SPACE SPACE SPACE

Stories selected by William Sloane

Space, Space, Space

SPACE, SPACE, SPACE

Stories about the Time when Men will be Adventuring to the Stars

Selected, Introduction and Commentaries by WILLIAM SLOANE

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For JESSIE *and* BILL
who have helped me find and choose the stories in this book

CONTENTS

9 *Introduction*

15 NO MOON FOR ME ★ *Walter M. Miller, Jr.*

42 TRIP ONE ★ *Edward Grendon*

56 TOOLS OF THE TRADE ★ *Raymond F. Jones*

93 HIDE AND SEEK ★ *Arthur C. Clarke*

111 MASTER RACE ★ *Richard Ashby*

128 DEAR DEVIL ★ *Eric Frank Russell*

184 COURTESY ★ *Clifford D. Simak*

217 NIGHTMARE BROTHER ★ *Alan E. Nourse*

255 SECOND CHANCE ★ *Walter Kubilius and Fletcher Pratt*

277 LIKE GODS THEY CAME ★ *Irving Cox, Jr.*

INTRODUCTION

Of course none of the stories in this book is true today. No living human being has ever been beyond the Earth, nor even as far as halfway up through the ocean of air to its surface in outer space. So far as we know for certain, the Earth has never yet been visited by any kind of intelligent life with a home on another planet, near or far. These things are still to happen; and so the stories in this book are all about what *may* take place sometime in the future.

There is something else about the stories you are going to read: They are all guesswork. Nobody really knows what will happen when the first spaceship leaves Earth and reaches even the closest of the heavenly bodies, which is our own Moon. No one knows for sure that there are other worlds on which life exists, or how that life would appear to us if we encountered it. The possibilities are too

vast for ordinary understanding. Our sun is only one star in a galaxy which contains hundreds of millions of stars, and yet the number of stars in our galaxy is small compared with the total number of galaxies in the universe. If Man is ever able to travel across the enormous gulfs between the stars of his own galaxy, or through the even huger gulfs between galaxies, he can only guess what he will find.

One thing is sure: The guesses are closer to the truth today than they could ever have been before, although astronomers have been studying the universe for thousands of years. At first they had to make their observations with the naked eye and with the help of the mathematics of their times. Then, only about 350 years ago, Galileo invented the telescope, and the mind of Man, if not his body, began to plunge deeper and deeper into space, until now it is possible that the end of all the galaxies has been found. The mystery of what lies beyond them is unanswerable today. It is even a question whether there is a "beyond" as we ordinarily mean the word. But in the past hundred years some of the secrets of the universe have been revealed. A thousand different instruments have been probing far into space. Science is able to interpret much of the information that is brought back; we know how hot the stars are, how far away, and that they are made of the same stuff as Earth and Earth's sun.

The conquest of space has begun. Not long ago an admiral in the United States Navy offered to put a rocket on the Moon if the money to build it were appropriated. Everybody knows that specially constructed senders and

receivers have beamed radar impulses to the Moon and caught the electronic echo back on Earth again. So, if Man has not yet landed matter on the Moon, he has sent energy there and got some of it back.

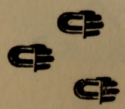
Science is continually adding to our total store of knowledge about the universe. The writers who speculate about space travel in the future have a great reservoir of facts to draw upon before they plot their stories. Indeed, they have so much technical information available that they must be at least amateur scientists in a dozen fields to avoid writing foolishly. Science fiction is a difficult and specialized kind of writing, and it is remarkable that so many authors today are able to do so well with it.

Wherever Man finally goes in space, he will find one thing that is always the same—himself. What is called "human nature" will not change very much, even in a colony of human beings on a planet of Procyon I. There will still be hope and fear, love and hate, courage and cowardice, the job well done or done badly. Just as they do on Earth, human beings will always interpret experience even in the farthest reaches of space in terms of themselves. That is why the stories in this book are all about human beings. Although some of the characters in them are beings from other worlds, if you look at them closely enough they will prove to be alive only insofar as they are derived from what the author has learned about himself and the rest of us. People are people, and all we know is in some way or other a reflection of ourselves, even when that reflection appears as remote as a radar impulse from the Moon or as abstract and grand as a scientific

equation like Einstein's famous $E = MC^2$. This is a part of his fate from which Man cannot escape even in the fastest rocket ship.

WILLIAM SLOANE

Rockland County
April, 1953



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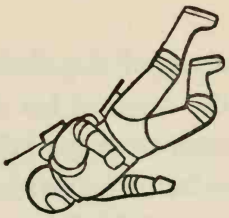


NO MOON FOR ME*

WALTER M. MILLER, JR.

★ ★
☆
★

The first voyage, of course, will have to be to the Moon. That is only logical, because the Moon is the closest celestial object and has a comparatively small gravity, so that it is a natural stepping stone to the planets and the stars beyond them. Then, too, the Moon is a safe destination; we know that it is uninhabited by any potentially hostile form of life—that is, as much as we can know anything like that ahead of time. The Moon will provide the men of Terra with a magnificent astronomical observatory and base of operations which cannot be equaled on Earth.

To a lot of people, these advantages will not seem worth the enormous cost of the first landing on Luna. Columbus pleaded for years to secure enough money to float the expedition which found a whole new hemisphere and

This story is from Astounding Science-Fiction Magazine.

changed the entire course of human history. He studied the maps of his day and of the ancients, but he had to resort to a good deal of double talk to get people to listen to him. The Colonel Denin of this story is the same kind of man Columbus was—willing to risk his whole future on a single voyage into the unknown to prove to everybody that no obstacle is too great to halt the onward sweep of the human adventure. Such men have always had to battle and plan for the things in which they believe.

But Mr. Miller has written a story with an unexpected and not altogether comforting ending. There is such a thing as being accidentally more right than you expect. Not all the surprises the travelers of space encounter will be pleasant ones. And not all the people who think they know just what to look for will have their guesses confirmed!

★ ★
☆
★

The rocket waited on the ramp at midnight. Floodlights bathed the area in glaring brilliance, while around the outer circle of barbed-wire entanglements, guards stood watching the night. A staff car crept through the gate, then purred toward a low tar-papered building where several other vehicles sat idle in the parking area. When the staff car stopped, and a middle-aged colonel climbed out, a loud-speaker croaked from the gable of the building:

"One hour before Zero. Dr. Gedrin, Colonel Denin,

and Major Long, please report to Briefing. One hour before Zero."

The colonel paused a moment beside his car and nodded to the WAC chauffeur. "Take the heap back, Sergeant. I won't need it again—not for a long time at least. And—take care of yourself."

She glanced at the building shadow of the rocket and made a wry mouth, shaking her head doubtfully.

"Sergeant!"

"Sorry, sir! I was just thinking—" She saw his frown and decided to keep her thoughts to herself. "Well—good luck, sir." She tossed him a last salute and backed away.

The colonel, a gangling man with a bony face and an unmilitary stoop, turned to glance at the cars parked before the Briefing building. There was the general's, and the long black limousine used by the Secretary of Defense. They were men who were going back to their beds this night. He eyed the rocket briefly, then strode toward the door of the Briefing building. A young major with command pilot's wings was lounging in the entrance.

"Hi, Dennie," he drawled with twisted grin. "Said your prayers?"

Colonel Denin punched his shoulder lightly in awkward greeting. "Yeah. I have got it figured out. We're just leaving it up to you." His voice was a melancholy baritone, edged as always with a slight sourness.

The major shifted restlessly, and his grin was nervous. "Now I know how the Wright Brothers felt. Dennie, I'm jumpy."

"Why?"

He nodded toward the slender black shaft whose nose aimed skyward. "Me flying that thing is like a Ubangi jumping in a Cadillac and taking off through New York traffic."

"Somebody's got to do *everything* for a first time."

The major studied Denin's dark, Lincolnesque face for a moment. "Aren't you worried?"

"Moderately. But not about your ability to fly it. The controls have been analogized to those of atmospheric rockets. And we've gotten pilotless rockets to the Moon before. You're just replacing some of the automatics, Jim."

Jim Long thoughtfully lit a cigarette and blew smoke toward the sky. "One thing bothers me."

"What?"

"You."

A faint smile of amusement twitched about the colonel's thin mouth, and his dark, deep-set eyes gathered wrinkles about their corners. "You think I can't navigate?"

Long snorted. "Don't play games. You know that's not what I mean."

"What, then?"

Long stared at him challengingly. "I think you're up to something, Dennie. I don't know what it is, but I can watch you and see it. The whole world's got its fingers crossed about tonight, and about the 'Voice.' But you're cool as ice. Cocksure. Why?"

Denin shrugged slowly. The faint smile lingered.

"Maybe I'm jumpy inside," he offered. "Maybe it just doesn't show."

Long fell silent, eying him clinically. Here was the impassioned man who had spent his life in working against bitter opposition for the launching of the first Lunar rocket. He had been a general during the last war, had helped build and launch the first pilotless rockets which had cleared Earth's gravity and helped end the conflict by the mere threat of transatmospheric attack. But then when the war was over, Congress had displayed no inclination to finance a piloted ship. The investment promised no returns. Denin had taken to the stump-circuit, speaking directly to the nation, and bitterly condemning the politicians who were consigning Man permanently to Earth for financial reasons. He had been broken in rank and suspended from the service. Now he was back, and he had won, but only because of the "Voice," blaring out of space unexpectedly, speaking a language to which there was no key.

"Maybe I'm wrong," Long grunted. "Maybe you're just tickled because you've won—if you call it winning."

Denin's smile faded. "Uh-uh, Jim," he said sadly. "*Man's* won. Not me. Space opens tonight."

"You've helped a little," the major grunted dryly. Then he paused, mouth open, thinking. "What you just said: '*Man's* won.' That's what I mean—by cocksure. A lot of people think we're going to lose—going out to meet the Voice. A lot of people don't even think

of it as 'opening space.' They think of us as a delegation, waving a white flag to a possible enemy. *What makes you so sure of yourself?*"

The loud-speaker blurted again, cutting into their conversation. "*Fifty minutes before Zero. Denin and Long, report to Briefing. Guards are requested to clear red area of all maintenance personnel. All non-coded personnel are requested to leave immediately. Red area now under secrecy quarantine. Fifty minutes before Zero.*"

"Guess Gedrin's already inside," the colonel grunted. "Let's go."

They flashed their credentials to the inside guard and strode down the corridor toward the lighted Briefing room. The pilot wore a puzzled frown.

"Dennie," he said suddenly, "Do you know what's secret aboard the ship?"

The colonel hesitated, then nodded affirmatively. "Yeah, I know."

"That why you're cocksure?"

"Maybe. If I *am*. Maybe not. You'll find out, Jim."

The others were waiting when they entered: Secretary Eserly, thin, graying, and impeccably tailored; General Werli, Commander of the Air Force; and Dr. Gedrin, linguist for the expedition. Eserly came forward to shake hands with the newcomers, then sat at the end of a long table and extracted several papers from his briefcase. He spoke quietly, informally.

"I have here your signed pledges, gentlemen. Would any of you like a rereading of them?" His blue-gray eyes flitted around the table, lingering on Denin,

Gedrin, and Long; each in turn murmured negatively.

"Very well, but let me remind you again of what you have signed. You have stated that you have no philosophic or religious objections to deliberate self-destruction if it will secure a world goal. I can tell you now, this may become necessary. Do any of you wish to modify your pledge in any way?"

Only Gedrin, a chubby, scholarly little man in his fifties, murmured surprise. Long glanced sharply at Denin, whose face remained masklike, unconcerned.

"This has been put off until the last minute," Eserly went on, "for obvious security reasons. If the beings behind the Voice became aware that we might be launching a kamikazi attack . . . well . . . it's hard to say what they might do. But even though it is the last minute, I'm prepared to release you from your pledges if you so desire."

Eserly stopped to look around again. Denin was watching the linguist like a hawk. Gedrin moistened his lips, glanced at the others, and said, "I . . . thought it was a formality."

"You wish to be released?" Eserly's voice was cold, but not contemptuous.

Colonel Denin drummed his fingers lightly on the table. It was the only sound in the room. Gedrin looked at the fingers, then met the colonel's eyes for a brief instant. A shudder seemed to pass through him. "No," he said, "no—I'll go along."

Major Long cleared his throat and met the same eyes almost angrily before he spoke to the secretary.

"I want to draw a line, Mr. Secretary."

Eserly shook his head. "We want no conditional acceptances—"

"I want to know what it's all about."

"You *know* all of it, Long. Except about the nuclear explosives in the nose of the ship. You've been briefed about finding the invader and trying to parley with him. You've been told the government's policy—an unconditional 'get off our Moon.' What you haven't been told: if the answer's no, you're to consummate your pledge."

Long looked angry. "I see. We're to home in on the Voice, land in the same crater, if they let us; and Gedrin tries to talk to them. If they're not co-operative, we blow up the whole kaboodle, including ourselves. Is that it?"

"Not quite, except as a last resort. You'll use your own judgment. If it's possible to *leave* the crater, and bomb them from above, you'll do that. But we have to make peaceful overtures. They might leave freely. If they don't, well—" He shook his head. "I want a confirmation of your pledge, Long."

"For a world goal that's worth while—*yes!*" he snapped.

"Meaning?"

"Meaning *not* for a childish goal!"

Eserly looked shocked. He glanced at the others. General Werli spoke sharply. "Suggest you temper your language, Major."

"Let him speak," Eserly said. "Go on, Long."

The pilot plucked at a splinter on the table and glowered at it. "We've been hearing 'the Voice' on

ultra-high-frequency bands for years now. You say it's trying to contact us. Well, it must be pretty patient, to keep talking that gibberish without an answer. All we know about it is: it's on the Moon. Telescopes don't pick it up. We can't decode the language without a key. Our only answer to it is this rocket."

"What are you getting at, Long?" Denin asked unexpectedly.

"*You,* Colonel," Long barked.

"What are you talking about, Major?" Eserly growled.

"Just this. Dennie fought all his life for this rocket. But the rocket isn't meant to be an answer to his fight. It's meant to be an answer to the Voice. The world wants to kick an invader off the Moon. Why? Is it because the world wants the Moon as a stepping stone to space? Or is it just a case of: 'If I don't want it, you can't have it either'? That's what I mean by a childish goal."

"Is that all that's bothering you?"

Long slapped the table and reddened. "*All!* What do you mean *all?* You want us to sit on a U-bomb and detonate it maybe. What are we doing it for? If it'll help Man get to space, I'm willing. But I'm *not* willing to do it just on principle; not unless the government's going to use a Lunar station after we clear the ground! Yes, that's *all.*"

He glared defiantly at both the secretary and the general. He glanced at Denin. The moody colonel had been smiling sardonically throughout the burst of irritation.

But Eserly looked relieved. "Don't let *that* bother you, Long. Stop and think a minute. Some extraterrestrial life form is on our satellite. Where it came from, nobody knows. Very possibly, it's been sitting there watching for a long time. When we hit the Moon with projectiles, it started trying to contact us. Very well, we respond through you. No matter what you do up there—even if you have to destroy yourselves—we know now that there *are* extraterrestrial life forms. And they might come again. We're pretty well forced to establish a Moon garrison."

Long thought about it for a moment and began nodding. "Sorry," he grumbled. "That makes sense. I guess I'm on edge."

"You reaffirm your pledge?"

"Sure, chief."

"That's about the only purpose of this briefing then. You've had all your other instructions. And when you land, you'll be on your own. The decisions you make must come from your own judgment, unless you have a chance to contact us—which I doubt."

Eserly began a brief rehash of the technical instructions. Long was pilot and ship's commander while in space. Gedrin was spokesman, once the invaders were contacted, and as long as negotiations proceeded peacefully, he was to act as chairman. Colonel Denin was to navigate, serve as ship's engineer, and take charge in the event of hostility. His would be the duty of detonating the kamikazi cargo, if such became necessary or advisable.

"*Thirty minutes before Zero,*" announced the public address system.

"That's all, men," Eserly grunted. "Get your gear and get aboard. Good luck." He glanced toward the doorway. "Chaplain, would you—"

A hoary-headed officer who had just appeared nodded quietly. The crew stared uneasily at the floor. The chaplain crossed himself. "In the name of the Father, and the Son, and the Holy Ghost—"

Soon they were striding across the brightly lighted ramp toward the ladder and the open hatch. Denin, having fought for this moment, was solemn, perhaps bitter, moving with his usual ungainly stride, his dark face waxen and heavy. The short rocket pilot strutted a little, gnawing on a wad of gum, and waving to spectators beyond the fence. "I'm still nervous!" he confided to the tall colonel.

Gedrin said nothing. He seemed frightened, and drawn into his shell. His plump face was mottled pink from the exertion of carrying his space gear, and he looked as if he wished he had never left the classroom.

"What do *you* think the Voice is, Dennie?" Long called back as he climbed the ladder.

"I'm not guessing."

The pilot chuckled. "Probably a dame with a flat tire, yelling for help."

Gedrin looked startled at the jest. "On the *Moon?*" he muttered thickly.

Long stopped climbing. He looked back at Denin

and slowly shook his head. Gedrin obviously wasn't going to be of much use to them.

"Hurry up," Denin snapped.

They climbed slowly, and disappeared into the compartment. A loading officer followed, saw that the hatch was secure from the outside. "Seven on the first shot," he muttered, and paused to chalk a pair of dice on it for luck.

"Five minutes before Zero. Clear the blast area. Five minutes before Zero."

