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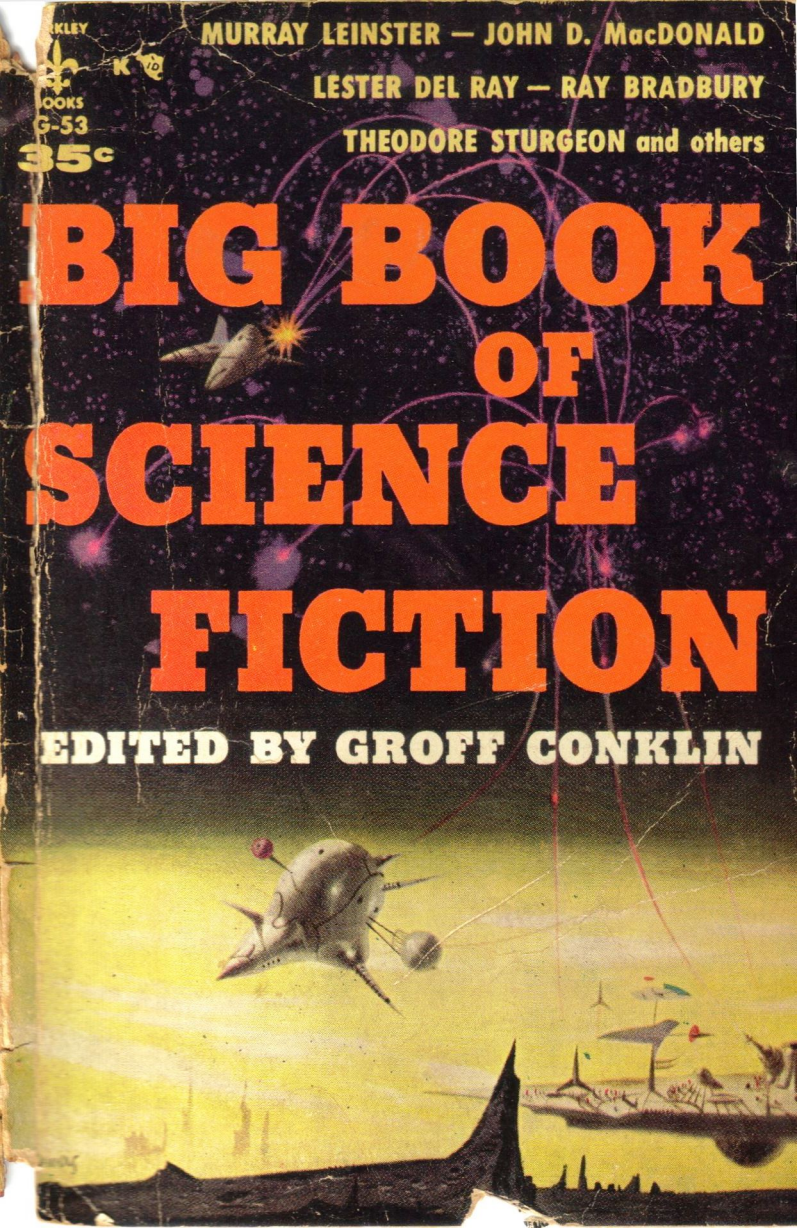
BIG BOOK OF SCIENCE FICTION

EDITED BY GROFF CONKLIN



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Edited by GROFF CONKLIN

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DESERTION

by Clifford D. Simak

FOUR men, two by two, had gone into the howling maelstrom that was Jupiter and had not returned. They had walked into the keening gale—or rather, they had loped, bellies low against the ground, wet sides gleaming in the rain.

For they did not go in the shape of men.

Now the fifth man stood before the desk of Kent Fowler, head of Dome No. 3, Jovian Survey Commission.

Under Fowler's desk, old Towser scratched a flea, then settled down to sleep again.

Harold Allen, Fowler saw with a sudden pang, was young—too young. He had the easy confidence of youth, the straight back and straight eyes, the face of one who never had known fear. And that was strange. For men in the domes of Jupiter did know fear—fear and humility. It was hard for Man to reconcile his puny self with the mighty forces of the monstrous planet.

"You understand," said Fowler, "that you need not do this. You understand that you need not go."

It was formula, of course. The other four had been told the same thing, but they had gone. This fifth one, Fowler knew, would go too. But suddenly he felt a dull hope stir within him that Allen wouldn't go.

"When do I start?" asked Allen.

There was a time when Fowler might have taken quiet pride in that answer, but not now. He frowned briefly.

"Within the hour," he said.

Allen stood waiting, quietly.

"Four other men have gone out and have not returned,"

said Fowler. "You know that, of course. We want you to return. We don't want you going off on any heroic rescue expedition. The main thing, the only thing, is that you come back, that you prove man can live in a Jovian form. Go to the first survey stake, no farther, then come back. Don't take any chances. Don't investigate anything. Just come back."

Allen nodded. "I understand all that."

"Miss Stanley will operate the converter," Fowler went on. "You need have no fear on that particular point. The other men were converted without mishap. They left the converter in apparently perfect condition. You will be in thoroughly competent hands. Miss Stanley is the best qualified conversion operator in the Solar System. She had had experience on most of the other planets. That is why she's here."

Allen grinned at the woman and Fowler saw something flicker across Miss Stanley's face—something that might have been pity, or rage—or just plain fear. But it was gone again and she was smiling back at the youth who stood before the desk. Smiling in that prim, schoolteacherish way she had of smiling, almost as if she hated herself for doing it.

"I shall be looking forward," said Allen, "to my conversion."

And the way he said it, he made it all a joke, a vast, ironic joke.

But it was no joke.

It was serious business, deadly serious. Upon these tests, Fowler knew, depended the fate of men on Jupiter. If the tests succeeded, the resources of the giant planet would be thrown open. Man would take over Jupiter as he already had taken over the other smaller planets. And if they failed—

If they failed, Man would continue to be chained and hampered by the terrific pressure, the greater force of gravity, the weird chemistry of the planet. He would continue to be shut within the domes, unable to set actual foot upon the planet, unable to see it with direct, unaided vision, forced to rely upon the awkward tractors and the televisor, forced to work with clumsy tools and mechanisms or through the medium of robots that themselves were clumsy.

For Man, unprotected and in his natural form, would be blotted out by Jupiter's terrific pressure of fifteen thousand pounds per square inch, pressure that made Terrestrial sea bottoms seem a vacuum by comparison.

Even the strongest metal Earthmen could devise couldn't exist under pressure such as that, under the pressure and the alkaline rains that forever swept the planet. It grew brittle and flaky, crumbling like clay, or it ran away in little streams and puddles of ammonia salts. Only by stepping up the toughness and strength of that metal, by increasing its electronic tension, could it be made to withstand the weight of thousands of miles of swirling, choking gases that made up the atmosphere. And even when that was done, everything had to be coated with tough quartz to keep away the rain—the bitter rain that was liquid ammonia.

Fowler sat listening to the engines in the sub-floor of the dome. Engines that ran on endlessly, the dome never quiet of them. They had to run and keep on running. For if they stopped, the power flowing into the metal walls of the dome would stop, the electronic tension would ease up and that would be the end of everything.

Towser roused himself under Fowler's desk and scratched another flea, his leg thumping hard against the floor.

"Is there anything else?" asked Allen.

Fowler shook his head. "Perhaps there's something you want to do," he said. "Perhaps you—"

He had meant to say write a letter and he was glad he caught himself quick enough so he didn't say it.

Allen looked at his watch. "I'll be there on time," he said. He swung around and headed for the door.

Fowler knew Miss Stanley was watching him and he didn't want to turn and meet her eyes. He fumbled with a sheaf of papers on the desk before him.

"How long are you going to keep this up?" asked Miss Stanley and she bit off each word with a vicious snap.

He swung around in his chair and faced her then. Her lips were drawn into a straight, thin line, her hair seemed skinned back from her forehead tighter than ever, giving her face that queer, almost startling death-mask quality.

He tried to make his voice cool and level. "As long as there's any need of it," he said. "As long as there's any hope."

"You're going to keep on sentencing them to death," she said. "You're going to keep marching them out face to face with Jupiter. You're going to sit in here safe and comfortable and send them out to die."

"There is no room for sentimentality, Miss Stanley," Fowler

said, trying to keep the note of anger from his voice. "You know as well as I do why we're doing this. You realize that Man in his own form simply cannot cope with Jupiter. The only answer is to turn men into the sort of things that can cope with it. We've done it on the other planets.

"If a few men die, but we finally succeed, the price is small. Through the ages men have thrown away their lives on foolish things, for foolish reasons. Why should we hesitate, then, at a little death in a thing as great as this?"

Miss Stanley sat stiff and straight, hands folded in her lap, the lights shining on her graying hair and Fowler, watching her, tried to imagine what she might feel, what she might be thinking. He wasn't exactly afraid of her, but he didn't feel quite comfortable when she was around. Those sharp blue eyes saw too much, her hands looked far too competent. She should be somebody's Aunt sitting in a rocking chair with her knitting needles. But she wasn't. She was the top-notch conversion unit operator in the Solar System and she didn't like the way he was doing things.

"There is something wrong, Mr. Fowler," she declared.

"Precisely," agreed Fowler. "That's why I'm sending young Allen out alone. He may find out what it is."

"And if he doesn't?"

"I'll send someone else."

She rose slowly from her chair, started toward the door, then stopped before his desk.

"Some day," she said, "you will be a great man. You never let a chance go by. This is your chance. You knew it was when this dome was picked for the tests. If you put it through, you'll go up a notch or two. No matter how many men may die, you'll go up a notch or two."

"Miss Stanley," he said and his voice was curt, "young Allen is going out soon. Please be sure that your machine—"

"My machine," she told him, icily, "is not to blame. It operates along the co-ordinates the biologists set up."

He sat hunched at his desk, listening to her footsteps go down the corridor.

What she said was true, of course. The biologists had set up the co-ordinates. But the biologists could be wrong. Just a hairbreadth of difference, one iota of digression and the converter would be sending out something that wasn't the thing they meant to send. A mutant that might crack up,

go haywire, come unstuck under some condition or stress of circumstance wholly unsuspected.

For Man didn't know much about what was going on outside. Only what his instruments told him was going on. And the samplings of those happenings furnished by those instruments and mechanisms had been no more than samplings, for Jupiter was unbelievably large and the domes were very few.

Even the work of the biologists in getting the data on the Lopers, apparently the highest form of Jovian life, had involved more than three years of intensive study and after that two years of checking to make sure. Work that could have been done on Earth in a week or two. But work that, in this case, couldn't be done on Earth at all, for one couldn't take a Jovian life form to Earth. The pressure here on Jupiter couldn't be duplicated outside of Jupiter and at Earth pressure and temperature the Lopers would simply have disappeared in a puff of gas.

Yet it was work that had to be done if Man ever hoped to go about Jupiter in the life form of the Lopers. For before the converter could change a man to another life form, every detailed physical characteristic of that life form must be known—surely and positively, with no chance of mistake.

Allen did not come back.

The tractors, combing the nearby terrain, found no trace of him, unless the skulking thing reported by one of the drivers had been the missing Earthman in Loper form.

The biologists sneered their most accomplished academic sneers when Fowler suggested the co-ordinates might be wrong. Carefully they pointed out, the co-ordinates worked. When a man was put into the converter and the switch was thrown, the man became a Loper. He left the machine and moved away, out of sight, into the soupy atmosphere.

Some quirk, Fowler had suggested; some tiny deviation from the thing a Loper should be, some minor defect. If there were, the biologists said, it would take years to find it.

And Fowler knew that they were right.

So there were five men now instead of four and Harold Allen had walked out into Jupiter for nothing at all. It was as if he'd never gone so far as knowledge was concerned.

Fowler reached across his desk and picked up the personal

file, a thin sheaf of papers neatly clipped together. It was a thing he dreaded but a thing he had to do. Somehow the reason for these strange disappearances must be found. And there was no other way than to send out more men.

He sat for a moment listening to the howling of the wind above the dome, the everlasting thundering gale that swept across the planet in boiling, twisting wrath.

Was there some threat out there, he asked himself? Some danger they did not know about? Something that lay in wait and gobbled up the Lopers, making no distinction between Lopers that were *bona fide* and Lopers that were men? To the gobblers, of course, it would make no difference.

Or had there been a basic fault in selecting the Lopers as the type of life best fitted for existence on the surface of the planet? The evident intelligence of the Lopers, he knew, had been one factor in that determination. For if the thing Man became did not have capacity for intelligence, Man could not for long retain his own intelligence in such a guise.

Had the biologists let that one factor weigh too heavily, using it to offset some other factor that might be unsatisfactory, even disastrous? It didn't seem likely. Stiffnecked as they might be, the biologists knew their business.

Or was the whole thing impossible, doomed from the very start? Conversion to other life forms had worked on other planets, but that did not necessarily mean it would work on Jupiter. Perhaps Man's intelligence could not function correctly through the sensory apparatus provided Jovian life. Perhaps the Lopers were so alien there was no common ground for human knowledge and the Jovian conception of existence to meet and work together.

Or the fault might lie with Man, be inherent with the race. Some mental aberration which, coupled with what they found outside, wouldn't let them come back. Although it might not be an aberration, not in the human sense. Perhaps just one ordinary human mental trait, accepted as commonplace on Earth, would be so violently at odds with Jovian existence that it would blast all human intelligence and sanity.

Claws rattled and clicked down the corridor. Listening to them, Fowler smiled wanly. It was Towser coming back

from the kitchen, where he had gone to see his friend, the cook.

Towser came into the room, carrying a bone. He wagged his tail at Fowler and flopped down beside the desk, bone between his paws. For a long moment his rheumy old eyes regarded his master and Fowler reached down a hand to ruffle a ragged ear.

"You still like me, Towser?" Fowler asked and Towser thumped his tail.

"You're the only one," said Fowler. "All through the dome they're cussing me. Calling me a murderer, more than likely."

He straightened and swung back to the desk. His hand reached out and picked up the file.

Bennett? Bennett had a girl waiting for him back on Earth.

Andrews? Andrews was planning on going back to Mars Tech just as soon as he earned enough to see him through a year.

Olson? Olson was nearing pension age. All the time telling the boys how he was going to settle down and grow roses.

Carefully, Fowler laid the file back on the desk.

Sentencing men to death. Miss Stanley had said that, her pale lips scarcely moving in her parchment face. Marching men out to die while he, Fowler, sat here safe and comfortable.

They were saying it all through the dome, no doubt, especially since Allen had failed to return. They wouldn't say it to his face, of course. Even the man or men he called before this desk and told they were the next to go, wouldn't say it to him.

They would only say: "When do we start?" For that was formula.

But he would see it in their eyes.

He picked up the file again. Bennett, Andrews, Olson. There were others, but there was no use in going on.

Kent Fowler knew that he couldn't do it, couldn't face them, couldn't send more men out to die.

He leaned forward and flipped up the toggle on the intercommunicator.

"Yes, Mr. Fowler."

"Miss Stanley, please."

He waited for Miss Stanley, listening to Towser chewing half-heartedly on the bone. Towser's teeth were getting bad.

"Miss Stanley," said Miss Stanley's voice.

"Just wanted to tell you, Miss Stanley, to get ready for two more."

"Aren't you afraid," asked Miss Stanley, "that you'll run out of them? Sending out one at a time, they'd last longer, give you twice the satisfaction."

"One of them," said Fowler, "will be a dog."

"A dog!"

"Yes, Towser."

He heard the quick, cold rage that iced her voice. "Your own dog! He's been with you all these years—"

"That's the point," said Fowler. "Towser would be unhappy if I left him behind."

It was not the Jupiter he had known through the televisor. He had expected it to be different, but not like this. He had expected a hell of ammonia rain and stinking fumes and the deafening, thundering tumult of the storm. He had expected swirling clouds and fog and the snarling flicker of monstrous thunderbolts.

He had not expected the lashing downpour would be reduced to drifting purple mist that moved like fleeing shadows over a red and purple sward. He had not even guessed the snaking bolts of lightning would be flares of pure ecstasy across a painted sky.

Waiting for Towser, Fowler flexed the muscles of his body, amazed at the smooth, sleek strength he found. Not a bad body, he decided, and grimaced at remembering how he had pitied the Lopers when he glimpsed them through the television screen.

For it had been hard to imagine a living organism based upon ammonia and hydrogen rather than upon water and oxygen, hard to believe that such a form of life could know the same quick thrill of life that humankind could know. Hard to conceive of life out in the soupy maelstrom that was Jupiter, not knowing, of course, that through Jovian eyes it was no soupy maelstrom at all.

The wind brushed against him with what seemed gentle fingers and he remembered with a start that by Earth standards the wind was a roaring gale, a two-hundred-mile an hour howler laden with deadly gases.

Pleasant scents seeped into his body. And yet scarcely

scents, for it was not the sense of smell as he remembered it. It was as if his whole being was soaking up the sensation of lavender—and yet not lavender. It was something, he knew, for which he had no word, undoubtedly the first of many enigmas in terminology. For the words he knew, the thought symbols that served him as an Earthman would not serve him as a Jovian.

The lock in the side of the dome opened and Towser came tumbling out—at least he thought it must be Towser.

He started to call to the dog, his mind shaping the words he meant to say. But he couldn't say them. There was no way to say them. He had nothing to say them with.

For a moment his mind swirled in muddy terror, a blind fear that eddied in little puffs of panic through his brain.

How did Jovians talk? How—

Suddenly he was aware of Towser, intensely aware of the bumbling, eager friendliness of the shaggy animal that had followed him from Earth to many planets. As if the thing that was Towser had reached out and for a moment sat within his brain.

And out of the bubbling welcome that he sensed, came words.

"Hiya, pal."

Not words really, better than words. Thought symbols in his brain, communicated thought symbols that had shades of meaning words could never have.

"Hiya, Towser," he said.

"I feel good," said Towser. "Like I was a pup. Lately I've been feeling pretty punk. Legs stiffening up on me and teeth wearing down to almost nothing. Hard to mumble a bone with teeth like that. Besides the fleas give me trouble. Used to be I never paid much attention to them. A couple of fleas more or less never meant much in my early days."

"But . . . but—" Fowler's thoughts tumbled awkwardly. "You're talking to me!"

"Sure thing," said Towser. "I always talked to you, but you couldn't hear me. I tried to say things to you, but I couldn't make the grade."

"I understood you sometimes," Fowler said.

"Not very well," said Towser. "You knew when I wanted food and when I wanted a drink and when I wanted out, but that's about all you ever managed."

"I'm sorry," Fowler said.

"Forget it," Towser told him. "I'll race you to the cliff."

For the first time, Fowler saw the cliff, apparently many miles away, but with a strange crystalline beauty that sparkled in the shadow of the many-colored clouds.

Fowler hesitated. "It's a long way—"

"Ah, come on," said Towser and even as he said it he started for the cliff.

Fowler followed, testing his legs, testing the strength in that new body of his, a bit doubtful at first, amazed a moment later, then running with a sheer joyousness that was one with the red and purple sward, with the drifting smoke of the rain across the land.

As he ran the consciousness of music came to him, a music that beat into his body, that surged throughout his being, that lifted him on wings of silver speed. Music like bells might make from some steeple on a sunny, springtime hill.

As the cliff drew nearer the music deepened and filled the universe with a spray of magic sound. And he knew the music came from the tumbling waterfall that feathered down the face of the shining cliff.

Only, he knew, it was no waterfall, but an ammonia-fall and the cliff was white because it was oxygen, solidified.

He skidded to a stop beside Towser where the waterfall broke into a glittering rainbow of many hundred colors. Literally many hundred, for here, he saw, was no shading of one primary to another as human beings saw, but a clear-cut selectivity that broke the prism down to its last ultimate classification.

"The music," said Towser.

"Yes, what about it?"

"The music," said Towser, "is vibrations. Vibrations of water falling."

"But, Towser, you don't know about vibrations."

"Yes, I do," contended Towser. "It just popped into my head."

Fowler gulped mentally. "Just popped!"

And suddenly, within his own head, he held a formula—the formula for a process that would make metal to withstand the pressure of Jupiter.

He stared, astounded, at the waterfall and swiftly his mind took the many colors and placed them in their exact sequence

in the spectrum. Just like that. Just out of blue sky. Out of nothing, for he knew nothing either of metals or of colors.

"Towser," he cried. "Towser, something's happening to us!"

"Yeah, I know," said Towser.

"It's our brains," said Fowler. "We're using them, all of them, down to the last hidden corner. Using them to figure out things we should have known all the time. Maybe the brains of Earth things naturally are slow and foggy. Maybe we are the morons of the universe. Maybe we are fixed so we have to do things the hard way."

And, in the new sharp clarity of thought that seemed to grip him, he knew that it would not only be the matter of colors in a waterfall or metals that would resist the pressure of Jupiter, he sensed other things, things not yet quite clear. A vague whispering that hinted of greater things, of mysteries beyond the pale of human thought, beyond even the pale of human imagination. Mysteries, fact, logic built on reasoning. Things that any brain should know if it used all its reasoning power.

"We're still mostly Earth," he said. "We're just beginning to learn a few of the things we are to know—a few of the things that were kept from us as human beings, perhaps because we were human beings. Because our human bodies were poor bodies. Poorly equipped for thinking, poorly equipped in certain senses that one has to have to know. Perhaps even lacking in certain senses that are necessary to true knowledge."

He stared back at the dome, a tiny black thing dwarfed by the distance.

Back there were men who couldn't see the beauty that was Jupiter. Men who thought that swirling clouds and lashing rain obscured the face of the planet. Unseeing human eyes. Poor eyes. Eyes that could not see the beauty in the clouds, that could not see through the storms. Bodies that could not feel the thrill of trilling music stemming from the rush of broken water.

Men who walked alone, in terrible loneliness, talking with their tongue like Boy Scouts wigwagging out their messages, unable to reach out and touch one another's mind as he could reach out and touch Towser's mind. Shut off forever from that personal, intimate contact with other living things.

He, Fowler, had expected terror inspired by alien things out here on the surface, had expected to cower before the threat of unknown things, had steeled himself against disgust of a situation that was not of Earth.

But instead he had found something greater than Man had ever known. A swifter, surer body. A sense of exhilaration, a deeper sense of life. A sharper mind. A world of beauty that even the dreamers of the Earth had not yet imagined.

"Let's get going," Towser urged.

"Where do you want to go?"

"Anywhere," said Towser. "Just start going and see where we end up. I have a feeling . . . well, a feeling—"

"Yes, I know," said Fowler.

For he had the feeling, too. The feeling of high destiny. A certain sense of greatness. A knowledge that somewhere off beyond the horizons lay adventure and things greater than adventure.

Those other five had felt it, too. Had felt the urge to go and see, the compelling sense that here lay a life of fullness and of knowledge.

That, he knew, was why they had not returned.

"I won't go back," said Towser.

"We can't let them down," said Fowler.

Fowler took a step or two, back toward the dome, then stopped.

Back to the dome. Back to that aching, poison-laden body he had left. It hadn't seemed aching before, but now he knew it was.

Back to the fuzzy brain. Back to muddled thinking. Back to the flapping mouths that formed signals others understood. Back to eyes that now would be worse than no sight at all. Back to squalor, back to crawling, back to ignorance.

"Perhaps some day," he said, muttering to himself.

"We got a lot to do and a lot to see," said Towser. "We got a lot to learn. We'll find things—"

Yes, they could find things. Civilizations, perhaps. Civilizations that would make the civilization of Man seem puny by comparison. Beauty and more important—an understanding of that beauty. And a comradeship no one had ever known before—that no man, no dog had ever known before.

And life. The quickness of life after what seemed a drugged existence.

"I can't go back," said Towser.

"Nor I," said Fowler.

"They would turn me back into a dog," said Towser.

"And me," said Fowler, "back into a man."

MEWHU'S JET

by Theodore Sturgeon

"WE INTERRUPT this program to announce—"

"Jack! Don't jump like that! And you've dropped ashes all over your—"

"Aw, Iris, honey, let me listen to—"

—at first identified as a comet, the object is pursuing an erratic course through the stratosphere, occasionally dipping as low as—"

"You make me nervous, Jack! You're an absolute slave to the radio. I wish you paid that much attention to me."

"Darling, I'll argue the point, or pay attention to you, or anything in the wide world you like when I've heard this announcement; but please, *please* LET ME LISTEN!"

"—dents of the East Coast are warned to watch for the approach of this ob—"

"Iris, don't—"

Click!

"Well, of all the selfish, inconsiderate, discourteous—"

"That will do, Jack Garry! It's my radio as much as yours, and I have a right to turn it off when I want to!"

"Might I ask why you find it necessary to turn it off at this moment?"

"Because I know the announcement will be repeated any number of times if it's important, and you'll shush me every time. Because I'm not interested in that kind of thing and don't see why I should have it rammed down my throat. Because the only thing you ever want to listen to is something which couldn't possibly affect us. But mostly because you *yelled* at me!"

"I did *not* yell at you!"

"You *did!* And you're yelling *now!*"

"Mom! Daddy!"

"Oh, Molly, darling, we woke you up!"

"Poor bratlet. Hey—what about your slippers?"

"It isn't cold tonight, Daddy. What was that on the radio?"

"Something buzzing around in the sky, darling, I didn't hear it all."

"A spaceship, I betcha."

"You see? You and your so-called science-fiction!"

"Call us a science-faction. The kid's got more judgment than you have."

"You have as little judgment as a seven-year-old child, you mean. And b-besides, you're turning her a-against me!"

"Aw, for Pete's sake, Mom, don't cry!"

At which point, something like a giant's fist clouted off the two-room top story of the seaside cottage and scattered it down the beach. The lights winked out, and outside, the whole waterfront lit up with a brief, shattering blue glare.

"Jacky, darling, are you hurt?"

"Mom, he's bleedin'!"

"Jack, honey, say something. *Please* say something."

"Urrrrgh," said Jack Garry obediently, sitting up with a soft clatter of pieces of falling lath and plaster. He put his hands gently on the sides of his head and whistled. "Something hit the house."

His red-headed wife laughed half-hysterically. "Not really, darling." She put her arms around him, whisked some dust out of his hair, and began stroking his neck. "I'm . . . frightened, Jack."

"You're frightened!" He looked around, shakily, in the dim moonlight that filtered in. Radiance from an unfamiliar place caught his bleary gaze, and he clutched Iris' arm. "Upstairs . . . it's gone!" he said hoarsely, struggling to his feet. "Molly's room . . . Molly—"

"I'm here, Daddy. Hey! You're squeezin'!"

"Happy little family," said Iris, her voice trembling. "Vacationing in a quiet little cottage by the sea, so Daddy can write technical articles while Mummy regains her good disposition—without a phone, without movies within miles, and

living in a place where the roof flies away. Jack—what hit us?"

"One of those things you were talking about," said Jack sardonically. "One of the things you refuse to be interested in, that couldn't possibly affect us. Remember?"

"The thing the radio was talking about?"

"I wouldn't be surprised. We'd better get out of here. This place may fall in on us, or burn, or something."

"An' we'll all be kilt," crooned Molly.

"Shut up, Molly! Iris, I'm going to poke around. Better go on out and pick us a place to pitch the tent—if I can find the tent."

"Tent?" Iris gasped.

"Boy oh boy," said Molly.

"Jack Garry, I'm not going to go to bed in a tent. Do you realize that this place will be swarming with people in no time flat?"

"O.K.—O.K. Only get out from under what's left of the house. Go for a swim. Take a walk. Or g'wan to bed in Molly's room, if you can find it. Iris, you can pick the oddest times to argue!"

"I'm not going out there by myself!"

Jack sighed. "I should've asked you to stay in here," he muttered. "If you're not the contrariest woman ever to— Be quiet, Molly!"

"I didn't say anything."

Meeew-w-w!

"Aren't you doing that caterwauling?"

"No, Daddy, truly."

Iris said, "I'd say a cat was caught in the wreckage except that cats are smart and no cat would ever come near this place."

Wuh-wuh-muh-meeee-ew-w-w!

"What a dismal sound!"

"Jack, that isn't a cat."

"Well, stop shaking like the well-known aspen leaf."

Molly said, "Not without aspen Daddy's leaf to do it."

"Molly! You're too young to make bad puns!"

"Sorry, Daddy. I fergot."

Mmmmmew. Mmm—m-m-m.

"Whatever it is," Jack said, "it can't be big enough to be afraid of and make a funny little noise like that." He squeezed

Iris' arm and, stepping carefully over the rubble, began peering in and around it. Molly scrambled beside him. He was about to caution her against making so much noise, and then thought better of it. What difference would a little racket make?

The noise was not repeated, and five minutes' searching elicited nothing. Garry went back to his wife, who was fumbling around the shambles of a living room, pointlessly setting chairs and coffee tables back on their legs.

"I didn't find anyth—"

"YIPE!"

"Molly! What is it?"

Molly was just outside, in the shrubbery. "Oh . . . oh—Daddy, you better come quick!"

Spurred by the urgency of her tone, he went crashing outside. He found Molly standing rigid, trying to cram both her fists in her mouth at the same time. And at her feet was a man with silver-gray skin and a broken arm, who mewed at him.

"—Guard and Navy Department have withdrawn their warnings. The pilot of a Pan American transport has reported that the object disappeared into the zenith. It was last seen eighteen miles east of Normandy Beach, New Jersey. Reports from the vicinity describe it as traveling very slowly, with a hissing noise. Although it reached within a few feet of the ground several times, no damage has been reported. Inves—"

"Think of that," said Iris, switching off the little three-way portable. "No damage."

"Yeah. And if no one saw the thing hit, no one will be out here to investigate. So you can retire to your downy couch in the tent without fear of being interviewed."

"Go to sleep? Are you mad? Sleep in that flimsy tent with that mewing monster lying there?"

"Oh heck, Mom, he's sick! He wouldn't hurt anybody."

They sat around a cheerful fire, fed by roof shingles. Jack had set up the tent without much trouble. The silver-gray man was stretched out in the shadows, sleeping lightly and emitting an occasional moan.

Jack smiled at Iris. "Y'know, I love your silly chatter, darling. The way you turned to and set his arm was a pleasure to watch. You didn't think of him as a monster while you were tending to him."

"Didn't I, though? Maybe 'monster' was the wrong word to use. Jack, he has only one bone in his forearm!"

"He has what? Oh, nonsense, honey! 'Tain't scientific. He'd have to have a ball-and-socket joint in his wrist."

"He *has* a ball and socket joint in his wrist."

"This I have to see," Jack muttered. He picked up a flash lantern and went over to the long prone figure.

Silver eyes blinked up at the light. There was something queer about them. He turned the beam closer. The pupils were not black in that light, but dark-green. They all but closed—from the sides, like a cat's. Jack's breath wheezed out. He ran the light over the man's body. It was clad in a bright-blue roomy bathrobe effect, with a yellow sash. The sash had a buckle which apparently consisted of two pieces of yellow metal placed together; there seemed to be nothing to keep them together. They just stayed. When the man had fainted, just as they found him, it had taken almost all Jack's strength to pull them apart.

"Iris."

She got up and came over to him. "Let the poor devil sleep."

"Iris—what color was his robe?"

"Red, with a . . . but it's *blue!*"

"Is now. Iris, what on earth have we got here?"

"I don't know. I don't know. Some poor thing that escaped from an institution for . . . for—"

"For what?"

"How should I know?" she snapped. "There must be some place where they send creatures that get born like that."

"Creatures don't get born like that. Iris, he isn't deformed. He's just different."

"I see what you mean. I don't know why I see what you mean, but I'll tell you something." She stopped, and was quiet for so long that he turned to her, surprised. She said slowly, "I ought to be afraid of him, because he's strange, and ugly, but—I'm not."

"Me, too."

"Molly, go back to bed!"

"He's a leprechaun."

"Maybe you're right. Go on to bed, chicken, and in the morning you can ask him where he keeps his crock of gold."

"Gee." She went off a little way then stood on one foot, drawing a small circle in the sand with the other. "Daddy."

"Yes, Molly-m'love."

"Can I sleep in the tent tomorrow, too?"

"If you're good."

"Daddy obviously means," said Iris acidly, "that if you're *not* good he'll have a roof on the house by tomorrow night."

"I'll be good." She disappeared into the tent.

"For kids," Jack said admiringly, "it never rains tomorrow."

The gray man mewed.

"Well, old guy, what is it?"

The man reached over and fumbled at his splinted arm.

"It hurts him," said Iris. She knelt beside him and, taking the wrist of his good arm, lifted it away from the splint, where he was clawing. The man did not resist, but lay and looked at her with pain-filled, slitted eyes.

"He has six fingers," Jack said. "See?" He knelt beside his wife and gently took the man's wrist. He whistled. "It *is* a ball and socket."

"Give him some aspirin."

"That's a good . . . wait." Jack stood pulling his lip in puzzlement. "Do you think we should?"

"Why not?"

"We don't know where he comes from. We know nothing of his body chemistry, or what any of our medicines might do to him."

"He . . . what do you mean, where he comes from?"

"Iris, will you open up your mind just a little? In the face of evidence like this, are you going to even attempt to cling to the idea that this man comes from anywhere on this earth?" Jack said with annoyance. "You know your anatomy. Don't tell me you ever saw a human freak with skin and bones like that! That belt buckle—that material in his clothes . . . come on, now. Drop your prejudices and give your brains a chance, will you?"

"You're suggesting things that simply don't *happen!*"

"That's what the man in the street said—in Hiroshima. That's what the old-time aeronaut said from the basket of his balloon when they told him about heavier-than-air craft. That's what—"

"All right, all right, Jack! I know the rest of the speech.

If you want dialectics instead of what's left of a night's sleep, I might point out that the things you have mentioned have all concerned human endeavors. Show me any new plastic, a new metal, a new kind of engine, and though I may not begin to understand it, I can accept it because it is of human origin. But this . . . this man, or whatever he is—"

"I know," said Jack, more gently. "It's frightening because it's strange, and away down underneath we feel that anything strange is necessarily dangerous. That's why we wear our best manners for strangers and not for our friends—but I still don't think we should give this character any aspirin."

"He seems to breathe the same air we do. He perspires, he talks . . . I think he talks—"

"You have a point. Well, if it'll ease his pain at all, it may be worth trying. Give him just one."

Iris went to the pump with a collapsible cup from her first-aid kit, and filled it. Kneeling by the silver-skinned man, she propped up his head, gently put the aspirin between his lips, and brought the cup to his mouth. He sucked the water in greedily, and then went completely limp.

"Oh, oh. I was afraid of that."

Iris put her hand over the man's heart. *"Jack!"*

"Is he . . . what is it, Iris?"

"Not dead, if that's what you mean. Will you feel this?"

Jack put his hand beside Iris'. The heart was beating with massive, slow blows, about eight to the minute. Under it, out of phase completely with the main beat, was another, an extremely fast, sharp beat, which felt as if it were going about three hundred.

"He's having some sort of palpitation," Jack said.

"And in two hearts at once!"

Suddenly the man raised his head and uttered a series of ululating shrieks and howls. His eyes opened wide, and across them fluttered a translucent nictitating membrane. He lay perfectly still with his mouth open, shrieking and gargling. Then, with a lightning movement, he snatched Jack's hand to his mouth. A pointed tongue, light-orange and four inches longer than it had any right to be, flicked out and licked Jack's hand. Then the strange eyes closed, the shrieks died to a whimper and faded out, and the man relaxed.

"Sleeping now," said Iris. "Oh, I hope we haven't done anything to him!"

"We've done something. I just hope it isn't serious. Anyhow, his arm isn't bothering him any. That's all we were worried about in the first place."

Iris put a cushion under the man's oddly planed head, touched the beach mattress he was lying on to see that he would be comfortable. "He has a beautiful mustache," she said. "Like silver. He looks very old and wise, doesn't he?"

"So does an owl. Let's go to bed."

Jack woke early, from a dream in which he had bailed out of a flying motorcycle with an umbrella that turned into a candy cane as he fell. He landed in the middle of some sharp-toothed crags which gave like sponge rubber. He was immediately surrounded by mermaids who looked like Iris and who had hands shaped like spur gears. But nothing frightened him. He awoke smiling, inordinately happy.

Iris was still asleep. Outside, somewhere, he heard the tinkle of Molly's laugh. He sat up, looked at Molly's camp cot. It was empty.

Moving quietly, so as not to disturb his wife, he slid his feet into moccasins and went out.

Molly was on her knees beside their strange visitor, who was squatting on his haunches and—

They were playing patty-cake.

"Molly!"

"Yes, Daddy."

"What are you trying to do? Don't you realize that that man has a broken arm?"

"Oh gosh, I'm sorry. Do you s'pose I hurt him?"

"I don't know. It's very possible," said Jack Garry testily. He went to the alien, took his good hand.

The man looked up at him and smiled. His smile was peculiarly engaging. All of his teeth were pointed, and they were very widely spaced. "Eeee-yu mow madibu Mewhu," he said.

"That's his name," Molly said excitedly. She leaned forward and tugged at the man's sleeve. "Mewhu. Hey, Mewhu!" And she pointed at her chest.

"Mooly," said Mewhu. "Mooly—Geery."

"See, Daddy?" Molly said ecstatically. "See?" She pointed at her father. "Daddy. Dah—dee."

"Deedy," said Mewhu.

"No, silly! Daddy."

"Dewdy."

"*Dah*-dy!"

Jack, quite entranced, pointed at himself and said, "Jack."

"Jeek."

"Good enough. Molly, the man can't say 'ah.' He can say 'oo' or 'ee' but not 'ah.' That's good enough."

Jack examined the splints. Iris had done a very competent job. When she realized that instead of the radius-ulna development of a true human, Mewhu had only one bone in his forearm, she had set the arm and laid on two splints instead of one. Jack grinned. Intellectually, Iris would not accept Mewhu's existence even as a possibility; but as a nurse, she not only accepted his body structure but skillfully compensated for its differences.

"I guess he wants to be polite," said Jack to his repentant daughter, "and if you want to play patty-cake, he'll go along with you, even if it hurts. Don't take advantage of him, chicken."

"I won't, Daddy."

Jack started up the fire and had a green-stick crane built and hot water bubbling by the time Iris emerged. "Takes a cataclysm to get you to start breakfast," she grumbled through a pleased smile. "When were you a boy scout?"

"Matter of fact," said Garry, "I was once. Will modom now take over?"

"Modom will. How's the patient?"

"Thriving. He and Molly had a patty-cake tournament this morning. His clothes, by the way, are red again."

"Jack—where does he come from?"

"I haven't asked him yet. When I learn to caterwaul, or he learns to talk, perhaps we'll find out. Molly has already elicited the information that his name's Mewhu." Garry grinned. "And he calls me 'Jeek.' "

"Can't pronounce an 'r,' hm?"

"That'll do, woman. Get on with the breakfast."

While Iris busied herself over breakfast, Jack went to look at the house. It wasn't as bad as he had thought—a credit to poor construction. Apparently the upper two rooms were a late addition and had just been perched onto the older, comparatively flat-topped lower section. The frame of Molly's bed was bent beyond repair, but the box spring and mattress were intact. The old roof seemed fairly sound, where the removal of the jerry-built little top story had exposed it. The living

room would be big enough for him and Iris, and Molly's bed could be set up in the study. There were tools and lumber in the garage, the weather was warm and clear, and like any other writer, Jack Garry was very much attracted by the prospect of hard work for which he would not get paid, as long as it wasn't writing. By the time Iris called him for breakfast, he had most of the debris cleared from the roof and a plan of action mapped out. It would only be necessary to cover the hole where the stairway landing had been, and go over the roof for potential leaks. A good rain, he reflected, would search those out for him quickly enough.

"What about Mewhu?" Iris asked as she handed him an aromatic plate of eggs and bacon. "If we feed him any of this, do you think he'll throw another fit?"

Jack looked at their visitor, who sat on the other side of the fire, very close to Molly, gazing big-eyed at their breakfasts.

"I don't know. We could give him a little, I suppose."

Mewhu inhaled his sample, and wailed for more. He ate a second helping, and when Iris refused to fry more eggs, he gobbled toast and jam. Each new thing he tasted he would nibble at, blink twice, and then bolt down. The only exception was the coffee. One taste was sufficient. He put it down on the ground and very carefully, very delicately overturned it.

