contact crisis. You have killed me. I am asking for euthanasia."

"I'll approve it gladly," Scarlet snarled. "But what became of Coral Fell?"

"You will find her with Flintledge," Whitherly whispered through the frosty dust. "If you find her at all!"

Feeling as cold and futile as the dying scientist, Scarlet rushed from the dome to the surface level. When he burst out of the lock tower in a space belt, Sol was already rising over the bleak moonscape.

But how could it be Sol?

Bewilderment froze him.

That blinding point of hot blue light was too small for Sol, rising too far north and three days early. Perhaps it was another star!

But he had no time for riddles now. Setting the belt to filter out its burning glare, he ran on to search for his neutrionic flyer.

Perhaps, he supposed, Newbolt had been panicked into an unduly violent interception of the rocket from Earth. Perhaps Tom Scoggins's fusion missiles had been detonated. But then, if that were true, the fire in space should have been fading.

Instead, it was visibly growing. He had to turn his filters up again. Although the savage blaze hid the constellations, he thought it must be in the direction of Denebola. It must be—

An artificial nova!

That jolted him. Even since he knew Penwright, the demolition of a star seemed incredible insolence. But he caught his breath and hurried on.

Which star had the signalmen chosen to burn for the first intergalactic flash?

VIII

He found the Vegan banker unhappily surveying a gray crater of deflated camouflage fabric around the empty pad where the neutrionic flyer had stood. Shivering with a sense of chill desolation, he whispered hoarsely:

"Coral? Have you seen her?"

"Gone with Flintledge." The banker waved stiffly at the blazing sky. "Gone out where you yourself were planning to go."

Scarlet recovered his breath and buried his dreams. He offered mechanically at last to surrender the documents that had made him legal owner of the flyer.

"Worthless waste tape!" The banker laughed. "Riding the neutrionic wind from that new nova, the flyer will come close enough to the speed of light. Flintledge and Coral can't be overtaken. They can choose their own worlds

to civilize, out on the galactic frontier—wherever it is when they overtake it."

"I can't understand it." Scarlet stood scowling with a puzzled indignation. "What had Coral in common with that monster?"

"Enough." The banker grinned. "They were both searching for more primitive creatures to exploit, each in his own way. They found each other. But I believe Your Equity has more urgent problems now." A raw edge of malice cut through the Vegan's well-conditioned courtesy. "Although I am in no position to press any charges against you, I was pleased to learn that Commander Newbolt has ordered your arrest."

"I'm immune from arrest," Scarlet muttered desperately. "So long as I wear my light of office."

"You won't wear it long," the banker promised unpleasantly. "Warden Thornwall will soon be landing, with all the unfortunate facts you thought you had buried on Denebola IV."

STILL clinging grimly to the pale halo of his authority, Scarlet was waiting with Newbolt and Penwright and the banker when the arriving quarantine flyer came down out of the savage glare of the nova. Newbolt marched quickly to meet Thornwall at the lock.

"Here's your man, sir." He nodded contemptuously toward Scarlet. "I attempted to arrest him. But he has the face to claim judicial immunity."

"Hello, Wain!" Thornwall looked older, his dark beauty oddly dulled, as if the long light-years had somehow overtaken him. Yet his worn smile seemed strangely benign. He walked past Newbolt, in order to grasp Scarlet's hand.

"Forgive my bringing up your past sins." Oddly, he was grinning. "When I sent the message, I understood from Newbolt that you were about to make a more serious sort of blunder. Fortunately, your ruling on the crisis here was a magnificent vindication."

"What's all this?" Newbolt followed from the lock, glaring furiously. "Warden Thornwall, aren't you going to nullify the decisions of this criminal?"

"On the contrary." A stern smile flickered through the shadow on Thornwall's face. "Commander, I am afraid that you have forgotten one of the first traditions of the service. We allow our people to learn from their mistakes. Although Scarlet was not aware of it, his unconditioned behavior back on Denebola IV was observed and reported at the time. The regional director offered me a bet that he would make the right decision, before we sent him here."

Scarlet blinked his yellow eyes.

"But if— if you know what I have done, aren't you going to break me?"

"Don't be an utterly unconditioned fool!" Thornwall clapped him warmly on the back. "I refused to accept that bet. We're few of us perfect. And those few are seldom successful in the service, because they share too little with the people we guard. Wain, I'm going to recommend you for promotion."

Scarlet gulped and tried to wet his quivering lips.

"But he ought to be cashiered!" Newbolt stormed. "I can prove that he accepted a bribe. His decision to extend the quarantine ignored competent evidence that Earth is not human. I will advise the signal service to appeal!"

"Your advice will carry little weight," Thornwall softly interrupted him. "Because you have been relieved of your duties here. You are being reassigned to the signal service—which is now facing an extraordinary emergency."

Ignoring Newbolt's indignant roar, Thornwall turned briskly back to Scarlet.

"Wain, you are replacing Newbolt as commander of the station here. For the next few centuries, you will be shepherding the people of Earth along toward truly human status. That will be a difficult and lonely task, which you can hope to accomplish only by making the best use of subordinates who are no better conditioned than you are."

Newbolt had moved apart, muttering with Penwright.

"We won't take this!" he shouted suddenly. "The blinker project must be accelerated now, to integrate this natural nova into our intergalactic signal. The condemnation of the planets of Sol was supported by adequate evidence, which Scarlet chose to ignore. The signal service is going to appeal to your regional headquarters on Denebola IV!"

Thornwall's worn smile checked him.

"We no longer have any headquarters on Denebola IV." He nodded soberly toward that terrible new luminary blazing over the blue moonscape. "Because that nova is Denebola."

"Denebola—a nova?"

"But not a natural nova."

NEWBOLT gasped and stared at Penwright.

"It can't—" Violently, the signal officer shook his head. "It can't be artificial! Sol was to be the first. Denebola is no part of our signal project."

"Not of yours," Thornwall said. "But there is another."

"Whose—?"

"Interpreting the signal will be part of your duty now." Thornwall smiled bleakly. "I had my first hint of the thing years ago, when I was sun-diving in Denebola, investigating the radiations of the energy complexes that we used to call the flying lights. On several occasions, I detected neutrionic components in their emissions.

"Since, I have been gathering the reports of other expeditions into other stars. Several divers have detected focused neutrionic beams, of the same type that you meant to use to ignite your own supernovas. A mass flight of the lights from the surface of Denebola, which I observed not long before I left, led me to suspect that our galactic civilization is just reaching contact with another culture more highly advanced than we can easily imagine."

Thornwall chuckled at Penwright's pale amazement.

"I should imagine that your blinker project will have to be abandoned now." The flicker of amusement faded from his voice. "Because these electronic beings have apparently selected the suns for their signal project with no more regard for us than you had for the anthropoids of Earth. I doubt that Denebola will be the last of their synthetic supernovas —unless you can persuade them to grant us status in their culture."

"How— how can we hope to do that?"

"It's your crisis now."

Scarlet turned slowly away from Penwright's hoarse consternation. He glanced into the burning sky, wondering which direction Coral and the trader had taken.

Then his mind came quickly back to the more important problem. He would have to return Major Tom Scoggins to Earth with a warning for the natives— tell them that the radiation from the nova would force a halt to all their plans for the exploration of space.

Then—to shepherd its people through the years of growth—until Earth could rejoin its proud, prodigal children!

— JACK WILLIAMSON

Not all aliens come from distant stars. These are all around us —and our very homes are theirs!

By AVRAM DAVIDSON Illustrated by DICK FRANCIS

The Tail-Tied Kings

HE brought Them water, one by one.

"The water is sweet, One-Eye," said a Mother. "Very sweet."

"Many bring Us water," a second Mother said, "but the water you bring is sweet."

"Because his breath is sweet," said a third Mother.

The One-Eye paused, about to leave. "I would tell you of a good thing," a Father said, "which none others know, only We. I may tell him, softly, in his ear, may I not?"

In his corner, Keeper stirred. A Mother and a Father raised their voices. "It is colder now," They said. "Outside: frost. A white thing on the ground, and burns. We have heard. Frost." Keeper grunted, did not move. "Colder, less food, less water, We have heard, but for Us always food, always water, water, food, food . . ." They went on. Keeper did not move.

"Come closer," said the Father, softly. "I will tell you of a good thing, while Keeper sleeps." The Father's voice was deep and rich. "Come to my mouth. A secret thing. One-Eye."

"I may not come, Father," said the One-Eye, uncertainly. "Only to bring water."

"You may come," said a Mother. Her voice was like milk, her voice was good. "Your breath is sweet. Come, listen. Come."

Another Father said, "You will be cold, alone. Come among Us and be warm." The One-Eye moved his head from side to side, and he muttered.

"There is food here and you will eat," the other Father said. The One-Eye moved a few steps, then hesitated.

"Come and mate with me," said the milk-voiced Mother. "It is my time. Come."

The One-Eye perceived that it was indeed her time and he darted forward, but the Keeper blocked his way.

"Go, bring water for Them to drink," said Keeper. He was huge.

"He has water for Us now," a Mother said, plaintively. "Stupid Keeper. We are thirsty. Why do you stop him?"

A Father said, "He has water in his mouth which he has brought for Us. Step aside and let him pass. Oh, it is an ugly, stupid Keeper!"

"I have water in my mouth which I have brought for Them," the One-Eye said. "Step aside and —" He stopped, as they burst into jeers and titters.

The Keeper was not even angry. "There was nothing in your mouth but a lie. Now, go."

Too late, the One-Eye perceived his mistake. "I may sleep," he muttered.

"Sleep, then. But go." Keeper bared his teeth. The One-Eye shrank back, and turned and slunk away. Behind him he heard the Mother in her milk-voice say, "It was a stupid One-Eye, Father."

"And now," the Father said. The One-Eye heard their mating as he went.

SOMETIMES he had tried to run away, but everywhere there were others who stopped him. "It is a One-Eye, and too far away. Go to your place, One-Eye. Go to your duty, bring water for the Mothers and Fathers, take Their food to the Keeper, go back, go back, One-Eye, go back," they cried, surrounding him, driving him from the way he would go.

"I will not be a One-Eye any longer," he protested.

They jeered and mocked. "Will you grow another eye, then? Back, back: it is The Race which orders you!" And they had nipped him and forced him back.

Once, he had said, "I will see the goldshining!"

There was an old one who said, "Return, then, One-Eye and I will show you the goldshining on the way." And the old one lifted a round thing and it glittered gold. He cried out with surprise and pleasure.

Then, "I thought it would be bigger," he said.

"Return, One-Eye, or you will be killed," the old one said. "Outside is not for you. Return . . . Not that way! That way is a death thing. Mark it well. *This* way. Go. And be quick—there may be dogs."

There was some times a new one to instruct, blood wet in the socket, at the place of water, to drink his fill and then fill his mouth and go to the Fathers and Mothers, not to swallow a drop, to learn the long way and the turnings, down and down in the darkness, past the Keeper, mouth to mouth to the Fathers and Mothers. Again and again.

"Why are *They* bound?" a new one asked.

"Why are *we* half-blinded? It is The Race which orders. It is The Race which collects the food that other One-Eyes bring to Keeper, and he stores it and feeds Them."

"Why?"

They paused, water dripping from above into the pool. *Why?* To eat and drink must be or else death. But why does The Race order Fathers and Mothers to be bound so that they cannot find their own food and water? "I am only a stupid One-Eye. But I think the Fathers and Mothers would tell me . . . There was mention of a secret thing . . . The Keeper would not let me listen after that . . . "

"That is a big Keeper, and his teeth are sharp!"

Water fell in gouts from overhead and splashed into the pool. They filled their mouths and started down. When he had emptied the last drop in his mouth he whispered, "Mother, I would hear the secret thing."

She stiffened. Then she clutched at him. The other Fathers and Mothers ceased speaking and moving. At the entrance the Keeper sat up. "What is it?" he called. There was alarm in his voice, and it quavered.

"A strange sound," said a Father. "Keeper, listen!" Then—"Slaves?" he whispered.

The Keeper moved his head from side to side. The Fathers and Mothers were all quite still. "I hear nothing," Keeper said, uncertainly.

"Keeper, you are old, your senses are dulled," the deep-voiced Father said. "We say there is a strange noise! There is danger! Go and see—go now!"

The Keeper became agitated. "I may not leave," he protested. "It is The Race which orders me to stay here—"

Fathers and Mothers together cried out at him. "The Race! The Race! We are The Race! Go and find out the danger to Us!"

"The One-Eye—where is the One-Eye? I will send him!" But they cried that the One-Eye had left (as, indeed, one of them had), and so, finally, gibbering and mut-

tering, he lumbered up the passageway.

As soon as he had left, the milk-voiced Mother began to caress and stroke the One-Eye, saying that he was clever and good, that his breath was sweet, that—.

"There is no time for that, Mother," she was interrupted. "Tell him the secret. Quick! Quick!"

"Before you were made a One-Eye and were set apart to serve Us, with whom did you first mate?" she asked.

"With the sisters in my own litter, of course."

"Of course . . . for they were nearest. And after that, with the mother of your own litter. Your sire was perhaps an older brother. After that you would have mated with daughters, with aunts . . ."

"Of course."

The Mother asked if he did not know that this incessant inbreeding could eventually weaken The Race.

"I did not know."

She lifted her head, listened. "The stupid Keeper is not returning yet. Good . . . It is so, One-Eye. Blindness, deafness, deformation, aborting, madness, still-births. All these occur from time to time in every litter. And when flaw mates with flaw and no new blood enters the line, The Race weakens. Is it not so, Fathers and Mothers?"

They answered, "Mother, it is so."

The One-Eye asked, "Is this, then, the secret? A Father told me that the secret was a good thing, and this is a bad thing."

Be silent, They told him, and listen.

In her milk-rich voice the Mother went on, "But *We* are not born of the same litter, *We* are not sib, not even near kin. From time to time there is a choosing made of the strongest and cleverest of many litters. And out of these further selections. And then a final choosing—eight, perhaps, or ten, or twelve. With two, or at most, three males to be Fathers, and the rest females. And these, the chosen of the best of the young, are taken to a place very far from the outside, very safe from danger, and a Keeper set to guard them, and One-Eyes set apart to bring them food and water . . ."

A Father continued the story. "It is of Ourselves that We are talking. They bound Us together, tied Us tightly with many knots, tail to tail together, so that it was impossible to run away. We had no need to face danger above, no need to forage. We had only to eat, to drink, to grow strong—and you see that we are far larger than you—and to mate. All this as The Race has ordered."

"I see . . . I did not know. This is a good thing, yes. It is wise."

The Mothers and Fathers cried out at this. "It is not good!" They declared. "It is not wise! It is not right! To bind Us together when We were young and unknowing was well, yes. But to keep Us bound now is not well. We, too, would walk freely about! We would see the goldshining and the slaves, not to stay bound in the dimness here!"

"One-Eye!" They cried. "You were set apart to serve Us—"

"Yes," he muttered. "I will bring water."

But this was not what They wanted of him. "One-Eye," They whispered, "good, handsome, clever, young, sweet-breathed One-Eye. Set Us free! Unloose the knots! We cannot reach them, you can reach them—"

He protested. "I dare not!"

Their voices rose angrily. "You must! It is The Race which orders! We would rule and We will rule and you will rule with Us!"

". . . . mate with Us!" In his ear, a Mother's voice. He shivered.

Again, they spoke in whispers, hissing. "See, One-Eye, you must know where there are death places and food set out which must not be eaten. Bring such food here, set it down. We will know. We will see that Keeper eats it, when he returns. Then, One-Eye, then—"

Suddenly, silence.

All heads were raised.

A Father's deep voice was shrill with fear. "That is smoke!"

But another Father said, "The Race will see that no harm comes to Us." And the others all repeated his assurance. They moved to and fro, in Their odd, circumscribed way, a few paces to each side, and around, and over each other, and back. They were waiting.

It seemed to the One-Eye that the smoke grew thicker. And a Mother said, "While We wait, let Us listen for Keeper and for the steps of those The Race will send to rescue Us. Meanwhile, you, One-Eye, try the knots. Test the knots, see if you can set Us free."

"What is this talk of 'try' and 'test' and 'see'?" a Father then demanded. "He has only to act and it is done! Have We not discussed this amongst Ourselves, always, always? Are We not agreed?"

A second Mother said, "It is so. The One-Eye has freedom, full freedom of movement, while We have not; he can reach the knots and We can not. Come, One-Eye. Act. And while you set Us free, We will listen, and when We are free, We will not need to wait longer for Keeper and the others. Why do they not come?" she concluded, querulous and uncertain.

And they cried to him to untie

Them, set Them free, and great things would be his with Them; and, "If not," They shrilled, "We will kill you!"

They pushed him off and ordered him to begin. The smell of the smoke was strong.

Presently he said, "I can do nothing. The knots are too tight."

"We will kill you!" they clamored. "It is not so! We are agreed it is not!" And again and again he tried, but could do nothing.

"Listen, Mothers and Fathers," the milk-voiced one said. "There is not time. No one comes. The Race has abandoned Us. There must be danger to them; rather than risk, they will let Us die and then they will make another choosing for new Mothers and Fathers."

Silence. They listened, strained, snuffed the heavy air.

Then, screaming, terrified, the others leaped up, fell back, tumbling over each other. A Mother's voice—soft, warm, rich, sweet—spoke. "There is one thing alone. Since the knots will not loose, they must be severed. One-Eye! Your teeth. Quickly! Now!"

The others crouched and cringed, panting. The One-Eye sank his teeth into the living knot, and, instantly a Father screamed and lunged forward, cried stop.

"That is pain!" he whimpered. "I have not felt pain before, I cannot bear it. Keeper will come, the others will save Us, The Race—"

And none would listen to the Mother.

"Mother, I am afraid," the One-Eye said. "The smoke is thicker."

"Go, then, save yourself," she said.

"I will not leave without you."

"I? I am part of the whole. Go. Save yourself."

But still he would not, and again he crept up to her.

They came at last to the end of the passage. They could not count the full number of the dead. The smoke was gone now. The Mother clung to him with her fore limbs. Her hind limbs dragged. She was weak, weak from the unaccustomed labor of walking, weak from the trail of thick, red blood she left behind from the wound which set her free.

"Is this outside?" she asked.

"I think so. Yes, it must be. See! Overhead—the goldshining! The rest I do not know," the One-Eye answered.

"So that is the goldshining. I have heard—Yes, and the rest, I have heard, too. Those are the houses of the slaves and there are the fields the slaves tend, and from which they make the food which they store up for Us. Come, help me, for I must go slowly; and we will find a place for Us. We will mate, for We are now The Race." Her voice was like milk. "And our numbers will not end."

He said, "Yes, Mother. Our numbers will not end."

With his single eye he scanned Outside—the Upper World of the slaves who thought themselves masters, who, with trap and terrier and ferret and poison and smoke, warred incessantly against The Race. Did they think that even this great slaughter was victory? If so, they were deceived. It had only been a skirmish.

The slaves were slaves still; the tail-tied ones were kings.

"Come, Mother," he said. And, slowly and painfully, and with absolute certainty, he and his new mate set out to take possession of the world.

— AVRAM DAVIDSON

star-crossed lover

She was a wonderful wife — sweet, pretty, loving — but she would keep littering up the house with her old, used-up bodies!

By WILLIAM W. STUART
Illustrated by RITTER

I

SO HELP me, I'm not really a fiend, a monstrous murderer or a Bluebeard. I am not, truly, even a mad scientist bucking for a billing to top Frankenstein's. My knowledge of science ends with the Sunday magazine section of the paper. As for the bodies of all those women the front pages claim I butchered and buried somewhat carelessly out by the garage, all that is just — well, just an illusion of sorts.

Equally illusory, I am hoping, is my reservation for a sure seat, next performance, in the electric chair which now seems so certain after the merest formality of a trial.

Actually I am, or was, nothing but a very normal, average — upper middle average, that is — sort of a guy. I have always been friendly, sociable, kindly, lovable to a fault. So how did lovable, kindly old I happen to get into such a bloody mess?

I simply helped a little old lady cross the street. That's all.

All right, I admit I was old for Boy Scout work. But the poor old bat did look mighty confused and baffled, standing there on the corner of York and Grand Avenue, looking vaguely around.

So, "What the hell," I said to myself; and, to her, "Can I help you, Madam?" I had to cross the street anyway. Traffic being what it was, I figured I'd feel a little safer with her for company. It was silly, of course, to think that a poor old lady on my arm would ever inhibit the Grand Avenue throughway traffic but I tried it. Good job I did, too.

It was an early fall afternoon, a bit before rush hour. I had knocked off work early. It was too nice a day for work and besides the managing editor had fired me again. I had nothing better to do, so I thought I'd wander over to Maxim's for a drink or two. Then, on the corner, I found the old lady.

She was a pretty sad-looking old lady. Matter of fact she was — just standing there, not even trying — the worst-looking old lady I ever saw. She looked, to put it kindly, like a three-day corpse that had made it the hard way after a century of poor health. First I thought, hell, I'll give the old bag of misery a boost, shove her under a bus or something. It would be the decent, kindly thing to do.

I spoke, tentatively. She half-turned and looked up at me from her witch's crouch. The eyes in the beak-nosed, ravaged ruin of a face were big, luminous, a glowing green. They clearly belonged elsewhere and there was a lost, appealing look in them. There was a demand there, too.

"I — uh — that is, would you care to cross with me, Madam?" I asked her.

She took my arm. There was a moment's lull in the wake of a screaming prowl car. I muttered a word of prayer and we were off the curb. The old hag was surprisingly quick. It looked as though we were going to make it. Then, three-quarters across, I came down with a rubber heel in an oil slick just as a roaring, grinding cement-mixer truck was coming down on me like an avalanche. My feet went up. I gave the old witch a shove clear and shut my eyes for fear the coming sight of smeared blood and guts — my own — would make me sick.

AND then, instead of a prone, cringing heap on the pavement sweating out the ten-to-one odds against all those wheels missing me, I was airborne. Cable-strong arms caught and lifted me. We were racing down field, elusive, unstoppable, all the way — touchdown.

So there we were, safe on the sidewalk. Traffic on the freeway, gaping at us, was chaos as the frail, doddering little old lady put me down. Me, I was never any extra large size. But still, a touch under six feet, maybe a little too friendly with beer and rich des-

serts — say, 210 pounds — I had considered myself a little big for convenient carrying about.

This was something new in little old ladies.

I stared down at her. She wasn't even breathing hard. In fact I couldn't tell if she was breathing at all. "Madam," I said, "my sincere thanks and admiration. I wonder now. If you're not late for practice with the Bears or something, perhaps we could go someplace and talk?" I couldn't guess what, but there was for sure some sort of a story here. If I could get something hot for the Sunday magazine, I'd have my job back.

The old crone looked up at me with those oddly out of place, compelling eyes of hers. "You will listen to me? You will help?"

"Madam, help you don't need. But listen, yes. This is my great talent. I will be happy to listen to you."

I thought a quiet booth and a couple of cold ones in Maxim's would be nice. No. She wondered in a different, quavering old voice, if greater privacy might not be better. "What I have to tell you, young man, may be difficult for you to grasp. It may be necessary to show you some things."

"Uh." She wasn't the type of doll I favored taking home for a sociable evening but it wouldn't have seemed mannerly to say no to the look of appeal in her eyes. "All right."

We went on over to the parking lot and I drove her to the very comfortable home out in Oakdale that Uncle John and Aunt Belle turned over to me when they rolled off to see the world from their house trailer a year and a half back. Of course they dropped anchor in Petersburg and haven't budged since, but I guess it gives them the footloose feeling they were looking for. And I have the house, which is quite a pleasant little place.

I think Aunt Belle figured giving me the house would offset my own dubious attributes so that some nice girl might just possibly marry and make something of me. But I kept a picture on my bureau of Uncle John, standing by the sink in his apron, and was still holding out.

Well, the old bat didn't clue me in on anything on the drive out there in my car. We chatted along the way, mostly her asking the questions, me answering. She was just a visitor to the town, she said. She wanted to find out all about it — with ten thousand nonsensical questions.

I parked in the drive and we went in. While she settled down on the sofa I went to the bar, my addition to the home furnishings, to fix a drink; wondered if there might still be any tea knocking around; thought better of that and mixed two drinks. Then I turned back toward her.

"Now," I said, "tell me."

"Well," announced that ravaged wreck of an old woman, "the fact is that I am from another world."

"Oh, hell," I said, "how did you come in? By saucer or by broom?" It was a mean remark, I suppose. Not kindly. Even so, the way she took it seemed all out of proportion. The old bat's face suddenly went slack. She slumped over sideways on the sofa, those big, green eyes open, staring, empty. There was no need to go check for a pulse or heartbeat. She was plainly, revoltingly dead.

"Ugh!" I said and tossed off one of the two drinks I was holding. It seemed the thing to do.

"DO not be alarmed," said an apparent voice. "I am really perfectly all right. I have simply left that poor vehicle I was using. I had thought, wrongly it now seems, that communication with you chemically powered life forms might be easier if I too were concealed within one such structure."

The voice actually wasn't so much a voice as a voice impression. It came from a point in the air above the body on the sofa. And it did make an impression. It came through in a rush of meanings, too loud somehow, almost overpowering.

I looked toward the point of origin. That's what it was, as near as anything, a tiny pinpoint of intense, green-gold light. It was too intense; I had to turn my eyes away. My head started to ache. I felt and knew that, whatever species this might be, my visitor was a female of it. She was, at the moment, horribly overbearing. She was communicating effectively, enthusiastically, but unclearly and it wasn't easy. Not on me, anyway. My mind was swamped with a mass of concepts, jabber and ideas, like all the women's clubs of the world talking at once.

I groaned and staggered back against the bar. "All right," I yelled, "all right, I believe you. You come from another world. You are an amazing, wonderful girl and I am proud to entertain you. But please — go back to being an old woman, or something I can handle."

The ravaged old crone's eyes glowed again. She blinked and sat up. "Please don't shout so. I can hear you," she remarked primly.

I drained the other drink and put both glasses back on the bar. "Ugh. Uh, that's better. But who — where — what —?"

"Please do stop and think a minute," the old witch told me. "If you will simply use that electro-chemical mental equipment of yours, you will find that I have already given you the answers to those questions about who and what I am and where I come from."

"Nonsense." But then it came to me that she had. I just hadn't taken time to sort any of it out.

I tried sorting. Much of it remained fuzzy, I suppose because some aspects were so far outside the range of anything known to me. She was, the way I got it, a life form based on something approximating atomic energy. She came from a dwarf star out someplace, I couldn't quite place it, out Orion way I think. Sure, the entire concept was beyond me and completely alien. And yet, oddly, in a lot of ways it was like old home week. This was a kind of life totally different from ours in all structure and development; and yet their kind of thought, their relationship to their world and their social organization, seemed weirdly familiar. They had work, recreation, social organization. They reproduced by some sort of polarity business I didn't get then and still don't; but it required mating and it certainly seemed a fair approximation of sex.

They had arts based on forms and shaped patterns of energy. I don't get it. She said it compared to our literature, music and painting and I take her work for it. "Only," as she later explained a touch wistfully, "terribly, terribly decadent in the present era."

THERE was their problem. Their social structure and individuals alike seemed, at last, to be losing all vitality. The birth rate dropped. Culture declined. They had, fairly recently by their standards, discovered the possibility of freeing themselves from their sun and travelling through space. But, while they found planets with chemical life forms like us not uncommon in space, they had found no form comparable to their own. Outside contacts, they had thought, might stimulate and revitalize their society. But, of course, where there is life there is politics. They had developed many and bitter differences of opinion regarding the feasibility or value of any attempt to communicate with chemical life forms. There was a party for, a party against and several favoring an agonizing reappraisal of the position whatever it might turn out to be. Nothing was done. And that, in due course, had brought me my lone lady visitor.

The "communication" party decided to take action in spite of the absence of official sanction. They worked cautiously, in secret. Specially selected representatives with certain exceptional kinds and degrees of sensitivity were made ready. Necessary energy supplies for distant space travel were carefully hoarded. Chances of anything coming of it were considered slim but . . . there was the horrible old hag sitting on my sofa, looking hopefully up at me out of great, youthfully glowing green eyes.

Anyway, that's the way the thing shaped up in my mind. And it seemed plenty hard to believe.

"Must I come out and show you again?"

"No," I said quickly. "Oh, no, please don't. I'm convinced."

"Or will be," she remarked cryptically. "Good. This now proves that at least one level of communication between us is possible. This is promising. It could mark the beginning of a relationship which may be most stimulating for both life forms."

Well, it was startling at least, I would have to admit that. "Speaking of forms," I said, "You sure picked an ugly one there. Why?"

"Oh? But I am only now beginning to understand your standards of attraction. I took this structure—" she pointed one gnarled, knotty hand at herself — "because in my own form no one seemed willing to listen or accept me logically. They only yelled that I was an A-bomb or a short circuit or lightning, or else simply pretended they didn't see me at all. So I took this body, making only a few small internal repairs and improvements. But then, until you came along, no one would stop long enough to listen to me."

"Hum. Where'd you get it?"

"I picked it up at one of your places for them to die. What you call the cold room at the County Hospital. There was, I admit, some confusion."

That I could believe.

"You are not nearly as different from us in mental processes and customs as I should have thought. Such an intriguing life form, with such amusing complications. Just strange enough to be exciting. Come over here and sit by me."

She beckoned coyly, like a flirtatious girl, and winked one youthfully glowing eye at me. The effect, in that ruin of a face, was appalling. I stayed where I was.

"Oh," she said in a hurt tone, "you don't like me? And you seemed so attractively receptive at first. How can we communicate completely on your plane if you are to be so aloof?" She stopped and seemed to concentrate a moment. I felt as if something gave my thoughts a brisk stir-

ring with a long swizzle stick.

"Damn it," I snapped, "quit that, you hear me? You've got to stop messing around in my mind. It's an outrageous invasion of—"

"All right, all right," she said. "I won't do it again, I promise. Unless — well, never mind." A typically feminine-type promise. "But now I see that it is simply this body that offends you. Except for this, you are quite ready to love me."

That was putting it a little strongly. I had to admit though, that she was a pretty interesting proposition.

"It is odd to attach such importance to form. A chemical life characteristic, I suppose. I do note that your own structure has its — well. There is no reason for this present form of mine being a problem between us. I shall simply change it."

"Oh?" Like changing a dress, she made it sound. It wasn't quite that easy.

"You must make it clear to me what sort of body you prefer. Oh, I see. That tall, widely curved one with the red hair. Yes, I see the image . . . my . . . and so lightly clad. Very well. I will have this body for you."

She was reading my mind again, the back corner section where I was keeping a few brightly descriptive memos on Venus de Lite, that luscious, languorous, long-legged new stripper-exotic dancer downtown at the Roma. "That," I told her, not without a touch of wistful regret, "is a live body. You cannot take live bodies. And stop reading my mind."

"I'm sorry. I won't do it again." She kept saying that; and doing it just the same. "I shall not have to take the original body. I can simply duplicate it."

"How could you do that?"

"It should not be difficult. The elements in the structure are common enough here and in readily modified forms. The body organization is complex, true, and not particularly efficient in many respects. However, the patterns can be readily traced and duplicated. It is a simple question of the application of energy to chemical matter. So now you must take me to observe this body which has such attraction for you."

II

THAT, as it turned out, was the toughest part. I did what I could, trying to fix the horrible old witch up in an outfit from one of Aunt Belle's old trunks and a few rather elementary cosmetics. The end result was that, instead of looking like a plain old witch, she seemed a scandalously depraved, probably drunken old witch. The Roma, in a long history dating back to prohibition days, has seen all kinds and conditions. But I don't doubt we were one of the damnedest looking couples on record.

"This — uh — this is my Grandma," I told the few, nastily grinning acquaintances I couldn't duck on our way into the joint. "Grandma is just up on a little visit from Lower Dogpatch. Excuse us, would you? Grandma needs a double shot quick."

That seemed unarguable. We finally settled at a small table off by the swinging doors to the kitchen and sat there through one floor show. "All right," said my old witch, as Venus closed the set with her final frenzy in the blue spotlight, "I have the pattern. There are a number of differences there from the picture in your mind. The age, the chemicals applied."

Venus went off to vigorous applause. The club lights came up and the M.C. stumbled out to favor us with his version of The Gent's Room Joe Miller. I considered. The more beautiful-looking the doll, I suppose, the greater the probable degree of illusion. "Where you find discrepancies," I told my old witch, "be guided by my imagination. Right?"

"All rightie," she remarked brightly, patting my hand on the table as she favored me with what I would estimate as one of history's lewdest winks. I noted a mutter of contempt from surrounding tables. "Shall I go ahead? Perhaps you'd better close your eyes," she said, "I—"

"No, not here!" I grabbed her arm and dragged her to her feet. Neighbor tables gave us their full attention and the muttering took on an ominous tone. "Come on. For pity's sake, let's get on home." I wasn't exactly convinced this proposition was going to work out; but a crowded night-club was no place for her to try it.

"Graverobber!" was one of the indignant remarks that caught my ear as I dragged the harridan out. She giggled. The female, species immaterial, seems to have a sense of humor ranging from the Pollyanna-like to the graveyard ghoulish — missing nearly every point between.