Inside the cabin, the three men lay prone on the gravity padding, waiting for the signal. The controls and the navigational equipment were suspended overhead, so that the men could reach them while lying face-up toward the nose of the ship. Gedrin's position was to one side. His eyes were closed and his lips were moving.

"Why do you keep watching him, Dennie?" Long whispered to the colonel.

"He may blow his top. Keep a wrench ready to club him."

Long shook his head. "Six Gs will hold him down."

They waited silently in the dim light from the instrument panels.

"This feels like a circus stunt," Long grunted. He tightened his hand, fingers spread wide, and looked at it, watching for a flutter.

"Afraid of being afraid?"

"Yeah, guess so. I could use a drink."

"Who couldn't?"

"Yeah. Well—everybody's invited to my place when we get back. We'll have a few—"

"*If* we get back," Denin murmured.

"*Good-by, good-by, good-by!*" shrilled a voice.

"What the—!"

"Gedrin." Colonel Denin nudged the linguist with his toe. "*Gedrin!* Snap out of it!"

"Huh . . . wh-what?" quavered the linguist, opening his eyes.

"You a hysteric?"

Gedrin sputtered a protest and fell silent. His face was righteously angry, as if he failed to realize that he had cried aloud.

"*Two minutes before Zero.*"

"Keep your hands in your pockets, Gedrin," Long warned. "You, too, Dennie. Hands off the controls. Black out if you can. We're just riders until we shed the last booster stage."

"You mean you won't be controlling it?" the linguist whimpered.

"Nobody piloted a V-2, did they? After we shed the last stage though, then I can take it."

Breathing became audible in the small hot compartment.

"We don't know what we're doing!" Gedrin gasped. "Nobody's done it before. We don't *know*."

"Shut up, you sniveling coward!" snapped the colonel.

"Take it easy, Dennie!" Long whispered.

"Only way to settle him," Denin murmured without

interest. He stretched his long arms, grinned a little, and folded his hands behind his head.

"Cocksure! Why—?"

"One minute before Zero. Charging-pumps, please. One minute before Zero."

Long's hand started toward the panel, then paused. "I feel small!" he gasped. He slapped the switch angrily. A motor wailed mournfully up to speed.

"Good-by, good-by!"

"Stop it!"

"Ten years jockeying rockets. Wonder why I never got married."

"Forty seconds. Ignition spark, please. Forty seconds."

Long cursed and slapped at the panel again. An angry *chug* rocked the ship, followed by a frying roar.

"No, no, no," whined the linguist. "Stop, please—go back."

"Quiet, you fool! We're not off the ground yet."

Gedrin yelped and slipped off the couch. He started for the crawlway to the hatch. Denin moved like a cat, rolling after him. He caught the linguist's ankle and hauled him back. Gedrin collapsed under a short chopping blow to the temple. "You can't get out, the ladder's down," the colonel explained to the limp body as he dragged it back into place.

"Your hour of triumph," the pilot muttered sarcastically.

"Couldn't help it!" Denin snapped. "He'd have broken his neck."

"You're eager, boy! Too eager for me."

"Zero time! Main pumps, please! Zero time!"

The pilot laughed grimly and reached out to do the radio's bidding. "Shall we go, gentlemen?"

The fuel pumps raged, drowning the ship with their din. The growl became an explosive roar of sound, engulfing them. The growling monster pressed them heavily into the padding. Man became sky-borne.

"What day is today?" shouted Long.

"September 9, 1990."

"Should remember it. Historic day." He paused. "All those nines—nine, nine, ninety. Ring of finality, eh?"

"Precedes the millennial number."

"Unless it's like a speedometer. Just goes back to zero."

"Don't worry about the invaders," Denin called. His eyes were closed, his big face calm. Too calm, Long thought suspiciously.

He lay thinking about the Voice—the *twitter, cheep, cheep twitter* that had been coming intermittently from the Moon, interspersed with long silences and variations in theme. For years the world had listened and shivered, and had grown angry, angry enough to build this ship which might otherwise never have been built. *Hunt them down and find out what they want!*—was the command issued to Denin and Gedrin and Long.

It was impossible to decode the twittering language without some sort of clue or key. There was no Earthly tongue to which it could be related, no starting point for linguists. The government had built a

station and had tried to answer. The venture had been useless.

What were the Outsiders doing? Mining? Observing the Earth and its inhabitants? There was no satisfactory answer.

There was a sudden lurch, then a cessation of sound. They became weightless. Muttering excitedly, Long shoved himself out from beneath the panels. "We shed the last combustion stage!" he barked. "Help me with the nuclears!"

Colonel Denin was already pulling his lanky frame out into the cramped standing-room of the small compartment. They walked with their hands feeling for new controls, fumbling about in the gravityless ship.

"Hurry before we drop back into air."

"Not much chance," muttered the colonel as he nudged a lever to quarter-scale. A sizzling throb passed through the ship.

Long's head ducked low to peer into a set of eyepieces. "Back it off a little!" he yelped. "Tube's getting red."

"Can't, man! Get your focusing voltage higher."

Long jerked a red knob down, pushing himself toward the ceiling. He clawed his way to the floor again and found the eyepiece.

"How's she look?" Denin called.

"Nice! Tight stream! Red's fading. Give us the juice."

"Keep watching it!" Denin eased the lever slowly forward. The reactors began whispering, purring, then

singing a bass note. Weight returned as acceleration mounted. Soon they were standing normally.

"Hold it! Beam's spreading a little!"

"Got to go higher." The colonel pressed relentlessly at the handle. "Still a few air molecules around. They defocus it."

"She's getting red again!"

"When it gets white, let me know. Then you can jump if you want to."

Sweat was leaking from Long's face and tracing black streaks down the rubber eyepiece. Denin watched him for a moment, then let the reaction-rate stay steady. The acceleration needle sat on 1.5 Gs. The radar altimeter floated past five thousand miles.

"Beam's tightening—tubes cooling off." He lifted his head and waggled it at Denin. "That mean we're safe?"

"Safe from atmospheric defocusing."

Long staggered to the controls and began making adjustments according to the prearranged course. The accelerative-gravity shifted slightly, rocking the floor to an uphill grade, then settled back as before. Denin plotted a check-point, then went to feel Gedrin's pulse. The man was still drowsing and groaning.

"He'll come around in a little while."

Long turned to shake his head and grin relief. "Thank God that's over! Now tell me what happened."

"Our jet's positively charged—helium nuclei. It focuses, like a cathode ray in an oscilloscope tube.

If we don't keep it in a tight stream, it can vaporize parts of the ship. A few air molecules defocus it. Something like when you get a gassy tube in your radio."

Long looked puzzled. "I never understood. We squirt out alpha particles for a rocket jet, but what keeps a negative charge from building up on the ship?"

"It leaks off. Pair of electron guns on the hull."

"Another thing—if the alpha stream doesn't touch the tubes, what does it push on?"

Denin chuckled. "It pushes on the field that focuses it. Just think of the ship as a flying cathode-ray tube with no return lead, and with helium atoms instead of electrons. Of course that's like comparing Niagara to a leaky faucet, but—"

The major shook his head. "Never mind, Dennie. As long as the right thing happens when I shove the right stick—that's all I want." He stared at the colonel for a long moment. "Now that we're out here, why don't you tell me what's on your mind?"

For an instant, the colonel's eyes gazed thoughtfully at the wall. But his mouth tightened, and he shook his head. "Let's have a look behind us," he growled, and began cranking aside the outer steel plate that covered a viewing port.

They stared at it for a long time—a bright crescent, fading through twilight grays into a dark globe.

"Mother of Man," Denin murmured. "We're weaned, Jim."

Long turned to look at the awkward dreamer. What he saw made him go back to his controls. There was too much triumph in Denin's face. Too much triumph

for a man who should know that Man's weaning might depend entirely upon the whim of the creatures of the Voice.

"Sorry I slugged you, Geddy," Denin growled suddenly.

Long looked around to see Dr. Gedrin sitting up. The chubby linguist looked bewildered. He listened to the whine of drive for a moment, then rolled back on the padding as if to sleep. The rocket rushed Moonward amid monotonous silence. Long occasionally glanced up at the compartment's ceiling. Somewhere overhead, the suicidal charge was stowed. And Denin's gloominess seemed to indicate that he expected to use them. Gloom and triumph rolled into one.

Long glanced at his watch. "Schedule says three more hours. We living up to it, Dennie?"

"Yeah. We're cutting the drive in a few minutes."

"What do we use for gravity?"

"Centrifugal force. Start her spinning."

"And sit on the walls?"

"Yeah."

"Hm-m-m—I'm going to start listening on the U.H.F."

"For the Voice? Don't bother."

Long stared at the colonel for a long time. "Our instructions say—"

"Don't bother."

"Why?"

Denin looked up with a sigh. "Because I know exactly where to look for it."

"You *what? How?*"

"Because I put it there."

There was a long silence. Gedrin stirred on his cot, peered at the colonel, then uncomprehendingly turned his face to the wall. Denin's fist was in his pocket; and he was armed. So was Long, but he kept his hands relaxed and watched Denin's grim face.

"The pilotless rockets!"

"The pilotless rockets," Denin echoed. "And a transmitter, and some timing devices, and—"

"And the Voice is a wire recorder."

The colonel nodded. His eyes were narrowed and alert, watching the pilot carefully.

"Why did you do it?"

"The Lunar rocket is underway, isn't it, Jim?"

"Not a nice trick to play on Congress and the taxpayers. This bolt bucket cost three billion bucks, if you count all the research that had to be done. You have ceased to be a popular man, Dennie."

"Not at all. I imagine they'll think of us as martyrs. They'll never know, Jim."

Long's eyes darted toward the ceiling.

"That's right. A kamikazi mission. They see the flash on the Moon. We died to get rid of the invaders. And so they build a Lunar station—to prevent any more invasions."

Long started to his feet. A gun appeared in Denin's hand. Long sank back in his seat.

"I hope you'll accept the situation, Jim. But I really don't need a pilot."

"No, I guess you don't. Any kind of landing would do, wouldn't it?"

"Even a crash."

Long thought for a moment. "Why this twilight-of-the-gods effect, Den?"

"What do you mean?"

"Why not dump the explosives in a bomb run, then head back for Earth? We can keep silent."

Denin hissed his disgust.

"All right, if you don't trust us—we can land at night, just off the African coast, say. Let the rocket sink. Swim ashore. Hit the jungle. They'd think we died in the Lunar explosion."

"Save your breath. And your tricks."

Long turned back to the controls, thinking quickly. Denin had spilled it because he could no longer contain it. That meant doubt, or guilt. He could have waited until the ship landed. It would have been safer for him.

"You think I'm wrong, Jim?"

"I think you're nuts."

"Space is opened. I'm nuts because I tricked the world into space? O.K., maybe. So was the first ape to come down out of his tree."

Gedrin suddenly sat up. The colonel shot him a sharp glance, taking his eyes from the pilot. Desperately, Long struck out for the stabilizers.

The ship lurched. The gun exploded, and a bullet ricocheted from the control panel to imbed itself in the wall. Gedrin screamed. Long wrenched the stabilizers hard, throwing the ship into violent twists. The acceleration jerked him down, then up against the safety belt. Bodies slammed about the cabin. He

kicked the drive to four Gs. Then, sagging in his seat he risked a look backward. Denin lay pinned to the floor by his own weight, and a trickle of blood leaked from a gash in his forehead. Gedrin was sprawled in the corner, one leg twisted unnaturally.

The pilot eased the acceleration back to normal, scooped up Denin's gun, and broke out the first-aid kit. "Cocksure," he grunted as he taped the engineer's wrists and tended the gash. "Too cocksure."

Denin came awake just before the landing. He strained at his bonds for a moment, glared at the pilot, said nothing. Gedrin was resting in a fog of morphine, pawing dumbly at a splinted leg.

"We're coming in on your transmitter," the pilot grunted. He switched the signal into the speaker, and for a moment the cabin was alive with the twitter of the Voice that had tricked the world.

"You going to land?"

"Yeah."

"Why? You mean to spoil it. Why not just turn back?"

"Stop snarling, Den. We're going down to turn it off. And I want to see how you managed to get it down without shattering the transmitter."

"It landed," Denin said tonelessly. "I told you—you just replace some of the automatics."

"How did you get the stuff aboard without suspicion?"

"The men who made it didn't know what it was for. The men who loaded the crate thought it was an atomic warhead. And I set it up personally. Two men

were bribed. They died since. Naturally, I might add."

"Who paid?"

"The government. The men bribed were accountants."

"It must have taken a lot of juggling."

"It did. It is worth it, or *was.*" Denin paused, staring at Long with lusterless eyes. "I hope I get an opportunity to kill you."

"It was your mistake, Den—telling me too soon."

Denin glanced toward the viewing screen, now entirely covered by the white face of the Moon—grim, pocked with the crescent-shadows of craters. His voice grew tremulous. "Man's destiny should lie in space. He may never come again. You're consigning him to Earth."

"Why? I don't see that."

"The cost, you fool! What reason has he to go? Not for economic returns. That's been established. Unless he has another reason, he'll stay Earthbound. I tried to *give* him a reason."

"A phony one. Uh-uh, Dennie—you don't trick people into their destiny."

"Why not? Ethics?" Denin's voice was acid.

Why not indeed, Long thought. Ninety-nine per cent of humanity would always remain Earthbound, and would derive no profit from space. Yet, that ninety-nine per cent would have to foot the bill. The price of getting a few ships into space—and some day to the stars—the price was sacrifice. Sacrifice of the many for the few. And the many wouldn't like it—as they had undoubtedly disliked building pyramids,

and temples, and Towers of Babel for the amusement of kings.

"Yeah, ethics," he murmured.

Landing in the faint gravity was an easy job. The strength of the Voice's signal was blocking the set as Long let the ship slip down on the auxiliary combustion-rockets. The transmitter was not in a crater, but on a wide, sun-parched and airless plain. The settling rockets fanned out huge clouds of white dust as they stung the surface. The dust fell rapidly, unsupported by any atmosphere.

Long stood up and reached for a pressure helmet. They had worn the heavy fabric suits while in flight. He started the air-compressors and gathered up a length of hose, then paused to glance down at the colonel, "You can come, Dennie—if you want to. I'll untie your feet."

Denin shook his head glumly.

Long shrugged. "O.K.—but I'm making sure you stay away from the detonator." He dragged the bound man to the bulkhead and taped his feet to a brace. Then he opened the port covers, letting the angry sunlight sweep through the compartment. The pilotless missile lay on its side, fifty yards from the ship. Its hull was cracked, but sweepmarks in the Lunar dust spoke of a successful landing.

The pilot was gone a long time. Through the port, Denin watched him bounding about the missile in long slow leaps. The colonel strained at his bonds, and

tried to saw them on the sharp edge of the brace. Gedrin was moaning on his cot.

"Gedrin!"

There was no answer. The colonel called again in an angry bellow. Gedrin stirred and looked up. "Where are we?" he groaned.

"Luna! Now listen to me if you want to live!"

The linguist whimpered in fright.

"Long's outside," Denin went on. "You hear that motor running?"

Gedrin's head wobbled dizzily. It might have been a nod.

"Those are the fuel pumps," the colonel lied.

"Huh?"

"Long forgot. Left them on. The tubes may fire accidentally."

Gedrin was ready to believe anything, but he failed to comprehend. Denin grumbled a curse and tried again.

"Just listen to me," he barked. "Listen! If you want to live, you'll have to get up and cut the switch. The switch. You understand?"

"Switch? Which?"

Denin nodded toward a panel. "The red double-toggle with the safety guard around it. You've got to get up."

Gedrin shook his head as if to clear it. He raised himself up a few inches and stared at the colonel. "You're *tied.*"

"Long lost his head! You going to let us die?"

Gedrin wheezed in pain. "My leg. I can't."

"You've *got* to. Roll off the cot. Gravity's faint. You won't get hurt."

The linguist shoved against the wall, and yelped as the light push carried him over the edge. He hit the floor with a light thud. The splint shifted. He screamed, then slumped back.

"Gedrin!"

It was useless. The linguist had fainted.

"You'd go to any lengths, wouldn't you, Dennie?"

Denin looked up to see the pilot coming through the crawlway. He scowled and said nothing. Long's face was white, and his hands were trembling as he removed his helmet. He seemed to be struggling to control some seething emotion. He moved quickly to the panel, fumbled beneath it for a moment, and jerked a wire loose from the red detonator switch. Then he began cutting Denin's bonds.

The colonel muttered in surprise.

"You're going outside with me," Long told him. "Get the camera equipment. We've got work to do."

"What?" Denin snarled. "Take pictures of the Voice? Evidence for my trial?"

The pilot shook his head and paused to light a cigarette. "They'll probably try you. But I think you'll get off light." He eyed Denin grimly. "Ever hear of ducks on the Moon?"

"What are you talking about?"

"Duck tracks, they look like. All around your rocket. And the dustmarks where another ship landed."

Color drained slowly from the colonel's face. He

came to his feet and pressed his face against the glass, peering outside.

"They've gone," Long went on. "Apparently left just after the missile landed. See that black patch over on the hillside?"

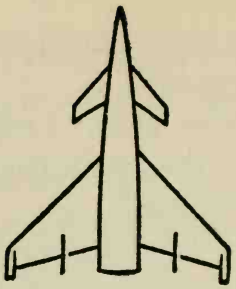
Denin didn't answer. He was reeling slightly.

"I think it was a mine shaft," the pilot told him tonelessly.

The man who had tricked humanity into space suddenly slumped. He sat down on the floor and began laughing wildly.

"I—want to go home," whimpered the awakening Gedrin. "No Moon for me!"