"Can you talk to him?" Iris asked suddenly.

"He can talk to me," declared Molly.

"I've heard him," Jack said.

"Oh, no. I don't mean *that*," Molly denied vehemently. "I can't make any sense out of that stuff."

"What do you mean, then?"

"I . . . I dunno, Mommy. He just—talks to me, that's all."

Jack and Iris looked at each other. "Must be a game," said Iris. Jack shook his head, looking at his daughter carefully as if he had not really seen her before. He could think of nothing to say, and rose.

"Think the house can be patched up?"

"Oh sure." He laughed. "You never did like the color of the upstairs rooms, anyway."

"I don't know what's gotten into me," said Iris thoughtfully. "I'd have kicked like a mule at any part of this. I'd have packed up and gone home if, say, just a wall was gone upstairs, or if there were just a hole in the roof, or if this . . .

this android phenomenon arrived suddenly. But when it all happens at once—I can take it all!"

"Question of perspective. Show me a nagging woman and I'll show you one who hasn't enough to worry about."

"You'll get out of my sight or you'll have this frying pan bounced off your yammering skull," said Iris steadily. Jack got.

Molly and Mewhu trailed after him as he returned to the house, stood side by side goggling at him as he mounted the ladder.

"Whatsha doing, Daddy?"

"Marking off the edges of this hole where the stairway hits the place where the roof isn't, so I can clean up the edges with a saw."

"Oh."

Jack roughed out the area with a piece of charcoal, lopped off the more manageable rough edges with a hatchet, cast about for his saw. It was still in the garage. He climbed down, got it, climbed up again, and began to saw. Twenty minutes of this, and sweat was streaming down his face. He knocked off, climbed down, doused his head at the pump, lit a cigarette, climbed back up on the roof.

"Why don't you jump off and back?"

The roofing job was looking larger and the day seemed warmer than it had. Jack's enthusiasm was in inverse proportion to these factors. "Don't be funny, Molly."

"Yes, but Mewhu wants to know."

"Oh, he does. Ask him to try it."

He went back to work. A few minutes later, when he paused for a breath, Mewhu and Molly were nowhere to be seen. Probably over by the tent, in Iris' hair, he thought, and went on sawing.

"Daddy!"

Daddy's unaccustomed arm and shoulder were, by this time, yelling for help. The dry soft-wood alternately cheesed the saw out of line and bound it. He answered impatiently, "Well, what?"

"Mewhu says to come. He wants to show you something."

"Show me what? I haven't time to play now, Molly. I'll attend to Mewhu when we get a roof over our heads again."

"But it's for you!"

"What is?"

"The thing in the tree."

"Oh, all right." Prompted more by laziness than by curiosity, Jack climbed back down the ladder. Molly was waiting. Mewhu was not in sight.

"Where is he?"

"By the tree," she said with exaggerated patience, taking his hand. "Come on. It's not far."

She led him around the house and across the bumpy track that was euphemistically known as a road. There was a tree down on the other side. He looked from it to the house, saw that in line with the felled tree and his damaged roof were more broken trees, where something had come down out of the sky, skimmed the tops of the trees, angling closer to the ground until it wiped the top off his house and had then risen up and up—to where?

They went deeper into the woods for ten minutes, skirting an occasional branch or fallen treetop, until they came to Mewhu, who was leaning against a young maple. He smiled, pointed up into the tree, pointed to his arm, to the ground. Jack looked at him in puzzlement.

"He fell out of the tree and broke his arm," said Molly.

"How do you know?"

"Well, he just did, Daddy."

"Nice to know. Now can I get back to work?"

"He wants you to get the thing in the tree!"

Jack looked upward. Hung on a fork two-thirds of the way up the tree was a gleaming object, a stick about five feet long with a streamlined shape on each end, rather like the wingtip tanks of a P-80. "What on earth is that?"

"I dunno. I can't— He tol' me, but I dunno. Anyway, it's for you, so you don't . . . so you don't—" She looked at Mewhu for a moment. The alien's silver mustache seemed to swell a little. "—so you don't have to climb the ladder so much."

"Molly—how did you know that?"

"He *told* me, that's all. Gosh, Daddy, don't be mad. I don't know how, honest; he just did, that's all."

"I don't get it," muttered Jack. "Anyhow—what's this about that thing in the tree? I'm supposed to break my arm too?"

"It isn't dark."

"What do you mean by that?"

Molly shrugged. "Ask him."

"Oh. I think I catch that. He fell out of the tree because it was dark. He thinks I can get up there and get the whatzit without hurting myself because I can see what I am doing. He also flatters me. Or is it flattery? How close to the apes does he think we are?"

"What are you talking about, Daddy?"

"Never mind . . . why am I supposed to get that thing, anyway?"

"Uh—so's you can jump off the roof."

"That is just silly. However, I do want a look at that thing. Since his ship is gone, that object up there seems to be the only artifact he brought with him except his clothes."

"What's an artifact?"

"Second cousin to an artichoke. Here goes nothin'." And he swung up into the tree. He had not climbed a tree for years, and as he carefully chose his way, it occurred to him that there were probably more efficient ways of gaining altitude. An escalator, for example. Why didn't escalators grow on trees?

The tree began to shiver and sway with his weight. He looked down once and decided instantly not to do it again. He looked up and was gratified to see how close he was to the object he was after. He pulled himself up another three feet and was horrified at how far away it was, for the branches were very small up here. He squirmed upward, reached, and his fingers just brushed against the shank of the thing. It had two rings fastened to it, he noticed, one each side of the center, large enough to get an arm through. It was one of these which was hung up on a branch. He chinned himself, then, with his unpracticed muscles cracking, took one hand off and reached.

The one-hand chinning didn't come off so well. His arms began to sag. The ring broke off its branch as his weight came on it. He was immediately surrounded by the enthusiastic crackling of breaking shrubbery. He folded his tongue over and got his teeth on it. Since he had a grip on Mewhu's artifact, he held on . . . even when it came free. He began to fall, tensed himself for the bone-breaking jolt he would get at the bottom.

He didn't get it.

He fell quite fast at first, and then the stick he was holding began to bear him up. He thought that it must have caught on a branch, by some miracle—but it hadn't! He was drifting down like a thistle seed, hanging from the rod, which in some impossible fashion was supporting itself in midair. There was a shrill, faint *whooshing* sound from the two streamlined fixtures at the ends of the rod. He looked down, blinked sweat out of his eyes, looked again. Mewhu was grinning a broad and happy grin, and Molly was slack-jawed with astonishment.

The closer he came to the ground the slower he went. When, after what seemed an eternity, he felt the blessed pressure of earth under his feet, he had to stand and *pull* the rod down. It yielded slowly, like an eddy current brake. Dry leaves danced and whirled under the end pieces.

"Gee, Daddy, that was wonderful!"

He swallowed twice to wet down his dry esophagus, and pulled his eyes back in. "Yeah. Fun," he said weakly.

Mewhu came and took the rod out of his hand, and dropped it. It stayed perfectly horizontal, and sank slowly down to the ground, where it lay. Mewhu pointed at it, at the tree, and grinned.

"Just like a parachute. Oh, *gee*, Daddy!"

"You keep away from it," said Jack, familiar with youthful intonation. "Heaven knows what it is. It might go off, or something."

He looked fearfully at the object. It lay quietly, the hissing of the end pieces stilled. Mewhu bent suddenly and picked it up, held it over his head with one hand. Then he calmly lifted his feet and hung from it. It lowered him gently, butt first, until he sat on the ground, in a welter of dead leaves; for as soon as he picked it up, the streamlined end pieces had begun to blast again.

"That's the silliest thing I ever saw. Here—let me see it." It was hovering about waist-high. He leaned over one of the ends. It had a fine round grille over it. He put out a hand. Mewhu reached out and caught his wrist, shaking his head. Apparently it was dangerous to go too near those ends. Garry suddenly saw why. They were tiny, powerful jet motors of some kind. If the jet was powerful enough to support a man's weight, the intake must be drawing like mad—probably enough to snap a hole through a man's hand like a giant ticket-puncher.

But what controlled it? How was the jet strength adjusted to the weight borne by the device, and to the altitude? He remembered without pleasure that when he had fallen with it from the treetop, he had dropped quite fast, and that he went slower and slower as he approached the ground. And yet when Mewhu had held it over his head, it had borne his weight instantly and lowered him very slowly. And besides—how was it so stable? Why didn't it turn upside down and blast itself and passenger down to earth?

He looked at Mewhu with some increase of awe. Obviously he came from a place where the science was really advanced. He wondered if he would ever be able to get any technical information from his visitor—and if he would be able to understand it. Of course, Molly seemed to be able to—

"He wants you to take it back and try it on the roof," said Molly.

"How can that refugee from a Kuttner opus help me?"

Immediately Mewhu took the rod, lifted it, ducked under it, and slipped his arms through the two rings, so that it crossed his back like a water-bucket yoke. Peering around, he turned to face a clearing in the trees, and before their startled eyes, he leaped thirty feet in the air, drifted away in a great arc, and came gently to rest twenty yards away.

Molly jumped up and down and clapped her hands, speechless with delight. The only words Garry could find were a reiterated, "Ah, no!"

Mewhu stood where he was, smiling his engaging smile, waiting for them. They walked toward him, and when they were close, he leaped again and soared out toward the road.

"What do you do with a thing like this?" breathed Jack. "Who do you go to, and what do you say to him?"

"Le's just keep him for a pet, Daddy."

Jack took her hand, and they followed the bounding, soaring silver man. A pet! A member of some alien race, from some unthinkable civilization—and obviously a highly trained individual, too, for no "man in the street" would have made such a trip. What was his story? Was he an advance guard? Or—was he the sole survivor of his people? How far had he come? Mars? Venus?

They caught up with him at the house. He was standing by the ladder. His strange rod was lying quiet on the ground. He was fascinatedly operating Molly's yo-yo. When he saw them,

he threw down the yo-yo, picked up his device, and slipping it across his shoulders, sprang high in the air and drifted down to the roof. "Eee-yu!" he said, with emphasis, and jumped off backward. So stable was the rod that, as he sank through the air, his long body swung to and fro.

"Very nice," said Jack. "Also spectacular. And I have to go back to work." He went to the ladder.

Mewhu bounded over to him, caught his arm, whimpering and whistling in his peculiar speech. He took the rod and extended it toward Jack.

"He wants you to use it," said Molly.

"No, thanks," said Jack, a trace of his tree-climbing vertigo returning to him. "I'd just as soon use the ladder." And he put his hand out to it.

Mewhu, hopping with frustration, reached past him and toppled the ladder. It levered over a box as it fell and struck Jack painfully on the shin.

"I guess you better use the flyin' belt, Daddy."

Jack looked at Mewhu. The silver man was looking as pleasant as he could with that kind of a face; on the other hand, it might just possibly be wise to humor him a little. Being safely on the ground to begin with, Jack felt that it might not matter if the fantastic thing wouldn't work for him. And if it failed him over the roof—well the house wasn't *very* tall.

He shrugged his arms through the two rings. Mewhu pointed to the roof, to Jack, made a jumping motion. Jack took a deep breath, aimed carefully, and, hoping the gadget wouldn't work—jumped.

He shot up close to the house—too close. The eave caught him a resounding thwack on precisely the spot where the ladder had just hit him. The impact barely checked him. He went sailing up over the roof, hovered for a breathless second, and then began to come down. For a moment he thought his flailing legs would find purchase on the far edge of the roof. He just missed it. All he managed to do was to crack the same shin, in the same place, mightily on the other eave. Trailing clouds of profanity, he landed standing—in Iris' wash basket. Iris, just turning from the clothes line, confronted him.

"Jack! What on earth are you . . . get out of that! You're standing right on my wash with your dirty . . . *oh!*"

"Oh oh!" said Jack, and stepped backward out of the wash

basket. His foot went into Molly's express wagon, which Iris used to carry the heavy basket. To get his balance, he leaped —and immediately rose high in the air. This time his luck was better. He soared completely over the kitchen wing of the house and came to earth near Molly and Mewhu.

"Daddy, you were just like a bird!"

"I'm going to be just like a corpse if your mother's expression means what I think it does." He shucked off the "flyin' belt" and dove into the house just as Iris rounded the corner. He heard Molly's delighted "He went *that* way" as he plowed through the shambles of the living room and out the front door. As the kitchen door slammed he was rounding the house. He charged up to Mewhu, snatched the gadget from him, slipped it on and jumped. This time his judgment was faultless. He cleared the house easily although he came very near landing astride the clothesline. When Iris, panting and furious, stormed out of the house, he was busily hanging sheets.

"Just what," said Iris, her voice crackling at the seams, "do you think you're doing?"

"Just giving you a hand with the laundry, m'love," said Jack.

"What is that . . . that object on your back?"

"Another evidence of the ubiquity of the devices of science-fiction," said Jack blandly. "This is a multilateral, three-dimensional mass adjuster, or pogo-chute. With it I can fly like a gull, evading the cares of the world and the advances of beautiful redheads, at such times as their passions are distasteful to me."

"Sometime in the very near future, you gangling hatrack, I am going to pull the tongue out of your juke box of a head and tie a bowknot in it." Then she laughed.

He heaved a sigh of relief, went and kissed her. "Darling, I am sorry. I was scared silly, dangling from this thing. I didn't see your clothes basket, and if I had I don't know how I'd have steered clear."

"What is it, Jack? How does it work?"

"I dunno. Jets on the ends. They blast hard when there's a lot of weight pushing them toward the earth. They blast harder near the earth than up high. When the weight on them slacks off a bit, they throttle down. What makes them do it, what they are using for power—I just wouldn't know. As far

as I can see, they suck in air at the top and blow it out through the jets. And, oh yes—they point directly downward no matter which way the rod is turned."

"Where did you get it?"

"Off a tree. It's Mewhu's. Apparently he used it for a parachute. On the way down, a tree branch speared through one of these rings and he slipped out of it and fell and broke his arm."

"What are we going to do with him, Jack?"

"I've been worrying about that myself. We can't sell him to a sideshow." He paused, thoughtfully. "There's no doubt that he has a lot that would be of value to humanity. Why—this thing alone would change the face of the earth! Listen—I weigh a hundred and seventy. I *fell* on this thing, suddenly, when I lost my grip on a tree and it bore my weight immediately. Mewhu weighs more than I do, judging from his build. It took his weight when he lifted his feet off the ground while holding it over his head. If it can do that, it or a larger version should be able, not only to drive, but to support an aircraft. If for some reason that isn't possible, the power of those little jets certainly could turn a turbine."

"Will it wash clothes?" Iris was glum.

"That's exactly what I mean! Light, portable, and more power than it has any right to have—of *course* it'll wash clothes. And drive generators, and cars, and . . . Iris, what do you *do* when you have something as big as this?"

"Call a newspaper, I guess."

"And have a hundred thousand people peeking and prying all over the place, and Congressional investigations, and what all? Uh . . . *uh!*"

"Why not ask Harry Zinsser?"

"Harry? I thought you didn't like him."

"I never said that. It's just that you and he go off in the corner and chatter about multitude amputation and debilities of reactance and things like that, and I have to sit, knit—and spit when I want someone's attention. Harry's all right."

"Gosh, honey, you've got it! Harry'll know what to do. I'll go right away."

"You'll do nothing of the kind! With that hole in the roof? I thought you said you could have it patched up for the night at least. By the time you get back here it'll be dark."

The prospect of sawing out the ragged hole in the roof was

suddenly the least appealing thing in the world. But there was logic and an "or else" tone to what she said. He sighed and went off, mumbling something about the greatest single advance in history awaiting the whim of a woman. He forgot he was wearing Mewhu's armpit altitudinizer, and only his first two paces were on the ground. Iris hooted with laughter at his clumsy walking on air. When he reached the ground, he set his jaw and leaped lightly up to the roof. "Catch me now, you and your piano legs," he taunted cheerfully, ducked the lancelike clothes prop she hurled at him, and went back to work.

As he sawed, he was conscious of a hubbub down below.

"Dah—dee! Mr-r-roo ellue—"

He sighed and put down the saw. "What is it?"

"Mewhu wants his flyin' belt!"

Jack looked at the roof, at the lower shed, and decided that his old bones could stand it if he had to get down without a ladder. He took the jet-tipped rod and dropped it. It stayed perfectly horizontal, falling no slower and no faster than it had when he had ridden it down. Mewhu caught it, deftly slipped his splinted arm through it—it was astonishing how careful he was of the arm, and yet how little it inconvenienced him—then the other arm, and sprang up to join Jack on the roof.

"What do you say, fella?"

"Woopen yew weep."

"I know how you feel." He knew that the silver man wanted to tell him something, but couldn't help him out. He grinned and picked up the saw. Mewhu took it out of his hand and tossed it off the roof, being careful to miss Molly, who was dancing back to get a point of vantage.

"What's the big idea?"

"Dellihew hidden," said Mewhu. "Pento deh numinew heh." And he pointed at the flyin' belt and at the hole in the roof.

"You mean I'd rather fly off in that thing than work? Brother, you got it. But I'm afraid I have to—"

Mewhu circled his arm, pointing all around the hole in the roof, and pointed again to the pogo-chute, indicating one of the jet motors.

"I don't get it," said Jack.

Mewhu apparently understood, and an expression of amazement crossed his mobile face. Kneeling, he placed his good

hand around one of the little jet motors, pressed two tiny studs, and the casing popped open. Inside was a compact, sealed, and simple-looking device, the core of the motor itself, apparently. There seemed to be no other fastening. Mewhu lifted it out and handed it to Jack. It was about the size and shape of an electric razor. There was a button on the side. Mewhu pointed at it, pressed the back; and then moved Jack's hand so that the device was pointed away from them both. Jack, expecting anything, from nothing at all to the "blinding bolt of searing, raw energy" so dear to the science-fiction world, pressed the button.

The gadget hissed, and snuggled back into his palm in an easy recoil.

"That's fine," said Jack, "but what do I do with it?"

Mewhu pointed at Jack's saw cut, then at the device.

"Oh," said Jack. He bent close, aimed the thing at the end of the saw cut, and pressed the button. Again the hiss, and the slight, steady recoil; and a fine line appeared in the wood. It was a cut about half as thick as the saw cut, clean and even and, as long as he kept his hand steady, very straight. A fine cloud of pulverized wood rose out of the hole in the roof, carried on a swirl of air.

Jack experimented, holding the jet close to the wood and away from it. He found that it cut finer the closer he go to it. As he drew it away from the wood, the slot got wider and the device cut slower until at about eighteen inches it would not cut at all. Delighted, Jack quickly cut and trimmed the hole. Mewhu watched, grinning. Jack grinned back, knowing how he would feel if he introduced a saw to some primitive who was trying to work wood with a machete.

When he was finished, he handed the jet back to the silver man, and slapped his shoulder. "Thanks a million, Mewhu."

"Jeek," said Mewhu, and reached for Jack's neck. One of his thumbs lay on Jack's collarbone, the other on his back, over the scapula. Mewhu squeezed twice, firmly.

"That the way you shake hands back home?" smiled Jack. He thought it likely. Any civilized race was likely to have a manual greeting. The handshake evolved from a raised palm, indicating that the saluter was unarmed. It was quite possible that this was an extension, in a slightly different direction, of the same sign. It would indeed be an indication of friend-

liness to have two individuals present their throats, each to the other.

Mewhu, with three deft motions, slipped the tiny jet back into its casing, and holding the rod with one hand, stepped off the roof, letting himself be lowered in that amazing thistle-down fashion to the ground. Once there, he tossed the rod back. Jack was started to see it hurtle upward like any earthly object. He grabbed it and missed. It reached the top of its arc, and as soon as it started down again the jets cut in, and it sank easily to him. He put it on and floated down to join Mewhu.

The silver man followed him to the garage, where he kept a few pieces of milled lumber. He selected some one-inch pine boards and dragged them out, to measure them and mark them off to the size he wanted to knock together a simple trap-door covering for the useless stair well; a process which Mewhu watched with great interest.

Jack took up the flying belt and tried to open the streamlined shell to remove the cutter. It absolutely defied him. He pressed, twisted, wrenched, and pulled. All it did was to hiss gently when he moved it toward the floor.

"Eek, Jeek," said Mewhu. He took the jet from Jack, pressed it. Jack watched closely. Then he grinned and took the cutter.

He swiftly cut the lumber up with it, sneering gayly at the ripsaw which hung on the wall. Then he put the whole trap together with a Z-brace, trimmed off the few rough corners, and stood back to admire it. He realized instantly that it was too heavy to carry by himself, let alone lift to the roof. If Mewhu had two good hands, now, or if— He scratched his head.

"Carry it on the flyin' belt, Daddy."

"Molly! What made you think of that?"

"Mewhu tol' . . . I mean, I sort of—"

"Let's get this straight once and for all. How does Mewhu talk to you?"

"I dunno, Daddy. It's sort of like I remembered something he said, but not the . . . the words he said. I jus' . . . jus'—" she faltered, and then said vehemently, "I don't *know*, Daddy. Truly I don't!"

"What'd he say this time?"

She looked at Mewhu. Again Jack noticed the peculiar

swelling of Mewhu's silver mustache. She said, "Put the door you jus' made on the flyin' belt and lift it. The flyin' belt'll make it fall slow, and you can push it along while . . . it's . . . fallin'."

Jack looked at the door, at the jet device, and got the idea. When he had slipped the jet-rod under the door, Mewhu gave him a lift. Up it came; and then Mewhu, steadying it, towed it well outside the garage before it finally sank to the ground. Another lift, another easy tow, and they covered thirty more feet. In this manner they covered the distance to the house, with Molly skipping and laughing behind, pleading for a ride and handing the grinning Mewhu a terrific brag.

At the house, Jack said, "Well, Einstein Junior, how do we get it up on the roof?"

Mewhu picked up Molly's yo-yo and began to operate it deftly. Doing so he walked around the corner of the house.

"Hey!"

"He don't know, Daddy. You'll have to figger it out."

"You mean he could dream up that slick trick for carrying it out here and now his brains give out?"

"I guess so, Daddy."

Jack Garry looked after the retreating form of the silver man, and shook his head. He was already prepared to expect better than human reasoning from Mewhu, even if it was a little different. He couldn't quite phase this with Mewhu's shrugging off a problem in basic logic. Certainly a man with his capabilities would not have reasoned out such an ingenious method of bringing the door out here without realizing that that was only half the problem.

Shrugging, he went back to the garage and got a small block and tackle. He had to put up a big screw hook on the eave, and another on the new trapdoor; and once he had laboriously hauled the door up until the tackle was two-blocked, it was a little more than arduous to work it over the edge and drag it into position. Mewhu had apparently quite lost interest. It was two hours later, just as he put the last screw in the tower bolt on the trapdoor and was calling the job finished, that he heard Mewhu begin to shriek again. He dropped his tools, shrugged into the jet stick, and sailed off the roof.

"Iris! Iris! What's the matter?"

"I don't know, Jack. He's . . . he's—"

Jack pounded around the house to the front. Mewhu was

lying on the ground in the midst of some violent kind of convulsion. He lay on his back, arching it high, digging his heels into the turf; and his head was bent back at an impossible angle, so that his weight was on his heels and his forehead. His good arm pounded the ground, though the splinted one lay limp. His lips writhed and he uttered an edgy, gasping series of ululations quite horrible to listen to. He seemed to be able to scream as loudly when inhaling as when exhaling.

Molly stood beside him, watching him hypnotically. She was smiling. Jack knelt beside the writhing form and tried to steady it. "Molly, stop grinning at the poor fellow!"

"But—he's happy, Daddy."

"He's what?"

"Can't you see, silly? He feels—good, that's all. He's laughing!"

"Iris, what's the matter with him? Do you know?"

"He's been into the aspirin again, that's all I can tell you."

"He ate four," said Molly. "He loves 'em."

"What can we do, Jack?"

"I don't know, honey," said Jack worriedly. "Better just let him work it out. Any emetic or sedative we give him might be harmful."

The attack slackened and ceased suddenly, and Mewhu went quite limp. Again, with his hand over the man's chest, Jack felt the strange double pulsing.

"Out cold," he said.

Molly said in a strange, quiet voice, "No, Daddy. He's lookin' at dreams."

"Dreams?"

"A place with a or'nge sky," said Molly. He looked up sharply. Her eyes were closed. "Lots of Mewhus. Hunderds an' hunderds—big ones. As big as Mr. Thorndyke." (Thorndyke was an editor whom they knew in the city. He was six feet seven.) "Round houses, an' big airplanes with . . . sticks fer wings."

"Molly, you're talking nonsense!" said her mother worriedly. Jack shushed her. "Go on, baby."

"A place, a room. It's a . . . Mewhu is there and a bunch more. They're in . . . in lines. Rows. There's a big one with a yella hat. He—keeps them in rows. Here's Mewhu. He's outa the line. He's jumpin' out th' windy with a flyin' belt." There was a long silence. Mewhu moaned.

"Well?"

"Nothin', Daddy—wait! It's . . . all . . . fuzzy. Now there's a thing, a kinda summerine. Only on the ground, not in the water. The door's open. Mewhu is . . . is inside. Knobs, and clocks. Pull on the knobs. Push a— Oh. *Oh!* It hurts!" She put her fists to her temples.

"Molly!"

Molly opened her eyes and said, quite calmly, "Oh, *I'm* all right, Mommy. It was a thing in the dream that hurt, but it didn't hurt *me*. It was all a bunch of fire an' . . . an' a sleepy feeling, only bigger. An' it hurt."

"Jack, he'll harm the child!"

"I doubt it," said Jack.

"So do I," said Iris, wonderingly, and then, almost inaudibly, "Now, why did I say that?"

"Mewhu's asleep," said Molly suddenly.

"No more dreams?"

"No more dreams. Gee. That was—funny."

"Come and have some lunch," said Iris. Her voice shook a little. They went into the house. Jack looked down at Mewhu, who was smiling peacefully in his sleep. He thought of putting the strange creature to bed, but the day was warm and the grass was thick and soft where he lay. He shook his head and went into the house.

"Sit down and feed," Iris said.

He looked around. "You've done wonders in here," he said. The litter of lath and plaster was gone, and Iris' triumphant antimacassars blossomed from the upholstery. She curtsied. "Thank you, m'lord."

They sat around the card table and began to do damage to tongue sandwiches. "Jack."

"Mm-m?"

"What was that—telepathy?"

"Think so. Something like that. Oh, wait'll I tell Zinsser! He'll never believe it."

"Are you going down to the airfield this afternoon?"

"You bet. Maybe I'll take Mewhu with me."

"That would be a little rough on the populace, wouldn't it? Mewhu isn't the kind of fellow you can pass off as your cousin Julius."

"Heck, he'd be all right. He could sit in the back seat with

Molly while I talked Zinsser into coming out to have a look at him."

"Why not get Zinsser out here?"

"You know that's silly. When we see him in town, he's got time off. Out here he's tied to that airport almost every minute."

"Jack—do you think Molly's quite safe with that creature?"

"Of course! Are you worried?"

"I . . . I am, Jack. But not about Mewhu. About me. I'm worried because I think I should worry more, if you see what I mean."

Jack leaned over and kissed her. "The good old maternal instinct at work," he chuckled. "Mewhu's new and strange and might be dangerous. At the same time Mewhu's helpless and inoffensive, and something in you wants to mother him, too."

"There you really have something," said Iris, thoughtfully. "He's as big and ugly as you are, and unquestionably more intelligent. Yet I don't mother you."

Jack grinned. "You're not kiddin'." He gulped his coffee and stood up. "Eat it up, Molly, and go wash your hands and face. I'm going to have a look at Mewhu."

"You're going in to the airport, then?" asked Iris.

"If Mewhu's up to it. There's too much I want to know, too much I haven't the brains to figure out. I don't think I'll get all the answers from Zinsser, by any means; but between us we'll figure out what to do about this thing. Iris, it's *big!*"

Full of wild, induced speculation, he stepped out on the lawn. Mewhu was sitting up, happily contemplating a caterpillar.

"Mewhu."

"Dew?"

"How'd you like to take a ride?"

"Hubilly grees. Jeek?"

"I guess you don't get the idea. C'mon," said Jack, motioning toward the garage. Mewhu very, very carefully set the caterpillar down on a blade of grass and rose to follow; and just then the most unearthly crash issued from the garage. For a frozen moment no one moved, and then Molly's voice set up a hair-raising reiterated screech. Jack was pounding toward the garage before he knew he had moved.

"Molly! what is it?"

At the sound of his voice the child shut up as if she were switch-operated.

"Molly!"

"Here I am, Daddy," she said in an extremely small voice. She was standing by the car, her entire being concentrated in her protruding, faintly quivering lower lip. The car was nose-foremost through the back wall of the garage.

"Daddy, I didn't mean to do it; I just wanted to help you get the car out. Are you going to spank me? Please, Daddy, I didn't—"

"Quiet!"

She was quiet, but immediately. "Molly, what on earth possessed you to do a thing like that? You know you're not supposed to touch the starter!"

"I was pretending, Daddy, like it was a summerine that could fly, the way Mewhu did."

Jack threaded his way through this extraordinary shambles of syntax. "Come here," he said sternly. She came, her paces half-size, her feet dragging, her hands behind her where her imagination told her they would do the most good. "I ought to whack you, you know."

"Yeah," she answered tremulously. "I guess you oughta. Not more'n a couple of times, huh, Daddy?"

Jack bit the insides of his cheeks for control, but couldn't make it. He grinned. *You little minx,* he thought. "Tell you what," he said gruffly, looking at the car. The garage was fortunately flimsy, and the few new dents on hood and fenders would blend well with the old ones. "You've got three good whacks coming to you. I'm going to add those on to your next spanking."

"Yes, Daddy," said Molly, her eyes big and chastened. She climbed into the back seat and sat, very straight and small, away back out of sight. Jack cleared away what wreckage he could, and then climbed in, started the old puddle-vaulter and carefully backed out of the damaged shed.

Mewhu was standing well clear, watching the groaning automobile with startled silver eyes. "Come on in," said Jack, beckoning. Mewhu backed off.

"Mewhu!" cried Molly, putting her head out the rear door. Mewhu said. "Yowk," and came instantly. Molly opened the door and he climbed in, and Molly shouted with laughter when he crouched down on the floor, and made him get up on the

seat. Jack pulled around the house, stopped, picked up Mewhu's jet rod, blew a kiss through the window to Iris, and they were off.

Forty minutes later they wheeled up to the airport after an ecstatic ride during which Molly had kept up a running fire of descriptive commentary on the wonders of a terrestrial countryside. Mewhu had goggled and ogled in a most satisfactory fashion, listening spellbound to the child—sometimes Jack would have sworn that the silver man understood everything she said—and uttering little shrieks, exclamatory mewings, and interrogative peeps.

"Now," said Jack, when he had parked at the field boundary, "you two stay in the car for a while. I'm going to speak to Mr. Zinsser and see if he'll come out and meet Mewhu. Molly, do you think that you can make Mewhu understand that he's to stay in the car, and out of sight? You see, if other people see him, they'll want to ask a lot of silly questions, and we don't want to embarrass him, do we?"

"No, Daddy. Mewhu'll be good. Mewhu," she said, turning to the silver man. She held his eyes with hers. His mustache swelled, rippled. "You'll be good, won't you, and stay out of sight?"

"Jeek," said Mewhu. "Jeek mereedy."

"He says you're the boss."

Jack laughed, climbing out. "He does, eh?" Did the child really know or was it mostly a game? "Be good, then. See you soon." Carrying the jet rod, he walked into the building.

Zinsser, as usual, was busy. The field was not large, but did a great deal of private-plane business, and as traffic manager, Zinsser had his hands full. He wrapped one of his pudgy, flexible hands around the phone he was using. "Hi, Garry! What's new out of this world?" he grated cheerfully. "Sid-down. With you in a minute." He bumbled cheerfully into the telephone, grinning at Jack as he talked. Jack made himself as comfortable as patience permitted and waited until Zinsser hung up.

"Well now," said Zinsser, and the phone rang again.

Jack closed his open mouth in annoyance. Zinsser hung up and another bell rang. He picked up a field telephone from its hook on the side of his desk. "Zinsser. Yes—"

"Now that's enough," said Jack to himself. He rose, went to the door, closed it softly so that he was alone with the

manager. He took the jet rod, and to Zinsser's vast astonishment, stood up on his desk, raised the rod high over his head, and stepped off. A hurricane screamed out of the jets. Jack, hanging by his hands from the rod as it lowered him gently through the air, looked over his shoulder. Zinsser's face looked like a red moon in a snow flurry, surrounded as it was by every interoffice memo for the past two weeks.

Anyway, the first thing he did when he could draw a breath was to hang up the phone.

"Thought that would do it," said Jack, grinning.

"You . . . you . . . what *is* that thing?"

"It's a dialectical polarizer," said Jack, alighting. "That is, it makes conversations possible with airport managers who won't get off the phone."

Zinsser was out of his chair and around the desk, remarkably light on his feet for a man his size. "Let me see that."

Jack handed it over.

"Look, Mewhu! Here comes a plane!"

Together they watched the Cub slide in for a landing, and squeaked at the little puffs of dust that were thrown up by the tires and flicked away by the slipstream.

"And there goes another one. It's gonna take off!" The little blue low-wing coupé taxied across the field, braked one wheel, swung in its own length and roared down toward them, lifting to howl away into the sky far over their heads.

"Eeeeeyow," droned Molly, imitating the sound of the motor as it passed everhead.

"S-s-s-s-sweeeeee!" hissed Mewhu, exactly duplicating the whine of control surfaces in the prop blast.

Molly clapped her hands and shrieked with delight. Another plane began to circle the field. They watched it avidly.

"Come on out and have a look at him," said Jack.

Zinsser looked at his watch. "I can't. All kidding aside, I got to stick by the phone for another half hour at the very least. Will he be all right out there? There's hardly anyone around."

"I think so. Molly's with him, and as I told you, they get along beautifully together. That's one of the things I want to have investigated—that telepathy angle." He laughed suddenly. "That Molly . . . know what she did this afternoon?"

He told Zinsser about Molly's driving the car through the wrong end of the garage.

"The little hellion," chuckled Zinsser. "They'll all do it, bless 'em. At some time or other in his life, I think every kid climbs aboard something he doesn't know anything about and runs it wrong. My brother's kid went to work on the front lawn with his mother's vacuum cleaner the other day." He laughed. "To get back to what's-his-name—Mewhu, and this gadget of his. Jack, we've got to hang on to it. Do you realize that he and his clothes and this thing are the only clues we have as to what he is and where he came from?"

"I sure do. But listen—he's very intelligent. I'm sure he'll be able to tell us plenty."

"You can bet he's intelligent," said Zinsser. "He's probably above average on his planet. They wouldn't send just anyone on a trip like that. Jack, what a pity we don't have his ship!"

"Maybe it'll be back. What's your guess as to where he comes from?"

"Mars, maybe."

"Now, you know better than that. We know Mars has an atmosphere, but it's mighty tenuous. An organism the size of Mewhu would have to have enormous lungs to keep him going. No; Mewhu's used to an atmosphere pretty much like ours."

"That would rule Venus out."

"He wears clothes quite comfortably here. His planet must have not only pretty much the same atmosphere, but the same climate. He seems to be able to take most of our foods, though he is revolted by some of them—and aspirin sends him high as a kite. He gets what looks like a laughing drunk on when he takes it."

"You don't say. Let's see; it wouldn't be Jupiter, because he isn't built to take a gravity like that. And the outer planets are too cold, and Mercury is too hot." Zinsser leaned back in his chair and absently mopped his bald head. "Jack, this guy doesn't even come from this solar system!"

"Gosh. I guess you're right. Harry, what do you make of this jet gadget?"

"From the way you say it cuts wood . . . can I see that, by the way?" Zinsser asked.

"Sure." Garry went to work on the jet. He found the right studs to press simultaneously. The casing opened smoothly.

He lifted out the active core of the device, and, handling it gingerly, sliced a small corner off Zinsser's desk top.

"That is the strangest thing I have ever seen," said Zinsser. "May I see it?"

He took it and turned it over in his hands. "There doesn't seem to be any fuel for for it," he said, musingly.

"I think it uses air," said Jack.

"But what pushes the air?"

"Air," said Jack. "No—I'm not kidding. I think that in some way it disintegrates part of the air, and uses the energy released to activate a small jet. If you had a shell around this jet, with an intake at one end and a blast tube at the other, it would operate like a high-vacuum pump, dragging more air through."

"Or like an athodyd," said Zinsser. Garry's blood went cold as the manager sighted down into the jet orifice. "For heaven's sake don't push that button."

"I won't. Say—you're right. The tube's concentric. Now, how on earth could a disruption unit be as small and light as that?"

Jack Garry said, "I've been chewing on that all day. I have one answer. Can you take something that sounds really fantastic, so long as it's logical?"

"You know me," grinned Zinsser, waving at a long shelf of back number science-fiction magazines. "Go ahead."

"Well," said Jack carefully. "You know what binding energy is. The stuff that holds the nucleus of an atom together. If I understand my smattering of nuclear theory properly, it seems possible to me that a sphere of binding energy could be produced that would be stable."

"A sphere? With what inside it?"

"Binding energy—or maybe just nothing . . . space. Anyhow, if you surround that sphere with another, this one a forcefield which is capable of penetrating the inner one, or of allowing matter to penetrate it, it seems to me than anything entering that balance of forces would be disrupted. An explosive pressure would be bottled up inside the inner sphere. Now if you bring your penetrating field in contact with the binding-energy sphere, the pressures inside will come blasting out. Incase the whole rig in a device which controls the amount of matter going in one side of the sphere and the amount of orifice allowed for the escape of energy, and incase that further

in an outside shell which will give you a stream of air induced violently through it—like the vacuum pump you mentioned—and you have this." And he rapped on the little jet motor.

"Most ingenious," said Zinsser, wagging his head. "Even if you're wrong, it's an ingenious theory. What you're saying, you know, is that all we have to do to duplicate this device is to discover the nature of binding energy and then find a way to make it stay stably in spherical form. After which we figure out the nature of a field which can penetrate binding energy and allow any matter to do likewise—one way." He spread his hands. "That's all. Just learn to actually use the stuff that the long-hair boys haven't thought of theorizing about yet, and we're all set."

"Shucks," said Garry, "Mewhu will give us all the dope."

"I hope so. Jack, this can revolutionize the entire industrial world!"

"You're understating," grinned Jack.

The phone rang. Zinsser looked at his watch again. "There's my call." He sat down, answered the phone, and while he went on at great length to some high-powered character at the other end of the line, about bills of lading and charter service and interstate commerce restrictions, Jack lounged against the cut-off corner of the desk and dreamed. Mewhu—a superior member of a superior race, come to earth to lead struggling humanity out of its struggling, wasteful ways. He wondered what Mewhu was like at home among his strange people. Young, but very mature, he decided, and gifted in many ways—the pick of the crop, fit to be ambassador to a new and dynamic civilization like Earth's. And what about the ship? Having dropped Mewhu, had it and its pilot returned to the mysterious corner of the universe from which they had come? Or was it circling about somewhere in space, anxiously awaiting word from the adventurous ambassador?

Zinsser cradled his instrument and stood up with a sigh. "A credit to my will power," he said. "The greatest thing that has ever happened to me, and I stuck by the day's work in spite of it. I feel like a kid on Christmas Eve. Let's go have a look at him."

"Wheeeeyouwow!" screamed Mewhu as another rising plane passed over their heads. Molly bounced joyfully up and down on the cushions, for Mewhu was an excellent mimic.

The silver man slipped over the back of the driver's seat in a lithe movement, to see a little better around the corner of a nearby hanger. One of the Cubs had been wheeled into it, and was standing not far away, its prop ticking over.

Molly leaned her elbows on the edge of the seat and stretched her little neck so she could see, too. Mewhu brushed against her head and her hat fell off. He bent to pick it up and bumped his own head on the dashboard, and the glove compartment flew open. His strange pupils narrowed, and the nictitating membranes flicked over his eyes as he reached inside. The next thing Molly knew, he was out of the car and running over the parking area, leaping high in the air, mouthing strange noises, and stopping every few jumps to roll and beat with his good hand on the ground.