She was quiet and thoughtful on the ride back home. So was I, pondering the doubtful status of my reputation around town and my sanity.

IN THE house, she was brisk and businesslike. She got me to help her stack a bunch of canned goods and junk from the refrigerator on the kitchen table — "Just for convenience." She remarked domestically, "It would

have saved your fuel and power if I had made the change at the other place. I must draw heavily on the power that runs into this house. I must, you understand, conserve my own supply."

"Perfectly all right. Be my guest." The whole thing had a sort of dream quality to it by then. You know how it is in dreams sometimes? The action and story lines are fantastic. You know the whole thing must be nonsense. You could, by an effort of will, wake up and end it. And yet you go along with the thing just to see how the foolishness will turn out. That is the way I felt then.

"Oh yes, one more detail," said my witch. "What about the eyes? I found nothing about the color of the eyes in your largely imaginary mental picture of the cheap floozy in that second-rate saloon."

Already she was not only speaking the language but thinking the thoughts like a native female. The eyes. Hmm. I guess my mental film strips of Venus had kind of skipped past facial close-ups. "Why don't you just keep the same eyes you have now?" I suggested.

"Good," she said. "They are my own design. Here goes. Close your eyes; there may be some glare."

I closed my eyes. For a moment there was nothing. Then, for about a second, say, there was an intense, flaring glare that shone reddish through my closed lids. Then it was dark.

"All righty," said a sweet-soft voice, ending in a little, half-breathless giggle. "Now you can look."

I looked.

Trouble was, it was still dark. No lights. All I could see by the faint light of a half moon filtering in the kitchen window was a dim figure standing by the table.

Fact was, I found later, a sudden power surge on the main line outside the house blew a transformer and blacked out the whole blinking suburb.

I snapped out my lighter and flicked it on. Well now, indeed! There, half shy, half not so shy and wearing the same negligible costume as in her final number at the Roma, was Venus, constructed just exactly the way she should have been.

"The way I built me," she said, and giggled, "to your very explicit order. So now what are you going to —"

I wouldn't say that I am notably more impetuous than the next man. That was just an impetuous situation. I let the lighter go and grabbed her. "Ah," I remember her saying softly, "now we can truly begin to communicate."

I can say with every reasonable assurance that we did so most effectively. Alien she was, but she was also a lovely girl, my own dream girl. Or girls. What man of any imagination at all is a totally monogamous dreamer? Anyway, she was unarguably lovely, loving, uniquely adaptable, generally sweet. And if, once her frequently unfathomable mind was made up, she had the determination of seven dedicated devils — well, she was female and probably no worse than some billion local girls. My little atom-powered space girl had a lot more built-in compensating factors.

But that's as it developed. That night, naturally, was largely devoted to communication. Luckily, having been fired, I didn't need to worry about getting up to go to work.

ALONG about eleven or so the next morning she bounced out of bed, bright, beautiful and lively. I dragged on down to the kitchen with her to see if we could put together a breakfast from whatever staples she hadn't found it necessary to incorporate into new construction. By the kitchen table I stumbled over the most ravaged, deadest looking corpse I ever hope to see. It was, of course, the unlamented body of the original witch, lying just where it had dropped the evening before.

"Look, hon, what about this?"

She shrugged quite charmingly, in spite of the tentlike dimensions of Aunt Belle's nightgown. "What about it?"

"Well, why didn't you use the — uh — material there, instead of all the groceries?"

Another shrug. "I wanted something fresh."

She had a point. I couldn't argue. I never could, when she turned those big green eyes of hers on me, full power. "Yeah," I said. "Only what are we going to do with it?"

"What do your kind do with old bodies here?"

"Mostly we bury them."

"All right then."

That was unassailable feminine logic. All right. So I'd bury it.

That night, by the eerie light of the waning moon, I went at it with Uncle John's pick and shovel and buried the old witch's body next to Aunt Belle's rose bushes by the garage. My bright, new-incarnation girl lounged around and chatted sociably. Everything still had quite a dreamlike quality; the corpse was a final, nightmare touch. But even so, I was beginning to wonder a bit about things; such things as, specifically, where we went from there.

"Star-doll-baby —" well, hell, there are times when a man has to use terms like that to communicate with the female — "you aren't going to vanish all of a sudden and leave me now, are you? Ugh!" That was a heavy shovel and thick clay. "What are our plans?"

"Sil-ly. I understand your custom now. We are going to be married, of course. Then we shall see. There is no hurry. I have, by your standards, plenty of time. I must assimilate and learn to understand you and your fascinating life-form. We shall live together and be man and wife. As I have said, your species and mine may derive much benefit from this intermingling."

That, if I understood her correctly, sounded fine to me. It was the best proposal I'd had yet. And surely it would have been poor hospitality to a lonely little girl some light-years away from home for me to have refused. "This is terribly sudden," I told her. "Uf! That ought to be enough of a hole for as wizened up a little old body as that . . . yes, darling, I will marry you. Who's going to earn us a living?"

III

I CLIMBED out of the hole and kissed her and, in time, we did manage to get the old woman buried.

The next day we applied for our license. Three days later we were married — so far as I know, an interstellar first. The job or money problem, as it turned out, was no problem. Her first thought was the direct, female approach to the problem. She could simply make it out of old newspapers whenever we needed some, as she had the body. She made some to show me.

"Well now," I told her, "it does seem the simplest way, I admit. But the government is pretty jealous of its ability to print money. It likes to think that nobody else can do the job just right."

I was afraid this might be one of her stubborn points but it wasn't. Government restrictions, bureaucracy and red tape were things she had no trouble understanding. "It is the same way back home with power and energy rations," she told me. "You have no idea the difficulty we had in building up the capital supply necessary for my trip here. So I suppose we must find another way. Don't you already have some of this money? Or couldn't you manage to borrow some?"

I had $37.62 in my checking account, but the house was in my name. I borrowed five grand. I invested. I was probably the most successful investor since old

King Midas developed his touch. If I sank a buck in land, oil would turn up within the week, and if it turned out to be a geologically inexplicable tiny pocket the next week — that would be after I had unloaded. Stocks, commodities, it made no difference. The money rolled in. We had the touch. Paid our taxes, too, but she had a way with tax loopholes that gave the district collector a nervous breakdown.

We traveled, but we kept the old house. We always came back to it for sentimental reasons. We spent a lot of time in libraries, museums. We went to shows and concerts. Anything that was going, we went to it. She had a contagious interest that she communicated to — not to say forced on — me; and if some of the operas and symphonies we caught seemed to my elemental musical taste to run a little long and loud, I had my compensations. And a lot more than most; our adjustments were not all one-sided.

Example: We made a tour of Europe. Now, I always was a fine, loving husband to her. Completely faithful. But — well, there was a dark-haired, laughing, button-cute little chick who sang Spanish songs in English with an Italian accent in a little place on the Riviera. I didn't make a pass. I didn't even speak to her. But I have to admit that, as a strictly idle fancy, she did cross my mind once or twice.

"Hah!" my tall, statuesque, beautiful red-haired wife snorted at me one evening after we were back home. She was sitting listening to hi-fi, some of the very long-hair music that she called "the second most fascinating development of your kind." I was just sitting, maybe dozing a bit.

"So!" She gave it full-force, wifely indignation. "You sit there and you smile on me — and all the time you are thinking of this cheap, female, singing bullfighter you have seen two times. You have two times me in your mind!"

Already she was talking with just the accent that chick had used.

"Now look here," I protested, "you promised not to go prowling through my mind. A man is entitled to a little privacy!"

"How can you think so of this other woman? You don't —" sob —"love me any more!"

Women! That's the way trying to argue with them goes. You are always on the defensive.

"Aw now, Star-hon-baby," I said, "honestly, it was just a passing thought. I only —"

"I know what sort of thought it was! Very well." She got up and stalked off to the kitchen. I didn't get what she was up to, not even when I heard her banging temperishly about out there.

When there was a sudden flash and the lights blinked out, the idea hit me. I was scared. What if she had gone back, left me? I dashed to the kitchen. Just through the swinging door, I tripped over a body and fell into the kitchen table. Had she —? Then I heard a charming, slightly accented little giggle.

I didn't bother with my lighter. I reached out, caught her, pulled my sweet little dark-haired baby to me and kissed her. "Honeydoll, believe me — I do love you. No matter who you are, I love you!"

I meant every word of it, too. That was a brand of accomodation you will never get from any local girl.

THE next night I had to dig a new grave out by the garage — a bigger one this time, for a big, beautiful, long-legged, red-haired body. Funny thing. Contrary to general belief, none of this ever seemed to do anything for the roses by the garage. They had done poorly ever since Aunt Belle left and they kept on doing poorly. Well, no matter. Six months later it was the little brunette's turn to go and we went back to red hair. When I say my wife was all women to me, I mean it.

The last model was medium height, Titian shade hair, not spectacular but cute, very companionable, very lovable, beautifully built, built to last. She was some builder, my wife, and she did a lot of fine construction work for me.

One night, back along about the third week of our marriage, I got to feeling lousy — sniffles, headache, no appetite.

It was no dramatic plague; just a typical, nasty case of flu. I used to get them every fall and winter. I mixed myself a couple of hot lemon and's, and explained it to my (tall, red headed) wife. "Oh, yes," she said. "I see."

I had an idea she took another quick prowl through my mind but I felt too sick to complain. "I'm going to bed," I told her. I went.

Oddly enough, instead of putting in a restless night, I slept like a log. When I woke up the next morning, I felt great. In fact, as I burst into a spontaneous and very tuneful chorus of *Body and Soul* in the shower, it came to me that I had never in my life felt so well. When I looked in the mirror to shave, it seemed to me I was even looking better.

Later that day I was up on the roof putting up a TV aerial. I hadn't ever bothered with TV, but she wanted to learn all about even that. I put up the aerial. Then I fell off the roof. I dropped

twelve feet, landing on my left arm and shoulder on hard-packed lawn. Then I got up and dusted myself off. No damage. I was all right.

"Clumsy," she said to me from the porch.

"No," I said. "Damn it, there was this loose shingle up there. It slipped right out from under me and — anyway, you might at least be a little sympathetic. It's a wonder I didn't break my arm. In fact, I can't understand why I didn't."

"Nothing broke because of the improvements I made in you last night."

"What?"

"Darling," she said, "I made a few improvements. Of course, you were very attractive, lover. Perfectly charming. But structurally, really, you were a most imperfect mechanism. So now that I have made a study of these bodies your people use, I . . . rebuilt you."

"Oh? Oh! Now, look here! Who in hell said you could?"

IT did, at the time, seem pretty damned officious. I was sore. However, I had to admit that the changes she made worked out rather well. A strong, light metallic alloy seems to make much better bones than can be made of calcium. General immunity to disease was desirable, I couldn't deny. My re-wired nervous system and modified muscular structure were as pleasant to work with as they were efficient. I was a new man.

Of course, every woman always wants to make a finer specimen of whatever slob she marries. Only I had the luck to get the one who knew how to do the job properly — from the inside out, rather than by simply peck, peck, pecking away at the outside.

It was all as near perfect as a marriage can be. I have no complaints now — and very few even then. She had built me to last a couple of centuries. I was ready and willing to string along with her all the way.

But it never does work out that way, does it?

What happened to us, as it does to most, was that at the end of the third year she got pregnant. A very ordinary female trait, you may say, and not ordinarily surprising. No. Except that she was no ordinary female.

We were in bed one night — out last night as it turned out — when she told me.

"Darling," she said, and kissed me. "I have something to tell you."

"Haw?" I was sort of sleepy.

"I've been hoping and hoping it would happen, but I wasn't sure it could."

"Ha? Whatsat?"

"Darling, we — are going to become parents."

"What?" I was awake then. "We're going to have a baby? Why, that's great. Wonderful! Do you think he'll take after me?" As I thought it over, it seemed something of a problem. What would the heredity be? In fact, *how* could it be?

"Never mind, darling," she said quietly — sadly, I like to think, as I look back on it. "That's woman's work, you know. Just leave the details to me."

I kissed her. We were very loving and tender. I went to sleep, and dreamed all night long that I was Siamese twins in a fratricidal finish fight over my model wife.

IV

I woke up by daylight to a horrible, icy, lost and separated feeling, as though part of me had really died. I reached out my hand for reassurance — and I yelled.

That sweet, soft-curved body in the bed next to me was cold and dead.

"Please! don't be frightened. It's all right. Really, it's all right." That was a voice that wasn't a voice again, as back in the beginning. It was familiar and at the same time new. It *wasn't* all right! I looked up, over the bed. There were not one but two tiny, blinding-bright pinpoints of light.

"What? Who?"

"Father," they said, "we are your children."

They were certainly not my idea of it.

"No. Oh, no! Star-baby, where are you?"

"Here. We were she. Now she plus you has become us. She has divided and now we are two, the children of you and she."

"Nonsense. Quit the double talk and give it to me straight!" Double talk it was. But if it was nonsense, it was an unhappy sort of nonsense I couldn't get around.

Coming slightly out of shock, I tried arguing and got nowhere. I never won any arguments from their mother either. I was convinced in spite of myself that this was the simple, brutal truth. It was the way of reproduction of her form of life. My alien wife had divided, to become two half-alien offspring.

I felt lousy. I didn't *want* two bright, pin-point kids. I wanted my wife. "But look, why couldn't one of you —"

"Why, father!" I got it in a tone of shocked horror. "Such a thing would be positively incestuous. No. We must go now. This is what mother-we came here for — to mix and to re-vitalize her-our people by the addition of a fresh, new stream of life force."

"You mean me?" It was flat-

tering to think my stock would invigorate the population of a sun, but it was no cure for the loneliness in which I was lost. "You are going back across space — and leave me here alone?"

"Yes, father. We must leave at once."

"Oh, now, wait just one radiating little minute! You say I'm your father. Well, I forbid—"

Weary patience. "Now, father, please."

"But — will you come back sometime?"

"Certainly. With the success of her-our mission, we hope the factions back home will unite in a policy of further interchange. We and others of our family will come. Soon, we hope. It could even prove possible to find a way of converting you to our own form, so that later you may return with us."

"But look—"

But that was it. A few more words and, "Goodby, father," they said, putting a reasonable amount of regret into it — even though I know damned well they were itching to get going. "And do take care of yourself."

They were gone. I was alone. No big, lush and lovely wife; no button-cute little brunette wife; no gay, lively, companionable, loving Titian-haired wife. No wife at all.

I had never been so alone. Nothing but me. What was I to do?

Well, there was only one possible thing to do, and I did it. I got drunk. I hung one on. It was a beauty. Sometime in the course of the following night I held a tearful wake out by the garage and I buried my wife's last body. That, I recognize, was thoughtless. I could and should have called doctors and undertakers to tell me there was no life left in the body, and then let them do the digging for me in a more formal, costly manner. But, for one thing, I was drunk. For another, I guess I'd just sort of gotten into the habit of doing it the other way.

MUCH too early the next day — like about 2:30 in the afternoon — the doorbell rang. I was totally despondent, nursing my sorrow and a fat hangover with a cold beer and some of my Star-baby's more heavily long-hair, hi-fi selections.

I let the bell ring for a while. Then I let somebody pound on the door for a bit. But that got to be hard on my headache so I went to the door.

There was Mrs. Schmerler, from next door, who used to be a real biddy-buddy of my Aunt Belle's. There were a couple of hard-eyed cops with her, too. They all pushed right on in.

"Celebrating something, Mac?" inquired cop number one, while Mrs. Schmerler and the other glared suspiciously about.

"No," I said, too miserable to think. "Not celebrating, mourning. Just lost my wife, and kids, too."

"He never had any children!" said Mrs. Schmerler. "Only women. And a great deal too many of the cheap tarts. What his poor, dear Aunt Belle, as saintly a woman as ever lived, would say . . . Why don't you ask him what he was digging for — digging and yowling *Star dust* — out there by his garage last night? And not the first time, neither!"

The sudden realization of what could be turned up out there by the garage — and how that would look to the unsympathetic and non-credulous eyes of the law — hit me. I opened and closed my mouth three or four times like an unwell goldfish. Nothing came out except a miasma of alcohol. Mrs. Schmerler gaped at me with delighted shock, indignation and horror. It was the great moment of her life.

The cops stepped in — not aggressively, more big-brotherly — and took a good, firm grip on my arm.

I won't go into the rest of all that. They got a squad and they dug. They took me in. I wouldn't talk. They locked me up. Cell block bookies quoted 50-1, no takers, I would make the death cell. The way I felt, I didn't care. The newspapers went wild. Things had been slow since the election. All my old pals from my working days on the paper were making a buck with special "Even then there was something frighteningly different about him" feature stories.

The next day, as my hangover faded and I got to thinking things over, my outlook changed. It was no time for me to give up. I would get a lawyer.

I walked over to rattle my cell door for a bit. "Hey! Hey there, guard. Come here a minute, huh?"

He came. "So? Is our Bluebeard softening up? Want to make a statement?"

"Uh-uh. Not me. I just want to ask a question. Those bodies, are they going to autopsy them?"

"Not yet. Today."

"Well, look—"

I had a little trouble persuading him, but I got him to take down all the data I could remember on the first one, the old hag. There would be records on her at the County Hospital. They'd never make any charge worse than body-snatching stick on that one.

The others? I chuckled. I was imagining the medical officers' expressions when they ran into

those stainless-steel bones, plastic circulatory system, metallic wiring and the assorted other little innovations that my wife — my *late* wife — had installed in her body-building exercises. That would give them something to think about.

So — that's my story; all of it up to now. I'm still here in my cool little cell, and I am damned lonesome. But I am not scared. I figure I have about four different kinds of insurance.

IN the first place, the way I am built now, with all the improvements in structure and durability she put into me, I doubt they could electrocute me. I'd probably just short the equipment out. A thing like that would make me quite a scientific curiosity, no doubt; but not, at least, a dead one.

Second, there are my investments and the way the money has piled up. You know and I know perfectly well that they just don't ever send a million bucks plus to any electric chair.

Besides, third place, while I have no doubt I can be convicted of something, I don't see how it could be murder. I wouldn't be surprised to see me get sent to the loony bin. I won't much mind that. I have nothing to do but wait anyway.

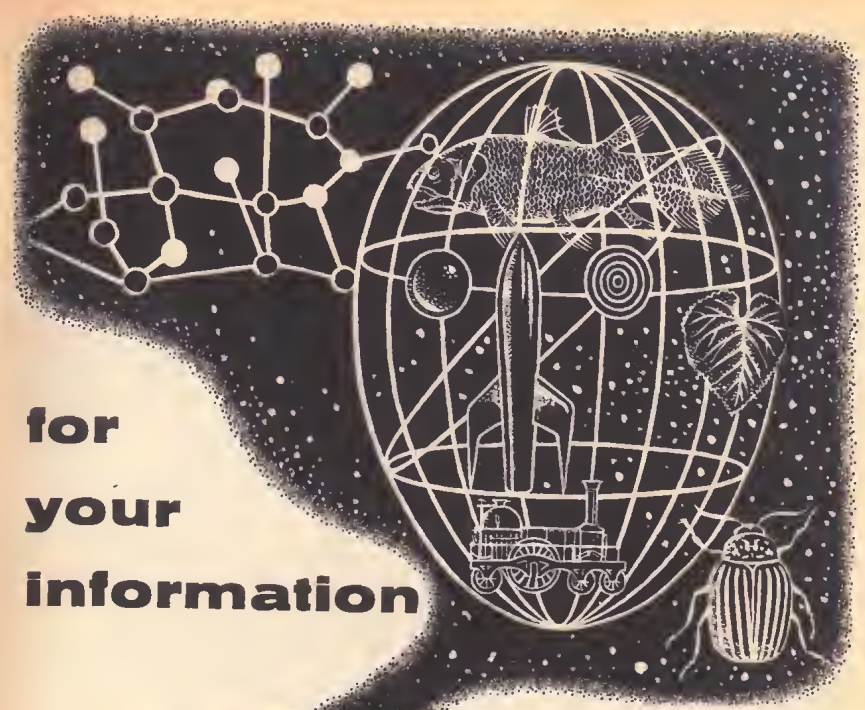
And, in the fourth place, which is what I am waiting for, there are my children — hers and mine. They are coming back. Soon, I hope. Not alone, I hope. "Tell them back there," was the last thing I said before they left, "tell them I want a girl just like the girl that married your dear old dad."

I admit it's a poor thing for a man to have to send his kids to do his courting for him — but at least mine are pretty exceptional children. Much better informed than most, too. They should bring me back a new bride. They've got to.

Somehow I kind of have a feeling now that a blonde — maybe a tall, willowy, statuesquely stacked type — might be nice for a while. After that, I don't know. I'll have to think it over. The waiting is what is going to be tough.

Kids aren't really undependable today. Are they?

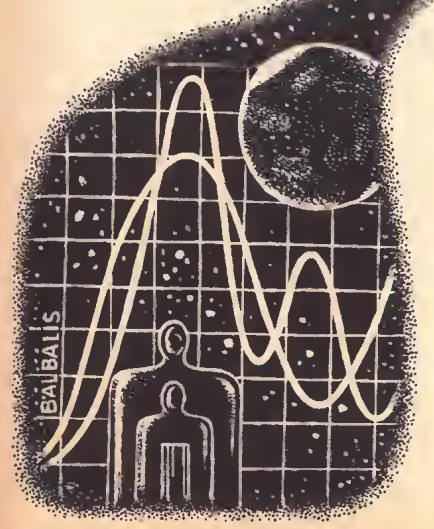
—WILLIAM W. STUART



for your information

BY WILLY LEY

The Shape of Shells to Come.



SINCE I am convinced that my readers have the normal reader's habits, I am quite sure you have all looked at the photograph on the following page before you started reading. To begin with, the other gentleman is Mr. Earl Buchanan, Deputy Chief of the Armor-Defeat Ammunition Unit, at Picatinny Arsenal in New Jersey. And the device we are holding is the prototype of a new anti-tank shell; I'll call it Projectile P, with the "P" stand-

Fig. 1. Earl H. Buchanan (left) and Willy Ley
— U. S. Army photograph

ing for Picatinny. When introduced into active service it will probably get a different name, but for the moment Projectile P will do.

The first point I have to make, after stating that I got to see it as a result of a kind invitation by Major General W. K. Ghormley to pay a visit to the Arsenal, is that this is the complete projectile. I trust that it wasn't loaded, but otherwise nothing is missing, except for one little item which I'll mention later. But the missing little item is not, repeat *not*, the nose cone.

Projectile P is, as has been mentioned, an anti-tank weapon, meant to be fired by other tanks. The very fact that it is to be carried by another tank produces a number of problems. It mustn't weigh too much. More importantly, it must not take up too much space. And it must be capable of punching a hole through another tank's skin, no matter how tough and how thick that skin might be.

ONE might say that the problem began in 1887.

At that time chemists almost anywhere were, if the term can be used in this case, knee-deep in high-explosives research. Only a few useful high explosives were known: guncotton, discovered accidentally by Christian Friedrich Schönbein in 1845, and dynamite, discovered equally accidentally by Alfred Nobel in 1866. Of course nitroglycerin was known since it is the basis of dynamite. But nitroglycerin was so untrustworthy that several countries had passed laws simply forbidding its manufacture.

As for guncotton, military engineers distinguished two kinds. One contained more than twelve per cent of water and was therefore referred to as "wet" guncotton. It was perfectly safe to handle but very hard to explode. The other kind of guncotton was logically known as "dry" guncotton (5 per cent water or less) and it was easy to explode, but by the same token it was unreliable. As for Nobel's dynamite it was safe, but nobody, Nobel himself included, had yet succeeded in inventing a really reliable igniting cap for it. Moreover most experts felt — correctly, it must be added — that dynamite was fine for construction and mining purposes but was not suited for military applications.

Military engineers and ordnance men hoped for an explosive which could not only be handled safely but could even be mistreated with impunity — but which would explode with great power if the proper fuze was applied to it. (To avoid receiving letters about that "misspelled" word I wish to point out that, during World War II, the Chief of Ordnance laid down a rule: fuzes used in ammunition of any kind are spelled with a "z", while a

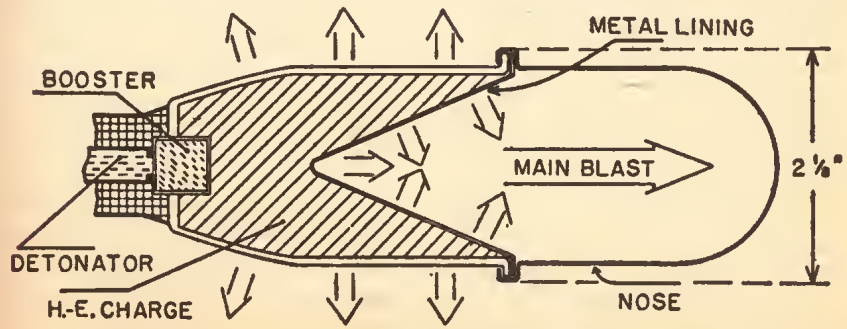


Fig. 2. Nose of grenade M9A1 (U.S.) with shaped charge.

"fuse" is something you replace after you had a short circuit.)

One of the researchers was an American, Professor Charles E. Munroe. The aspect of his work which interests us here had to do with the damage which is inflicted on steel plate by a nearby explosion. His tests were conducted on an old bank safe with various kinds of explosive substances, standard as well as experimental. Fairly small samples of the explosives were attached to the safe and then exploded.

One of the samples was a disk of compressed guncotton, with the letters U. S. N. and the year 1884 indented on its face, indicating year of manufacture and ownership.

After this disk had been exploded, Professor Munroe inspected the steel plate for damage. It was negligible, just as he had expected; but to his intense surprise he now saw the letters U. S. N. and the date 1884 indented in the steel. Nobody had ever seen anything like that and there was no explanation.

Professor Munroe wondered whether the fact that the "bottom" of each indented letter had been a short distance from the metal could have anything to do with it. At first glance this did not seem likely; Munroe himself had exploded charges ¼ inch, ½ inch and as much one inch away from the metal plate to see what would happen. Nothing had.

But then he reasoned that he did not deal with a short distance away from the metal only. It was a combination of two things: a short airspace between plate and high explosive under the indented letters; but this short airspace was surrounded by high explosive fitting against the metal.

To test his idea he took a small bundle of sticks of dynamite, pulled the stick in the center back for about an inch, then tied the bundle tightly and placed it against the steel plate. The explosion promptly punched a hole into the "burglarproof" safe.

The same quantity of dynamite, exploded against the steel in open air, had hardly even dented it.

IF the date of the experiment had been 1957 instead of 1887, Professor Munroe's journal would have been stamped SECRET immediately. Since this was 1887, Professor Munroe described what had happened in an article in *Scribner's Magazine* (March issue of 1888), wrote a technical article about it for Professor Silliman's *American Journal of Science* ("Wave-like effects produced by the detonation of guncotton," vol. 36, 1888) and, at a later date (1900) rewrote this article in popular form for

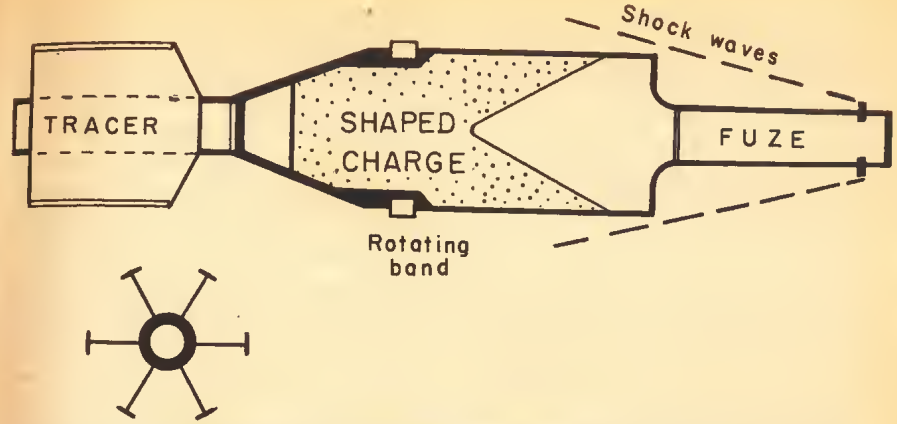


Fig. 3. Prototype of new anti-tank shell, fin-stabilized and with shaped charge.

the magazine *Popular Science Monthly*.

Other researchers repeated the experiment in various forms, found it correct and began speaking about the "Munroe effect". They all agreed that the Munroe effect consisted in focusing an explosion. The gases developed by the high explosive around the cavity ran into each other and, so to speak, compromised on a concentrated blast in a specific direction.

In Germany one researcher, Dr. Egon Neumann, spent a good deal of time investigating the Munroe effect and developed arrangements and shapes which produced it best. He reported on his work in 1914 in a German scientific journal under the title "New types of hollow bodies made of explosive substances". Thereafter Germans talked about the "Neumann Effekt." In the meantime a German explosives manufacturer, the WASAG (the letters stand for *Westphälisch-Anhaltische Sprengstoff Aktiengesellschaft* or Westphalian-Anhaltian Explosives, Inc.), had taken out several patents for such shaped charges. They were used to replace the rock drill in ore mines. The shaped charges punched deep and narrow holes into the rock, then dynamite sticks were inserted into these holes for blasting.

This went on all through the first World War . . . and nobody ever conceived the idea that something that punches holes through armor plate might have a military application!

After the first World War a Russian, M. Kukharevsky, began

to look at the Munroe-Neumann effect and wrote (in the journal *Technology of the Red Army*) about "Researches concerning the question of whether there is a possibility of increasing the effect of high explosives by the method of the accumulation wave."

But in spite of all the learned treatises in German and in Russian the Munroe effect was finally used for military purposes in the country of its discovery. The first weapon to carry a shaped charge was the famous bazooka of World War II. It had been learned in the meantime — I don't know when and by whom — that the punch of a shaped charge was very noticeably increased if the cavity of the high explosive was lined with thin metal. Wartime research also established that not every metal was equally effective as a liner. Lead and aluminum liners did not add much. A steel liner did and, surprisingly, a zinc liner was quite effective. What was used in the bazooka was simply steel; what is in use now is, naturally, classified. The reason why such a metal liner increases the force is easy to understand. The explosion tears the liner into tiny particles which are added to the blast and probably act somewhat like an abrasive.

The bazooka which carried the first shaped charges into battle was a rocket, a rather slow one. It was easy to follow its flight all the way from launching tube to target. Then shaped charges were used in slightly larger rockets (airborne), in grenades and, I believe, in mortar shells. None of these types of ammunition spins in flight. If you visualize the action of the Munroe effect carefully you'll realize that it would be diluted by a spinning projectile.

But bazooka-type rockets and rifle grenades do not have much range. Moreover, they are not very accurate. They lack both in range and in accuracy because of the fact that they are not very fast. They are much slower by far than an artillery projectile.

THIS is what led up to Projectile P.

If you could fire a shaped charge from a long–barreled high velocity artillery piece you would get the velocity and with it range and accuracy. But you also get spin. Could one fire a shell without causing it to spin? Well, yes, but it must be stabilized in flight somehow. Bombardment rockets are stabilized by fins at their rear ends and so are mortar shells.

Why not a fin-stabilized artillery projectile?

There are some problems, one of which is the fact that any projectile is in a very curious situation immediately after leaving the muzzle. Since a few figures are needed at this point I'll quote those for the German infantry rifle, model 1898, which may safely be considered to be public property. When this rifle was fired with its normal cartridge, the bullet left the muzzle with a velocity of 2900 feet per second. When the same rifle was fired with the same cartridge but with the bullet removed, the combustion gases left the muzzle with a velocity of nearly 7000 feet per second. The point is that they still did this, even if they had propelled the bullet — which means that the bullet, immediately after leaving the muzzle, found itself in a strong "wind" of hot combustion gases which were faster than the bullet and blew against its stern.

For a spherical bullet this doesn't matter much. For an elongated bullet it does. And for a fin-stabilized bullet it could cause trouble. (Needless to say, the condition of the hot powder gases blowing from the rear holds true for any firearm of any size or construction.) Normally a designer would help himself with a long nose cone and fins on a rather long spike. But a shorter projectile has advantages too, not even counting the problem of storage space.

In the case of Projectile P, the fuze had to stick out in front on a spike so that the shaped charge would explode before it had been squashed flat by the impact. It then turned out that the shock wave caused by the spike acted very nearly like the nose cone of another projectile. It did not spread out fast enough, so that it still hit the body of the projectile. But by adding a little collar to the spike this problem could be solved.

That's the reason why Projectile P does not have the normal ogive in front.

Since the front end could be shortened, the tail end could be shortened too; the fins are closer to the body than one would expect. Fine, but now the armor-punching projectile has to be fired from the gun which is mounted in the tank turret. That gun has a rifled barrel and should not be made unusable for its normal ammunition.

Well, sometimes a problem can be solved by putting the cart before the horse. Normal ammunition has driving bands which are forced into the groves between the lands of the gun barrel and which spin the shell. Projectile P has a *rotating* band, a band which is forced into the rifling, making a gastight seal. But here only the band rotates. The projectile is left alone, to be stabilized in flight by its tail fins.