Long eyed the linguist coldly. "You've got it, fellow. Like it or not."



TRIP ONE*

EDWARD GRENDON

★ ★
☆
★

Only a handful of people will be able to make the first trip to another world, even if it is a neighboring planet. Maybe the line will form on the right, and everyone will want to go. Maybe; but here is a story about one of the reasons why we Terrans may not want to launch the first interplanetary flight—that is, when we come to think more carefully about it.

The author of this story is not exaggerating the danger. In the Middle Ages, the Black Plague killed from a quarter to over half of all the people in Europe, and at the end of World War I many millions of men, women and children died of what was then called influenza. Both these terrible events came about when the population of Earth was subjected to a "new" disease against which most people had

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no immunity. Who is to say that there are no diseases on the other planets?

Almost certainly, that will not deter the people whose eyes are fixed on the stars. They will go anyway, and run the risk. But what about the danger of bringing back a plague that may wipe out most of the population of Earth?

★ ★
☆
★

When she was all ready to go we were afraid to send her. Sometimes it's like that; you have problems and you worry about them for years. Then they are all solved for you and it's the big chance. It's what you have been waiting for—and then it falls apart. It wouldn't be so bad except for the letdown. They build you up and knock you down.

The ship was beautiful. A hundred and ten feet long and shaped like a hammerhead shark. She was named *The Astra.* One problem after another had been settled. Propulsion was the first big one to be put away. Ingeline took care of that. Ingeline was the fuel that Walther developed in Germany just at the end of the war. He developed it so that a submarine could outrun a destroyer. Thank God, the Nazis never had a chance to use it; but plenty of uses were developed later.

The second problem we solved was cosmic rays. We had sent up rocket after rocket carrying sheep and monkeys until we figured out how to protect them. The other problems went fast—oxygen, navigation, land-

ing and the rest. We had the backing of the United Nations Science Foundation, and those boys were good. We had sent the ship around the Moon as a test under gyroscope control, full of chimpanzees and orangutans as test freight. Every one of them came back in perfect condition. The automatic cameras got some photographs of the Moon's other side. The photographs looked just like this side of the Moon to everyone but the astronomers, but we didn't care. We were looking forward to the big one—Mars Trip One. Everything had been checked and set and now it was all off.

When Jerrins over at the Research Council phoned me I had an idea it was bad news. Jerrins and I knew each other pretty well and I knew from the tone of his voice that something was wrong.

"I'm coming over, Jake," he said. "Just hold everything until I get there."

We were set to pull out for Mars in twenty-nine hours so we were pretty busy. "What do you mean, hold everything?" I asked him. "Hold what?"

"Just that. Hold everything. You might as well stop loading supplies because you ain't goin' nowhere. Be over in an hour," and he hung up on me.

I didn't get it. Ten years' work, twenty million bucks spent, and we weren't going. I figured I'd better not tell the boys and just let them go on loading up. It couldn't do any harm to wait an hour.

Fifty minutes later Jerrins pulled in. I knew he'd flown from Washington rather than try to explain by phone, but I couldn't think about anything. I yanked

him into the office, slammed the door, opened it and yelled "No visitors or calls" in the general direction of the switchboard, and slammed the door again.

"O.K., Warren, what's the dope?" I asked.

He sat down, lit a cigarette and said: "The trip's off for good. It's final, irrevocable and that's all there is to it. I've been with the U.N. Subcommittee on Interplanetary Travel all afternoon. There is no question about it. Finis. Period. Stop."

Finally he told me the whole story. "It's this way, Jake," he said. "It's not a question of not *wanting* to go. Everyone wants the trip to be a success. It's a question of being afraid to go. And I agree. There's too much risk." He stopped for a moment. "You didn't know it and I didn't know it until now, but a lot of the biology boys have been worrying themselves sick ever since the planning really got started. We haven't thought much about their problems and they have one big one. The U.N. has let us go on beating our brains out because they wanted space travel and they hoped a solution would be found. They wanted space travel so bad that they were willing to put all this money and energy into it in the hope that something could be done; some answer would be found at the last minute. But the bio boys report no can do."

He stopped, lit a cigarette, leaned across the desk and shoved it into my mouth. Then he leaned back, lit himself another and went on.

"They let the Moon trip go because we weren't landing anywhere. That's O.K. with them. As long as the ship just stays in space it can come back and land,

but once it's landed on another planet, it can't ever come back here. That's final. The U.N. is agreed on it and we work for them. As a matter of fact, I agree with them myself."

I started to sputter, thought better of it, leaned back and tried to focus my mind. A: Jerrins was a good man and wasn't crazy. He was sorry for me. Come to think of it, I was sorry for him. This must nearly have killed him. B: Our bosses weren't crazy. They were bright, trained men whom the U.N. had selected. Space travel was strictly a U.N. proposition. It was too explosive for any single nation to get to Mars first and the U.N. had the power now to take over. Ergo there must be a good reason why we couldn't go. Also I knew it concerned the microscope and dissection gang. That was all I knew, and I was chief engineer in charge of building and was going to be—would have been—chief engineer and captain on Mars Trip One. So—I relaxed, stamped out my cigarette butt and said to Jerrins: "Well?"

He grinned. "You collected yourself fast. It's this way. Do you remember what happened to the Incas? They were a pretty big gang until the Spaniards came in with European diseases. The Spaniards had built up a fairly good immunity to them but the Incas died like flies. They had no immunity. By the same token the Spaniards died of yellow fever, dengue and what not, stuff the Incas had some immunity to." He was speaking very slowly now. "There were diseases in Europe and diseases in South America, and each killed people from the opposite continent. People who

hadn't built up immunities by selective breeding and by little doses of the disease when they were children. If there were diseases on two different continents that were deadly, what about diseases on two different planets? Suppose you can land on Mars. Suppose you can get back. How will you know you're not carrying something that will kill you six months later? Or sterilize you? Or kill off the whole human race? When can you ever be sure something isn't incubating inside the crew that will make them ten thousand times worse than Typhoid Mary ever was?"

He stopped and didn't say anything for three or four minutes. Neither did I. Outside the sounds of loading still went on. What he said made sense. Good sense. You couldn't come back. Not ever. A trip to Mars was potential death for every human being. You couldn't risk the human race. I'd always assumed the biologists could handle their end of the job and had left it to them. But I could see now why my medics had seemed worried lately. There didn't seem to be any answer to this problem.

"So, Jake," he said finally, "I ain't goin' nowhere and it can be conjugated as a regular verb. You ain't goin' nowhere, we ain't goin' nowhere, and they ain't goin' nowhere. It will be on the radio in a little while. You better tell the boys before that. They'll have their chance at trips later. The U.N. has O.K.'d research trips so long as they just float around. The astronomers will want more photographs of the other face of the Moon, some close-ups of Mars, and so forth. But the ship—she stays on the ground for the present."

He got up, patted me on the shoulder and walked out. Sixty seconds later I heard his helicopter taking off.

After twenty minutes of sitting there silently by myself, I stood up and went over to the mirror. I looked at myself in it and thought, *Look here, Jake, you're a big boy now and can take a disappointment. Call the gang in and get it over with.* I walked out to the switchboard and patted the operator on the shoulder.

"Hook me up to the loud-speaker, Evie. Entire plant and grounds. Give it to me in my office and then get me some extra chairs in there. About twelve will do."

Three minutes later my voice was booming out over the grounds and shops: "Attention, attention. Chief Engineer Weinberg speaking. I want all crew personnel, all chiefs of departments and all chiefs of sections in my office immediately. All other loading personnel take a thirty-minute break. All crew personnel, department and section chiefs in my office immediately. All others take a thirty-minute break. That is all."

The men who crowded into my office were a widely varying lot. They were all shapes, sizes, ages and colors. They had three major factors in common. Each was intelligent, each was highly trained in his own field, and each wanted the Mars trip to be a success, with a desire that was passionate and devoted. They filed in, tense, joking, worried. They distributed themselves on the chairs, lit cigarettes or pipes, and

waited. They knew me and knew that if I called them at this late hour something important was up. It was too early for formal speeches and they all knew I would never dream of making one in any case. It was too late for instructions; they all knew their jobs perfectly by this time. They hoped it was nothing but they knew better.

Twenty minutes later they understood. The medical section had understood as soon as I had started to talk. They had known about this for a long time but were under orders from their U.N. chief to keep their mouths shut and wait. It took the others a little longer to get it. They listened silently, thought, asked a few questions and finally just sat there looking at me. I looked at them for a long minute and suddenly realized something that made me feel wonderful: They were disappointed but not beaten.

Most of them had been on this job between three and ten years. They had worked, talked, eaten and slept Mars Trip One. But when they were told it was off they weren't in shock, they weren't in tears, they weren't licked. And this wasn't the refusal of a bunch of fanatics to face the facts. This was a team of highly trained specialists who had faith in their brains and ability and in the knowledge of their sciences. This was the cream of humanity and they knew where they were going. I remembered Don Byrne saying: "There is a wisdom beyond wisdom and a faith beyond faith."

The men were determined. They believed that Man could not be permanently stopped by anything in the

universe. And it wasn't conceit or intellectual snobbishness. Man was heading for the stars and they knew it. They had conquered other obstacles; here was one more. Each had seen apparently insuperable barriers appear in his respective science time and time again but none had halted progress for long. Man had kept expanding intellectually, emotionally and morally in spite of real and imagined hurdles. He was also going to expand and settle the planets and then the stars, and these men knew it. They were hard-headed, scientifically trained dreamers, and that's an unbeatable combination.

I felt myself relaxing and grinned at them. "Here are your instructions: All perishable supplies are to be battened down. Those supplies on board are to be left there, those in the warehouses left where they are. Put everything on the loading ramps away, either in the ship or back in storage. Use your own judgment. Tell the work crews to report for instructions each morning. They'll get paid for eight hours so long as they report in, whether or not there's a job for them. Then you make any phone calls you want to. But every mother's son of you is to be back here in one hour. Maybe the U.N. is licked, but we've got a lot of thinking to do before we are."

They filed out and I sat back and tried to think. My thoughts went round and round.

Ten minutes later I realized I was defeating my own purpose. There had been attempts to think this through from the top down before. This was a job for

teamwork. I went out to the switchboard again. Evie was still there but her ear was glued to the radio. As I came in she flicked it off and looked at me and started to cry.

"Relax, Evie," I told her. "Don't believe everything you hear on the radio. Those broadcasters are a bunch of defeatists."

She looked up startled, stopped crying and eyed me questioningly. She had mascara all over her cheeks and looked adorable. I patted her on the shoulder and said: "I want a big conference table moved into my office. More chairs and try to get comfortable ones this time. Leave the other chairs in there. Put them against the wall or something. Then phone all the alternates and tell them I want them as quick as they can get here. Phone Jerrins at the U.N. Research Council and tell him I'd like him to fly back here as soon as he can make it. Then get the kitchen on the phone and tell them I want plenty of hot coffee and sandwiches and I want *good* sandwiches—not just bread and a thin slice of ham. On second thought, just get coffee from them. Call a delicatessen in town and get the sandwiches there. We're going to have us a conference. There will be all the crew, the chiefs and the alternates, so figure out how much food we'll need and get twice as much. Then phone supply and tell them I want a small portable air conditioner in my office inside of fifteen minutes. And you'll probably be needed all night, so make any phone calls you need to get yourself a relief at the switchboard, grab some

notebooks and pencils and come inside when you're finished. And tell the relief that she will probably be needed out here all night, too."

Evie is a dependable gal as well as being ornamental, so I knew she'd get everything done. I walked down to the snack bar and bought a few cartons of cigarettes. On the way back I stole ash trays and pads of blank paper from all the empty offices. When I got back the conference table and chairs were in and the boys from supply were plugging in the air conditioner. I scattered my armload of supplies around the table and waited. I was glad I'd thought of the air conditioner. These boys could no more hold a conference without smoking than they could think without doodling, but I'd never believed in the efficacy of a low oxygen content to increase efficiency.

And the alternates were a good idea, too. Every crew member including myself had an alternate. The alternates were just as involved as we were and just as highly trained. If one of us couldn't go, the alternate was all ready to take his place. Having them would double our number and should increase the probability of our finding a way out of this. Jerrins, too, would help. He had a razor-sharp mind and we had worked together enough to know we complemented each other. Also, if we developed anything good, he was the man to sell it to the U.N. I was glad I'd asked him to come.

Five hours later we were still at it. The room was as jammed as the ash trays. We had batted around a dozen ideas—like big tanks of acid on the Moon into

which we'd dunk the ship on the way back to cleanse her; and an observation ward into which we'd dunk the crew. Or small boats and suits to be worn on Mars when the landing parties went out while the big ship floated in space. Later the small boats and suits would be jettisoned on Mars. Every plan went haywire on one major count. You couldn't guess at the characteristics of possible bacteria, viruses, fungi and whatnot, that you might encounter. Jerrins and the four committee members he'd brought back kept pointing out that there was no way of guessing at the staying or spreading powers of these hypothetical critters. The U.N. Medical Commissioner in charge of Interplanetary Travel kept hammering at it. And you couldn't take chances.

One thing that struck me about these boys was that no one ever suggested we use an idea in spite of possible risks. They didn't mind risking *their* necks, but if there was the slightest chance of bringing back infection, they dropped the idea like a hot potato. They were going to get the trip off somehow but not one of them was a sloppy thinker. A good bunch.

No one figured out the final idea. It came gradually to us all at about the same time. Carruthers, the biologist, said something or other and that was all. We stopped talking for awhile and thought it through. We looked from one to the other, from Jamieson, our physicist and atmosphere expert, who nodded "yes" to LaRoux, our agronomist, to Seivers, our psychologist, and then to the U.N. medic. All nodded "yes." No one said anything until Evie put down her pen-

cil and notebook, stood up very deliberately and came over and kissed me on the cheek. Then the uproar began.

We have a nice little community here on Mars. We've been here twelve years now. We moved out of *The Astra* four years back. The air is still a bit thin but our big atomic plants are constantly working reconverting the iron oxide this planet is covered with. Plants are growing, we have a truck farm that's not doing badly and a nursery school that's doing even better.

The U.N. psychologists and medics finally selected a hundred and twelve of us to come. Those psychologists were really rough. Every test and interview technique they could figure out. We are now nearer one hundred and fifty. Evie and I have two kids of our own and the older has all the makings of a good engineer.

Of course we can never go back, nor can our children—but, if their children are O.K., they can go back to Earth. We figure that if no bad diseases emerge in three generations, things are pretty safe here. Then we'll set up regular travel. We'll never see that ourselves but it will happen. A ship floats around Mars every three years and we communicate by heliograph. They drop supplies and mail and we blink back messages. Each time they come they drop a lifeboat with one couple on it. That way they check if any new diseases have emerged and the rest of us have gradually built up immunity to it. We've had our dis-

eases, especially the first year, and some of them were weirdies all right, but our medical staff dealt with them quickly and effectively, thank God.

There is the same quality of teamwork here that we so clearly had back in those first planning days. It's a good little culture we have here and it's part of a dream—a good dream. The last papers we had two years ago said a party planned to try for Venus soon. And someday the stars.

TOOLS OF THE TRADE*

RAYMOND F. JONES

★ ★
☆
★

There are a lot of tools in any good garage. But what if the garage were for spaceships, and if the ships came in for repair from every corner of the universe? And suppose that they had been built by hundreds of different races, each with its own set of living requirements, its own special kind of intelligence, and its own sciences never developed on Earth. Running that kind of garage will be an art.

Politics, too, is an art. We Terrans have not developed it very highly as yet. Our sciences are far ahead of our political institutions, and it's a favorite game to assign the responsibility for what goes wrong with the machinery of our government to politicians. When men have made their contacts with the races of other planets they may discover

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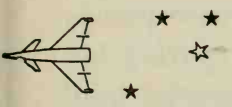
that for all Earth's skills and knowledge the inhabitants of other worlds are wiser in certain respects than Man.

Anyway, here is a story with something to think about in it. It starts with a super garage, but it is up to the reader to decide just where it ends. That depends, in part, on what he thinks of those dopes in City Hall and the muddleheads in Washington. Or are they?



The desert sun was slowly lighting the sleek, lazy backs of the ships on the field of "Joe's Service and Repair." It lit the distant hills, too, promising a day of greater splendor than it could possibly deliver in this barren land. But Joe didn't mind. He liked big plans.

From the window of his second-story office he watched. His normal working day began at dawn, and in the outer office he heard the entrance of his secretary, Mary Barnes. She was devoted to him, but her quick heel taps registered the irritation of having to rise so early.

Joe stoked the big cigar in his mouth with long, pleasurable draughts. The field was getting too small. Time for another expansion, almost, but he wondered if this time he should set up a separate location somewhere else. Concentration meant efficiency but the bureaucrats who had to keep tabs on him worried about "Joe's Service and Repair" becoming too big. Steadily, however, they were becoming smaller and

smaller fry. Soon they wouldn't matter at all—he hoped.

He marveled at the colors of the hulls. At midday most would be dingy, space-pocked gray, but now they seemed to glow with bright yellow and pink and hues of shining steel.

There was the big *Nadian*. She was having a new drive, atomic, Class Six, he recalled. Beside her was the much smaller *Iban* with new atmosphere pumps to be installed—half the crew had died getting her into the repair depot. Most of them represented tragedy, but that tragedy was less because of him.

He looked beyond the *Nadian* to the fine, golden hull that loomed even bigger a little way beyond. He squinted for recognition, bending forward until his cigar almost touched the windowpane. Then he recognized it.