Horrified, Molly Garry left the car and ran after him. "Mewhu!" she cried. "Mewhu, come *back!*"

He cavorted toward her, his arms outspread. "W-r-r-row-w!" he shouted, rushing past her. Lowering one arm a little and raising the other like an airplane banking, he ran in a wide arc, leaped the little tarmac retaining wall and bounded out onto the hangar area.

Molly, panting and sobbing, stopped and stamped her foot. "Mewhu!" she croaked helplessly. "Daddy said—"

Two mechanics standing near the idling Cub looked around at a sound like a civet-cat imitating an Onondaga war whoop. What they saw was a long-legged, silver-gray apparition with a silver-white mustache, and slotted eyes, dressed in a scarlet robe that turned to indigo. Without a sound, moving as one man, they cut and ran. And Mewhu with one last terrible shriek of joy, leaped to the plane and disappeared inside.

Molly put her hands to her mouth and her eyes bugged. "Oh, Mewhu," she breathed. "Now you've done it." She heard pounding feet, turned. Her father was racing toward her, with Mr. Zinsser waddling behind. "Molly! Where's Mewhu?"

Wordlessly, she pointed at the Cub; and as if it were a signal, the little ship throttled up and began to crawl away from the hangars.

"Hey! Wait! Wait!" screamed Jack Garry uselessly, sprinting after the plane. He leaped the wall but misjudged it because of his speed. His toe hooked it and he sprawled slitheringly, jarringly on the tarmac. Zinsser and Molly ran to him, helped

him up. Jack's nose was bleeding. He whipped out a handkerchief, looked out at the dwindling plane. "Mewhu!"

The little plane waddled across the field, bellowed suddenly with power. The tail came up, and it scooted away from them —cross wind, cross the runway. Jack turned to speak to Zinsser and saw the fat man's face absolutely stricken. He followed Zinsser's eyes and saw the other plane, the big six-place cabin job, coming in.

He had never felt so helpless in all his life. Those planes were going to collide. There was nothing anyone could do about it. He watched them, unblinking, almost detachedly. They were hurtling but they seemed to creep; the moment lasted forever. Then, with twenty feet altitude, Mewhu cut his gun and droppd a wing. The Cub slowed, leaned into the wind, and *side-slipped* so close under the cabin ship that another coat of paint on either craft woud have meant disaster.

Jack didn't know how long he had been holding that breath, but it was agony when he let it out.

"Anyway, he can fly," breathed Zinsser.

"Of course he can fly," snapped Jack. "A prehistoric thing like an airplane would be child's play for him. Child's play."

"Oh, Daddy, I'm scared."

"I'm not," said Jack hollowly.

"Me, too," said Zinsser with an unconvincing laugh. "The plane's insured."

The Cub arrowed upward. At a hundred feet it went into a skidding turn, harrowing to watch, suddenly winged over and came shouting down at them. Mewhu buzzed them so close that Zinsser went flat on his face. Jack and Molly simply stood there, wall-eyed. An enormous cloud of dust obscured every thing for ninety interminable seconds. When they next saw the plane it was wobbling crazily at a hundred and fifty.

Suddenly Molly screamed piercingly and put her hands over her face.

"Molly! Kiddo, what is it?"

She flung her arms around his neck and sobbed so violently that he knew it was hurting her throat. "Stop it!" he yelled; and then, very gently, he asked, "What's the matter, darling?"

"He's scared. Mewhu's terrible, terrible scared," she said brokenly.

Jack looked up at the plane. It yawed, fell away on one wing.

Zinsser shouted, his voice cracking, "Gun her! Gun her! Throttle up, you idiot!"

Mewhu cut the gun.

Dead stick, the plane winged over and plunged to the ground. The impact was crushing.

Molly said, quite calmly, "All Mewhu's pictures have gone out now," and slumped unconscious to the ground.

They got him to the hospital. It was messy—all of it; picking him up, carrying him to the ambulance—

Jack wished fervently that Molly had not seen; but she had sat up and cried as they carried him past. He thought worriedly as he and Zinsser crossed and recrossed in their pacing of the waiting room, that he would have his hands full with the child when this thing was all over.

The resident physician came in, wiping his hands. He was a small man with a nose like a walnut meat. "Who brought that plane-crash case in here—you?"

"Both of us," said Zinsser.

"What . . . who is he?"

"A friend of mine. Is he . . . will he live?"

"How should I know?" snapped the doctor impatiently. "I have never in my experience—" He exhaled through his nostrils. "The man has two circulatory systems. Two *closed* circulatory systems, and a heart for each. All his arterial blood looks veinous—it's purple. How'd he happen to get hurt?"

"He ate half a box of aspirin out of my car," said Jack. "Aspirin makes him drunk. He swiped a plane and piled it up."

"Aspirin makes him—" The doctor looked at each of them in turn. "I won't ask if you're kidding me. Just to see that . . . that thing in there is enough to kid any doctor. How long has that splint been on his arm?"

Zinsser looked at Jack and Jack said "About eighteen hours."

"Eighteen *hours?*" The doctor shook his head. "It's so well knitted that I'd say eighteen days." Before Jack could say anything he added, "He needs a transfusion."

"But you can't! I mean . . . his blood—"

"I know. Took a sample to type it. I have two technicians trying to blend chemicals into plasma so we can approximate it. Both of 'em called me a liar. But he's got to have the transfusion. I'll let you know." He strode out of the room.

"There goes one bewildered medico."

"He's O.K.," said Zinsser. "I know him well. Can you blame him?"

"For feeling that way? Gosh now. Harry, I don't know what I'll do if Mewhu checks out."

"That fond of him?"

"Oh, it isn't only that. But to come so close to meeting a new culture, and then have it slip from our fingers like this—it's too much."

"That jet . . . Jack, without Mewhu to explain it, I don't think any scientist will be able to build another. It would be like . . . like giving a Damascus sword-smith some tungsten and asking him to draw it into filaments. There the jet would be, hissing when you shove it toward the ground, sneering at you."

"And that telepathy—what J. B. Rhine wouldn't give to be able to study it!"

"Yeah, and what about his origin?" Zinsser asked excitedly. "He isn't from this system. It means that he used an interstellar drive of some kind, or even that space-time warp the boys write about."

"He's got to live," said Jack. "He's got to, or there ain't no justice. There are too many things we've got to know, Harry! Look—he's here. That must mean that some more of his people will come some day."

"Yeah. Why haven't they come before now?"

"Maybe they have. Charles Fort—"

"Aw, look," said Zinsser, "don't let's get this thing out of hand."

The doctor came back. "I think he'll make it."

"Really?"

"Not really. Nothing real about that character. But from all indications, he'll be O.K. Responded very strongly. What does he eat?"

"Pretty much the same as we do, I think."

"You think. You don't seem to know much about him."

"I don't. He only just got here. No—don't ask me where from," said Jack. "You'll have to ask him."

The doctor scratched his head. "He's out of this world. I can tell you that. Obviously adult, but every fracture but one is a greenstick break; kind of thing you see on a three-year-old.

Transparent membranes over his . . . what are you laughing at?" he asked suddenly.

Jack had started easily, with a chuckle, but it got out of control. He roared.

Zinsser said, "Jack! Cut it out. This is a hosp—"

Jack shoved his hand away. "I . . . I got to," he said helplessly and went off on another peal.

"You've got to what?"

"Laugh," said Jack, gasping. He sobered—he more than sobered. "It has to be funny, Harry. I won't let it be anything else."

"What the devil do you—"

"Look, Harry. We assumed a lot about Mewhu, his culture, his technology, his origin . . . we'll never know anything about it!"

"Why? You mean he won't tell us—"

"He won't tell us. I'm wrong. He'll tell us plenty. But it won't do any good. Here's what I mean. Because he's our size, because he obviously arrived in a spaceship, because he brought a gadget or two that's obviously the product of a highly advanced civilization, we believe that *he* produced the civilization; that he's a superior individual in his own place."

"Well, he must be."

"He must be? Harry, did Molly invent the automobile?"

"No, but—"

"But she drove one through the back of the garage."

Light began to dawn on Zinsser's moon face. "You mean—"

"It all fits! Remember when Mewhu figured out how to carry that heavy trapdoor of mine on the jet stick, and then left the problem half-finished? Remember his fascination with Molly's yo-yo? What about that peculiar rapport he has with Molly that he has with no one else? Doesn't that begin to look reasonable? Look at Iris' reaction to him—almost maternal, though she didn't know why."

"The poor little fellow," breathed Zinsser. " I wonder if he thought he was home when he landed?"

"Poor little fellow—sure," said Jack, and began to laugh again. "Can Molly tell you how an internal combustion engine works? Can she explain laminar flow on an airfoil?" He shook his head. "You wait and see. Mewhu will be able to

tell us the equivalent of Molly's 'I rode in the car with Daddy and we went sixty miles an hour.' "

"But how did he get here?"

"How did Molly get through the back of my garage?"

The doctor shrugged his shoulders helplessly, "About that I don't know. But his biological reactions do look like those of a child—and if he is a child, then his rate of tissue restoration will be high, and I'll guarantee he'll live."

Zinsser groaned. "Much good will it do us—and him, poor kid. With a kid's inherent faith in any intelligent adult anywhere, he's probably been feeling happily sure we'd get him home somehow. Well—we haven't got what it takes, and won't have for a long, long time. We don't know enough to start duplicating that jet of his—and that was just a little kid's toy on his world."

"Daddy—"

"Molly! I thought Mother was—"

"Daddy, I jus' wannit you to take this to Mewhu." She held out her old, scuff-rimmed yo-yo. "Tellum I'm waiting. Tellum I'll play with him soon's he's better."

Jack Garry took the toy. "I'll tell him, honey."

NOBODY SAW THE SHIP

by Murray Leinster

THE landing of the Qul-En ship, a tiny craft no more than fifteen feet in diameter, went completely unnoticed, as its operator intended. It was armed, of course, but its purpose was not destruction. If this ship, whose entire crew consisted of one individual, were successful in its mission then a great ship would come, wiping out the entire population of cities before anyone suspected the danger.

But this lone Qul-En was seeking a complex hormone substance which Qul-En medical science said theoretically must exist, but the molecule of which even the Qul-En could not synthesize directly. Yet it had to be found, in great quantity; once discovered, the problem of obtaining it would be taken up, with the resources of the whole race behind it. But first it had to be found.

The tiny ship assigned to explore the Solar System for the hormone wished to pass unnoticed. Its mission of discovery should be accomplished in secrecy if possible. For one thing, the desired hormone would be destroyed by contact with the typical Qul-En ray-gun beam, so that normal methods of securing zoological specimens could not be used.

The ship winked into being in empty space, not far from Neptune. It drove for that chilly planet, hovered about it, and decided not to land. It sped inward toward the sun and touched briefly on Io, but found no life there. It dropped into the atmosphere of Mars, and did not rise again for a full week, but the vegetation on Mars is thin and the animals mere degenerate survivors of once specialized forms. The ship came to Earth, hovered lightly at the atmosphere's very edge for a

long time, and doubtless chose its point of descent for reasons that seemed good to its occupant. Then it landed.

It actually touched Earth at night. There was no rocket-drive to call attention and by dawn it was well concealed. Only one living creature had seen it land—a mountain lion. Even so, by midday the skeleton of the lion was picked clean by buzzards, with ants tidying up after them. And the Qul-En in the ship was enormously pleased. The carcass, before being abandoned to the buzzards, had been studied with an incredible competence. The lion's nervous system—particularly the mass of tissue in the skull—unquestionably contained either the desired hormone itself, or something so close to it that it could be modified and the hormone produced. It remained only to discover how large a supply of the precious material could be found on Earth. It was not feasible to destroy a group of animals—say, of the local civilized race—and examine their bodies, because the hormone would be broken down by the weapon which allowed of a search for it. So an estimate of available sources would have to be made by sampling. The Qul-En in the ship prepared to take samples.

The ship had landed in tumbled country some forty miles south of Ensenada Springs, national forest territory, on which grazing-rights were allotted to sheep-ranchers after illimitable red tape. Within ten miles of the hidden ship there were rabbits, birds, deer, coyotes, a lobo wolf or two, assorted chipmunks, field-mice, perhaps as many as three or four mountain lions, one flock of two thousand sheep, one man, and one dog.

The man was Antonio Menendez. He was ancient, unwashed, and ignorant, and the official shepherd of the sheep. The dog was Salazar, of dubious ancestry but sound worth, who actually took care of the sheep and knew it; he was scarred from battles done in their defense. He was unweariedly solicitous of the wooly half-wits in his charge. There were whole hours when he could not find time to scratch himself, because of his duties. He was reasonably fond of Antonio, but knew that the man did not really understand sheep.

Besides these creatures, among whom the Qul-En expected to find its samples, there were insects. These, however, the tiny alien being disregarded. It would not be practical to get any great quantity of the substance it sought from such small organisms.

By nightfall of the day after its landing, the door of the ship

opened and the explorer came out in a vehicle designed expressly for sampling on this planet. The vehicle came out, stood on its hind legs, closed the door, and piled brush back to hide it. Then it moved away with the easy, feline gait of a mountain lion. At a distance of two feet it was a mountain lion. It was a magnificent job of adapting Qul-En engineering to the production of a device which would carry a small-bodied explorer about a strange world without causing remark. The explorer nested in a small cabin occupying the space—in the facsimile lion—that had been occupied by the real lion's lungs. The fur of the duplicate was convincing; its eyes were excellent, housing scanning-cells which could make use of anything from ultraviolet far down into the infra-red. Its claws were retractable and of plastic much stronger and keener than the original lion's claws. It had other equipment, including a weapon against which nothing on this planet could stand, and for zoological sampling it had one remarkable advantage. It had no animal smell; it was all metal and plastics.

On the first night of its roaming, nothing in particular happened. The explorer became completely familiar with the way the controls of the machine worked. As a machine, of course, it was vastly more powerful than an animal. It could make leaps no mere creature of flesh and blood could duplicate; its balancing devices were admirable; it was, naturally, immune to fatigue. The Qul-En inside it was pleased with the job.

That night Antonio and Salazar bedded down their sheep in a natural amphitheatre and Antonio slept heavily, snoring. He was a highly superstitious ancient, so he wore various charms of a quasi-religious nature. Salazar merely turned around three times and went to sleep. But while the man slept soundly, Salazar woke often. Once he waked sharply at a startled squawking among the lambs. He got up and trotted over to make sure that everything was all right, sniffed the air suspiciously. Then he went back, scratched where a flea had bitten him, bit—nibbling—at a place his paws could not reach, and went back to sleep. At midnight he made a clear circle around his flock and went back to slumber with satisfaction. Toward dawn he raised his head suspiciously at the sound of a coyote's howl, but the howl was far away. Salazar dozed until daybreak, when he rose, shook himself, stretched himself elaborately, scratched thoroughly, and was ready for a new day. The man waked, wheezing, and cooked breakfast;

it appeared that the normal order of things would go undisturbed.

For a time it did; there was certainly no disturbance at the ship. The small silvery vessel was safely hidden. There was a tiny, flickering light inside—the size of a pin-point—which wavered and changed color constantly where a sort of tape unrolled before it. It was a recording device, making note of everything the roaming pseudo-mountain lion's eyes saw and everything its microphonic ears listened to. There was a bank of air-purifying chemical which proceeded to regenerate itself by means of air entering through a small ventilating slot. It got rid of carbon dioxide and stored up oxygen in its place, in readiness for further voyaging.

Of course, ants exploded the whole outside of the space-vessel, and some went inside through the ventilator-opening. They began to cart off some interesting if novel foodstuff they found within. Some very tiny beetles came exploring, and one variety found the air-purifying chemical refreshing. Numbers of that sort of beetle moved in and began to raise large families. A minuscule moth, too, dropped eggs lavishly in the nest-like space in which the Qul-En explorer normally reposed during space-flight. But nothing really happened.

Not until late morning. It was two hours after breakfast-time when Salazar found traces of the mountain lion which was not a mountain lion. He found a rabbit that had been killed. Having been killed, it had very carefully been opened up, its various internal organs spread out for examination, and its nervous system traced in detail. Its brain-tissue, particularly, had been most painstakingly dissected, so the amount of a certain complex hormone to be found in it could be calculated with precision. The Qul-En in the lion shape had been vastly pleased to find the sought-for hormone in another animal besides a mountain lion.

The dissection job was a perfect anatomical demonstration; no instructor in anatomy could have done better, and few neuro-surgeons could have done as well with the brain. It was, in fact, a perfect laboratory job done on a flat rock in the middle of a sheep-range, and duly reproduced on tape by a flickering, color-changing light. The reproduction, however, was not as good as it should have been, because the tape was then covered by small ants who had found its coating palatable and were trying to clean it off.

Salazar saw the rabbit. There were blow-flies buzzing about it, and a buzzard was reluctantly flying away because of his approach. Salazar barked at the buzzard. Antonio heard the barking; he came.

Antonio was ancient, superstitious, and unwashed. He came wheezing, accompanied by flies who had not finished breakfasting on the bits of his morning meal he had dropped on his vest. Salazar wagged his tail and barked at the buzzard. The rabbit had been neatly dissected, but not eaten. The cuts which opened it up were those of a knife or scalpel. It was not—it was definitely not!—the work of an animal. But there were mountain-lion tracks, and nothing else. More, every one of the tracks was that of a hind foot! A true mountain lion eats what he catches; he does not stand on his hind-paws and dissect it with scientific precision. Nothing earthly had done this!

Antonio's eyes bulged out. He thought instantly of magic, Black Magic. He could not imagine dissection in the spirit of scientific inquiry; to him, anything that killed and then acted in this fashion could only come from the devil.

He gasped and fled, squawking. When he had run a good hundred yards, Salazar caught up to him, very much astonished. He overtook his master and went on ahead to see what had scared the man so. He made casts to right and left, then went in a conscientious circle all around the flock under his care. Presently he came back to Antonio, his tongue lolling out, to assure him that everything was all right. But Antonio was packing, with shaking hands and a sweat-streaked brow.

In no case is the neighborhood of a mountain lion desirable for a man with a flock of sheep. But this was no ordinary mountain lion. Why, Salazar—honest, stout-hearted Salazar—did not scent a mountain lion in those tracks. He would have mentioned it vociferously if he had, so this was beyond nature. The lion was *un fantasmo* or worse; Antonio's thoughts ran to were-tigers, ghosts-lions, and sheer Indian devils. He packed, while Salazar scratched fleas and wondered what was the matter.

They got the flock on the move. The sheep made idiotic efforts to disperse and feed placidly where they were. Salazar rounded them up and drove them on. It was hard work, but even Antonio helped in frantic energy—which was unusual.

Near noon, four miles from their former grazing-ground,

there were mountain-peaks all around them. Some were snow-capped, and there were vistas of illimitable distance everywhere. It was very beautiful indeed, but Antonio did not notice; Salazar came upon buzzards again. He chased them with loud barkings from the meal they reluctantly shared with blowflies and ants. This time it wasn't a rabbit; it was a coyote. It had been killed and most painstakingly taken apart to provide at a glance all significant information about the genus *canis*, species *latrans*, in the person of an adult male coyote. It was a most enlightening exhibit; it proved conclusively that there was a third type of animal, structurally different from both mountain lions and rabbits, which had the same general type of nervous system, with a mass of nerve-tissue in one large mass in a skull, which nerve-tissue contained the same high percentage of the desired hormone as the previous specimens. Had it been recorded by a tiny colored flame in the hidden ship —the flame was now being much admired by small red bugs and tiny spiders—it would have been proof that the Qul-En would find ample supplies on Earth of the complex hormone on which the welfare of their race now depended. Some members of the Qul-En race, indeed, would have looked no farther. But sampling which involved only three separate species and gave no proof of their frequency was not quite enough; the being in the synthetic mountain lion was off in search of further evidence.

Antonio was hardly equipped to guess at anything of this sort. Salazar led him to the coyote carcass; it had been neatly halved down the breastbone. One half the carcass had been left intact; the other half was completely anatomized, and the brain had been beautifully dissected and spread out for measurement. Antonio realized that intelligence had been at work. But—again—he saw only the pad-tracks of a mountain lion, and he was literally paralyzed by horror.

Antonio was scared enough to be galvanized into unbelievable energy. He would have fled gibbering to Ensenada Springs, some forty miles as the crow flies, but to flee would be doom itself. The devils who did this sort of work liked—he knew—to spring upon a man alone. But they can be fooled.

The Qul-En in the artificial mountain lion was elated. To the last quivering appendage on the least small tentacle of its body, the pilot of the facsimile animal was satisfied. It had found good evidence that the desired nervous system and con-

centration of the desired hormone in a single mass of nerve-tissue was normal on this planet! The vast majority of animals should have it. Even the local civilized race might have skulls with brains in them, and, from the cities observed from the stratosphere, that race might be the most numerous fair-sized animal on the planet!

It was to be hoped for, because large quantities of the sought-for hormone were needed; taking specimens from cities would be most convenient. Long-continued existence under the artificial conditions of civilization—a hundred thousand years of it, no less—had brought about exhaustion of the Qul-Ens' ability to create all their needed hormones in their own bodies. Tragedy awaited the race unless the most critically needed substance was found. But now it had been!

Antonio saw it an hour later, and wanted to shriek; it looked exactly like a mountain lion, but he knew it was not flesh and blood because it moved in impossible bounds. No natural creature could leap sixty feet; the mountain-lion shape did. But it was convincingly like its prototype to the eye. It stopped, and regarded the flock of sheep, made soaring progression to the front of the flock, and came back again. Salazar ignored it. Neither he nor the sheep scented carnivorous animal life. Antonio hysterically concluded that it was invisible to them; he began an elaborate, lunatic pattern of behavior to convince it that magic was at work against it, too.

He began to babble to his sheep with infinite politeness, spoke to blank-eyed creatures as *Senor* Gomez and *Senora* Onate. He chatted feverishly with a wicked-eyed ram, whom he called *Senor* Guttierez. A clumsy, wabbling lamb almost upset him, and he scolded the infant sheep as Pepito. He lifted his hat with great gallantry to a swollen ewe, hailing her as *Senora* Garcia, and observed in a quavering voice that the flies were very bad today. He moved about in his flock, turning the direction of its march and acting as if surrounded by a crowd of human beings. This should at least confuse the devil whom he saw. And while he chatted with seeming joviality, the sweat poured down his face in streams.

Salazar took no part in this deception. The sheep were fairly docile, once started; he was able to pause occasionally to scratch, and once even to do a luxurious, thorough job on that place in his back between his hind legs which is so difficult to reach. There was only one time when he had any diffi-

culty. That was when there was a sort of eddying of the sheep, ahead. There were signs of panic. Salazar went trotting to the spot. He found sheep milling stupidly, and rams pawing the ground defying they had no idea what. Salazar found a deer-carcass on the ground and the smell of fresh blood in the air and the sheep upset because of it. He drove them on past, barking where barking would serve and nipping flanks where necessary—afterward disgustedly tonguing bits of wool out of his mouth.

The sheep went on. But Antonio, when he came to the deer-carcass, went icy-cold in the most exquisite of terror; the deer had been killed by a mountain lion—there were tracks about. Then it, too, had been cut into as if by a dissector's scalpel, but the job was incomplete. Actually, the pseudo-mountain lion had been interrupted by the approach of the flock. There were hardly blow-flies on the spot as yet. Antonio came to it as he chatted insanely with a sheep with sore eyes and a halo of midges about its head, whom he addressed as *Senorita* Carmen. But when he saw the deer his throat clicked shut. He was speechless.

To pass a creature laid out for magical ceremony was doom indubitable, but Antonio acted from pure desperation. He recited charms which were stark paganism and would involve a heavy penance when next he went to confession. He performed other actions, equally deplorable; when he went on, the deer was quite spoiled for neat demonstration of the skeletal, circulatory, muscular and especially the nervous system and brain-structure of genus *cervus*, species *dama*, specimen and adult doe. Antonio had piled over the deer all the brush within reach, had poured over it the kerosene he had for his night-lantern, and had set fire to the heap with incantations that made it a wholly impious sacrifice to quite nonexistent heathen demons.

Salazar, trotting back to the front of the flock after checking on Antonio and the rear-guard, wrinkled his nose and sneezed as he went past the blaze again. Antonio tottered on after him. But Antonio's impiety had done no good. The tawny shape bounded back into sight among the boulders on the hillside. It leaped with infinite grace for impossible distances. Naturally! No animal can be as powerful as a machine, and the counterfeit mountain lion was a machine vastly better than men could make.

The Qul-En now zestfully regarded the flock of sheep. It looked upon Salazar and Antonio with no less interest. The Qul-En explorer was an anatomist and organic chemist rather than a zoologist proper, but it guessed that the dog was probably a scavenger and that the man had some symbiotic relationship to the flock.

Salazar, the dog, was done a grave injustice in that estimate. Even Antonio was given less than he deserved. Now he was gray with horror. The blood in his veins turned to ice as he saw the false mountain lion bounding back upon the hillside. No normal wild creature would display itself so openly. Antonio considered himself both doomed and damned; stark despair filled him. But with shaking hands and no hope at all, he carved a deep cross on the point of a bullet for his ancient rifle. Licking his lips, he made similar incisions on other bullets in reserve.

The Qul-En vehicle halted. The flock had been counted; now to select specimens and get to work. There were six new animal types to be dissected for the nervous organ yielding the looked-for hormone. Four kinds of sheep—male and female, and adult and immature of each kind—the biped, and the dog. Then a swift survey to estimate the probable total number of such animals, available, and—

Antonio saw that the devil mountain lion was still. He got down on one knee, fervently crossed himself and fed a cross-marked bullet into the chamber of his rifle. He lined up the sights on the unearthly creature. The lion-facsimile watched him interestedly; the sight of a rifle meant nothing to the Qul-En, naturally. But the kneeling posture of the man was strange. It was part, perhaps, of the pattern of conduct which had led him to start that oxidation process about the deer-specimen.

Antonio fired. His hands trembled and the rifle shook; nothing happened. He fired again and again, gasping in his fear. And he missed every time.

The cross-marked bullets crashed into red earth and splashed from naked rock all about the Qul-En vehicle. When sparks spat from a flint pebble, the pilot of the mountain lion realized that there was actual danger here. It could have slaughtered man and dog and sheep by the quiver of a tentacle, but that would have ruined them as specimens. To avoid spoiling specimens it intended to take later, the Qul-En put the mountain-lion shape into a single, magnificent leap. It soared more than

a hundred feet up-hill and over the crest at its top; then it was gone.

Salazar ran barking after the thing at which Antonio had fired, sniffed at the place from which it had taken off. There was no animal smell there at all. He sneezed, and then trotted down again. Antonio lay flat on the ground, his eyes hidden, babbling. He had seen irrefutable proof that the shape of the mountain lion was actually a fiend from hell.

Behind the hill-crest, the Qul-En moved away. It had not given up its plan of selecting specimens from the flock, of course, nor of anatomizing the man and dog. It was genuinely interested, too, in the biped's novel method of defense. It dictated its own version of the problems raised, on a tight beam to the wavering, color-changing flame. Why did not the biped prey on the sheep if it could kill them? What was the symbiotic relationship of the dog to the man and the sheep? The three varieties of animal associated freely. The Qul-En dictated absorbed speculations, then it hunted for other specimens. It found a lobo wolf, and killed it, verified that this creature also could be a source of hormones. It slaughtered a chipmunk and made a cursory examination. Its ray-beam had pretty well destroyed the creature's brain-tissue, but by analogy of structure this should be a source also.

In conclusion, the Qul-En made a note via the wavering pin-point of flame that the existence of a hormone-bearing nervous system, centralized in a single mass of hormone-bearing nerve-tissue inside a bony structure, seemed universal among the animals of this planet. Therefore it would merely examine the four other types of large animal it had discovered, and take off to present its findings to the Center of its race. With a modification of the ray-beam to kill specimens without destroying the desired hormone. the Qul-En could unquestionably secure as much as the race could possibly need. Concentrations of the local civilized race in cities should make large-scale collection of the hormone practical unless that civilized race was an exception to the general nervous structure of all animals so far observed.

This was dictated to the pin-point flame, and the flame faithfully wavered and changed color to make the record. But the tape did not record it; a rather large beetle had jammed the tape-reel. It was squashed in the process, but it effectively

messed up the recording apparatus. Even before the tape stopped moving, though, the record had become defective; tiny spiders had spun webs, earwigs got themselves caught. The flame, actually, throbed and pulsed restlessly in a cob-webby coating of gossamer and tiny insects. Silverfish were established in the plastic lining of the Qul-En ship; beetles multiplied enormously in the air-refresher chemical; moth-larvae already gorged themselves on the nest-material of the intrepid explorer outside. Ants were busy on the food-stores. Mites crawled into the ship to prey on their larger fellows, and a praying-mantis or so had entered to eat their smaller ones. There was an infinite number of infinitesimal flying things dancing in the dark; large spiders busily spun webs to snare them, and flies of various sorts were attracted by odors coming out of the ventilator-opening, and centipedes rippled sinuously inside—

Night fell upon the world. The pseudo-mountain lion roamed the wild, keeping in touch with the tide of baa-ing sheep now headed for the lowlands. It captured a field-mouse and verified the amazing variety of planetary forms containing brain-tissue rich in hormones. But the sheep-flock could not be driven at night. When stars came out, to move them farther became impossible. The Qul-En returned to select its specimens in the dark, with due care not to allow the man to use his strange means of defense. It found the flock bedded down.

Salazar and Antonio rested; they had driven the sheep as far as it was possible to drive them, that day. Though he was sick with fear and weak with horror, Antonio had struggled on until Salazar could do no more. But he did not leave the flock; the sheep were in some fashion a defense—if only a diversion—against the creature which so plainly was not flesh and blood.

He made a fire, too, because he could not think of staying in the dark. Moths came and fluttered about the flames, but he did not notice. He tried to summon courage. After all, the unearthly thing had fled from bullets marked with a cross, even though they missed; with light to shoot by, he might make a bull's eye. So Antonio sat shivering by his fire, cutting deeper crosses into the points of his bullets, his throat dry and his heart pounding while he listened to the small noises of the sheep and the faint thin sounds of the wilderness.

Salazar dozed by the fire. He had had a very hard day, but even so he slept lightly. When something howled, very far away, instantly the dog's head went up and he listened. But it was nowhere near; he scratched himself and relaxed. Once something hissed and he opened his eyes.

Then he heard a curious, strangled *"Baa-a-a."* Instantly he was racing for the spot. Antonio stood up, his rifle clutched fast. Salazar vanished. Then the man heard an outburst of infuriated barking; Salazar was fighting something, and he was not afraid of it, he was enraged. Antonio moved toward the spot, his rifle ready.

The barking raced for the slopes beyond the flock. It grew more enraged and more indignant still. Then it stopped. There was silence. Antonio called, trembling. Salazar came paddling up to him, whining and snarling angrily. He could not tell Antonio that he had come upon something in the shape of a mountain lion, but which was not—it didn't smell right—carrying a mangled sheep away from its fellows. He couldn't explain that he'd given chase, but the shape made such monstrous leaps that he was left behind and pursuit was hopeless. Salazar made unhappy, disgusted, disgraced noises to himself. He bristled; he whined bitterly. He kept his ears pricked up and he tried twice to dart off on a cast around the whole flock, but Antonio called him back. Antonio felt safer with the dog beside him.

Off in the night, the Qul-En operating the mountain-lion shape caused the vehicle to put down the sheep and start back toward the flock. It would want at least four specimens besides the biped and the dog, but the dog was already on the alert. The Qul-En had not been able to kill the dog, because the mouth of the lion was closed on the sheep. It would probably be wisest to secure the dog and biped first—the biped with due caution—and then complete the choice of sheep for dissection.

The mountain-lion shape came noiselessly back toward the flock. The being inside it felt a little thrill of pleasure. Scientific exploration was satisfying, but rarely exciting; one naturally protected oneself adequately when gathering specimens. But it was exciting to have come upon a type of animal which would dare to offer battle. The Qul-En in the mountain-lion shape reflected that this was a new source of pleasure—to do

battle with the fauna of strange planets in the forms native to those planets.

The paddling vehicle went quietly in among the wooly sheep. It saw the tiny blossom of flame that was Antonio's campfire. Another high-temperature oxidation process . . . It would be interesting to see if the biped was burning another carcass of its own killing. . . .

The shape was two hundred yards from the fire when Salazar scented it. It was upwind from the dog; its own smell was purely that of metals and plastics, but the fur, now, was bedabbled with the blood of the sheep which had been its first specimen of the night. Salazar growled. His hackles rose, every instinct for the defense of his flock. He had smelled that blood when the thing which wasn't a mountain lion left him behind with impossible leapings.

He went stiff-legged toward the shape. Antonio followed in a sort of despairing calm born of utter hopelessness.

A sheep uttered a strangled noise. The Qul-En had come upon a second specimen which was exactly what it wished. It left the dead sheep behind for the moment, while it went to look at the fire. It peered into the flames, trying to see if Antonio—the biped—had another carcass in the flames as seemed to be a habit. It looked—

Salazar leaped for its blood-smeared throat in utter silence and absolute ferocity. He would not have dreamed of attacking a real mountain lion with such utter lack of caution, but this was not a mountain lion. His weight and the suddenness of his attack caught the operator by surprise, the shape toppled over. Then there was an uproar of scared bleatings from sheep nearby, and bloodthirsty snarlings from Salazar. He had the salty taste of sheep-blood in his mouth and a yielding plastic throat between his teeth.

The synthetic lion struggled absurdly. Its weapon, of course, was a ray-gun which was at once aimed and fired when the jaws opened wide. The being inside tried to clear and use that weapon. It would not bear upon Salazar; the Qul-En would have to make its device lie down, double up its mechanical body, and claw Salazar loose from its mechanical throat with the mechanical claws on its mechanical hind-legs. At first the Qul-En inside concentrated on getting its steed back on its feet.

That took time, because whenever Salazar's legs touched

ground he used the purchase to shake the throat savagely. In fact, Antonio was within twenty yards when the being from the ship got its vehicle upright. It held the mechanical head high, then, to keep Salazar dangling while it considered how to dislodge him.

And it saw Antonio. For an instant, perhaps, the Qul-En was alarmed. But Antonio did not kneel; he made no motion which the pilot—seeing through infra-red sensitive photocells in the lion's eyeballs—could interpret as offensive. So the machine moved boldly toward him. The dog dangling from its throat could be disregarded for the moment. The killing-ray was absolutely effective, but it did spread, and it did destroy the finer anatomical features of tissues it hit. Especially, it destroyed nerve-tissue outright. So the closer a specimen was when killed, the smaller the damaged area.

The being inside the mountain lion was pleasantly excited and very much elated. The biped stood stock-still, frozen by the spectacle of a mountain lion moving toward it with a snarling dog hanging disregarded at its throat. The biped would be a most interesting subject for dissection, and its means of offense would be most fascinating to analyze. . . .

Antonio's fingers, contracting as the shape from the ship moved toward him, did an involuntary thing. Quite without intention, they pulled the trigger of the rifle. The deeply cross-cut bullet seared Salazar's flank, removing a quarter-inch patch plastic and metal, hit a foreleg. Although that leg was largely plastic, what metal it contained being mostly magnesium for lightness, there were steel wires imbedded for magnetic purposes. The bullet smashed through plastic and magnesium, struck a spark upon the steel.

There was a flaring, sun-bright flash of flame, a dense cloud of smoke. The mountain-lion shape leaped furiously and the jerk dislodged the slightly singed Salazar and sent him rolling. The mountain-lion vehicle landed and rolled over and over, one leg useless and spouting monstrous, white, actinic fire. The being inside knew an instant's panic; then it felt yielding sheep-bodies below it, thrashed about violently and crazily, and at last the Qul-En jammed the flame-spurting limb deep into soft earth. The fire went out; but that leg of its vehicle was almost useless.

For an instant deadly rage filled the tiny occupant of the cabin where a mountain-lion's lungs should have been. Almost,

it turned and opened the mouth of its steed and poured out the killing-beam. Almost. The flock would have died instantly, and the man and the dog, and all the things in the wild for miles. But that would not have been scientific; after all, this mission should be secret. And the biped . . .

The Qul-En ceased the thrashings of its vehicle. It thought coldly. Salazar raced up to it, barking with a shrillness that told of terror valorously combatted; he danced about, barking.

The Qul-En found a solution. Its vehicle rose on its hind legs and raced up the hillside. It was an emergency method of locomotion for which this particular vehicle was not designed, and it required almost inspired handling of the controls to achieve it. But the Qul-En inside was wholly competent; it guided the vehicle safely over the hilltop while Salazar made only feigned dashes after it. Safely away, the Qul-En stopped and deliberately experimented until the process of running on three legs developed. Then the mountain lion, which was not a mountain lion, went bounding through the night toward its hidden ship.

Within an hour, it clawed away the brush from the exit-port, crawled inside, and closed the port after it. As a matter of pure precaution, it touched the "take-off" control before it even came out of its vehicle.

The ventilation-opening closed—very nearly. The ship rose quietly and swiftly toward the skies. Its arrival had not been noted; its departure was quite unsuspected.

It wasn't until the Qul-En touched the switch for the ship's system of internal illumination to go on that anything appeared to be wrong. There was a momentary arc, and darkness. There was no interior illumination; ants had stripped insulation from essential wires. The lights were shorted. The Qul-En was bewildered; it climbed back into the mountain-lion shape to use the infra-red-sensitive scanning-cells.

The interior of the ship was a crawling mass of insect life. There were ants and earwigs, silverfish and mites, spiders and centipedes, mantises and beetles. There were moths, larvae, grubs, midges, gnats and flies. The recording-instrument was shouded in cobweb and hooded in dust which was fragments of the bodies of the spiders' tiny victims. The air-refresher chemicals were riddled with the tunnels of beetles. Crickets devoured plastic parts of the ship and chirped loudly. And the

controls—ah! the controls! Insulation stripped off here; brackets riddled or weakened or turned to powder there. The ship could rise, and it did. But there were no controls at all.

The Qul-En went into a rage deadly enough to destroy the insects of itself. The whole future of its race depended on the discovery of an adequate source of a certain hormone. That source had been found. Only the return of this one small ship—fifteen feet in diameter—was needed to secure the future of a hundred-thousand-year-old civilization. And it was impeded by the insect-life of the planet left behind! Insect-life so low in nervous organization that the Qul-En had ignored it!

The ship was twenty thousand miles out from earth when the occupant of the mountain lion used its ray-beam gun to destroy all the miniature enemies of its race. The killing beam swept about the ship. Mites, spiders, beetles, larvae, silverfish and flies—everything died. Then the Qul-En crawled out and began to make repairs furiously. The technical skill needed was not lacking; in hours, this same being had made a perfect counterfeit of a mountain lion to serve it as a vehicle. Tracing and replacing gnawed-away insulation would be merely a tedious task. The ship would return to its home planet; the future of the Qul-En race would be secure. Great ships, many times the size of this, would flash through emptiness and come to this planet with instruments specially designed for collecting specimens of the local fauna. The cities of the civilized race would be the simplest and most ample sources of the so-desperately-needed hormone, no doubt. The inhabitants of even one city would furnish a stop-gap supply. In time—why—it would become systematic. The hormone would be gathered from this continent at this time, and from that continent at that, allowing the animals and the civilized race to breed for a few years in between collections. Yes . . .

The Qul-En worked feverishly. Presently it felt a vague discomfort; it worked on. The discomfort increased; it could discover no reason for it. It worked on, feverishly. . . .

Back on Earth, morning came. The sun rose slowly and the dew lay heavy on the mountain grasses. Faraway peaks were just beginning to be visible through clouds that had lain on them overnight. Antonio still trembled, but Salazar slept. When the sun was fully risen he arose and shook himself; he

stretched elaborately, scratched thoroughly, shook himself again and was ready for a new day. When Antonio tremblingly insisted that they drive the flock on toward the lowlands, Salazar assisted. He trotted after the flock and kept them moving; that was his business.