The whole cartridge, roughly

three feet in length, hardly looks different from an artillery cartridge of about the same size. Compared to a cartridge for an anti-aircraft gun the shell looks very short. And, of course, the nose cone seems to be missing.

ANY QUESTIONS?

My father, who was born and grew up in Hamburg used to tell me that it is possible to see stars in full daylight, provided that you look up through a tall opening such as a mine shaft or tall factory chimney. I have recently been able to test his story but the result was negative. Could this be due to the fact that Hamburg is about 10° farther North than Chicago?

Karl Wechselmann
Chicago 56, Ill.

No, this is due to the fact that this legend is rather wide-spread in Germany but not in the United States. I have recently re-read the third volume of Baron Alexander von Humboldt's *Kosmos* — for an entirely different reason, of course — and found that the famous traveler had been annoyed by the same story. Being Humboldt, he had traced the whole history of the idea.

He had heard it when a boy and had, naturally, tried it and failed. This failure annoyed him and he never missed an opportunity during his long life to check back on it. He found that the oldest mention is in Aristotle's works, "in a place where one would never have looked for it," namely in the book on animals. Aristotle says that stars can be seen in daylight from dark "cisterns" and Humboldt explained that these "cisterns" are subterranean caves with fresh water springs. In order to provide some illumination a shaft was dug from the roof of the cistern to the surface.

Alexander von Humboldt then reminded his readers that he, in his young days, had been the supervisor of mining in a German duchy, having therefore many opportunities to test the story. But he had never succeeded. The Swiss "natural philosopher" Horace Bénédict de Saussure reported that his guides at the Montblanc swore they could see stars when looking up from the bottom of a nearly vertical mountain side. Humboldt pointed out that de Saussure himself did not see stars and that two other Swiss, the brothers Hermann and Adolph Schlagintweit, also did not succeed and that, finally, he himself had spent years in the high mountains of South America and had never succeeded, even though he could see Jupiter and Venus when the sun was in the

THE FIRST 35 ASTEROIDS

No.	*Name*	*Year and Date*	*Discoverer*	*Visual Magnitude when closest to earth*
1	Ceres	1801, Jan. 1	Piazzi	7.4
2	Pallas	1802, Mar. 28	Olbers	8.0
3	Juno	1804, Sept. 1	Harding	8.7
4	Vesta	1807, Mar. 29	Olbers	6.5
5	Astraea	1845, Dec. 8	Hencke	9.9
6	Hebe	1847, July 1	Hencke	8.5
7	Iris	1847, Aug. 13	Hind	8.4
8	Flora	1847, Oct. 18	Hind	8.9
9	Metis	1848, Apr. 26	Graham	8.9
10	Hygeia	1849, Apr. 12	de Gasparis	9.5
11	Parthenope	1850, May 11	de Gasparis	9.3
12	Victoria	1850, Sept. 13	Hind	9.7
13	Egeria	1850, Nov. 2	Hind	9.7
14	Irene	1851, May 19	de Gasparis	9.7
15	Eunomia	1851, July 29	de Gasparis	8.6
16	Psyche	1852, Mar. 17	de Gasparis	9.6
17	Thetis	1852, Apr. 17	Luther	10.1
18	Melpomene	1852, June 24	Hind	9.3
19	Fortuna	1852, Aug. 22	Hind	9.8
20	Massalia	1852, Sept. 19	de Gasparis	9.2
21	Lutetia	1852, Nov. 15	Goldschmidt	10.1
22	Kalliope	1852, Nov. 16	Hind	9.8
23	Thalia	1852, Dec. 15	Hind	10.5
24	Themis	1853, Apr. 5	de Gasparis	10.8
25	Phocaea	1853, Apr. 7	Chacornac	10.5
26	Proserpina	1853, May 5	Luther	10.5
27	Euterpe	1853, Nov. 8	Hind	9.7
28	Bellona	1854, Mar. 1	Luther	10.1
29	Amphitrite	1854, Mar. 1	Marth	9.0
30	Urania	1854, July 22	Hind	9.9
31	Euphrosine	1854, Sept. 2	Ferguson	11.0
32	Pomona	1854, Oct. 26	Goldschmidt	10.6
33	Polyhymnia	1854, Oct. 28	Chacornac	11.8
34	Circe (Kirkeia)	1855, Apr. 16	Chacornac	11.5
35	Leukothea	1855, Apr. 19	Luther	12.2

sky. Humboldt was a most methodical man.

But then Sir John Herschel, in his *Outlines of Astronomy* would write: "We have ourselves heard it stated by a celebrated Optician, that the earliest circumstance which drew his attention to astronomy, was the regular appearance, at a certain hour, for several successive days, of a considerable star, through the shaft of a chimney." Humboldt quickly struck up ephemeral friendships with professional chimney-sweeps, who all assured him that they had never seen stars through their chimneys in daytime. But it seemed to them that the stars seen through a chimney at night seemed to be enlarged.

In short, there is nothing to the story. It is, of course, possible that Jupiter or Venus happen to be in the piece of sky visible through a slanting mineshaft. But if they are visible under these conditions they would also be visible from the top of this shaft, provided you know where to look for them.

I have been trying to find a list of the larger asteroids but my local librarian has not been able to help me. One other question: does any asteroid ever become a naked-eye object?

(Mrs.) Diana Fields
Trenton, New Jersey

Well, I can oblige you with a list of the first 35 asteroids, which is sure to include most of the largest of them. (Some of the Trojan asteroids, in the orbit of Jupiter, are quite large but are not in this list because they were discovered quite late.) No asteroid ever reaches visual magnitude 6, which is usually considered to be the smallest magnitude visible to the naked eye. I may add here that the well known astronomer Dr. Bobrovnikoff once told me that he found many people, among his students, I presume, which could see stars of magnitude 7 under fine conditions. But for normal eyesight, or eyesight corrected to normal by glasses, and under normal conditions you can't hope to see an asteroid without the aid of a telescope.

In a newspaper article about life forms of other planets it was mentioned that there are life forms which do not feed on organic substances like animals and do not need sunlight, like plants. Can you tell me more about them, if they really exist?

Dave McGuire
Rutherford, New Jersey

Yes, they do exist, but one could say that they do depend on plant life even though they do not eat vegetable matter. Plants, remember, use a process called photosynthesis. They can convert simple chemical compounds into complicated so-called organic compounds, provided liquid water is present and there is sunlight as an energy source. The by-product of photosynthesis is free oxygen. The life forms which do not live on vegetable matter but do not need sunlight either utilize a process called chemosynthesis. They are a special group of bacteria which have names like nitrogen bacteria, methane bacteria, and sulphur bacteria. They can build up complex molecules from simple molecules without needing sunlight, but they do need oxygen. As a rule one does not consider oxygen a "vegetable matter" since it is a chemical element. But in the ecology of a whole planet it is practical to remember that free oxygen would not exist if the plants did not keep making it; without a steady production of more oxygen, the oxygen that happens to be in a planetary atmosphere would quickly be used up by oxidizing whatever can be oxidized.

— WILLY LEY

★ ★ ★ ★ ★

Each year the World Science Fiction Convention awards trophies to the best science fiction of the year in several categories. As a service to readers who would like to nominate their favorites for this honor, we publish the following ballot. This is for nomination only. A later vote on the five highest in each category will determine the award winners.

1962 HUGO AWARDS NOMINATION BLANK

20th World Science Fiction Convention • P.O. Box 4864 • Chicago 80, Illinois. Please enter my nominations in the following categories. I feel this is the best science fiction published during 1961 and should be considered for recognition at the Annual Hugo Awards Banquet on September 2.

1. Novel _____
2. Short Fiction _____
3. Dramatic Presentation _____
4. Professional Artist _____
5. Professional Magazine _____
6. Amateur Magazine _____

To become a valid nomination, this blank must be signed with name and address and postmarked by midnight April 20. Only Convention members will receive a voting ballot, distributed June 5 with the 4th issue of the Progress Report; a $2.00 membership fee, payable to George W. Price, Treasurer, will insure your vote and enter your subscription for the Progress Reports.

Name _____

Address _____

City _____ Zone _____ State _____

I already hold convention membership #_____

CHICON III • Pick-Congress Hotel • Chicago • August 31 — September 3

It was one of those days — perhaps you've had them — when everything went right!

THE LONG SILVERY DAY

By MAGNUS LUDENS

"LET'S go slumming," said Powers-of-pearl. "Let's give an earthman his wish for a day. We haven't played that game in ages."

"How do we pick him?" Firepride asked indulgently. "Phone book?"

"Intensity's more fun. But no more nomads, I got so bored putting connoisseur features on synthetic camels!"

Peter Stone put on his hat and started for the station. Every third step he inhaled and told himself: "It isn't that bad." Peter had a good job, a good wife, and commuting was wearing him down to a twitch. Sooty teeth-rattling train, Penn Station's steaming caverns, a soggy lurching bus, lunch down in sun-seared, exhaust-ventilated streets and the ride home . . . as the hated maroon dot of his train appeared, a convulsion of revulsion shook him.

"I *wish* it weren't that bad!" he thought with every fiber. And Powers-of-pearl, suffused with the glow of challenge, laughed.

Peter Stone, fighting at the newsstand, noted with annoyance that a crew of maintenance men swarmed about the train. "Broke down *again*," he thought bitterly. Halfway down his car two men ran a vacuum cleaner over the tired plush. Keeping pace behind them, two others aimed wide-mouth silver hoses upwards, spreading thick sheets of foam on the ceiling. It wasn't until Peter Stone unfolded his newspaper that he noticed how quiet had spread with that foam. Next, his ears registered with surprise the purr of freshly-oiled machinery, and his eyes the sight of a tree, for once without its double window screen of hair-oil and dried grime droplets.

When he boarded his bus, a maintenance man was just hanging a sign over the gagged fare box:

Due to Tax Readjustment,
Urban Transportation Free.

The driver, liberated from change-making and police duties, smiled a greeting at him. No crush in the bus, perhaps because there seemed so many about. The silver one coming towards him had a big green and white sign: DOWN FIFTH TO 33rd. WEST ON 33rd TO SEVENTH. PENN STATION LAST STOP. It was the first readable bus sign he remembered seeing.

Whenever the light turned red, he found, squads of maintenance men darted about the stopped cars and trucks, slapping silver cylinders over each exhaust pipe. He could hear snatches of explanations: "City ordinance," "Free service." As soon as a cylinder was in place, smoke and noise stopped coming out of the exhaust.

WHEN his hat sailed gaily towards the hook. Peter Stone realized that, incredibly, he wasn't tired. Work flowed through his fingers, his secretary smiled, his boss looked in once and whistled. At noon only the thought of paraffined carton coffee restrained him from staying in.

"Coming right up, Seventeen!" said the new silver grille next to the elevator button. Cheered, he clove the mindless rush downstairs and pushed inside a luncheonette where maintenance men were finishing the removal of every second stool and the reupholstery of the remainder with foam cushions. A smiling waitress brought him a menu and a pencil. Opposite each item was a small circle, and a line at the top explained: THIS IS YOUR MENUCHECK. PLEASE MARK WANTED ITEMS, DROP MENUCHECK IN SLOT.

Served incredibly fast, Peter Stone ate in blissful peace. On his way out he saw that the cashier's cage had been replaced with three silver cabinets with hoppers for Menuchecks and money, recessed cups for change and a turnstile each. When he walked through he found that he still had forty minutes of his lunch hour left.

Forty minutes! He could walk to a bookshop, or the park . . . walk, through exhaust fumes and the belches of airconditioner waste? But silver mesh covered the noissome vents. A cautious sniff assured him it worked.

He decided to walk to the Library newsstands for a foreign magazine. As he reached 42nd and Fifth an army of workmen were putting the last touches on a structure of dull silver that spanned the four sides of the intersection. Airy and elegant, with faint echoes of Library style, the quadruple arch provided the perfect finishing touch for the square. Each side was composed of three escalators and moving platforms in both directions, with a set of stairs and a promenade.

– Timidly, he set foot on the silver filigree. He was wafted up, across and down. Beneath him flowed a brilliant river of quiet cars. Fascinated, he took the trip back, then stood on the promenade watching the pattern, breathing in incredulous lungfuls of clean air.

The afternoon fled on newly silent feet. Once more he put on his hat to face the ride home.

HIS small, air-conditioned silver bus reached Penn Station ten minutes earlier than usual. By now Peter Stone was not overly surprised to see silver moving ways disappearing into the Station's maw, nor, once inside, to feel breezes that blew silently from silver gadgets like jet engines. He also accepted the waiting passengers dancing in the great lobby—the piped music there had long been excellent.

A low, pleasant voice announced his train in diamond-cut syllables that floated from silver-dollar speakers spangling the walls. Silver escalators swept to a bright platform covered in springy non-skid green plastic.

One wall of his train was made up of clear plastic sliding doors. Inside, there were deep pile carpets, reclining chairs, low blue overheads and movable reading lights. As the doors slid softly shut, Peter Stone remembered as usual the letter he'd forgotten to mail for his wife; but this time he could see a stamp machine and mail box at the end of the car. When he got up he saw that there were also milk, coffee, soda, fruit, cigarette, aspirin and newspaper vending machines, and three telephone booths.

The train glided to a hushed halt three minutes after a speaker at his elbow had murmured the name of his station. Before his wife's goggling eyes, Peter Stone bonded down the steps and ran to their car. She remembered that evening the rest of her life.

Powers-of-pearl let the silver evaporate, and with it the memory of it. "The best game yet," she smiled, leaning in happy exhaustion against Firepride's shoulder.

"You were magnificent," laughed Fire-pride. "One step ahead of an entire city!" Powers-of-pearl blushed radiantly.

No trace of their game remained. But for some obscure reason, Peter Stone decided that one day he would run for Mayor.

— MAGNUS LUDENS

STATEMENT REQUIRED BY THE ACT OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, JULY 2, 1946 AND JUNE 11, 1960 (74 STAT. 208) SHOWING THE OWNERSHIP, MANAGEMENT, AND CIRCULATION OF

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1. The names and addresses of the publisher, editor, managing editor, and business managers are: *Publisher* Robert M. Guinn, 421 Hudson St., New York 14, N. Y.; *Managing editor* Fred Pohl; *Business manager* None.

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5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: (This information is required by the act of June 11, 1960 to be included in all statements regardless of frequency of issue.) 91,000.

ROBERT M. GUINN, *Publisher*

Sworn to and subscribed before me this 12th day of October, 1961.

Jacques N. Glick, Notary Public, State of New York, No. 03-1457100. Qualified in Bronx County. Cert. filed in New York County. (Commission expires March 30, 1963)

The baby was lonesome, helpless and afraid. It wasn't his fault he was seven hundred feet tall!

By JACK SHARKEY Illustrated by GAUGHAN

BIG BABY

THE dancing green blip traced an erratic course upon the glossy gray screen, the jagged-line pattern repeated over and over, its outline going from dim to sharply emerald brightness to dim again before fading. The technician cut the switch. There was a sustained whir of reorganization within the machine as the data-cards were refiled.

"Care to see it again, sir?" asked the technician. His fingers hovered over the dials, his body in an attitude of impending motion.

Jerry Norcriss tilted his head in a brief, authoritative nod. The technician started the machine again. With a soft humming, the gray circular screen began to pulse once more with that dancing line of brightness.

"Now, here, sir," said the tech, "is where the scanner beam first caught the pulse of the creature."

Jerry nodded, his eyes riveted to that zigzag phosphor pattern upon the screen. He noted the soaring peaks and plunging valleys with something like dismay. "It's a powerful one," he marveled. It was one of his rare comments. Space Zoologists rarely spoke at all, to any but their own kind, and even then

were typically terse of speech.

The tech, almost as impressed by this — for Jerry — long speech as he had been by the first warning from Naval Space Corps Headquarters on Earth, could only nod grimly. His own eyes were as intent upon the screen as Jerry's.

"Here — " the line was glowing its brightest now — "here's where the creature passed directly beneath the scanner-beam. That's the full strength of its life-pulse." The line lost clarity and strength, faded. "And here's where it was lost again, sir."

"Time of focus?" snapped Jerry, trying to keep his voice calm.

"Nearly a full minute," said the tech, still blinking at the screen. It was now devoid of impulse, barren once more. "That means that whatever the thing is, it's big, sir. Damned big, to stay at maximum pulse that long."

"I know very well what it means!" Jerry grated. "The thing's so —"

The tech smiled bleakly. " — incredible, sir?"

Jerry's nod was thoughtful. "The only word for it, Ensign." His inner eye kept repeating for him that impossible green pattern he'd seen. The strong, flat muscles of his shoulders and neck knotted into what could easily become a villainous tension-headache. Jerry realized suddenly that he was badly scared . . .

"SIR," the tech said suddenly, "I was under the impression that the roborocket scanners couldn't miss a life-pulse on a planet. I mean, making a complete circuit of the planet every ninety minutes, for a period of six months . . . It's impossible for them to miss an uncatalogued life-form."

"I know it is," said Jerry Norcriss, pushing blunt fingers through his shock of prematurely white hair. "Save for two precedents, I cannot conceive of any way in which this pulse could have been overlooked."

"Two precedents, sir?" said the tech, intrigued both by the unsuspected fallibility of the scanner and by this unusual loquacity from the zoologist.

Jerry removed his gaze from the screen and regarded the young man standing beside it. He made as if to reply, then thought better of it. Any out-going on his part was an effort. A big effort. And a danger. Only another Space Zoologist would understand the danger of speech, of letting loose, of relaxing for a moment that terrible vigil over one's personal psychic barricades.

"Skip it," he said abruptly. The young ensign's smile tightened to obedience at the words.

"Yes, sir," said the tech, with strained cordiality. "Will that be all, sir?"

"Yes," said Jerry. Then, as the tech started out of the compartment, "No, wait. Tell Ollie Gibbs in the Ward Room to bring up a pot of coffee. Black."

The man nodded, and went out the door, dogging it after him.

Jerry listened to the booted feet clanking on their magnetic soles up the passageway of the spaceship, and sighed.

The situation, in Jerry's experience, was fantastic. Only twice, in the history of Space Zoology, had there been oversights on the part of the scanners. One, almost comically, had been on Earth, when the scanners were first being tested. The chunky roborocket — its angles and bulges and tapering pickup-heads unsuitable for flight in any medium but airless space — had swept giddily about the planet, the sensitive pickup-heads recording and filing on microtape the patterns of the life-pulses of all sentient life below. And when the tape had been translated onto the IBM cards, and the cards run through the translation chambers, to get their incomprehensible sine-patterns changed into readable English, it was found that there was an animal missing.

Six months of circling the planet had still left the index blank on that animal's expected check-pattern. The animal was the brown bear, of north central America. And only after agonizing hours of theorizing and worrying did someone come up with the answer to the dilemma:

It had been a long, hard winter. The bears were in extended hibernation. Somehow, the fleeting flicker of their subdued life-pulses had never managed to correspond with the inquisitive sweep of the scanner-beams from the blackness of space overhead. And so, they'd been left off, as though they did not even exist.

A lot of sweat was dabbed from relieved foreheads in the Corps when a secondary roborocket, sent into a short one-week orbit, had picked up the animals' pulses with ease as soon as springtime was upon the land. The odds against their being thus missed were fantastic, astronomically unlikely. But it *had* happened, despite the odds against it, and the Corps was forcibly reminded that in a universe of planets, there is infinite room for even the unlikely to occur.

The only other oversight had been years later, when a just-settling colony had been half-destroyed by a herd of immense beasts similar to the buffalo of Earth, but viciously carnivorous. There had been no indication, in the six-month scanning period,

that such a species even existed on the planet, the third planet of Syrinx Gamma, the sun of a newly discovered system beyond the Coalsack.

The reason was maddeningly simple. The herds were migratory. Their migrations had corresponded in scope around the oceanless planet with the sweep of the scanner-beam in such a way that the roborocket was scanning either where the herd had just been or where it had not yet arrived. Again, the odds were fantastic against the occurrence. Yet, again, it *had* happened. Other than these two events, though, there had been no further error on the part of scanners for nearly a decade.

Precautions had been taken against recurrence.

Roborockets were now sent to scan a planet only at a time when there would be an overlap of seasonal climes, so that the beam would inspect the surface throughout both the mild and the rigorous weathers, thus obviating a repeat of the brown bear incident. And the sweep of the beam had been extended, so that no animal with migratory movement at speeds less than that of a supersonic plane could have avoided being duly detected and catalogued. That, they thought, should prevent any more such incidents.

All that Jerry knew.

AND yet, here he was, descending through the black vacuum of space toward an already-colonized planet, the second planet of Sirius, a planet supposedly already scanned, catalogued, and long-since ready for inhabitation. And now, after the colonials had been there for nearly five years, something was starting to wipe them out. Some unsuspected alien thing was present on the planet, a thing that a hastily lofted roborocket had located in a matter of hours, and yet had missed in its original six-month orbital check, before the settlers came.

It was impossible. Incredible. And yet, again, it *had* happened — *was* happening — and had to be stopped.

A frantic appeal had been beamed to Earth through subspace, an appeal for a Space Zoologist to find the alien, Learn its weaknesses, and recommend its mode of destruction.

"Some day," Jerry mused, waiting impatiently for Ollie Gibbs with the coffee, "I'll come upon an invincible alien. What recommendation then!" He could just imagine himself telling a second-generation village of hardshell settlers that they'd best just pack up and get out . . .

Jerry's ruminations were interrupted by the soft tap on the door that meant Ollie had arrived.

He grunted an answer, and the ship's mess boy came in, his face rigid in an expression of polite decorum as he set the steaming pot and drab plastic cup down on the swing-out table at Jerry's elbow.

Jerry sensed the man's eyes flickering onto him each time the mess boy felt the zoologist wasn't looking his way. He finally turned and caught the youth in mid-stare.

"What is it, Ollie?" said Jerry, not unkindly. "You'll burst if you don't talk. Go ahead, spit it out."

Ollie flashed a brief grin, a dazzle of white teeth that was all the brighter in his bronze face. "If I'm bursting with anything, sir, it's just plain nosiness."

JERRY glanced from Ollie to the wall clock — spaceship clocks were always set at Eastern Standard Earth Time — and sighed. He was cutting it terribly close this time. Suddenly, he wanted very much to have someone to talk to. It didn't matter, all at once, that he'd be exposing himself to danger by relaxing his mental grip on himself. If the ship were not landed and his job begun within two hours he'd be no worse off speaking than if he'd kept still.

"Sit down, Ollie," he said abruptly.

The mess boy's eyebrows rose at this unheard-of request, but he perched obediently in a chair, almost poised for flight on the edge of the seat. To have a chat with a Space Zoologist was without precedent in Ollie's experience.

Jerry carefully poured himself a cup of coffee, took a sip and settled back comfortably in his chair. "What's on your mind, Ollie?"

"Like I said, sir, just plain nosiness. I — I can't get over you Learners, sir, that's all. I always wonder what gets you into the business. Why you stay in it so long, why you die so quick if you quit the Corps, or — Well, like that, sir."

"Just general curiosity about my *raison d'être*, huh?" said Jerry. He wasn't trying to floor the mess boy with a four-dollar word; even the lowliest crewman on a spaceship had been chosen for brainpower, long before brawn came into consideration at all.

"That's about it, sir." Ollie nodded. "I mean, I watch you, sir, when you come out on these trips. You get all keyed up and worried and sick-looking, and I keep wondering, 'Why does he do it? Why doesn't he get out of it if it affects him like that?'"

Jerry stared ruefully at the wall before him, and didn't meet the mess boy's eyes as he replied.

"Every man gets keyed up and scared when he has an important

undertaking at hand. It's just worry, plain and simple. The thought of failure keeps me all tightened up."

Jerry paused, awaiting a response. When none was forthcoming, he turned his gaze slowly to meet that of the mess boy, hoping he was doing it casually enough to allay anything like suspicion in the other man. But the smile he met was, affectionately, the smile of a man who hasn't been fooled.

"That's not it, sir," said Ollie. "I know it's not. Because you're keyed up the wrong way. You're keyed up with worry that you *won't* have a job to do. Your big upset's a lot like a — Well, like a junky waiting for his next fix . . . If you'll pardon the expression, sir."

"I will *not* pardon it!" Jerry bawled, then gripped the arms of his chair and shook his head in instant apology as the other man's face went slack with surprise. "No, Ollie, no. I take that back. I *asked* you to sit there, *told* you to let me know what was on your mind. I can't very well blow up just because you followed my lead."

"Everyone blows up, now and then, sir," Ollie said.

Jerry nodded glumly.

Ollie got up. "I'll be in the ward room, sir, if you need anything else," he said. "Unless you'd like me to stick around awhile?"

Jerry considered the offer, then shook his head. "No . . . I'd better not, Ollie." The barest ghost of humor glowed a moment on the zoologist's face. "You're too damned easy to talk to."

"Yes, sir," Ollie grinned, then went out and closed the door after him.

Jerry sat in the chair a second longer, then jumped up and pulled the door open again. Ollie, a few steps down the passageway, turned about in curious surprise.

"Sir?"

"Tell Captain — " Jerry began, then realized his voice was nearly a ragged shout, and lowered it. "Would you please tell the captain to speed things up if he can, Ollie?"

Ollie hesitated. "The vector — " he started, then stiffened militarily and replied, "Yes, sir. At once, sir."

"No," Jerry groaned, closing his eyes and hanging onto the metal edge of the doorframe. "Forget it. He's got a course to follow in. He can't get there any faster."

Ollie, knowing this already, just stood there.

"Just go have a cup of coffee," Jerry added, lamely. "And about what I said — "

"*You* know I wouldn't say anything about it, sir," Ollie said.

"I know," Jerry admitted. "Sorry. Space nerves or something of the sort, I guess."

"Sure, sir."

The mess boy turned and continued down the passageway. Jerry shut the door slowly, then sat down in his chair once more, and stared at the clock, and sipped the hot coffee, and fought the cold needle-pricks of fear in every muscle and joint of his body. . .

II

THE colony on the second planet of Sirius existed solely due to one of those vicious circles of progress. Just as iron is needed to make the steel to build the tools and equipment necessary to mine the raw iron ore, so this colony was needed to mine the precious mineral that made such colonies possible in the first place.

The mineral was called Praesodynimium, a polysyllabic mouthful which meant simply that it was an unstable crystalline isotope of sodium that broke down eventually into ordinary sodium (hence "prae-":before; "sod-":sodium), which was possessed of extreme kinetic potentials ("dyn-":power), and was first extracted from sodium compounds by a Canadian scientist ("-imium" instead of the more American "-inum" or even "-um").

This crystal had the happy habit of electrical allergy. When subjected to even a mild electric current, it avoided the consequent shakeup of its electronic juxtaposition by simply vanishing from normal space until the power was turned off. The nice part about its disappearance — from an astronaut's point of view — was that the crystal took not only itself, but objects within a certain radius along with it. It turned out that a crystal of Praesodynimium the moderate size of a sixteen-inch softball would warp a ninety-foot spaceship into hyperspace without even breathing hard. Of course, it would warp anything *else* within a fifty-foot radius, too; so it was only turned on after the ship had ascended beyond planetary atmosphere, lest a large scoop of landing-field, not to mention a few members of the ground crew, be carried away with the ship.

In her eagerness to investigate the now-attainable stars, Earth had soon exhausted her sources of the mineral. Worse, the crystal, being unstable, had a half-life of only twenty-five years. That meant that a ship using it had a full-range radial margin of about five years before the crystal ceased warping the ship-inclusive area.

Until some way was discovered to get into hyperspace without using Praesodynimium — and its actual function was as much a

mystery to scientists as an automobile's cause-and-effect is to a lot of drivers; very few people can describe the esoteric relationships between the turning of the ignition key and the turning of the rear wheels — the mineral was worth ten times its weight in uranium 235.

Sirius II had been found to be as rife with the mineral as a candy store is with calories. Hence the colony.

For so long as the ore held out the planet would be regarded with fond respect and esteem by any and all persons who had investments, relatives or even just interest in the Space Age and its contingent programs.

SO it was with considerable trepidation that Earth received the news that the mines on Sirius were no longer being worked. Oh, yes, there was still ore — enough to keep the planet profitable for another century. The trouble was the miners. They weren't coming out of the mines anymore. And no one who went inside to look for them was ever seen again, either.

Naturally, mining slacked off. The men refused to set foot in the mines until somebody found out what had happened to their predecessors.

So the officials of the colony resurrected a scanner-beam and roborocket from the cellar of the spacefield warehouse and storage depot. They sent the rocket into an orbit matching planetary rotation. In effect it simply hovered over the mines while it scanned the area for uncatalogued alien life.

And when they brought the rocket down and checked the microtape against the file of known species on the planet, they found that no such beast had ever been catalogued. Its life-pulse gave a reading of point-nine-nine-nine.

Since lifepulses are catalogued on a decimal scale based on the numeral one (with Man rated at point-oh-five-oh), the colonial administration staff immediately ordered the mines officially closed and off-limits. This brought no results on Sirius II which had not been already achieved, but the declaration made the miners feel a little less guilty over their dereliction of duty.

An SOS was swiftly sent to Earth, explaining the situation in detail and requesting instructions.

Earth sent word to hang on, keep calm and leave the mines closed until an investigation could be made — all of which the colony was trying to do anyway.

A duplicate of the microtape had been transmitted along with the SOS. Earth had checked the pattern against every known species filed in U.S. Naval Space Corps Alien-Contact Library, a collection of the vast alien multitude gathered by Space Zoologists in the methodical colonization and exploration of the universe. It was found to be not only *unknown* anywhere in the thus-far-explored cosmos, but totally *unlike* any life-pulse previously encountered.

Earth decided the only way to get any satisfaction would be by the unorthodox method of sending in a Space Zoologist to Contact the alien, though this would be the first time in the history of Contact that this had ever been done on an already-settled planet.

And so the badly frightened colony lingered behind bolted doors, and peered through locked windows at the sky — awaiting the arrival of Jerry Norcriss, and praying he'd locate the alien and tell them how it might be dealt with . . .

"BEGGING your pardon, sir," grinned the tech, doing some last-minute fiddling with the machine, "but you never had it so good." Jerry dabbed at the cold sweat-film on his forehead and upper lip, and nodded silently.

In all his previous Contacts, done before any colonization was even attempted, things were a bit more rustic. His present environs were luxury compared to those setups. If the six-month orbit of the roborocket found the planet safe for humans, well and good; Jerry did not have to go. But if a new life-form were spotted — one that did not correspond in life-pulse to any known species — then it was Jerry's job to land on the planet and Learn the beast, to determine its probable menace, if any, to man.

The tech was referring to the fact that Jerry's usual base of operations was out on the sward beside the tailfin of the rocket, the only power-source on a non-colonized planet. There, in his Contact helmet, relaxed upon his padded couch, he would let his mind be sent right into that of the alien, to Learn it from the inside out. Here, though, on a settled world, his accommodations were pleasantly out of the ordinary. He was in the solarium of the town's research laboratory-hospital. He gazed up through quartz panes at soothing blue skies, in air-conditioned comfort spoiled only by a fugitive scent of disinfectant lingering in the building.

Some half-dozen curious members of the building's staff were gathered in the room. None of them had ever seen a man go into Contact before. In vain the tech had assured them, before Jerry's arrival, that there was nothing to be seen. Jerry would lie on the

couch and adjust the helmet upon his head, and then the tech would throw a switch. And for forty minutes there would be nothing to see except Jerry's silent supine body.

Later, of course, the information transmitted by Jerry's mind through the helmet pickups to the machine would be translated into English. Then they could all read about the new animal. That would be the interesting part, for them; not this senseless staring at the young man, white-haired at thirty-plus, who would, so far as they'd be able to tell, merely doze off for an uneventful forty-minute nap.

For Jerry, however, things would be anything but dull for those forty minutes.

Once the process was begun, there was no way known even to the discoverer of the Contact principle to extend or reduce the time-period. When Jerry's mind had traveled to that of the alien, he would remain there for the full time. Anything that happened to the alien in that period would also happen to Jerry. Including death.

If the alien somehow perished with Jerry "aboard," as it were, the group in the solarium would wait in vain for him ever to bestir himself and rise from the couch again.

Jerry, fighting the waves of nausea that burned in the pit of his stomach, lay there in his helmet and waited for the tech to finish adjusting the machine.

A scanner-beam, sent toward the suspected locale from the solarium, had instantly retriggered that same green blip in response, as jagged and powerful as before. Jerry would soon be sent right into the center of the response-area, and his mind imbedded in the brain of the alien.

"Hurry it up, will you?" Jerry called over to the tech, trying not to shout.

"Ready, sir," the other man said abruptly. "Are you all set?"

"All set, Ensign," Jerry replied, then shut his eyes to the clear blue sky and the stares of the curious and let his mind relax for the brief shock of transport . . .

A flare of lightning, silent, white and cold in his mind — and Jerry Norcriss was in Contact . . .

ONE of the nurses, crisp and efficient in white starched cotton, took a hesitant step toward the figure on the couch, then spoke to the tech without looking at him, intensely. "What are his chances? It's so important that he succeed!"