"Mary! How did that royal barge get on our field? Mary—!"

She came from the outer office at her own pace, but with her morning coiffure adjustments only half completed. "I have the entry slip on the *Martremant*, if that's what you're worrying about," she said. "It was in the hopper this morning—came in during the night. It is a very big job. She was rammed by a freighter that got out of control at Capitol Field just as the First Administrator was about to take off."

"I can refuse service to anyone, and I refuse to have anything to do with those junketing politicians. Goodwill tour—bah!"

The *Martremant* was the personal ship of the Ga-

lactic Union's First Administrator. With two hundred of his commissioners, he was making a good-will tour through member galaxies. Since it was, of course, impossible to visit all, the party had honored Earth greatly, her galaxy being one of the most remote from Administration Central.

Joe looked up sharply as he became aware of Mary's silence. "Well, I can, can't I—?"

"I'm afraid not, Joe." Her brown eyes watched him seriously. "Your charter forbids discrimination, except by government ban or permission. I'm sure there will be neither in this instance. The job carries a special government contract straight from the Capitol."

"Not only do I have to fix this barge, but, as a taxpayer, I have to foot my own bill?"

"Stripped to its bare essentials, that's about it. The government is half panicky about the accident. Up to now the junket went off as rehearsed. It looked as if the support of the First Administrator had been assured for Earth's candidate when the Administrator's term expires in six months."

"Now the political plums have all turned sour because some chowderhead rams the royal barge, is that it?"

"That's it. You can bet nobody slept on Capitol Hill last night."

Joe chuckled suddenly. "Tough, isn't it? The vips will have to wait for repairs or a new ship. Wouldn't it be tough if we couldn't find or make one essential part? Of course, it would take a long time to find that out. I think I'll like this job after all."

"Why don't you just get it fixed as quickly as you can," said Mary crossly, "and get it off your mind? You breed ulcers this way."

Joe's face sobered. "All right, Mary. We'll do it your way. I think the efficiency of this office has picked up thirty percent since you came—but I wonder if we have as much fun—"

"It's not fun to hate anything as much as you do politicians."

"A person can't be sweet all the time. I don't know of more suitable use to be made of the pompous windbags."

"If I remember elementary history correctly there was a time of technological government."

"A bunch of plumbers' apprentices," growled Joe. "The gang that got in was worse than the politicians."

"That's what everybody else thought, too."

"Look, you're changing the subject." He took her arm with fatherly gentleness and led her closer to the window. "That hulk out there cost a billion, at least. Its operating expenses on this hundred-day junket are a quarter-million a day. Who pays it? Little guys like me and you. A tax on this, a tax on that—half our life and substance are dribbled away supporting those . . . those junketeers!"

"Little guys like me and you—! That calls for an increase next Thursday. Here comes Mr. Litchfield. He looks as if he has troubles on his mind. Ten to one it's *Martremant* trouble."

She retreated to her own office as the chief repair

engineer parked his scooter outside the building and started up the stairs.

Howard Litchfield looked more like a professional wrestler than a crack engineer. He carried his elbows slightly away from his body as if perpetually waiting for someone to photograph his strong-man pose.

"You've seen, I suppose," he said.

"The *Martremant?*"

"We're going to have trouble on this job."

"Why—what is it?"

"This is one of the eight third-order ships in existence. We've never had a third-order job in here before."

"So what? There are twenty other jobs out there that are the first we've seen of their exact kind. The crew of the *Martremant* can give enough of their cerebral analogues to pin it down."

"They could—if they were alive."

Joe slowly removed his cigar. "What happened to them?"

"The freighter that knocked the ship out drove through the side of the officers' quarters, and ended by almost splitting the drive chambers in two. Only twenty percent of the machinery is good. All crewmen with technical knowledge are dead. The only ones left are cooks and stewards, and they're not Radalians, who built the vessel."

"And politicians—" added Joe.

"Who won't move out."

"What?"

"That's right. The First and his commissioners are still aboard."

"What about the atmosphere machinery?"

"That's the twenty percent that's left. Each state suite is self-contained and independent. None of them got damaged."

"Well, why doesn't the government just give them a new ship and junk the old one? It would be cheaper. Don't forget who pays this bill."

Litchfield shook his head and sat down on the polished desk. "There was some mention of it, I gather, but the First wants his personal barge back in Grade A shape with not a scratch showing, so that's what he was promised. We have to deliver."

"It's not his ship, anyway. It belongs to the Galactic Commission."

"Sure—but who's going to remind him? He's the F. A."

"*I'd* like to remind him! I'd—" Joe sensed the uselessness of another tirade. He recalled Mary's advice—get the ship fixed.

"I'll help you," he announced decisively. "Let's get that thing off the field by the end of the week."

"This is already Monday!"

"A man could breed a pretty good-sized ulcer in six days."

On the small scooters used for transportation about the vast field, they sped towards the hulk of the *Martremant*. It was a squat tube of a hull about twenty

stories high and three times as long. Joe gasped at the great gash in the rear third of it.

"It would have been easier to take the tools to the job than bring that piece of junk here. The freighter must have rammed clear inside and then turned and come out sidewise."

"It exploded. That's why nobody will know for sure what happened."

Lights had been placed and Litchfield's analysis crew were already deep in the process of photographing and carefully dismantling the wreckage.

As Joe looked about, he became aware that there were others present who had no business to be—but he knew who they were.

You could tell them by the crease of their clothes, the glistening shine upon their shoes, the dainty way they reached down every so often to dust imaginary specks from their knees.

There were four of them this time. The leader approached with outstretched hand, and recognition slowly flamed in Joe's eyes.

"I'm Mr. Johnson of the President's office. Perhaps you recall I used to be in Field Inspection," he said. "These men are—"

"I remember," said Joe slowly, glancing at Johnson's graying temples. "You're the Capitol's current wonder boy. You write speeches now."

The man flushed, but he went on. "These men are Mr. Burns, Mr. Cornwall, and Mr. Hansen, who are of the Presidential Advisory Office."

Joe took the hand of each in sullen challenge.

"We tried to locate you last night to discuss the repair of the *Martremant.* We finally authorized its entry, since it had already arrived, anyway."

"I was home asleep until five and down here at five-thirty. You didn't look very hard for me."

"Perhaps you have been acquainted with the tremendous significance of this job," said Johnson.

"I have. You want it done promptly so you can all get your fingers in the big pie to be cut next election day."

The advisors' faces grew masklike. "The ship must be repaired with dispatch and accuracy, in order to minimize the inconvenience to the Commissioners and the First Administrator. We are authorized to place every government facility required at your disposal and issue a blank check for the work."

"On my account!" cried Joe. "You offer me a blank check on my own bank account just like you were Santa Claus."

"I'm afraid, Mr. Williams, that you don't understand the matter of appropriations."

"I'm afraid I do. But if you want this hulk fixed, my advice is to get out and stay out. Every hour you clutter up the field delays the work another day."

"It is necessary that we remain. The President has delegated us to be on the site and issue him hourly reports on the progress of the work."

Groaning, Joe turned away. Above their heads, he could see successive floors blasted upward and torn with jagged holes. Swaying lights and miniature shad-

ows of crewmen showed the analysis work going on in those far levels.

"Did you check the files for Radalian analogues?" he asked Litchfield.

"Yes. We've never had any in here before of that race. The First and his Radalian Commissioners have already been asked. They refused, of course."

"Naturally." Joe growled. "Who could expect a politician to let his brains be poked into? We'd find out what was behind the double-talk we get. Get a transcript of plans from Radal then."

"We already tried. They report the plans are confidential, top-secret and super secret. Therefore, they cannot be given out."

Joe stood for perhaps five seconds while his blood pressure mounted. Then he walked quietly to where the four advisors were watching. He spoke to them for approximately thirty seconds. They held a consultation and then moved towards the front end of the ship where the officials held forth in their luxurious suites.

Fifteen minutes later they emerged and went to the communications office. Within an hour the transcript of the plans was on Litchfield's desk.

It made Joe feel good. He smiled expansively at the stack of sheets.

"That is the first time I ever saw a politician who was any good in a pinch. Now, we ought to be able to go on without any more trouble. We won't even

need an analogue. Maybe I ought to go back to the office and see what Mary's got for me. If you need me—"

Litchfield listened absently. The responsibility for repair was his. The stack of sheets describing the drive was three feet high. It would be necessary to resort to cerebral absorption methods to comprehend all that mass of data, but that didn't worry him. He had opened the broad structural schematic and the stereoscopic representation of the engines as they were in place.

The tan of his face became suddenly a shade lighter. "Wait a minute, Joe. Our troubles aren't over yet. This may be the time we don't make it—"

"What's the matter now? We've got the plans of the ship. All we need to do is follow them. Anything a critter can build, we can fix."

"Providing we have the tools."

"Tools? We've got a tool department. Art Rawlins can build any tool you need."

"Think Art ever heard of the molecular spray technique?"

Joe slowly dropped his cigar into a spittoon and retreated from the doorway. "Molecular spray—it's only a rumor. You hear it at least once a week."

"Not any more is it just a rumor. These plans specify it."

Joe bent over the charts. They had been given English titling automatically during transmission. Litchfield was right. The engines were designed to be constructed by spray technique.

He knew what that meant. It was the only way they could be built. Any other construction method would require a new design for the whole power plant.

Joe knew virtually nothing of the technique. He had never found anyone who had even seen it. According to rumor, however, it was remotely akin to the printing of electrical circuits which had been common for hundreds of years.

It was a means of building up three-dimensional objects of unlimited complexity by spraying on molecules in precise streams of variable constituency. The spray was keyed by an intricate matrix system that steered automatically the tool mechanism and changed the quality of the molecules from uranium to soft putty if that was called for. It was possible to leave channels, build in wiring, and assemble parts in any degree of intimacy required by design, a degree far surpassing that possible by clumsy nut and bolt or welding techniques.

"There ought to be spray equipment aboard ship," said Joe. "If repairs were required, I understand they would have to tear the thing down and build it up again."

"Could be, but any sign of a machine shop was volatilized. As it stands, we'd have to build a factory to build the tool before we could even start on the ship—provided we could get plans for the tools."

"That shouldn't be hard. We could get them the same way we got the drive data."

"Let's try once more to get them to settle for conven-

tional drive. We can set them up with a good second-order outfit. Maybe the Presidential Advisors can put some pressure in that direction."

Joe called them in and explained the situation. They tried to look as if they comprehended what spray technique was all about, but Johnson shook his head.

"I guess we should have mentioned at first," he said, "that the Administrator asked if you understood the spray methods. We said you did, because we felt sure you would have no trouble with construction methods. He said that was fine, because his people only rented the equipment from the makers—some other race who won't let it out of their hands. The tool design is not available."

"Then we'll have to substitute," said Litchfield. "There's no possible way to obtain spray tools in any reasonable time. We can install a good second-order drive. You'll have to make it right with the First."

"You want to substitute a simpler, less efficient drive?"

"If the junketeers want to get under way in the next six years."

"We can't allow it," said Johnson. "This represents the thing the President sent us to guard against. The ship *has* to be repaired as it was."

"That represents the political mind at work under a full head of steam!" exclaimed Joe. "We can't be given the tools, but we have to do the job anyway! Now, listen—"

"Suppose *you* listen, Mr. Williams. How would it look for the First Administrator to go limping around

the galaxies explaining that he was behind schedule because his ship got wrecked on Sol III and the Terrestrians were incapable of matching his drives?

"How would it look, not only from our own political viewpoint, but from the standpoint of your technical abilities, your business? Consider the effect if it got spread around that 'Joe's Service and Repair' had muffed the First Administrator's job? In spite of my own personal distress in the matter, it is with a great deal of pleasure I view your position over a very rickety barrel.

"Good day, Mr. Williams—Mr. Litchfield."

"All right—here's the last word," said Joe. "We'll fix the *Martremant* so well that the original builders won't know it's been repaired—and by the end of the week. You may include *that* in the next hourly report to the President."

Litchfield didn't look up when they had gone. He continued to stare down at the drawing, but he spoke to Joe. "You know what you just said?"

"You bet I do! Call in all three crew shifts who'll be on the repair job. We'll give them cerebral on the drive plans. Get Art Rawlins and his whole tool crew down here. Start them making matrices from these plans.

"Then tell them to make some spray tools and get to work."

"Just like that?"

Joe's face was suddenly more bitter than Litchfield remembered it for a long time. He leaned over the

table of drawings to look out the window. The quartet of advisors seemed in a jovial mood as they went towards the ship.

"They may not represent the President's views," said Joe, "but for themselves they've already written off this crop of plums. They have given up, but they think they're going to watch us lose our shirts in this deal.

"Remember the times we beat Johnson when he was in Field Inspection? He hates our guts. They all do, because we produce, and they can't do anything but sit on the sidelines. They make believe they run the show while inside they eat their hearts out because they are so incompetent in the ordinary business of living.

"If we fail on this job, they'll see that we're blackballed in every port in the Union. The fact that we represent Terra in the field of service and repair doesn't matter any more. They figure we can be replaced."

From long custom Litchfield gave only half an ear to Joe's political tirades, but he saw that Joe was completely right this time. The politicians whose strangling regulations had been loosed by Joe's persistence were not going to let this golden opportunity go by.

Suddenly he was mad too. "The end of the week," he muttered.

Art Rawlins considered himself the biggest man on the place. Physically, he was. Joe wouldn't have tolerated the huge, slow-moving bulk in any lesser man, but Rawlins was probably the best tool engineer on the planet.

"You can't make things without tools," was his motto, "and I'm the man who makes the tools that make the machines," he finished modestly. "Without me, nobody works."

He was given the problem without the political angles. There was no dismay in his reaction. Rather, he scented in it the challenge of his career. He exhaled a happy snort of enthusiasm as Joe finished outlining the details.

"Molecular spray!" he exclaimed. "I've heard of it half a dozen times in the last three months. But no crew that has come in has ever seen it. Now we've got a ship that uses it!"

"But without analogues of the designing race, and with no plans of the spray, can you build it?"

"I don't see why not. There's not an artifact made that doesn't leave tool marks indicating the mental processes of the mind that made it—and the tools with which he built. There should be enough information in the plans of the ship to identify and build the tools."

"All right. I hope so. We're setting up a cerebral for the repair crews this morning. You'll want to get in on that with your crew. Get them into the cerebral room in fifteen minutes."

Cerebral indoctrination was a method of short-circuiting the acquiring of data. It implanted items of information directly into the cortex without sending it through the long, circuitous, interference-filled channels of the senses.

From the original data, scanning machines pro-

duced impulses exactly like the waves of a perfectly healthy brain as it thought through the problem. These impulses acted directly upon the molecules of the recipients' brains, imposing the data within.

Joe and Litchfield sat in on the session, absorbing the vast flood of information regarding the design of the *Martremant*. When it was over, they felt sure they could have designed the tools by which the engines would have to be built. But they knew it was an illusion. There was still a tremendous job of analysis to be done, and they lacked Art Rawlins' special skill in evaluating the data they had.

The repair crews filed out of the room at the end of the two-hour session. Rawlins and his men continued to sit there in their chairs, their headpieces in their laps. It was when he saw them that Joe felt the intense sinking inside him.

"What's the matter?" he said thinly. "Wasn't it any good?"

Art Rawlins' wide jowls circled downward to rest against his upper chest. "Let's run through it again, Joe. This time change the differential to get fabrication analysis instead of design and function."

The smaller group of men sat there for another two hours while the machine went through the thousands of drawings and stereoscopes once more. When the lights were on again, Rawlins was slumped still lower.

"I was right the first time," he muttered. "It's no wonder the spray technique is so scarce if the inven-

tors want to keep it hidden. Nobody could figure it out from scratch."

"Why?"

"The tools . . . the tools to make the spray—we can't make *them.*"

For about three-quarters of a minute Joe thought he hadn't heard right. Then he saw that Rawlins wasn't joking, but was perfectly serious in his absurd-sounding statement.

"What do you mean?" Joe asked. "I don't understand."

"We'd have to go down through four or five separate derivations to try to get to the basic technologies involved. By then the trail would be so faint and the variables so large that it would be meaningless."

"I never heard of taking four or five derivatives of a cerebral," said Litchfield.

"Neither has anyone else. It's never come up in such a series as this before. Look: We now have an understanding of what the third-order-drive engines are like. We know what the molecular spray tools to build them are like—but we don't know how to build the tools to build the tools with which to build the spray—and maybe one order of tools below that. See what I mean?"

Joe's voice sounded awed by this complexity that he had never imagined. "It still sounds crazy."

"That's the way it is. Take our tools. Suppose an aborigine could utilize cerebral processes to analyze a sawed block of wood, for example.

"He would first discover the need of a steel saw and would get a pretty good idea of what it was like. His next derivative would be the machine tools to make the saw. That would be pretty faint. He'd go on down to steel-making processes and discover the necessity for iron ore—but he'd never reach any geological knowledge that would show him how to locate it. He'd never get as far as the technology of smelting it or tempering it. Those items just wouldn't be there in the sawing process.

"So it is with the spray. There are at least five separate and unknown technologies that step down to any level with which we are now familiar. The chances of *our* discovering how to build a molecular spray are absolutely, mathematically zero. The information has got to come from outside, or not at all."

"Nevertheless, the ship has to be repaired and off the field by the end of the week," said Joe.

The others in the room stared at him with a sort of pity as if his mind had slipped into a rut from which it would never emerge.

"Go over it again," he said. "Try it on down to the hundredth differential if necessary. Drain it of everything it's got, and then have a try at it again. I'll see you later."