Out in space, the silvery ship suddenly winked out of existence. Enough of its circuits had been repaired to put it in overdrive. The Qul-En was desperate, by that time. It felt itself growing weaker, and it was utterly necessary to reach its own race and report the salvation it had found for them. The record of the flickering flame was ruined. The Qul-En felt that itself was dying. But if it could get near enough to any of the planetary systems inhabited by its race, it could signal them and all would be well.

Moving even more feebly, the Qul-En managed to get lights on within the ship again. Then it found what it considered the cause of its increasing weakness and spasmodic, gasping breaths. In using the killing-ray it had swept all the interior of the ship. But not the mountain-lion shape. Naturally! And the mountain-lion shape had killed specimens and carried them about. While its foreleg flamed, it had even rolled on startled, stupid sheep. It had acquired fleas—perhaps some from Salazar—and ticks. The fleas and ticks had not been killed; they now happily inhabited the Qul-En.

The Qul-En tried desperately to remain alive until a message could be given to its people, but it was not possible. There was a slight matter the returning explorer was too much wrought up to perceive, and the instruments that would have reported it were out of action because of destroyed insulataion. When the ventilation-slit was closed as the ship took off, it did not close completely; a large beetle was in the way. There was a most tiny but continuous leakage of air past the crushed chitinous armor. The Qul-En in the ship died of oxygen-starvation without realizing what had happened, just as human pilots sometimes black out from the same cause before they know what is the matter. So the little silvery ship never came out of overdrive. It went on forever, or until its source of power failed.

The fleas and ticks, too, died in time; they died very happily, very full of Qul-En body-fluid. And they never had a chance to report to their fellows that the Qul-En were very superior hosts.

The only entity who could report told this story and was laughed at. Only his cronies, ignorant and superstitious men like himself, could believe in the existence of a thing not of earth, in the shape of a mountain lion that leaped hundreds of feet at a time, which dissected wild creatures and made magic over them, but fled from bullets marked with a cross and bled flame and smoke when such a bullet wounded it.

Such a thing, of course, was absurd!

THE WINGS OF NIGHT

by Lester del Rey

"CURSE all Martians!" Fats Welch's thin mouth bit out the words with all the malice of an offended member of a superior race. "Here we are, loaded down with as sweet a high-rate cargo of iridium as ever came out of the asteriods, just barely over the Moon, and that injector starts mis-metering again. If I ever see that bulbous Marshy—"

"Yeah." Slim Lane groped back with his right hand for the flexible-shaft wrench, found it, and began wriggling and grunting forward into the mess of machinery again. "Yeah. I know. You'll make mince meat out of him. Did you ever figure that maybe you were making your own trouble? That maybe Martians are people after all? Lyro Bmachis told you it would take two days to make the overhaul of the injector control hookup, so you knocked him across the field, called his ancestors dirty dogs, and gave him just eight hours to finish repairs. Now you expect his rush job to be a labor of love for you— Oh, skip it, Fats, and give me the screwdriver."

What was the use? He'd been over it all with Fats a dozen times before, and it never got him anywhere. Fats was a good rocket man, but he couldn't stretch his imagination far enough to forget the hogwash the Reconstruction Empire was dishing out about the Destiny of Man and the Divine Plan whereby humans were created to exploit all other races. Not that it would do Fats much good if he did. Slim knew the value of idealism—none better.

He'd come out of college with a bad dose of it and an inherited fortune big enough for three men, filled with the old crusading spirit. He'd written and published books, made

speeches, interviewed administrators, lobbied, joined and organized societies, and been called things that weren't complimentary. Now he was pushing freight from Mars to Earth for a living, quarter owner of a space-worn freighter. And Fats, who'd come up from a tube cleaner without the help of ideals, owned the other three quarters.

Fats watched him climb out of the hold. "Well?"

"Nothing. I can't fix it—don't know enough about electronics. There's something wrong with the relays that control the time interval, but the indicators don't show where, and I'd hate to experiment out here."

"Make it to Earth—maybe?"

Slim shook ihs head. "I doubt it, Fats. Better set us down on Luna somewhere, if you can handle her that far. Then maybe we can find out what's wrong before we run out of air."

Fats had figured as much and was already braking the ship down, working against the spasmodic flutter of the blasts, and swearing at the effects of even the Moon's weak gravity. But the screens showed that he was making progress toward the spot he'd chosen—a small flat plain with an area in the center that seemed unusually clear of debris and pockmarks.

"Wish they'd at least put up an emergency station out here," he muttered.

"They had one once," Slim said. "But nobody ever goes to Luna, and there's no reason for passenger ships to land there; takes less fuel for them to coast down on their fins through Earth's atmosphere than to jet down here. Freighters like us don't count, anyway. Funny how regular and flat that place is; we can't be over a mile up, and I don't see even a meteor scar."

"Luck's with us, then. I'd hate to hit a baby crater and rip off a tube or poke a hole in the shell." Fats glanced at the radio altimeter and fall indicator. "We're gonna hit plenty hard. If— Hey, what the deuce?"

Slim's eyes flicked to the screen just in time to see the flat plain split into two halves and slide smoothly out from under them as they seemed about to touch it; then they were dropping slowly into a crater of some sort, seemingly bottomless and widening out rapidly; the roar of the tubes picked up suddenly. Above them, the overscreens showed a pair of translucent slides closing together again. His eyes stared at the height indicator, neither believing nor doubting.

"Hundred and sixty miles down, and trapped in! Tube

sounds show air in some amount, at least, even up here. This crazy trap can't be here; there's no reason for it."

"Right now, who cares? We can't go through that slide up there again, so we go down and find out, I guess. Damn, no telling what kind of landing field we'll find when we reach bottom." Fats' lack of excess imagination came in handy in cases like this. He went about the business of jockeying down the enormous crater as if he were docking at York port, too busy with the uncertain blast to worry about what he might find at the bottom. Slim gazed at him in wonder, then fell back to staring at the screens for some indication of the reason behind this obviously artificial trap.

Lhin scratched idly through the pile of dirt and rotten shale, pried out a thin scrap of reddened stone his eyes had missed the first time, and rose slowly to his feet. The Great Ones had been good to him, sending a rockslide just when the old beds were wearing thin and poor from repeated digging. His sensitive nostrils told him there was magnesium, ferrous matter, and sulphur in abundance, all more than welcome. Of course, he'd hoped there might be copper, even as little as the end of his finger but of that there seemed no sign. And without copper—

He shrugged the thought aside as he had done a thousand times before, and picked up his crude basket, now filled half with broken rock and half with the lichenlike growth that filled this end of the crater. One of his hands ground a bit of rottenstone together with shreds of lichen and he popped the mixture into his mouth. Grace to the Great Ones who had sent the slide; the pleasant flavor of magnesium tickled his tongue, and the lichens were full-flavored from the new richness of the soil around them. Now, with a trace of copper, there would have been nothing left to wish for.

With a rueful twitch of his supple tail, Lhin grunted and turned back toward his cave, casting a cursory glance up at the roof of the cavern. Up there, long miles away, a bright glare lanced down, diffusing out as it pierced through the layers of air, showing that the long lunar day was nearing noon, when the sun would lance down directly through the small guarding gate. It was too high to see, but he knew of the covered opening where the sloping walls of the huge valley ended and the roof began. Through all the millennia of his race's slow defeat,

that great roof had stood, unsupported except for the walls that stretched out around in a circle of perhaps fifty miles diameter, strong and more lasting that even the crater itself; the one abiding monument to the greatness that had been his people's.

He knew without having to think of it, that the roof was artificial, built when the last thin air was deserting the Moon, and the race had sought a final refuge here in the deepest crater, where oxygen could be trapped and kept from leaking away. In a vague way, he could sense the ages that had passed since then and wondered at the permanence of the domed roof, proof against all time.

Once, as the whole space about him testified, his had been a mighty race. But time had worked on them, aging the race as it had individuals, removing the vigor of their youth and sending in the slow creepers of hopelessness. What good was existence here, cooped up in one small colony, away from their world? Their numbers had diminished and some of their skill had gone from them. Their machines had crumbled and vanished, unreplaced, and they had fallen back to the primitive, digging out the rocks of the crater walls and the lichens they had cultured to draw energy from the heat and radioactive phosphorescence of the valley instead of sunlight. Fewer young were planted each year, and of the few, a smaller percentage proved fertile, so that their original million fell to thousands, then to hundreds, and finally to a few grubbing individuals.

Only then had they awakened to the danger of extinction, to find it too late. There had been three elders when Lhin was grown, his seed being the only fertile one. Now the elders were gone long years since, and Lhin had the entire length and breadth of the crater to himself. And life was a long series of sleeps and food forages, relieved only by the same thoughts that had been in his mind while his dead world turned to the light and away more than a thousand times. Monotony had slowly killed off his race, but now that its work was nearly done, it had ended. Lhin was content with his type of life; he was habituated, and immune to boredom.

His feet had been moving slowly along with the turning of his thoughts, and he was out of the valley proper, near the door of the shelter carved into the rocky walls which he had chosen from the many as his home. He munched another mouthful of rock and lichen and let the diffused sunlight shine

on him for a few minutes more, then turned into the cave. He needed no light, since the rock walls about had all been rendered radioactive in the dim youth of his race, and his eyes were adapted to wide ranges of light conditions. He passed quickly through the outer room, containing his woven lichen bed and a few simple furnishings, and back into the combination nursery and workshop, an illogical but ever-present hope drawing him back to the far corner.

But, as always, it was reasonless. The box of rich earth, pulped to a fine loam and watered carefully, was barren of life. There was not even the beginnings of a small red shoot to awaken him to hope for the future. His seed was infertile, and the time when all life would be extinct was growing near. Bitterly he turned his back on the nursery bed.

So little lacking, yet so much! A few hundred molecules of copper salt to eat, and the seeds he grew would be fertile; or those same copper molecules added to the water would render the present seeds capable of growing into vigorous manhood—or womanhood; Lhin's people carried both male and female elements within each member, and could grow the seeds that became their children either alone or with another. So long as one member of the race lived, as many as a hundred young a year could be reared in the carefully tended incubating soil—if the vital hormone containing copper could be made.

But that, it seemed, was not to be. Lhin went over his laboriously constructed apparatus of hand-cut rock bowls and slender rods bound together into tubes, and his hearts were heavy within him. The slow fire of dried lichen and gummy tar burned still, and slow, drop by drop, liquid oozed from the last tube into a bowl. But even in that there was no slightest odor of copper salts. Well, he had tried that and failed. The accumulation of years of refining had gone into the water that kept the nursery soil damp, and in it there had been too little of the needed mineral for life. Almost dispassionately he threw the permanent metal rolls of his race's science back into their cylinders and began disassembling the chemical part of his workshop.

That meant the other solution, harder, and filled with risks, but necessary now. Somewhere up near the roof, the records indicated, there was copper in small amounts, but well past the breathable concentration of air. That meant a helmet and tanks for compressed air, long with hooks and grapples

to bridge the eroded sections of the old trail and steps leading up, instruments to detect the copper, and a pump to fill the tanks. Then he must carry many tanks forward, cache them, and go up to make another cache, step by step, until his supply line would reach the top and—perhaps—he could find copper for a new beginning.

He deliberately avoided thinking of the time required and the chances of failure. His foot came down on the little bellows and blue flames licked up from his crude forge as he drew out the hunks of refined metal and began heating them to malleability. Even the shaping of it by hand to the patterns of the ancient records was almost impossible, and yet, somehow, he must accomplish it correctly. His race must not die!

He was still working doggedly hours later when a high-pitched note shot through the cave. A meteor, coming into the fields around the sealing slides of the roof, and a large one! In all Lhin's life there had been none big enough to activate the warning screens, and he had doubted that the mechanism, though meant to be ageless and draw Sun power until the Sun died, was still functioning. As he stood staring at the door senselessly, the whistling note came again.

Now, unless he pressed his hand over the inductance grid, the automatic forces would come into play, twisting the meteor aside and beyond the roof. But he gave no thought to that as he dashed forward and slapped his fingers against the grilled panel. It was for that he had chosen this rock house, once the quarters of the Watchers who let the few scouting rockets of dim past ages in and out. A small glow from the grid indicated the meteor was through, and he dropped his hand, letting the slides close again.

Then he waited impatiently for it to strike, moving out to the entrance. Perhaps the Great Ones were kind and were answering his prayers at last. Since he could find no copper here, they were sending a token from outer space to him, and who knew what fabulous amounts it might contain—perhaps even as much as he could hold in one hand! But why hadn't it struck? He scanned the roof anxiously, numb with a fear that he had been too late and the forces had thrown it aside.

No, there was a flare above—but surely not such as a meteor that size should make as it sliced down through the resisting air! A sharp stinging whine hit his ears finally,

flickering off and on; and that was not the sound a meteor would logically make. He stared harder, wondering, and saw that it was settling downward slowly, not in a sudden rush, and that the flare struck down instead of fading out behind. That meant—could only mean—intelligent control! A rocket!

Lhin's mind spun under the shock, and crazy ideas of his ancestors' return, of another unknown refuge, of the Great Ones' personal visit slid into his thoughts. Basically, though, he was severely logical, and one by one he rejected them. This machine could not come from the barren moon, and that left only the fabled planet lying under the bottom of his world, or those that wandered around the Sun in other orbits. Intelligence there?

His mind slid over the records he had read, made when his ancestors had crossed space to those worlds, long before the refuge was built. They had been unable to colonize, due to the oppressive pull of gravity, but they had observed in detail. On the second planet were only squamous things that slid through the water and curious fronds on the little dry land; on his own primary, gigantic beasts covered the globe, along with growth rooted to the ground. No intelligence on those worlds. The fourth, thought, was peopled by more familiar life, and like his own evolutionary forerunners, there was no division into animal and vegetable, but both were present in all. Ball-shaped blobs of life had already formed into packs, guided by instinct, with no means of communication. Yet, of the other worlds known, that seemed the most probable as a source of intelligence. If, by some miracle, they came from the third, he abandoned hope; the blood lust of that world was too plainly written in the records, where living mountainlike beasts tore at others through all the rolls of etched pictures. Half filled with dread, half with anticipation, he heard the ship land somewhere near, and started toward it, his tail curved tightly behind him.

He knew, as he caught sight of the two creatures outside the opened lock of the vessel, that his guess had been wrong. The creatures were bifurcate, like himself, though massive and much larger, and that meant the third world. He hesitated, watching carefully as they stared about, apparently keenly enjoying the air around them. Then one spoke to the other, and his mind shook under a new shock.

The articulation and intonation were intelligent, but the

sounds were a meaningless babble. Speech—that! It must be, though the words held no meaning. Wait—in the old records. Slha the Freethinker had touched on some such thought; he had written of remote days when the Lunarites had had no speech and postulated that they had invented the sounds and given them arbitrary meaning, and that only by slow ages of use had they become instinctive in the new-grown infants—had even dared to question that the Great Ones had ordered speech and sound meanings as the inevitable complement of intelligence. And now, it seemed, he was right. Lhin groped up through the fog of his discovery and tightened his thoughts into a beam.

Again, shock struck at him. Their minds were hard to reach, and once he did find the key and grope forward into their thoughts, it was apparent that they could not read his! Yet they were intelligent. But the one on whom his thoughts centered noticed him finally, and grabbed at the other. The words were still harsh and senseless, but the general meaning reached the Moon man. "Fats, what's that?"

The other turned and stared at Lhin's approach. "Dunno. Looks like a scrawny three-foot monkey. Reckon it's harmless?"

"Probably, maybe even intelligent. It's a cinch no band of political refugees built this place—nonhuman construction. Hi there!" the one who thought of himself as Slim—massive though he appeared—turned to the approaching Lunarite. "What and who are you?"

"Lhin," he answered, noting surprised pleasure in Slim's mind. "Lhin—me Lhin."

Fats grunted. "Guess you're right, Slim. Seems to savvy you. Wonder who came here and taught him English."

Lhin fumbled clumsily, trying to pin down the individual sounds to their meanings and remember them. "No sahffy Enlhish. No who came here. You—" He ran out of words and drew nearer, making motions toward Slim's head, then his own. Surprisingly, Slim got it.

"He means he knows what we're thinking, I guess. Telepathy."

"Yeah? Marshies claim they can do it among themselves, but I never saw one read a human mind. They claim we don't open up right. Maybe this Ream monkey's lying to you."

"I doubt it. Take another look at the radioactivity meter

in the viability tester—men wouldn't come here and go home without spreading the good word. Anyway, his name isn't Ream—Lean comes closer to the sound he made, though we'll never get it right." He half sent a thought to Lhin, who dutifully pronounced his name again. "See? His liquid isn't . . . it's a glottal stop. And he makes the final consonant a labial, though it sounds something like our dental. We can't make sounds like that. Wonder how intelligent he is."

He turned back into the ship before Lhin could puzzle out some kind of answer, and was out a moment later with a small bundle under his arm. "Space English code book," he explained to Fats. "Same as they used to teach the Martians English a century ago."

Then to Lhin: "Here are the six hundred most useful words of our language, organized, so it'll beat waiting for you to pick them up bit by bit. You look at the diagramed pictures while I say and think the word. Now. One—w-uh-nn; two—t-ooo. Getting it?"

Fats watched them for a while, half amused, then grew tired of it. "O. K., Slim, you molly-coddle the native awhile and see what you learn. I'm going over to the walls and investigate that radioactive stuff until you're ready to start repairs. Wish radios weren't so darned limited in these freighters and we could get a call through."

He wandered off, but Lhin and Slim were hardly aware of it. They were going through the difficult task of organizing a means of communication, with almost no common background, which should have been worse than impossible in terms of hours. Yet, strange as the word associations and sounds were, and odd as their organization into meaningful groups, they were still only speech, after all. And Lhin had grown into life with a highly complex speech as natural to him as breathing. He twisted his lips over the sounds and nailed the meanings down in his mind, one by one, indelibly.

Fats finally found them in Lhin's cave, tracing them by the sound of their voices, and sat down to watch, as an adult might watch a child playing with a dog. He bore Lhin no ill will, but neither could he regard the Moon man as anything but some clever animal, like the Martians or the primitives of Venus; if Slim enjoyed treating them as equals, let him have his way for the time.

Lhin was vaguely conscious of those thoughts and others

more disturbing, but he was too wrapped up in the new experience of having some living mind to communicate with, after nearly a century of being alone with himself. And there were more important things. He wriggled his tail, spread his arms, and fought over the Earth sounds while Slim followed as best he could.

Finally the Earth man nodded. "I think I get it. All of them have died off except you, and you don't like the idea of coming to a dead end. Um-m-m. I wouldn't either. So now you hope these Great Ones of yours—we call 'em God—have sent us down here to fix things up. How?"

Lhin beamed, his face contorting into a furrowed grimace of pleasure before he realized Slim misinterpreted the gesture. Slim meant well. Once he knew what was needed, perhaps he would even give the copper gladly, since the old records showed that the third world was richest of all in minerals.

"Nra is needed. Life comes from making many simple things one not-simple thing—air, drink stuff, eat stuff, all that I have, so I live. But to begin the new life, Nra is needed. It makes things begin. The seed has no life—with Nra it lives. But I had no word."

He waited impatiently while Slim digested that. "Sort of a vitamin or hormone, something like Vitamin E_6, eh? Maybe we could make it, but—"

Lhin nodded. Surely the Great Ones were kind. His hearts were warm as he thought of the many seeds carefully wrapped and stored that could be made to grow with the needed copper. And now the Earth man was willing to help. A little longer and all would be well.

"No need to make," he piped happily. "Simple stuff. The seed or I can make, in us. But we need Nra to make it. See." He pulped a handful of rock from the basket lying near, chewed it carefully, and indicated that it was being changed inside him.

Fats awoke to greater attention. "Do that again, monkey!" Lhin obliged, curious to note that they apparently ate nothing other life had not prepared for them. "Darn. Rocks—just plain rocks—and he eats them. Has he got a craw like a bird, Slim?"

"He digests them. If you've read of those half-plant, half-animal things the Martians come from, you'll know what his metabolism's like. Look, Lhin, I take it you mean an

element. Sodium, calcium, chlorine? No, I guess you have all those. Iodine, maybe? Hm-m-m." He went over a couple of dozen he could imagine having anything to do with life, but copper was not among them, by accident, and a slow fear crept up into the Lunarite's thoughts. This strange barrier to communication—would it ruin all?

He groped for the answer—and relaxed. Of course, though no common word existed, the element itself was common in structure. Hurriedly he flipped the pages of the code book to a blank one and reached for the Earth man's pencil. Then, as Slim and Fats stared curiously, he began sketching in the atomic structure of copper, particle by particle, from the center out, as the master physicists of his race had discovered it to be.

It meant nothing to them! Slim handed the paper back, shaking his head. "Fella, if I'm right in thinking that's a picture of some atom, we've got a lot to learn back on Earth. *Wheoo!*"

Fats twisted his lips. "If that's an atom, I'm a fried egg. Come on, Slim, it's sleepy time and you've fooled away half a day. Anyhow, I want to talk that radioactive business over with you. It's so strong it'd cook us in half an hour if we weren't wearing these portable nullifiers—yet the monkey seems to thrive on it. I got an idea."

Slim came back from his brown study and stared at his watch. "Darn it! Look, Lhin, don't give up yet; we'll talk all this over tomorrow again. But Fats is right; it's time for us to sleep. So long fella."

Lhin nodded a temporary farewell in his own tongue and slumped back on his rough bed. Outside, he heard Fats extolling a scheme of some kind for getting out the radioactives with Lhin's help, somehow, and Slim's protesting voice. But he paid no attention. The atomic structure had been right, he knew, but they were only groping toward it in their science, and their minds knew too little of the subject to enable them to grasp his pictures.

Chemical formulas? Reactions that would eliminate others, one by one? If they were chemists, perhaps, but even Slim knew too little for that. Yet, obviously, unless there was no copper on Earth, there was an answer somewhere. Surely the Great Ones whom they called God would never answer generations of faithful prayer with a mockery! There was an

answer, and while they slept, he would find it, though he had to search through every record roll for clues.

Hours later he was trudging across the plain toward the ship, hope again high. The answer, once found, was simple. All elements formed themselves into families and classes. Slim had mentioned sodium, and copper was related in the more primitive tables, such as Earth might use. More important, its atomic number was twenty-nine by theory elementary enough for any race that could build rockets.

The locks were open, and he slipped through both, the wavering half-formed thoughts of the men leading him to them unerringly. Once in their presence, he stopped, wondering about their habits. Already he had learned that what held true for his people was not necessarily the rule with them, and they might not approve of his arousing a sleeper. Finally, torn between politeness and impatience, he squatted on the metal floor, clutching the record roll, his nostrils sampling the metals around him. Copper was not there; but he hadn't expected so rare an element, though there were others here that he failed completely to recognize and guessed were among the heavy ones almost lacking on the Moon.

Fats gurgled and scrimmaged around with his arms, yawned, sat up, still half asleep. His thoughts were full of some Earth person of the female element which Lhin had noted was missing in these two, and what he'd do "when he got rich." Lhin was highly interested in the thought pictures until he realized that it would be best not to intrude on these obviously secret things. He withdrew his mind just as the man noted him.

Fats was never at his best while waking up. He came to his feet with a bellow and grabbed for something. "Why, you sneaking little monkey! Trying to sneak up and cut our—"

Lhin squealed and avoided the blow that would have left him a shapeless blob, uncertain of how he had offended, but warned by caution to leave. Physical fear was impossible to him—too many generations had grown and died with no need of it. But it came as a numbing shock that these beings would actually kill another intelligent person. Was life so cheap on Earth?

"Hey! Hey, Fats, stop it!" Slim had awakened at the sound of the commotion, and a hasty glance showed Lhin

that he was holding the other's arms. "Lay off, will you? What's going on?"

But now Fats was fully awake and calming down. He dropped the metal bar and grinned wryly. "I dunno. I guess he meant all right, but he was sitting there with that metal thing in his hands, staring at me, and I figured he meant to cut my throat or something. I'm all right now. Come on back, monkey; it's all right."

Slim let his partner go and nodded at Lhin. "Sure, come back, fella. Fats has some funny ideas about nonhumans, but he's a good-hearted sort, on the whole. Be a good doggie and he won't kick you—he might even scratch your ears."

"Nuts." Fats was grinning, good nature restored. He knew Slim meant it as a crack, but it didn't bother him; what was wrong with treating Marshies and monkeys like what they were? "Whatcha got there monkey? More pictures that mean nothing?"

Lhin nodded in imitation of their assent gesture and held out the roll to Slim; Fats' attitude was no longer unfriendly, but he was an unknown quantity, and Slim seemed the more interested. "Pictures that mean much, I hope. Here is Nra, twenty-nine, under sodium."

"Periodic table," Slim told Fats. "At least, it looks like one. Get me the handbook, will you? Hm-m-m. Under sodium, No. 29. Sodium, potassium, copper. And it's No. 29, all right. That it, Lhin?"

Lhin's eyes were blazing with triumph. Grace to the Great Ones. "Yes it is copper. Perhaps you have some? Even a gram, perhaps?"

"A thousand grams, if you like. According to your notions, we're lousy with the stuff. Help yourself."

Fats cut in. "Sure, monkey, we got copper, if that's the stuff you've been yelling about. What'll you pay for it?"

"Pay?"

"Sure, give in return. We help you; you help us. That's fair, isn't it?"

It hadn't occurred to Lhin, but it did seem fair. But what had he to give? And then he realized what was in the man's mind. For the copper, he was to work, digging out and purifying the radioactives that gave warmth and light and life to the crater, so painfully brought into being when

the place was first constructed, transmuted to meet the special needs of the people who were to live there. And after him, his sons and their sons, mining and sweating for Earth, and being paid in barely enough copper to keep Earth supplied with laborers. Fats' mind filled again with dreams of the other Earth creature. For that, he would doom a race to life without pride or hope or accomplishment. Lhin found no understanding in it. There were so many of those creatures on Earth—why should his enslavement be necessary?

Nor was enslavement all. Eventually, doom was as certain that way as the other, once Earth was glutted with the radioactives, or when the supply here dropped below the vital point, great as the reserve was. He shuddered under the decision forced upon him.

Slim's hand fell on his shoulder. "Fats has things slightly wrong, Lhin. Haven't you, Fats?"

There was something in Slim's hand, something Lhin knew dimly was a weapon. The other man squirmed, but his grin remained.

"You're touched, Slim, soft. Maybe you believe all this junk about other races' equality, but you won't kill me for it. I'm standing pat—I'm not giving away my copper."

And suddenly Slim was grinning, too, and putting the weapon back. "O. K., don't. Lhin can have my share. There's plenty on the ship in forms we can spare, and don't forget I own a quarter of it."

Fats' thoughts contained no answer to that. He mulled it over slowly, then shrugged. Slim was right enough about it, and could do as he wanted with his share. Anyhow—"O. K. Have it your way. I'll help you pry it off wherever it is, or dig it out. How about that wire down in the engine locker?"

Lhin stood silently watching them as they opened a small locker and rummaged through it, studying the engines and controls with half his mind, the other half quivering with ecstasy at the thought of copper—not just a handful, but all he could carry, in pure form, easily turned into digestible sulphate with acids he had already prepared for his former attempt at collecting it. In a year, the crater would be populated again, teeming with life. Perhaps three or four hundred sons left, and as they multiplied, more and yet more.

A detail of the hookup he was studying brought that part

of his mind uppermost, and he tugged at Slim's trouser leg. "That . . . that . . . is not good, is it?"

"Huh? No, it isn't, fella. That's what brought us here. Why?"

"Then, without radioactives. I can pay. I will fix it." A momentary doubt struck him. "That is to pay, is it not?"

Fats heaved a coil of wonderful-smelling wire out of the locker, wiped off sweat, and nodded. "That's to pay, all right, but you let those things alone. They're bad enough, already, and maybe even Slim can't fix it."

"I can fix."

"Yeah. What school did you get your degree in electronics from? Two hundred feet in this coil, makes fifty for him. You gonna give it all to him, Slim?"

"Guess so." Slim was looking at Lhin doubtfully, only half watching as the other measured and cut the wire. "Ever touched anything like that before, Lhin? Controls for the ion feed and injectors are pretty complicated in these ships. What makes you think you can do it—unless your people had things like this and you studied the records."

Lhin fought for words as he tried to explain. His people had had nothing like that—their atomics had worked from a different angle, since uranium was almost nonexistent on the Moon, and they had used a direct application of it. But the principles were plain to him, even from what he could see outside; he could feel the way it worked in his head.

"I feel. When I first grew, I could fix that. It is the way I think, not the way I learn, though I have read all the records. For three hundred million years, my people have learned it—now I feel it."

"Three hundred million years! I knew your race was old when you told me you were born talking and reading, but—galloping dinosaurs!"

"My people saw those things on your world, yes," Lhin assured him solemnly. "Then I shall fix?"

Slim shook his head in confusion and handed over a tool kit without another word. "Three hundred million years, Fats, and during almost all that time they were farther ahead than we are now. Figure that one out. When we were little crawling things living off dinosaur eggs, they were flitting from planet to planet—only I don't suppose they could stay very long; six times normal gravity for them. And now,

just because they had to stay on a light world and their air losses made them gather here where things weren't normal, Lhin's all that's left."

"Yeah, and how does that make him a mechanic?"

"Instinct. In the same amount of time, look at the instincts the animals picked up. He has an instinct for machinery; he doesn't know all about it, probably, but he can instinctively feel how a thing should work. Add to that the collection of science records he was showing me and the amount of reading he's probably done, and there should be almost nothing he couldn't do to a machine."

There wasn't much use in arguing, Fats decided, as he watched what was happening. The monkey either fixed things or they never would leave. Lhin had taken snips and disconnected the control box completely; now he was taking that to pieces, one thing at a time. With a curious deftness, he unhooked wires, lifted out tubes, uncoupled transformers.

It seemed simple enough to him. They had converted energy from the atomic fuel, and they used certain forces to ionize matter, control the rate of ionization feed the ions to the rocket tubes, and force them outward at high speed through helices. An elementary problem in applied electronics to govern the rate and control the ionization forces.

With small quick hands he bent wires into coils, placed other coils in relation, and coupled a tube to the combination. Around the whole, other coils and tubes took shape, then a long feeder connected to the pipe that carried the compound to be ionized, and bus bars to the energy intake. The injectors that handled the feeding of ions were needlessly complicated, but he let them alone, since they were workable as they were. It had taken him less than fifteen minutes.

"It will now work. But use care when you first try it. Now it makes all work, not a little as it did before."

Slim inspected it. "That all? What about this pile of stuff you didn't use?"

"There was no need. It was very poor. Now it is good." As best he could, he explained to Slim what happened when it was used now; before, it would have taken a well-trained technician to describe, even with the complicated words at his command. But what was there now was the product of a science that had gone beyond the stumbling complications of first attempts. Something was to be done,

and was done, as simply as possible. Slim's only puzzle was that it hadn't been done that way in the first place—a normal reaction, once the final simplification is reached. He nodded.

"Good. Fats, this is the business. You'll get about 99.99% efficiency now, instead of the 20% maximum before. You're all right, Lhin."

Fats knew nothing of electronics, but it had sounded right as Lhin explained, and he made no comment. Instead, he headed for the control room. "O. K., we'll leave here, then. So long, monkey."

Slim gathered up the wire and handed it to Lhin, accompanying him to the air lock. On the ground as the locks closed, the Moon man looked up and managed an Earth smile. "I shall open the doors above for you to go through. And you are paid, and all is fair, not so? Then—so long, Slim. The Great Ones love you, that you have given my people back to me."

"Dios," Slim answered, and waved, just before the doors came shut. "Maybe we'll be back sometime and see how you make out."

Back at the cave, Lhin fondled the copper and waited for the sounds the rockets would make, filled with mixed emotions and uncertainties. The copper was pure ecstasy to him, but there were thoughts in Fats' mind which were not all clear. Well, he had the copper for generations to come; what happened to his people now rested on the laps of the Great Ones.

He stood outside the entrance, watching the now-steady rocket blast upward and away, carrying with it the fate of his race. If they told of the radioactives, slavery and extinction. If they remained silent, perhaps a return to former greatness, and passage might be resumed to other planets, long deserted even at the height of their progress; but now planets bearing life and intelligence instead of mere jungles. Perhaps, in time, and with materials bought from other worlds with ancient knowledge, even a solution that would let them restore their world to its ancient glory, as they had dreamed before hopelessness and the dark wings of a race's night had settled over them.

As he watched, the rocket spiraled directly above him, cutting the light off and on with a shadow like the beat of

wings from the mists of antiquity, when winged life had filled the air of the Moon. An omen, perhaps, those sable wings that reached up and passed through the roof as he released the slides, then went skimming out, leaving all clear behind. But whether a good omen or ill, he had not decided.

He carried the copper wire back to the nursery.

And on the ship, Slim watched Fats wiggle and try to think, and there was amusement on his face. "Well, was he good? As good as any human, perhaps?"

"Yeah. All right, better. I'll admit anything you want. He's as good as I am—maybe he's better. That satisfy you?"

"No." Slim was beating the iron while it was hot. "What about those radioactives?"

Fats threw more power into the tubes, and gasped as the new force behind the rockets pushed him back into his seat. He eased up gently, staring straight ahead. Finally he shrugged and turned back to Slim.

"O. K., you win. The monkey keeps his freedom and I keep my lip buttoned. Satisfied?"

"Yeah." Slim was more than satisfied. To him, also, things seemed an omen of the future, and proof that idealism was not altogether folly. Some day the wings of dark prejudice and contempt for others might lift from all Earth's Empire, as they were lifting from Fats' mind. Perhaps not in his time, but eventually; and intelligence, not race, would rule.

"Well satisfied, Fats," he said. "And you don't need to worry about losing too much. We'll make all the money we can ever spend from the new principles of Lhin's hookup; I've thought of a dozen applications already. What do you figure on doing with your share?"

Fats grinned. "Be a damned fool. Help you start your propaganda again and go around kissing Marshies and monkeys. Wonder what our little monkey's thinking."

Lhin wasn't thinking, then; he'd solved the riddle of the factors in Fats' mind, and he knew what the decision would be. Now he was making copper sulphate, and seeing dawn come up where night had been. There's something beautiful about any dawn, and this was very lovely to him.

ARENA

by Fredric Brown

CARSON opened his eyes, and found himself looking upward into a flickering blue dimness.

It was hot, and he was lying on sand, and a sharp rock embedded in the sand was hurting his back. He rolled over to his side, off the rock, and then pushed himself up to a sitting position.

"I'm crazy," he thought. "Crazy—or dead—or something." The sand was blue, bright blue. And there wasn't any such thing as bright blue sand on Earth or any of the planets.

Blue sand.

Blue sand under a blue dome that wasn't the sky nor yet a room, but a circumscribed area—somehow he knew it was circumscribed and finite even though he couldn't see to the top of it.

He picked up some of the sand in his hand and let it run through his fingers. It trickled down onto his bare leg. *Bare?*

Naked. He was stark naked, and already his body was dripping perspiration from the enervating heat, coated blue with sand wherever sand had touched it.

But elsewhere his body was white.

He thought: Then this sand is really blue. If it seemed blue only because of the blue light, then I'd be blue also. But I'm white, so the sand *is* blue. *Blue sand.* There isn't any blue sand. There isn't any place like this place I'm in.

Sweat was running down in his eyes.

It was hot, hotter than Hades. Only Hades—the Hades of the ancients—was supposed to be red and not blue.

But if this place wasn't Hades, what was it? Only Mercury,

among the planets, had heat like this and this wasn't Mercury. And Mercury was some four billion miles from—

It came back to him then, where he'd been. In the little one-man scouter, outside the orbit of Pluto, scouting a scant million miles to one side of the Earth Armada drawn up in battle array there to intercept the Outsiders.

That sudden strident nerve-shattering ringing of the alarm bell when the rival scouter—the Outsider ship—had come within range of his detectors—

No one knew who the Outsiders were, what they looked like, from what far galaxy they came, other than that it was in the general direction of the Pleiades.

First, sporadic raids on Earth colonies and outposts. Isolated battles between Earth patrols and small groups of Outsider spaceships; battles sometimes won and sometimes lost, but never to date resulting in the capture of an alien vessel. Nor had any member of a raided colony ever survived to describe the Outsiders who had left the ships, if indeed they had left them.

Not a too-serious menace, at first, for the raids had not been too numerous or destructive. And individually, the ships had proved slightly inferior in armament to the best of Earth's fighters, although somewhat superior in speed and maneuverability. A sufficient edge in speed, in fact, to give the Outsiders their choice of running or fighting, unless surrounded.

Nevertheless, Earth had prepared for serious trouble, for a showdown, building the mightiest armada of all time. It had been waiting now, that armada, for a long time. But now the showdown was coming.

Scouts twenty billion miles out had detected the approach of a mighty fleet—a showdown fleet—of the Outsiders. Those scouts had never come back, but their radiotronic messages had. And now Earth's armada, all ten thousand ships and half-million fighting spacemen, was out there, outside Pluto's orbit, waiting to intercept and battle to the death.

And an even battle it was going to be, judging by the advance reports of the men of the far picket line who had given their lives to report—before they had died—on the size and strength of the alien fleet.

Anybody's battle, with the mastery of the solar system hanging in the balance, on an even chance. A last and *only* chance,

for Earth and all her colonies lay at the utter mercy of the Outsiders if they ran that gauntlet—

Oh yes. Bob Carson remembered now.

Not that it explained blue sand and flickering blueness. But that strident alarming of the bell and his leap for the control panel. His frenzied fumbling as he strapped himself into the seat. The dot in the visiplate that grew larger.

The dryness of his mouth. The awful knowledge that this was *it*. For him, at least, although the main fleets were still out of range of one another.

This, his first taste of battle. Within three seconds or less he'd be victorious, or a charred cinder. Dead.

Three seconds—that's how long a space-battle lasted. Time enough to count to three, slowly, and then you'd won or you were dead. One hit completely took care of a lightly armed and armored little one-man craft like a scouter.

Frantically—as, unconsciously, his dry lips shaped the word "One"—he worked at the controls to keep that growing dot centered on the crossed spiderwebs of the visiplate. His hands doing that, while his right foot hovered over the pedal that would fire the bolt. The single bolt of concentrated hell that had to hit—or else. There wouldn't be time for any second shot.

"Two." He didn't know he'd said that, either. The dot in the visiplate wasn't a dot now. Only a few thousand miles away, it showed up in the magnification of the plate as though it were only a few hundred yards off. It was a sleek, fast little scouter, about the size of his.

And an alien ship, all right.

"Thr—" His foot touched the bolt-release pedal—

And then the Outsider had swerved suddenly and was off the cross-hairs. Carson punched keys frantically, to follow.

For a tenth of a second, it was out of the visiplate entirely, and then as the nose of his scouter swung after it, he saw it again, diving straight toward the ground.

The ground?

It was an optical illusion of some sort. It *had* to be, that planet—or whatever it was—that now covered the visiplate. Whatever it was, it couldn't be there. Couldn't possibly. There *wasn't* any planet nearer than Neptune three billion miles away—with Pluto around on the opposite side of the distant pinpoint sun.

His *detectors! They* hadn't shown any object of planetary dimensions, even of asteroid demensions. They still didn't.

So it couldn't be there, that whatever-it-was he was diving into, only a few hundred miles below him.

And in his sudden anxiety to keep from crashing, he forgot even the Outsider ship. He fired the front braking rockets, and even as the sudden change of speed slammed him forward against the seat straps, he fired full right for an emergency turn. Pushed them down and *held* them down, knowing that he needed everything the ship had to keep from crashing and that a turn that sudden would black him out for a moment.

It did black him out.

And that was all. Now he was sitting in hot blue sand, stark naked but otherwise unhurt. No sign of his spaceship and—for that matter—no sign of *space*. That curve overhead wasn't a sky, whatever else it was.

He scrambled to his feet.

Gravity seemed a little more than Earth-normal. Not much more.