About to brush her off with a noncommittal reply, the tech turned his gaze from the control panel to meet, turning to face him, a pair of the deepest blue eyes he'd ever seen, and a smooth-

skinned serious face beneath a short-cropped tangle of bright yellow hair. The eyes were troubled. His manner softened instantly.

Trying not to show the sudden warmth he felt, he pointed with offhand authority at the tall metal machine, its face alive with leaping lights and quivering indicator needles.

"This'll tell the story, one way or the other," he said. "A Space Zoologist's chances are always fifty-fifty. He either succeeds and returns in perfect health, or he fails and doesn't return at all. But whatever data he picks up in Contact will be punched onto the microtape. It may help us deal with the menace. Or it may not."

She looked surprised. "Then this is simply a recorder? I'd thought it was the thing that sent his mind out to the mine area . . ." She faltered on the last few words, and looked more concerned than ever.

The tech was tempted to ask her about it, but decided to stay on the neutral ground of simple mechanics for a while. "No, his mind sends itself. That is, the helmet triggers a certain brain-center; his mind follows a scanner-beam directed toward the alien and he Contacts. After that, this machine could be turned off, so far as maintaining Contact goes. After a forty-minute interim, his mind would return to his body by itself. The brain-center gets triggered sort of like a muscle reacts to a blow. It gets paralyzed for a certain time. Forty minutes. Beyond that limit, or short of it, no Contact or breaking of Contact is possible . . ."

His voice trailed off as he realized her responsive nods were abstracted and vague, her thoughts elsewhere. "Look," he said awkwardly, "I'm no psyche-man, but — maybe it'd help if you talked about it."

A faint smile touched her mouth. "I didn't realize it showed."

He grinned and shrugged.

"My name's Jana," she said. "Jana Corby." She was trying to ease some of the natural tension between strangers.

"Bob Ryder," said the tech. He stood and waited for her to make the next move.

"My father — " she said, and for the first time, some of the tension behind her eyes flowed over into her voice. "My father was one of the miners. He was on the morning shift. The day the men didn't come home was the day before my wedding."

Bob frowned. "I don't understand."

SHE blinked at the moisture that had come to her eyes, and flashed him a sad little smile.

"I'm sorry. I was telescoping events. You see, with Dad missing, I postponed the ceremony, naturally, till I could learn what had happened. Jim — that's Jim Herrick, my fiance — was wonderfully understanding about it. He's a miner, too. On the night-shift, thank God. But if Lieutenant Norcriss doesn't succeed — if he can't find a way to destroy this beast, whatever it is — we can't get married, ever."

Bob shook his head slowly. "You can't? I don't follow."

"You're in the Space Corps," she said. "Maybe you don't know about interstellar colonies. It costs plenty to send people to the stars. The investors want some kind of guarantees for their money. So we're all signed to a ten-year contract. If we fail to fulfill the terms we're sent back to Earth on the next ship going that way."

"Well — I know you're still within the limit," said Bob, "but how does this upset your marriage plans?"

"We go where we're sent," she said simply. "If this colony fails, we'll be sent to a new planet. It may not be the same one. I'll be sent where they need nurses, Jim where they need miners."

Bob felt funny, talking against the colonial program, but the weary despair in the girl's eyes outweighed economic considerations. "You could both renege on your contracts."

"And go back to Earth together?" Jana shook her head. "I couldn't do that, for Jim's sake. He's spent his life at mining, and this is the kind of mining he knows best: Praesodynimium. And there just *is* no more on Earth."

"He could get something else," said Bob.

"I know. But he might not be happy. After a while, he might blame me for it. Or I'd blame myself. Either way, things just wouldn't be the same. I — I suppose you think I'm foolish, feeling so strongly about him?"

Bob said softly, "Honey, any guy would cut his arm off to get a girl like you. Myself included."

Embarrassed, she looked once more toward the silent figure upon the couch. "You're very kind."

"Not kind," said the tech. "Wistful."

Behind them, a myriad banks of lights and switches flickered shifted with electric monotony, slowly recording the details, down to the most minute sensory awareness, of the Contact between Jerry Norcriss and the alien . . .

III

THERE was at first the feeling of warm sunlight on his flesh, then a pungent scent of crushed

foliage, green and heady very strong and familiar.

As his mind took hold, a whisper of wind hummed into his consciousness and a shimmering golden brightness began to grow upon his closed eyelids. Abruptly, unity of sensation was achieved. Jerry Norcriss "was" in a sunlit part of the woods near the mines, feeling the alien's perceptions as though they were his own.

He crinkled his eyes against the glare, then slowly opened them.

As he blinked his eyes to focus the golden glare, he spotted a strange little cluster of tiny sticks, with miniature leaves sprouting greenly on thread-like branches. Halfway between his face and this fragile copse slithered a brilliant blue line, ribbon-thin, through a serpentine gouge along the earth. On the far side of this trickle lay a rich tumble of soft green velvet, ending at a group of more of those twig-copses. Puzzled, Jerry turned his gaze skyward. Within the warm blue canopy overhead he saw clouds . . . but clouds unlike any he'd ever seen for size. None of them could have been more than a foot in diameter. They hung against the sky like cotton-covered basketballs.

He returned his gaze groundward, and for the first time saw the scuffed grayish area of earth between himself and the trickle. A wiry network of metal glittered there, the wires in pairs, and the pairs disappearing into small square punctures against a wall of banked soil.

Then Jerry gasped. His mind had apprehended the implications of his vista so suddenly that he was staggered.

All the facts sprang into proper perspective. The twigs were actually tall trees, the tumble of velvet a wide stretch of grassy sward, the trickle was a rushing blue river, and the tiny wire-network in the grayish area was the tracks for the mine-cars, leading down into the planet through those tiny square adits.

Jerry had unconsciously been receiving sensations in terms of his host's size. A quick calculation showed him that his head must be easily five hundred feet in the air.

Cautiously, he glanced for the first time toward the body of his host, to see what sort of creature he was in Contact with.

There was nothing whatever to be seen.

Yet when he closed his eyelids once again, golden opacity returned. He reopened them thoughtfully. The alien, apparently, could cut off its vision. Yet the eyes of a creature so high must be many feet in diameter. And, at this height, twin opacities would be spotted even from the nearby town.

But so such sight had been reported. Therefore, the lids were opaque only from the inside. Which was ridiculous. Yet it was happening.

Jerry's thoughts were interrupted by a giddy realization. He, in this alien body, was not standing. He was seated cross-legged on the ground. That meant a height of not five hundred feet, but nearer seven hundred.

CAUTIOUSLY, he extended a hand toward one of the tiny mine-cars. He had a little difficulty directing a hand and arm he could not see; but, by feeling along the earth, he got hold of the dull gray object and tried to lift it. It came up with featherweight ease.

Then, halfway to his eyes, it began to glow, to smoke, to grow terribly hot. And as Jerry released it with a reflex of pain, it burst into white flame and hit the ground as a shapeless gobbet of molten slag. Jerry's hand came to his mouth automatically. He sucked and licked at the sore surfaces of his finger and thumb, trying to drain some of the hurt out of them.

Then he froze.

After a heartbeat, he felt carefully about the interior of his mouth with a forefinger. Gums. Warm, wet, soft-boned toothless gums. Whatever the alien looked like — it was still only a baby.

Which meant —

Quickly Jerry looked at the sky again. Not a cloud had moved. Their rotund fleeciness might have been carven there. He gave himself a mental kick. Hadn't one of his first alien awarenesses been the sound of wind? And yet the grass lay still. The trees stood silent. And the clouds, so nearly over his head that he could have touched one, hung quietly against a perfectly calm sky.

It was not the wind he had heard. It was air. Just molecules of air, as they shifted and flew about at incredible speeds.

The alien-baby's time-sense was occluded, as that of any Earth-baby, by shortness of life. It was the paradox of relative lifetime.

A lifetime, Old Peters had said, training the eager young men who were to become graduate Space Zoologists, is a lifetime. He'd written it on the blackboard so they might understand he was not speaking in circles.

"A lifetime," he'd said, "is the time one spends from birth until any present moment. A lifetime is the actual count of moments of existence from birth. When a baby has been born for an hour, its lifetime is sixty minutes. And

to the baby, that sixty minutes is a lifetime."

He'd written the two words on the board, and would point from one to the other as he spoke, so the class could understand the distinction visually, and not have to rely on his inflection to tell which term he'd used.

"A lifetime," he'd continued, "is subjective; a lifetime is objective. The first deals in one's personal sense of time passed. The second is simply readings from a clock. When a man turns ninety, he is usually surprised to find how short a life he's seemed to have had. His ninety years seem hardly longer to him than a single day seemed when he was a baby.

"It is a lucky thing that we cannot penetrate the mind of an intelligent creature. If any of us got into the mind of a baby, we'd soon start going out of our minds with the maddening length of a day's time, seen from a baby's viewpoint. Remember, when you are in Contact with an alien mind, for that immutable forty minutes your *sensation* of elapsed time will be subject to that of your host. To a baby, forty minutes is forever."

AND here Jerry Norcriss was, in a baby's mind.

No wonder no tree had rippled, no cloud had blown. The baby-senses were geared to a near-eternal forty minutes. For all practical purposes, Jerry was stuck in one frame of a movie film, trapped for who-knows-how-long till the next frame came by.

"*That's* why the car melted!" he realized. "The movement of the car toward me, in my hand, must have been infinitely shorter than the few seconds it seemed to take. I tried to make the mine car move more than five hundred feet, in an actual time less than a thousandth of a *second!*"

Jerry wasn't overly concerned about the duration itself. He'd been in subjectively-slow creatures before. If things got too boring, he could always doze off; that usually served to pass the time. Even a baby's time-sense jumps long gaps when it sleeps.

The thing that puzzled him was this: If the mine car had burnt up from moving too far too fast, why hadn't the baby's hand and arm been scorched by the motion? The heat of the car had affected it, so that let out inborn heat-resistance. . .

His hands once again went to his face. He felt not only the features — familiar features, eerily like a human baby's — but the skull-size. When he'd finished, he no longer had reason to doubt that the baby was of an intelligent species. Too much cranial allotment to think any differently.

The whole situation, Jerry mused with grim humor, was screwy. The six-month roborocket could not have missed a creature with such an intense life-pulse, but it had. Contact could not be achieved with an intelligent mind, but it had been. Invisibility — except for certain species of underwater creatures — was supposed to be impossible for a living organism. Yet here it was.

Three separate impossibles . . . all accomplished.

"Still," said Jerry to himself, "that's not the main puzzle. The vanishing of those two shifts of miners is still beyond me. They could, of course, have simply walked head-on into this invisible leviathan. But how fast can a man walk? And would they *all* have done it? Now, if this kid happened to pick one of them *up* —" Jerry gave a shudder at the thought of what had happened to that metal mine car. "Still," he sighed, baffled, "a man who bursts into flame is no more fun to hold than a hot mine car. After maybe two or three deaths at the *outside*, the kid would've learned not to touch them."

Then he had an even eerier thought. If this creature were a baby — where did its mother and father lurk?

The thought of two more invisible giants at large on the planet was unbearable.

JERRY decided to chance loosing control over the alien mind, to let its own instincts come to the fore.

There was the possibility that it knew where its folks were, and would try moving in that direction. Or it might cry for its mother, and she'd hurry back. If there *were* invisible giants, the sooner the colony was informed the better.

As Jerry's control of his host grew tenuous, he could feel the baby's mind taking over once again. Feeble pulsations reached him — nothing like solid thought, but mere urgencies about comfort, food and affection.

Jerry waited, in the background of the unformed mind, for something to happen. Then, suddenly, there was a shifting, something like a metal earthquake. A cold hard light of awareness focused on him, where he'd thought he was safely hidden in the background.

"Who are you?" asked the awareness.

It is not in so many words, of course. A mind speaks to another mind in incredibly swift shorthand. The actual thought-impulse that came to Jerry was a thick wave of curiosity, its stress laid upon identity.

"I am a Learner," Jerry's thought replied. It was a self-sufficient response, since Jerry's

concept of all that a Learner was was incorporated in the thought.

"I see," said the alien. "You have memories of antagonism which are now gone from your intent. Explain."

"I came to find a menace. I found a helpless child."

"I see," came the cold, thoughtful reply. "Yes, that is how I sensed it."

"Is your mother around?" asked Jerry. "Or father?"

"Dead," said the awareness. "I am alone."

At the thought, the intense thought of loneliness, a kindred spark flared in Jerry's own mind. The alien caught at the spark, recognized it.

"Strange," it said. "You, too, are alone. But it is a different aloneness."

Jerry's thoughts were whirling in confusion. To be read so easily by a baby was incredible to him. Yet the situation was without precedent. Perhaps a baby's mind was brighter than science gave credit. Since a mind needed no words or manual skills, the mind of a baby might be open to learn the thousand things necessary for adult survival. Maybe as a man learned to use his body, he forgot in proportion how to use his mind.

"How can you know my aloneness?" asked Jerry.

"I see it, there in your mind. It is plain to me. You have been misled. You are a helpless pawn of a singularly wicked scheme. The victim of a lie."

JERRY'S recollection flashed to his conversation with Ollie Gibbs, to the things he had wanted to tell the other man but was unable to put into words. All the heaviness he had borne alone these many years was apparent to this mind he enhosted. The alien mind knew. *Knew!*

"I see," it said again, though Jerry was unaware of expressing any conscious thought. "It is clear to me now. You have suffered much — will suffer much. No hope for you, is there?"

There was warmth in the words — warmth, friendship and compassionate understanding. Suddenly, to this mind of an alien in its incongruous, invisible baby's body, Jerry found himself blurting the things he had never told to any man. Things which no Space Zoologist had ever discussed even with another member of that hapless clan.

"They never told us," he said to the alien. "I don't hold any rancor because of it; they dared not tell us, lest we refuse to become one with them. They were fair, though. Long before we were indoctrinated, long before we'd been allowed to attempt our first Contact, we were told that there were dangers. Not the dangers we had heard about, such as the imminent peril of dying if the host died while we were in Contact. Another danger was implied, one which we could only learn of by actually becoming Learners, and one which — once we had learned of it — would be impossible to escape.

"With a little thought along the proper lines, we might almost have guessed it. For every action, there is an equal and opposite reaction. One of Newton's laws, applied in an area he did not even suspect existed.

"Oh, we were a brave, adventurous lot, all of us. We would be Learners; no alien mind but we could enter it, and actually become the alien for the period of Contact. Thrills, danger and hairsbreadth escapes would be ours. Ultimate adventurers, they called us. And all along, we were fools."

The alien refrained from comment, although Jerry could feel its mind waiting, listening, assimilating.

"Contact had a drawback. A basic one which we might have guessed, if we hadn't been going around with stars in our eyes and a delightful feeling of superiority over the men who would never know the interior on any minds but their own. In Contact, just as in sunbathing, there is a delayed reaction, a kickback."

"Sunbathing?" thought the alien.

Jerry's mind swiftly opened for the alien's inspection his full storehouse of information on the subject. In an instant, the alien apprehended the fate that lay in wait for the careless Space Zoologist —

"SURE IS warm in here," said Bob, running a finger around inside his sweat-dampened uniform collar.

"You have to be careful," said Jana, indicating the quartz panes that formed the ceiling and three walls of the solarium. "The quartz passes ultraviolet, unlike glass. You can pick up a severe burn if you sit out here too long without some sort of protection for your skin."

The tech nodded. "The insidious thing about sunburn is that you only turn a little pink as long as you're out in the sunlight. It's when you've gone indoors, or the sun has set, or you put your clothes back on that the red-hot burn begins to show up on your flesh."

"It's the light-pressure," said Jana. "As long as there's an influx of ultraviolet, the flesh continues to absorb it without showing much reaction. But as soon as you get away from the rays — the burns show up . . . I wonder how Norcriss is making out.

IV

"YOU mean, then," said the alien to Jerry, "that all the experiences you undergo in Contact are held back under the surface of your mind. waiting there until you let up on the incoming Contact experiences?"

"That's it," said Jerry, miserably. "In some of my Contacts, I've undergone pretty painful experiences. I've had an eye twisted out, an arm eaten and digested, been poisoned, nearly strangled — you name a near-death; I've been through it."

"And your reaction?" thought the mind.

"Nil," said Jerry, ruefully. "When I awakened from a Contact, my memory of my experiences was strictly a mental one. Like something I'd read in a book. There was no emotional reaction whatsoever. My heart beat its normal amount, my glands excreted normal perspiration, my muscles were relaxed. Not a trace of shock or any other after effect."

"And later?" the mind asked gently.

"Back on Earth," said Jerry, "the Space Zoologists have a thing we call the Comprehension Chamber. It's a room filled with couches and helmets, in which we can listen — through replayed microtapes — to all the Contacts our confreres have ever made. Perhaps 'listen' is a weak word. For all practical purposes, *we* are in Contact, so long as the tape runs. I thought this room was a wonderful adjunct to my education, but nothing more. I went there a lot at first. It was even more fun than the real thing because there was no danger of perishing. Tapes of zoologists who died while in Contact are never used in the Chamber."

The mind waited, listening patiently.

"So one week — " Jerry's mind gave a mental twinge akin to a physical shudder — "one week I got bored. I decided not to go to the Comprehensive Chamber. I went out on a few dates, instead. Tennis, the movies, like that. And on the third day, I woke in the morning with a heart trying to pound its way through my ribs, with my bedsheets dripping with cold perspiration, and lancing agony in my eye, my hand knotted into a fist of pain, lungs burning for air . . ."

"Delayed reaction," said the mind.

"Yes," said Jerry. "That was it. I recognized the pains right away, having been through them personally in Contact only a month before them. I had a horrible inkling of what was occurring. I called the medics at Space Corps Headquarters before I passed out. They came, shot me full of morphine and stuck me into a helmet for twenty-four hours straight, to cram my reactive agonies back beneath an overload of vicarious Contacts. It worked pretty well. The pain was gone when I awakened. But my nerves weren't the same afterward. I used to look forward to Contacts because I enjoyed them. Now I look forward to them because I dread what will happen if I don't have another one in time."

"In time?"

"I FIND that I *must* get to a Contact — real or vicarious — at least once in forty-eight hours. I've been trapped by my job. I'm doomed to do this job or die horribly. Some men, desperate for escape from this treadmill, have quit the Corps, tried to battle this kickback-effect. None of them have made it. They were found, all of them, in various states of agony. Dead, broken, burnt, torn . . ."

"Psychosomatic pressures?" asked the mind.

"Yes. Their minds, overborne by their emotions, self-hypnotized them into re-undergoing their experiences. And their bodies, duped by their minds, reacted. On a normal man, a hypnotically suggested burn can raise an actual blister. On a man who's opened his mind to the Contact-power — his body can break, burn, dissolve or even evaporate.'"

"Poor Jerry," said the alien mind, soothingly. A tingle formed slowly in Jerry's mind, a growing warmth, a vibration of utter affection. He was being consoled, being loved by the alien. It knew his troubles. It understood the sorrow of his life. It wanted only to keep him close, to tell him not to be afraid, to make him happy, comfortable, safe . . . Safe, and secure, and —

The glare of silent lightning leaped through Jerry's consciousness, jerking him back from the unnervingly delightful torpor he'd been letting overcome his thoughts.

Something hard bumped against his forehead. He realized that he'd just sat up on the couch, knocking the helmet from his head with the shock of the breaking Contact.

"Sir!" said the tech, pausing only to snap off the circuit switch before dashing to his side. "What the hell happened? I never saw you break Contact like that! Did you see the alien? Can it be destroyed?"

Jerry groaned, tried to speak, then fell back onto the thick padding, unconscious.

"What's the matter with him?" cried Jana, sensing the fright in the tech's attitude.

"I don't know," he whispered.

"I've never seen him act this way before. Whatever's out there, it's unlike anything we've ever encountered before! Here, you get some of your medics up here to see to him. I'm going to process this damned tape and see what's what!"

Her face pale, Jana hurried off to do his bidding. The tech began to reset the machine so that the coded information on the tape might be translated into legible words.

And Jerry Norcriss lay on the couch, sobbing and groaning like a man on the rack, although his mind was blanked by merciful unconsciousness.

"A baby?" choked the tech. "That thing out there is a *baby?*"

"Does the tape ever lie?" sighed Jerry, relaxing against the plump white pillows Jana had arranged under his back and shoulders.

"Well, no," faltered the tech. "But a baby! Five hundred feet high — and invisible — and able to carry on an intelligent conversation?"

"Which reminds me," said Jerry, sternly. "I am going to ask you to edit both the tape and that typewritten translation of that conversation. It's just as well too many people don't get the inside story on my job, and its rather rugged drawback. And as for yourself. . . Well, I can't order you to forget what you've read there."

"I won't talk about it, sir, if that's what you mean," said the tech. "It's not such a hard secret to keep. All the crewman on the ship know there's *something* pretty awful about your job. I just happen to know *what*. All I'd get for spilling the inside dope would be, 'Oh, is *that* what it is!' Hardly worth it."

"That's hardly a noble reason to keep a secret," Jerry murmured, looking narrow-eyed at the tech.

The man grinned, then shrugged. "Makes my life easy, too. Now when you flare up at me, I'll know why, and skip it."

"Thanks a hell of a lot," Jerry muttered.

The tech laughed aloud.

"But," the zoologist added soberly, "we did learn one surprising lesson today. The forty-minute Contact period can be broken, under certain stresses."

The smile left the tech's face, and he looked earnestly puzzled. "I don't follow you, sir. There was nothing on the tape about — "

"Tape?" said Jerry. "You *saw* how quickly I came out, didn't you? What's that got to do with the tape?"

"Sir," the tech said hesitantly, "you were under the helmet for the full forty."

Jerry flopped back upon the pillows, staring at the other man as if he'd suddenly gone berserk. "That can't *be*," he said slowly. "I was in a long-life host. The clouds weren't even moving. That baby was living many subjective days in the forty-minute period."

"Begging your pardon, sir," said the tech, "but you must be mistaken. You were gone the full forty."

"That's impossible," said Jerry.

Jana, who'd been standing back from the two men, stepped forward cautiously, apprehensive at butting into something that was not really her affair.

"Excuse me, Lieutenant Norcriss," she said softly, "but Bob's right. You were gone as long as he says."

"You don't understand, either of you!" Jerry snapped. "My time-awareness in a host is subject to the host's time-awareness. So far as this host was concerned, a day was a confoundedly long period. But I could tell the elapsed time by watching the clouds, the height of the sun. They didn't move, either of them, visibly . . ."

"How's that again, sir? asked the tech. "How long did you *seem* to spend?"

"Possibly an hour."

"Well, then." The tech shrugged.

"But this had nothing to do with the host's subjective sense of *time*, Ensign. It was my own knowledge of *objective* time through watching the sun, the trees, the clouds. None of them moved during my subjective hour in the host-alien. So no time — or very little time; barely a few minutes — could have passed while I was enhosted, do you see?"

"Lieutenant Norcriss," said Jana, abruptly. "I'm sorry to interrupt, but did you say clouds?"

"Yes," said Jerry, puzzled by her intensity. "Why?"

"There hasn't been a cloud in the sky today," she said awkwardly. "I mean — Well, look for yourself!"

Jerry turned his gaze upward through the quartz ceiling of the solarium. The sky, a rich turquoise, was smooth and unbroken save for the glaring gold orb of the sun, Sirius. He sat up then, looking out through the likewise transparent walls. As far as he could see, over storetops, cottage roofs, and distant green glades, the sky was that same unbroken blue.

"But that's crazy!" he said, sinking back against the pillows. "It couldn't have been like that all the time I was in Contact. Could it?"

Jana and Bob exchanged an uncomfortable look.

"Well, sir," the tech said, "we weren't exactly *watching* the sky, if you know what I mean. But it

was clear when you went into Contact. And it's clear *now*."

His voice trailed off, uncertainly, but Jerry gave a slow thoughtful nod. "You're right, Ensign. It is, and it was. The likelihood of its clouding up for forty minutes, and then clearing again is so ridiculous I can't even consider it . . . And yet, I *saw* —"

Jerry stopped speaking, and shook his head. Then he waved a hand at the tech, abstractedly. "Get me some coffee, Ensign. I have to think, hard."

WHEN nightfall had cloaked the planet in dark purple folds, Jerry was still gazing intently at nothingness, racking his brain for an answer. Bob, meantime, had checked the card against the ship's files on dealing with alien menaces, and had found — much as both he and Jerry had suspected — that there was no recommendation available. The menace was new. It would have to be approached strictly *ad libidum*. Whatever method served to rid the planet of the menace would then, not before, be incorporated into the electronic memory of the brain on the ship, to serve future colonies who might meet a similar alien species.

"Any ideas, sir?" asked the tech, after a long silence from his superior.

"None," Jerry admitted, not turning his head. "It's pretty damned difficult to find a solution to a problem until you're sure what the problem *is*."

"Well," said the tech, "we played the radar all over the area where the tape said the thing was located. We got nothing. Maybe the kid's mother came back."

"Just a second — " said Jerry. "Ensign, could you rig the machine to give us, not a written transcript of that alien's description, but a drawing of it?"

"Jeepers, sir!" choked the tech, taken aback. "I don't know. I'd have to talk with the engineers."

"It should be possible. Hell, it's got to be. When I was enhosted, my mind transmitted back every bit of info on that body. A man who only knew mechanical drawing could sketch that shape, simply by following the measurement specifications as my mind recorded them. Go on, Ensign, get with it. One way or the other, I want a look at what we're dealing with."

It was nearly midnight when Bob shook Jerry gently awake and handed him a small glossy rectangle of paper.

Jerry, blinking his eyes against the sudden onslaught of light in the room as the tech threw the wall switch, stared blearily at the paper for a moment, blank and disoriented.

"It's the picture, sir," Bob said, recognizing the bafflement on his superior's face for what it was. "I finally had the bright idea of turning the problem over to the brain, aboard the ship. It followed the specifications from the tape by drawing the picture in periods."

"In what periods?" Jerry mumbled, still trying to come awake.

"Not time-periods, sir. Punctuation. Then, when it had the thing done, on a ten-by-fourteen-inch sheet of feed-paper from its roller, I had the ship's photographer take a snapshot and reduce it in size, so it looks at least as good as the average newspaper halftone job."

Jerry nodded, absorbing the information even as his eyes crept over the image in his hands. "Looks strangely familiar," he said, studying it closely.

"If you'll pardon what sounds like a gag, sir," began the tech, "I think that the picture — in fact, we all think —"

"Yes?" said Jerry, looking at the man.

"Well, the consensus among the crew was that this baby here looks a hell of a lot like *you*, sir."

Jerry sat where he was, his eyes on Bob's face, for a long moment, as fingers of ice took hold of his spine. Then, with unreasoning apprehension, he turned his gaze back upon the near-photographic likeness he held. "Ensign," he said, after a minute. "This *is* a picture of me."

"But sir, it can't be," said the tech.

"You're wrong," said Jerry, letting the paper drop to the floor. "It can be, because it is. And all at once I think I know why."

Without warning, Jerry swung his legs over the side of the couch and jumped to his feet.

"Listen," he said urgently, "there's no time to lose. Get the hospital staff together, fast, and bring me back their best psycheman. I need a hypnotist."

"A h-hyp—?" the tech blurted, confused, then gave an obedient nod and hurried out, shaking his head all the way to the switchboard.

"NEVER mind *why*, Doctor. Can you *do* it? That's all I care to knew," Jerry's voice crackled, his eyes flashing with authority.

"Y-Yes, I think so," quavered the other man. "If you *can* be hypnotized, I mean."

"All Space Zoologists have the brainpower necessary to be perfect subjects," Jerry snapped. "Quickly, now, Doctor. I've wasted one Contact already."

"Very well, sir," said the man. "If you'll lie back, now, and make your mind blank —"

"I know, I know! Get *on* with it, will you!"

Bob and Jana stood back in the shadows beside the towering metal control board, listening in silence as the hypnotist put Jerry under, deeper and deeper, until his mind was readily suggestible. Then he made the statements Jerry had told him to make, and with a snap of his fingers brought the zoologist out of hypnosis.

"You heard, Ensign?" asked Jerry. "Did he do exactly as I told him to?"

"Sir!" protested the doctor.

"I mean no offense," said Jerry. "But if your words left my mind too free, too human somehow, the alien would sense it. And a ruse like this one might not work on a second attempt, once the alien had been apprised of our intent."

"He did, sir," said Bob. "Word for word, as you told it to him."

"Good," Jerry said. "Thank you, Doctor. And good night."

"Uh — yes," said the man, finally realizing he was being peremptorily dismissed after coming all the way across the town from his warm bed in the black morning hours. "Good night to you, sir."

HE fumbled his way out the door, and Jana, after a glance at Bob, shut it after him. Bob stood beside the control board, waiting as Jerry once more adjusted the helmet upon his head and lay back on the couch.

"All right?" he called to the tech, as Jana, now walking nervously on tiptoe, though there'd been no injunction against noise, hurried to Bob's side and took his arm.

"Ready, sir," Bob said, keeping his voice steady.

"You've set the stopwatch?" warned Jerry.

"I depress the starter the same instant I turn on the machine," said Bob.

"All right, then," said Jerry.

Bob's right hand threw a switch.

Even as it snapped home, his left thumb had jabbed down upon the stopwatch button. The long red sweephand began clicking with relentless eagerness about the dial.

On the couch Jerry stiffened, then relaxed.

"You'd better stay with him," Bob cautioned Jana. "The machine's on automatic. If I'm not back on time, it'll take care of itself."

"Back on time?" she gasped. "But you can't be, Bob. If what he said about the timing —"

Bob shut his eyes and gripped his forehead between thumb and fingers. "Yes, of course. I'm being an idiot. This maneuver is something new. But —" he withdrew his hand from his face and smiled at the girl — "you stay with him anyhow. I'd feel better — safer

— if you weren't with me and the others."

"Yes, Bob," she said, in a faint shadow of her normal voice. "Be careful."

Bob grinned with more confidence than he felt, turned and hurried from the room.

Jana moved slowly across the floor to the couch where Jerry Norcriss lay in unnatural slumber, and stood staring down at his strange, young-old face, and her eyes were bright with quiet wonder . . .

V

"WHAT'S this, what's this?" rasped Jerry's mind. "Where have I gotten to, now?"

"It's all right," said a soothing voice. "You're with *me*, now."

"Oh? Oh?" Jerry's mind said, snickering. "And who might *you* be?"

It was dark as he looked out through the alien eyes, but a quick patting of his paw across his face reassured him that his sharp white incisors, muzzle and stiff gray whiskers were intact and healthy.

"How can I be you?" asked Jerry. "If I'm a gray rat and you're a gray rat, what am I doing here?"

"You've come to spy on me, I know," said the soothing voice. "But see? You have nothing to fear, nothing at all. I'm not going to hurt you. You find no menace in me. Do you?"

"No. No menace. No danger. I'm safe, I'm secure, I'm warm and loved . . . "

"Relax," said the alien. "Relax, and let me have full control again. You can sleep if you do. You can rest. *I'll* take care of you, thrust in that."

"Yes. Sleep. Rest. No more running, hiding, fearing . . ." said Jerry Norcriss, the gray rat-mind in the invisible body of another rat much like himself . . .

"Come on with that flashlight, damn it!" Bob raged, leading the other three crewmen through the woods. Two of them carried rifles, one had a flamethrower, and Bob himself carried one of the new bazookas with a potent short-range atomic warhead. Ollie, the man with the light, hurried up to him with a quick apology.

"Okay, okay," Bob said. "But I've got to see this dial — Ah, yes. This is the way, all right. Come on. Ollie, keep that beam so it spills on the tracking-cone dial as well as on the earth. We don't dare risk losing our way. There are only seven minutes left until Contact is broken."

"Yes, sir. I'll keep it right on there," Ollie said. "But about the lieutenant — are you *sure* he won't —"

"That's what the stopwatch is for. We *must* strike just as Contact is being broken. Any sooner, and we kill Lieutenant Norcriss with the alien. Any later, and the alien kills us. The same way it did the others who came upon it."

"But what does it do? What does it look like?" Ollie persisted.

"Damn it, there's no time to talk now! Just keep that light steady, and hurry!"

The men plunged onward through the woods, the white circle of light from the arc-torch splashing the cold leaves and damp, colorless grass with sickly, stark illumination.

"IF YOU would only release your hold," the alien was saying. Then its mind-voice stopped.

Jerry, too, had seen the dancing white freckles that spattered the boles and branches of the nearby trees. The darkness of the woods was rent by streamers of ruler-straight light beams. They began to radiate like luminous wheel-spokes through the tangled leaves of the woods.

"Men!" cried the alien mind. "Men are coming here. Men, our enemies!"

Jerry, still in partial control of the invisible rat-body, fought the flight-impulse that began to stir beneath the unseen skin.

"Run!" shrieked the alien mind. "You fool, can't you see that we must flee this place? Quickly, or we are done for!"

"Run — Flee —" Jerry said dully, within the alien mind. "Yes. Run from men . . . the eternal enemy, men. Run, hide, a dark corner, under a bush, behind a tree . . ."

He felt his own mind joining that of the alien in the preliminary tension that comes before flight . . . Then the glaring beam of the arc-torch was full in his eyes, and the hypnotic illusion, at this, the trigger of his psyche, was shattered. And Jerry once again knew himself to be a man.