Litchfield followed him out of the analysis building into the hot sunlight of the field. Dingy, dust-colored haze hung over all the desert now and the distant hills were shaded a dirty color. He remembered the splendor of the morning and looked accusingly skyward. If any day was ever a bust, this one was.

They walked half of the mile to the site of the wrecked *Martremant* before either spoke. Then Joe stopped, looking towards the ship with grim defiance shaping his face.

"Howard," he said slowly, "in all the rumors you've heard about the molecular spray, whose name has been connected with it? Did you ever hear before of this mysterious, secret race that's supposed to have concocted it?"

"Why, no. It's always mentioned in connection with the Radalians, but I supposed that was because the Radalians appear to be the only ones using it in their third-order ships—after what Johnson reported about the First."

"I don't believe it. It's too thin. I think the Radalians themselves built it."

"That's crazy! Why would they be withholding it when we can't fix their ship without it?"

"Only the special gods of the politicians could answer that one. The whole thing reeks of the thinking of the political mind. Wherever a political deal is going on there are always lies and counterlies. In this deal, one of them is the story of the mysterious builders of the molecular spray. And there is one way we can find out with absolute certainty."

"How?"

"We'll get us a Radalian analogue."

There was a white plume of dust growing slowly in their direction from the damaged *Martremant*. At its head were twin scooters bearing two of Litchfield's analysis crew. The illusion of slowness disappeared as

the little carriers crackled up and stopped with a burst of gray dust.

"Have you got trouble?" Litchfield asked.

"Trouble!" one exclaimed. "Those crazy politicians —you've got to get them out of there."

"Where?"

"Everywhere. They're loose all over the place. They got tired of sitting in their plush staterooms so they put on pressure suits and now they're kibitzing all over the place—telling *us* how to do our jobs! The windbags—!"

"At least our friends from the President's office ought to be able to keep the vips out of our hair while we work," said Litchfield.

"Not only that," continued his crewman, "but their suit exhausts smell up the place until we can't breathe."

"You say they're trying to tell you how to do the job—?" said Joe.

"Yeah—I finished a picture of an assembly and was starting to tear it apart when one of these walking nightmares suddenly sticks out ten of his arms or legs and *garrmps* in his own language and then says, now on *my* world, young man, we perform such an operation *this* way!"

"Were any of them Radalians?"

"I don't know, but you've got to get them out of the way."

Joe turned to Litchfield. "They're trying to show the man how to do his job. What more could we want?"

"A bunch of junketing, kibitzing commissioners

won't do much good. They couldn't run the ship, let alone build it."

"No, but I'll bet if we had an analogue—a Radalian one—*we'd* know how to build the tools to build the tools to build it. We could differentiate all the way down to the most basic technology required."

"I suppose you'll just step up to the First Administrator and ask him for it."

"Something like that. I've sparred with them long enough to know something about how political minds tick. One thing they can't resist is a Tour."

The atmosphere inside the ship was foul. There were at least a score of clumsy, alien pressure suits within range of their vision as they climbed in through the rent in the hull.

Some suits were squat, some tall, some with eight appendages, some with three or four. Some were filled with liquid, others with gas of chemistry and pressure that would be instant death to a Terrestrian.

It was the exhaust from some of these that Joe and Litchfield smelled immediately. Methane, chlorine, and fluorine were the least deadly that they recognized.

And every one of the politicians was equipped with a cerebropath by which he could make himself heard and understood in order to inflict his opinions on the helpless workman nearest him.

Close by, a six-appendaged creature was earnestly instructing a workman in his job—and exuding a foul aroma that Joe didn't recognize at once. While they

watched, the workman quietly rolled over with his staring face upward.

The alien commissioner straightened in perplexity. "That fellow is incompetent. We can't allow such to work on our vessel. See that he is replaced."

And the creature marched austerely away.

Funny, Joe thought. You travel a million light-years and find creatures that look like something that should be crawling on the bottom of the sea. Even among them a politician is a politician—arrogant, demanding, and wholly ignorant of ninety-nine percent of the subjects upon which he essays to pontificate.

Joe and Litchfield hunted up the advisors and explained the problem.

"Sorry," said Johnson. "It *is* their ship, you know. If you can't stand their breathing methane down your necks, you'll just have to work in pressure suits yourselves."

In the eyes of Johnson and the three others Joe could see the grinning faces of all the host of inspectors and bureaucrats he had bested in his long career. They hated him because they belonged to a dying race of bureaucrats and he was their successor. But they had never had him bound so tightly in their red tape as now.

Direct appeal to the foreign commissioners was, of course, useless. They might retreat from their kibitzing, but they would put Earth down as an unfriendly planet of sub-sentient life on which it was not safe to have a space vessel repaired.

"All right, will you do this, then?" said Joe. "Will you convey my respects to the First Administrator and ask him if he would care for a personally conducted tour of my place? Since the repair work is well in hand, I find myself free and would be glad to be at his service."

The advisors gave him uniform, startled glances. Johnson blinked. "I don't see why not," he said, slowly turning over the idea to find the catch. "You're sure the work is in hand? We should like to report that to the President."

"You may assure him that he has nothing to worry about, but a good deal depends upon my friendly relations with the First Administrator. Will you be so kind as to introduce me?"

Suspicious still, he left and returned in a moment with a grotesque, armored hulk.

"Lochneil, the Radalian, First Administrator of the Galactic Union," said Johnson.

The creature extended one of two stubby appendages. Two others he kept wrapped around his waist —as if he were afraid he'd get his shirt stolen, Joe thought.

"And this is Joe Williams, owner and operator of 'Joe's Service and Repair'—"

Be nice to him, Joe told himself fiercely. This is the guy that can make the field look like another archaeological site if he's rubbed the wrong way.

"Glad to know you," said Joe.

"And I," said the Radalian. "Your name is known widely in many galaxies."

The old oil, Joe muttered to himself and smiled appreciatively. "Yes, we get customers from a variety of ports."

"It's comforting to know that our vessel is in such good hands. You are experiencing no unusual difficulty, I trust?"

"Oh, no. Everything's coming along fine. We are old hands at working with strange machinery. We have quite a complete system for analyzing cultural artifacts foreign to our own system."

"That's what I've been told," said Lochneil with interest. "In fact, I had hoped during this good-will tour to investigate your place. Time would not have permitted, but this unfortunate accident has forced the delay upon us. Your offer of which Mr. Johnson spoke is extremely welcome. That is, if you're not too busy, of course."

Was there ever a politician who didn't ask that fool question while he consumed the time and energies of his betters, Joe wondered. The tools to make the tools to make the tools—

It kept ringing through his head like a stupid jingle that had no end or meaning. He had to get a Radalian analogue. He was sure he was right—but if his hunch were a bust—

"We have a carrier that will make it easier than trying to walk in the pressure suit," he offered.

"Not at all. Your gravity is light. I shall enjoy the stroll."

You and who else, Joe thought, glancing towards the dust-covered pavement that seemed to be faintly

smoking in the heat of mid-afternoon. But already the Radalian was striding away.

Joe caught up with him. "That building directly across the field is the hospital. We attempt to give medical attention to all who are sick or injured when they arrive."

"Your depot is extremely far advanced to have such."

He introduced the First Administrator to Dr. Yates, in charge of the hospital. Immediately it was like old home week, and Joe was startled at the ease with which Lochneil conducted himself in Yates' presence. The old doctor was crotchety and hated people asking silly questions.

But he showed Lochneil the pressure suites where natural accommodations of temperature, pressure, and atmosphere could be supplied in an infinite variety of combinations.

For an hour the Administrator pressed him with questions about the mechanical and biological functions of the complex hospital—how they operated on creatures that couldn't be depressurized, that had to be continually in atmospheres deadly to Earthmen—

Yates answered them all with obvious pleasure.

A political trick, Joe thought irritably, the ability to appear interested in something about which you didn't give a single, minute damn. But that wasn't the answer, either, he recognized with a start. The First Administrator was actually interested in these things. He acted like a creature with a mind that could absorb such technical information.

He found himself almost pleased with the company of the First Administrator, and chafed irritably against this breach of principle.

They went from there to the great machine shops where Lochneil grilled the official in charge in a way that made old Mortenson enjoy it. The Administrator insisted on operating some of the complex fabricating tools—a twenty-ton shear, an eighty-foot planer, the giant lathes.

Next came the library and museum where vast accumulations of encyclopedic data on a hundred thousand races was stored.

"This is most complete," said the First Administrator in frank awe. "It almost is superior to our Union facilities."

The afternoon was nearly over and the sun was setting with an unembarrassed attempt to re-enact some of the morning's glory. Evening crews had come on, but Lochneil showed no signs of giving up. Joe was hungry and tired. He was afraid the First Administrator would want to read the whole library—or worse, yet, that he would suddenly decide to quit.

They had to make one more stop—just one more.

"Engineering analysis is last," said Joe wearily. "Outside of administration, that about completes what we have here—except the hotel, of course, and you wouldn't care to see that now, I'm sure."

"I must see your analysis section," said Lochneil. "That is almost legendary among starmen."

Joe led him into the building and showed him the files of tapes. "We have better than a hundred thou-

sand analogues of members of foreign races. These have all been gathered since I started the depot when I was young.

"You are aware, of course, of the basis of analogue work. It depends upon the fact that in the brain of each race are typical neural structures. The artifacts of the race are always analogous to portions of these structures. If we have so much as one percent of the data relative to a certain artifact, we can usually determine the rest by interpolation from neural analogues."

"Without the analogue your whole establishment would be virtually helpless, would it not?"

"Right. That's the key that allows the whole place to operate."

"May I see the Radalian analogues that you have on hand?"

"We have none at all of your race."

"That is most unfortunate—and even more so that we are unable to allow specimens from those of us who are present. Your request was relayed to us, but of course it was not necessary in order to repair the ship."

"Oh, no. We just wanted to increase our files. The repair work was well under way when we made the request."

"Fortunately—otherwise it might have been delayed."

Joe felt the tension of fatigue growing strong within him. "Over here," he said, "are the chambers used for interviewing and analogue taking. Would you care to

see what we can do in the way of duplicating your environment?"

"Of course."

Lochneil recited the atmospheric constituents and required pressures and temperatures.

"When the green light glows you may remove your pressure suit. I will be on the other side of this transparent wall."

Would the fool actually do it? Joe was so tired he was almost trembling. He feared his anxiety showed, but Lochneil seemed oblivious to all but the mechanical intricacies of the chamber.

Joe sealed the door and took his place in the interviewer's chair. As the green light flashed Lochneil cautiously opened a panel at the side of his face.

"Very agreeable. Like a spring day on my home world."

He stripped off the pressure suit while Joe sat as if paralyzed. The Radalian was a sleek creature who seemed covered with bright green velvet. Great wild eyes shifting at random in the bulging sockets. Scanning vision, Joe thought. He had seen it twice before, but didn't know it was in the Radalians.

The First Administrator strode about, flexing his short and long arms with pleasurable freedom from the suit.

Like a politican strutting around on a platform, Joe thought. But that wasn't right, he knew somehow. Lochneil was of a different cast from the local politicians. He spoke and talked like a man who could perform—

He sat down opposite Joe. "Extremely well done," he said. "I have not seen anything to compare with it in all my travels. I only regret our visit was at the expense of the lives of our crew."

He began fingering the panel at his side. He picked up the helmet used for analogue taking. "This is what, now?" he said.

"That picks up the neural pulses and sends them on to the recorder."

Lochneil gave a pompous *grmmf* and eyed the gadget closely.

Joe fingered the row of controls on the arm of his chair. His hands were sweaty.

If he puts it on, I'll let him have it—

He did—

And Joe did.

He blasted the brain of Lochneil with one quick flash that went deep to extract millions of neural patterns. It was a bitter technique seldom used, but possible. It differed from the ordinary recording in the same way a photograph by intense flash differs from a time picture. And it always knocked the patient out —sometimes seriously.

For a long time Joe just sat there. The great eyes of Lochneil were staring wildly and still scanning slowly —but utterly vacant.

He would be all right—Joe hoped and prayed. But he prayed also for the impossible—that Lochneil might be as completely stupid as the run of the mill politicians in regard to technical matters.

It was already much too late for that, for the First

Administrator had displayed many times the comprehension of his Terrestrian kind. And, much as he hated to admit it to himself, Joe liked the man.

He called Yates, who swore at him and left his dinner table. Then he called Litchfield and explained what he had done. The engineer swore, too, and called him a fool for pulling such a stunt.

Then Joe sat down and waited for them to come, almost convinced that their opinions of him were correct.

Yates came first and took the stiff Lochneil away with scarcely a word to Joe. When Litchfield came, Joe was examining the tapes.

"You really put the fat in the fire."

"I don't know. I couldn't think of anything else."

"You shouldn't think at all after a day like this. Let's get a drink and go home to bed."

"No—we've got to examine these analogues. If I'm right, we can start making tools to make the tools to make . . . oh, hell! we can start tonight."

"And I suppose the First won't even know what hit him?"

"Let's not speak of it now."

They took the tape into the scanning room and placed it in one of the machines. Beside it, they placed data take from the Radalian plans. Then Joe pressed the button and watched the screen. After a moment he sat back with a sigh. This was it. The Radalian analogue nailed down the molecular spray to the lowest technical level.

They didn't sleep that night, and by morning it was raining. That was appropriate, Joe thought, for the events that would certainly transpire this day.

Art Rawlins had slaved beside them all night and by morning his eyes were as baggy as his grin was wide. "We can make a spray, now," he said. "You watch!"

By dawn Lochneil had still not awakened. Joe went over to the hospital suite while Litchfield and Rawlins got things under way. Joe wanted to be alone with the First Administrator. He didn't want anyone else to have to share the brunt of Lochneil's wrath.

But the First Administrator awoke without wrath or indignation. He sat up so suddenly it almost shocked Joe. Then he grinned ruefully. At least Joe took it for a Radalian grin.

"That was a foolish thing for me to do," said Lochneil. "I didn't even give you time to warn me, did I?"

Joe exhaled—long and deep—and a slow, grim tension began building up anew within him. The Radalian intended to pose as innocent of understanding what had taken place. But Joe knew that was a lie. The questions he had heard yesterday could not have come from one too ignorant to know his analogue had been taken.

Lochneil was still playing a lying political game, and to what purpose Joe could not guess.

"Are you hurt?" he said solicitously. "We're deeply sorry a thing like this should happen. The current—"

"A slight headache is all. I'd like to return to the ship now. I feel hungry."

"Stay right where you are. Breakfast is coming up!"

On Wednesday they had the tools to make the tools to make the tools to make the spray.

On Thursday they had the tools to make the tools to make the spray.

Friday, they had the spray.

In the process, Art Rawlins had filled a hangar fifteen hundred feet long with machinery. He had taken advantage of the offer of Johnson to use available government facilities. For two solid days fleets of ships had poured machines and technicians into the place.

On the third day the single piece of equipment required to rebuild the *Martremant* emerged.

The evening shift on Friday began the rebuilding. The ship was moved a considerable distance and shielded heavily—but the junketeers refused to move. Of them all, only Lochneil was on hand to watch the process.

It was wholly automatic, but Joe had the honor of pressing the button to start the process. Inside the ship, a great backing plate had been prepared. In front of it, an intricate scaffolding held the nozzle that sprayed out a great machine, molecule by molecule.

Simultaneously, on each floor, the process went on, building the units that would drive the ship at third-order velocities.

And Joe had not yet solved the lie of Lochneil. But

he was about to, he thought. It was now or never.

He fed the heavy piles of matrix plates into the scanning chambers of the molecular spray. While Lochneil —and only Lochneil—was looking, he switched a pair of matrices.

He stepped back then, absently watching the functioning of the machine. On tube faces, they could watch the building as it proceeded inside the ship. Joe was aware of Lochneil's eyes upon him. The great scanning eyes of the First Administrator were spinning back and forth like mad radar beams.

At last, with a cry of dismay, the Radalian leaped for the controls of the machine just as the scanning of the erroneous matrix began.

He cut the power and gestured helplessly towards the matrix.

"I thought . . . it seemed . . . are you sure it's working all right?"

"Now how about the full story?" said Joe. "You've been pulling our legs ever since you came here. Why?

"You knew perfectly well how the molecular spray was to be built. You could have told us, but you played dumb. Then you deliberately sat down in the analogue chair and *gave* me the analogue I had tried so hard to get. There must be a reason, and even if you are First Administrator, it ought to be a good one."

Lochneil smiled slowly and turned to the controls. He changed the matrix and started the machine again. Then he faced Joe.

"I was quite sure you never would get the *Mar-*

tremant repaired in any reasonable time without the analogue. That's why I gave it to you. You see, I happen to be the inventor of the spray process."

Joe swallowed hard. "You . . . the spray—?"

"We came here for the prime purpose of getting information first-hand from your people about your people. The conferences and dinners and polite exchanges we were subjected to in your Capitol seemed like a deliberate barrier to prevent that. So we had planned a secret mission to accomplish what a straightforward visit seemed unable to do.

"Then, suddenly, the accident made it possible. Our kibitzing, as you called it, was quite deliberate. We wanted to observe you in natural circumstances. We wanted to observe your attempts to solve the problem without knowing you were being given the molecular spray. Your results were admirable."

"But why all this?" said Joe. "It still makes no sense. You—the spray designer, and First Administrator. We haven't a single being on our whole planet who could occupy correspondingly similar positions."