Flat sand stretching away, a few scrawny bushes in clumps here and there. The bushes were blue, too, but in varying shades, some lighter than the blue of the sand, some darker.

Out from under the nearest bush ran a little thing that was like a lizard, except that it had more than four legs. It was blue, too. Bright blue. It saw him and ran back again under the bush.

He looked up again, trying to decide what was overhead. It wasn't exactly a roof, but it was dome-shaped. It flickered and was hard to look at. But definitely, it curved down to the ground, to the blue sand, all around him.

He wasn't far from being under the center of the dome. At a guess, it was a hundred yards to the nearest wall, if it was a wall. It was as though a blue hemisphere of *something*, about two hundred and fifty yards in circumference, was inverted over the flat expanse of the sand.

And everything blue, except one object. Over near a far curving wall there was a red object. Roughly spherical, it seemed to be about a yard in diameter. Too far for him to see clearly through the flickering blueness. But, unaccountably, he shuddered.

He wiped sweat from his forehead, or tried to, with the back of his hand.

Was this a dream, a nightmare? This heat, this sand, that vague feeling of horror he felt when he looked toward the red thing?

A dream? No, one didn't go to sleep and dream in the midst of a battle in space.

Death? No, never. If there were immortality, it wouldn't be a senseless thing like this, a thing of blue heat and blue sand and a red horror.

Then he heard the voice—

Inside his head he heard it, not with his ears. It came from nowhere or everywhere.

"Through spaces and dimensions wandering," rang the words in his mind, *"and in this space and this time I find two peoples about to wage a war that would exterminate one and so weaken the other that it would retrogress and never fulfill its destiny, but decay and return to mindless dust whence it came. And I say this must not happen."*

"Who . . . what are you?" Carson didn't say it aloud, but the question formed itself in his brain.

"You would not understand completely. I am—" There was a pause as though the voice sought—in Carson's brain—for a word that wasn't there, a word he didn't know. *"I am the end of evolution of a race so old the time can not be expressed in words that have meaning to your mind. A race fused into a single entity, eternal—*

"An entity such as your primitive race might become"—again the groping for a word—*"time from now. So might the race you call, in your mind, the Outsiders. So I intervene in the battle to come, the battle between fleets so evenly matched that destruction of both races will result. One must survive. One must progress and evolve."*

"One?" thought Carson. "Mine, or—?"

"It is in my power to stop the war, to send the Outsiders back to their galaxy. But they would return, or your race would sooner or later follow them there. Only by remaining in this space and time to intervene constantly could I prevent them from destroying one another, and I cannot remain.

"So I shall intervene now. I shall destroy one fleet completely without loss to the other. One civilization shall thus survive."

Nightmare. This had to be nightmare, Carson thought. But he knew it wasn't.

It was too mad, too impossible, to be anything but real.

He didn't dare ask *the* question—*which?* But his thoughts asked it for him.

"The stronger shall survive," said the voice. *"That I can not —and would not—change. I merely intervene to make it a complete victory, not"*—groping again—*"not Pyrrhic victory to a broken race.*

"From the outskirts of the not-yet battle I plucked two individuals, you and an Outsider. I see from your mind that in your early history of nationalisms battles between champions, to decide issues between races, were not unknown.

"You and your opponent are here pitted against one another, naked and unarmed, under conditions equally unfamiliar to you both, equally unpleasant to you both. There is no time limit, for here there is no time. The survivor is the champion of his race. That race survives."

"But—" Carson's protest was too inarticulate for expression, but the voice answered it.

"It is fair. The conditions are such that the accident of physical strength will not completely decide the issue. There is a barrier. You will understand. Brain-power and courage will be more important than strength. Most especially courage, which is the will to survive."

"But while this goes on, the fleets will—"

"No, you are in another space, another time. For as long as you are here, time stands still in the universe you know. I see you wonder whether this place is real. It is, and it is not. As I—to your limited understanding—am and am not real. My existence is mental and not physical. You saw me as a planet; it could have been as a dustmote or a sun.

"But to you this place is now real. What you suffer here will be real. And if you die here, your death will be real. If you die, your failure will be the end of your race. That is enough for you to know."

And then the voice was gone.

Again he was alone, but not alone. For as Carson looked up, he saw that the red thing, the red sphere of horror which he now knew was the Outsider, was rolling toward him.

Rolling.

It seemed to have no legs or arms that he could see, no features. It rolled across the blue sand with the fluid quickness of a drop of mercury. And before it, in some manner he could

not understand, came a paralyzing wave of nauseating, retching, horrid hatred.

Carson looked about him frantically. A stone, lying in the sand a few feet away, was the nearest thing to a weapon. It wasn't large, but it had sharp edges, like a slab of flint. It looked a bit like blue flint.

He picked it up, and crouched to receive the attack. It was coming faster, faster that he could run.

No time to think out how he was going to fight it, and how anyway could he plan to battle a creature whose strength, whose characteristics, whose method of fighting he did not know? Rolling so fast, it looked more than ever like a perfect sphere.

Ten yards away. Five. And then it stopped.

Rather, it *was stopped.* Abruptly the near side of it flattened as though it had run up against an invisible wall. It bounced, actually bounced back.

Then it rolled forward again, but more slowly, more cautiously. It stopped again, at the same place. It tried again, a few yards to one side.

There was a barrier there of some sort. It clicked, then, in Carson's mind. That thought projected into his mind by the Entity who had brought them there: "—accident of physical strength will not completely decide the issue. There is a barrier."

A force-field, of course. Not the Netzian Field, known to Earth science, for that glowed and emitted a crackling sound. This one was invisible, silent.

It was a wall that ran from side to side of the inverted hemisphere; Carson didn't have to verify that himself. The Roller was doing that; rolling sideways along the barrier, seeking a break in it that wasn't there.

Carson took half a dozen steps forward, his left hand groping out before him, and then his hand touched the barrier. It felt smooth, yielding, like a sheet of rubber rather than like glass. Warm to his touch, but no warmer than the sand underfoot. And it was completely invisible, even at close range.

He dropped the stone and put both hands against it, pushing. It seemed to yield just a trifle. But no farther than that trifle, even when he pushed with all his weight. It felt like a sheet of rubber backed up by steel. Limited resiliency, and then firm strength.

He stood on tiptoe and reached as high as he could and the barrier was still there.

He saw the Roller coming back, having reached one side of the arena. That feeling of nausea hit Carson again, and he stepped back from the barrier as it went by. It didn't stop.

But did the barrier stop at ground level? Carson knelt down and burrowed in the sand. It was soft, light, easy to dig in. At two feet down the barrier was still there.

The Roller was coming back again. Obviously, it couldn't find a way through at either side.

There must be a way through, Carson thought. *Some* way we can get at each other, else this duel is meaningless.

But no hurry now, in finding that out. There was something to try first. The Roller was back now, and it stopped just across the barrier, only six feet away. It seemed to be studying him, although for the life of him, Carson couldn't find external evidence of sense organs on the thing. Nothing that looked like eyes or ears or even a mouth. There was though, he saw now, a series of grooves—perhaps a dozen of them altogether, and he saw two tentacles suddenly push out from two of the grooves and dip into the sand as though testing its consistency. Tentacles about an inch in diameter and perhaps a foot and a half long.

But the tentacles were retractable into the grooves and were kept there except when in use. They were retracted when the thing rolled and seemed to have nothing to do with its method of locomotion. That, as far as Carson could judge, seemed to be accomplished by some shifting—just *how* he couldn't even imagine—of its center of gravity.

He shuddered as he looked at the thing. It was alien, utterly alien, horribly different from anything on Earth or any of the life forms found on the other solar planets. Instinctively, somehow, he knew its mind was as alien as its body.

But he had to try. If it had no telepathic powers at all, the attempt was foredoomed to failure, yet he thought it had such powers. There had, at any rate, been a projection of something that was not physical at the time a few minutes ago when it had first started for him. An almost tangible wave of hatred.

If it could project that perhaps it could read his mind as well, sufficiently for his purpose.

Deliberately, Carson picked up the rock that had been his only weapon, then tossed it down again in a gesture of re-

linquishment and raised his empty hands palms up, before him.

He spoke aloud, knowing that although the words would be meaningless to the creature before him, speaking them would focus his own thoughts more completely upon the message.

"Can we not have peace between us?" he said, his voice sounding strange in the utter stillness. "The Entity who brought us here has told us what must happen if our races fight—extinction of one and weakening and retrogession of the other. The battle between them, said the Entity, depends upon what we do here. Why can not we agree to an external peace—your race to its galaxy, we to ours?"

Carson blanked out his mind to receive a reply.

It came, and it staggered him back, physically. He actually recoiled several steps in sheer horror at the depth and intensity of the hatred and lust-to-kill of the red images that had been projected at him. Not as articulate words—as had come to him the thoughts of the Entity—but as wave upon wave of fierce emotion.

For a moment that seemed an eternity he had to struggle against the mental impact of that hatred, fight to clear his mind of it and drive out the alien thoughts to which he had given admittance by blanking his own thoughts. He wanted to retch.

Slowly his mind cleared as, slowly, the mind of a man wakening from nightmare clears away the fear-fabric of which the dream was woven. He was breathing hard and he felt weaker, but he could think.

He stood studying the Roller. It had been motionless during the mental duel it had so nearly won. Now it rolled a few feet to one side, to the nearest of the blue bushes. Three tentacles whipped out of their grooves and began to investigate the bush.

"O.K.," Carson said, "so it's war then." He managed a wry grin. "If I got your answer straight, peace doesn't appeal to you." And, because he was, after all, a quiet young man and couldn't resist the impulse to be dramatic, he added, "To the death!"

But his voice, in the utter silence, sounded very silly, even to himself. It came to him, then, that this *was* to the death. Not only his own death or that of the red spherical thing which he now thought of as the Roller, but death to the entire race

of one or the other of them. The end of the human race, if he failed.

It made him suddenly very humble and very afraid to think that. More than to think it, to *know* it. Somehow, with a knowledge that was above even faith, he knew that the Entity who had arranged this duel had told the truth about its intentions and its powers. It wasn't kidding.

The future of humanity depended upon *him*. It was an awful thing to realize, and he wrenched his mind away from it. He had to concentrate on the situation at hand.

There had to be some way of getting through the barrier, or of killing through the barrier.

Mentally? He hoped that wasn't all, for the Roller obviously had stronger telepathic powers than the primitive, undeveloped ones of the human race. Or did it?

He had been able to drive the thoughts of the Roller out of his own mind; could it drive out his? If its ability to project were stronger, might not its receptive mechanism be more vulnerable?

He stared at it and endeavored to concentrate and focus all his thoughts upon it.

"*Die,*" he thought. "*You are going to die. You are dying. You are—*"

He tried variations on it, and mental pictures. Sweat stood out on his forehead and he found himself trembling with the intensity of the effort. But the Roller went ahead with its investigation of the bush, as utterly unaffeced as though Carson had been reciting the multiplication table.

So *that* was no good.

He felt a bit weak and dizzy from the heat and his strenuous effort at concentration. He sat down on the blue sand to rest and gave his full attention to watching and studying the Roller. By close study, perhaps, he could judge its strength and detect its weaknesses, learn things that would be valuable to know when and if they should come to grips.

It was breaking off twigs. Carson watched carefully, trying to judge just how hard it worked to do that. Later, he thought, he could find a similar bush on his own side, break off twigs of equal thickness himself, and gain a comparison of physical strength between his own arms and hands and those tentacles.

The twigs broke off hard; the Roller was having to struggle with each one, he saw. Each tentacle, he saw, bifurcated at

the tip into two fingers, each tipped by a nail or claw. The claws didn't seem to be particularly long or dangerous. No more so than his own fingernails, if they were let to grow a bit.

No, on the whole, it didn't look too tough to handle physically. Unless, of course, that bush was made of pretty tough stuff. Carson looked around him and, yes, right within reach was another bush of identically the same type.

He reached over and snapped off a twig. It was brittle, easy to break. Of course, the Roller might have been faking deliberately but he didn't think so.

On the other hand, where was it vulnerable? Just how would he go about killing it, if he got the chance? He went back to studying it. The outer hide looked pretty tough. He'd need a sharp weapon of some sort. He picked up the piece of rock again. It was about twelve inches long, narrow, and fairly sharp on one end. If it chipped like flint, he could make a serviceable knife out of it.

The Roller was continuing its investigations of the bushes. It rolled again, to the nearest one of another type. A little blue lizard, many-legged like the one Carson had seen on his side of the barrier, darted out from under the bush.

A tentacle of the Roller lashed out and caught it, picked it up. Another tentacle whipped over and began to pull legs off the lizard, as coldly and calmly as it had pulled twigs off the bush. The creature struggled frantically and emitted a shrill squealing sound that was the first sound Carson had heard here other than the sound of his own voice.

Carson shuddered and wanted to turn his eyes away. But he made himself continue to watch; anything he could learn about his opponent might prove valuable. Even this knowledge of its unnecessary cruelty. Particularly, he thought with a sudden vicious surge of emotion, this knowledge of its unnecessary cruelty. It would make it a pleasure to kill the thing, if and when the chance came.

He steeled himself to watch the dismembering of the lizard, for that very reason.

But he felt glad when, with half its legs gone, the lizard quit squealing and struggling and lay limp and dead in the Roller's grasp.

It didn't continue with the rest of the legs. Contemptuously it tossed the dead lizard away from it, in Carson's direction.

It arched through the air between them and landed at his feet.

It had come through the barrier! The barrier wasn't there any more!

Carson was on his feet in a flash, the knife gripped tightly in his hand, and leaped forward. He'd settle this thing here and now! With the barrier gone—

But it wasn't gone. He found that out the hard way, running head on into it and nearly knocking himself silly. He bounced back, and fell.

And as he sat up, shaking his head to clear it, he saw something coming through the air toward him, and to duck it, he threw himself flat again on the sand, and to one side. He got his body out of the way, but there was a sudden sharp pain in the calf of his left leg.

He rolled backward, ignoring the pain, and scrambled to his feet. It was a rock, he saw now, that had struck him. And the Roller was picking up another one now, swinging it back gripped between two tentacles, getting ready to throw again.

It sailed through the air toward him, but he was easily able to step out of its way. The Roller, apparently, could throw straight, but not hard nor far. The first rock had struck him only because he had been sitting down and had not seen it coming until it was almost upon him.

Even as he stepped aside from that weak second throw, Carson drew back his right arm and let fly with the rock that was still in his hand. If missiles, he thought with sudden elation, can cross the barrier, then two can play at the game of throwing them. And the good right arm of an Earthman—

He couldn't miss a three-foot sphere at only four-yard range, and he didn't miss. The rock whizzed straight, and with a speed several times that of the missiles the Roller had thrown. It hit dead center, but it hit flat, unfortunately, instead of point first.

But it hit with a resounding thump, and obviously it hurt. The Roller had been reaching for another rock, but it changed its mind and got out of there instead. By the time Carson could pick up and throw another rock, the Roller was forty yards back from the barrier and going strong.

His second throw missed by feet, and his third throw was short. The Roller was back out of range—at least out of range of a missile heavy enough to be damaging.

Carson grinned. That round had been his. Except—

He quit grinning as he bent over to examine the calf of his leg. A jagged edge of the stone had made a pretty deep cut, several inches long. It was bleeding pretty freely, but he didn't think it had gone deep enough to hit an artery. If it stopped bleeding of its own accord, well and good. If not, he was in for trouble.

Finding out one thing, though, took precedence over that cut. The nature of the barrier.

He went forward to it again, this time groping with his hands before him. He found it; then holding one hand against it, he tossed a handful of sand at it with the other hand. The sand went right through. His hand didn't.

Organic matter versus inorganic? No, because the dead lizard had gone through it, and a lizard, alive or dead, was certainly organic. Plant life? He broke off a twig and poked it at the barrier. The twig went through, with no resistance, but when his fingers gripping the twig came to the barrier, they were stopped.

He couldn't get through it, nor could the Roller. But rocks and sand and a dead lizard—

How about a live lizard? He went hunting, under bushes, until he found one, and caught it. He tossed it gently against the barrier and it bounced back and scurried away across the blue sand.

That gave him the answer, in so far as he could determine it now. The screen was a barrier to living things. Dead or inorganic matter could cross it.

That off his mind, Carson looked at his injured leg again. The bleeding was lessening, which meant he wouldn't need to worry about making a tourniquet. But he should find some water, if any was available, to clean the wound.

Water—the thought of it made him realize that he was getting awfully thirsty. He'd *have* to find water, in case this contest turned out to be a protracted one.

Limping slightly now, he started off to make a full circuit of his half of the arena. Guiding himself with one hand along the barrier, he walked to his right until he came to the curving sidewall. It was visible, a dull blue-gray at close range, and the surface of it felt just like the central barrier.

He experimented by tossing a handful of sand at it, and the sand reached the wall and disappeared as it went through.

The hemispherical shell was a force-field, too. But an opaque one, instead of transparent like the barrier.

He followed it around until he came back to the barrier, and walked back along the barrier to the point from which he'd started.

No sign of water.

Worried now, he started a series of zigzags back and forth between the barrier and the wall, covering the intervening space thoroughly.

No water. Blue sand, blue bushes, and intolerable heat. Nothing else.

It must be his imagination, he told himself angrily, that he was suffering *that* much from thirst. How long had he been here? Of course, no time at all, according to his own space-time frame. The Entity had told him time stood still out there, while he was here. But his body processes went on here, just the same. And according to his body's reckoning, how long had he been here? Three or four hours, perhaps. Certainly not long enough to be suffering seriously from thirst.

But he was suffering from it; his throat dry and parched. Probably the intense heat was the cause. It was *hot!* A hundred and thirty Fahrenheit, at a guess. A dry, still heat without the slightest movement of air.

He was limping rather badly, and utterly fagged out when he'd finished the futile exploration of his domain.

He stared across at the motionless Roller and hoped it was as miserable as he was. And quite possibly it wasn't enjoying this, either. The Entity had said the conditions here were equally unfamiliar and equally uncomfortable for both of them. Maybe the Roller came from a planet where two-hundred degree heat was the norm. Maybe it was freezing while he was roasting.

Maybe the air was as much too thick for it as it was too thin for him. For the exertion of his explorations had left him panting. The atmosphere here, he realized now, was not much thicker than that on Mars.

No water.

That meant a deadline, for him at any rate. Unless he could find a way to cross that barrier or to kill his enemy from this side of it, thirst would kill him, eventually.

It gave him a feeling of desperate urgency. He *must* hurry.

But he made himself sit down a moment to rest, to think.

What was there to do? Nothing, and yet so many things. The several varieties of bushes, for example. They didn't look promising, but he'd have to examine them for possibilities. And his leg—he'd have to do something about that, even without water to clean it. Gather ammunition in the form of rocks. Find a rock that would make a good knife.

His leg hurt rather badly now, and he decided that came first. One type of bush had leaves—or things rather similar to leaves. He pulled off a handful of them and decided, after examination, to take a chance on them. He used them to clean off the sand and dirt and caked blood, then made a pad of fresh leaves and tied it over the wound with tendrils from the same bush.

The tendrils proved unexpectedly tough and strong. They were slender, and soft and pliable, yet he couldn't break them at all. He had to saw them off the bush with the sharp edge of a piece of the blue flint. Some of the thicker ones were over a foot long, and he filed away in his memory, for future reference, the fact that a bunch of the thick ones, tied together, would make a pretty serviceable rope. Maybe he'd be able to think of a use for rope.

Next, he made himself a knife. The blue flint *did* chip. From a foot-long splinter of it, he fashioned himself a crude but lethal weapon. And of tendrils from the bush, he made himself a rope-belt through which he could thrust the flint knife, to keep it with him all the time and yet have his hands free.

He went back to studying the bushes. There were three other types. One was leafless, dry, brittle, rather like a dried tumbleweed. Another was of soft, crumbly wood, almost like punk. It looked and felt as though it would make excellent tinder for a fire. The third type was the most nearly woodlike. It had fragile leaves that wilted at a touch, but the stalks, although short, were straight and strong.

It was horribly, unbearably hot.

He limped up to the barrier, felt to make sure that it was still there. It was.

He stood watching the Roller for a while. It was keeping a safe distance back from the barrier, out of effective stone-throwing range. It was moving around back there, doing something. He couldn't tell what it was doing.

Once it stopped moving, came a little closer, and seemed to concentrate its attention on him. Again Carson had to fight

off a wave of nausea. He threw a stone at it and the Roller retreated and went back to whatever it had been doing before.

At least he could make it keep its distance.

And, he thought bitterly, a devil of a lot of good *that* did him. Just the same, he spent the next hour or two gathering stones of suitable size for throwing, and making several neat piles of them, near his side of the barrier.

His throat burned now. It was difficult for him to think about anything except water.

But he *had* to think about other things. About getting through that barrier, under or over it, getting *at* that red sphere and killing it before this place of heat and thirst killed him first.

The barrier went to the wall upon either side, but how high and how far under the sand?

For just a moment, Carson's mind was too fuzzy to think out how he could find out either of those things. Idly, sitting there in the hot sand—and he didn't remember sitting down—he watched a blue lizard crawl from the shelter of one bush to the shelter of another.

From under the second bush, it looked out at him.

Carson grinned at it. Maybe he was getting a bit punch-drunk, because he remembered suddenly the old story of the desert-colonists on Mars, taken from an older desert story of Earth— "Pretty soon you get so lonesome you find yourself talking to the lizards, and then not so long after that you find the lizards talking back to you—"

He should have been concentrating, of course, on how to kill the Roller, but instead he grinned at the lizard and said, "Hello, there."

The lizard took a few steps toward him. "Hello," it said.

Carson was stunned for a moment, and then he put back his head and roared with laughter. It didn't hurt his throat to do so, either; he hadn't been *that* thirsty.

Why not? Why should the Entity who thought up this nightmare of a place not have a sense of humor, along with the other powers he had? Talking lizards, equipped to talk back in my own language, if I talk to them— It's a nice touch.

He grinned at the lizard and said, "Come on over." But the lizard turned and ran away, scurrying from bush to bush until it was out of sight.

He was thirsty again.

And he had to *do* something. He couldn't win this contest by sitting here sweating and feeling miserable. He had to *do* something. But what?

Get through the barrier. But he couldn't get through it, or over it. But was he certain he couldn't get under it? And come to think of it, didn't one sometimes find water by digging? Two birds with one stone—

Painfully now, Carson limped up to the barrier and started digging, scooping up sand a double handful at a time. It was slow, hard work because the sand ran in at the edges and the deeper he got the bigger in diameter the hole had to be. How many hours it took him, he didn't know, but he hit bedrock four feet down. Dry bedrock; no sign of water.

And the force-field of the barrier went down clear to the bedrock. No dice. No water. Nothing.

He crawled out of the hole and lay there panting, and then raised his head to look across and see what the Roller was doing. It must be doing something back there.

It was. It was making something out of wood from the bushes, tied together with tendrils. A queerly shaped framework about four feet high and roughly square. To see it better, Carson climbed up onto the mound of sand he had excavated from the hole, and stood there staring.

There were two long levers sticking out of the back of it, one with a cup-shaped affair on the end of it. Seemed to be some sort of a catapult, Carson thought.

Sure enough, the Roller was lifting a sizable rock into the cup-shaped outfit. One of his tentacles moved the other lever up and down for a while, and then he turned the machine slightly as though aiming it and the lever with the stone flew up and forward.

The stone arced several yards over Carson's head, so far away that he didn't have to duck, but he judged the distance it had traveled, and whistled softly. He couldn't throw a rock that weight more than half that distance. And even retreating to the rear of his domain wouldn't put him out of range of that machine, if the Roller shoved it forward almost to the barrier.

Another rock whizzed over. Not quite so far away this time.

That thing could be dangerous, he decided. Maybe he'd better do something about it.

Moving from side to side along the barrier, so the catapult couldn't bracket him, he whaled a dozen rocks at it. But that wasn't going to be any good, he saw. They had to be light rocks, or he couldn't throw them that far. If they hit the framework, they bounced off harmlessly. And the Roller had no difficulty, at that distance, in moving aside from those that came near it.

Besides, his arm was tiring badly. He ached all over from sheer weariness. If he could only rest awhile without having to duck rocks from that catapult at regular intervals of maybe thirty seconds each—

He stumbled back to the rear of the arena. Then he saw even that wasn't any good. The rocks reached back there, too, only there were longer intervals between them, as though it took longer to wind up the mechanism, whatever it was, of the catapult.

Wearily he dragged himself back to the barrier again. Several times he fell and could barely rise to his feet to go on. He was, he knew, near the limit of his endurance. Yet he didn't dare stop moving now, until and unless he could put that catapult out of action. If he fell asleep, he'd never wake up.

One of the stones from it gave him the first glimmer of an idea. It struck upon one of the piles of stones he'd gathered together near the barrier to use as ammunition, and it struck sparks.

Sparks. Fire. Primitive man had made fire by striking sparks, and with some of those dry crumbly bushes as tinder—

Luckily, a bush of that type was near him. He broke it off, took it over to the pile of stones, then patiently hit one stone against another until a spark touched the punklike wood of the bush. It went up in flames so fast that it singed his eyebrows and was burned to an ash within seconds.

But he had the idea now, and within minutes he had a little fire going in the lee of the mound of sand he'd made digging the hole an hour or two ago. Tender bushes had started it, and other bushes which burned, but more slowly, kept it a steady flame.

The tough wirelike tendrils didn't burn readily; that made the fire-bombs easy to make and throw. A bundle of faggots tied about a small stone to give it weight and a loop of the tendril to swing it by.

He made half a dozen of them before he lighted and threw

the first. It went wide, and the Roller started a quick retreat, pulling the catapult after him. But Carson had the others ready and threw them in rapid succession. The fourth wedged in the catapult's framework, and did the trick. The Roller tried desperately to put out the spreading blaze by throwing sand, but its clawed tentacles would take only a spoonful at a time and his efforts were ineffectual. The catapult burned.

The Roller moved safely away from the fire and seemed to concentrate its attention on Carson and again he felt that wave of hatred and nausea. But more weakly; either the Roller itself was weakening or Carson had learned how to protect himself against the mental attack.

He thumbed his nose at it and then sent it scuttling back to safety by throwing a stone. The Roller went clear to the back of its half of the arena and started pulling up bushes again. Probably it was going to make another catapult.

Carson verified—for the hundredth time—that the barrier was still operating, and then found himself sitting in the sand beside it because he was suddenly too weak to stand up.

His leg throbbed steadily now and the pangs of thirst were severe. But those things paled beside the utter physical exhaustion that gripped his entire body.

And the heat.

Hell must be like this, he thought. The hell that the ancients had believed in. He fought to stay awake, and yet staying awake seemed futile, for there was nothing he could do. Nothing, while the barrier remained impregnable and the Roller stayed back out of range.

But there must be *something*. He tried to remember things he had read in books of archaeology about the methods of fighting used back in the days before metal and plastic. The stone missile, that had come first, he thought. Well, that he already had.

The only improvement on it would be a catapult, such as the Roller had made. But he'd never be able to make one, with the tiny bits of wood available from the bushes—no single piece longer than a foot or so. Certainly he could figure out a mechanism for one, but he didn't have the endurance left for a task that would take days.

Days? But the Roller had made one. Had they been here days already? Then he remembered that the Roller had many

tentacles to work with and undoubtedly could do such work faster that he.

And besides, a catapult wouldn't decide the issue. He had to do better than that.

Bow and arrow? No; he had tried archery once and knew his own ineptness with a bow. Even with a modern sportsman's durasteel weapon, made for accuracy. With such a crude, pieced-together outfit as he could make here, he doubted if he could shoot as far as he could throw a rock, and knew he couldn't shoot as straight.

Spear? Well, he *could* make that. It would be useless as a throwing weapon at any distance, but would be a handy thing at close range, if he ever got to close range.

And making one would give him something to do. Help keep his mind from wandering, as it was beginning to do. Sometimes now, he had to concentrate awhile before he could remember why he was here, why he had to kill the Roller.

Luckily he was still beside one of the piles of stones. He sorted through it until he found one shaped roughly like a spearhead. With a smaller stone he began to chip it into shape, fashioning sharp shoulders on the sides so that if it penetrated it would not pull out again.

Like a harpoon? There was something in that idea, he thought. A harpoon was better than a spear, maybe, for this crazy contest. If he could once get it into the Roller, and had a rope on it, he could pull the Roller up against the barrier and the stone blade of his knife would reach through that barrier, even if his hands wouldn't.

The shaft was harder to make than the head. But by splitting and joining the main stems of four of the bushes, and wrapping the joints with the tough but thin tendrils, he got a strong shaft about four feet long, and tied the stone head in a notch cut in the end.

It was crude, but strong.

And the rope. With the thin tough tendrils he made himself twenty feet of line. It was light and didn't look strong, but he knew it would hold his weight and to spare. He tied one end of it to the shaft of the harpoon and the other end about his right wrist. At least, if he threw his harpoon across the barrier, he'd be able to pull it back if he missed.

Then when he had tied the last knot and there was nothing more he could do, the heat and the weariness and the pain in

his leg and the dreadful thirst were suddenly a thousand times worse than they had been before.

He tried to stand up, to see what the Roller was doing now, and found he couldn't get to his feet. On the third try, he got as far as his knees and then fell flat again.

"I've got to sleep," he thought. "If a showdown came now, I'd be helpless. He could come up here and kill me, if he knew. I've got to regain some strength."

Slowly, painfully, he crawled back away from the barrier. Ten yards, twenty—

The jar of something thudding against the sand near him waked him from a confused and horrible dream to a more confused and more horrible reality, and he opened his eyes again to blue radiance over blue sand.

How long had he slept? A minute? A day?

Another stone thudded nearer and threw sand on him. He got his arms under him and sat up. He turned around and saw the Roller twenty yards away, at the barrier.

It rolled away hastily as he sat up, not stopping until it was as far away as it could get.

He'd fallen asleep too soon, he realized, while he was still in range of the Roller's throwing ability. Seeing him lying motionless, it had dared come up to the barrier to throw at him. Luckily, it didn't realize how weak he was, or it could have stayed there and kept on throwing stones.

Had he slept long? He didn't think so, because he felt just as he had before. Not rested at all, no thirstier, no different. Probably he'd been there only a few minutes.

He started crawling again, this time forcing himself to keep going until he was as far as he could go, until the colorless, opaque wall of the arena's outer shell was only a yard away.

Then things slipped away again —

When he awoke, nothing about him was changed, but this time he knew that he had slept a long time.

The first thing he became aware of was the inside of his mouth; it was dry, caked. His tongue was swollen.

Something was wrong, he knew, as he returned slowly to full awareness. He felt less tired, the stage of utter exhaustion had passed. The sleep had taken care of that.

But that was pain, agonizing pain. It wasn't until he tried to move that he knew that it came from his leg.

He raised his head and looked down at it. It was swollen

terribly below the knee and the swelling showed even halfway up his thigh. The plant tendrils he had used to tie on the protective pad of leaves now cut deeply into the swollen flesh.

To get his knife under that imbedded lashing would have been impossible. Fortunately, the final knot was over the shin bone, in front where the vine cut in less deeply than elsewhere. He was able, after an agonizing effort, to untie the knot.

A look under the pad of leaves told him the worst. Infection and blood poisoning both pretty bad and getting worse.

And without drugs, without cloth, without even *water*, there wasn't a thing he could do about it.

Not a thing, except *die*, when the poison had spread through his system.

He knew it was hopeless, then, and that he'd lost.

And with him humanity. When he died here, out there in the universe he knew, all his friends, everybody, would die too. And Earth and the colonized planets would be the home of the red, rolling, alien Outsiders. Creatures out of nightmare, things without a human attribute, who picked lizards apart for the fun of it.

It was the thought of that which gave him courage to start crawling, almost blindly in pain, toward the barrier again. Not crawling on hands and knees this time, but pulling himself along only by his arms and hands.

A chance in a million, that maybe he'd have strength left, when he got there, to throw his harpoon-spear just *once*, and with deadly effect, if—on another chance in a million—the Roller would come up to the barrier. Or if the barrier was gone, now.

It took him years, it seemed, to get there.

The barrier wasn't gone. It was as impassable as when he'd first felt it.

And the Roller wasn't at the barrier. By raising up on his elbows, he could see it at the back of its part of the arena, working on a wooden framework that was a half-completed duplicate of the catapult he'd destroyed.

It was moving slowly now. Undoubtedly it had weakened, too.

But Carson doubted that it would ever need that second catapult. He'd be dead, he thought, before it was finished.

If he could attract it to the barrier, now, while he was still

alive—He waved an arm and tried to shout, but his parched throat would make no sound.

Or if he could get through the barrier—

His mind must have slipped for a moment, for he found himself beating his fists against the barrier in futile rage, and made himself stop.

He closed his eyes, tried to make himself calm.

"Hello," said the voice.

It was a small, thin voice. It sounded like—

He opened his eyes and turned his head. It *was* a lizard.

"Go away," Carson wanted to say. "Go away; you're not really there, or you're there but not really talking. I'm imagining things again."

But he couldn't talk; his throat and tongue were past all speech with the dryness. He closed his eyes again.

"Hurt," said the voice. "Kill. Hurt—kill. Come."

He opened his eyes again. The blue tenlegged lizard was still there. It ran a little way along the barrier, came back, started off again, and came back.

"Hurt," it said. "Kill. Come."

Again it started off, and came back. Obviously it wanted Carson to follow it along the barrier.

He closed his eyes again. The voice kept on. The same three meaningless words. Each time he opened his eyes, it ran off and came back.

"Hurt. Kill. Come."

Carson groaned. There would be no peace unless he followed the blasted thing. Like it wanted him to.

He followed it, crawling. Another sound, a high-pitched squealing, came to his ears and grew louder.

There was something lying in the sand, writhing, squealing. Something small, blue, that looked like a lizard and yet didn't—

Then he saw what it was—the lizard whose legs the Roller had pulled off, so long ago. But it wasn't dead; it had come back to life and was wriggling and screaming in agony.

"Hurt," said the other lizard. "Hurt. Kill. Kill."

Carson understood. He took the flint knife from his belt and killed the tortured creature. The live lizard scurried off quickly.

Carson turned back to the barrier. He leaned his hands and head against it and watched the Roller, far back, working on the new catapult.

"I could get that far," he thought, "if I could get through. If I could get through, I might win yet. It looks weak, too. I might—"

And then there was another reaction of black hopelessness, when pain snapped his will and he wished that he were dead. He envied the lizard he'd just killed. It didn't have to live on and suffer. And he did. It would be hours, it might be days, before the blood poisoning killed him.

If only he could use that knife on himself—

But he knew he wouldn't. As long as he was alive, there was the millionth chance—

He was straining, pushing on the barrier with the flat of his hands, and he noticed his arms, how thin and scrawny they were now. He must really have been here a long time, for days, to get as thin as that.

How much longer now, before he died? How much more heat and thirst and pain could flesh stand?

For a little while he was almost hysterical again, and then came a time of deep calm, and a thought that was startling.

The lizard he had just killed. *It had crossed the barrier, still alive.* It had come from the Roller's side; the Roller had pulled off its legs and then tossed it contemptuously at him and it had come through the barrier. He'd thought, because the lizard was dead.

But it hadn't been dead; it had been unconscious.

A live lizard couldn't go through the barrier, but an unconscious one could. The barrier was not a barrier, then, to living flesh, but to conscious flesh. It was a *mental* projection, a *mental* hazard.

And with that thought, Carson started crawling along the barrier to make his last desperate gamble. A hope so forlorn that only a dying man would have dared try it.

No use weighing the odds of success. Not when, if he didn't try it, those odds were infinitely to zero.

He crawled along the barrier to the dune of sand, about four feet high, which he'd scooped out in trying—how many days ago?—to dig under the barrier or to reach water.

That mound was right at the barrier, its farther slope half on one side of the barrier, half on the other.

Taking with him a rock from the pile nearby, he climbed up to the top of the dune and over the top, and lay there against the barrier his weight leaning against it so that if the

barrier were taken away he'd roll on down the short slope, into the enemy territory.

He checked to be sure that the knife was safely in his rope belt, that the harpoon was in the crook of his left arm and that the twenty-foot rope fastened to it and to his wrist.

Then with his right hand he raised the rock with which he would hit himself on the head. Luck would have to be with him on that blow; it would have to be hard enough to knock him out, but not hard enough to knock him out for long.

He had a hunch that the Roller was watching him, and would see him roll down through the barrier, and come to investigate. It would think he was dead, he hoped—he thought it had probably drawn the same deduction about the nature of the barrier that he had drawn. But it would come cautiously. He would have a little time—

He struck.

Pain brought him back to consciousness. A sudden, sharp pain in his hip that was different from the throbbing pain in his head and the throbbing pain in his leg.

But he had, thinking things out before he had struck himself, anticipated that very pain, even hoped for it, and had steeled himself against awakening with a sudden movement.

He lay still, but opened his eyes just a slit, and saw that he had guessed rightly. The Roller was coming closer. It was twenty feet away and the pain that had awakened him was the stone it had tossed to see whether he was alive or dead.

He lay still. It came closer, fifteen feet away, and stopped again. Carson scarcely breathed.

As nearly as possible, he was keeping his mind a blank, lest its telepathic ability detect consciousness in him. And with his mind blanked out that way, the impact of its thoughts upon his mind was nearly soul-shattering.

He felt sheer horror at the utter *alienness*, the *differentness* of those thoughts. Things that he felt but could not understand and could never express, because no terrestrial language had words, no terrestrial mind had images to fit them. The mind of a spider, he thought, or the mind of a praying mantis or a Martian sand-serpent, raised to intelligence and put in telepathic rapport with human minds, would be a homely familiar thing, compared to this.

He understood now that the Entity had been right: Man or Roller, and the universe was not a place that could hold

them both. Farther apart than god and devil, there could never be even a balance between them.

Closer. Carson waited until it was only feet away, until its clawed tentacles reached out—

Oblivious to agony now, he sat up, raised and flung the harpoon with all the strength that remained to him. Or he thought it was all; sudden final strength flooded through him, along with a sudden forgetfulness of pain as definite as a nerve block.

As the Roller, deeply stabbed by the harpoon, rolled away, Carson tried to get to his feet to run after it. He couldn't do that; he fell, but kept crawling.

It reached the end of the rope, and he was jerked forward by the pull of his wrist. It dragged him a few feet and then stopped. Carson kept on going, pulling himself toward it hand over hand along the rope.

It stopped there, writhing tentacles trying in vain to pull out the harpoon. It seemed to shudder and quiver, and then it must have realized that it couldn't get away, for it rolled back toward him, clawed tentacles reaching out.

Stone knife in hand, he met it. He stabbed, again and again, while those horrid claws ripped skin and flesh and muscle from his body.

He stabbed and slashed, and at last it was still.

A bell was ringing, and it took him a while after he'd opened his eyes to tell where he was and what it was. He was strapped into the seat of his scouter, and the visiplate before him showed only empty space. No Outsider ship and no impossible planet.

The bell was the communications plate signal; someone wanted him to switch power into the receiver. Purely reflex action enabled him to reach forward and throw the lever.

The face of Brander, captain of the *Magellan*, mother-ship of his group of scouters, flashed into the screen. His face was pale and his black eyes glowed with excitement.

"*Magellan* to Carson," he snapped. "Come on in. The fight's over. We've won!"

The screen went blank; Brander would be signaling the other scouters of his command.

Slowly, Carson set the controls for the return. Slowly, unbelievingly, he unstrapped himself from the seat and went

back to get a drink at the cold-water tank. For some reason, he was unbelievably thirsty. He drank six glasses.

He leaned there against the wall, trying to think.

Had it happened? He was in good health, sound, uninjured. His thirst had been mental rather than physical; his throat hadn't been dry. His leg—

He pulled up his trouser leg and looked at the calf. There was a long white scar there, but a perfectly healed scar. It hadn't been there before. He zipped open the front of his shirt and saw that his chest and abdomen were criss-crossed with tiny, almost unnoticeable, perfectly healed scars.

It *had* happened.