A man in the body of a rat — the animal which Jerry Norcriss loathed most of all creatures!

"Run!" screamed the alien. "Why don't you —!" Its commands ceased as it realized the difference within the mind that had invaded its body. "You again!" it cried, trying wildly to reassume the placid plump image of that unseen baby once more.

"You're too late," said Jerry, fighting its will with his own as the crewmen broke from the underbrush into the clearing, and the tech, pointing straight at him, yelled a caution to the man with the flame thrower. The man bringing up the terrible gaping mouth of that weapon halted, waiting, as the tech stared at the stopwatch in his hand.

"Five seconds!" cried the tech.

"Four . . . three . . . two . . . one . . . *Get* it, quick!"

Jerry, still within the mind and watching with the same horrified fascination as his host, saw the puff of flame within the flame-tube of the weapon, then saw the insane red flower blossoming with its smoking yellow tendrils toward his face —

And the silent white lightning flared —

And he sat up on the couch, back in the solarium.

JANA hurried over to him.

"Did it work? Did it work, sir?" she cried. "Is Bob —"

Jerry patted her hand. "Bob's all right. He was on time. *Just* on time."

"I still don't understand, sir," said the nurse, sinking onto the couch beside him without waiting for an invitation. "I don't understand *any* of this!"

For an instant, Jerry resented this familiarity, then felt slightly overstuffed, and slipped an arm paternally across her slim shoulders.

"I'll explain," he said. "It'll pass the time till he gets back."

Jana nodded.

"The alien," Jerry said softly, "was a mimic. A perfect mimic. It was, while non-intelligent, of an abnormally well developed mind in one function: telepathy. That's how it could carry on apparently intelligent mental conversation with me, during my first contact. It could sense my questions, then probe my mind for the answers I wanted most to hear — and play them back to me. For my forty minutes of contact, it told me only what I wanted to know, like a selective echo. It needed no understanding of my questions, nor of the answers it plucked from my mind. It had one instinct: self-preservation. It could sense my question, select an uncontroversial answer from my mind and feed it back to me, without really understanding how it warded me off as a menace to it, any more than a dog understands why lowering its ears and hanging its head as it whines can fend off the wrath of its master. It works; that's all the creature cares about."

"But how did you *know* —?" Jana asked.

"I didn't," Jerry replied. "It fooled me completely. Until the Ensign — Bob told me that my full forty minutes in Contact had elapsed, despite my knowledge that the sun and clouds had remained motionless during my Contact. That threw me, I'll admit, for quite a while. It just didn't make sense."

Jana's eyes widened as she suddenly understood. "And then you realized that you had seen the sun and clouds motionless because that was what you *expected*

to experience when enhosted in a baby!"

"That's it," Jerry nodded. "It made an error with the baby, though. It was able to duplicate it in almost every respect except two: Size and appearance."

"Why?" asked Jana. "And why appear as a baby at all?"

"I'M COMING to that," said Jerry. "The size was off because the first thing I saw when I blinked open my eyes was a distant copse of trees, which I took to be an upright pile of leafy twigs. Since my mind possessed information regarding the relative size of babies and twigs, the alien immediately made sure my mind saw other things in the same perspective. By the time it realized it had made an error, it was too late to normalize the baby's dimensions; that would have given its fakery away."

"But why did the thing choose a baby?"

"Because that was the thing's protection! It had a powerful hypnotic power, one that worked on its victims minds directly through its telepathic interference with sensory perception. It always appeared as the thing the victim would be least likely to harm. In my case, a baby. But it made a slight error there, too. I'm a bachelor, Jana. There's only one baby with whom I ever had any great amount of experience: myself."

"And the invisibility?"

"I have no recollection, even now, of my body when I was a baby. I may have stared at my toes, played with my fingers, but they just never registered on my consciousness as being part of *myself*. So the thing was stuck when it came to reproducing me visually, since it depended upon my own memory for details. But it was able to supply the way I'd *felt* as a baby. Every baby has an acute awareness of its own skin; it will cry if any particle of its flesh is bothered in the slightest. So the alien fed the 'feel' of my baby-body back to me, if not the view. Which is why the electronic brain on the ship was able to duplicate the detail into an almost perfect replica of my babyhood likeness."

Jana nodded, as she finally understood the meaning of that strange illusion. "And this time? That post-hypnotic suggestion you had the doctor give you, I mean: that you'd think you were a gray rat until such time as the light of the arc-torch caught you directly in the eyes . . ."

"Duplicity, Jana. It had to be that way. The alien was very sure of its powers. If I returned, and it were a baby again, I couldn't attack it or thwart its ends. And such an attack was necessary. I had to be able to fight it, to hold it in place for that last moment before it was destroyed. Which is why I chose a gray rat, an animal I cannot bear the sight of. When the light struck my eyes and I became myself again, I caught the alien unawares. Then, before it could change to a baby, and start lulling me back into camaraderie, it was too late. Bob had given the order to fire. And here I am."

HURRYING footsteps sounded in the corridor. The door burst open and Bob rushed in, his face anxious and creased with worry until he saw Jerry sitting on the couch, alive and well.

"Whoosh!" The tech expelled a mingled chuckle and sigh as he sank into a chair opposite the zoologist. "Well, sir, I can't tell you how glad I am to see you. I couldn't be sure you'd gotten out of that thing alive until I got back here. Glad you made it, sir. Damn glad!"

"That 'thing' you mentioned," said Jerry. "What did it *actually* look like?"

Bob jerked his head toward the corridor. "The other guys are bringing it along. I kind of thought you'd want a peep at it."

As more footfalls were heard from the corridor, Bob bounced to his feet again, and stepped to the door. "Hold it a minute, guys," he said, then turned back into the room. "Jana, I don't think you'd better stick around for this. It's not very pretty."

The girl hesitated, then flashed him a smile and shook her head. "I'll stay. It can't look as ugly as a bad case of peritonitis on the surgeon's table. If I can take that without upchucking, I can take anything."

Bob shrugged. "Suit yourself, honey. Just remember you got fair warning." He leaned back out the door. "Okay. Bring it in."

The crewmen, looking a little ill, came slowly into the room, bearing a bloated, scorched object on a stretcher they'd contrived from two long poles and their jackets. They set it onto the tiled floor before the zoologist, then stepped away, all of them wiping their hands hard against their trousers in ludicrous unison, though their grip on the poles had not brought them into actual contact with the alien's corpse.

"There it is, sir," said Ollie Gibbs. "And you are very welcome to it."

Jana, to her credit, had not upchucked, but she went a shade paler, and her mouth grew tight.

Jerry studied the burnt husk, from its sharp-fanged mouth — easily eighteen inches from side to side — to its stubby centipedal cilia under the grossly swollen body.

"Damn thing's all bloat, slime and mouth," said the tech, suddenly shuddering. "I wonder if its victims felt those jaws rending them open, or if it kept their minds fooled through to the end?"

"I don't think we'll ever know that, Ensign," said Jerry. "Unless you feel like going out there and playing victim to one of this thing's confreres?"

"No thanks, sir," said Bob, so swiftly that Jana laughed. "I'd rather fall out an airlock in hyperspace."

"WELL, here's what we do to get rid of this thing, then," said Jerry. "Since it assumes a form that's the least likely to be harmed by whatever presence stimulates its mimetic senses, we'll have to trick it. Before this thing decomposes too far, rig it up with an electrical charge, and stimulate its nerve-centers artificially. That ought to give you an accurate microtape of its life-pulse. Then hook the tape to a scanner-beam, and *send* the life-pulse into the mine-area. When the fellows of this creature react to it, they'll assume the safest possible form: their own."

"I get you, sir!" said Bob. "Then all the miners have to do is see it for what it is, and shoot it."

Jerry nodded. "It'll mean all miners will have to go armed for awhile. But that's better than getting eaten alive by one of these."

"You sure their presence won't trigger the thing's mimetic power?" asked Bob, uneasily.

"Not if you give full power to the scanner-beam," Jerry replied. "It'll muffle their life-pulse radiations under the brunt of the artificial one."

"Good enough, sir," said Bob. "I'll rig it right away."

Jerry shook his head. "No need. You could use some rest, I'm sure. The morning'll be soon enough. Meantime, you can see this young lady home. The rest of you," he said to the hovering crewmen, "are dismissed, too."

The men, eager to be away from the thing, saluted smartly and hurried out of the solarium, buzzing with wordy relief.

Jana paused a moment, staring at the creature whose strange powers had destroyed her father. Then she turned to Bob.

"I think I'll go to Jim's place," she said. "I want him to know." She moved her gaze to Jerry. "I owe you a lot," she said. "We all owe you a lot."

Embarrassed by the warmth of her praise, Jerry could only mumble something diffident and look the other way. He was taken quite by surprise by the pressure of cool moist lips against the side of his face.

When he looked back at the

pair, Bob and Jana were on their way out the door.

Only when he heard the elevator doors at the end of the corridor close behind them did he move to the still-warm corpse of his onetime adversary, with a look of deepest compassion on his face.

"Well," he said gently, "you've lost. The planet goes back to the invaders. Once again, Earth has successfully obliterated the opposition."

He reached out a hand and touched the hulking thing on the floor. "Good-by," he said. "And I'm sorry."

Jerry Norcriss wasn't thinking about the deadliness of the thing, nor of the deaths of the hapless miners, nor of the billions of dollars he'd saved the investors holding Praesodynimium stock. He was thinking of a voice that — even unintelligently, even in the course of deception — had said, "Poor Jerry. Rest . . . Relax. You're safe . . . Secure . . ."

"You really had me going for a while, baby," he said, then blinked at the sudden sharp sting in his eyes, and hurried from the room.

OUTSIDE, the sun was glowing pink against the black eastern sky, and the air was cool and fresh in his nostrils. As he crossed the street from the hospital, heading toward the landing field and his shipboard bunk, a hurrying figure from the end of the block caught up with him and began to pace his stride, panting slightly.

"Talk about happy," said Bob, glumly. "When Jana told her boy friend the news, they went into such a clinch I didn't even stick around to be introduced. Seemed a nice enough guy, I guess. Hope she'll be happy with him."

Jerry recognized the gloominess of the tech's mood, and its cause, so didn't say anything. After a moment, Bob seemed to recover himself a little.

"Sir," he said, "there's one thing still bugs me about this alien."

"Oh?" said Jerry, halting. "What's that, Ensign?"

"How'd the initial roborocket miss the thing and its kind when it circled the planet before colonization began?"

"That's a moot question," said Jerry. "But my conjecture is that the scanner always caught it when it was assuming some other form. Since its victims were always indigenous to this planet, the things familiar to them were also of this planet, and the scanner-beam couldn't detect any life-pulses which were dissimilar to already-known species."

"I'll be damned," said Bob. "It's almost childishly simple when you explain it." Then, as Jerry went to start off again, Bob stopped him with an exclamation.

"What about that melting mine car I read about on the translation sheets? Was that for real, or wasn't it?"

Jerry shook his head. "Part of the general mimetic illusion, like the motionless clouds and unmoving trees. It let me see what I expected to see. In reality, I was just in the woods near the mine area, where you came upon the creature to destroy it." Jerry started slowly moving away once more.

A few steps further, and Bob halted again. "One final point, sir. That life-pulsing reading of point-nine-nine-nine. If the thing's pulsation was that powerful, I should think it would've been a lot harder to knock off than it was."

"You're right," said Jerry. "It would have been. But its life-pulse wasn't nearly that high."

"But the scanner-beam —" Bob protested. "When the colony sent up that roborocket, after those miners vanished, it reported an unknown life-pulse of point-nine-nine-nine. If that wasn't the alien's life-pulse, what the devil was it?"

Jerry patted Bob on the shoulder. "You're forgetting the mimicry. The roborocket they sent up caught the alien off-guard, in its own shape, not imitating some other life-form's pulsations. It detected the beam, since a scanner picks up mental pulses, and it instantly assumed the life-pulse of a creature it assumed no roborocket would worry about."

"What? What life-pulse, sir? What kind of life?"

"Atomic life, Ensign," said Jerry. "That bright green blip you and I studied so assiduously was the life-pulse of an atom-powered creature. It was another roborocket."

And as Bob stared after him, stupefied, Jerry Norcriss made his way across the landing field toward a well-earned bed — and oblivion.

— JACK SHARKEY

GOURMET

This was the endless problem of all spaceship cooks: He had to feed the men tomorrow on what they had eaten today!

By ALLEN KIM LANG

UNABLE to get out to the ballgame and a long way off from the girls, men on ships think about, talk about, bitch about their food. It's true that Woman remains a topic of thoughtful study, but discussion can never replace practice in an art. Food, on the other hand, is a challenge shipmen face three times a day, so central to their thoughts that a history of seafaring can be read from a commissary list.

In the days when salt-sea sailors were charting islands and spearing seals, for example, the fo'c's'le hands called themselves Lobscousers, celebrating the liquid hash then prominent in the marine menu. The Limey sailor got the name of the anti-scorbutic citrus squeezed into his diet. a fruit known to us mariners of a more sophisticated age only as garnish for our groundside gin-and-tonic. And today we Marsmen are called Slimeheads, honoring in our title the *Chlorella* and *Scenedesmus* algae that, by filling up the spaces within, open the road to the larger Space without.

Should any groundsman dispute the importance of belly-furniture in history — whether it be exterminating whales, or introducing syphilis to the Fiji Islanders, or settling the Australian littoral with cross-coves from Middlesex and Hampshire —he is referred to the hundred-and-first chapter of *Moby Dick,* a book spooled in the amusement tanks of all but the smallest spacers. I trust, however, that no Marsman will undertake to review this inventory of refreshment more than a week from groundfall. A catalogue of sides of beef and heads of Leyden cheese and ankers of good Geneva would prove heavy reading for a man condemned to snack on the Chlorella-spawn of cis-Martian space.

The *Pequod's* crew ate wormy biscuit and salt beef. Nimitz's men won their war on canned pork and beans. The *Triton* made her underwater periplus of Earth with a galley stocked with frozen pizza and concentrated apple-juice. But then, when sailors left the seas for the skies, a decline set in.

The first amenity of groundside existence to be abandoned was decent food. The earliest men into the vacuum swallowed protein squeezings from aluminum tubes, and were glad enough to drop back to the groundsman's diet of steak and fried potatoes.

LONG before I was a boy in Med School, itching to look at black sky through a viewport, galley science had fulfilled the disgusting exordium of *Isaiah* 36:12, to feed the Slimeheads for breakfast today what was day-before-yesterday's table-scraps and jakes-water.

The Ship's Cook, the man who accomplishes the daily miracle of turning offal into eatables, is in many ways the most vital man aboard a spacer. He can make morale or foment a mutiny. His power is paramount. Slimeheads remember the H. M. S. *Ajax* fiasco, for example, in which a galleyman leveled his Chlorella tanks with heavy water from the ship's shielding. Four officers and twenty-one Other Ranks were rescued from the *Ajax* in deep space, half dead from deuterium poisoning. We think of the *Benjo Maru* incident, too, caused by a Ship's Cook who allowed his algaeal staff-of-life to become contaminated with a fast-grow-

ing *Saccharomycodes* yeast. The Japanese vessel staggered to her pad at Piano West after a twenty-week drunk: the alien yeast had got into the stomach of every man aboard, where it fermented each subsequent bite he ate to a superior grade of *sake*. And for a third footnote to the ancient observation, "God sends food, and the Devil sends cooks," Marsmen will recall what happened aboard my ship the *Charles Partlow Sale*.

The *Sale* blasted off from Brady Station in the middle of August, due in at Piano West in early May. In no special hurry, we were taking the low-energy route to Mars, a pathway about as long in time as the human period of gestation. Our cargo consisted mostly of Tien-Shen fir seedlings and some tons of an arctic grass-seed — these to be planted in the *maria* to squeeze out the native blue bugberry vines. We had aboard the Registry minimum of six men and three officers. Ship's Surgeon was myself, Paul Vilanova. Our Captain was Willy Winkelmann, the hardest man in space and very likely the fattest. Ship's Cook was Robert Bailey.

Cooking aboard a spacer is a job combining the more frustrating tensions of biochemistry, applied mycology, high-speed farming, dietetics and sewage engineering. It's the Cook's responsibility to see that each man aboard gets each day no less than five pounds of water, two pounds of oxygen, and one-and-a-half pounds of dry food. This isn't just a paragraph from the Spacer Union Contract. It's a statement of the least fuel a man can run on.

Twelve tons of water, oxygen, and food would have filled the cargo compartments to bursting, and left a small ship like the *C. P. Sale* no reason to reach for Mars. By allowing a colony of Chlorella algae to work over our used air, water and other effluvia, though, three tons of metabolites would see us through from Brady Station to Piano West and back. Recycling was the answer. The molecule of carbohydrate, fat, protein or mineral that didn't feed the crew fed the algae. And the algae fed us.

All waste was used to fertilize our liquid fields. Even the stubble from our 2,680 shaves and the clippings from our 666 haircuts en route and back would be fed into the Chlorella tanks. Human hair is rich in essential amino acids.

The algae — dried by the Cook, bleached with methyl alcohol to kill the smell and make the residue more digestible, disguised and seasoned in a hundred ways — served as a sort of meat-and-potatoes that never quite wore out. Our air and water were equally immortal. Each molecule of oxygen would be conversant with the alveoli of every man aboard by the end of our trip. Every drop of water would have been intimate with the glomeruli of each kidney on the ship before we grounded in. Groundling politicians are right enough when they say that we spacers are a breed apart. We're the one race of men who can't afford the luxury of squeamishness.

THOUGH I'm signed aboard as Ship's Surgeon, I seldom lift a knife in space. My employment is more in the nature of TS-card-puncher extraordinary. My duties are to serve as wailing-wall, morale officer, guardian of the medicinal whiskey and frustrator of mutual murder. Generally the man aboard who'd serve as the most popular murder-victim is the Cook. This trip, the-man-you-love-to-hate was our Captain.

If the Cook hadn't problems enough with the chemical and psychic duties of his office, Winkelmann supplied the want. Captain Willy Winkelmann was the sort of man who, if he had to go into space at all, had best do so alone. If the Prussians had a Marine Corps, Winkelmann would have done splendidly as Drill Instructor for their boot camp. His heart was a chip of helium ice, his voice dripped sarcastic acid. The planet Earth was hardly large enough to accommodate a wart as annoying as Willy Winkelmann. Cheek-by-jowl every day in a nacelle the size of a Pullman car, our Captain quickly established himself as a major social hemorrhoid.

The Captain's particular patsy was, of course, young Bailey the Cook. It was Winkelmann who saw humerous possibilities in the entry, "Bailey, Robert," on Ship's Articles. He at once renamed our unfortunate shipmate "Belly-Robber." It was Winkelmann who discussed *haut cuisine* and the properties of the nobler wines while we munched our algaeburgers and sipped coffee that tasted of utility water. And it was Captain Willy Winkelmann who never referred to the ship's head by any other name than The Kitchen Cabinet.

Bailey tried to feed us by groundside standards. He hid the taste of synthetic methionine — an essential amino acid not synthesized by Chlorella — by seasoning our algaeal repasts with pinches of oregano and thyme. He tinted the pale-green dollops of pressed Chlorella pink, textured the mass to the consistency of hamburger and toasted the slabs to a delicate brown in

a forlorn attempt to make mock-meat. For dessert, he served a fudge compounded from the dextrose-paste of the carbohydrate recycler. The crew thanked him. The Captain did not. "Belly-Robber," he said, his tone icy as winter wind off the North Sea, "you had best cycle this mess through the tanks again. There is a pun in my home country: *Mensch ist was er isst.* It means, you are what you eat. I think you are impertinent to suggest I should become this *Schweinerei* you are feeding me." Captain Winkelmann blotted his chin with his napkin, heaved his bulk up from the table, and climbed up the ladder from the dining-cubby.

"DOC, do you like Winkelmann?" the Cook asked me.

"Not much," I said. "I suspect that the finest gift our Captain can give his mother is to be absent from her on Mother's Day. But we've got to live with him. He's a good man at driving a ship."

"I wish he'd leave off driving this Cook," Bailey said. "The fat swine!"

"His plumpness is an unwitting tribute to your cooking, Bailey," I said. "He eats well. We all do. I've dined aboard a lot of spacers in my time, and I'll testify that you set a table second to none."

Bailey took a handful of dried Chlorella from a bin and fingered it. It was green, smelled of swamp, and looked appetizing as a bedsore. "This is what I have to work with," he said. He tossed the stuff back into its bin. "In Ohio, which is my home country, in the presence of ladies, we'd call such garbage Horse-Leavings."

"You'll never make Winkelmann happy," I said. "Even the simultaneous death of all other human beings could hardly make him smile. Keep up the good work, though, and you'll keep our Captain fat."

Bailey nodded from his one-man cloud of gloom. I got a bottle of rye from Medical Stores and offered him a therapeutic draught. The Cook waved my gift aside. "Not now, Doc," he said. "I'm thinking about tomorrow's menu."

The product of Bailey's cerebrations was on the mess table at noon the next day. We were each served an individual head of lettuce, dressed with something very like vinegar and oil, spiced with tiny leaves of burnet. How Bailey had constructed those synthetic lettuces I can only guess: the hours spent preparing a green Chlorella paste, rolling and drying and shaping each artificial leaf, the fitting together of

nine heads like crisp, three-dimensional jigsaw puzzles. The *pièce de résistance* was again a "hamburger steak;" but this time the algaeal mass that made it up was buried in a rich, meaty gravy that was only faintly green. The essence-of-steak used in these Chlorella cutlets had been sprinkled with a lavish hand. Garlic was richly in evidence. "It's so tender," the radioman joked, "that I can hardly believe it's really steak."

Bailey stared across the dining-cubby toward Winkelmann, silently imploring the Captain's ratification of his masterpiece. The big man's pink cheeks bulged and jumped with his chewing. He swallowed. "Belly-Robber," Winkelmann said, "I had almost rather you served me this pond-scum raw than have it all mucked-up with synthetic onions and cycler-salt."

"YOU seem able enough to choke down Bailey's chow, Captain," I said. I gazed at Winkelmann's form, bulbous from a lifetime of surfeit feeding.

"Yes, I eat it," the Captain said, taking and talking through another bite. "But I eat only as a man in the desert will eat worms and grasshoppers, to stay alive."

"Sir, what in heaven's name do you expect from me?" Bailey pleaded.

"Only good food," Winkelmann mumbled through his mouthful of disguised algae. He tapped his head with a finger. "This — the brain that guides the ship — cannot be coaxed to work on hog-slop. You understand me, Belly-Robber?"

Bailey, his hands fisted at his sides, nodded. "Yes, sir. But I really don't know what I can do to please you."

"You are a spacer and a Ship's Cook, not a suburban *Hausfrau* with the vapors," Winkelmann said. "I do not expect from you hysterics, tantrums or weeping. Only — can you understand this, so simple? — food that will keep my belly content and my brain alive."

"Yes, sir," Bailey said, his face a picture of that offense the British term Dumb Insolence.

Winkelmann got up and climbed the ladder to the pilot-cubicle. I followed him. "Captain," I said, "you're driving Bailey too hard. You're asking him to make bricks without straw."

Winkelmann regarded me with his pale-blue stare. "You think, Doctor, that my cruelty to the Belly-Robber is the biliousness of a middle-aged man?"

"Frankly, I can't understand your attitude at all," I said.

"You accuse me of driving a man to make bricks without

straw," Winkelmann said. "Very well, Doctor. It is my belief that if the Pharaoh's taskmaster had had my firmness of purpose, the Children of Israel would have made bricks with stubble. Necessity, Doctor, is the mother of invention. I am Bailey's necessity. My unkindnesses make him uncomfortable, I doubt that not. But I am forcing him to experiment, to improvise, to widen the horizons of his ingenuity. He will learn somehow to bring good food from Chlorella tanks."

"You're driving him too hard, Sir," I said. "He'll crack."

"Bailey will have some fifty thousand dollars' salary waiting when we ground at Brady Station," Captain Winkelmann said. "So much money buys many discomforts. That will be all, Doctor Vilanova."

"Crew morale on the ship . . ." I began.

"That will be all, Doctor Vilanova," Captain Winkelmann repeated.

BAILEY grew more silent as we threaded our way along the elliptical path to Mars. Each meal he prepared was a fresh attempt to propitiate the appetite of our splenetic Captain. Each such offering was condemned by that heartless man. Bailey began to try avoiding the Captain at mealtimes, but was frustrated by Winkelmann's orders. "Convey my compliments to the Chef, please," the Captain would instruct one of the crew, "and ask him to step down here a moment." And the Cook would cheerlessly appear in the dining-cubby, to have his culinary genius acidly called in question again.

I myself do not doubt that Bailey was the finest Cook ever to go into Hohmann orbit. His every meal established a higher benchmark in brilliant galley-manship. We were served, for instance, an *ersatz* hot turkey supreme. The cheese-sauce was almost believable, the Chlorella turkey-flesh was white and tender. Bailey served with this delicacy a grainy and delicious "cornbread," and had extracted from his algae a lipid butter-substitute that soaked into the hot "bread" with a genuinely dairy smell. "Splendid, Bailey," I said.

"We are not amused," said Captain Winkelmann, accepting a second helping of the pseudo-turkey. "You are improving, Belly-Robber, but only arithmetically. Your first efforts were so hideous as to require a geometric progression of improving excellence to raise them to mere edibility. By the time we are halfway 'round the Sun, I trust you will have learned to cook with the competence of a freshman Home Economics student. That will be all, Bailey."

The crew and my fellow-officers were amused by Winkelmann's riding of Bailey; they were in addition gratified that the battle between their Captain and their Cook served to feed them so well. Most spacers embark on an outward voyage somewhat plump, having eaten enough on their last few days aground to smuggle several hundred calories of fat and many memories of good food aboard with them. This trip, none of the men had lost weight during the first four months in space. Winkelmann, indeed, seemed to have gained. His uniform was taut over his plump backside, and he puffed a bit up the ladders. I was considering suggesting to our Captain that he curtail his diet for reasons of health, a bit of advice that would have stood unique in the annals of space medicine, when Winkelmann produced his supreme insult to our Cook.

EACH man aboard a spacer is allowed ten kilograms of personal effects besides his uniforms, these being considered Ship's Furnishing. As his rank and responsibility merit, the Captain is allowed double this ration. He may thus bring aboard with him some forty-five pounds of books, playing-cards, knitting-wool, whiskey or what have you to help him while away the hours between the planets. Bailey, I knew for a fact, had used up his weight-allowance in bringing aboard a case of spices: marjoram and mint, costmary, file powder, basil and allspice, and a dozen others.

Captain Winkelmann was not a reader, and had brought no books. Cards interested him not at all, as card-playing implies a sociability alien to his nature. He never drank aboard ship. I had supposed that he'd exercised his option of returning his personal-effects weight allowance to the owners for the consideration of one hundred dollars a kilogram. To collect the maximum allowance, spacers have been known to come aboard their ship mother-naked.

But this was not the case with Winkelmann. His personal-effects baggage, an unlabeled cardboard box, appeared under the table at noon mess some hundred days out from Piano West. Winkelmann rested his feet on the mysterious box as he sat to eat.

"What disgusting form does the ship's garbage appear in today, Belly-Robber?" he asked the Cook.

Bailey frowned, but kept his temper, an asceticism in which by now he'd had much practice. "I've been working on the pro-

blem of steak, Sir," he said. "I think I've whipped the taste; what was left was to get the texture steak-like. Do you understand, Sir?"

"I understand," Winkelmann growled. "You intend that your latest mess should feel like steak to the mouth, and not like baby-food. Right?"

"Yes, Sir," Bailey said. "Well, I squeezed the steak-substrate — Chlorella, of course, with all sorts of special seasonings — through a sieve, and blanched the strands in hot algaeal oil. Then I chopped those strands to bits and rolled them out. *Voila!* I had something very close in texture to the muscle-fibers of genuine meat."

"Remarkable, Bailey," I said.

"It rather throws me off my appetite to hear how you muddle about with our food," the Captain said, his jowls settling into an expression of distaste. "It's quite all right to eat lobster, for example, but I never cared to see the ugly beast boiled before my eyes. Detail spoils the meal."

Bailey lifted the cover off the electric warming-pan at the center of the table and tenderly lifted a small "steak" onto each of our plates. "Try it," he urged the Captain.

CAPTAIN Winkelmann sliced off a corner of his algaeal steak. The color was an excellent medium-rare, the odor was the rich smell of fresh-broiled beef. Winkelmann bit down, chewed, swallowed. "No too bad, Belly-Robber," he said, nodding. Bailey grinned and bobbed his head, his hands folded before him in an ecstasy of pleasure. A kind word from the Captain bettered the ruffles-and-flourishes of a more reasonable man. "But it still needs something . . . something," Winkelmann went on, slicing off another portion of the tasty Chlorella. "Aha! I have it!"

"Yes, Sir?" Bailey asked.

"This, Belly-Robber!" Winkelmann reached beneath the mess-table and ripped open his cardboard carton. He brought out a bottle and unscrewed the cap. "Ketchup," he said, splattering the red juice over Bailey's masterpiece. "The scarlet burial-shroud for the failures of Cooks." Lifting a hunk of the "steak," streaming ketchup, to his mouth, Winkelmann chewed. "Just the thing," he smiled.

"Damn you!" Bailey shouted.

Winkelmann's smile flicked off, and his blue eyes pierced the Cook.

". . . Sir," Bailed added.

"That's better," Winkelmann said, and took another bite. He said meditatively, "Used with caution, and only by myself, I believe I have sufficient ketchup here to see me through to Mars. Please keep a bottle on the table for all my future meals, Belly-Robber."

"But, Sir . . ." Bailey began.

"You must realize, Belly-Robber, that a dyspeptic Captain is a threat to the welfare of his ship. Were I to continue eating your surrealistic slops for another hundred days, without the small consolation of this sauce I had the foresight to bring with me, I'd likely be in no condition to jet us safely down to the Piano West pad. Do you understand, Belly-Robber?" he demanded.

"I understand that you're an ungrateful, impossible, square-headed, slave-driving . . ."

"Watch your noun," Winkelmann cautioned the Cook. "Your adjectives are insubordinate; your noun might prove mutinous."

"Captain, you've gone too far," I said. Bailey, his fists knotted, was scarlet, his chest heaving with emotion.

"Doctor, I must point out to you that it ill behooves the Ship's Surgeon to side with the Cook against the Captain," Winkelmann said.

"Sir, Bailey has tried hard to please you," I said. "The other officers and the men have been more than satisfied with his work."

"That only suggests atrophy of their tastebuds," Winkelmann said. "Doctor, you are excused. As are you, Belly-Robber," he added.

BAILEY and I climbed from the mess compartment together. I steered him to my quarters, where the medical supplies were stored. He sat on my bunk and exploded into weeping, banging his fists against the metal bulkhead. "You'll have that drink now," I said.

"No, dammit!" he shouted.

"Orders," I said. I poured us each some fifty cc's of rye. "This is therapy, Bailey," I told him. He poured the fiery stuff down his throat like water and silently held out his glass for a second. I provided it.

After a few minutes Bailey's sobbing ceased. "Sorry, Doc," he said.

"You've taken more pressure than most men would," I said. "Nothing to be ashamed of."

"He's crazy. What sane man would expect me to dip Wiener schnitzel and sauerkraut and *Backhahndl nach suddeutscher Art* out of an algae tank? I've got nothing but microscopic weeds to cook for him! Worn-out molecules reclaimed from the head; packaged amino acid additives. And he expects meals that would take the blue ribbon at the annual banquet of the Friends of Escoffier!"

"Yours is an ancient plaint,

Bailey," I said. "You've worked your fingers to the bone, slaving over a hot stove, and you're not appreciated. But you're not married to Winkelmann, remember. A year from now you'll be home in Ohio, fifty grand richer, set to start that restaurant of yours and forget about our fat Flying Dutchman."

"I hate him," Bailey said with the simplicity of true emotion. He reached for the bottle. I let him have it. Sometimes alcohol can be an apt confederate of *vis medicatrix naturae*, the healing power of nature. Half an hour later I strapped Bailey into his bunk to sleep it off. That therapeutic drunk seemed to be just what he'd needed.

For morning mess the next day we had a broth remarkable in horribleness, a pottage or boiled *Chlorella vulgaris* that looked and tasted like the vomit of some bottom-feeding sea-beast. Bailey, red-eyed and a-tremble, made no apology, and stared at Winkelmann as though daring him to comment. The Captain lifted a spoonful of the disgusting stuff to his lips, smacked and said, "Belly-Robber, you're improving a little at last."

Bailey nodded and smiled. "Thank you, Sir," he said.

I smiled, too. Bailey had conquered himself. His psychic defenses were now strong enough to withstand the Captain's fiercest assaults of irony. Our food would likely be bad the rest of this trip, but that was a price I was willing to pay for seeing destroyed the Willy Winkelmann theory of forcing a Cook to make bricks without straw. The Captain had pushed too hard. He'd need that ketchup for the meals to come, I thought.