"I know," said Lochneil. "That is the tragedy of your people. We have studied and marveled over your organization since you entered the Union. You will not be flattered, I'm sure, to know that among the sociologists of more advanced civilizations you are classified as 'political primitives.' Hundreds of theses have been written to describe and explain how a culture can advance in such a lopsided manner as yours.

"Good government is simply good living, and we are

taught how to live with one another. Therefore, it is hardly startling among us that I, the inventor of the spray, should also serve a term as First Administrator. The implications of your term 'political' do not exist among us."

"Then there is no intention of choosing an Earthman for First Administrator?" said Joe.

"On the contrary, we are seriously considering the appointment. It would give you considerable political confidence as a people.

"We have watched with pleasure your progress since entering the Union. Your bureaucracy is dying at an increasing rate, and we should like to offer assistance in its replacement. There is in your language a term, I believe, that expresses somewhat the situation—wheels within wheels."

Joe got it then. The faint implications that had been present in the Lochneil analogue.

Wheels within wheels—

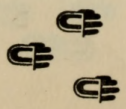
Concentric coteries of increasingly tight and advanced organizations within the vast Galactic Union. Primitive worlds, such as Earth, were allowed to believe there was only a loose federation. But they were thinking now of inviting Earth to join one of the inner circles—

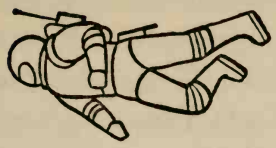
"I hope if you choose an Earthman you will get a man who can beat a politician at his own game," said Joe.

"I shall. I surely shall. He will be handpicked and trained for the position, and I have a positive recom-

mendation already to make as soon as we return to Administration Central.

"It has been a pleasure to know you and watch you at work. Exhausting all lesser alternatives, you resorted to extremities only when necessary. You operate according to correct political principles, Mr. Williams. In fact, I would say you are an excellent politician."





HIDE AND SEEK*

ARTHUR C. CLARKE

★ ★
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Not all space adventures will involve people of our own planet and alien beings. There will be encounters between Earth man and Earth man, and between men in big machines, like space cruisers, and in small ones, like space suits. It will be hard to tell the outcome of these encounters ahead of time. Size isn't always an advantage, as Mr. Clarke makes entertainingly clear in this compressed and humorous account of one such engagement.

This business of size will cause a great deal of trouble in the years of space exploration ahead. If you think about it, you will see that human beings measure everything in terms of the size of their own bodies. Even if two men have now climbed Mount Everest, the mountains of Terra are about as high as Man can go, and although no one has been to the bottom of the deepest gulfs of the sea, Man has sent his instruments there.

* *This story is from* Astounding Science-Fiction Magazine.

This is all very well, but there may be worlds too big to cope with by human standards. And perhaps, too, there are worlds so tiny that a human machine like a space cruiser will fail to fit the different scale of size. Vast though space is, it contains the small as well as the huge, and the only thing that has no size, big or little, is the mechanism for adapting to bigness and smallness with equal effectiveness —the right idea.

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We were walking back through the woods when Kingman saw the gray squirrel. Our bag was a small but varied one—three grouse, a couple of pigeons and four rabbits—one, I am sorry to say, an infant in arms. And contrary to certain dark forecasts, both the dogs were still alive.

The squirrel saw us at the same moment. It knew that it was marked for immediate execution as a result of the damage it had done to the trees on the estate, and perhaps it had lost close relatives to Kingman's gun. In three leaps it had reached the base of the nearest tree, and vanished behind it in a flicker of gray. We saw its face once more, appearing for a moment round the edge of its shield a dozen feet from the ground; but though we waited, with guns leveled hopefully at various branches, we never saw it again.

Kingman was very thoughtful as we walked back across the lawn to the magnificent old house. He said

nothing as we handed our victims to the cook—who received them without much enthusiasm—and only emerged from his reverie when we were sitting in the smoking room and he remembered his duties as a host.

"That tree-rat," he said suddenly—he always called them "tree-rats," on the grounds that people were too sentimental to shoot the dear little squirrels —"it reminded me of a very peculiar experience that happened shortly before I retired. Very shortly indeed, in fact."

"I thought it would," said Carson dryly. I gave him a glare; he'd been in the Navy and had heard Kingman's stories before, but they were still new to me.

"Of course," Kingman remarked, slightly nettled, "if you'd rather I didn't—"

"Do go on," I said hastily. "You've made me curious. What connection there can possibly be between a gray squirrel and the Second Jovian War I can't imagine."

Kingman seemed mollified. "I think I'd better change some names," he said thoughtfully, "but I won't alter the places. The story begins about a million kilometers sunwards of Mars—"

K.15 was a military intelligence operator. It gave him considerable pain when unimaginative people called him a spy, but at the moment he had much more substantial grounds for complaint. For some days now a fast cruiser had been coming up astern, and though it was flattering to have the undivided attention of such a fine ship and so many highly

trained men, it was an honor that K.15 would willingly have forgone.

What made the situation doubly annoying was the fact that his friends would be meeting him off Mars in about twelve hours, aboard a ship quite capable of dealing with a mere cruiser—from which you will gather that K.15 was a person of some importance. Unfortunately, the most optimistic calculation showed that the pursuers would be within accurate gun range in six hours. In some six hours five minutes, therefore, K.15 was likely to occupy an extensive and still expanding volume of space.

There might just be time for him to land on Mars, but that would be one of the worst things he could do. It would certainly annoy the aggressively neutral Martians, and the political complications would be frightful. Moreover, if his friends *had* to come down to the planet to rescue him, it would cost them more than ten kilometers a second in fuel—most of their operational reserve.

He had only one advantage, and that a very dubious one. The commander of the cruiser might guess that he was heading for a rendezvous, but he would not know how close it was nor how large was the ship that was coming to meet him. If he could keep alive for only twelve hours, he would be safe. The "if" was a somewhat considerable one.

K.15 looked moodily at his charts, wondering if it was worth while to burn the rest of his fuel in a final dash. But a dash to where? He would be completely helpless then, and the pursuing ship might still have

enough in her tanks to catch him as he flashed outwards into the empty darkness, beyond all hope of rescue—passing his friends as they came sunwards at a relative speed so great that they could do nothing to save him.

With some people, the shorter the expectation of life, the more sluggish are the mental processes. They seem hypnotized by the approach of death, so resigned to their fate that they do nothing to avoid it. K.15, on the other hand, found that his mind worked better in such a desperate emergency. It began to work as it had seldom done before.

Commander Smith—the name will do as well as any other—of the cruiser *Doradus* was not unduly surprised when K.15 began to decelerate. He had half expected the spy to land on Mars, on the principle that internment was better than annihilation, but when the plotting room brought the news that the little scout ship was heading for Phobos, he felt completely baffled. The inner moon was nothing but a jumble of rock some twenty kilometers across, and not even the economical Martians had ever found any use for it. K.15 must be pretty desperate if he thought it was going to be of greater value to him.

The tiny scout had almost come to rest when the radar operator lost it against the mass of Phobos. During the braking maneuver, K.15 had squandered most of his lead and the *Doradus* was now only minutes away—though she was beginning to decelerate lest she overrun him. The cruiser was scarcely three thou-

sand kilometers from Phobos when she came to a complete halt; but of K.15's ship, there was still no sign. It should be easily visible in the telescopes, but it was probably on the far side of the little moon.

It reappeared only a few minutes later, traveling under full thrust on a course directly away from the sun. It was accelerating at almost five gravities—and it had broken its radio silence. An automatic recorder was broadcasting over and over again this interesting message:

"I have landed on Phobos and am being attacked by a Z-class cruiser. Think I can hold out until you come, but hurry."

The message wasn't even in code, and it left Commander Smith a sorely puzzled man. The assumption that K.15 was still aboard the ship and that the whole thing was a ruse was just a little too naive. But it might be a double-bluff—the message had obviously been left in plain language so that he would receive it and be duly confused. He could afford neither the time nor the fuel to chase the scout if K.15 really had landed. It was clear that reinforcements were on the way, and the sooner he left the vicinity the better. The phrase "Think I can hold out until you come" might be a piece of sheer impertinence, or it might mean that help was very near indeed.

Then K.15's ship stopped blasting. It had obviously exhausted its fuel, and was doing a little better than six kilometers a second away from the sun. K.15 *must* have landed, for his ship was now speeding helplessly out of the solar system. Commander Smith

didn't like the message it was broadcasting, and guessed that it was running into the track of an approaching warship at some indefinite distance, but there was nothing to be done about that. The *Doradus* began to move towards Phobos, anxious to waste no time.

On the face of it, Commander Smith seemed the master of the situation. His ship was armed with a dozen heavy guided missiles and two turrets of electromagnetic guns. Against him was one man in a space suit, trapped on a moon only twenty kilometers across. It was not until Commander Smith had his first good look at Phobos, from a distance of less than a hundred kilometers, that he began to realize that, after all, K.15 might have a few cards up his sleeve.

To say that Phobos has a diameter of twenty kilometers, as the astronomy books invariably do, is highly misleading. The word "diameter" implies a degree of symmetry which Phobos most certainly lacks. Like those other lumps of cosmic slag, the asteroids, it is a shapeless mass of rock floating in space, with, of course, no hint of an atmosphere and not much more gravity. It turns on its axis once every seven hours thirty-nine minutes, thus keeping the same face always to Mars—which is so close that appreciably less than half the planet is visible, the poles being below the curve of the horizon. Beyond this, there is very little more to be said about Phobos.

K.15 had no time to enjoy the beauty of the crescent world filling the sky above him. He threw all the

equipment he could carry out of the air lock, set the controls, and jumped. As the little ship went flaming out towards the stars he watched it go with feelings he did not care to analyze. He had burned his boats with a vengeance, and he could only hope that the oncoming battleship would intercept the radio message as the empty vessel went racing by into nothingness. There was also a faint possibility that the enemy cruiser might go in pursuit, but that was rather too much to hope for.

He turned to examine his new home. The only light was the ochre radiance of Mars, since the sun was below the horizon, but that was quite sufficient for his purpose and he could see very well. He stood in the center of an irregular plain about two kilometers across, surrounded by low hills over which he could leap rather easily if he wished. There was a story he remembered reading long ago about a man who had accidentally jumped off Phobos; that wasn't quite possible—though it was on Deimos—as the escape velocity was still about ten meters a second. But unless he was careful, he might easily find himself at such a height that it would take hours to fall back to the surface—and that would be fatal. For K.15's plan was a simple one—he must remain as close to the surface of Phobos as possible *and diametrically opposite the cruiser.* The *Doradus* could then fire all her armament against the twenty kilometers of rock, and he wouldn't even feel the concussion. There were only two serious dangers, and one of these did not worry him greatly.

To the layman, knowing nothing of the finer details of astronautics, the plan would have seemed quite suicidal. The *Doradus* was armed with the latest in ultra-scientific weapons; moreover, the twenty kilometers which separated her from her prey represented less than a second's flight at maximum speed. But Commander Smith knew better, and was already feeling rather unhappy. He realized, only too well, that of all the machines of transport man has ever invented, a cruiser of space is far and away the least maneuverable. It was a simple fact that K.15 could make half a dozen circuits of his little world while her commander was persuading the *Doradus* to do even one.

There is no need to go into technical details, but those who are still unconvinced might like to consider these elementary facts. A rocket-driven spaceship can, obviously, only accelerate along its major axis—that is, "forwards." Any deviation from a straight course demands a physical turning of the ship, so that the motors can blast in another direction. Everyone knows that this is done by internal gyros or tangential steering jets—but very few people know just how long this simple maneuver takes. The average cruiser, fully fueled, has a mass of two or three thousand tons, which does not make for rapid footwork. But things are even worse than this, for it isn't the mass, but the moment of inertia that matters here—and since a cruiser is a long, thin object, its moment of inertia is slightly colossal. The sad fact remains—though it is seldom mentioned by astronautical engineers—that it takes a good ten minutes to rotate a

spaceship through one hundred eighty degrees, with gyros of any reasonable size. Control jets aren't much quicker, and in any case their use is restricted because the rotation they produce is permanent and they are liable to leave the ship spinning like a slow-motion pinwheel, to the annoyance of all inside.

In the ordinary way, these disadvantages are not very grave. One has millions of kilometers and hundreds of hours in which to deal with such minor matters as a change in the ship's orientation. It is definitely against the rules to move in ten-kilometer radius circles, and the commander of the *Doradus* felt distinctly aggrieved. K.15 wasn't playing fair.

At the same moment that resourceful individual was taking stock of the situation, which might very well have been worse. He had reached the hills in three jumps and felt less naked than he had out in the open plain. The food and equipment he had taken from the ship he had hidden where he hoped he could find it again, but as his suit could keep him alive for over a day that was the least of his worries. The small packet that was the cause of all the trouble was still with him, in one of those numerous hiding places a well-designed space suit affords.

There was an exhilarating loneliness about his mountain aerie, even though he was not quite as lonely as he would have wished. Forever fixed in his sky, Mars was waning almost visibly as Phobos swept above the night side of the planet. He could just make out the lights of some of the Martian cities, gleaming pinpoints marking the junctions of the invisible ca-

nals. All else was stars and silence and a line of jagged peaks so close it seemed he could almost touch them. Of the *Doradus* there was still no sign. She was presumably carrying out a careful telescopic examination of the sunlit side of Phobos.

Mars was a very useful clock—when it was half full the sun would rise and, very probably, so would the *Doradus*. But she might approach from some quite unexpected quarter; she might even—and this was the one real danger—have landed a search party.

This was the first possibility that had occurred to Commander Smith when he saw just what he was up against. Then he realized that the surface area of Phobos was over a thousand square kilometers and that he could not spare more than ten men from his crew to make a search of that jumbled wilderness. Also, K.15 would certainly be armed.

Considering the weapons which the *Doradus* carried, this last objection might seem singularly pointless. It was very far from being so. In the ordinary course of business, side arms and other portable weapons are as much use to a space-cruiser as are cutlasses and crossbows. The *Doradus* happened, quite by chance—and against regulations at that—to carry one automatic pistol and a hundred rounds of ammunition. Any search party would, therefore, consist of a group of unarmed men looking for a well concealed and very desperate individual who could pick them off at his leisure. K.15 was breaking the rules again.

The terminator of Mars was now a perfectly straight line, and at almost the same moment the sun

came up, not so much like thunder as like a salvo of atomic bombs. K.15 adjusted the filters of his visor and decided to move. It was safe to stay out of the sunlight, not only because he was less likely to be detected in the shadow but also because his eyes would be much more sensitive there. He had only a pair of binoculars to help him, whereas the *Doradus* would carry an electronic telescope of twenty centimeters' aperture at least.

It would be best, K.15 decided, to locate the cruiser if he could. It might be a rash thing to do, but he would feel much happier when he knew exactly where she was and could watch her movements. He could then keep just below the horizon, and the glare of the rockets would give him ample warning of any impending move. Cautiously launching himself along an almost horizontal trajectory, he began the circumnavigation of his world.

The narrowing crescent of Mars sank below the horizon until only one vast horn reared itself enigmatically against the stars. K.15 began to feel worried —there was still no sign of the *Doradus*. But this was hardly surprising, for she was painted black as night and might be a good hundred kilometers away in space. He stopped, wondering if he had done the right thing after all. Then he noticed that something quite large was eclipsing the stars almost vertically overhead, and was moving swiftly even as he watched. His heart stopped for a moment—then he was himself

again, analyzing the situation and trying to discover how he had made so disastrous a mistake.

It was some time before he realized that the black shadow slipping across the sky was not the cruiser at all, but something almost equally deadly. It was far smaller, and far nearer, than he had at first thought. The *Doradus* had sent her television-homing guided missiles to look for him.

This was the second danger he had feared, and there was nothing he could do about it except to remain as inconspicuous as possible. The *Doradus* now had many eyes searching for him, but these auxiliaries had very severe limitations. They had been built to look for sunlit spaceships against a background of stars, not to search for a man hiding in a dark jungle of rock. The definition of their television systems was low, and they could only see in the forward direction.

There were rather more men on the chessboard now, and the game was a little deadlier, but his was still the advantage. The torpedo vanished into the night sky. As it was traveling on a nearly straight course in this low gravitational field, it would soon be leaving Phobos behind, and K.15 waited for what he knew must happen. A few minutes later, he saw a brief stabbing of rocket exhausts and guessed that the projectile was swinging slowly back on its course. At almost the same moment he saw another flare far away in the opposite quarter of the sky, and wondered just how many of these infernal machines were in action. From what he knew of Z-class cruisers—which was a good

deal more than he should—there were four missile control channels, and they were probably all in use.

He was suddenly struck by an idea so brilliant that he was quite sure it couldn't possibly work. The radio on his suit was a tunable one, covering an unusually wide band, and somewhere not far away the *Doradus* was pumping out power on everything from a thousand megacycles upwards. He switched on the receiver and began to explore.

It came in quickly—the raucous whine of a pulse transmitter not far away. He was probably only picking up a subharmonic, but that was quite good enough. It D/F'd sharply, and for the first time K.15 allowed himself to make long-range plans about the future. The *Doradus* had betrayed herself—as long as she operated her missiles, he would know exactly where she was.

He moved cautiously forward towards the transmitter. To his surprise the signal faded, then increased sharply again. This puzzled him until he realized that he must be moving through a diffraction zone. Its width might have told him something useful if he had been a good enough physicist, but he couldn't imagine what.