The scouter, under automatic control, was already entering the hatch of the mother-ship. The grapples pulled it into its individual lock, and a moment later a buzzer indicated that the lock was air-filled. Carson opened the hatch and stepped outside, went through the double door of the lock.

He went right to Brander's office, went in, and saluted.

Brander still looked dizzily dazed. "Hi, Carson," he said. "What you missed! What a show!"

"What happened, sir?"

"Don't know, exactly. We fired one salvo, and their whole fleet went up in dust! Whatever it was jumped from ship to ship in a flash, even the ones we hadn't aimed at and that were out of range! The whole fleet disintegrated before our eyes, and we didn't get the paint of a single ship scratched!

"We can't even claim credit for it. Must have been some unstable component in the metal they used, and our sighting shot just set it off. Man, oh man, too bad you missed all the excitement."

Carson managed to grin. It was a sickly ghost of a grin, for it would be days before he'd be over the mental impact of his experience, but the captain wasn't watching, and didn't notice.

"Yes, sir," he said. Common sense, more than modesty, told him he'd be branded forever as the worst liar in space if he ever said any more than that. "Yes, sir, too bad I missed all the excitement."

THE ROGER BACON FORMULA

by Fletcher Pratt

I MET the old man as the result of three beers and an argument. I never even knew his name. He may be one of the greatest scientists alive; he may even not have been human; and in either of these cases, I would hold through him the key to an almost infinite enrichment of the human spirit. On the other hand, he may merely have been one of those people of whom the law takes a justifiably dim view, and in that case, it wouldn't even do for me to be inquiring after him. I work in a bank, and it would be as much as my job is worth.

So all I have is a rather incredible story. All right, I admit I wouldn't believe it myself if somebody else told it. But just listen, will you? You can check if you want to.

It starts in one of those restaurant-bars in Greenwich Village, where they have booths opposite the bar, a radio that goes all the time, and as little light as possible. The gang used to meet there because it was less depressing than getting together in anyone's furnished room and just about as cheap as long as you stuck to beer. It was a good gang, even if most of them were a bunch of lousy Reds—or thought they were in those days. I noticed that with most of them, the closer they got to fifty bucks a week, the farther they got from the party line. That was the dividing line, fifty per; once they hit it, they were all through as Commies.

At the time I'm telling about, it was different, and I was practically the only one who blew a fuse whenever the name of Karl Marx was mentioned. They used to gang up on me,

with a lot of scientific terms, and they knew most of the arguments I used, so I was always having to think up new ones. On this night I'm talking about, I'd been doing a little reading, so I let them have it with something about Roger Bacon, the medieval friar, you know, who did so much monkeying around both with philosophy and the physical sciences. "Go on, look him up some time," I told them. "You'll find that every real argument of the Marxian dialectic has been anticipated and answered before it was ever written down. Marx was just ignoramus enough not to know that he was digging up dead rats."

That let things loose, especially as none of them really knew any more about Roger Bacon than I did, and for that matter, they hadn't read Marx at first hand, either. We all talked loud enough to keep down the noise of the radio and to try to keep down each other, so that after about the third beer, the bartender came around and told us to pipe down a little. I had had my fun by that time, so I tried to change the subject to something safe, like baseball, and when the rest wouldn't, I got up and went home.

Or started for home. I was just going around the corner when this old man sidled up to me. "Pardon me, sir," he said apologetically.

The Village is full of panhandlers. I glanced at him for long enough to see that he was very short, had white hair and no hat, and a tear in his coat. I said, "Sorry, chum, I haven't got any money."

"I don't want money," he said. "It's about—that is, I heard you mention Roger Bacon."

I looked at him again then. He had a kind of pear-shaped head with a little fluffy crown of hair on the top of it, and a rim of more hair around over the ears, and the longest and thinnest hands I ever saw on a human being. The tendons stood out on the backs of those hands and made it look as though there were no flesh between them at all. I said, "I'm afraid I'm really not much of a Bacon student."

He looked so disappointed that I thought he was going to burst into tears. I tried to comfort him with, "But I do think the Bacon manuscripts are remarkable productions, whether they are forged or not."

"Forged?" he said, his voice going up thinly. "I don't . . . Oh, you mean the Parma manuscripts, the ones Newbold tried to translate when he achieved such curiously correct results by

the wrong method. But those only describe annular eclipses and plant reproduction. They are the least part of the work. If the world had listened to the full doctrine of Roger Bacon, it would be six centuries further along the path of civilization."

"Do you think so?" I said. This sounded like the beginning of one of the arguments of the gang.

"I know it! Can you spare a few moments to come up to my place? I have something that will interest any student of Roger Bacon. There are so few."

If there is one thing the Village has more of than panhandlers, it is nuts, but the night was young and the old bird sounded so wistful that it was hard to turn him down. Besides, even a nut can be interesting. I let him lead me around a couple of corners to Bank Street and up interminable flights of stairs in a rickety building to where he flung open a door on an attic room of surprising size.

Its layout resembled the tower of a medieval alchemist more than anything it could have been designed for. There was a long library table in black wood, stained and scarred, on which stood a genuine alembic, which had been abandoned to distill some pungent liquid over a low flame. All around about the alembic was a furious litter of papers, chemical apparatus and bottled reagents. A cabinet opposite held rolls of something that appeared to be sheepskin; there was a sextant on the cot, and a telescope stood by the window. To complete the picture, a huge armillary sphere occupied the corner of the room between the cot and the telescope.

I realized the old duffer was talking in his piping voice: "—the unity of all the sciences, Roger Bacon's greatest contribution to human knowledge. Your modern specialists are only beginning to realize that every experimenter must understand other sciences before he can begin to deal with his own. What would the zoologist do without a knowledge of some chemistry, the chemist without geology, and the geologist without physics? Science is all one. I will show—"

He was at the cabinet, producing one of the sheepskin rolls. It was covered with the crabbed and illegible writing of the Middle Ages, made more illegible still by the wear and tear of centuries.

"A genuine Roger Bacon. You know there are some years following his stay in Paris that have never been accounted for publicly? Ha! Certainly you do not know that he spent them

at Citeaux, the headquarters of the order to which he belonged. I have been to Citeaux. I found them restoring the place after the damage caused by the war. Fortunate circumstance that you—that we have wars. The vaults had been damaged by shellfire; it was easy to search among them and gather—these!" He waved one of his skeleton-like hands toward the sheepskin rolls. "The greatest of Roger Bacon's works."

"But didn't the French government—?" I asked.

"French government! What does any government that represents only a tiny portion of the world know about something that affects the whole? The French government never heard of the manuscripts. I saw to that." He chuckled.

"What did you find in them?" I asked.

"Everything. What would you say to an absolutely flat statement of the nebular hypothesis? An exposition of nuclear theory?"

"It must be wonderful. Is that all in there?" I was not quite sure what he was talking about, but I knew enough to know I should be startled.

"All that and more. Didn't I tell you that Bacon made discoveries that the rest of the world has not yet grasped? Here, look at this—" He shoved one of the sheepskins into my hand. "Wait, you do not know how to read the script. I have the same thing written out and translated." He fumbled among the papers on the laboratory table and handed me one. His own writing was almost as bad as the medieval script, but I managed to make out something like this:

"De Transpositio mentis: He that would let hys spirit vade within the launds of fay and fell shall drinke of the drogge mandragoreum till he bee sight out of eye, sowne out of ear, speache out of lips and time out of minde. Lapped in lighte shall he then fare toe many a straunge and horrid earthe beyond the bounds of ocean and what he seeth there shall astounde him much; yet shall he return withouten any hurt."

"What do you make of it?" said the old man.

"That he was probably a drug addict," I said, frankly. "Mandragora is fairly well known—was well known even in the Middle Ages, I presume."

"You are as bad as the rest," said the old man. "I had hoped that a Bacon scholar—look, you're missing all the essentials. You people here never believe in anything but yourselves. Now, look again. He doesn't say 'mandragora' but 'mandrago-

reum' and it's not a copyist's error, because it's written in Bacon's own hand. Note also that he titles it 'the transposition of the mind.' He never imagined, as drug addicts do, that his body was performing strange things. What Roger Bacon is telling us there is that there is a drug which will bring about the dissociation of the mind from the body which seems to occur under hypnotism, but 'withouten any hurt.' Also he says 'lapped in lighte,' which is more than a hint of employing the force and speed of light. Modern science has not attained anything like that yet. I told you Bacon was ahead not only of his time, but of ours. Moreover—" here he gave me a quick glance "—in another place, I found the formula for compounding his drug mandragoreum, and I can assure you that it is nothing like mandragora. I have even used it myself; it produces a certain ionization among the cells of the inner brain by action on the pineal—but you probably don't understand; you are willing to remain earthbound."

I looked at him, trying to figure out what he was driving at. Was he suggesting that I try out this mandragoreum of his? And why me? Surely, if there were anything in it—

"You doubt me? I grant it sounds incredible. Your scientists, as they call themselves, would laugh. But here, try it for yourself. It is the authentic mandragoreum of Bacon." He seized the flask into which the alembic had discharged is contents and thrust it into my hand.

I hesitated, sniffing. The odor was rather pleasant than otherwise, spicy as though it were some form of liqueur. When I touched a drop of it to my tongue, the flavor confirmed this diagnosis. So genial a beverage could hardly be dangerous. And after all, he believed me a fellow student of Roger Bacon. I seated myself in the one chair the room afforded, and sipped.

At once the room and surroundings were blotted out in an immense burst of light, so brilliant that I closed my eyes to shield them from it. When I opened them again, the light was still there all about me, but it seemed to be gathering into me from an outside source, as though my own body were draining it away to leave everything else dark. At the same time there was a wonderful sensation of lightness and freedom.

As my eyes became accustomed to the surrounding dimness, I perceived to my astonishment that I was no longer in the room. There was no trace of a room; I was out under the winter sky, floating along over the lights of New York like a cloud.

Beneath and behind me a long trail of phosphorescence like a comet's tail led back to the roof of one of the buildings, I supposed that from which I had come. It was not a hallucination; I have been over New York in a plane, and everything was in the right position and right proportions. I was actually seeing New York from the air; but that phosphorescent trail held me like a tether, I could not get free from it, nor go farther. I felt someone touching my hand, and as the light around me seemed to burn down, there was another flash, and I was back in the room.

The old man with the long hands was smiling into my face. "An experience, is it not?" he said. "You did not drink enough to gain the full effect. Would you care to try again? Mandragoreum is not easy to make, but I have enough for you."

This time I tilted my head back and took a long pull from the flask.

Again the unbearable flash of light, a sense of swift motion. When I opened my eyes, New York City was far beneath, receding into the distance as I seemed to gather speed. The long cord of light that had bound me to the room trailed off behind me; but either its farther end became so small as to be invisible or I had taken enough of the drug altogether to break the connection. In the single glance backward that my speed allowed, I could not even tell toward what part of the city it led.

Clear and bright as I rose, Venus hung like a lamp against the vault of the sky. If I could direct my course, I decided it would be thither, to the most mysterious of the planets. Old Friar Bacon had promised that his drug would "let hys spirit vade . . . toe many a straunge and horrid earthe beyond the bounds of ocean," and surely Venus met such a definition better than any other place.

I looked back. The earth seemed to be beneath me, fading to a black ball, on which land and sea were just barely visible in the darkness. My speed was still mounting. Suddenly I reached the limit of the earth's shadow; the sun flashed blazingly from behind it, and I beheld the skies as no one on earth has ever seen them—except perhaps Roger Bacon. The nearer planets stood out like so many phases of the moon against the intense blackness of space. The moon itself was a tiny crescent, just visible at the outer edge of the sun, on whose huge disk

the earth had sunk to a black spot; yet I found that I could bear to look directly into that glare.

When I turned to look ahead again, however, it was as though my sense of direction had shifted. Venus, growing from the size of a moon to that of a great shield of silver, was no longer overhead, but beneath me, and I was diving downward to a whirling, tossing mass of clouds that reflected the sunlight with dazzling brilliance. Now it was a sea of clouds that seemed to take the shape of a bowl; I reached them, cleft the radiant depths, and at once was in a soundless and almost lightless mass of mist, with no knowledge of my direction except that I seemed to be following the straight course that had brought me here.

The cloud-banks lifted behind me, and I experienced a sense of deep disappointment, for below I saw nothing but an endless ocean, heaving slowly under the heavy groundswell and dotted with drops of rain from the clouds I had just left. The planet of mystery was all one vast ocean, then, inhabited by fishes if by anything, and we men of earth were the only intelligent form of life in the solar system, after all.

I found that I could direct my flight by moving my shoulders and arms, but as I soared across the Venerian ocean, my progress was much slower than it had ever been before. I can only explain this now by the fact that much of the sun's light was cut off by the omnipresent clouds. Roger Bacon's drug undoubtedly makes use of some property of light, that form of energy which is so little understood. I do not know what it can be and my scientific friends laugh at the idea.

But that is wandering from my story. At the time, the slowness of this exploratory voyage gave me no special concern, except that it was becoming monotonous until I perceived in the distance a place where the clouds seemed to touch the surface of the sea. I moved toward it; it soon became clear that this was not the clouds coming down but a thin mist rising up like steam from the surface of a patch of land. But what a land!

It was a water-logged swamp, out of which coiled a monstrous vegetation of a sickly yellow hue, quite without any touch of the green of earthly growths. Here were gigantic mushrooms, that must have been twenty or thirty feet tall; long, slender reedlike stems that burst out at the top into spreading tangles of branches; huge fungus growths of bulbous

shape, and a vinelike form that twisted and climbed around and over the reed-trees and giant fungi.

There was no clear line where shore and sea met. The swamp began with a tangle of branches reaching out of the ocean and the growths simply became larger and more dense as one progressed. But at last the ground seemed to be rising; I could catch glimpses of something that was not water among the trunks and vines.

It had occurred to me that where there was such abundant vegetable life, there might be something animal, but up to this point I had seen no sign of anything that might move by its own will under the ceaselessly falling rain and rising mist. But at last I caught sight of a growth resembling the round balls of the fungoids, but too large and too regular to be a fungus. I swung my shoulders toward it; it was a huge ball that seemed made of some material harder and more permanent than the vegetation amid which it rose. I circled the ball; at one side, low down, there was the only opening, a door of some sort. It stood open.

I slid in. The room in which I found myself was very dim and my progress was slow. The light was a kind of phosphorescence like that on the sea at night, issuing from some invisible source. I looked round; I was in a vast hall, whose ceiling vaulted upward until it reached a vertical wall at the other end. From the looks of the outside I had not realized that it was so large. There was no other architectural feature in the place save a hole in the center of the floor, set round with a curbing of some sort.

Slanting toward this with some difficulty of movement, I saw that the hole was a wide well, with the sheen of water visible below. Down into this well went a circular staircase, the stairs of which were broad and fitted with low risers.

From behind the vertical wall at the far end, I was conscious of, rather than heard, a confused shouting, and as I drew near to it I saw that it was pierced by several doors, like the one I had entered by, very thick and heavy. These doors bore horizontal rods which I took to be the Venerian equivalent of doorknobs, and over the terminations of the rods were a series of slits which I took to be approximations of keyholes. I do not know of any sight that would have pleased me more at the moment. Something of the order of cave-men could conceivably have set up such a building; savages might have dug

the well and lined it with stairs; but only a fairly intelligent and fairly well-civilized form of life would have doors that locked. We were not alone in the solar system after all.

One of the doors toward the end was open; I drifted through. I don't know what I expected to find inside, but what I did find was beyond any expectation. It was another hall, larger if anything than the first, but not as high, since it was roofed over about halfway up. At each corner a circular staircase, with the same wide, low steps as the well ran up to pierce this ceiling.

The room was filled with an endless range of tables, wide and low, like those in a kindergarten. They were composed of a shimmering metal which may very well have been silver, though it may also have been some alloy of which I am ignorant. At these tables, in high-backed chair-like seats of the same metal sat rows of—the people of Venus. They were busy eating and talking together, like a terrestrial crowd in a busy cafeteria, and their babble was the noise I had sensed.

The Venerians bore a cartoonist's resemblance to seals. They had the same short, barrel-like body, surmounted by the same long, narrow head, but the muzzle had grown back to a face and the forehead was high enough to contain a brain of at least the size of our own. The nostrils were wide and very high, so that the eyes were almost behind them. There were no outer ears, but a pair of holes, low down and toward the back, I took to be orifices for hearing.

The legs of the Venerians are pillar-like muscular appendages, short and terminating in flat, spiny feet, webbed between the four toes. I may mention here that while swimming they trail these feet behind them, using them both for propulsion and changes of direction.

The greatest shock was to see their arms—or rather, the appendages that served them for arms, since they really had no arms at all. Instead there were tentacles in groups; two groups beginning at the place where the short, thick neck joined the trunk, on the sides, and a third, smaller set springing from the center of the back, high up. These tentacles reached nearly to the floor when a full-grown Venerian was standing at his height of nearly four feet. Each of the three groups contained four tentacles; all the tentacles were prehensile and capable of independent action, giving the Venerian not only an excellent grip on anything, but also the power of

picking up as many as twelve objects at a time. I am inclined to think that the tentacles at the back were less functional than the rest; only once did I see a Venerian use one of them.

The Venerians in the hall were entirely innocent of clothing, and all were covered with rough, coarse hair, except for their faces, and of course, the tentacles. Most of them were wearing a type of bandolier, or belt, supported by a strap around the neck, and in turn carrying a series of pocket-like pouches, held shut by clasps. When a Venerian wished to open one, he thrust two of his tentacles into slits in the clasps; I do not know how they operated.

Some of them carried weapons in their belts; short spears or knife-blades, with the handles set T-shape for better grasping in Venerian tentacles. There were also what I later found to be explosive weapons, with a tube springing out from the T-shaped handle. Every tool and weapon was of metal; clearly there could be little wood in this world where the clouds were never broken.

The Venerians were eating with little metal spades, sharpened at the outer end for cutting. Their food came up to them from beneath, through the tables, when they pulled handles set in front of them. The food itself seemed to be the same throughout the hall, some kind of stew, with solids floating in sauces.

I had come in to find the meal nearly over, with Venerians all over the room rising to leave the table and move down the hall with quick, shambling steps. I followed a pair of the weapon-bearers who were talking animatedly together. They went straight to the door into the other hall, crossed it to the well, which they descended till they were about waist-deep, then turned suddenly and dived. I hesitated, then followed; in my envelope of light there was no sense of wetness, and below I found the well turning into a long underwater passage, lit by the same dim radiance that illuminated the hall.

The dimness made it difficult for me to keep up with the Venerians, who were evidently water-livers as we are creatures of the land, for they were amazing swimmers. Abruptly the passage widened, and the light became enough stronger for me to catch up with the pair ahead.

They directed their course upward through the water, came to the surface (where I saw we were well beyond the swamp belt) and took fresh gulps of air through their elevated nos-

trils. Then, diving beneath the surface again, they coasted along slowly. I caught a flash of something silvery ahead in the water. So did the Venerians. One of them snatched the tube-weapon from his belt, the other jerked out his spear; both swam faster.

Their quarry was a huge fish, its head and body covered with scaly plates. A long tail projected backward from this coat of mail and two big paddles hung near the beast's head. I'm no biologist, but I just happen to have taken my girl to the museum one afternoon, and we saw something just like it. I remember kidding about the tag, which described it as an "ostracoderm."

It had seen the Venerians, and evidently had a well-developed respect for them, for it fled down the watery path like an arrow—but not fast enough.

The Venerian with the spear gained more rapidly than his companion, heading the fish off with its barbed point, and herding it around. The other lifted his tubed weapon; there were two muffled thuds, like the blows of a padded hammer, and the seven-foot fish wavered, then stopped, its paddles moving convulsively. The Venerian with the spear ranged alongside dodged the reflex swing of the long tail, and thrust his weapon in where the bony plate of the head met the cuirass of the body. The big fish heaved once more, then slowly began to sink, but the two Venerians, each wrapping his tentacles round the fish's tail, began to tow him back toward the hall of the well.

Neither of them rose to the surface during all this period. They were marvellously adapted to staying under water.

They were evidently regular, professional hunters by the manner in which they went about their business. It occurred to me that a race which could divide labor in this fashion, which could produce the explosive weapons, and organize life with the ingenuity shown in the common dining-hall, with its ingenious arrangements for service of food, must possess other and interesting establishments of some kind in the swampy land that represented continents on this planet.

Filled with a desire to see them, I took to the air once more and hurried back to the building. The door was still open, and the hall held an assortment of Venerians, some merely standing and talking, some diving into the well to swim off somewhere, and some passing through the portal out into the jungle of

fungi. I had seen the sea-hunters; now I followed a party of those who remained on the surface.

They blinked as the brighter light of the out-of-doors struck their eyes, and I wondered what they would do in the dazzling illumination of an earthly day. After a moment or two to accustom their eyes to the light, they struck out up the gentle slope behind the ball-shaped building. The vegetation was a perfect tangle, and I wondered how the Venerians would manage if they left the path they were following until I saw one of them blunder against the trunk of one of the yellow trees. It was all of twenty-five feet high, but his impact sent it crashing to the ground as though it were made of tissue-paper.

The slope became steeper as the Venerians pushed on, kicking the big, soft stems out of their way when they had fallen to block the path. At last the track encountered a buttress of outcropping stone, the first I had seen on the planet. The Venerians paused. Two of them produced tube-weapons from their belts and, walking with some care, took the lead in the group, which had suddenly grown silent.

What were they afraid of? Some grisly amphibian monster of the swamps, I fancy. At all events, one of them suddenly lifted his weapon and fired it in among the crowding growths. I caught a glimpse of a pair of huge eyes, heard the thud of the fall of a big mushroom and that was all. The Venerians with the weapons crouched and peered; there were a few words, and then they pushed on again. On that steaming planet, the ordinary individual must live far closer to the terrors of the beast-world than he does on earth.

The Venerians followed their path down a little dip till it ended at another bulbous building like the hall of the food and the well. Its door was open; within it had the same cold and feeble illumination as the other. All about the outer room of this place were shelves filled with tools, and a Venerian in attendance. At the back another of the thick doors gave on a room in which I glimpsed pulsating machinery. They were that high up the scale.

The party I had followed received tools from the attendant in the outer hall, and came out again, following another path to the hillside behind. There, where a cliff towered out of the swamp, they entered a hole that had been dug in the stony face of the hill, and drawing from the pouches at their belts some

balls that emitted the same light I had seen indoors, they plunged in.

I followed them. It was injudicious, no doubt, but I only found that out later. At the time, I had only noticed that my movements were sometimes faster, sometimes slower, and I had not worked out the rationale of what turned out to be a very dangerous business. It also turned out to be an interesting business, though one that had no particular meaning for me, and has not had since.

It was a mine. The Venerians worked it by means of a shafted tool, which is attached by a metal cord to a box about two feet square, the box standing on the floor behind the miner and evidently furnishing the power for the operation. At the working end of the shafted head is a circle of metal teeth, and beneath the teeth a basket of woven metal. The Venerian presses the tool against the rock he is mining. The teeth spring into motion with the pressure, the rock is pulverized and falls into the basket as a powder. When the basket is filled, the miner takes it to the power box, empties it in and pulls a small rod. Immediately, the box emits a strong red glow, and in a minute or two a bar of shining metal is discharged at the back, and a little ball of waste material falls beside it.

When a pile of the metal bars has accumulated, the miner picks them up and carries them back to the tool-hall, where he turns them in, receiving in exchange a metal token which he deposits in one of his pouches.

I watched the Venerian miners carefully and for a long while, hoping to learn the secret of their power box. Eventually, I thought something would go wrong with one of them, or it would need a re-charge, and the miner would open it. If I could get an inkling of that, and tell it to some of my engineering friends, it would not only be a proof of my strange experience, but it might also be worth—well, a great deal.

So much interested in the project did I become, that I failed to notice the passage of time, and during one of the miner's visits to the hall of the machines, as I waited for him to return, I suddenly realized that it had grown dark. The miner, too, seemed to be gone for an extraordinarily long time. If he had finished his assigned task for the day, there was no sense remaining where I was. I started to leave—and found I could not move an inch.

It was at this point I realized the implications of the fact

that Roger Bacon's drug enabled the use of the power of light. There was no light; and there I was, bound by motionlessness, as though in a nightmare; marooned on a planet millions of miles from home, from my own body even, and with no means of returning. I could hear the crash of some beast through the vegetation and the patter of the eternal Venerian rain. That was all; I was alone.

At such moments, in spite of the statements of some writers, one does not rave and storm, or review the mistakes of a past life. I thought of my body back in the room on Bank Street, Earth, and what the old man would do as it sat there in the chair, lifelessly. Would he dare to call the police or a doctor? Would he try to dispose of part of "me"? Was there any antidote to the drug mandragoreum that he could apply? Suppose I finally obtained some kind of release, with the coming of the Venerian dawn, and came rushing home to find my body beneath the waters of the Hudson or on a dissecting table in the New York morgue?

Or perhaps I would remain as a disembodied brain there on Venus throughout eternity? The creatures of this planet had taken no notice of me, and I had made no attempt to communicate with them. Could I if I wished? It was a pretty academic problem. I remembered Jack London's remark that the blackest thing in nature was a hole in a box. That was what I was in—a hole in a box.

From that point, I turned to wondering how long it would be before dawn on Venus. For all I knew it might not come for fifty or sixty hours—quite enough time for anything on earth to happen to my body. It would begin to need nourishment, even if nothing more drastic happened to it. There it sat, in what resembled a hypnotic trance. How long could people stay alive in such a state? I tried to remember and could not recall ever having heard anywhere. Every time I tried to review my knowledge on the subject it turned out to be too sketchy to be helpful.

I was aroused from this reverie by a grunting sound like that made by a wallowing pig, and looking toward the mouth of the cave, saw a pair of phosphorescent eyes gleaming at the entrance. Apparently the animal, who had no outline in that absolute black, was disturbed by the smell of the place, for the grunts changed into a grinding bellow and it backed out.

Perhaps I could communicate with the Venerians after all—provided my mind did not die with my distant body.

Followed another series of grunts, and the sound of heavy footsteps, followed by angry snarls. Then came the sound of heavy bodies hurled about. Two of the Venerian beasts were fighting outside my prison. Of all the events of that journey, this one stands out most clearly; the quarrel of those two Venerian monsters, whose shape I did not even know, snarling and biting each other under the rain, while I hung in the cave without the power of motion.

The battle trailed off to one side and ended in grunting moans, which in turn faded into a sound suggestive of eating. One of the invisible beasts had evidently been victorious and was celebrating—noisily. Finally this sound also ceased, and there was only the steady beat of the rain.

It seemed to grow heavier, and I began to wonder how that mattered on a planet where it was always raining. Far in the distance, I heard the roll of thunder; and I noted without really thinking about it that they had thunderstorms on Venus as well as on earth.

The rain fell harder; again came the peal of thunder, and as it rolled I could see lightning flickering, far in the distance. A new, wild hope rose in me. Lightning was light; if one of those flashes came near enough—

For a time it seemed that it would not. The lightning flashed away among the distant clouds, the thunder continued to boom, but the storm seemed about to pass off to one side and away from me. I was just giving up hope when there were simultaneously a terrific crash and a dazzling burst of lightning across the door of the cave.

With a twist of the shoulders, I was out and riding. It was as dark as before out there, but I was now in the open, where I could travel on any flash of lightning that came, and I did, in a long series of jerking leaps. Another flash—I was among the clouds. Another—I was more than halfway through them. I believed I could see the stars of space beyond. Another flash below me, and I was at last out of the atmosphere of that grim and slimy planet and riding the ether in the light of the stars.

When I reached the earth and the room on Bank Street, dawn was just coming up behind the skyscrapers. I felt cold and numb all over; the old man was standing in the center of the room, looking at me anxiously.

"Thank God!" he said, as I opened my eyes and moved a palsied hand. "I had begun to fear that you could not make the return trip, and I would have to look for you—although that is very difficult for a person of my constitution."

"I need some coffee," was all I said; and as I looked at him, I noticed how very much he resembled the Venerians I had seen.

"Was it an interesting journey?" he asked.

"Wonderful; but I need some coffee," I repeated. "I'll tell you about it later."

I staggered out and down the stairs. And that's just the trouble about my story. There wasn't any later.

For after I fumbled through a day's work at the bank, I got to thinking about things, and I wasn't quite sure whether I wanted to go back there again alone; that is, until I had talked to someone else about it. When I did summon up nerve enough to go back, a couple of evenings later, I found there wasn't any name beside the top button in the row in the hall, and nobody answered the bell when I rang. So I pushed the button marked "Super" and a fat women with scraggly hair came out.

As I remarked before, I didn't even know the old man's name. "Who lives on the top floor?" I asked.

"Nobody," she said. "Not now, anyway." She gave me a suspicious look. "If you're another one of them G-men, I want to see your badge."

So there it is. I went away. I'm not a G-man, I don't want them looking for me when I have to work in a bank. It could be that the old man gave me some kind of dope, and that he was mixed up in the racket somehow. I don't know. But if he was, why did he have all those old rolls of sheepskin up there? They were genuine, all right. And any scientific people I've talked to since say that my description of Venus is just about what it would look like. Me, I just don't know.

FOREVER AND THE EARTH

by Ray Bradbury

AFTER seventy years of writing short stories that never sold, Mr. Henry William Field arose one night at 11:30 and burned ten million words. He carried the manuscripts downstairs through his dark old mansion and threw them into the furnace.

"That's that," he said, and thinking about his lost art and his misspent life, he put himself to bed, among his rich antiques. "My mistake was in ever trying to picture this wild world of 2257 A.D. The rockets, the atom wonders, the travels to planets and double suns. Nobody can do it. Everyone's tried. All of our modern authors have failed."

Space was too big for them, and rockets too swift, and atomic science too instantaneous, he thought. But at least the other writers while failing, had been published, while he, in his idle wealth, had used the years of his life for nothing.

After an hour of feeling this way, he fumbled through the night rooms to his library and switched on a green hurricane lamp. At random, from a collection untouched in fifty years, he selected a book. It was a book three centuries yellow and three centuries brittle, but he settled into it and read hungrily until dawn. . . .

At nine o'clock, Henry William Field rushed from his library, called his servants, televised lawyers, friends, scientists, litterateurs.

"Come at once!" he cried.

Within the hour, a dozen people hurried into the study where Henry William Field sat, very disreputable and hysterical with an odd, feeding joy, unshaven and feverish. He

clutched a thick book in his brittle arms and laughed if anyone even said good morning.

"Here you see a book," he said at last, holding it out, "written by a giant, a man born in Asheville, North Carolina, in the year 1900. Long gone to dust, he published four huge novels. He was a whirlwind. He lifted up mountains and collected winds. He left a trunk of pencilled manuscripts behind when he lay in bed at Johns Hopkins Hospital in Baltimore in the year 1938, on September 15th, and died of pneumonia. an ancient and awful disease."

They looked at the book.

Look Homeward, Angel.

He drew forth three more. *Of Time and the River. The Web and the Rock. You Can't Go Home Again.*

"By Thomas Wolfe," said the old man. "Three centuries cold in the North Carolina earth."

"You mean you've called us simply to see four books by a dead man?" his friends protested.

"More than that! I've called you because I feel Tom Wolfe's the man, the necessary man, to write of space, of time, huge things like nebulae and galactic war, meteors and planets; all the dark things he loved and put on paper were like this. He was born out of his time. He needed really big things to play with and never found them on Earth. He should have been born this afternoon instead of one hundred thousand mornings ago."

"I'm afraid you're a bit late," said Professor Bolton.

"I don't intend to be late!" snapped the old man. "I will *not* be frustrated by reality. You, professor, have experimented with time-travel. I expect you to finish your time machine this month. Here's a check, a blank check, fill it in. If you need more money, ask for it. You've done *some* traveling already, haven't you?"

"A few years, yes, but nothing like centuries—"

"We'll *make* it centuries! You others—" he swept them with a fierce and shining glance "—will work with Bolton. I *must* have Thomas Wolfe."

"What!" They fell back before him.

"Yes," he said. "That's the plan. Wolfe is to be brought to me. We will collaborate in the task of describing the flight from Earth to Mars, as only he could describe it!"

They left him in his library with his books, turning the dry

pages, nodding to himself. "Yes. Oh, dear Lord, yes, Tom's the boy, Tom is the *very* boy for this."

The month passed slowly. Days showed a maddening reluctance to leave the calendar, and weeks lingered on until Mr. Henry William Field began to scream silently.

At the end of the month, Mr. Field awoke one midnight. The phone was ringing. He put his hand out in the darkness.

"Yes?"

"This is Professor Bolton calling."

"Yes, Bolton?"

"I'll be leaving in an hour," said the voice.

"Leaving? Leaving where? Are you quitting? You can't do that!"

"Please, Mr. Field, leaving means *leaving*."

"You mean, you're actually going?"

"Within an hour."

"To 1938? To September 15th?"

"Yes!"

"You're sure you've the date written down? You'll arrive before he dies? Be sure of it! Good Lord, you'd better get there a good hour before his death, don't you think?"

"A good hour."

"I'm so excited I can't hold the phone. Good luck, Bolton. Bring him through safely!"

"Thank you, sir. Goodbye."

The phone clicked.

Mr. Henry William Field lay through the ticking night. He thought of Tom Wolfe as a lost brother to be lifted intact from under a cold, chiseled stone, to be restored to blood and fire and speaking. He trembled each time he thought of Bolton whirling on the time wind back to other calendars and other faces.

Tom, he thought, faintly, in the half-awake warmth of an old man calling after his favorite and long-gone child, Tom, where are you tonight, Tom? Come along now, we'll help you through, you've got to come, there's need of you. I couldn't do it, Tom, none of us here can. So the next best thing to doing it myself, Tom, is helping you to do it. You can play with rockets like jackstraws, Tom, and you can have the stars, like a handful of crystals. Anything your heart asks, it's here. You'd like the fire and the travel, Tom, it was made for you.

Oh, we've a pale lot of writers today, I've read them all, Tom, and they're not like you. I've waded in libraries of their stuff and they've never touched space, Tom; we need *you* for that! Give an old man his wish then, for God knows I've waited all my life for myself or some other to write the really great book about the stars, and I've waited in vain. So, whatever you are tonight, Tom Wolfe, make yourself tall. It's that book you were going to write. It's that good book the critics said was in you when you stopped breathing. Here's your chance, will you do it, Tom? Will you listen and come through to us, will you do that tonight, and be here in the morning when I wake? Will you, Tom?

His eyelids closed down over the fever and the demand. His tongue stopped quivering in his sleeping mouth.

The clock struck four.

Awakening to the white coolness of morning, he felt the excitement rising and welling in himself. He did not wish to blink, for fear that the thing which awaited him somewhere in the house might run off and slam a door, gone forever. His hands reached up to clutch his thin chest.

Far away . . . footsteps . . .

A series of doors opened and shut. Two men entered the bedroom.

Field could hear them breathe. Their footsteps took on identities. The first steps were those of a spider, small and precise: Bolton. The second steps were those of a big man, a large man, a heavy man.

"Tom?" cried the old man. He did not open his eyes.

"Yes," said the voice, at last.

Tom Wolfe burst the seams of Field's imagination, as a huge child bursts the lining of a too-small coat.

"Tom Wolfe, let me look at you!" If Field said it once he said it a dozen times as he fumbled from bed, shaking violently. "Put up the blinds, for God's sake, I want to see this! Tom Wolfe, is that *you?*"

Tom Wolfe looked down from his tall thick body, with big hands out to balance himself in a world that was strange. He looked at the old man and the room and his mouth was trembling.

"You're just as they said you were, Tom!"

Thomas Wolfe began to laugh and the laughing was huge, for he must have thought himself insane or in a nightmare,

and he came to the old man and touched him and he looked at Professor Bolton and felt of himself, his arms and legs, he coughed experimentally and touched his own brow. "My fever's gone," he said. "I'm not sick any more."

"Of course not, Tom."

"What a night," said Tom Wolfe. "It hasn't been easy. I thought I was sicker than any man ever was. I felt myself floating and I thought, this is fever. I felt myself traveling, and thought, I'm dying fast. A man came to me. I thought, this is the Lord's message. He took my hands. I smelled electricity. I flew up and over, and I saw a brass city. I thought, I've arrived. This is the city of heaven, there is the Gate! I'm numb from head to toe, like someone left in the snow to freeze. I've got to laugh and do things or I might think myself insane. You're not God, are you? You don't look like him."

The old man laughed. "No, no, Tom, not God, but playing at it. I'm Field." He laughed again. "Lord, listen to me. I said it as if you should know who Field is. Field, the financier, Tom, bow low, kiss my ring-finger. I'm Henry Field, I like your work. I brought you here. Come here."

The old man drew him to an immense crystal window.

"Do you see those lights in the sky, Tom?"

"Yes, sir."

"Those fireworks?"

"Yes."

"They're not what you think, son. It's not July Fourth, Tom. Not in the usual way. Every day's Independence Day now. Man has declared his Freedom from Earth. Gravitation without representation has been overthrown. The Revolt has long since been successful. That green Roman Candle's going to Mars. That red fire, that's the Venus rocket. And the others, you see the yellow and the blue? Rockets, all of them!"

Thomas Wolfe gazed up like an immense child caught amid the colorized glories of a July evening when the set-pieces are awhirl with phosphorous and glitter and barking explosion.

"What year is this?"

"The year of the rocket. Look here." And the old man touched some flowers that bloomed at his touch. The blossoms were like blue and white fire. They burned and sparkled their cold, long petals. The blooms were two feet wide, and they were the color of an autumn moon. "Moon-flowers," said the old man. "From the other side of the moon." He brushed

them and they dripped away into a silver rain, a shower of white sparks, on the air. "The year of the rocket. That's a title for you, Tom. That's why we brought you here, we've need of you. You're the only man could handle the sun without being burnt to a ridiculous cinder. We want you to juggle the sun, Tom, and the stars, and whatever else you see on your trip to Mars."

"Mars?" Thomas Wolfe turned to seize the old man's arm, bending down to him, searching his face in unbelief.

"Tonight. You leave at six o'clock."

The old man held a fluttering pink ticket on the air, waiting for Tom to think to take it.

It was five in the afternoon. "Of course, of course I appreciate what you've done," cried Thomas Wolfe.

"Sit down, Tom. Stop walking around."

"Let me finish, Mr. Field, let me get through with this, I've got to say it."

"We've been arguing for hours," pleaded Mr. Field, exhaustedly.

They had talked from breakfast until lunch until tea, they had wandered through a dozen rooms and ten dozen arguments, they had perspired and grown cold and perspired again.

"It all comes down to this," said Thomas Wolfe, at last. "I can't stay here, Mr. Field. I've got to go back. This isn't my time. You've no right to interfere—"

"But, I—"

"I was amidst my work, my best was yet to come, and now you hurry me off three centuries. Mr. Field, I want you to call Mr. Bolton back. I want you to have him put me in his machine, whatever it is, and return me to 1938, my rightful place and year. That's all I ask of you."

"But, don't you *want* to see Mars?"

"With all my heart. But I know it isn't for me. It would throw my writing off. I'd have a huge handful of experience that I couldn't fit into my other writing when I went home."

"You don't understand, Tom, you don't understand at all."

"I understand that you're selfish."

"Selfish? Yes," said the old man. "For myself, and for others, very selfish."

"I want to go home."

"Listen to me, Tom."

"Call Mr. Bolton."

"Tom, I don't want to have to tell you this. I thought I wouldn't have to, that it wouldn't be necessary. Now, you leave me only this alternative." The old man's right hand fetched hold of a curtained wall, swept back the drapes revealing a large white screen, and dialed a number, a series of numbers, the screen flickered into vivid color, the lights of the room darkened, darkened, and a graveyard took line before their eyes.

"What are you doing?" demanded Wolfe, striding forward, staring at the screen.

"I don't like this at all," said the old man. "Look there."

The graveyard lay in mid-afternoon light, the light of summer. From the screen drifted the smell of summer earth, granite, and the odor of a nearby creek. From the trees, a bird called. Red and yellow flowers nodded among the stones, and the screen moved, the sky rotated, the old man twisted a dial for emphasis, and in the center of the screen, growing large, coming closer, yet larger, and now filling their senses was a dark granite mass and Thomas Wolfe, looking up in the dim room, ran his eyes over the chiseled words, once, twice, three times, gasped, and read again, for there was his name:

THOMAS WOLFE.