Noon mess was nearly as awful as breakfast had been. The coffee tasted of salt, and went largely undrunk. The men in the mess compartment were vehement in their protests, blaming the Captain, in his absence, for the decline in culinary standards. Bailey seemed not to care. He served the algaeburgers with half a mind, and hurried back into his galley oblivious of the taunts of his crewmates.

THERE being only three seats in the *Sale's* mess compartment, we ate our meals in three shifts. That evening, going down the ladder to supper, my nose was met with a spine-tingling barbecue tang, a smell to make a man think of gray charcoal glowing in a picnic brazier, of cicadas chirping and green grass underfoot, of the pop and hiss of canned beer being church-keyed. "He's done it, Doc!" one of the first-shift diners said. "It actually tastes of food!"

"Then he's beat the Captain at his game," I said.

"The Dutchman won't want to mess ketchup on these steaks," the crewman said.

I sat, unfolded my napkin, and looked with hope to the electric warming-pan at the center of the table. Bailey served the three of us with the small "steaks." Each contained about a pound of dried Chlorella, I judged, teasing mine with my fork. But they were drenched in a gravy rich as the stuff grandma used to make in her black iron skillet, peppery and seasoned with courageous bits of garlic. I cut a bit from my steak and chewed it. Too tender, of course; there are limits to art. But the pond-scum taste was gone. Bailey appeared in the galley door. I gestured for him to join me. "You've done it, Bailey," I said. "Every Slimehead in orbit will thank you for this. This is actually *good*."

"Thanks, Doc," Bailey said.

I smiled and took another bite. "You may not realize it, Bailey; but this is a victory for the Captain, too. He drove you to this triumph; you couldn't have done it without him."

"You mean he was just whipping me on, trying to make me do better?" Bailey asked.

"He was driving you to do the impossible," I said; "and you did it. Our Captain may be a hard man, Bailey; but he did know how to coax maximum performance out of his Ship's Cook."

Bailey stood up. "Do you like Captain Winkelmann, Doctor?" he asked.

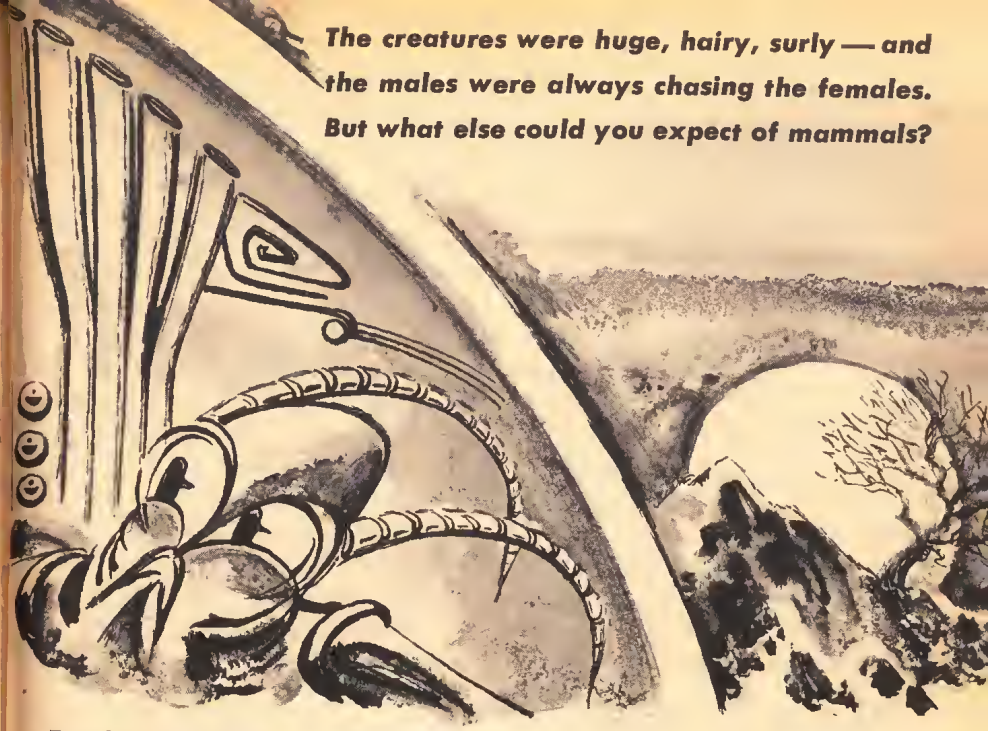
I thought about his question a moment. Winkelmann was good at his job. He persuaded his men by foul means, true; but it was all for the good of the ship and his crew. "Do I like Captain Winkelmann?" I asked, spearing another piece of my artificial steak. "Bailey, I'm afraid I'll have to admit that I do."

Bailey smiled and lifted a second steak from the warming-pan onto my plate. "Then have another piece," he said.

— ALLEN KIM LANG

Founding Father

The creatures were huge, hairy, surly — and the males were always chasing the females. But what else could you expect of mammals?



By J. F. BONE

Illustrated by RITTER

I

"WE need data," I said as I manipulated the scanner and surveyed our little domain of rocks and vegetation. "The animate life we have collected so far is of a low order."

"There is nothing here with intelligence," Ven agreed, gesturing at the specimens in front of us. "Although they're obviously related to our race, they're quite incapable of constructing those artifacts we saw on our way down."

"Or of building electone communications or even airboats," I added.

"I expect that there is only one way to get what we want — and that's to go looking for it," Ven said as she smoothed her antennae with a primary digit. "I also expect," she added acidly, "that there might have been other places from which it wouldn't be so hard to start looking. Or did you *have* to set us down in this isolated spot?"

I glared at her and she flushed a delicate lavender. "Do you think I landed here because I *wanted* to?" I asked with some bitterness, inflating my cheek pouches to better express my disgust. "There were less than two vards of useful fuel left on the reels when I cut the drives. There isn't enough to take us across this valley. We came close to not making planetfall here at all."

"Oh," Ven said in a small voice, vocalizing as she always does when she is embarrassed. Like most females, she finds it difficult to project normally when she is under emotional stress. Afraid or angry she can blow a hole in subspace; but embarrassed, her projections are so faint that I have to strain my antennae to receive them.

Her aura turned a shamefaced

nacreous lavender. I couldn't stay angry with her. She was lovely, and I was proud to be her mate. The Eugenics Council had made an unusually good match when they brought us together. The months we had spent aboard ship on our sabbatical had produced no serious personality conflicts. We fitted well, and I was more happy than any Thalassan had a right to be.

"We shall have to try other measures," I said. "Although there aren't very many natives hereabouts, we had better start looking for them rather than wait for them to look for us." I felt disappointed. I was certain that we made enough disturbance coming down for them to be here in droves, which was why I had the robots camouflage the ship to look like the surrounding rocks. There could be such a thing as too much attention.

"They could have mistaken us for a meteor," Ven said.

"Probably," I agreed. "But it would have saved a great deal of trouble if one of them had come to us." I sighed. "Oh well,"

I added, "it was only a hope, at best."

"I could explore," Ven offered.

"I was about to suggest that," I said. "After all, the atmosphere is breathable although somewhat rich in oxygen, and the gravity is not too severe. It would be best to wait until dark before starting out. There may be danger. After all, this is an alien world, and Authority knows what's out there."

Her antennae dropped, her aura dimmed to gray and her integument turned a greenish black. "It doesn't sound pleasant," she said.

THE sun dipped below the horizon with an indecently gaudy display of color. After the last shades of violet had faded, I opened the airlock and watched Ven, a darker blot in the darkness of the night, slip away into the shadows.

She went unarmed. I wanted her to take a blaster, but she refused, saying that she had never fired one, wouldn't know what to do with one — and that its weight would hold her back. I didn't like it. But I was unable to go with her, and it was better that she did as she wished at this time.

I sat for a while in the entrance port watching the slow wheel of the stars across the heavens, and for a moment I wished that I were a female with the rugged physique to withstand this gravity. As it was, the beauty of the night was lost on me. I breathed uncomfortably as the pressure crushed my body and made every joint and muscle ache.

Males, I reflected gloomily, weren't what they were in the old days. Too much emphasis on mind, and not enough on body, had made us a sex of physical weaklings.

I wondered bitterly if a brain was as worthwhile as the Council insisted.

The next few hours were miserable. I worried about Ven, imagining a number of unpleasant things which might have happened to her. I dragged myself into the control room and fiddled with the scanners, trying the infra and ultra bands as well as the normal visible spectrum in the hopes of seeing something. And just as I was beginning to feel the twinges of genuine fear, I heard Ven.

Her projection was faint. "Help me, Eu! Help me!"

I stumbled to the entrance port, dragging a blaster with me. "Where are you?" I projected. I couldn't see her, but I could sense her presence.

"Here, Eu. Just below you. Help me. I can't make it any farther!"

Somehow I managed it. I don't know from where the strength came, but I was on the ground lifting her, pushing her onto the flat surface of the airlock — clambering up — dragging her in and closing the lock behind us. I looked down at her with pride. Who would have thought that I, a male, could lift a mature female into a ship's airlock even against normal gravity? I chuckled shakily. Strange things happen to a body when its owner is stressed and its suprarenals are stimulated.

She looked up at me. "Thank you," she said simply. But there was more behind the words than the bare bones of customary gratitude.

I helped her into the refresher and as she restored her tired body I pelted her with numerous questions.

"Did you succeed?" I asked.

"Better than I expected."

"Did you find a native?"

"Two of them." The cubicle glowed a pale green as her strength came back.

"Where?"

"Two vursts from here—down the hill. They're camped near a road. They have a big ground car with them."

"Did you see them?"

"Yes."

"What did they look like."

The radiance in the cubicle flicked out. "They're horrible!" Ven said. "Monstrous! Four or five times our size! I never saw anything so hideous!"

"Did they see you?"

"No, I don't think so. They weren't looking in my direction

at first. And I don't think they can sense, because I was frightened and they didn't respond to my projection." She was beginning to recover.

"You couldn't have been too frightened," I said. "I didn't hear you — and you can reach farther than two vursts."

"Mostly I was repelled," Ven admitted.

"Why?"

"I don't know. They smelled bad, but it was more than that. There was something about them that made my antennae lie flat against my ears. Anyway — I did a foolish thing." The cubicle turned a pale embarrassed lavender.

"What did you do?" I demanded.

"I ran away," Ven said. "And I made a lot of noise."

"All right — all right," I said impatiently. "Go ahead and tell the rest of it."

"By the time I stopped running I was down at the bottom of the hill," Ven said. "I was dead tired — and with all that rock to climb to get back to the ship. I didn't really think I'd make it."

"But you did," I said proudly. "You're a real Thalassan — pure green."

The cubicle slowly brightened again.

"Can you find them again?" I asked.

"Of course. I wasn't lost at any time. If I hadn't panicked, I'd have been back a whole lot sooner."

"Can you go now?"

SHE shivered with distaste. "I can," she said, "but I don't want to."

"That's nonsense. We can't let a little physical revulsion stop us. After all, there are some pretty grim things to be seen in this universe."

"But nothing like this! I tell you, Eu, they're horrible! That's the only word that can describe them."

"Take a stat projector —" I began.

"Aren't you coming?" she asked.

"Two vursts on this planet? What do you think I am?"

Her face hardened. "I don't know," she said coldly, "but I do know this — if you don't come, I won't go."

I groaned. From her aura I could tell she meant every word. It angered me, too, because Thalassan females usually don't defy a male. "Remember," I said icily, "that you're not the only female on Thalassa."

"We're not on Thalassa," she said. Her aura was a curious leaden color, shot through with sullen red flares and blotches.

"I have no right to force you," she went on stubbornly, "but I *can't* handle them alone. You simply *have* to come."

"But Ven — I'm a physical cipher. This gravity flattens me. I won't make it."

"You will," she said. "I'll help you. But this job needs a male mind."

It was deliberate flattery, I suppose. But there was an element of truth in it. Ven obviously couldn't do it, and obviously she thought I could. I couldn't help feeling pride in her need for me. I liked the feeling. For, after all, we hadn't been mated so long that there was too great an amount of familiarity in our relationship. The Eugenics Council had taken care of that very effectively when we announced our plans for our sabbatical.

"All right — I'll go," I repeated.

With a quick light movement she touched my antennae with her primary digits. The shock ran through me clear to my pads. "You're good," she said — and the way she said it was an accolade.

II

"THIS way," Ven said, emitting a faint yellow aura that lighted the area around her. "Follow me." She staggered a little under the weight of the equipment she was carrying. I wished that we had enough power to energize an air sled — but we had none to spare. The robots had used up most of our scanty power metal reserves in camouflaging the ship and the adaptor had taken the rest. This was going to be a miserable trip. It was going to be painful, uncomfortable and perhaps even dangerous.

It was.

We went across rocks, through sharp-twigged brush — across the saw-edged grass of the meadow below us, over more rocks, and down-hill along a faint double trail that never seemed to end. I was nearly dead with weariness when Ven's aura flicked off and the dark closed in. My proprioceptors were screaming as I sank to the ground and panted the rich air of this world in and out of my aching chest.

"They're just ahead," Ven whispered. "Around that next group of rocks. Be careful."

We moved forward cautiously. "There was a fire," Ven whispered.

"There isn't now," I said. "I can't sense any heat." The night air blew a rank odor to my nostrils. My spines stiffened! I knew what Ven meant when she said that these natives repelled her. I had smelled that scent before — the scent of our ancestral enemies! So *these* were

the natives, the dominant life on this planet! I gagged, my tongue thick in my throat.

"You see?" Ven asked.

I nodded. "It's pretty bad," I said.

"It reminds me of a zoo," Ven answered softly.

I nodded. It did and it was thoroughly unpleasant.

I strained my perception to its limits, pushing it through the gelid darkness, searching until I found the natives. "They're asleep," I said.

"What's that?"

"Suspension of consciousness. Something like estivation."

"Oh. Then we can approach safely?"

"If we are quiet," I replied. "Sleep is broken easily and consciousness returns quickly."

The trail deepened beyond the rocks — two rutted tracks about three yards apart. We moved forward cautiously, our senses keyed to their highest pitch. The night was oppressively still and every movement rasped loudly. My breath came fast and shallow. My heart pounded and my musk glands were actively secreting as I parted the opening to their cloth shelter, and sensed the dim forms within.

"Stat," I projected and Ven handed me the weapon. It was almost more than I could manage in my weakened condition, but I aimed it and fired a full intensity blast at the nearest lumpy figure. It jerked and flopped inside its coverings, and the second form sat up with horrid speed!

A roar of sound came from it as the air was filled with its fetid odor. In panic I triggered a blast at the menacing figure, and it, too, flopped and laid still.

I ran my tongue over the roof of my dry mouth and called to Ven. "They're quiet now. Come in and see what we've got."

"Ugh!" Ven snorted as she entered the tent at my heels. "It stinks!"

"They're not the sweetest life form in the universe," I said as I prodded the huge mound beside me, looking for reflexes that would indicate returning consciousness.

"What are they?" Ven asked.

"Mammals," I said.

"No wonder I thought of a zoo," Ven said. "But they're so big!"

"Not on all planets," I said.

"Obviously," Ven commented. "Well — what's next? Let's get this done. I'm suffocating!"

"Hand me the probe kit," I said.

I selected two of the longest probes and made my way up to the head of the nearest monster. I scanned its braincase until I found the area I wanted and inserted the probes, driving them through the heavy bone and into the brain beneath. I clipped on the short antennae and stepped back. "Turn the control to low," I said. "Place the clips on your antennae. Now think of rising." The bulk beside me stirred and Ven gave a squeak of terror. "It's all right," I assured her. "Turn the control back to zero. This one's secure."

I went to the second and treated it like the first, and felt a justifiable pride as it reacted. Not many men could implant neuroprobes correctly on the first attempt. "All right, Ven. You can go out now. Take the controls with you. I'll see what I can do to get these brutes out of their coverings."

The tent opening swayed as Ven passed through and I bent over the nearest form. The covering was a heavy sack closed with a slide fastener much like the ones we used. I pulled and it opened, sending a flood of rank scent into the fetid air. I coughed, my eyes smarting, and found the fastener of the other sack. Retching with nausea I staggered out of the tent.

Ven sprang forward, caught me as I was about to fall, and lowered me gently to the ground.

"What are we going to do?" Ven asked as I lay panting at her feet.

"We're going to get them out of there," I said, "and take them back to the ship. I didn't come all this way for nothing." I drew one of the controls toward me, fastened the clips to my antennae, advanced the gain and thought into it. There was a stir of movement inside and a huge form came stumbling out. It stood there clad in loose cloth coverings, reeking with halogen. I looked up at the dark bulk and shivered.

"That smell!" Ven said.

"WE can help it a bit," I replied and turned to the control. With its massive forelimbs the brute ripped the cloth from its body as it moved downwind. I made it stand and took the other control.

"Let me do it," Ven said. "You can't handle both of them in your condition."

"All right," I said, "but be careful."

"I will. Now what do I do?"

"Advance the intensity knob and think what you want it to do."

There was a flurry of movement inside the tent, the thrashing of a huge body, and the second mammal burst through the opening and staggered clumsily to a stop.

"Reduce the intensity," I said. "You're projecting too strong a stimulus. Now uncover it and

send it over with the other one to cool off. They're more bearable when they're cold. They exude the scent from their skin glands to compensate for temperature."

"I know," Ven said. "I studied biology." She did as I instructed and then dropped beside me. We relaxed, gathering our strength for the climb ahead. But I didn't recover rapidly. I could move, but the exertion made me dizzy. The excitement was over and reaction had set in. "I'll never make it," I said dully.

"I can help," Ven said — "a little."

"It won't be enough. You don't have the strength to carry me." I looked at the huge bodies of the mammals gleaming pallidly in the darkness, and suddenly I had an idea. The Slaads on Valga domesticated mammals. They were quadrupedal, true enough, but they were still mammals. Why couldn't I ride one of these as they did? Those great masses of muscle should carry me easily. "I think I have a solution," I said.

"What?"

"I'll have one of them carry me."

"You can't!"

"Why not? They're controlled. And they're the only way I'll be able to get back to the ship." I picked up the nearest controller. "Let's see what happens."

Ven squeaked as the monster lifted me in the air and set me across its neck. I crossed my pads and hung on. The ground seemed terribly far away.

"How is it up there?" Ven asked.

"A little unstable," I said, "but I'll manage. Shall we go?"

We moved up the trail to the rocky abutment and turned up the hill. The brute beneath me climbed strongly and easily.

"Wait a minute," Ven said as she turned the corner behind me, "you're going too fast."

"Why don't you ride?" I called down to her. "This one moves easily enough. It's much better than walking."

"I think I will," Ven replied.

"THIS is all right," Ven said as we moved side by side up the hill. "The fibrils on top of its head—"

"Hair," I corrected.

"The hair of this one is longer than yours. I can hold on nicely."

The big bodies of the natives moved smoothly and powerfully, their giant strides eating up the distance we had so painfully covered some time before. Presently we came out onto the lower edge of the meadow below our ship.

Ven looked at me, her aura glowing pink with excitement. "I'll race you to the ship," she

cried, and dashed off with a burst of speed.

Somehow I couldn't resist the challenge in her voice. I advanced the control knob and thought strongly. The brute jumped as though it had been whipped and leaped into a plunging run. I clung desperately for a moment and then relaxed as I caught the rhythm of the driving strides. My heart pounded, but not with fear. I had never known such exhilaration! Machines were pale compared to it. The mammal could run like a frightened skent — and it was faster than Ven's!

I caught her halfway up the meadow, and pulled away, exulting in the powerful muscles moving underneath me. I charged up to the grove of trees that concealed our camouflaged ship, and brought the mammal to a halt. It was panting, trembling, drenched with stinking sweat, but I didn't mind. I was part of it. There was a certain amount of feedback in a bipolar control circuit and I could feel the heat of its body, the beat of the great heart, the rise and fall of the broad chest, the pulse of the blood vessels in the thick neck. It was magnificent! I laughed. I had never before felt the ecstasy of physical strength!

I turned and looked back, still tasting the pleasure of the great body connected to my mind.

Ven drew up beside me. "Hai Yee!" she exclaimed. "What a sensation!"

"You liked it?" I asked.

"Liked it? *Liked* it? I loved it! Didn't you?"

"I think so," I said truthfully.

"I'm going across the meadow again," Ven said as she turned her mammal around.

"No," I said. "We have use for these two and we have no knowledge of how much they can stand. There's no sense damaging them." I frowned as I noticed the bloody scratches on the legs and body of her mammal.

Ven noted the direction of my gaze. "They're not as tough as I thought," she said with sudden contrition. "But they're not too badly damaged, are they?"

"No." I said.

I ordered the mammal to set me down. Dawn was breaking and I could see better what we had captured. They were a male and a female. On the whole, except for their mammalian ancestry, they conformed to dominant-race criteria, being erect, bipedal, predatory types with binocular vision. Their upper extremities were evolved into manipulative organs similar to our primary digits.

The most outstanding difference was the extreme sex dimorphism, which was obviously apparent in the brightening light.

The physical differences were carried to such lengths that it was hard to believe that they were members of the same species.

THEY weren't exactly ugly, yet there was something disturbing about them. Perhaps it was the rank halogen odor of their skin glands that were still secreting despite the coolness of the air. Or perhaps it was merely that they were intelligent mammals. It was as though Authority had, in a moment of cosmic humor, drawn oversized caricatures of Thalassans and endowed them with life. I felt a subtle insult in their presence. I suppose it showed in my aura because Ven came quickly to my side.

"I told you they were disturbing," she said as we looked up at their monstrous forms towering over us.

"I'm glad they're not uncontrolled," I answered, shivering a little as I looked at them. "I suppose it's just species antipathy, but they make me uncomfortable."

"Mammals were exterminated on Thalassa long ago, weren't they?"

"Yes," I said. "They ate our eggs."

Ven walked forward and ran her primary digits over the female's legs. "They're quite well evolved," she said. "The skin hasn't a vestige of scales."

"Neither does yours except at the tip of your tail," I said tartly. "Don't get the idea that they're a primitive life form. Actually they are a *later* evolutionary type than we! If our ancestors had not developed intelligence enough to realize their peril we would be extinct — and something like them would rule Thalassa today."

Ven shivered, "How horrible! I don't like thinking about it."

"Don't," I advised.

"What are we going to do with them?" Ven asked.

"I was going to analyze them and construct a proxy, but they're far too big to duplicate with our limited resources. I suppose the only thing we can do is to insert control circuits and use them as they are."

"Won't that be painful?"

"Only psychically. Physically they shouldn't suffer a bit. The brain, you know, feels no pain. It merely interprets stimuli from elsewhere."

"In mammals too?"

I shrugged. "I suppose so. Besides, what difference does it make? Once we're through with them we can destroy them if they're too badly damaged."

"That seems unfair."

"It's not a question of fairness. It's survival. If they don't perform properly, we shall have to

dispose of them or they'll be back here with a whole herd. Of course, if they operate under control, we'll turn them loose when we're through with them. I doubt that their technology is advanced enough to recognize a bio-circuit if they saw one. And if it is, they will have learned nothing new."

"But why can't we keep them — take them back to Thalassa? They'd make an unusual contribution to the Central Zoo."

"I'm afraid not," I said. "I doubt if they'd survive space. The only part of the ship large enough to hold them would be the cargo storage compartment, and that's not shielded. A hyperjump would kill them. You wouldn't want even them to die *that* way, would you?"

Her aura turned gray. "No, I suppose not."

"There isn't a chance," I said, seizing her thought before it was uttered. "It would take ten of our lifetimes to reach our nearest outpost on normal spacedrive. Forget it."

"But—"

"Come along," I said, "I'll need your help to modify these brutes."

ACTUALLY it wasn't a hard job. Their brains were well developed and nicely compartmentalized. With our probes and instruments it was a simple enough matter to implant the necessary organic extensions of our instruments.

"That should do it," I murmured as I disconnected the leads I had jury-rigged into the analyzer. "They're clean as a Fardel's tooth." I was tired, but I had the pleasant feeling of accomplishment that comes from working with organic matter. Possibly if I were not so interested in History, I'd have become a medic. I do have a certain talent along that line.

At any rate, we now had a pair of proxies. With only normal fortune they would be completely undetectable.

"Is it all done?" Ven asked as she looked over my shoulder.

"Yes," I said. "But leave the probes in place until we test them." I dragged my weary body once again into the control room and tried the headgear and circuits. They functioned absolutely perfectly.

"What do we do now?" Ven's projection came to me.

"Remove the probes and send them back to their camp. There's no sense in leaving them here."

"But Eu—"

"No," I said. "They are not toys. They're tools. They're to do a job for us. Now stop acting like a child. When they bring us metal you can play games with them — but not now. They're stressed, tired, and need rest.

And they're going to get it."

"Yes, Eu." Her projection was submissive.

"But don't worry," I added kindly. "You can monitor them. I installed two extra circuits, one to the hypothalamus and the other to the tactile centers. You will be able to feel every sensation they experience. It will be just like having an extra body."

"Can I try it now?" she asked eagerly as she came into the control room.

"Go ahead," I said. "Put on a helmet and use the double control. Take them back to their camp and then neutralize the controller. As for me, I'm going to the refresher. I need it."

III

I awoke from partial estivation with Ven's projection vibrating my antennae. "Eu! Come quickly! They're awake!"

I groaned. What did she expect? But it might be interesting to see how they behaved. And if they panicked, someone should be there to assume control.

I checked the chronometer. I had rested for eight satts which should be enough. I felt as well as could be expected, so with only a few choice Low-Thalassic expletives to help me I managed to clamber out of the tank and stagger into the control room. Ven already had one of the helmets on. I picked up the other and flicked the switch to "on." It was the male's — and he was talking. The words were gibberish, but the thoughts behind them were easy to read.

I was part of an entity called Donald G. Carlton, a male mammal of the human species. He was a "writer" and was mated to the female, who was called Edith and who worked in "motion pictures." They lived in a place called Hollywood, in a family unit structure faintly similar to a children's creche. Custom on this world dictated that the female take one name of her mate, which indicated that the sex was even more subservient than female Thalassans. The male's body ached, but not as badly as I would have expected. And, as I expected, there was no sensitivity in the brain.

"Hey! Edith!" Donald said. "Get up!"

"Leave me alone, Don. I'm miserable," a lighter voice answered from the lumpy sack beside him. "I had the most awful dream."

"It must be the mountain air," he replied. "I did too."

"Whatever made me think this would be fun!" Edith said. "You and your meteor-hunting!" The sack heaved and twisted and her head appeared at one end. "I

feel like I've been worked over with a baseball bat. Oh! My legs!"

"You're not alone," he said. "I guess it's the hard ground and these strait-jackets they laughingly call sleeping bags."

"About that dream," Edith said. "It was horrible. There was this little green and yellow thing that looked like a cross between a lizard and a human being. It was sitting on my shoulders and I was naked — carrying it around, doing what it wanted me to do! I wanted to throw it off and stamp on it but I couldn't. I just ran and ran and all the time that little monster sat with its legs around my neck, hooting like an owl. Now, wasn't that something?"

Donald was very quiet. "You know," he said slowly, "essentially that was the same dream I had."

"But that can't be! People don't have the same nightmares."

"We did."

"Then maybe — maybe it wasn't a nightmare!"

"Nonsense. We're here. We're all right. But I think perhaps we'd better get out of here — oh, Keerist! I'm one solid bruise." He twisted around until he found the fastenings and opened the bag. With a groan he stood up.

Edith looked at him, her eyes wide with sudden terror. "Don," she said in a brittle voice, didn't you wear pajamas when you went to bed last night?"

"Yes."

"Well, you're not wearing them now." An expression of horror crossed her face. "And neither am I," she added in a small voice.

I could feel the shock in Donald's brain as he looked down at himself. "That's not all I'm not wearing," he said dully. "I'm shaved!"

There was a brief flurry inside the other sleeping bag. "So am I!" Edith's voice was a whisper of fright. "That was no dream! I remember this. The lizard gave me something that I rubbed all over myself — and my hair came off. I didn't want to, but I couldn't help myself." Her hands went to her head and she sighed, "Well, *that's* all there. For a moment I thought—"

"My skin is different," Donald interrupted thoughtfully as he inspected himself. "It feels thicker. And I don't feel cold, although I'll bet it's nearly freezing outside."

"Don! Don't you understand? That dream was real!" Edith said.

"Of course it was, — unless *this* is a dream. We could be having a nightmare about a nightmare . . ."

I looked at Ven.

"Just what did you do to them?" I asked.

She glowed guiltily. "I didn't know it would take their hair off," she said. "I was worried about their scratches, and the insects were biting them. So I made them rub on some of our skin conditioner."

I raised my digits toward the sky. "There is an Authority that looks over fools and Thalassan females," I said. "What made you so sure our conditioner would work on them? It might have been poisonous."

"I tried it on the male first," Ven said.

"Genius," I breathed with icy sarcasm, "sheer genius!"

"Well," she said, "it worked!" The eternal pragmatist had applied her sole criterion. "And what's more they looked and smelled lots better after they used it."

I shrugged, gave it up and turned my attention back to the mammals.

Edith had emerged from her sack and was standing before the male.

"Do I look like a nightmare?" she demanded.

"No. More like a skinned rabbit — ouch! What did you do that for?" He rubbed his face where she struck him with her digits.

"There!" Edith said. "*Now* do you think it's a dream?"

"I never did," he replied mildly. "I've never dreamed in my life. I was just breaking it to you easy. It was real enough — even the blank spaces. I wonder —"

"You wonder what?"

"What their reason was for capturing us and then letting us go. It doesn't make sense. They wouldn't grab us just for fun. They're obviously intelligent, and probably thought we would be useful to them. But they turned us loose. So we couldn't be useful except maybe for amusement — but that doesn't jell. No. They've done something to us. They've let us go for a reason."

"STOP analyzing!" Edith said. "Why don't you just get scared, like I am!"

"I *am*," he said, "but I like to figure things out. If I know what frightens me, it doesn't bother me so much."

"Do that while we're on the way home. Get your clothes on and let's get out of here! Right away!"

"We have to pack."

"Oh, leave it! Let's get out while we can!"

"I don't think we're in any danger," he said.

"Well — I don't want to stay here a minute longer!"

"All right. We'll go. But we'll

pack first. Look at it logically. They had us cold. We didn't escape. We were *let* go. So why, if they didn't want us then, should they want us now?"

"Unless they can get us any time they want us."

"You have a point there, but if that's the case, they can get us anyway. So let's pack."

"You can pack if you want to. I'm leaving!" Edith pulled the opening to the tent and slipped out.

"Edith!" Donald cried. "Wait!"

I touched Ven. "Stop her," I said.

Edith's voice came from outside. "Don!" she called in a tight voice. "Don! Help me! *I can't move!*"

"Try coming back here and see what happens," Donald said slowly.

Edith's head appeared in the entrance. "I'm back," she said in a small voice.

"I thought you would be. Now let's pack and perhaps they'll let us go. It's obvious that we can't run away."

"But why? *What's happened to us?*"

"If I told you, you'd think I'm crazy."

"Tell me anyway. It can't be any worse than this."

"I think," Donald said slowly as he began to roll up his sleeping bag, "that we were kidnapped by extraterrestrials."

"Martians?"

"Not necessarily," he said. "But if I remember my nightmare correctly, they aren't human — and they are obviously smart. So they aren't of this earth. We don't have intelligent reptiles here. And with their ability to control our actions, I'd say that they were from a considerably higher culture than ours. They've done things to us — but I don't think they did them just for fun. They want us to do something."

"What?"

"I don't know. Right now I'd guess they want us to pack our things. Let's do it and get out of here. This place smells like the reptile house in the zoo!"

I was amazed. The native's analysis was as logical as my own would have been under similar circumstances. There was nothing wrong with his mind or with his courage. That big braincase held a smoothly functioning mind and a cold courage I could almost envy. In a similar fix I wasn't sure that I could be so calm.

My respect for him mounted. If there were others like him on this world, his race could be a potential danger spot for the whole Galaxy. And, with the natural antipathy between our

races, these creatures could be *trouble* if they ever reached space. I wondered for a moment if Authority had known this when It brought me here. There must be some design that I should land here when this race was still capable of being frustrated.

For the sake of civilization I would have to learn more about these mammals. Much more. But since the male had deduced so much, there was only one logical course of action. I adjusted the filters on my helmet to allow the passage of surface thoughts, twisted the dials on the controller until the meters balanced and projected gently.

"Donald — listen to me," I said.

He stiffened. "I thought you would be somewhere around," he said. "Who are you?"

"My name is Eu Kor, and I am a native of Thalassa."

"Where's that?"

"A good many spatial units from here — a good many of your light years," I amended. "I mean you no harm, but I need your cooperation. My spaceship is crippled. Our fuel has deteriorated. We need more and I want you to get it for us. We captured you because we need your help. Being a native you would not make a ripple in this society. And we would create whirlpools."

"What is this material you want?"

"A metal. Atomic number 50, a white metal used as an alloy component of primitive metallic cultures," I said. "It shouldn't be too hard to get." I didn't realize how hard it was to describe what I wanted. I wasn't getting through, and it bothered me. The culture barrier was almost as bad as though we couldn't contact mind to mind.