The *Doradus* was hanging about five kilometers above the surface, in full sunlight. Her "nonreflecting" paint was overdue for renewal, and K.15 could see her clearly. As he was still in darkness, and the shadow line was moving away from him, he decided that he was as safe here as anywhere. He settled down comfortably so that he could just see the cruiser and

waited, feeling fairly certain that none of the guided projectiles would come too near the ship. By now, he calculated, the commander of the *Doradus* must be getting pretty mad. He was perfectly correct.

After an hour, the cruiser began to heave herself round with all the grace of a bogged hippopotamus. K.15 guessed what was happening. Commander Smith was going to have a look at the antipodes, and was preparing for the perilous fifty-kilometer journey. He watched very carefully to see the orientation the ship was adopting, and when she came to rest again was relieved to see that she was almost broadside on to him. Then, with a series of jerks that could not have been very enjoyable aboard, the cruiser began to move down to the horizon. K.15 followed her at a comfortable walking pace—if one could use the phrase—reflecting that this was a feat very few people had ever performed. He was particularly careful not to overtake her on one of his kilometer-long glides, and kept a close watch for any missiles that might be coming up astern.

It took the *Doradus* nearly an hour to cover the fifty kilometers. This, as K.15 amused himself by calculating, represented considerably less than a thousandth of her normal speed. Once she found herself going off into space at a tangent, and rather than waste time turning end over end again fired off a salvo of shells to reduce speed. But she made it at last, and K.15 settled down for another vigil, wedged between two rocks where he could just see the cruiser and he was quite sure she couldn't see him. It occurred to him that

by this time Commander Smith might have grave doubts as to whether he really was on Phobos at all, and he felt like firing off a signal flare to reassure him. However, he resisted the temptation.

There would be little point in describing the events of the next ten hours, since they differed in no important detail from those that had gone before. The *Doradus* made three other moves, and K.15 stalked her with the care of a big-game hunter following the spoor of some elephantine beast. Once, when she would have led him out into full sunlight, he let her fall below the horizon until he could only just pick up her signals. But most of the time he kept her just visible, usually low down behind some convenient hill.

Once a torpedo exploded some kilometers away, and K.15 guessed that some exasperated operator had seen a shadow he didn't like—or else that a technician had forgotten to switch off a proximity fuse. Otherwise nothing happened to enliven the proceedings; in fact, the whole affair was becoming rather boring. He almost welcomed the sight of an occasional guided missile drifting inquisitively overhead, for he did not believe that they could see him if he remained motionless and in reasonable cover. If he could have stayed on the part of Phobos exactly opposite the cruiser, he would have been safe even from these, he realized, since the ship would have no control there in the moon's radio-shadow. But he could think of no reliable way in which he could be sure of staying in the safety zone if the cruiser moved again.

The end came very abruptly. There was a sudden

blast of steering jets, and the cruiser's main drive burst forth in all its power and splendor. In seconds the *Doradus* was shrinking sunwards, free at last, thankful to leave, even in defeat, this miserable lump of rock that had so annoyingly balked her of her legitimate prey. K.15 knew what had happened, and a great sense of peace and relaxation swept over him. In the radar room of the cruiser, someone had seen an echo of disconcerting amplitude approaching with altogether excessive speed. K.15 now had only to switch on his suit beacon and to wait. He could even afford the luxury of a cigarette.

"Quite an interesting story," I said, "and I see now how it ties up with that squirrel. But it does raise one or two queries in my mind."

"Indeed?" said Rupert Kingman politely.

I always like to get to the bottom of things, and I knew that my host had played a part in the Jovian War about which he very seldom spoke. I decided to risk a long shot in the dark.

"May I ask how you happened to know so much about this unorthodox military engagement? It isn't possible, is it, that *you* were K.15?"

There was an odd sort of strangling noise from Carson. Then Kingman said, quite calmly, "No, I wasn't."

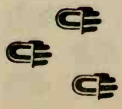
He got to his feet and started towards the gun room. "If you'll excuse me a moment, I'm going to have another shot at that tree-rat. Maybe I'll get him this time." Then he was gone.

Carson looked at me as if to say: "This is another

house you'll never be invited to again." When our host was out of earshot he remarked in a coldly clinical tone, "What did you have to say that for?"

"Well, it seemed a safe guess. How else could he have known all that?"

"As a matter of fact, I believe he met K.15 after the war; they must have had an interesting conversation together. But I thought you knew that Rupert was retired from the service with only the rank of lieutenant commander. The Court of Inquiry could never see his point of view. After all, it just wasn't reasonable that the commander of the fastest ship in the Fleet couldn't catch a man in a space suit."



MASTER RACE*

RICHARD ASHBY

★ ★
☆
★

Even if no human being has yet managed to reach the Moon, let alone the nearest star, it is possible that elsewhere in the universe there are beings who have been traveling through space for so long that they have forgotten the very reasons with which they began. Perhaps they have also forgotten that the only thing swifter than a cruiser in space is the imagination. And human imaginations have been pretty busy with space travel and the marvels of the future for quite a number of years. We don't often think of imagination as a weapon of defense, but here is an ingenious story about a boy and a tree house and a visitation from space which suggests that the imagination can be more powerful than a hydrogen bomb—if there is no way to distinguish fact from fancy.

Perhaps when the first Terran spacemen go out to the countless worlds which the universe may hold, the shoe

* *This story is from* Imagination *magazine.*

will be on the other foot. They will have no way of knowing with certainty whether what they find is harmless or a deadly warning. They may be wholly unable to interpret the things they find. The wisest course will be to take no chances.

One moment he was piloting a fast plane over dangerous green jungles . . . and the next Eddie was wide awake and peering through the gloom. Across the room Rags was whining softly and sniffing the damp night air that rolled in through the open window. The Scottie was excited, Eddie saw, and it must be something out of the ordinary for Rags' whimpering carried an undercurrent of perplexity and fear . . . and the dog wasn't a coward.

The boy called softly to him, but Rags, after tossing back a swift glance of recognition, put his forefeet up on the sill and peered, muttering, out across the pastures.

Eddie slipped from his bed and padded over to the window. As he comfortingly ruffed the fur behind the Scottie's ears, he listened intently to the night. At first he heard only the ordinary country sounds—roosters crowing over at the next farm, the muffled thumping of stock shifting about in the barn and against the corral fence; the flittering and high chirping of birds in the cottonwoods and pepper trees. He took the dog in his arms and was about to go back to bed with him when

he became aware of a sound that was very much out of the ordinary. A sound, Eddie decided, something like what you heard standing outside the Baptist church in Riverside when the organist was playing low, vibrant notes inside.

Eddie wondered how he could have missed the sound at first, so firmly had it now become established. Where could it be coming from? It was, he guessed, about an hour till dawn, and no tractors or other farm machinery should be running. And it wasn't a radio.

A plane?

Leaning from the window he glanced upwards, then gasped in astonishment. Goose pimples of excitement tingled his skin, for there in the sky, above the oak tree on the ridge, hung a pattern of sharp white lights. They were little lights, as if someone had strung together a fanciful arrangement of Christmas tree bulbs, then sent them dangling aloft beneath a kite.

Rags' mutterings became deep and angry. Finally he gave vent to a short sharp bark.

Instantly Eddie quieted the dog. Lights or not, his mother had made it plenty clear about Rags' being in the house.

Crouching on the floor, both arms about Rags, Eddie whispered words of reassurance while he stared up at the strange sparklings. The oak tree—the one with his tree house—was a scant quarter-mile from where he knelt, and he wondered if its being so high on the ridge had caused it to draw some sort of lightning to itself. He'd read of that happening . . .

chain lightning. Or was it called fox-fire? Eddie couldn't remember. Anyway, it looked something like that, he imagined.

But no lightning, he remembered, made a noise like a machine. Unconsciously, he'd hooked sight and sound together.

Frowning, Eddie let go of the dog. If the lights had been over the barn or garage, he'd have gone to tell his father. Or over the garden, his mother. But the tree house didn't concern them. It was his, and even if it hadn't been an hour before dawn he wouldn't have told his parents. He had things in there he shouldn't have, and it wouldn't do for either Mother or Father to go snooping around, even if they couldn't find his secret ladder and climb it.

He returned to the window.

Something thrashed in the highest branches of the oak. Rags began his whining again.

There was but one thing to do. He found his moccasins by the night table and pulled them on, threw a leather jacket on over his pajamas. From the wall above his desk, Eddie took down his .22, broke it, slipped in a shell, and tiptoed from the house.

The humming was stronger outside. Not louder, exactly, but more easy to feel. He crouched down, the way he'd seen commandos do in pictures, and began to run, holding the rifle at ready before him. And for once, Rags seemed content to stay at his side and not go dashing along ahead up the path. As they took the turn by the big rock a startled nightbird plunged out of the bushes and took wing. The bird's violent rush

brought caution to Eddie and he slowed his run to a walk. Suppose, he thought, that someone in a helicopter or maybe a balloon was hanging over the tree house. Spies, probably. And suppose they wanted the tree house for a headquarters.

He stopped, looked back down at the house dimly outlined in the starlight. Suppose, he continued, that there were too many of them. He'd just better sneak up quiet and see what was going on.

He eased himself around another turn in the path and came again in view of the oak. The lights were still there, but they no longer looked to be mere points of brightness against an empty sky. He stopped, more puzzled than ever . . . they looked like navigation lights on a ship, and a couple of them like the glow from inside a radio. And all of them were swaying gently in the night wind, twenty feet or so above the tree.

Rags went slowly ahead, two feet, three, four, then stopped . . . belly almost to the dust. His teeth shone in a soundless snarl, not a muscle of his body moving. Eddie had never seen him act like this, not even when the bear had come down into the valley to raid for chickens. Rags was plainly terrified, and something of the dog's emotion communicated itself. The boy bit his lip grimly, then strained to listen, heard what the dog was hearing; someone . . . something was moving about up in the oak.

Some of his fear gave way to anger. "Messin' around in my tree house!"

He gripped the rifle tightly, took two determined

steps forward. The third step he never completed. He was unconscious when he pitched into the ground. And when Rags leaped after him, he too crumpled as if dead. . . .

The Commander left his report-strewn desk and strode heavily over to the forward port. Glumly, he looked down at the frosty pitted surface of the satellite a thousand miles away, and in his imagination saw the planet that swung on the dead orb's opposite side. It was nonsense to have to hide behind a moon from such a primitive planet, waiting and waiting like a coward for reassuring information. But such prudence had ever been part of holy Law.

He sighed, turned away from the huge wall of window. Sometimes one wondered about Law, he mused darkly. One did not disobey, of course, but one could not help wondering sometimes. And occasionally one even wondered the blackest heresy of all—was it really important to kill all life everywhere for the sake of colonization?

The Commander caught sight of his reflection in a polished door panel. His own hard eyes glowered out from the reflection accusingly, so he pulled up his shoulders and put all suspicion from his mind. Would he not destroy any of his people for such thoughts? Then he must not allow himself to entertain such blasphemy. Naturally, colonization was all-important. That was Law.

Picking up the pictures taken when they had first flashed into this system, the Commander saw again

the nature of the beings they were about to exterminate. That they were ignorant savages, quite unworthy of the usual precautions now being taken, was plain to see. Their atmosphere showed heavy traces of carbon combustion, a certain indication that the creatures were inefficient, for who but a savage would burn matter to obtain power? The amount of radioactivity present in their gaseous envelope was so tiny as to prove that they had little or no knowledge of atomic power. There were no *frell* vibrations apparent; imagine existing without an understanding of simple magnetics!

He picked up an enlargement of one portion of a land mass, put a hand magnetic lens over it. The magnification showed clusters of dwellings, linked together by lines and double lines upon the ground—certainly the ultimate proof of low-order civilization, when beings chose to live clustered together, commuting by land, when they could spread themselves out over the surface of their planet and use the roads of the sky.

The Commander made a sign in the air with his fingers and a door popped open at the end of the vast room. An aide ran toward the desk, halted, covered his face in salute.

"Sir?"

"How long has the scout been gone?"

The aide removed his hands from his eyes. "A day and a night, sir. He should be back any time, now."

"Fool!" The Commander roared out the word. "Did I ask for your guesses? I know he's due back. He is,

in fact, one hour overdue." He did not know if this was or was not true, but it was good discipline policy. "Lock him away when he arrives."

The other covered his face respectfully. "Yes, sir." He turned, ran from the desk and out the door.

For a few minutes the Commander kept busy by calling the ten ray-centers of the three-mile-long ship, demanding to know if they were ready to beam. They were. He then spent a while ordering all unit leaders to hold their sections in readiness for inertialess drive. The unit leaders protested politely that they were. He called engine, commanded that they "look sharp." Meekly they assured him that all was well.

With only small satisfaction, the Commander rose from his desk, paced slowly over to the port again. As he gazed out at the Moon's bland surface, he reflected that there was something about this nine-planet system they were in that made him edgy . . . made him want to keep active and alert.

And where was that thrice-blasted scout?

He decided to have him flogged when he returned. Good discipline policy.

The Scout woke from his drunken sleep and glanced at the clock on the dash of his little craft. It was very late, he saw. He would have to think of a fine excuse when he returned or they would put him in Truth and learn that all Scouts took the precious freedom of voyages to become intoxicated for a while.

Not much time! He would have to take what he could find in the vicinity. Small difference it made,

though, since the beings of the planet were surely doomed.

The Scout yawned, then lifted the ship from the mountain and arrowed it down into the folds of the valley. His visor translated the immediate night into light, showing him the typically repugnant surface features of a type J planet: foliage, sharp young geology, water flowing in natural beds. A world like a hundred others he'd visited in the name of Law.

When the floor of the valley came up he leveled off, then silently sped along in search of dwellings. Beneath him, on level stretches of land, stood odd four-legged creatures. The dominants of this world? he wondered. Probably not. The extremities of their limbs appeared to be too blunt and crude to do even the simple tooling he'd noticed during his flight in. Beasts of transport, no doubt. Boldly, he swooped low over a group, scattering them in panic.

The meadow ended with almost sheer mountain wall, and the Scout whipped his craft up its face and down the opposite side. Something flickered in his vision screen and he swung the controls. A dwelling! In a moment he was back over it, hanging motionless. Sure enough, a revolting crude shack that nestled high in the branches of one of this world's surface growths.

This was it. There was no time nor need to search further.

He locked the controls, then turned on the deadly screen that would kill all life directly beneath, save one properly shielded such as himself, and would

stun all life attempting to enter the edges of the field.

Pulling on his helmet, the Scout reached to the stud at his belt and reduced his weight to but a fraction of itself. Then he opened the hatch and clambered out into the air.

His first few minutes of exploration in the tree house were disappointing. There was no life, no corpses about for him to dissect and study. But the hunting club puzzled him. Obviously tooled by machinery and scuffed from much killing, it bore what might be a word burnt into its thickened end: "SPAULDING." He realized he was in an extremely primitive section of the planet, for this weapon was, no doubt, a trade article from some more advanced portion of the globe. Too bad he'd had to land in this region. Dull.

The club he chucked into the bag over his shoulder.

A round object, made of some fairly soft material, with seams twisting over its surface next caught his eye. He took it up, shook it. It, too, bore the symbol "SPAULDING." Probably a totem word. Perhaps the sign of this particular tribe. He put it with the club. It was followed by a small package of soft white cylinders which were stuffed with crumbles of dried weed. Each cylinder bore the sign "CAMEL" as did the container, which also showed a beast, somewhat like those he had buzzed.

And beyond that there was nothing.

A simple people indeed, he pondered. He was about to leave when he noticed the stack of artifacts in one corner. The Scout bent to examine them. They seemed to be composed of the same material as the white of

the "CAMEL" cylinders, but thicker and bound together in long, wide, flat construction. There were bright colors on the outside of each, and just as he discovered that the individual leaves of material could be separated and turned, the alarm bell sounded twice in his helmet. Life had blundered into the outer edges of his field.

Hastily, the Scout put a score of his latest finds into his sack and left the tree house. And without bothering to search for the life that had triggered his alarm (Law specified a Scout was to flee in such an instance) he adjusted his weight and rose up to his waiting ship.

Minutes later he had passed the world's satellite and was in view of his parent craft.

The Commander's first action was to order the Scout flogged before his comrades as an example of what awaited those who became lax in the performance of important duties. His second was to assemble the Council of Experts. When the eight old men had taken their places about the table, the Commander saluted them in the name of Law, then summoned his aide. "Is Decontamination through?"

"It is, sir."

"Then have the findings brought in."

The officer ran from the room and returned in a moment with the Scout's bulging sack. Gently he placed it in the center of the round table before the council. After saluting he took his leave again.

"Gentlemen," began the Commander, "we are met

again to pass judgment on a corrupt, life-harboring planet. By the authority vested in me through the line of my father I charge you with the voice of Law." And so on, and on, with the ancient words of the ritual. The eight old experts hardly listened. They had sat through countless identical sessions during the hundreds of years of their lives. Theirs was but to view the oddities that would presently be arranged before them, make mental records of their descriptions, and offer one or two tentative guesses as to the nature of the articles. But in any event, the action that followed would be the same. The creatures responsible for the articles would shortly be snuffed out . . . in the glorious and awful name of Law.

So they hardly listened.

When the Commander had finished with the rites of the occasion he unsnapped the bag and after peering within it gingerly brought out the Scout's first find. Only now did the old men appear to take much notice. A few even leaned forward slightly. All eyes centered on what their Commander held.

"A totemic object?" asked the youngest.

"No. A lever," said the eldest.

"For killing," added the next.

"But it was made by machine," put in a fourth.

For a moment they were silent. The Commander placed the "machine-made killing-lever" on the table. It described a short little half-roll, bringing the printing into view.