And the date of his birth and the date of his death, and the flowers and green ferns smelling sweetly on the air of the cold room.

"Turn it off," he said.

"I'm sorry, Tom."

"Turn it off, turn it off! I don't believe it."

"It's there."

The screen went black and now the entire room was a midnight vault, a tomb, with the last faint odor of flowers.

"I didn't wake up again," said Thomas Wolfe.

"No. You died that September of 1938."

"I never finished my book."

"It was edited for you, by others who went over it, carefully."

"I didn't finish my work, I didn't finish my work."

"Don't take it so badly, Tom."

"How else can I take it?"

The old man didn't turn on the lights. He didn't want to see Tom there. "Sit down, boy." No reply. "Tom?" No an-

swer. "Sit down, son; will you have something to drink?" For answer there was only a sigh and a kind of brutal moaning. "Good Lord," said Tom, "it's not fair. I had so much left to do, it's not fair." He began to weep quietly.

"Don't do that," said the old man. "Listen. Listen to me. You're still alive, aren't you? Here? Now? You still *feel*, don't *you?*"

Thomas Wolfe waited for a minute and then he said, "Yes."

"All right, then." The old man pressed forward on the dark air. "I've brought you here, I've given you another chance, Tom. An extra month or so. Do you think *I* haven't grieved for you? When I read your books and saw your gravestone there, three centuries worn by rains and wind, boy, don't you imagine how it killed me to think of your talent gone away? Well, it did! It killed me, Tom. And I spent my money to find a way to you. You've got a respite, not long, not long at all. Professor Bolton says that, with luck, he can hold the channels open through time for eight weeks. He can keep you here that long, and only that long. In that interval, Tom, you must write the book you've wanted to write—no, not the book you were working on for them, son, no, for they're dead and gone and it can't be changed. No, this time it's a book for us, Tom, for us the living, that's the book we want. A book you can leave with us, for you, a book bigger and better in every way than anything you ever wrote; say you'll *do* it, Tom, say you'll forget about that stone and that hospital for eight weeks and start to work for us, will you, Tom, will you?"

The lights came slowly on. Tom Wolfe stood tall at the window, looking out, his face huge and tired and pale. He watched the rockets on the sky of early evening. "I imagine I don't realize what you've done for me," he said. "You've given me a little more time, and time is the thing I love most and need, the thing I always hated and fought against, and the only way I can show my appreciation is by doing as you say." He hesitated. "And when I'm finished, then what?"

"Back to your hospital in 1938, Tom."

"Must I?"

"We can't change time. We borrowed you for five minutes. We'll return you to your hospital cot five minutes after you left it. That way, we upset nothing. It's all been written. You can't hurt us in the future by living here now with us, but, if

you refused to go back, you could hurt the past, and resultantly, the future, make it into some sort of chaos."

"Eight weeks," said Thomas Wolfe.

"Eight weeks."

"And the Mars rocket leaves in an hour?"

"Yes."

"I'll need pencils and paper."

"Here they are."

"I'd better go get ready. Goodbye, Mr. Field."

"Good luck, Tom."

Six o'clock. The sun setting. The sky turning to wine. The big house quiet. The old man shivering in the heat until Professor Bolton entered. "Bolton, how is he getting on, how was he at the port; tell me?"

Bolton smiled. "What a monster he is, so big, they had to make a special uniform for him! You should've seen him, walking around, lifting up everything, sniffing like a great hound, talking, his eyes looking at everything, excited as a ten-year-old!"

"God bless him, oh, God bless him! Bolton, can you keep him here as long as you say?"

Bolton frowned. "He doesn't belong here, you know. If our power should falter, he'd be snapped back to his own time, like a puppet on a rubber band. We'll try and keep him, I assure you."

"You've got to, you understand, you can't let him go back until he's finished with his book. You've—"

"Look," said Bolton. He pointed to the sky. On it was a silver rocket.

"Is that him?" asked the old man.

"That's Tom Wolfe," replied Bolton. "Going to Mars."

"Give 'em blazes, Tom!" shouted the old man, lifting both fists.

They watched the rocket fire into space.

By midnight, the story was coming through.

Henry William Field sat in his library. On his desk was a machine that hummed. It repeated words that were being written out beyond the Moon. It scrawled them in black pencil, in facsimile of Tom Wolfe's fevered hand a million miles away. The old man waited for a pile of them to collect and then he seized them and read them aloud to the room where Bolton and the servants stood listening. He read the

words about space and time and travel, about a large man and a large journey and how it was in the long midnight and coldness of space, and how a man could be hungry enough to take all of it and ask for more. He read the words that were full of fire and thunder and mystery.

Space was like October, wrote Thomas Wolfe. He said things about its darkness and its loneliness and man so small in it. The eternal and timeless October, was one of the things he said. And then he told of the rocket itself, the smell and the feel of the metal of the rocket, and the sense of destiny and wild exultancy to at last leave Earth behind, all problems and all sadnesses, and go seeking a bigger problem and a bigger sadness. Oh, it was fine writing, and it said what had to be said about space and man and his small rockets out there alone.

The old man read until he was hoarse, and then Bolton read, and then the others, far into the night, when the machine stopped transcribing words and they knew that Tom Wolfe was in bed, then, on the rocket, flying to Mars, probably not asleep, no, he wouldn't sleep for hours yet, no, lying awake, like a body the night before a circus, not believing the big jewelled black tent is up and the circus is on, with ten billion blazing performers on the high wires and the invisible trapezes of space.

"There," breathed the old man, gentling aside the last pages of the first chapter. "What do you think of that, Bolton?"

"It's good."

"Good, hell!" shouted Field. "It's wonderful! Read it again, sit down, read it again, damn you!"

It kept coming through, one day following another, for ten hours at a time. The stack of yellow papers on the floor, scribbled on, grew immense in a week, unbelievable in two weeks, absolutely impossible in a month.

"Listen to this!" cried the old man, and read.

"And this!" he said.

"And this chapter here, and this little novel here, it just came through, Bolton, titled *The Space War*, a complete novel on how it feels to fight a space war. Tom's been talking to people, soldiers, officers, men, veterans of space. He's got it all here. And here's a chapter called The Long Midnight, and here's one on the Negro colonization of Mars, and here's a character sketch of a Martian, absolutely priceless!"

Bolton cleared his throat. "Mr. Field?"

"Yes, yes, don't bother me."

"I've some bad news, sir."

Field jerked his grey head up. "What? The time element?"

"You'd better tell Wolfe to hurry his work. The connection may break some time this week," said Bolton, softly.

"I'll give you another million dollars if you keep it going!"

"It's not money, Mr. Field. It's just plain physics right now. I'll do everything I can. But you'd better warn him, is all I say."

The old man shriveled away into his chair and was small. "But you can't take him away from me now, not when he's doing so well. You should see the outline he sent through, an hour ago, the stories, the sketches. Here, here's one on spatial tides, another on meteors. Here's a short novel begun called *Thistledown and Fire—*"

"I'm sorry."

"If we lose him now, can we get him again?"

"I'd be afraid to tamper too much."

The old man was frozen. "Only one thing to do then. Arrange to have Wolfe type his work, if possible, or dictate it, to save time, rather than have him use pencil and paper, he's got to use a machine of some sort. See to it!"

The machine ticked away by the hour into the night and into the dawn and through the day. The old man slept only in faint dozes, blinking awake when the machine stuttered to life, and all of space and travel and existence came to him through the mind of another:

". . . the great starred meadows of space . . .

The machine jumped.

"Keep at it, Tom, show them!" The old man waited.

The phone rang.

It was Bolton.

"We can't keep it up, Mr. Field. The time contact will fade some time in the next minute."

"Do something!"

"I can't."

The teletype chattered. In a cold fascination, in a horror, the old man watched the black lines form.

". . . the Martian cities, immense and unbelievable, as numerous as stones thrown from some great mountain in a

rushing and incredible avalanche, resting at last in shining mounds . . ."

"Tom!" cried the old man.

"Now," said Bolton, on the phone.

The teletype hesitated, typed a word, and fell silent.

"Tom!" screamed the old man.

He shook the teletype.

"It's no use," said the telephone voice. "He's gone. I'm shutting off the Time Machine."

"No! Leave it on!"

"But—"

"You heard me—leave it! We're not sure he's gone."

"He is. It's no use, we're wasting energy."

"Waste it, then!"

He slammed the phone down.

He turned to the teletype, to the unfinished sentence.

"Come on, Tom, they can't get rid of you that way, you won't let them, will you, boy, come on. Tom, show them, you're big, you're bigger than time or space or their damned machines, you're strong and you've a will like iron, Tom, show them, don't let them send you back!"

The teletype snapped one key.

The old man bleated. "Tom! You *are* there, aren't you? Can you still write? Write, Tom, keep it coming, as long as you keep it rolling, Tom, they *can't* send you back!"

"The," typed the machine.

"More, Tom, more!"

"Odors of," clacked the machine.

"Yes?"

"Mars," typed the machine, and paused. A minute's silence. The machine spaced, skipped a paragraph, and began:

The odors of Mars, the cinnamons and cold spice winds, the winds of cloudy dust and winds of powerful bone and ancient pollen—

"Tom, you're still alive!"

For answer the machine, in the next ten hours, slammed out six chapters of *Flight Before Fury* in a series of fevered explosions.

"Today makes six weeks, Bolton, six whole weeks, Tom gone, on Mars, through the Asteroids. Look here, the manuscripts. Ten thousand words a day, he's driving himself, I

don't know when he sleeps, or if he eats, I don't care, he doesn't either, he only wants to get it done, because he knows the time is short."

"I can't understand it," said Bolton. "The power failed because our relays wore out. It took us three days to manufacture and replace the particular channel relays necessary to keep the Time Element steady and yet Wolfe hung on. There's a personal factor here, Lord knows what, we didn't take into account. Wolfe lives here, in this time, when he *is* here, and can't be snapped back, after all. Time isn't as flexible as we imagined. We used the wrong simile. It's not like a rubber band. More like osmosis; the penetration of membranes by liquids, from Past to Present, but we've got to send him back, can't keep him here, there'd be a void there, a derangement. The one thing that really keeps him here now is himself, his desire, his work. After it's over he'll go back as naturally as pouring water from a glass."

"I don't care about reasons, all I know is Tom is finishing it. He has the old fire and description, and something else, something more, a searching of values that supersede time and space. He's done a study of a woman left behind on Earth while the brave rocket heroes leap into space that's beautiful, objective and subtle; he calls it *Day of the Rocket*, and it is nothing more than an afternoon of a typical surburban housewife who lives as her ancestral mothers lived, in a house, raising her children, her life not much different from a cavewoman's, in the midst of the splendor of science and the trumpetings of space projectiles; a true and steady and subtle study of her wishes and frustrations. Here's another manuscript called *The Indians*, in which he refers to the Martians as Cherokees and Iroquois and Blackfoots, the Indian nations of space, destroyed and driven back. Have a drink, Bolton, have a drink!"

Tom Wolfe returned to Earth at the end of eight weeks.

He arrived in fire as he had left in fire, and his huge steps were burned across space, and in the library of Henry William Field's house were towers of yellow paper, with lines of black scribble and type on them, and these were to be separated out into the six sections of a master-work that, through endurance, and a knowing that the sands were dwindling from the glass, had mushroomed day on day.

Tom Wolfe came back to Earth and stood in the library of Henry William Field's house and looked at the massive outpourings of his heart and his hand and when the old man said, "Do you want to read it, Tom?" he shook his great head and replied, putting back his thick mane of dark hair with his big pale hand, "No. I don't dare start on it. If I did, I'd want to take it home with me. And I can't do that, can I?"

"No, Tom, you can't."

"No matter *how* much I wanted to?"

"No, that's the way it is. You never wrote another novel in that year, Tom. What was written here must stay here, what was written there must stay there. There's no touching it."

"I see." Tom sank down into a chair with a great sigh. "I'm tired. I'm mightily tired. It's been hard, but it's been good. What day is it?"

"This is the sixtieth day."

"The *last* day?"

The old man nodded and they were both silent awhile.

"Back to 1938 in the stone cemetery," said Tom Wolfe, eyes shut. "I don't like that. I wish I didn't know about that, it's a horrible thing to know." His voice faded and he put his big hands over his face and held them tightly there.

The door opened. Bolton let himself in and stood behind Tom Wolfe's chair, a small phial in his hand.

"What's that?" asked the old man.

"An extinct virus. Pneumonia. Very ancient and very evil," said Bolton. "When Mr. Wolfe came through, I had to cure him of his illness, of course, which was immensely easy with the techniques we know today, in order to put him in working condition for his job, Mr. Field. I kept this pneumonia culture. Now that he's going back, he'll have to be reinoculated with the disease."

"Otherwise?"

Tom Wolfe looked up.

"Otherwise, he'd get well, in 1938."

Tom Wolfe arose from his chair. "You mean, get well, walk around, back there, be well, and cheat the mortician?"

"That's what I mean."

Tom Wolfe stared at the phial and one of his hands twitched. "What if I destroyed the virus and refused to let you inoculate me?"

"You can't do that!"

"But—supposing?"

"You'd ruin things."

"What things?"

"The pattern, life, the way things are and were, the things that can't be changed. You can't disrupt it. There's only one sure thing, you're to die, and I'm to see to it."

Wolfe looked at the door. "I could run off, go back by myself."

"We control the machine. You wouldn't get out of the house. I'd have you back here, by force, and inoculated. I anticipated some such trouble when the time came; there are five men waiting down below. One shout from me—you see, it's useless. There, that's better. Here now."

Wolfe had moved back and now had turned to look at the old man and the window and this huge house. "I'm afraid I must apologize. I don't want to die. So very much I don't want to die."

The old man came to him and shook his hand. "Think of it this way; you've had two more months than anyone could expect from life, and you've turned out another book, a last book, a new book, think of that, and you'll feel better."

"I want to thank you for this," said Thomas Wolfe, gravely. "I want to thank both of you. I'm ready." He rolled up his sleeve. "The inoculation."

And while Bolton bent to his task, with his free hand Thomas Wolfe pencilled two black lines across the top of the first manuscript and went on talking:

"There's a passage from one of my old books," he said, scowling to remember it. "*. . . of wandering forever and the earth . . . Who owns the Earth? Did we want the Earth? that we should wander on it? Did we need the Earth that we were never still upon it? Whoever needs the Earth shall have the Earth; he shall be upon it, he shall rest within a little place, he shall dwell in one small room forever . . .*"

Wolfe was finished with the remembering.

"Here's my last book," he said, and on the empty yellow paper facing it he blocked out vigorous huge black letters with pressures of the pencil: *Forever and the Earth,* by Thomas Wolfe.

He picked up a ream of it and held it tightly in his hands, against his chest, for a moment. "I wish I could take it back

with me. It's like parting with my son." He gave it a slap and put it aside and immediately thereafter gave his quick hand into that of his employer, and strode across the room, Bolton after him, until he reached the door where he stood framed in the late afternoon light, huge and magnificent. "Goodbye, goodbye!" he cried.

The door slammed. Tom Wolfe was gone.

They found him wandering in the hospital corridor.

"Mr. Wolfe!"

"What?"

"Mr. Wolfe, you gave us a scare, we thought you were gone!"

"Gone?"

"Where did you go?"

"Where? Where?" He let himself be led through the midnight corridors. "Where? Oh, if I *told* you where, you'd never believe."

"Here's your bed, you shouldn't have left it."

Deep into the white death bed, which smelled of pale, clean mortality awaiting him, a mortality which had the hospital odor in it; the bed which, as he touched it, folded him into fumes and white starched coldness.

"Mars, Mars," whispered the huge man, late at night. "My best, my very best, my really fine book, yet to be written, yet to be printed, in another year, three centuries away . . ."

"You're tired."

"Do you really think so?" murmured Thomas Wolfe. "Was it a dream? Perhaps. A good dream."

His breathing faltered. Thomas Wolfe was dead.

In the passing years, flowers are found on Tom Wolfe's grave. And this is not unusual, for many people travel to linger there. But these flowers appear each night. They seem to drop from the sky. They are the color of an autumn moon, their blossoms are immense and they burn and sparkle their cold, long petals in a blue and white fire. And when the dawn wind blows they drip away into a silver rain, a shower of white sparks on the air. Tom Wolfe has been dead many, many years, but these flowers never cease. . . .

THE MINIATURE

by John D. MacDonald

AS Jedediah Amberson stepped through the bronze, marble and black-glass doorway of the City National Bank on Wall Street, he felt the strange jar. It was, he thought, almost a tremor. Once he had been in Tepoztlan, Mexico, on a Guggenheim grant, doing research on primitive barter systems, and during the night a small earthquake had awakened him.

This was much the same feeling. But he stood inside the bank and heard the unruffled hum of activity, heard no shouts of surprise. And, even through the heavy door he could hear the conversation of passers-by on the sidewalk.

He shrugged, beginning to wonder if it was something within himself, some tiny constriction of blood in the brain. It had been a trifle like that feeling which comes just before fainting. Jedediah Amberson had fainted once.

Fumbling in his pocket for the checkbook, he walked, with his long loose stride, over to a chest-high marble counter. He hadn't been in the main office of the bank since he had taken out his account. Usually he patronized the branch near the University, but today, finding himself in the neighborhood and remembering that he was low on cash, he had decided to brave the gaudy dignity of the massive institution of finance.

For, though Jed Amberson dealt mentally in billions, and used such figures familiarly in dealing with his classes in economics, he was basically a rather timid and uncertain man and he had a cold fear of the scornful eyes of tellers who might look askance at the small check he would present at the window.

He made it out for twenty dollars, five more than he would have requested had he gone to the familiar little branch office.

Jedediah Amberson was not a man to take much note of his surroundings. He was, at the time, occupied in writing a text, and the problems it presented were so intricate that he had recently found himself walking directly into other pedestrians and being snatched back onto the curb by helpful souls who didn't want to see him truck-mashed before their eyes. Just the day before he had gone into his bedroom in mid-afternoon to change his shoes and had only awakened from his profound thoughts when he found himself, clad in pajamas, brushing his teeth before the bathroom mirror.

He took his place in the line before a window. He was mentally extrapolating the trend line of one of J. M. Keynes' debt charts when a chill voice said, "Well!"

He found that he had moved up to the window itself and the teller was waiting for his check. He flushed and said, "Oh! Sorry." He tried to push the check under the grill, but it fluttered out of his hand. As he stooped to get it, his hat rolled off.

At last recovering both hat and check, he stood up, smiled painfully and pushed the check under the grill.

The young man took it, and Jed Amberson finally grew aware that he was spending a long time looking at the check. Jed strained his neck around and looked to see if he had remembered to sign it. He had.

Only then did he notice the way the young man behind the window was dressed. He wore a deep wine-colored sports shirt, collarless and open at the throat. At the point where the counter bisected him, Jedediah could see that the young man wore green-gray slacks with at least a six-inch waistband of ocher yellow.

Jed had a childlike love of parties, sufficient to overcome his chronic self-consciousness. He said, in a pleased tone, "Ah, some sort of festival?"

The teller had a silken wisp of beard on his chin. He leaned almost frighteningly close to the grill, aiming the wisp of beard at Amberson as he gave him a careful scrutiny.

"We are busy here," the teller said. "Take your childish little game across street and attempt it on them."

Though shy, Jedediah was able to call on hidden stores of indignation when he felt himself wronged. He straightened

slowly and said, with dignity, "I have an account and I suggest you cash my check as quickly and quietly as possible.

The teller glanced beyond Jedediah and waved the silky beard in a taut half circle, a "come here" gesture.

Jedediah turned and gasped as he faced the bank guard. The man wore a salmon-pink uniform with enormously padded shoulders. He had a thumb hooked in his belt, his hand close to the plastic bowl of what seemed to be a child's bubble pipe.

The guard jerked his other thumb toward the door and said, "Ride off, honorable sir."

Jedediah said, "I don't care much for the comic-opera atmosphere of this bank. Please advise me of my balance and I will withdraw it all and put it somewhere where I'll be treated properly."

The guard reached out, clamped Jed's thin arm in a meaty hand and yanked him in the general direction of the door. Jed intensely disliked being touched or pushed or pulled. He bunched his left hand into a large knobby fist and thrust it with vigor into the exact middle of the guard's face.

The guard grunted as he sat down on the tile floor. The ridiculous bubble pipe came out, and was aimed at Jed. He heard no sound of explosion, but suddenly there was a large cold area in his middle that felt the size of a basketball. And when he tried to move, the area of cold turned into an area of pain so intense that it nauseated him. It took but two tiny attempts to prove to him that he could achieve relative comfort only by standing absolutely still. The ability to breathe and to turn his eyes in their sockets seemed the only freedom of motion left to him.

The guard said, tenderly touching his puffed upper lip, "Don't drop signal, Harry. We can handle this without flicks." He got slowly to his feet, keeping the toy weapon centered on Jedediah.

Other customers stood at a respectful distance, curious and interested. A fussy little bald-headed man came trotting up, carrying himself with an air of authority. He wore pastel-blue pajamas with a gold medallion over the heart.

The guard stiffened. "Nothing we can't handle, Mr. Greenbush."

"Indeed!" Mr. Greenbush said, his voice like a terrier's bark. "Indeed! You seem to be creating enough disturbance

at this moment. Couldn't you have exported him more quietly?"

"Bank was busy," the teller said. "I didn't notice him till he got right up to window."

Mr. Greenbush stared at Jedediah. He said, "He looks reasonable enough, Palmer. Turn it off."

Jed took a deep, grateful breath as the chill area suddenly departed. He said weakly, "I demand an explanation."

Mr. Greenbush took the check the teller handed him and, accompanied by the guard, led Jed over to one side. He smiled in what was intended to be a fatherly fashion. He said, glancing at the signature on the check, "Mr. Amberson, surely you must realize, or your patrons must realize, that City National Bank is not sort of organization to lend its facilities to inane promotional gestures."

Jedediah had long since begun to have a feeling of nightmare. He stared at the little man in blue pajamas. "Promotional gestures?"

"Of course, my dear fellow. For what other reason would you come here dressed as you are and present this . . . this document."

"Dressed?" Jed looked down at his slightly baggy gray suit, his white shirt, his blue necktie and cordovan shoes. Then he stared around at the customers of the bank who had long since ceased to notice the little tableau. He saw that the men wore the sort of clothes considered rather extreme at the most exclusive of private beaches. He was particularly intrigued by one fellow who wore a cerise silk shirt, open to the waist, emerald green shorts to his knees, and calf-length pink nylons.

The women, he noticed, all wore dim shades of deep gray or brown, and a standard costume consisting of a halter, a short flared skirt that ended just above the knees and a knit cap pulled well down over the hair.

Amberson said, "Uh. Something special going on."

"Evidently. Suppose you explain."

"Me explain! Look, I can show you identification. I'm an Associate Professor of Economics at Columbia and I—" He reached for his hip pocket. Once again the ball of pain entered his vitals. The guard stepped over to him, reached into each of his pockets in turn, handed the contents to Mr. Greenbush.

Then the pressure was released. "I am certainly going to

give your high-handed procedures here as much publicity as I can," Jed said angrily.

But Greenbush ignored him. Greenbush had opened his change purse and had taken out a fifty-cent piece. Greenbush held the coin much as a superstitious savage would have held a mirror. He made tiny bleating sounds. At last he said, his voice thin and strained, "Nineteen forty-nine mint condition! What do you want for it?"

"Just cash my check and let me go," Jed said wearily. "You're all crazy here. Why shouldn't this year's coin be in mint condition?"

"Bring him into my office," Greenbush said in a frenzy.

"But I—" Jed protested. He stopped as the guard raised the weapon once more. Jed meekly followed Greenbush back through the bank. He decided that it was a case of mistaken identity. He could call his department from the office. It would all be straightened out, with apologies.

With the door closed behind the two of them, Jed looked around the office. The walls were a particularly liverish and luminescent yellow-green. The desk was a block of plastic balanced precariously on one slim pedestal no bigger around than a lead pencil. The chairs gave him a dizzy feeling. They looked comfortable, but as far as he could see, they were equipped only with front legs. He could not see why they remained upright.

"Please sit there," Greenbush said.

Jed lowered himself into the chair with great caution. It yielded slightly, then seemed to clasp him with an almost embarrassing warmth, as though he sat on the pneumatic lap of an exceptionally large woman.

Greenbush came over to him, pointed to Jed's wristwatch and said, "Give me that, too."

"I didn't come for a loan," Jed said.

"Don't be ass. You'll get all back."

Greenbush sat behind his desk, with the little pile of Jed's possessions in front of him. He made little mumbling sounds as he prodded and poked and pried. He seemed very interested in the money. He listened to the watch tick and said, "Mmm. Spring mechanical."

"No. It runs on atomic power," Jed said bitterly. Greenbush didn't answer.

From the back of Jed's wallet, Greenbush took the picture

of Helen. He touched the glossy surface, said, "Two-dimensional."

After what seemed an interminable period, Mr. Greenbush leaned back, put the tips of his fingers together and said, "Amberson, you are fortunate that you contacted me."

"I can visualize two schools of thought on that," Jed said stiffly.

Greenbush smiled. "You see, Amberson, I am coin collector and also antiquarian. It is possible National Museum might have material to equip you, but their stuff would be obviously old. I am reasonable man, and I know there must be explanation for all things." He fixed Jed with his sharp bright eyes, leaned slowly forward and said, "How did you get here?"

"Why, I walked through your front door." Jed suddenly frowned. "There was a strange jar when I did so. A dislocation, a feeling of being violently twisted in here." He tapped his temple with a thin finger.

"That's why I say you are fortunate. Some other bank might have had you in deviate ward by now where they'd be needling out slices of your frontal lobes."

"Is it too much to ask down here to get a small check cashed?"

"Not too much to ask in nineteen forty-nine, I'm sure. And I am ready to believe you are product of nineteen forty-nine. But, my dear Amberson, this is year eighty-three under Gradzinger calendar."

"For a practical joke, Greenbush, this is pretty ponderous."

Greenbush shrugged, touched a button on the desk. The wide draperies slithered slowly back from the huge window. "Walk over and take look, Amberson. Is that your world?"

Jed stood at the window. His stomach clamped into a small tight knot which slowly rose up into his throat. His eyes widened until the lids hurt. He steadied himself with his fingertips against the glass and took several deep, aching breaths. Then he turned somehow and walked, with knees that threatened to bend both ways, back to the chair. The draperies rustled back into position.

"No," Jed said weakly, "this isn't my world." He rubbed his forehead with the back of his hand, finding there a cold and faintly oily perspiration. "I had two classes this morning. I came down to look up certain documents. Everything was fine. And then I came in . . . how . . ."

Greenbush pursed his lips. "How? Who can say? I'm banker, not temporal tech. Doubtless you'd like to return to your own environment. I will signal Department of Temporal Technics at Columbia where you were employed so many years ago. . . ."

"That particular phraseology, Mr. Greenbush, I find rather disturbing."

"Sorry." Greenbush stood up. "Wait here. My communicator is deranged. I'll have to use other office."

"Can't we go there? To the University?"

"I wouldn't advise it. In popular shows I've seen on subject, point of entry is always important. I rather postulate they'll assist you back through front door."

Greenbush was at the office door. Jed said, "Have—have you people sent humans back and forth in time?"

"No. They send neutrons and gravitons or something like those. Ten minutes in future or ten minutes in past. Very intricate. Enormous energy problem. Way over my head."

While Greenbush was gone, Jed methodically collected his belongings from the desk and stowed them away in his pockets. Greenbush bustled in and said, "They'll be over in half hour with necessary equipment. They think they can help you."

Half an hour. Jed said, "As long as I'm here, I wonder if I could impose? You see, I have attempted to predict certain long-range trends in monetary procedures. Your currency would be—"

"Of course, my dear fellow! Of course! Kindred interest, etc. What would you like to know?"

"Can I see some of your currency?"

Greenbush shoved some small pellets of plastic across the desk. They were made from intricate molds. The inscription was in a sort of shorthand English. "Those are universal, of course," Greenbush said.

Two of them were for twenty-five cents and the other for fifty cents. Jed was surprised to see so little change from the money of his own day.

"One hundred cents equals dollar, just as in your times," Greenbush said.

"Backed by gold, of course," Jed said.

Greenbush gasped and then laughed. "What ludicrous idea! Any fool with public-school education has learned enough about transmutation of elements to make five tons of gold in

afternoon, or of platinum or zinc or any other metal or alloy of metal you desire."

"Backed by a unit of power? An erg or something?" Jed asked with false confidence.

"With power unlimited? With all power anyone wants without charge? You're not doing any better, Amberson."

"By a unit share of national resources maybe?" Jed asked hollowly.

"National is obsolete word. There are no more nations. And world resources are limitless. We create enough for our use. There is no depletion."

"But currency, to have value, must be backed by something," Jed protested.

"Obviously!"

"Precious stones?"

"Children play with diamonds as big as baseballs," Greenbush said. "Speaking as economist, Amberson, why was gold used in your day?"

"It was rare, and, where obtainable, could not be obtained without a certain average fixed expenditure of man hours. Thus it wasn't really the metal itself, it was the man hours involved that was the real basis. Look, now, you've got me talking in the past tense."

"And quite rightly. Now use your head, Mr. Amberson. In world where power is free, resources are unlimited and no metal or jewel is rare, what is one constant, one user of time, one external fixity on which monetary systems could be based?"

Jed almost forgot his situation as he labored with the problem. Finally he had an answer, and yet it seemed so incredible that he hardly dared express it. He said in a thin voice, "The creation of a human being is something that probably cannot be shortened or made easy. Is—is human life itself your basis?"

"Bravo!" Greenbush said. "One hundred cents in dollar, and five thousand dollars in HUC. That's brief for Human Unit of Currency."

"But that's slavery! That's—why, that's the height of inhumanity!"

"Don't sputter, my boy, until you know facts."

Jed laughed wildly. "If I'd made my check out for five thousand they'd have given me a—a person!"

"They'd have given you certificate entitling you to HUC. Then you could spend that certificate, you see."

"But suppose I wanted the actual person?"

"Then I suppose we could have obtaned one for you from World Reserve Bank. As matter of fact, we have one in our vault now."

"In your vault!"

"Where else would we keep it? Come along. We have time."

The vault was refrigerated. The two armed attendants stood by while Greenbush spun the knob of the inner chamber, slid out the small box. It was of dull silver, and roughly the size of a pound box of candy. Greenbush slid back the grooved lid and Jed, shuddering, looked down through clear ice to the tiny, naked, perfect figure of an adult male, complete even to the almost invisible wisp of hair on his chest.

"Alive?" Jed asked.

"Naturally. Pretty well suspended, of course." Greenbush slid the lid back, replaced the box in the vault and led the way back to the office.

Once again in the warm clasp of the chair, Jed asked, with a shaking voice, "Could you give me the background on—this amazing currency?"

"Nothing amazing about it. Technic advances made all too easily obtainable through lab methods except living humans. There, due to growth problems and due to—certain amount of nontechnic co-operation necessary, things could not be made easily. Full-sized ones were too unwieldy, so lab garcons worked on size till they got them down to what you see. Of course, they are never brought up to level of consciousness. They go from birth bottle to suspension chambers and are held there until adult and then refrigerated and boxed."

Greenbush broke off suddenly and said, "Are you ill?"

"No. No, I guess not."

"Well, when I first went to work for this bank, HUC was unit worth twenty thousand dollars. Then lab techs did some growth acceleration work—age acceleration, more accurate—and that brought price down and put us into rather severe inflationary period. Cup of java went up to dollar and it stayed there ever since. So World Union stepped in and made it against law to make any more refinements in HUC production. That froze it at five thousand. Things have been stable ever since."

"But they're living, human beings!"

"Now you sound like silly Anti-HUC League. My boy, they wouldn't exist were it not for our need for currency base. They never achieve consciousness. We, in banking business, think of them just as about only manufactured item left in world which cannot be produced in afternoon. Time lag is what gives them their value. Besides, they are no longer in production, of course. Being economist, you must realize over-production of HUC's would put us back into inflationary period."

At that moment the girl announced that the temporal techs had arrived with their equipment. Jed was led from the office out into the bank proper. The last few customers were let out as the closing hour arrived.

The men from Columbia seemed to have no interest in Jed as a human being. He said hesitantly to one, smiling shyly, "I would think you people would want to keep me here so your historians could do research on me."

The tech gave him a look of undisguised contempt. He said, "We know all to be known about your era. Very dull period in world history."

Jed retired, abashed, and watched them set up the massive silvery coil on the inside of the bank door.

The youngest tech said quietly, "This is third time we've had to do this. You people seem to wander into sort of rhythm pattern. Very careless. We had one failure from your era. Garcon named Crater. He wandered too far from point of entry. But you ought to be all opt."

"What do I have to do?"

"Just walk through coil and out door. Adjustment is complicated. If we don't use care you might go back into your own era embedded up to your eyes in pavement. Or again, you might come out forty feet in air. Don't get unbalanced."

"I won't," Jed said fervently.

Greenbush came up and said, "Could you give me that coin you have?"

The young technician turned wearily and said, "Older, he has to leave with everything he brought and he can't take anything other with him. We've got to fit him into same vibratory rhythm. You should know that."

"It is such nice coin," Greenbush sighed.

"If I tried to take something with me?" Jed asked.

"It just wouldn't go, gesell. You would go and it would stay."

Jed thought of another question. He turned to Greenbush. "Before I go, tell me. Where are the HUC's kept?"

"In refrigerated underground vault at place called Fort Knox."

"Come on, come on, you. Just walk straight ahead through coil. Don't hurry. Push door open and go out onto street."

Jed stood, faintly dizzy, on the afternoon sidewalk of Wall Street in Manhattan. A woman bounced off him, snarled, "Fa godsake, ahya goin' uh comin'!" Late papers were tossed off a truck onto the corner. Jed tiptoed over, looked cautiously and saw that the date was Tuesday, June 14th, 1949.

The further the subway took him uptown, the more the keen reality of the three quarters of an hour in the bank faded. By the time he reached his own office, sat down behind his familiar desk, it had become like a fevered dream.

Overwork. That was it. Brain fever. Probably wandered around in a daze. Better take it easy. Might fade off into a world of the imagination and never come back. Skip the book for a month. Start dating Helen again. Relax.

He grinned slowly, content with his decision. "HUC's, indeed!" he said.

Date Helen tonight. Better call her now. Suddenly he remembered that he hadn't cashed a check, and he couldn't take Helen far on a dollar.

He found the check in his pocket, glanced at it, and then found himself sitting rigid in the chair. Without taking his eyes from the check, he pulled open the desk drawer, took out the manuscript entitled, "Probable Bases of Future Monetary Systems," tore it in half and dropped it in the wastebasket.

His breath whistled in pinched nostrils. He heard, in his memory, a voice saying, "You would go and it would stay."

The check was properly made out for twenty dollars. But he had used the ink supplied by the bank. The check looked as though it had been written with a dull knife. The brown desk top showed up through the fragile lace of his signature.

SANITY

by Fritz Leiber, Jr.

"COME in, Phy, and make yourself comfortable."

The mellow voice—and the suddenly dilating doorway—caught the general secretary of the World playing with a blob of greenish gasoid, squeezing it in his fist and watching it ooze between his fingers in spatulate tendrils that did not dissipate. Slowly, crookedly, he turned his head. World Manager Carrsbury became aware of a gaze that was at once oafish, sly, vacuous. Abruptly the expression was replaced by a nervous smile. The thin man straightened himself, as much as his habitually drooping shoulders would permit, hastily entered, and sat down on the extreme edge of a pneumatically form-fitting chair.

He embarrassedly fumbled the blob of gasoid, looking around for a convenient disposal vent or a crevice in the upholstery. Finding none, he stuffed it hurriedly into his pocket. Then he repressed his fidgetings by clasping his hands resolutely together, and sat with downcast eyes.

"How are you feeling, old man?" Carrsbury asked in a voice that was warm with a benign friendliness.

The general secretary did not look up.

"Anything bothering you, Phy?" Carrsbury continued solicitously. "Do you feel a bit unhappy, or dissatisfied, about your . . . er . . . transfer, now that the moment has arrived?"

Still the general secretary did not respond. Carrsbury leaned forward across the dully silver, semi-circular desk and, in his most winning tones, urged, "Come on, old fellow, tell me all about it."

The general secretary did not lift his head, but he rolled

up his strange, distant eyes until they were fixed directly on Carrsbury. He shivered a little, his body seemed to contract, and his bloodless hands tightened their interlocking grip.

"I know," he said in a low, effortless voice. "You think I'm insane."

Carrsbury sat back, forcing his brows to assume a baffled frown under the mane of silvery hair.

"Oh, you needn't pretend to be puzzled," Phy continued, swiftly now that he had broken the ice. "You know what that word means as well as I do. Better—even though we both had to do historical research to find out."

"Insane," he repeated dreamily, his gaze wavering. "Significant departure from the norm. Inability to conform to basic conventions underlying all human conduct."

"Nonsense!" said Carrsbury, rallying and putting on his warmest and most compelling smile. "I haven't the slightest idea of what you're talking about. That you're a little tired, a little strained, a little distraught—that's quite understandable, considering the burden you've been carrying, and a little rest will be just the thing to fix you up, a nice long vacation away from all this. But as for your being . . . why, ridiculous!"

"No," said Phy, his gaze pinning Carrsbury. "You think I'm insane. You think all my colleagues in the World Management Service are insane. That's why you're having us replaced with those men you've been training for ten years in your Institute of Political Leadership—ever since, with my help and connivance, you became World manager."

Carrsbury retreated before the finality of the statement. For the first time his smile became a bit uncertain. He started to say something, then hesitated and looked at Phy, as if half hoping he would go on.

But that individual was once again staring rigidly at the floor.

Carrsbury leaned back, thinking. When he spoke it was in a more natural voice, much less consciously soothing and fatherly.

"Well, all right, Phy. But look here, tell me something, honestly. Won't you—and the others—be a lot happier when you've been relieved of all your responsibilities?"

Phy nodded somberly. "Yes," he said, "we will . . . but"—his face became strained—"you see—"

"But—?" Carrsbury prompted.

Phy swallowed hard. He seemed unable to go on. He had gradually slumped toward one side of the chair, and the pressure had caused the green gasoid to ooze from his pocket. His long fingers crept over and kneaded it fretfully.

Carrsbury stood up and came around the desk. His sympathetic frown, from which perplexity had ebbed, was not quite genuine.

"I don't see why I shouldn't tell you all about it now, Phy," he said simply. "In a queer sort of way I owe it all to you. And there isn't any point now in keeping it a secret . . . there isn't any danger—"

"Yes," Phy agreed with a quick bitter smile, "you haven't been in any danger of a *coup d'état* for some years now. If ever we should have revolted, there'd have been"—his gaze shifted to a point in the opposite wall where a faint vertical crease indicated the presence of a doorway—"your secret police."

Carrsbury started. He hadn't thought Phy had known. Disturbingly, there loomed in his mind a phrase: *the cunning of the insane*. But only for a moment. Friendly complacency flooded back. He went behind Phy's chair and rested his hands on the sloping shoulders.

"You know, I've always had a special feeling toward you, Phy," he said, "and not only because your whims made it a lot easier for me to become World manager. I've always felt that you were different from the others, that there were times when—" He hesitated.

Phy squirmed a little under the friendly hands. "When I had my moments of sanity?" he finished flatly.

"Like now," said Carrsbury softly, after a nod the other could not see. "I've always felt that sometimes, in a kind of twisted, unrealistic way, you *understood*. And that has meant a lot to me. I've been alone, Phy, dreadfully alone, for ten whole years. No companionship anywhere, not even among the men I've been training in the Institute of Political Leadership—for I've had to play a part with them too, keep them in ignorance of certain facts, for fear they would try to seize power over my head before they were sufficiently prepared. No companionship anywhere, except for my hopes—and for ocasional moments with you. Now that it's over and a new regime is beginning for us both, I can tell you that. And I'm glad."