"I think you mean tin," he said. I grasped the concept and it seemed right.

"Bring me some and I will run tests," I said.

"And what do I get in return?"

I thought quickly. If he wanted to bargain perhaps we could reach an agreement. It's always better to have a cooperative proxy. They don't cause nearly the trouble in management. And I had other things to do than monitor natives. There was a great deal of repair work to be done on the ship before she would fly again. The subspace radio power bank had to be rebuilt and the circuits should be checked.

"I can give you knowledge that you wouldn't have for decades — maybe centuries," I said. "And I can adjust your bodies for a longer and happier

life." I shot a glance at Ven still immersed in her helmet. "In fact, I have made a few adjustments already."

"So I noticed," Donald thought dryly. "Although whether they're an improvement or not I couldn't say. But did you have to go to all this trouble?"

"Think of us — and discount the fact that you carried us because our bodies are too weak for your heavy world." I said. "Did you like us?"

"No," he said. "You repelled me. I disliked you on sight, more than I can say."

"The emotion is mutual," I said. "Yet I can endure you. But with your glandular outlook you could only think of destroying us."

"That is true. But you treated us like animals."

"You are animals," I said logically.

"We are masters of this world. We recognize no higher authority. We are free people — not slaves. And unless we are treated as free agents you will get no cooperation from us."

"I can force you to do as I wish," I said.

"Prove it!"

I took over. And while Donald watched with helpless horror his hand picked up a knife and drew it across his arm. The keen edge split the tissues neatly and the blood flowed.

"Don! What are you doing!" Edith screamed and then stiffened as Ven took control.

"Observe," I said as I released control.

"Why, you —" Donald began — and then continued in a tone of wonder. "Why — the cut's closing! There's no more blood — It's gone!"

"It's just one of the improvements I mentioned," I said smugly. "You also had a patch of scar tissue on your left lung and infected kidneys. You do not have them now. Had you not met us you would have been dead within five of your years."

HE was shaken. I could feel it. "I do have Bright's disease," he said thoughtfully.

"You had it," I corrected.

"All right," he said suddenly, "I'll bargain with you. You've done me a good turn and it deserves a payment. I'll help you get your metal." He grinned ruefully. "I guess I couldn't do anything else."

"It makes it easier this way," I said. I smiled to myself. I was telling him the truth, but not all of it. Nor did I trust him. There was fear and hatred in his lower centers, and a formless feeling in his upper levels that he could outsmart any damn lizard that ever lived. He didn't realize that I could read his surface thoughts.

"Just remember," I said, "I can control you completely, if necessary, and pick your brain for data whether you wish it or not. And forget those ideas of informing your authorities about us. Except with your mate you cannot communicate to anyone about us. There's a basic block in your brain that will result in irreversible mental damage if you try."

This last was not quite the truth. But I hoped that by establishing fear I would prevent talk. "Now find us samples of the metal I want." I withdrew and went back to scanning.

"What was going on there?" Edith said. "You were talking to empty air. And why did you cut yourself?"

"It was one of our reptilian friends," Don said. "Like I thought, they're right with us — every way. He's a weird sort. Wants to trade health and knowledge for tin."

"Tin?"

"Yeah. At least I think it's tin. His description of the metal fits. They use it instead of rocket juice."

"But that knife — your arm?"

"Look. No cut — no blood. That's one of the things they did to us. We've got puncture-proof skin."

"Is that good?"

"It isn't bad. And I don't think I'll ever have to shave again. As I remember I put that stuff on my face. Anyway, we now have a couple of fairy godmothers who ride around in spaceships instead of pumpkin coaches."

"You're mixing your stories," Edith said. "Cinderella travelled in the pumpkin coach, not her fairy godmother. And besides, it's not funny. We're more like those poor souls in the Middle Ages who were possessed by devils — incubuses, I think they called them."

"It makes no difference what you call them," Donald said indifferently. "Whatever they are, we've got them and they're not going to leave until they're damn good and ready. Incidentally, yours is a female, so she's probably a succubus. Now don't start screaming. You'll probably be paralyzed if you do."

"I won't scream," Edith said dully. "I'm too numb to scream."

IV

WE had surprisingly little trouble with the two natives once they realized we could control them if we wished. Of the two, Edith was the worst. She refused to cooperate and had to be forced into the simplest actions.

"We're going to have trouble

with that one," I observed as Ven looked at me with faint exasperation in her yellow eyes.

"Oh, I don't think so," she said. "Not really. This is a normal female reaction. It's a phase. Like the way I felt when the Eugenics Council selected me to be your mate."

"Did you feel like that?" I asked with surprise.

"Of course. I wanted to make my own choice."

"But you never told me."

"There was no need. I came around to the Council's view before I met you. And Edith will come around to mine. Don't worry. I know how to handle this."

And she did.

I helped a little by altering a few reflex arcs and basic attitudes, but Ven wouldn't allow me to modify the higher centers.

"There's no need to make her a mindless idiot," Ven said. "You didn't do that to Donald."

"Yes, but Donald controls his emotions. He doesn't like me any better than Edith likes you, but he doesn't work himself into an emotional homogenate every time I make a suggestion. We argue it out like rational intelligences. Often I can use his experience and viewpoint. And when I can't agree, he will cooperate rather than operate under control. He's not like that bundle of glands and emotions you are trying to make into a useful proxy."

"She *is* a problem," Ven admitted, "but if I had her here—"

"That can be arranged," I said. "I'll give you two weeks. And if that doesn't work you let me perform a prefrontal block."

"That isn't very long."

"That's all we can afford, I told her.

"All right, I can try. In a month I know I could do it."

Donald protested violently when I told him what we planned for Edith, but when I gave him the alternative, he reluctantly agreed.

He passed a story that Edith would be visiting friends, and brought her to the ship.

At once Ven went systematically to work to reduce the mammal to an acquiescent state that would permit control. Since sleep is unknown to our race but necessary for mammals, the task of breaking down the female's resistance was simplified by physical exhaustion. Ven also found that the mammal's sleeping time could be used to strengthen the new reflex channels built during her waking periods. The results were amazing, even to me, and I'm fairly well trained in neuromanipulation. Halfway through the second week the mammal's surrender was complete.

"ANOTHER day and she can go back," Ven said. "I can finish her training at long range. Now that I have the channels established, I don't think she'll be any further trouble."

I took the helmet and scanned Edith. "Hmm," I said. "Do you know what you've done? You've built yourself into an Authority image."

"I know," Ven said smugly. "She is essentially a dependent type. Her mate was her decision maker. That's why I had to get her alone. It wasn't too hard once I knew where to look. As a girl, her mother made the decisions for her. As a woman, Donald has done it. And when I faced her with situations where she had to decide and where the decisions were invariably wrong, she transferred the decision-making power to me."

I looked at her sharply. "I had no idea that you intended to make a pet out of her," I said. "Otherwise I wouldn't have permitted this."

"Well, it's too late now. And besides, it was the only way I could do it in the time you allotted. But don't worry. She'll be as good a tool as your precious Donald — maybe even a better one — because she'll do things to please me and not merely because they're expedient."

Ven had a point there. But it isn't a good policy to get emotionally involved with alien races. However, the deed was done, and as long as Ven was happy I didn't care. I only hoped that she wouldn't become too attached to the creature.

Donald was much more cooperative and much tougher. He had realized from the start that there was no profit in objecting to my demands. But, unlike Edith, he gave me no handle for leverage. He arranged his life to include the unpleasant fact of my existence, and that was that. Where Ven achieved a form of mastery, I never received anything more than acquiescence. There were levels in Donald I could not touch. At first it irked me, but then I realized that I was the greater gainer. For Donald was a constant challenge, a delight to the mind, an outward collaborator and an inward enemy. Our relationship had all the elements of an armed truce. And I often thought that if I did not have the crushing advantage of control, our contest might have been more even.

Although in time Donald's hatred became modified to a grim sort of tolerance, and his repulsion into something that closely resembled admiration, he never lost the basic species antipathy which separated us. And

in that regard our feelings were mutual. The ancient Thalassan proverb that familiarity breeds friendship simply didn't apply. We held a mutual respect for each other, and in a fashion we cooperated, but I never could pierce the armor of resentment that shielded him. I tried, but finally I gave up. There would never be friendship between us. We were too different —

And too alike.

IN the days that followed the first contact, I proceeded according to approved methods of investigating alien civilizations. At my request, Donald went to the local book repository and we went through a number of works on law, government, social structure, and finance. I felt that I should have some knowledge of this mammalian culture before attempting to refuel the ship. There was no sense in calling attention to myself any more than necessary. If I could obtain what I wanted and leave quietly, I would be perfectly happy. This world was of interest — but it was too disturbing to contemplate for an extended period of time.

"You were right, Eu Kor," Ven said to me as we scanned the pattern of the mammals' culture. "If you had picked any place less isolated than this, we might have been engulfed in that maelstrom."

I nodded. "It was more luck than design," I said, "but I am happy that we are no closer. This world is not for us. It is too strange, too alien with its uncontrolled emotionalism and frightening energy."

"It reminds me of a malignant neoplasm," Ven said, "growing uncontrolled, destroying the body from which it draws sustenance. Have you ever seen such a seething flux of people — such growth — such appalling waste and carelessness?"

I shook my head. "The only parallel that comes to mind is Sennor."

"But that's a dead world — killed by a suicidal race that achieved technology before it had attained culture."

"Which is precisely the situation we have here. Or have you observed their social inequities and history? Periodically these mammals erupt in merciless riots and slaughters over things that could be settled by reason. And oddly enough, these 'wars' as humans call them have the effect of stimulating technology. This is a race that apparently loves death and battle. A barbaric horde of cultural morons, with a civilized technology geared to mutual destruction."

"Frankly, I've been scanning through Edith. I've seen only the technical excellence of their entertainment industry, and the enormous waste which goes into the making of one of their productions."

"We must have a synthesis," I said, "and pool our observations."

Ven nodded.

"I'm not at all happy about this place," I continued. "It makes me uncomfortable."

"Could we modify it?" Ven asked.

I shook my head. "It would take an entire task force to do that. Reeducation of this culture would have to begin at birth after appropriate culling. We would have to start from the beginning. I fear that the council would never authorize such an action on behalf of mammals. We are altruistic . . . but not that altruistic."

"Then they will destroy themselves?"

"I fear so. This culture has a poor prognosis. But it is perhaps better so. Or would you like to see them roaming through the Galaxy?"

Ven shuddered. "Not as they are now. Not these fierce, combative stupid brutes. Individuals perhaps, but not the race. They would have to learn the rules of civilization first."

"Yet they show no sign of learning. If they can't even cooperate with their own species, how in Authority's name could they ever get along with the dissimilar races of this island universe?"

"They couldn't. We would have to quarantine them."

"So isn't it better to save the expense and let them quarantine themselves?"

"I suppose so." Ven's aura was a dull gray and mine matched the gloom of hers. It is hard to stand aloof and watch a race condemn itself to death.

WE fed our observations into the analyzer, together with all extraneous data we could lay our digits on via our proxies — not to prove our conclusions but to determine the means by which we could obtain the power metal with the least possible repercussions in this society. We both realized it would be fatal to expose ourselves. The mammalian technology was sufficiently advanced for them to duplicate the essential portions of our ship, and chaos could result if they secured a road to the stars. Generations of effort would be required to confine them again to their homeworld.

Thinking in this manner caused me to take certain precautions with the drive mechanism that would ensure no trace of our craft remaining if I pro-

jected a certain impulse at a given strength. Ven, of course, was appalled at my action, although she realized its grim necessity.

And in the meantime we worked with our proxies, I attempting to establish some means of quietly obtaining the metal we needed, and Ven doing nothing so far as I could determine that would further our mission. At that, Edith was in no position to obtain metal, and Ven was too young and inexperienced in contact work to attempt a mission of such delicacy. Since Edith amused her, I was content to leave them both to their own devices while I worked with Donald to speed our departure.

"In this society," I said to Donald, "it seems that one can accomplish anything with this medium of exchange you call money."

"That's close to a fundamental truth," Donald replied.

"And you are not too well supplied with it?" I asked.

"Those four ingots I brought you last week put a vicious dent in our savings account."

"Isn't your trade as an author profitable?"

"Only in spurts. It's a feast-famine existence. But it's the only one I care to lead."

"But popular fiction makes money — and you can write."

"I wish you'd tell that to my agent. He seems to have other ideas."

"I have recently read some of your fiction," I said, "and have noticed that it has certain basics that could easily be applied to an analyzer. There is no reason why we could not cooperate and produce a work that would yield a great deal of money."

Donald laughed. "Now I've heard everything!" he said. "You mean to tell me *you* could write a book *humans* would buy?"

"No, you would write the book. I would merely furnish the idea, the research data, the plot, and the general story outline. In your popular fiction," I continued, "there are four basic elements and a plot that can be varied about twenty-five ways. There is small need for philosophy and little need for abstract thought. In fact, there is no need at all for anything but glandular excitation. All that is really necessary is plenty of action, enough understanding of the locale and events to avoid anachronism — and the basics."

"WHAT are these basics?" Donald said. "As a writer I'd like to know them."

"There are four," I ticked them off on my digits. "First, violation of the ethical or moral code of your race; second, adequate amounts of cohabitation between the characters; third, brutality; and fourth — murderous assault."

"Hmm. Sin, sex, sadism and slaughter," Donald commented. "You know, you might have something there."

"I have prepared an outline and a synopsis of such a book," I said. "It is a historical novel. It should sell. Most historical novels do."

"You've done what?" Donald gasped. Then he laughed. "Of all the insufferable egoists I've ever seen!"

"Listen," I said, ordering him to silence while I outlined the opening chapter.

"I can't stop you," Donald said. "But why should this happen to me? Isn't it bad enough to be bossed around by you lizards without having to be forced to ghost-write your amateur literary efforts?"

"It is laid in the period of your history called the Renaissance," I continued, "and deals with a young man of a noble but impoverished house who rose to power by cleverness, amorality and skill with the sword."

"I suppose the girl is the daughter of the local duke."

"No," I said, "she is the favorite wife of a Saracen corsair."

"Well, that's a switch," Donald said. "Tell me more."

So I did. I outlined the opening and told him the major points of the whole story . . . as the computer had synthesized it out of seven excellent novels of the period and a four-volume set of Renaissance history.

Donald was enthralled. "You're right," he said. "It will sell. It's lousy literature, but it's got appeal. With this story and my writing we can out-Spillane Mickey." He was more enthusiastic than I had ever seen him appear before.

"Who is Spillane?" I asked.

Donald looked at me as though he thought I was crazy and shook his head. "I can get to work on it as soon as I get home," Donald said. "And if I keep at it, it'll be ready for mailing in a couple of weeks. I'll get it off to my agent and we'll see. I hate to admit it, but I think you're right about the yarn. It should sell like hotcakes."

"That is fine. It should provide us with the medium of exchange, which is necessary in this society."

"It's not necessary," Donald grinned. "It's essential."

V

DONALD'S prediction was a good one. The book sold — and sold well. Despite the outright plagiarism of ideas and source material it was hailed as a new novel — one that stimu-

lated thought with its realistic approach to the life of the times. And we prospered amazingly.

With the advance money, I had Donald buy the land on which the ship was resting, together with the valley and rimrock. Having thus secured our landing site I felt a bit more comfortable. The comfort was even greater when, at Donald's suggestion, a fence was placed around the property and electronic telltales were installed. The remainder of the royalties were used to purchase tin and supplies.

But despite our prosperity and the regular supply of tin that came to me as a result of my adventure in fiction, and the certainty that Ven and I would be leaving, Donald was not happy.

As a successful new author he had to travel to meetings in various cities. He had to speak at public gatherings. He had to meet with publishers eager to receive rights to his next book. And Edith did not go with him.

Ven was adamant on this point. "It's bad enough that she is working on this motion picture," she said, "but I'm not going to have her traveling all over the face of this planet. She's the only amusement I have since we must stay cooped up in this place. I'm not going to let her go."

Donald was upset about it. He was so angry that he came to visit me voluntarily, and the sight of Edith's little car parked under the trees below the ship infuriated him even more. It took the controller to make him keep his distance as he stood in front of the airlock and hated me.

"Damn you!" he swore. "You can't do this to me! Edith's my wife and I don't like this relationship between her and that — that *dinosaur!* It isn't healthy."

"It's out of my hands," I said. "Edith is Ven's responsibility."

"It's not only that," he raged. "Ever since you lizards butted into our lives Edith looks at me like I was a stranger." His face twisted. "I'll admit she has her reasons. But that gives her no call to ask Ven's advice rather than mine. When I told her I wanted her to come with me, the first thing she said was that she'd ask Ven. She doesn't do one damn thing without that cold-blooded little monster's consent! She even asks advice on what clothes she should wear!" He laughed harshly. "The blind asking advice from the blind!"

I couldn't help chuckling. Ven, like all Thalassans, had never worn anything in her life except a utility belt. Clothing has never been a feature of our culture. Since it isn't necessary on Thalassa, it was never developed, and since our sex impulses are periodic it has never been useful to attract either males or females.

"I can see your point," I said. "Ven's ideas along that line would be zero."

"Not quite," Donald said angrily. "She likes moccasins. Apparently they make feet look more like your pads."

"Well?"

"But that's it! Edith's idea of what a well-dressed housewife should wear is — *moccasins!* She damn near caused a riot the other day when our TV repairman called to fix the set. We'll be lucky if we're not forced to move because of that little incident!"

"I'll speak to Ven," I said. "And if that doesn't work, I'll insert a block against such a thing happening again. I don't want special attention called to you. That sort of thing will stop right now."

"Thanks," Donald said. "But I should be the one to stop it."

"Face it," I replied, "you aren't. Not now. But you will be once we're gone."

"Which can't be too soon to suit me," he said. "I spend every spare moment collecting tin for you. Edie doesn't. She *wants* Ven to stay."

"They seem to be happy with each other. Edith comes up here regularly."

"I know," he said bitterly. "She's here more often than she's home. I can't see what fun she gets out of running around these hills stripped to the skin carrying your mate on her shoulders."

"I wouldn't know," I said. "Certainly you never seem to enjoy performing that service for me."

"I don't even like the thought of it. I'm not an animal, after all."

"But you are," I said. "So am I. The only difference is that I am a superior animal and you, being inferior, conform to my wishes. It is a law of nature that the superior type will inevitably rule. The inferior either conforms or dies. And you have no desire to die."

He shook his head. "But I can still object," he said.

"At that?" I asked pointing across the meadow with a primary digit.

Edith was running, her long yellow hair floating free behind her. Ven, high on her shoulders in a seat the two of them had contrived, waved gaily at us as they came up. Edith was flushed and laughing. Her eyes sparkled and her smooth bronze body gleamed in the sunlight. She lowered Ven to the ground, slipped the harness off her smooth shoulders and stood behind my mate, breathing deeply but not at all distressed.

"OH, Donald!" she said. "We had a wonderful climb — clear up to the top of the ridge! And coming down was almost like flying! I'll tell you all about it in a minute, right after I take a dip in the pool. Ven doesn't like it when I sweat." She turned and ran down to the little pool in the meadow.

"See what I mean!" Donald gritted.

"She seems happy. She's not hurt. And Ven's little weight doesn't seem to bother her. What are you complaining about?"

Donald growled something unintelligible, turned on his heel and walked away.

I let him go. There was no sense in making him angrier than he was. After a moment the snarl of his car's engine rose to a crescendo then faded away into the distance.

A few minutes later Edith came back to the ship. "Why did Don leave?" she asked.

"Perhaps he had something to do," Ven said.

She pouted. "He's always so busy nowadays," she said sulkily. "He isn't nice like he used to be. Do you think he's tired of me?"

"No, I don't think so. He just doesn't like you spending so much time up here," I said.

"But it's fun — and Ven likes it," she said. "I like it too. And since he isn't home much any more, it's the only place where I can relax and be myself." She brushed the drops of water from her body and shook out her damp hair. "It's wonderful up here — so quiet and peaceful — and Ven's so nice."

My mate's aura glowed a pleased pink as I turned an embarrassed lavender. It was almost criminal, I thought, what Ven had done to the girl. Donald might be my servant, but I had never attempted to condition him into liking it. As much as possible we operated as equals, rather than in this sickening relationship which Ven had imposed upon Edith. To avoid showing my displeasure I went up to the control room, donned my helmet and went into rapport with Donald.

"I'm sorry," I said. "I hadn't realized the true situation. The best thing for both of us is for Ven and me to leave as quickly as possible."

"How quick is that?" he shot back angrily.

"Four thousand pounds more," I said.

"Whew! That can must drink tin."

"It takes a great deal to leave a planet," I said. "And hyperspace demands a great deal more. Once we develop an inertialess drive it will be easier. But we've only been working on it a thousand years. These things take time."

"I imagine. Well, are you going to do anything about Edith?"

"No," I said. "It would only make things worse. The relationship has gone too far. Ven has become an Authority-image."

"You could break it."

"But I won't. I'm fond of Ven."

"You're a damned little tyrant," Donald said. "You like to see a human squirm."

"BE thankful that I'm the worst tyrant you'll see," I answered sharply. "You could really learn about them if the Slaads knew you existed. They're more advanced than you. And, unlike us, they're warlike and predatory. They breed mammals for food. However, I'll put up a marker on your moon before I leave. They respect Thalassa and won't preempt our claims."

"You mean you're going to lay claim to Earth?"

"Only technically. We'll exercise it only if the Governing Council decides it will be to our advantage."

"What would you do if you took over?" Don asked curiously.

"Clean things up," I said. "Stop wars, stabilize the population, increase production and distribution, give you an effective central government and an understandable legal code, and eliminate the unfit. In three generations you'd be Class VI all over your planet."

"It sounds good. What's the catch."

"The catch," I said, "is that you wouldn't like it. You mammals are erratic, emotional and uncontrolled. You do not reason well, and you have no race discipline."

"What's that?"

"The capability of sacrificing units for the benefit of the whole. Eugenics control, culling the unfit."

"You're talking about human beings!" Donald exploded.

"And what makes a human being different from any other animal?" I asked. "Would you hesitate to dispose of an animal that was unfit to breed?"

He sighed. "No," he said. "But that's not the same."

"What's the difference? And realize, it's done for your betterment."

"Just a bunch of murderous little altruists," Donald sneered. "Out of the kindness of your cold-blooded hearts —"

"That's the trouble with you lower orders," I interrupted. "You get emotional. Your observations have no basis in logic. Actually, the Galaxy wouldn't even quiver if the lot of you disappeared tomorrow. Yet you

think the universe rotates about your heads."

"I didn't—"

"Don't interrupt," I snapped. "You — your race — your whole pitiful little civilization is ready mentally and almost ready technologically to commit suicide. If we came and saved you, you would owe us eternal gratitude, but I doubt if we'd get it."

"You wouldn't," Donald assured me. "There wouldn't be a human alive who wouldn't hate you."

"I realize that — and that is one of the reasons I should report your world unfavorably to the council. We could hardly take on an altruism mission like this unless we felt that our work would be appreciated. It would be better to let you kill yourselves."

"Altruism!"

"In a sense. At least your race would be the greater gainers. All we'd get would be your excess population."

"And what would you want them for — slaves?"

"Authority, no!" I said, shocked in spite of myself. "We'd merely process them for food."

He was silent after that.

DONALD was away again, at a publisher's meeting. Our new book laid in Restoration England was going to be an even greater success than the first if the advance notices were any criterion. Edith was at a studio party celebrating the completion of the picture in which she was working. And Ven was bored.

For awhile she sat in on Donald's conference in a city called New York, but that proved to be uninteresting. I was busy with a faulty fuel feed in the drive chamber. The sun was hot, and the day was promising to be extremely warm even though it was not yet noon. It was one of those days when nothing happens, and I was grateful for it. I had had enough of emotional tangles to last me for some time. It was almost soothing to work with the robots on insensate machinery rather than supervise a pair of highly charged mammals and a hardly less unstable mate.

The association with these entities hadn't done Ven a great deal of good. In fact, I could notice a deterioration of her character that bothered me. She no longer looked at me with respect. Indeed, her yellow eyes at times held a pitying amusement that I should be so weak as to argue with Donald. I didn't bother to point out that the three tons of power metal had virtually all been brought aboard through Donald's efforts, and that our conveniences, our defenses, our robots and our very lives were due to the working arrangements I had established.

The only useful thing Edith had done in the past month was to help me change the tube liners in the steering jets. Her size and strength had made the job easy — and it was normally a hard one, since the robots didn't have the flexibility or balance that Edith, with her dancer's body, possessed. The job had taken two days. It would have taken better than a week if I had to use robots.

The mammals, I thought, would be of distinct value as members of spaceport maintenance crews. Their combination of immense strength and high intelligence would be useful to our society. I made a note of it and added it to the data I was assembling for the Council. It was foolish, perhaps, but I couldn't help feeling an interest in these creatures.

I looked across the little valley that was our domain. It was an idyllic life we were leading. Unhurried — peaceful — the sort of life I thoroughly enjoyed. It would have been perfect if it wasn't for the insane and dangerous world on which it was being lived.

Of course it was too good to last. Idylls invariably are. The peace of ours was shattered abruptly when Ven came into the drive room and disturbed my work. Her aura blazed a rich violet.

"Eu," she said. "Come up to the control room. Something's wrong!"

"What," I asked.

"It's Edith. I can't do a thing with her."

"You're not supposed to. She's working now."

"She is not! Her studio has finished the picture and they're having a party."

"That's nice. I hope you're letting her have a good time."

"I told her to. But I never imagined what they'd be doing!" Ven's voice was anguished.

"Well, what *are* they doing?"

"Ingesting ethanol to excess!"

"Ethanol!" I gasped. "Oh no!"

I hadn't realized that normal mammals consumed excess amounts of the stuff, although there were references to it in the literature. I thought that was merely literary exaggeration. After all, we had been here scarcely half a year, and we hadn't really learned too much about the details of mammalian society. Donald's kidneys had forced him to lead a quiet life, and the passing of Edith from his control to Ven's had caused no remarkable alterations in her doings.

I should have paid more attention to their customs. But I had

been too busy. I swore as I reached for my control helmet. I'd have to stop this before it became serious. Donald would be of no help to me. He was several thousand vursts away, and even under the best circumstances couldn't be expected back for a day.

I didn't bother to call him, but instead adjusted the controls to Edith's setting.

VI

A horde of gaily dressed mammals surrounded me, their faces and bodies oddly fuzzy and distorted. Edith's voice was equally fuzzy. There was something wrong with her centers. I tapped the helmet and checked the controller just in case it was on our end, but they were functioning perfectly. There was nothing wrong — merely the fact that ethanol was disturbing the biocircuits I had implanted in her brain. I swore a few choice expletives of Low Thalassan and tried to get through by increasing the power. It did no good.

"I c'n still feel that li'l lizard in m' head," Edith announced. "Gimme another drink. I wanna wash her out. Darn li'l lizard makes me do things I dowanna do. It wants me to quit, but I wanna get drunk."

"Take it easy," a fuzzy male face said. "You're loaded. Why does a nice chick like you hafta be loaded? Whyncha get outa here? I gotta nice place over in Santa Monica where—"

The face disappeared.

"Hey! Alice! Golly, I almos' din't reckanize you. Howya doin?"

"Better than you, Edith. You're drunk. And from the looks of you, you're going to be sick if you don't get some fresh air."

"Gotta go spit in the eye of my li'l lizard," Edith said. "Y'wanna come with me? I got Don's car. We c'n get outa here an' get some fresh air — an' I c'n tell that li'l lizard what I think of her."

"What are you talking about?"

"You wanna see my li'l lizard. She's got yella eyes, and a li'l tail, and she turns all kindsa colors, and she lives in a rock with a door in it, an she makes me do things I dowanna do. It ain't so bad though. Mosta the time I like it. Not alla time though. That's why I wanna spit in her eye. She c'n tell me all she wants — but she's gotta leave me'n Don alone. I love that guy." Edith started sobbing — why, I couldn't understand.

"She's maudlin," I said to Ven. "No one's going to believe a thing she is saying. But this should be a warning to us. We'll have to put in a block against

drinking ethanol. I didn't realize how badly it can affect the biocircuits." I handed the helmet back to Ven. "You can watch this mess if you want to. I'm going to our quarters."

I slipped out of the control chair and walked across the room.

I was stronger now, more accustomed to the gravity, and it didn't bother me unless I had to stand for long periods of time. I turned in the doorway to look at Ven. She had the helmet on again and her aura was a crackling red. I shook my head. Edith was due for a bad time when the effects of that hydrocarbon wore off.

I had hardly fallen into light estivation when Ven's projection crashed through my antennae.

"Eu! Get up! Come here quickly!"

With a groan I came slowly back to full facility and ran to the control room. Ven's face was filled with panic.

"They're coming up here," she said. "A whole carful of them!"

"Who?"

"Edith's drunken friends! Somehow she's collected six of them and they're driving up here to spit in my eye!"

Despite myself, I laughed. Ven looked so outraged I couldn't help it.

"We can close the airlock," I said, "and they can't tell us from a rock."

"I won't! I'm going to teach that girl a lesson she won't forget in a hurry! I've listened to myself being insulted for two hours — and she's still going strong. When she gets up here I'll show her whose eye she'll spit in!"

VEN was raging. I'd never seen her so emotional before. Her aura swelled and ebbed in ruddy shades as her breath came and went in short gasps.

"And how do you propose to do that?" I asked.

"I'll stat her!" Ven raged. "I'll stat every one of them!"

I blinked. "I wouldn't do that," I said mildly. "What can we do with them? The two we have are bad enough. And if you stat them, we'll have to kill or condition them. We couldn't let them go home with a story like the one they'd tell."

"I don't care," Ven said. "You can do what you like about the rest of them, but that Edith is going to learn a lesson." She was being emotional and quite unwilling to listen to reason — and she was larger and stronger than I. Despite my protests, she jerked a stat projector from the rack and strode toward the open airlock.

"Thalassa!" she exclaimed. "They're coming through the gate! They'll be here in a minute."

I could hear the roar of a pro-

testing engine groaning up the trail to the lower meadow as I hurried after Ven. As I reached the airlock, the gray body of Donald's station wagon poked its nose around the trees below our ship.

Ven stood rigidly in the airlock, waiting, her lips tight and her eyes narrow. She took a firmer grip on the stat as the car stopped and the giggling, half-sober humans tumbled out. I was in a quandary. I didn't want Ven to shoot, but I couldn't close the airlock with her inside it. So I stood, hesitating while the group of gaily dressed mammals came toward us through the trees, their high voices loud in the stillness.

"Gotta find that li'l lizard an tell her to stop meddling with my life," Edith's voice came to my ears.

Ven stiffened beside me as the group broke out of the trees in front of the ship.

"Why, Edie, it's beautiful!" a voice said. "It's a fairy glen! No wonder you'd never tell us where you got that suntan! And that big rock — it's just like you said — And — uh!" The voice never finished as Ven pressed the trigger.

I looked down at the six crumpled mammalian bodies and the lone standing figure that looked stupidly up at us.

"Well," I said. "You've done it this time. Now are you satisfied?

"No," Ven said. "Not half." Her voice was tight with anger. She looked down at Edith. "Come here!" she said.

"Dowanna," Edith replied uncertainly. "You've made Don leave me. I don't like you." But habit was stronger than alcohol and under the furious lash of Ven's voice she came unsteadily forward.

"Do you understand me, you little sarf!" Ven snapped icily. "I said *come here!*" She took the control box from her waist and viciously twisted the intensity dial to maximum. At this range its force was irresistible, even with alcohol-deadened synapses. Edith shuddered and moved toward us, her hands clumsily tearing at the fabric that covered her.

"I'm comin'! You don' hafta shout. I ain't deaf. I ain't done nothin'!" She sat down beside the airlock and struggled out of her clothing, ripping the thin fabric under the last of Ven's anger until she was completely naked. Then she stood up and reached her hands toward Ven.

"You're not going to try to ride her while she's in that condition?" I said.

"This is my affair," Ven replied grimly. "I'm going to get this settled."

I shrugged.

THERE was no sense reasoning with her while she was in that mood. And if she wanted to kill herself that was her concern. I watched her drop onto Edith's shoulders, wind one hand viciously into the mammal's long blonde hair and guide the gross body into a shambling walk toward the meadow. Edith swayed dangerously, but somehow she managed to stay on her feet as they disappeared into the trees.

I walked over to the six bodies, gave each of them a light stat to make sure they would remain quiet and sat down beside the nearest one to think.

Ven's anger had left me a sizeable problem. What on earth could I do with six human females? I needed them like I needed a broken digit. Time passed and the sun rose toward the zenith, and finally I came to a decision. Since we had them on our hands, we might as well make use of them. Killing would be too dangerous.

And presently Edith came through the trees, a sick, tired, sober Edith whose face was dirty and tear streaked, carrying a grim Ven whose aura smoldered a reddish brown.

"What did you do to her?" I asked.

"None of your business," Ven snapped. "She's all right now. Aren't you, Edith?"

"Yes, Ven — and I won't do it again. Honest I won't."

"You'd better not," Ven said grimly. "Now I suppose we have some work to do."