There was a silence. Then—Phy did not look around, but one lean hand crept up and touched Carrsbury's. Carrsbury cleared his throat. Strange, he thought, that there could be even a momentary rapport like this between the sane and the insane. But it was so.

He disengaged his hands, strode rapidly back to his desk, turned.

"I'm a throwback, Phy," he began in a new, unused, eager voice. "A throwback to a time when human mentality was far sounder. Whether my case was due chiefly to heredity, or to certain unusual accidents of environment, or to both, is unimportant. The point is that a person had been born who was in a position to criticize the present state of mankind in the light of the past, to diagnose its condition, and to begin its cure. For a long time I refused to face the facts, but finally my researches—especially those in the literature of the twentieth century—left me no alternative. The mentality of mankind had become—aberrant. Only certain technological advances, which had resulted in making the business of living infinitely easier and simpler, and the fact that war had been ended with the creation of the present world state, were staving off the inevitable breakdown of civilization. But only staving it off—delaying it. The great masses of mankind had become what would once have been called hopelessly neurotic. Their leaders had become . . . you said it first, Phy . . . insane. Incidentally, this latter phenomenon—the drift of psychological aberrants toward leadership—has been noted in all ages."

He paused. Was he mistaken, or was Phy following his words with indications of a greater mental clarity than he had ever noted before, even in the relatively nonviolent World secretary? Perhaps—he had often dreamed wistfully of the possibility—there was still a chance of saving Phy. Perhaps, if he just explained to him clearly and calmly—

"In my historical studies," he continued, "I soon came to the conclusion that the crucial period was that of the Final Amnesty, concurrent with the founding of the present world state. We are taught that at that time there were released from confinement millions of political prisoners—and millions of others. Just who were those others? To this question, our present histories gave only vague and platitudinous answers. The semantic difficulties I encountered were exceedingly ob-

stinate. But I kept hamemring away. Why, I asked myself, have such words as insanity, lunacy, madness, psychosis, disappeared from our vocabulary—and the concepts behind them from our thought? Why has the subject 'abnormal psychology' disappeared from the curricula of our schools? Of greater significance, why is our modern psychology strikingly similar to the field of abnormal psychology as taught in the twentieth century, and to that field alone? Why are there no longer, as there were in the twentieth century, any institutions for the confinement and care of the psychologically aberrant?"

Phy's head jerked up. He smiled twistedly. "Because," he whispered slyly, "everyone's insane now."

The cunning of the insane. Again that phrase loomed warningly in Carrsbury's mind. But only for a moment. He nodded.

"At first I refused to make that deduction. But gradually I reasoned out the why and wherefore of what had happened. It wasn't only that a highly technological civilization had subjected mankind to a wider and more swiftly-tempoed range of stimulations, conflicting suggestions, mental strains, emotional wrenchings. In the literature of twentieth century psychiatry there are observations on a kind of psychosis that results from success. An unbalanced individual keeps going so long as he is fighting something, struggling toward a goal. He reaches his goal—and goes to pieces. His repressed confusions come to the surface, he realizes that he doesn't know what he wants at all, his energies hitherto engaged in combatting something outside himself are turned against himself, he is destroyed. Well, when war was finally outlawed, when the whole world became one unified state, when social inequality was abolished . . . you see what I'm driving at?"

Phy nodded slowly. "That," he said in a curious, distant voice, "is a very interesting deduction."

"Having reluctantly accepted my main premise," Carrsbury went on, "everything became clear. The cyclic six-months' fluctuations in a world credit—I realized at once that Morgenstern of Finance must be a manic-depressive with a six-months' phase, or else a dual personality with one aspect a spendthrift, the other a miser. It turned out to be the former. Why was the Department of Cultural advancement stagnating? Because Manager Hobart was markedly catatonic. Why the boom in extraterrestrial Research? Because McElvy was a euphoric."

Phy looked at him wonderingly. "But naturally," he said, spreading his lean hands, from one of which the gasoid dropped like a curl of green smoke.

Carrsbury glanced at him sharply. He replied, "Yes, I know that you and several of the others have a certain warped awareness of the differences between your . . . personalities, though none whatsoever of the basic aberration involved in them all. But to get on. As soon as I realized the situation, my course was marked out. As a sane man, capable of entertaining fixed realistic purposes, and surrounded by individuals of whose inconsistencies and delusions it was easy to make use, I was in a position to attain, with time and tact, any goal at which I might aim. I was already in the Managerial Service. In three years I became World manager. Once there, my range of influence was vastly enhanced. Like the man in Archimedes' epigram, I had a place to stand from which I could move the world. I was able, in various guises and on various pretexts, to promulgate regulations the actual purpose of which was to soothe the great neurotic masses by curtailing upsetting stimulations and introducing a more regimented and orderly program of living. I was able, by humoring my fellow executives and making the fullest use of my greater capacity for work, to keep world affairs staggering along fairly safely—at least stave off the worst. At the same time I was able to begin my Ten Years' Plan—the training, in comparative isolation, first in small numbers, then in larger, as those instructed could in turn become instructors, of a group of prospective leaders carefully selected on the basis of their relative freedom from neurotic tendencies."

"But that—" Phy began rather excitedly, starting up.

"But what?" Carrsbury inquired quickly.

"Nothing," muttered Phy dejectedly, sinking back.

"That about covers it," Carrsbury concluded, his voice sudenly grown a little duller. "Except for one secondary matter. I couldn't afford to let myself go ahead without any protection. Too much depended on me. There was always the risk of being wiped out by some ill-co-ordinated but none the less effective spasm of violence, momentarily uncontrollable by tact, on the part of my fellow executives. So, only because I could see no alternative, I took a dangerous step. I created"—his glance strayed toward the faint crease in the side wall—"my secret police. There is a type of insanity known as para-

noia, an exaggerated suspiciousness involving delusions of persecution. By means of the late twentieth century Rand technique of hypnotism, I inculcated a number of these unfortunate individuals with the fixed idea that their lives depended on me and that I was threatened from all sides and must be protected at all costs. A distasteful expedient, even though it served its purpose. I shall be glad, very glad to see it discontinued. You can understand, can't you, why I had to take that step?"

He looked up questioningly at Phy—and became aware with a shock that that individual was grinning at him vacuously and holding up the gasoid between two fingers.

"I cut a hole in my couch and a lot of this stuff came out," Phy explained in a thick naïve voice. "Ropes of it got all over my office. I kept tripping." His fingers patted at it deftly, sculpturing it into the form of a hideous transparent green head, which he proceded to squeeze out of existence. "Queer stuff," he rambled on, "rarefied liquid. Gas of fixed volume. And all over my office floor, tangled up with the furniture."

Carrsbury leaned back and shut his eyes. His shoulders slumped. He felt suddenly a little weary, a little eager for his day of triumph to be done. He knew he shouldn't be despondent because he had failed with Phy. After all, the main victory was won. Phy was the merest of side issues. He had always known that except for flashes, Phy was hopeless as the rest. Still—

"You don't need to worry about your office floor Phy," he said with a listless kindliness. "Never any more. Your successor will have to see about cleaning it up. Already, you know, to all intents and purposes, you have been replaced."

"That's just it!" Carrsbury started at Phy's explosive loudness. The World secretary jumped up and strode toward him, pointing an excited hand. "That's what I came to see you about! That's what I've been trying to tell you! I can't be replaced like that! None of the others can, either! It won't work! You can't do it!"

With a swiftness born of long practice, Carrsbury slipped behind his desk. He forced his features into that expression of calm, smiling benevolence of which he had grown unutterably weary.

"Now, now, Phy," he said brightly, soothingly, "if I can't do it, of course I can't do it. But don't you think you ought

to tell me why? Don't you think it would be very nice to sit down and talk it all over and you tell me why?"

Phy halted and hung his head, abashed.

"Yes, I guess it would," he said slowly, abruptly falling back into the low, effortful tones. "I guess I'll have to. I guess there just isn't any other way. I had hoped, though, not to have to tell you everything." The last sentence was half question. He looked up wheedlingly at Carrsbury. The latter shook his head, continuing to smile. Phy went back and sat down.

"Well," he finally began, gloomily kneading the gasoid, "it all began when you first wanted to be World manager. You weren't the usual type, but I thought it would be kind of fun —yes, and kind of helpful." He looked up at Carrsbury. "You've really done the World a lot of good in quite a lot of ways, always remember that," he assured him. "Of course," he added, again focusing the tortured gasoid, "they weren't exactly the ways you thought."

"No?" Carrsbury prompted automatically. *Humor him. Humor him.* The wornout refrain droned in his mind.

Phy sadly shook his head. "Take those regulations you promulgated to soothe people—"

"Yes?"

"—they kind of got changed on the way. For instance, your prohibition, regarding reading tapes, of all exciting literature . . . oh, we tried a little of the soothing stuff you suggested at first. Everyone got a great kick out of it. They laughed and laughed. But afterwards, well, as I said, it kind of got changed —in this case to a prohibition of all *unexciting* literature."

Carrsbury's smile broadened. For a moment the edge of his mind had toyed with a fear, but Phy's last remark had banished it.

"Every day I coast past several reading stands," Carrsbury said gently. "The fiction tapes offered for sale are always in the most chastely and simply colored containers. None of those wild and lurid pictures that one used to see everywhere."

"But did you ever buy one and listen to it? Or project the visual text?" Phy questioned apologetically.

"For ten years I've been a very busy man," Carrsbury answered. "Of course I've read the official reports regarding such matters, and at times glanced through sample résumés of taped fiction."

"Oh, sure, that sort of official stuff," agreed Phy, glancing

up at the wall of tape files beyond the desk. "What we did, you see, was to keep the monochrome containers but go back to the old kind of contents. The contrast kind of tickled people. Remember, as I said before, a lot of your regulations have done good. Cut out a lot of unnecessary noise and inefficient foolishness, for one thing."

That sort of official stuff. The phrase lingered unpleasantly in Carrsbury's ears. There was a trace of irrepressible suspicion in his quick over-the-shoulder glance at the tiered tape files.

"Oh, yes," Phy went on, "and that prohibition against yielding to unusual or indecent impulses, with a long listing of specific categories. It went into effect all right, but with a little rider attached: 'unless you really want to.' That seemed absolutely necessary, you know." His fingers worked furiously with the gasoid. "As for the prohibition of various stimulating beverages—well, in this locality they're still served under other names, and an interesting custom has grown up of behaving very soberly while imbibing them. Now when we come to that matter of the eight-hour working day—"

Almost involuntarily, Carrsbury had got up and walked over to the outer wall. With a flip of his hand through an invisible U-shaped beam, he switched on the window. It was as if the outer wall had disappeared. Through its near-perfect transparency, he peered down with fierce curiosity past the sleekly gleaming façades to the terraces and parkways below.

The modest throngs seemed quiet and orderly enough. But then there was a scurry of confusion—a band of people, at this angle all tiny heads with arms and legs, came out from a shop far below and began to pelt another group with what looked like foodstuffs. While, on a side parkway, two small ovoid vehicles, seamless drops of silver because their vision panels were invisible from the outside, butted each other playfully. Someone started to run.

Carrsbury hurriedly switched off the window and turned around. Those were just off-chance occurrences, he told himself angrily. Of no real statistical significance whatever. For ten years mankind had steadily been trending toward sanity despite occasional relapses. He'd seen it with his own eyes, seen the day-by-day progress —at least enough to know. He'd been a fool to let Phy's ramblings affect him—only tired nerves had made that possible.

He glanced at his timepiece.

"Excuse me," he said curtly, striding past Phy's chair, "I'd like to continue this conversation, but I have to get along to the first meeting of the new Central Managerial Staff."

"Oh but you can't!" Instantly Phy was up and dragging at his arm. "You just can't do it, you know! It's impossible!"

The pleading voice rose toward a scream. Impatiently Carrsbury tried to shake loose. The seam in the side wall widened, became a doorway. Instantly both of them stopped struggling.

In the doorway stood a cadaverous giant of a man with a stubby dark weapon in his hand. Straggly black beard shaded into gaunt cheeks. His face was a cruel blend of suspicion and fanatical devotion, the first directed along with the weapon at Phy, the second—and the somnambulistic eyes—at Carrsbury.

"He was threatening you?" the bearded man asked in a harsh voice, moving the weapon suggestively.

For a moment an angry, vindictive light glinted in Carrsbury's eyes. Then it flicked out. What could he have been thinking, he asked himself. This poor lunatic World secretary was no one to hate.

"Not at all, Hartman," he remarked calmly. "We were discussing something and we became excited and allowed our voices to rise. Everything is quite all right."

"Very well," said the bearded man doubtfully, after a pause. Reluctantly he returned his weapon to its holster, but he kept his hand on it and remained standing in the doorway.

"And now," said Carrsbury, disengaging himself, "I must go."

He had stepped on to the corridor slidewalk and had coasted halfway to the elevator before he realized that Phy had followed him and was plucking timidly at his sleeve.

"You can't go off like this," Phy pleaded urgently, with an apprehensive backward glance. Carrsbury noted that Hartman had also followed—an ominous pylon two paces to the rear. "You must give me a chance to explain, to tell you why, just like you asked me."

Humor him. Carrsbury's mind was deadly tired of the drone, but mere weariness prompted him to dance to it a little longer. "You can talk to me in the elevator," he conceded, stepping off the slidewalk. His finger flipped through a

U-beam and a serpentine movement of light across the wall traced the elevator's obedient rise.

"You see, it wasn't just that matter of prohibitory regulations," Phy launched out hurriedly. "There were lots of other things that never did work out like your official reports indicated. Departmental budgets for instance. The reports showed, I know, that appropriations for Extraterrestrial Research were being regularly slashed. Actually in your ten years of office, they increased tenfold. Of course, there was no way for you to know that. You couldn't be all over the world at once and see each separate launching of supra-stratospheric rockets."

The moving light became stationary. A seam dilated. Carrsbury stepped into the elevator. He debated sending Hartman back. Poor babbling Phy was no menace. Still—*the cunning of the insane.* He decided against it, reached out and flipped the control beam at the sector which would bring them to the hundredth and top floor. The door snipped softly shut. The cage became a surging darkness in which floor numerals winked softly. Twenty-one. Twenty-two. Twenty-three.

"And then there was the Military Service. You had it sharply curtailed."

"Of course I did." Shear weariness stung Carrsbury into talk. "There's only one country in the world. Obviously, the only military requirement is an adequate police force. To say nothing of the risks involved in putting weapons into the hands of the present world population."

"I know," Phy's answer came guiltily from the darkness. "Still, what's happened is that, unknown to you, the Military Service has been increased in size, and recently four rocket squadrons have been added."

Fifty-seven. Fifty-eight. *Humor him.* "Why?"

"Well, you see we've found out that Earth is being reconnoitered. Maybe from Mars. Maybe hostile. Have to be prepared. We didn't tell you . . . well, because we were afraid it might excite you."

The voice trailed off. Carrsbury shut his eyes. How long, he asked himself, how long? He realized with dull surprise that in the last hour people like Phy, endured for ten years, had become unutterably weary to him. For the moment even the thought of the conference over which he would soon be presiding, the conference that was to usher in a sane world, failed

to stir him. Reaction to success? To the end of a ten years' tension?

"Do you know how many floors there are in this building?"

Carrsbury was not immediately conscious of the new note in Phy's voice, but he reacted to it.

"One hundred," he replied promptly.

"Then," asked Phy, "just where are we?"

Carr opened his eyes to the darkness. One hundred twenty-seven, blinked the floor numeral. One hundred twenty-eight. One hundred twenty-nine.

Something cold dragged at Carrsbury's stomach, pulled at his brain. He felt as if his mind were being slowly and irresistibly twisted. He thought of hidden dimensions, of unsuspected holes in space. Something remembered from elementary physics danced through his thoughts: If it were possible for an elevator to keep moving upward with uniform acceleration, no one inside an elevator could determine whether the effects they were experiencing were due to acceleration or to gravity—whether the elevator were standing motionless on some planet or shooting up at ever-increasing velocity through free space.

One hundred forty-one. One hundred forty-two.

"Or as if you were rising through consciousness into an unsuspected realm of mentality lying above," suggested Phy in his new voice, with its hint of gentle laughter.

One hundred forty-six. One hundred forty-seven. It was slowing now. One hundred forty-nine. One hundred fifty. It had stopped.

This was some trick. The thought was like cold water in Carrsbury's face. Some cunning childish trick of Phy's. An easy thing to hocus the numerals. Carrsbury groped irascibly about in the darkness, encountered the slick surface of a holster, Hartman's gaunt frame.

"Get ready for a surprise," Phy warned from close at his elbow.

As Carrsbury turned and grabbed, bright sunlight drenched him, followed by a griping, heart-stopping spasm of vertigo.

He, Hartman, and Phy, along with a few insubstantial bits of furnishings and controls were standing in the air fifty stories above the hundred-story summit of World Managerial Center.

For a moment he grabbed frantically at nothing. Then he realized they were not falling and his eyes began to trace the

hint of walls and ceiling and floor and, immediately below them, the ghost of a shaft.

Phy nodded. "That's all there is to it," he assured Carrsbury casually. "Just another of those charmingly odd modern notions against which you have legislated so persistently—like our incomplete staircases and roads to nowhere. The Buildings and Grounds Committee decided to extend the range of the elevator for sightseeing purposes. The shaft was made air-transparent to avoid spoiling the form of the original building and to improve the view. This was achieved so satisfactorily that an electronic warning system had to be installed for the safety of passing airjets and other craft. Treating the surfaces of the cage like windows was an obvious detail."

He paused and looked quizzically at Carrsbury. "All very simple," he observed, "but don't you find a kind of symbolism in it? For ten years now you've been spending most of your life in that building below. Every day you've used this elevator. But not once have you dreamed of these fifty extra stories. Don't you think that something of the same sort may be true of your observations of other aspects of contemporary social life?"

Carrsbury gaped at him stupidly.

Phy turned to watch the growing speck of an approaching aircraft. "You might look at it too," he remarked to Carrsbury, "for it's going to transport you to a far happier, more restful life."

Carrsbury parted his lips, wet them. "But—" he said, unsteadily. "But—"

Phy smiled. "That's right, I didn't finish my explanation. Well, you might have gone on being World manager all your life, in the isolation of your office and your miles of taped official reports and your occasional confabs with me and the others. Except for your Institute of Political Leadership and your Ten-Year-Plan. That upset things. Of course, we were as much interested in it as we were in you. It had definite possibilities. We hoped it would work out. We would have been glad to retire from office if it had. But, most fortunately, it didn't. And that sort of ended the whole experiment."

He caught the downward direction of Carrsbury's gaze.

"No," he said, "I'm afraid your pupils aren't waiting for you in the conference chamber on the hundredth story. I'm afraid they're still in the Institute." His voice became gently

sympathetic. "And I'm afraid that it's become . . . well . . . a somewhat different sort of institute."

Carrsbury stood very still, swaying a little. Gradually his thoughts and his will power were emerging from the waking nightmare that had paralyzed them. *The cunning of the insane*—he had neglected that trenchant warning. In the very moment of victory—

No! He had forgotten Hartman! This was the very emergency for which that counterstroke had been prepared.

He glanced sideways at the chief member of his secret police. The black giant, unconcerned by their strange position, was glaring fixedly at Phy as if at some evil magician from whom any malign impossibility could be expected.

Now Hartman became aware of Carrsbury's gaze. He divined his thought.

He drew his dark weapon from its holster, pointed it unwaveringly at Phy.

His black-bearded lips curled. From them came a hissing sound. Then, in a loud voice, he cried, "You're dead, Phy! I disintegrated you."

Phy reached over and took the weapon from his hand.

"That's another respect in which you completely miscalculated the modern temperament," he remarked to Carrsbury, a shade argumentatively. "All of us have certain subjects on which we're a trifle unrealistic. That's only human nature. Hartman's was his suspiciousness—a weakness for ideas involving plots and persecutions. You gave him the worst sort of job—one that catered to and encouraged his weaknesses. In a very short time he became hopelessly unrealistic. Why for years he's never realized that he's been carrying a dummy pistol."

He passed it to Carrsbury for inspection.

"But," he added, "give him the proper job and he'd function well enough—say something in creation of exploration or social service. Fitting the man to the job is an art with infinite possibilities. That's why we had Morgenstern in Finance—to keep credit fluctuating in a safe, predictable rhythm. That's why a euphoric is made a manager of Extraterrestrial Research—to keep it booming. Why a catatonic is given Cultural Advancement—to keep it from tripping on its face in its haste to get ahead."

He turned away. Dully, Carrsbury observed that the aircraft was hovering close to the cage and sidling slowly in.

"But in that case why—" he began stupidly.

"Why were you made World manager?" Phy finished easily. "Isn't that fairly obvious? Haven't I told you several times that you did a lot of good, indirectly? You interested us, don't you see? In fact, you were practically unique. As you know, it's our cardinal principle to let every individual express himself as he wants to. In your case, that involved letting you become World manager. Taken all in all it worked out very well. Everyone had a good time, a number of constructive regulations were promulgated, we learned a lot—oh, we didn't get everything we hoped for, but one never does. Unfortunately, in the end, we were forcd to discontinue the experiment."

The aircraft had made contact.

"You understand, of course, why that was necessary?" Phy continued hurriedly, as he urged Carrsbury toward the opening port. "I'm sure you must. It all comes down to a question of sanity. What is sanity—now, in the twentieth century, any time? Adherence to a norm. Conformity to certain basic conventions underlying all human conduct. In our age, departure from the norm has become the norm. Inability to conform has become the standard of conformity. That's quite clear, isn't it? And it enables you to understand, doesn't it, your own case and that of your proteges? Over a long period of years you persisted in adhering to a norm, in conforming to certain basic conventions. You were completely unable to adapt yourself to the society around you. You could only pretend—and your proteges wouldn't have been able to do even that. Despite our many engaging personal characteristics, there was obviously only one course of action open to us."

In the port Carrsbury turned. He had found his voice at last. It was hoarse, ragged. "You mean that all these years you've just been *humoring* me?"

The port was closing. Phy did not answer the question.

As the aircraft edged out, he waved farewell with the blob of green gasoid.

"It'll be very pleasant where you're going," he shouted encouragingly. "Comfortable quarters, adequate facilities for exercise, and a complete library of twentieth century literature to while away your time."

He watched Carrsbury's rigid face, staring whitely from the vision port, until the aircraft had diminished to a speck.

Then he turned away, looked at his hands, noticed the gasoid, tossed it out the open door of the cage, studied its flight for a few moments, then flicked the downbeam.

"I'm glad to see the last of that fellow," he muttered, more to himself than to Hartman, as they plummeted toward the roof. "He was beginning to have a very disturbing influence on me. In fact, I was beginning to fear for my"—his expression became suddenly vacuous—"sanity."

THE ONLY THING WE LEARN

by C. M. Kornbluth

THE professor, though he did not know the actor's phrase for it, was counting the house—peering through a spyhole in the door through which he would in a moment appear before the class. He was pleased with what he saw. Tier after tier of young people, ready with notebooks and styli, chattering tentatively, glancing at the door against which his nose was flattened, waiting for the pleasant interlude known as "Archaeo-Literature 203" to begin.

The professor stepped back, smoothed his tunic, crooked four books in his left elbow and made his entrance. Four swift strides brought him to the lectern and, for the thousandth-odd time, he impassively swept the lecture hall with his gaze. Then he gave a wry little smile. Inside, for the thousandth-odd time, he was nagged by the irritable little thought that the lectern really ought to be a foot or so higher.

The irritation did not show. He was out to win the audience, and he did. A dead silence, the supreme tribute, gratified him. Imperceptibly, the lights of the lecture hall began to dim and the light on the lectern to brighten.

He spoke.

"Young gentlemen of the Empire, I ought to warn you that this and the succeeding lectures will be most subversive."

There was a little rustle of incomprehension from the audience—but by then the lectern light was strong enough to show the twinkling smile about his eyes that belied his stern mouth, and agreeable chuckles sounded in the gathering darkness of the tiered seats. Glow-lights grew bright gradually at the students' tables, and they adjusted their notebooks in the narrow

ribbons of illumination. He waited for the small commotion to subside.

"Subversive—" He gave them a link to cling to. "Subversive because I shall make every effort to tell both sides of our ancient beginnings with every resource of archaeology and with every clue my diligence has discovered in our epic literature.

"There *were* two sides, you know—difficult though it may be to believe that if we judge by the Old Epic alone—such epics as the noble and tempestuous *Chant of Remd*, the remaining fragments of *Krall's Voyage*, or the gory and rather out-of-date *Battle for the Ten Suns*." He paused while styli scribbled across the notebook pages.

"The Middle Epic is marked, however, by what I might call the rediscovered ethos." From his voice, every student knew that that phrase, surer than death and taxes, would appear on an examination paper. The styli scribbled. "By this I mean an awakening of fellow-feeling with the Home Suns People, which had once been filial loyalty to them when our ancestors were few and pioneers, but which turned into contempt when their numbers grew.

"The Middle Epic writers did not despise the Home Suns People, as did the bards of the Old Epic. Perhaps this was because they did not have to—since their long war against the Home Suns was drawing to a victorious close.

"Of the New Epic I shall have little to say. It was a literary fad, a pose, and a silly one. Written within historic times, the some two score pseudo-epics now moulder in their cylinders, where they belong. Our ripening civilization could not with integrity work in the epic form, and the artistic failures produced so indicate. Our genius turned to the lyric and to the unabashedly romantic novel.

"So much, for the moment, of literature. What contribution, you must wonder, have archaeological studies to make in an investigation of the wars from which our ancestry emerged?

"Archaeology offers—one—a check in historical matter in the epics—confirming or denying. Two—it provides evidence glossed over in the epics—for artistic or patriotic reasons. Three—it provides evidence which has been lost, owing to the fragmentary nature of some of the early epics."

All this he fired at them crisply, enjoying himself. Let them not think him a dreamy litterateur, nor, worse, a flat pre-

cisionist, but let them be always a little off-balance before him, never knowing what came next, and often wondering, in class and out. The styli paused after heading Three.

"We shall examine first, by our archaeo-literary technique, the second book of the *Chant of Remd.* As the selected youth of the Empire, you know much about it, of course—much that is false, some that is true and a great deal that is irrelevant. You know that Book One hurls us into the middle of things, aboard ship with Algan and his great captain, Remd, on their way from the triumph over a Home Suns stronghold, the planet Telse. We watch Remd on his diversionary action that splits the Ten Suns Fleet into two halves. But before we see the destruction of those halves by the Horde of Algan, we are told in Book Two of the battle for Telse."

He opened one of his books on the lectern, swept the amphitheater again and read sonorously.

"Then battle broke
And high the blinding blast
Sight-searing leaped
While folk in fear below
Cowered in caverns
From the wrath of Remd—

"Or, in less sumptuous language, one fission bomb—or a stick of time-on-target bombs—was dropped. An unprepared and disorganized populace did not take the standard measure of dispersing, but huddled foolishly to await Algan's gun-fighters and the death they brought.

"One of the things you believe because you have seen them in notes to elementary-school editions of *Remd* is that Telse was the fourth planet of the star, Sol. Archaeology denies it by establishing that the fourth planet—actually called Marse, by the way—was in those days weather-roofed at least, and possibly atmosphere-roofed as well. As potential warriors, you know that one does not waste fissionable material on a roof, and there is no mention of chemical explosives being used to crack the roof. Marse, therefore, was not the locale of *Remd,* Book Two.

"Which planet was? The answer to that has been established by X-radar, differential decay analyses, video-coring and every other resource of those scientists still quaintly called 'diggers.'

We know and can prove that Telse was the *third* planet of Sol. So much for the opening of the attack. Let us jump to Canto Three, the Storming of the Dynastic Palace.

"Imperial purple wore they
Fresh from the feast
Grossly gorged
They sought to slay—

"And so on. Now, as I warned you, Remd is of the Old Epic, and makes no pretense at fairness. The unorganized huddling of Telse's population was read as cowardice instead of poor A.R.P. The same is true of the Third Canto. Videocores show on the site of the palace a hecatomb of dead in once-purple livery, but also shows impartially that they were not particularly gorged and that digestion of their last meals had been well advanced. They didn't give such a bad accounting of themselves, either. I hesitate to guess, but perhaps they accounted for one of our ancestors apiece and were simply outnumbered. The study is not complete.

"That much we know." The professor saw they were tiring of the terse scientist and shifted gears. "But if the veil of time were rent that shrouds the years between us and the Home Suns People, how much more would we learn? Would we despise the Home Suns People as our frontiersman ancestors did, or would we cry: '*This* is our spiritual home—this world of rank and order, this world of formal verse and exquisitely patterned arts'?"

If the veil of time were rent—?

We can try to rend it . . .

Wing Commander Arris heard the clear jangle of the radar net alarm as he was dreaming about a fish. Struggling out of his too-deep, too-soft bed, he stepped into a purple singlet, buckled on his Sam Browne belt with its hostered .45 automatic and tried to read the radar screen. Whatever had set it off was either too small or too distant to register on the five-inch C.R.T.

He rang for his aide, and checked his appearance in a wall-mirror while waiting. His space tan was beginning to fade, he saw, and made a mental note to get it renewed at the parlor. He stepped into the corridor as Evan, his aide, trotted up—

younger, browner, thinner, but the same officer type that made the Service what it was, Arris thought with satisfaction.

Evan gave him a bone-cracking salute, which he returned. They set off for the elevator that whisked them down to a large, chilly dark underground room where faces were greenly lit by radar screens and the lights of plotting tables. Somebody yelled "Attention!" and the tecks snapped. He gave them "At ease" and took the brisk salute of the senior teck, who reported to him in flat, machine-gun delivery:

"Object-becoming-visible-on-primary-screen-sir."

He studied the sixty-inch disk for several seconds before he spotted the intercepted particle. It was coming in fast from zenith, growing while he watched.

"Assuming it's now traveling at maximum, how long will it be before it's within striking range?" he asked the teck.

"Seven hours, sir."

"The interceptors at Idlewild alerted?"

"Yessir."

Arris turned on a phone that connected with Interception. The boy at Interception knew the face that appeared on its screen, and was already capped with a crash helmet.

"Go ahead and take him, Efrid," said the wing commander.

"Yessir!" and a punctilious salute, the boy's pleasure plain at being known by name and a great deal more at being on the way to a fight that might be first-class.

Arris cut him off before the boy could detect a smile that was forming on his face. He turned from the pale lumar glow of the sixty-incher to enjoy it. Those kids—when every meteor was an invading dreadnaught, when every ragged scouting ship from the rebels was an armada!

He watched Efrid's squadron soar off on the screen and then he retreated to a darker corner. This was his post until the meteor or scout or whatever it was got taken care of. Evan joined him, and they silently studied the smooth, disciplined functioning of the plot room, Arris with satisfaction and Evan doubtless with the same. The aide broke silence, asking:

"Do you suppose it's a Frontier ship, sir?" He caught the wing commander's look and hastily corrected himself: "I mean rebel ship, sir, of course."

"Then you should have said so. Is that what the junior officers generally call those scoundrels?"

Evan conscientiously cast his mind back over the last few junior messes and reported unhappily: "I'm afraid we do, sir. We seem to have got into the habit."

"I shall write a memorandum about it. How do you account for that very peculiar habit?"

"Well, sir, they do have something like a fleet and they did take over the Regulus Cluster, didn't they?"

What had got into this incredible fellow, Arris wondered in amazement. Why, the thing was self-evident! They had a few ships—accounts differed as to how many—and they had, doubtless by raw sedition, taken over some systems temporarily.

He turned from his aide, who sensibly became interested in a screen and left with a murmured excuse to study it very closely.

The brigands had certainly knocked together some ramshackle league or other, but— The wing commander wondered briefly if it could last, shut the horrid thought from his head, and set himself to composing mentally a stiff memorandum that would be posted in the junior officer's mess and put an end to this absurd talk.

His eyes wandered to the sixty-incher, where he saw the interceptor squadron climbing nicely toward the particle—which, he noticed, had become three particles. A low crooning distracted him. Was one of the tecks singing at work? It couldn't be!

It wasn't. An unsteady shape wandered up in the darkness, murmuring a song and exhaling alcohol. He recognized the Chief Archivist, Glen.

"This is Service country, mister," he told Glen.

"Hullo, Arris," the round little civilian said, peering at him. "I come down here regularly—regularly against regulations—to wear off my regular irregularities with the wine bottle. That's all right, isn't it?"

He was drunk and argumentative. Arris felt hemmed in. Glen couldn't be talked into leaving without loss of dignity to the wing commander, and he couldn't be chucked out because he was writing a biography of the chamberlain and could, for the time being, have any head in the palace for the asking. Arris sat down unhappily, and Glen plumped down beside him.

The little man asked him.

"Is that a fleet from the Frontier League?" He pointed to the big screen. Arris didn't look at his face, but felt that Glen was grinning maliciously.

"I know of no organization called the Frontier League," Arris said. "If you are referring to the brigands who have recently been operating in Galactic East, you could at least call them by their proper names." Really, he thought—civilians!

"So sorry. But the brigands should have the Regulus Cluster by now, shouldn't they?" he asked, insinuatingly.

This was serious—a grave breach of security. Arris turned to the little man.

"Mister, I have no authority to command you," he said measuredly. "Furthermore, I understand you are enjoying a temporary eminence in the non-service world which would make it very difficult for me to—ah—tangle with you. I shall therefore refer only to your altruism. How did you find out about the Regulus Cluster?"

"Eloquent!" murmured the little man, smiling happily. "I got it from Rome."

Arris searched his memory. "You mean Squadron Commander Romo broke security? I can't believe it!"

"No, commander. I mean Rome—a place—a time—a civilization. I got it also from Babylon, Assyria, the Mogul Raj—every one of them. You don't understand me, of course."

"I understand that you're trifling with Service security and that you're a fat little, malevolent, worthless drone and scribbler!"

"Oh, commander!" protested the archivist. "I'm not so little!" He wandered away, chuckling.

Arris wished he had the shooting of him, and tried to explore the chain of secrecy for a weak link. He was tired and bored by this harping on the Fron—on the brigands.

His aide tentatively approached him. "Interceptors in striking range, sir," he murmured.

"Thank you," said the wing commander, genuinely grateful to be back in the clean, etched-line world of the Service and out of that blurred, water-color, civilian land where long-dead Syrians apparently retailed classified matter to nasty little drunken warts who had no business with it. Arris confronted the sixty-incher. The particle that had become three particles

was now—he counted—eighteen particles. Big ones. Getting bigger.

He did not allow himself emotion, but turned to the plot on the interceptor squadron.

"Set up Lunar relay," he ordered.

"Yessir."

Half the plot room crew bustled silently and efficiently about the delicate job of applied relativistic physics that was 'lunar relay.' He knew that the palace power plant could take it for a few minutes, and he wanted to *see*. If he could not believe radar pips, he might believe a video screen.

On the great, green circle, the eighteen—now twenty-four—particles neared the thirty-six smaller particles that were interceptors, led by the eager young Efrid.

"Testing Lunar relay, sir," said the chief teck.

The wing commander turned to a twelve-inch screen. Unobtrusively, behind him tecks jockeyed for position. The picture on the screen was something to see. The chief let mercury fill a thick-walled, ceramic tank. There was a sputtering and contact was made.

"Well done," said Arris. "Perfect seeing."

He saw, upper left, a globe of ships—what ships! Some were Service jobs, with extra turrets plastered on them wherever there was room. Some were orthodox freighters, with the same porcupine-bristle of weapons. Some were obviously home-made crates, hideously ugly—and as heavily armed as the others.

Next to him, Arris heard his aide murmur, "It's all wrong, sir. They haven't got any pick-up boats. They haven't got any hospital ships. What happens when one of them gets shot up?"

"Just what ought to happen, Evan," snapped the wing commander. "They float in space until they desiccate in their suits. Or if they get grappled inboard with a boat hook, they don't get any medical care. As I told you, they're brigands, without decency even to care for their own." He enlarged on the theme. "Their morale must be insignificant compared with our men's. When the Service goes into action, every rating and teck knows he'll be cared for if he's hurt. Why, if we didn't have pick-up boats and hospital ships the men wouldn't—" He almost finished it with "fight," but thought, and lamely ended—"wouldn't like it."

Evan nodded, wonderingly, and crowded his chief a little as he craned his neck for a look at the screen.

"Get the hell away from here!" said the wing commander in a restrained yell, and Evan got.

The interceptor squadron swam into the field—a sleek, deadly needle of vessels in perfect alignment, with its little cloud of pick-ups trailing, and farther astern a white hospital ship with the ancient red cross.

The contact was immediate and shocking. One of the rebel ships lumbered into the path of the interceptors, spraying fire from what seemed to be as many points as a man has pores. The Service ships promptly riddled it and it should have drifted away—but it didn't. It kept on fighting. It rammed an interceptor with a crunch that must have killed every man before the first bulwark, but aft of the bulwark the ship kept fighting.

It took a torpedo portside and its plumbing drifted through space in a tangle. Still the starboard side kept squirting fire. Isolated weapon blisters fought on while they were obviously cut off from the rest of the ship. It was a pounded tangle of wreckage, and it had destroyed two interceptors, crippled two more, and kept fighting.

Finally, it drifted away, under feeble jets of power. Two more of the fantastic rebel fleet wandered into action, but the wing commander's horrified eyes were on the first pile of scrap. It was going *somwhere*—

The ship neared the thin-skinned, unarmored, gleaming hospital vessel, rammed it amidships, square in one of the red crosses, and then blew itself up, apparently with everything left in its powder magazine, taking the hospital ship with it.

The sickened wing commander would never have recognized what he had seen as it was told in a later version, thus:

"The crushing course they took
And nobly knew
Their death undaunted
By heroic blast
The hospital's host
They dragged to doom
Hail! Men without mercy
From the far frontier!"

Lunar relay flickered out as overloaded fuses flashed into vapor. Arris distractedly paced back to the dark corner and sank into a chair.

"I'm sorry," said the voice of Glen next to him, sounding quite sincere. "No doubt it was quite a shock to you."

"Not to you?" asked Arris bitterly.

"Not to me."

"Then how did they do it?" the wing commander asked the civilian in a low, desperate whisper. "They don't even wear .45's. Intelligence says their enlisted men have hit their officers and got away with it. They *elect* ship captains! Glen, what does it all mean?"

"It means," said the fat little man with a timbre of doom in his voice, "that they've returned. They always have. They always will. You see, commander, there is always somewhere - a wealthy, powerful city, or nation, or world. In it are those whose blood is not right for a wealthy, powerful place. They must seek danger and overcome it. So they go out—on the marshes, in the desert, on the tundra, the planets, or the stars. Being strong, they grow stronger by fighting the tundra, the planets or the stars. They—they change. They sing new songs. They know new heroes. And then, one day, they return to their old home.

"They return to the wealthy, powerful city, or nation or world. They fight its guardians as they fought the tundra, the planets or the stars—a way that strikes terror to the heart. Then they sack the city, nation or world and sing great, ringing sagas of their deeds. They always have. Doubtless they always will."

"But what shall we do?"

"We shall cower, I suppose, beneath the bombs they drop on us, and we shall die, some bravely, some not, defending the palace within a very few hours. But you will have your revenge."

"How?" asked the wing commander, with haunted eyes.

The fat little man giggled and whispered in the officer's ear. Arris irritably shrugged it off as a bad joke. He didn't believe it. As he died, drilled through the chest a few hours later by one of Algan's gunfighters, he believed it even less.

The professor's lecture was drawing to a close. There was time for only one more joke to send his students away happy.

He was about to spring it when a messenger handed him two slips of paper. He raged inwardly at his ruined exit and poisonously read from them:

"I have been asked to make two announcements. One, a bulletin from General Sleg's force. He reports that the so-called Outland Insurrection is being brought under control and that there is no cause for alarm. Two, the gentlemen who are members of the S.O.T.C. will please report to the armory at 1375 hours—whatever that may mean—for blaster inspection. The class is dismissed."

Petulantly, he swept from the lectern and through the door.

THE END

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