"You certainly have," I said. "If it wasn't for your temper we wouldn't have this mess on our hands. Now get moving! Have Edith carry these girls to the ship." I gestured at the prone bodies. "And you, get inside and bring out the control equipment and connect the leads to the computer." I was angry, too. Under the force of my superior will, the two females scurried to obey. "I'm disgusted with you, Ven," I said angrily. "Just because your pet went to a party, you don't have to act childish. Did you expect she'd behave like a Thalassan?"

"I trusted her," Ven said.

"It just goes to show that you can't trust an animal too far," I said. "Now get moving. Bring the probes first. We have a lot of work to do before evening."

IT was finished sooner than I expected. The sun was still in the sky, but close to the edge of the hills. The row of mammalian bodies slumbered peacefully beside the airlock. Ven looked down at them speculatively.

"No," I said. "You have one, and that's enough."

"But," Ven said.

"I've humored you," I said. "I've let you act like a lower order. Now I want to see you behave like a civilized being. For unless you do, I shall have to take steps. I'm tired of this childishness."

"I'll be all right now," Ven replied. "We've come to an understanding." She gestured at Edith with her primary digit and the big mammal shivered. I wondered what Ven had done to her. Edith was thoroughly cowed — actually afraid of little Ven, who was less than one fifth her size. In a way, I felt an odd sort of pride in my mate that she should achieve mastery over such an intelligent and potentially dangerous brute. I knew perfectly well that I'd never dare attempt such dominance over Donald unless I was prepared to rob him of the mentality that made him useful. But I consoled myself with the thought that this female was peculiarly susceptible to domination.

"We'd better get that car out of sight," Ven said. She nodded to Edith. The human obediently trotted off in the direction of the car. A few moments later the sound of the motor rose and fell as she concealed it in the trees.

As soon as I could, I contacted Donald and told him what had happened. Fortunately he was alone, so his exclamation of surprise and consternation didn't arouse any suspicion.

"Ethanol, eh?" he said speculatively.

It was easy to follow the trend of his thoughts. "Don't get any ideas," I warned in my best TV villain manner. "I have Edith up here with me. If you want to see her again, you'd better stay sober."

"I wouldn't think of crossing you," he assured me insincerely. "I'm too close to being rid of you."

"Well — what do we do?" I asked. "You're the expert on this insane society of yours."

"You've done it," he said. "I don't think it was smart of you, but under the circumstances, I can't see how you could have done anything else. I warned you about Ven and Edith," he added — rather gloatingly, I thought. "Now you're in for it." His voice was almost gay.

"How?"

"Six women vanishing all at once is going to cause a stir even in Los Angeles," he said.

"After an ethanol party?" I asked curiously. "Six dancers out of a production that used a hundred? Your city will never miss them."

"But their families will."

Families! I hadn't thought of that. Mammals had strong family ties — probably due to their

method of reproduction. We Thalassans, coming as we did from eggs, had none of this. The state incubators and the creches were our only contact with parenthood. We had no families.

"Hmm," I said. "I hadn't thought of that."

"Well, you'd better start. I hope it gives you a headache."

"You get nastier every time I talk with you," I complained.

"I have my reasons," he said bitterly. "Now, if you're through with me, little master, I think I'd like to get some sleep. In the meantime you'd better get them back to their homes before they're missed."

"I can't," I confessed. "The controller isn't big enough to handle eight of you — not as individuals."

Donald chuckled grimly. "That's your worry. Remember, unless you find out which of them will be missed and act accordingly, you're going to be very much in the public eye."

I didn't feel too happy as I cut off, but Donald had given me an idea.

One by one I checked the new proxies. Of the six, two were living together. They had the casual emotional involvement with males so characteristic of this species, but they could remain here for several days without causing comment. Of the remaining four, one had a roommate and would be difficult to extract; another was living alone; still another was mated and had an offspring, but she was not living with her mate — a legal action having separated her much as it separates incompatible Thalassans. The offspring, however, was living with her when she wasn't working, a not unusual situation on this world, but one which could have some complications unless she was returned to it very shortly.

The last was living with her parents and was seriously involved emotionally with a male. She was planning to be officially mated in the near future, although it would be legal fiction rather than fact since she was already nurturing a living embryo of some three weeks development. I debated whether to remove it, a simple enough manipulation, but decided against it. It would be interesting to observe a mammalian reproduction. But to remove her from her family and her unofficial mate was a task that might be difficult. I needed help.

I projected a call for Ven, phrasing it imperatively so she could have no doubt about its urgency. Her answer was quick and clear.

"I'm coming," she said.

"Good. I need you. And bring Edith. We have a problem that will require her talents."

"She'll be happy to cooperate." Ven's projection was cheerfully confident.

"You did her no permanent damage, I hope."

"Not a bit. In fact, you'd never know she's been disciplined."

"Well, get in here, both of you, We have work to do."

Edith had trouble squeezing into the control room and, despite her skin conditioning, the place quickly filled with her scent. But Ven and I were old hands now and took it in stride. She grasped the problem instantly. "The only one who might be any trouble is Alice. Her family and her boy friend can be difficult. The others won't need much effort, except for Grace. She'd better be returned to her baby as soon as possible."

"How soon?" I asked.

"The baby isn't living with her," Edith added, "not while she's working, but she sees it regularly. Every day or two, I believe."

I sighed. That solved the biggest problem.

"We had better start at once," Ven said.

I ignored her and looked inquiringly at Edith. "What would you do?" I asked, flashing a cold projection at Ven to stay out of this.

"Well — if I had to do it, I'd send Alice and Grace home. I wouldn't do anything to Alice except block her from talking about this place and what happened. Grace I'd put under full control, have her pick up her baby, go home and pack to leave. As soon as she's ready to go, bring her out here."

"The infant, too?"

"Of course. A baby's no bother."

This, I thought, was something of an understatement.

"And what of the others?" I asked.

"Velma has a nosey roommate. Have her start a fight and leave angry. She hasn't much baggage, and it won't be any trouble for her to collect it. As for the other three, I think Joan's being kept. She can't afford a single apartment on her salary. Loleta and Marian are always out, sometimes for days. Their landlady won't think a thing of it. If they never return, she'll just pack their things and rent the room to someone else. I know that old witch. I'd just keep those three here and not worry about them. Nobody's going to make any fuss about three chorines disappearing. Later on you can make them write letters enclosing money to send their clothes to

another city. Then they can be picked up and stored. That should give us a year before anyone gets suspicious enough to look for them."

"Edith," I said, "you're a genius."

"I got you into this mess," Edith said. "So, perhaps I'd better get you out."

"But your fellow mammals—"

"You haven't hurt me — not much, anyway," Edith said. "So I don't suppose you'll hurt them. And, besides, I don't want Ven mad at me like she was this afternoon. Anyway — you'll be gone soon."

"I think I shall regret leaving," I said honestly. "There is a great deal about you mammals I am beginning to suspect I do not know."

"You aren't kidding," she said with faint bitterness so similar to Donald's that my antennae quivered. "But it's been quite an experience. I'll tell my kids when I have them — but they're not going to believe me."

"I hope you have those children — and raise them to maturity," I said.

The tone of my voice caused her to look at me with sudden fear on her face. But at the sight of my impassive features it died away. "You scared me for a moment," she said.

"Did I? I didn't mean to."

VII

THE next week kept us busy following Edith's instructions. I didn't see how they would apply to Alice, but Edith knew her species better than I. Alice's silence and the prying inquisitiveness of her parents and her boyfriend worked like magic. Alice finally became angry and after a stormy scene left the house, swearing never to return. Edith picked her up as she walked away; Ven turned on the control and turned the threat to fact. Later I took a leaf from Edith's book and sent Alice to San Francisco, where I had her write a pair of bitter letters to her parents and her extralegal mate. After that I felt more secure.

The others worked out exactly as Edith predicted. No trouble at all. By the time Donald returned from the East with a ton of tin ingots in a small truck our training schedule was well set up. The robots and I had managed to build a multiplex controller similar to those we used on Thalassa on the state farms, but much smaller. It could handle the proxies en masse or as individuals. While far less sensitive than the one in the ship, it was effective enough for our rather elementary purposes.

Edith, who was running the group under Ven's supervision,

had them lined up in a row to greet Donald as he came up the hill toward the ship.

"The place looks like a nudist colony," Donald grumbled. "You haven't improved it any." He eyed the file of mammals trooping down to the truck to unload the tin ingots. "I have another ton lined up for delivery as soon as you get this processed," he said.

"Good," I replied. "We'll leave as soon as it's aboard. I don't like the looks of your recent actions."

"Mine?" I shook my head. "Oh, you mean the world situation." I nodded. "You shouldn't worry about it. You should have seen it this time last year."

I shrugged. I would never really understand these creatures. Their brains functioned differently. "You frighten me with your wild displays of emotion. Someday one of you is going to start something and your world is going to go up in fire."

"I don't think so," he said. "I have some ideas about that. With the money from your stories and with what you have taught me, I think there will be some changes." There was a peculiar expression in his eyes that I couldn't identify. It made me vaguely uneasy. "I've been doing a lot of thinking since you met up with Edie and me. What this world needs is someone who can run it."

"That's obvious," I said. "Until your society catches up with your technology you will be in constant danger. You mammals will have to learn to discipline your emotions."

His face twisted. "I've had a good practical course in that," he said. "Now I'm getting postgraduate training." He gestured at the women coming up the hill carrying the silver tin ingots. "Just how long do you think I can endure something like this?"

"Like what?" I asked.

"Do I have to draw you a diagram?" he asked. "Ever since you lizards came into my life I haven't been able to touch a woman. Not even Edith — and she's my wife. Just how much of this do you think I can take?"

"OH!" I exclaimed with dawning comprehension. "I think I see."

The situation would have been amusing if it wasn't so stupid. I was surprised that I hadn't realized it before. There was, I knew, a certain amount of feedback in a bipolar control circuit. Obviously enough of Ven's conditioning, and mine, had seeped through to affect Donald and Edith's normal relationships. Mammals were far more preoccupied with sex than we were. Their books, maga-

zines, television and motion pictures reeked of it. It was present in almost every piece of advertising, and four of our six new proxies were living histories of it. Yet Donald and Edith, because of our feedback, had been kept as continent as novitiates for the priesthood of Authority!

"I'm a perfectly normal male," Donald said. "Just what do you think you've been doing to me? I can't drink. I can't make love. I can't do anything except collect tin for you lizards. Just why do you think I hate you? Now you surround me with a whole damned untouchable harem! Are you trying to drive me insane?"

I laughed, and Donald recognize the sound for what it was.

"Oh, *damn* you!" he said bitterly. "How would you like to be married for eight months and for six of them be unable to touch your wife? Just why do you think Edith tried to get drunk? I could kill you cheerfully for what you've done to us!"

"Oh!" I said. There was a world of understanding opening in front of me. Of course, it would do no good to tell him that Ven and I had remained in enforced continence for five years. It was just the Eugenics council working through us — entirely involuntarily. What was bothering Donald and Edith was so absurdly simple that neither Ven nor I would have thought to ask. And the mammals with their peculiar customs and habits would never have told us unless — as had happened — the pressure became too great.

What our mammals needed was a good dose of Va Krul's basic therapy. If Edith were fertilized as a result of it, so much the better. It would keep her attention where it more properly belonged. The thought would never have occurred to me in my present state. Since I was content, I had erroneously assumed that everything was in harmony.

"You might as well go home," I said. "Take Edith with you. We won't need you for several days."

"Why?"

"You'll find things a little different. I'll make a few adjustments on the controller."

TO my surprise Don didn't appear happy at all. "Does that mean what I think it does?" he demanded. "Do you think I'll get any satisfaction out of being controlled *even there?*"

"I don't know about the pleasure," I said coldly, "but I do know that it will improve your attitude."

Donald raged at me, his brain white with anger. "So help me God, Eu Kor, someday I'm going to kill you for this! It's the ultimate insult."

"You're not going to do anything," I said calmly. His voice dissolved into obscenity. For a moment I felt sorry for him until I remembered the basic truth that none of us are free — and the most intelligent, naturally, are the least free of all. They are bound by their commitments, their duties, their responsibilities, and by their intelligence itself. If a superior intelligence occasionally exhibits petty lapses — which amuse him or relieve his boredom — it is not the place of the less endowed to construe it as a sign of equality.

Some — like Ven and me — have known their place from birth. Others, like Edith and Alice, learn easily with a minimum amount of pain. Some like Grace learn hard; and some — like Donald — do not learn at all.

Donald was the eternal rebel, complying because he must, yet seething with resentment because he did. He was the personification of drive without innate control, ambition without humility, intelligence without wisdom. As he had been, he was not quite enough. At best he would have been a minor author and a petty domestic tyrant. He would never have been a threat simply because he didn't have the ability or training. But I had given him what he lacked. The knowledge I had impressed upon his mind would give him a tremendous advantage over his fellow mammals, and his tendencies toward domestic tyranny would expand to include others. His glandular attitude would pervert his knowledge to the detriment of humankind. He could become a thing so dangerous that it could destroy this precariously balanced world.

I went into the ship and set up a world matrix on the computer, using all the data I had accumulated, secured the answer, and then inserted Donald's potential into the matrix. I then ordered a probability extrapolation for both matrices, equating the solutions with survival.

The answers confirmed my thoughts. With the matrix as it stood, the twenty year survival prediction was 65 per cent, which wasn't too bad since few advanced-technology worlds have better than an 85 per cent survival probability. But with Donald in the matrix, the survival prediction was zero!

I knew what I must do. I could not leave him behind as I had planned. Nor could I inflict the senseless cruelty of brainblotting. He would have to be mercifully destroyed.

Although I was fond of Donald,

and his death would leave me sick for weeks, it would not be right to let my creation live and condemn the mammal race to death. I could not exterminate a race Authority had created. The guilt syndrome would be shattering. Of course, if they killed each other that was not my concern.

But until we left I would give him all the freedom he could use. Outside of the minimum of control, he would be free to do and act as he pleased. I didn't owe it to him, yet it was not his fault that he had come into my hands. And when I returned to Thalassa I would tell the Council what I had done and ask for justice. Perhaps we could save this world from itself even as we had saved others. The question of gratitude would be immaterial.

With a firm hand to set them on the track, the mammals might learn the values of intelligence and cooperation before it was too late. They might understand the realities of existence rather than fall victim to their glandular fancies. They might. But if they did, one thing would be certain — they would learn it the hard way. Donald was proof of that.

I went to our living quarters, and presently Ven joined me. "They're all in for the night, Eu," she said.

"That's good. How are they coming along?"

"Splendidly. Another week should see the end of the training. Edith was a good experience for me in handling these. I'm not making the mistakes I did. I'm finding the blocks and removing them. One of them, the one called Grace, should be even better than Edith."

"As a mount?" I asked with faint humor. "Or as a working proxy?"

"Both," Ven said promptly. "She's stronger and more intelligent. Yet even so I think I shall always like Edith best."

"ONE'S first dependent is always one's fondest memory," I replied sententiously, "But you'll forget them all when we're back on Thalassa."

"I won't," Ven said. "I'll never forget Edith."

"Never is a long time," I said gently. "I shall even forget the pain of killing Donald some day."

"Then you've decided to eliminate him?" Ven said.

I nodded. "It's necessary," I said. "This world wouldn't be safe with him alive."

"Poor Edith. She's fond of the brute," Ven said. She moved toward the doorway.

"Where are you going?" I asked.

"I want to talk to Edith. Perhaps I can prepare her."

"No. Don't," I said. "Contact her if you wish, but tell her nothing."

"Very well," she said. I smiled as she disappeared. Ven was going to miss her pet once we had left. It was obvious.

"Eu! Quick!" Ven's projection crackled in my brain. "They're fighting! Edith's being hurt, and I can't touch them! They've set up a block!"

I ran for the control room, slapped the helmet on my head, reached for the controls — and stopped, laughing.

"Stop them!" Ven screamed. Her aura blazed a brilliant white and her projection nearly knocked me down. She reached for the control switch, but I slapped her hand away.

"Quiet!" I snapped. "They're not fighting, you little fool! Turn on your audio and listen and stop acting silly!"

Ven did as I told her and her aura changed to a fiery pink. "Oh!" she said in a small voice, "but they never—"

I must have made some mistake in revising the controllers — or feedback was stronger than I suspected — for the Va Krul syndrome came back along our lines of contact with explosive force! Desperately I reached for the switch — but my hand froze in midair as an intolerable wave of emotion drove Ven and me together like two pieces of iron with opposite magnetic charge! The last thing I remember was being enveloped in the flaring golden glow of Ven's aura.

I came to my senses in our living quarters. I was stunned — exhausted — limp and gasping.

"Thalassa!" I said weakly, "we've *really* done it now!"

Ven smiled a pale blue radiance at me. "You have become strong, living on this heavy world," she said. "I like it."

"But — but!" I sputtered. "It was so — it can't — it couldn't—"

"But it did," Ven said softly. "And I'm glad it did."

"I don't mean that. What I mean to say was that it was so—"

"Unexpected?"

"No! So utterly—"

"Satisfying?" she asked.

"Stop interrupting! It was all of that and more. But what I want to say is that we've violated the prime restriction for space travellers. How could we do it?"

"You're forgetting that for some time we have been living upon this emotion-charged world," Ven said. "The steady erosion was more than our conditioning could take. The feedback was merely the last in a whole series of disruptive stimuli. It was the trigger, but our defenses had been weakened long

before. Not that I'm sorry," she added quickly. "For weeks I've been wondering what sort of a mate you'd be when this trip was over. I'm not unhappy with the preview." She smiled at me and the whole of our living quarters was filled with a bright tender blue.

"The natives," I said worriedly. "We were in contact with them."

Ven's aura darkened. "I had forgotten them," she said. "I hope that the feedback wasn't intensified and returned to them. I'd better look." She started for the control room and I followed more slowly.

"There's no damage," she said from beneath the helmet. "Edith feels just as I do."

I took my helmet and coded Don's pattern on the selector. Peculiar, I thought with vague wonder. Most peculiar. For the first time Donald and I were in true rapport. His mind was slow, lazy, sluggish — even his ambition was sated for the moment. Could it be, I wondered, that we could find agreement through our *emotions?* Was it frustration that drove him? Whatever the block had been it was gone now. This was a true empathic meeting — something far more satisfying than our previous conflict.

I relaxed in it, feeling the slow langorous questings of his mind even as he felt mine. There was a sense of brotherhood that transcended differences in race and culture. We were down to basics, on the oldest meeting ground of life.

He was wondering idly what the outcome of this might be — conscious of me, but careless. It jolted me. He might be uncertain, but I *knew* Ven was from good family stock, and "good" to a Thalassan meant something entirely different than it commonly did to the natives of this planet!

I disengaged hurriedly and shook Ven out of her rapport with Edith. "We've no time to lose," I said. "We must leave at once! You know what's going to happen!"

"I know," Ven said. "I feel the changes already."

"That's just in your mind," I snapped.

"We're not going home," she said. There was a note of prophecy in her voice. "We'll never make it."

"We can't stay here!"

"I know."

"Then what are we going to do?"

WE couldn't stay here. But we couldn't go home either. The trip would take weeks, and hyperspace is fatal to a gravid Thalassan female. That was something we learned long ago, and the principal reason for continence-conditioning for couples in space. What was more, I knew that where Ven stayed, I would stay.

"Remember the fourth planet of this system?" Ven asked.

"Yes. Ideal gravity, adequate oxygen, but too cold."

"And with no intelligent life," Ven added. "That's an advantage — and we can beat the cold. It wouldn't be too hard to build domes. We have plenty of power metal, and a matricizer. We could hatch our clutch there. With the mammals to help us, we should be able to make a comfortable enough life for the forty years it'll take to bring our offspring to maturity. We should be able to do this easily, and still get home before we're strangers."

"Hmm," I said. "It's possible. And we can use this world for a supply base. But would you care to live on that cold barren planet?"

"There are worse places," she said matter-of-factly. "And we'd be close to everything we'd need."

It did have possibilities. And the mammals could be adapted. They were a more advanced evolutionary form than we, but lower on the adaptive scale — nonspecialized — more so than any other intelligent race I had encountered.

Ven said, "We would actually be doing their race a favor, if the computation of this world's future is correct. Some of them would still survive if this planet commits suicide. And if the prediction is wrong, we would have done no harm. If they reach space, they'll merely find that they've already arrived when they reach the fourth planet."

"Which might be something of a surprise to their explorers," I said with a chuckle. "All right. We'll play it your way."

I was pretty sure how Donald would take this. He was going to be furious, but after all one doesn't make a pet of a wolf and then turn it loose. It's too hard on the livestock. But I didn't think he'd be too unhappy. He'd be the principal human on Mars; and after we left he'd be ruler of a world. And in the meantime he could be a domestic tyrant.

It was fortunate, I thought with a smile, that mammals were essentially polygamous. Donald would make some nasty comments about being a herd sire — but I didn't think his comments would be too sincere. After all, it's not every man that has a chance to become a founding father.

I was still smiling as I turned the dials on the controller and flipped the switch. Founding father — the title was as much mine as his!

—J. F. BONE

The first Laika visited space and died. The second Laika reversed that order — to save a man's life!

MOON DOG

By ARTHUR C. CLARKE Illustrated by DICK FRANCIS

WHEN I heard Laika's frantic barking, my first reaction was one of annoyance. I turned over in my bunk and murmured sleepily "Shut up, you silly bitch." That dreamy interlude lasted only a fraction of a second. Then consciousness returned — and with it, fear. Fear of loneliness, and fear of madness.

For a moment I dared not open my eyes. I was afraid of what I might see. Reason told me that no dog had ever set foot upon this world, that Laika was separated from me by a quarter of a million miles of space — and, far more irrevocably, by five years of time.

"You've been dreaming," I told myself angrily. "Stop being a fool — open your eyes! You won't see anything except the glow of the wall-paint."

That was right, of course. The tiny cabin was empty, the door tightly closed. I was alone with my memories, overwhelmed by the transcendental sadness that often comes when some bright dream fades into drab reality. The sense of loss was so desolating that I longed to return to sleep.

It was well that I failed to do so, for at that moment sleep would have been death. But I did not know this for another five seconds, and during that eternity I was back on Earth, seeking what comfort I could from the unforgotten past.

NO one ever discovered Laika's origin, though the Observatory staff made a few inquiries and I inserted several advertisements in the Pasadena newspapers. I found her, a lost and lonely ball of fluff, huddled by the roadside one summer evening when I was driving up to Palomar. Though I have never liked dogs, or indeed any animals, it was impossible to leave this helpless little creature to the mercy of the passing cars. With some qualms, wishing that I had a pair of gloves, I picked her up and dumped her in the baggage compartment. I was not going to hazard the upholstery of my new '92 Vik, and felt that she could do little damage there. In this, I was not altogether correct.

When I had parked the car at the Monastery — the astronomers' residential quarters, where I'd be living for the next week — I inspected my find without much enthusiasm. I had intended to hand the puppy over to the janitor. But then it whimpered and opened its eyes. There was such an expression of helpless trust in them that — well, I kept it.

Sometimes I regretted that decision. But never for long.

I had no idea how much trouble a growing dog could cause, deliberately and otherwise. My cleaning and repair bills soared. I could never be sure of finding an unravaged pair of socks or an unchewed copy of the *Astrophysical Journal*. But eventually Laika was both house-trained and Observatory-trained; she must have been the only dog ever to be allowed inside the 200-inch dome. She would lie there quietly in the shadows for hours, while I was up in the cage making adjustments, quite content if she could hear my voice from time to time. The other astronomers became equally fond of her (it was old Dr. Anderson who suggested her name) but from the beginning she was my dog. She would obey no one else. Not that she would always obey me.

She was a beautiful animal, about 95% Alsatian. It was that missing 5%, I imagine, that led to her being abandoned. (I still feel a surge of anger when I think of it, but as I shall never know the facts I may be jumping to false conclusions.) Apart from two dark patches over the eyes, most of her body was a smoky gray. Her coat was soft as silk. When her ears were pricked up, she looked incredibly intelligent and alert. Sometimes I would be discussing spectral types or stellar evolution with my colleagues, and it would be hard to believe that she was not understanding us.

Even now, I cannot understand why she became so attached to me, for I have made very few friends among human beings. Yet when I returned to the Observatory after an absence, she would go almost frantic with delight, bouncing round on her hindlegs and putting her paws on my shoulders — which she could reach quite easily — all the while uttering small squeaks of joy which seemed highly inappropriate from so large a dog. I hated to leave her for more than a few days at a time. I could not take her with me on overseas trips, but she accompanied me on most of my shorter journeys.

She was with me when I drove north to attend that ill-fated seminar at Berkeley.

SHE had been very good company on the long drive.

We were staying with university acquaintances on Telegraph Hill; they had been polite about it, but obviously did not look forward to having a monster in the house. However, I assured them that Laika never gave the slightest trouble. Rather reluctantly, they let her sleep in the living room. "You needn't worry about burglars tonight," I said.

"We don't have any in Berkeley," they answered, rather coldly.

In the middle of the night it seemed that they were wrong.

I was awakened by an hysterical, high-pitched barking from Laika which I had heard only once before — when she had first seen a cow, and did not know what on earth to make of it. Cursing, I threw off the sheets and stumbled out into the darkness of the unfamiliar house. My main thought was to silence Laika before she roused my hosts — assuming that this was not already far too late. If there had been an intruder, he would certainly have taken flight by now. Indeed, I rather hoped that he had.

For a moment I stood beside the switch at the top of the stairs, wondering whether to throw it. Then I growled, "Shut up, Laika!" and irritably flooded the place with light.

She was scratching frantically at the door, pausing from time to time to give that hysterical yelp. "If you want out," I said angrily, "there's no need for all that fuss." I went down and shot the bolt. She took off into the night like a rocket.

It was very calm and still, with a waning moon struggling to pierce the San Francisco fog. I stood in the luminous haze, looking out across the water to the lights of the city, waiting for Laika to come back so that I could chastise her suitably. I was still waiting when, for the second time in the Twentieth Century,

the San Andreas Fault woke from its sleep.

Oddly enough, I was not frightened — at first.

I can remember that two thoughts passed through my mind, in the moment before I realized the danger. Surely, I told myself, the geophysicists could have given us some warning. And then I found myself thinking, with great surprise, "I'd no idea that earthquakes make so much noise!"

It was about then that I knew that this was no ordinary quake.

What happened afterward I would prefer to forget. The Red Cross did not take me off until quite late the next morning, because I refused to leave Laika. As I looked at the shattered house containing the bodies of my friends, I knew that I owed my life to her; but the helicopter pilots could not be expected to understand that, and I cannot blame them for thinking that I was crazy, like so many of the others they had found wandering among the fires and the debris.

AFTER that, I do not suppose we were ever apart for more than a few hours. I have been told — and I can well believe it — that I became less and less interested in human company, without being actively unsocial or misanthropic. Between them, the stars and Laika filled all my needs. We used to go for long walks together over the mountains; it was the happiest time I have ever known.

There was only one flaw. I knew, though Laika could not, how soon it must end.

We had been planning the move for more than a decade. As far back as the 1960's, it was realized that Earth was no place for an astronomical observatory. Even the small pilot instruments on the Moon had far out-performed all the telescopes peering through the murk and haze of the terrestrial atmosphere. The story of Mount Wilson, Palomar, Greenwich and the other great names was coming to an end. They would still be used for training purposes, but the research frontier must move out into space.

I had to move with it. Indeed, I had already been offered the post of Deputy Director, Farside Observatory. In a few months, I could hope to solve problems I had been working on for years. Beyond the atmosphere, I would be like a blind man who had suddenly been given sight.

It was utterly impossible, of course, to take Laika with me. The only animals on the Moon were those needed for experimental purposes. It might be another generation before pets were allowed, and even then it would cost a fortune to carry them there and to keep them alive. Providing Laika with her usual two pounds of meat a day would take several times my quite comfortable salary.

The choice was simple and straightforward. I could stay on Earth and abandon my career. Or I could go to the Moon and abandon Laika.

After all, she was only a dog.

In a dozen years, she would be dead, while I should be reaching the peak of my profession. No sane man would have hesitated over the matter. Yet I did hesitate, and if by now you do not understand why, no further words of mine can help.

In the end, I let matters go by default. Up to the very week I was due to leave, I had still made no plans for Laika. When Dr. Anderson volunteered to look after her, I accepted numbly, with scarcely a word of thanks. The old physicist and his wife had always been fond of her, and I am afraid that they considered me indifferent and heartless. The truth was just the opposite.

We went for one more walk together over the hills; then I delivered her silently to the Andersons, and did not see her again.

TAKE-OFF was delayed almost twenty-four hours until a major flare-storm had cleared the Earth's orbit. Even so, the Van Allen belts were still so active that we had to make our exit through the North Polar Gap.

It was a miserable flight. Apart from the usual trouble with weightlessness, we were all groggy with anti-radiation drugs. The ship was already over Farside before I took much interest in the proceedings, so I missed the sight of Earth dropping below the horizon. Nor was I really sorry. I wanted no reminders, and intended to think only of the future. Yet I could not shake off that feeling of guilt; I had deserted someone who loved and trusted me, and was no better than those who had abandoned Laika when she was a puppy, beside the dusty road to Palomar.

The news that she was dead reached me a month later.

There was no reason that anyone knew; the Andersons had done their best, and were very upset. She had just lost interest in living, it seemed. For a while, I think I did the same; but work is a wonderful anodyne, and my program was just getting under way.

Though I never forgot Laika, in a little while the memory ceased to hurt.

Then why had it come back to haunt me, five years later, on the far side of the Moon? I was searching my mind for the reason,

when the metal building around me quivered as if under the impact of a heavy blow.

I reacted without thinking. I was already closing the helmet of my emergency suit when the foundations slipped and the wall tore open with a short-lived scream of escaping air. Because I had automatically pressed the General Alarm button we lost only two men, despite the fact that the tremor—the worst ever recorded on Farside—cracked all three of the Observatory's pressure-domes.

It is hardly necessary for me to say that I do not believe in the supernatural. Everything that happened has a perfectly rational explanation, obvious to any man with the slightest knowledge of psychology. In the Second San Francisco earthquake, Laika was not the only dog to sense approaching disaster. Many such cases were reported. And on Farside, my own memories must have given me that heightened awareness, when my never-sleeping subconscious detected the first faint vibrations from within the Moon.

The human mind has strange and labyrinthine ways of going about its business. It knew the signal that would most swiftly rouse me to the knowledge of danger. There is nothing more to it than that; though in a sense one could say that Laika woke me on both occasions, there is no mystery about it, no miraculous warning across the gulf that neither man nor dog can ever bridge.

Of that I am sure, if I am sure of anything.

Yet sometimes I wake now, in the silence of the Moon, and wish that the dream could have lasted a few seconds longer—so that I could have looked just once more into those luminous brown eyes, brimming with an unselfish, undemanding love I have found nowhere else on this world, or on any other.

— ARTHUR C. CLARKE

★ ★ ★ ★ ★

FORECAST

Instead of a single issue, let's take a long-range view. On hand right now, scheduled soon, are lead stories by Leiber, Blish, Pohl, Aldiss, Budrys, etc.; shorts by Edward Wellen, Judith Merril, Jack Sharkey, Avram Davidson and a dozen more; the long-awaited Theodore Sturgeon sequel to *Tandy's Story* — and more! Some will be in June — all will be in *Galaxy!*

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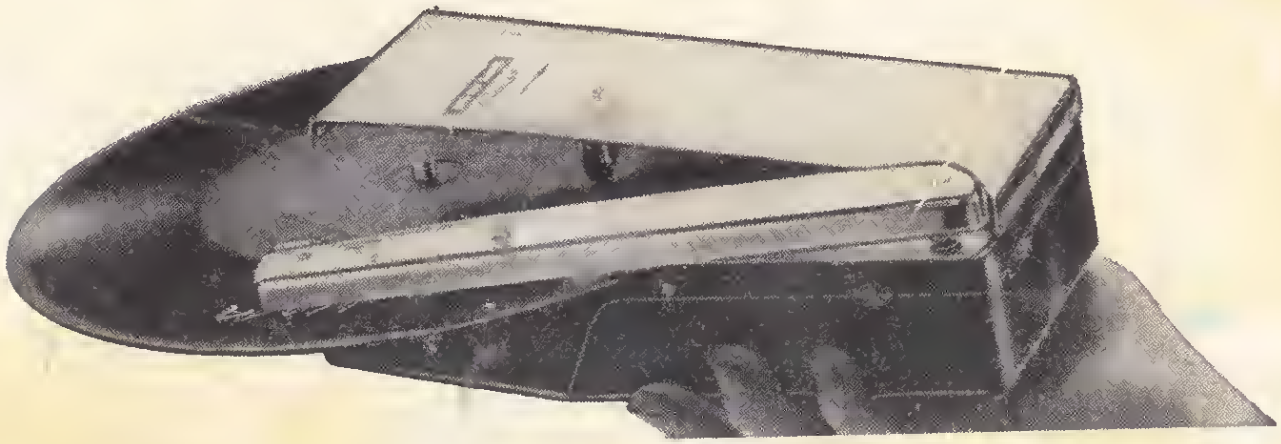

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