"A religious design," said the youngest. "Obviously pagan."

"But rather well worked."

No one found anything further to say, so the Commander brought forth from the bag the next object. A mild flurry of interest ensued when it was discovered that this soft globular thing bore the same "religious design." But the sages would not venture an opinion as to the thing's purpose, so the Commander took out the package of white cylinders.

Only the next to the eldest made any comment. He claimed that he had seen such articles in his youth, brought out from a system of three worlds that swung above a nova. The white things there, he reminisced, were units of value, useful in bartering. They were designed to be spent quickly, lest the stuffing fall out. The other experts agreed that these were no doubt also moneys.

The Commander had been listening with but half an ear. Privately, he had long considered the experts to be but a muttering pack of senile dolts . . . dead weight, useless cargo on the ship. They worked not, neither did they breed. But Law demanded their presence. The Law, he mused, seemed strange at times.

He discovered the Council was waiting for him. Frowning to cover his embarrassment, he took out the last of the Scout's finds. For a moment all of them were struck by the bright colors on the flat surface. The one old man reached out a trembling hand. "Records," he murmured incredulously. "Records such as our own race is said to have once made, long long ago before Law." Reverently, he examined the cover, then

with remarkable agility for one so decrepit he jumped to his feet and flung the thing from him. His face twitched with horror.

The others shocked and disbelieving, fell to examining the rest of the new articles. In a moment, cries of alarm filled the council room. Chairs were upset, dignity forgotten. Only the eldest retained his composure, although with difficulty, for he could hardly manage to control the palsied shaking of his hands. The astonished Commander leaned over his shoulder and watched as the ancient turned the pages.

What he saw made the blood drum in his ears, made his vision swim, and only faintly did he hear the old one's croaking words. "Praise to Law, which we so carelessly accepted, for Law has saved us from the fiendish denizens of this planet. Had we attempted to exterminate them, their space armadas would have taken instant revenge. For they are obviously mightier than we." He put down the bright record of space craft vaster than the one which they occupied and took up another. On its cover was depicted a world being blasted into flaming wreckage, and within was shown the pictorial history of a space fleet, engaged in repelling an alien invasion, and who followed up their successful repulse by annihilating the entire system of the aliens.

Five more of the record books did they examine before the Commander's stunned mind at last reeled beneath the hideous concepts and he could look no more. Dumbly, he managed to reach the phones and

order the ship thrown into emergency drive to some far and lost point in space and dimension.

And as he waited for the shuddering wrench that signaled interdimensional shift, he tried to forget the horrors they had so narrowly escaped: creatures who could make themselves invisible, who had mastered space travel, who worked in magic more powerful than that of Law's, who could whiff out entire solar systems, who could survive incredible mishaps and hardships. Creatures who were no less than gods!

A wave of fear tore at the Commander as the glittering Moon faded away. Eternal nothingness of grey enclosed the ship. . . .

The sun was up when Eddie recovered consciousness. Stiff and cold, he sat and looked around sleepily a moment before remembering. Then, as he saw Rags sitting before him, tail wagging happily, it all began to come back: Last night, sometime; humming lights above the tree house, someone moving about up there, himself sneaking up to see, then . . . nothing. He must have tripped and knocked himself out, somehow. Eddie snatched up the .22 and aimed it at the tree. "Whoever's up there," he said, getting to his feet, "had better come on out!"

Nothing happened.

Eddie bent down cautiously, his eyes still fixed on the tree house, picked up a rock and hurled it through the shanty's open door. A bird fluttered from the

gnarled oak, sailed across the morning meadow chirping angrily.

"This is your last chance. Come on out, or I'm comin' up and get you!" The bird's being there made him quite sure that everything was all right, so after a moment he pulled the knotted rope from its concealment in a cleft of the tree and went up hand over hand.

A strange odor lingered inside the shack. Something like . . . Eddie sniffed, frowned . . . something like a freshly blown fuse, but outside of that nothing seemed amiss at first. Then he discovered his softball and bat were missing. He found he didn't care too much. The season was over anyway; and besides, hunting and riding and fishing were more fun.

He looked further.

The cigarettes! He hoped the thief wouldn't snitch on him to Dad. But that didn't make too much sense, he realized. The thief—a tramp, probably—was far away by now, maybe at this very minute trying to trade the ball and bat for a meal or a drink.

And those humming lights? Even now he wasn't too sure he'd seen them. Stars, probably. The Little Dipper, or maybe fireflies, or lightning. Sure.

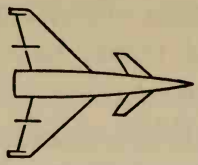
He turned to go. The sun told him it was almost seven o'clock. Mother would be furious if she found him out in the morning without having dressed properly, or eaten.

It was then he saw that something else was missing, but because it was so late he didn't stop to worry. "Mandrake The Magician," "The Invisible

Boys," "Buck Rogers," "Bat Man" . . . they were all old comic books. He'd finished with them months ago.

Eddie clambered down the rope, and seconds later he and Rags were joyfully racing along the trail that led to home.

It was a beautiful morning.



DEAR DEVIL*

ERIC FRANK RUSSELL

★ ★
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Here is a tale which may or may not seem to you to belong in a collection of stories about Man's attempt to conquer space. In it, the people who have adventured into space are not men at all, but another race of mortals—one which might appear at first glance to be more horrible than human. And yet, if human beings are going to move among the stars and meet beings as strange to them as they themselves will seem to the inhabitants of other worlds, they must be prepared to believe that aliens are a part of life, too.

Fander, the Martian in this tale, is a creature far removed from anything that Earth people have ever seen or experienced. He is a poet and an artist, not a scientist; a Martian so far removed from the technical skills of his own world that he does not know what makes the devices of

* *This story is from* Other Worlds Science Stories *magazine.*

his people work. How he found *that* out is part of this story.

Behind this tale is an idea of real importance: the notion of what actually ties all thinking life together. Mr. Russell knows that this common denominator is not scientific knowledge but the ability to share the experience of being alive. Even though Fander is not at all like anything on Terra, he does not doubt that the children and the adults of the new planet where he has cast his lot will find out that he feels, deep down, very much like them.

One of the best things about science fiction is that not all of its material is scientific. Our science is created by us, and our fiction is really no more than the stories we tell ourselves about ourselves. So perhaps the Martian in this story is only a human being in disguise. If so, he is very wise. He knows that there is something wonderful in almost everything, if you can learn to see it—and when you learn to see it you have to believe in what you have seen. He knows, too, that when you really feel sure that what you have seen is important, you must stick with it.

This kind of understanding does not come from equations and charts. It comes from inside the people who have it. When human beings set their feet on the ladder to the stars, it will be a greater and more hopeful adventure if there is someone like Fander along.

★ ★
☆
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The first Martian vessel descended upon Earth with the slow, stately fall of a grounded balloon. It did

resemble a large balloon in that it was spherical and had a strange buoyancy out of keeping with its metallic construction. Beyond this superficial appearance all similarity to anything Terrestrial ceased.

There were no rockets, no crimson venturis, no external projections other than several solaradiant distorting grids which boosted the ship in any desired direction through the cosmic field. There were no observation ports. All viewing was done through a transparent band running right around the fat belly of the sphere. The bluish, nightmarish crew were assembled behind that band, surveying the world with great multi-faceted eyes.

They gazed through the band in utter silence as they examined this world which was Terra. Even if they had been capable of speech they would have said nothing. But none among them had a talking faculty in any sonic sense. At this quiet moment none needed it.

The scene outside was one of untrammeled desolation. Scraggy blue-green grass clung to tired ground right away to the horizon scarred by ragged mountains. Dismal bushes struggled for life here and there, some with the pathetic air of striving to become trees as once their ancestors had been. To the right, a long, straight scar through the grass betrayed the sterile lumpiness of rocks at odd places. Too rugged and too narrow ever to have been a road, it suggested no more than the desiccating remnants of a long-gone wall. And over all this loomed a ghastly sky.

Captain Skhiva eyed his crew, spoke to them with

his sign-talking tentacle. The alternative was contact-telepathy which required physical touch.

"It is obvious that we are out of luck. We could have done no worse had we landed on the empty satellite. However, it is safe to go out. Anyone who wishes to explore a little while may do so."

One of them gesticulated back at him. "Captain, don't you wish to be the first to step upon this world?"

"It is of no consequence. If anyone deems it an honor, he is welcome to it." He pulled the lever opening both air-lock doors. Thicker, heavier air crowded in and pressure went up a little. "Beware of overexertion," he warned as they went out.

Poet Fander touched him, tentacles tip to tip as he sent his thoughts racing through their nerve-ends. "This confirms all that we saw as we approached. A stricken planet far gone in its death throes. What do you suppose caused it?"

"I have not the remotest idea. I would like to know. If it has been smitten by natural forces, what might they do to Mars?" His troubled mind sent its throb of worry up Fander's contacting tentacle. "A pity that this planet had not been farther out instead of closer in; we might then have observed the preceding phenomena from the surface of Mars. It is so difficult properly to view this one against the sun."

"That applies still more to the next world, the misty one," observed Poet Fander.

"I know it. I am beginning to fear what we may find there. If it proves to be equally dead, then we are stalled until we can make the big jump outward."

"Which won't be in our lifetimes."

"I doubt it," agreed Captain Skhiva. "We might move fast with the help of friends. We shall be slow—alone." He turned to watch his crew writhing in various directions across the grim landscape. "They find it good to be on firm ground. But what is a world without life and beauty? In a short time they will grow tired of it."

Fander said thoughtfully, "Nevertheless, I would like to see more of it. May I take out the lifeboat?"

"You are a songbird, not a pilot," reproved Captain Skhiva. "Your function is to maintain morale by entertaining us, not to roam around in a lifeboat."

"But I know how to handle it. Every one of us was trained to handle it. Let me take it that I may see more."

"Haven't we seen enough, even before we landed? What else is there to see? Cracked and distorted roads about to dissolve into nothingness. Ages-old cities, torn and broken, crumbling into dust. Shattered mountains and charred forests and craters little smaller than those upon the Moon. No sign of any superior life-form still surviving. Only the grass, the shrubs, and various animals, two- or four-legged, that flee at our approach. Why do you wish to see more?"

"There is poetry even in death," said Fander.

"Even so, it remains repulsive." Skhiva gave a little shiver. "All right. Take the lifeboat. Who am I to question the weird workings of the nontechnical mind?"

"Thank you, Captain."

"It is nothing. See that you are back by dusk."

Breaking contact, he went to the lock, curled snakishly on its outer rim and brooded, still without bothering to touch the new world. So much attempted, so much done—for so poor reward.

He was still pondering it when the lifeboat soared out of its lock. Expressionlessly, his multi-faceted eyes watched the energized grids change angle as the boat swung into a curve and floated away like a little bubble. Skhiva was sensitive to futility.

The crew came back well before darkness. A few hours were enough. Just grass and shrubs and child-trees straining to grow up. One had discovered a grassless oblong that once might have been the site of a dwelling. He brought back a small piece of its foundation, a lump of perished concrete which Skhiva put by for later analysis.

Another had found a small, brown, six-legged insect, but his nerve-ends had heard it crying when he picked it up, so hastily he had put it down and let it go free. Small, clumsily moving animals had been seen hopping in the distance, but all had dived down holes in the ground before any Martian could get near. All the crew were agreed upon one thing: the silence and solemnity of a people's passing was unendurable.

Fander beat the sinking of the sun by half a time-unit. His bubble drifted under a great, black cloud, sank to ship-level, came in. The rain started a moment later, roaring down in frenzied torrents while they stood behind the transparent band and marveled at so much water.

After a while, Captain Skhiva told them, "We must accept what we find. We have drawn a blank. The cause of this world's condition is a mystery to be solved by others with more time and better equipment. It is for us to abandon this graveyard and try the misty planet. We will take off early in the morning."

None commented, but Fander followed him to his room, made contact with a tentacle-touch.

"One could live here, Captain."

"I am not so sure of that." Skhiva coiled on his couch, suspending his tentacles on the various limb-rests. The blue sheen of him was reflected by the back wall. "In some places are rocks emitting alpha sparks. They are dangerous."

"Of course, Captain. But I can sense them and avoid them."

"*You?*" Skhiva stared up at him.

"Yes, Captain. I wish to be left here."

"What?—in this place of appalling repulsiveness?"

"It has an all-pervading air of ugliness and despair," admitted Poet Fander. "All destruction is ugly. But by accident I have found a little beauty. It heartens me. I would like to seek its source."

"To what beauty do you refer?" Skhiva demanded.

Fander tried to explain the alien in non-alien terms.

"Draw it for me," ordered Skhiva.

Fander drew it, gave him the picture, said, "There!"

Gazing at it for a long time, Skhiva handed it back, mused awhile, then spoke along the other's nerves. "We are individuals with all the rights of in-

dividuals. As an individual, I don't think that picture sufficiently beautiful to be worth the tail-tip of a domestic *arlan*. I will admit that it is not ugly, even that it is pleasing."

"But, Captain—"

"As an individual," Skhiva went on, "you have an equal right to your opinions, strange though they may be. If you really wish to stay I cannot refuse you. I am entitled only to think you a little crazy." He eyed Fander again. "When do you hope to be picked up?"

"This year, next year, sometime, never."

"It may well be never," Skhiva reminded. "Are you prepared to face that prospect?"

"One must always be prepared to face the consequences of his own actions," Fander pointed out.

"True." Skhiva was reluctant to surrender. "But have you given the matter serious thought?"

"I am a non-technical component. I am not guided by thought."

"Then by what?"

"By my desires, emotions, instincts. By my inward feelings."

Skhiva said fervently, "The twin moons preserve us!"

"Captain, sing me a song of home and play me the tinkling harp."

"Don't be silly. I have not the ability."

"Captain, if it required no more than careful thought you would be able to do it?"

"Doubtless," agreed Skhiva, seeing the trap but unable to avoid it.

"There you are!" said Fander pointedly.

"I give up. I cannot argue with someone who casts aside the accepted rules of logic and invents his own. You are governed by notions that defeat me."

"It is not a matter of logic or illogic," Fander told him. "It is merely a matter of viewpoint. You see certain angles; I see others."

"For example?"

"You won't pin me down that way. I can find examples. For instance, do you remember the formula for determining the phase of a series-tuned circuit?"

"Most certainly."

"I felt sure you would. You are a technician. You have registered it for all time as a matter of technical utility." He paused, staring at Skhiva. "I know that formula, too. It was mentioned to me, casually, many years ago. It is of no use to me—yet I have never forgotten it."

"Why?"

"Because it holds the beauty of rhythm. It is a poem."

Skhiva sighed and said, "I don't get it."

"*One upon R into omega L minus one upon omega C*," recited Fander. "A perfect hexameter." He showed his amusement as the other rocked back.

After a while, Skhiva remarked, "It could be sung. One could dance to it."

"Same with this." Fander exhibited his rough sketch. "This holds beauty. Where there is beauty there once was talent—may still be talent for all we know. Where talent abides is also greatness. In the

realms of greatness we may find powerful friends. We *need* such friends."

"You win." Skhiva made a gesture of defeat. "We leave you to your self-chosen fate in the morning."

"Thank you, Captain."

The same streak of stubbornness which made Skhiva a worthy commander induced him to take one final crack at Fander shortly before departure. Summoning him to his room, he eyed the poet calculatingly.

"You are still of the same mind?"

"Yes, Captain."

"Then does it not occur to you as strange that I should be so content to abandon this planet if indeed it does hold the remnants of greatness?"

"No."

"Why not?" Skhiva stiffened slightly.

"Captain, I think you are a little afraid because you suspect what I suspect: that there was no natural disaster. They did it themselves—to themselves."

"We have no proof of it," said Skhiva uneasily.

"No, Captain." Fander posed there without desire to add more.

"*If* this is their own sad handiwork," Skhiva commented at length, "what are our chances of finding friends among people so much to be feared?"

"Poor," admitted Fander. "But that—being the product of cold thought—means little to me. I am animated by warm hopes."

"There you go again, blatantly discarding reason in favor of an idle dream. Hoping, hoping, hoping—to achieve the impossible."

Fander said, "The difficult can be done at once; the impossible takes a little longer."

"Your thoughts make my orderly mind feel lopsided. Every remark is a flat denial of something that makes sense." Skhiva transmitted the sensation of a lugubrious chuckle. "Oh, well, we live and learn." He came forward, moving closer to the other. "All your supplies are assembled outside. Nothing remains but to bid you goodby."

They embraced in the Martian manner. Leaving the lock, Poet Fander watched the big sphere shudder and glide up. It soared without sound, shrinking steadily until it was a mere dot entering a cloud. A moment later it had gone.

He remained there, looking at the cloud, for a long, long time. Then he turned his attention to the load-sled holding his supplies. Climbing onto its tiny, exposed front seat, he shifted the control which energized the flotation-grids, let it rise a few feet. The higher the rise the greater the expenditure of power. He wished to conserve power; there was no knowing how long he might need it. So at low altitude and gentle pace he let the sled glide in the general direction of the thing of beauty.

Later, he found a dry cave in the hill on which his objective stood. It took him two days of careful, cautious raying to square its walls, ceiling and floor, plus half a day with a powered fan driving out sili-

cate dust. After that, he stowed his supplies at the back, parked the sled near the front, set up a curtaining force-screen across the entrance. The hole in the hill was now home.

Slumber did not come easily that first night. He lay within the cave, a ropy, knotted thing of glowing blue with enormous, bee-like eyes, and found himself listening for harps that played sixty million miles away. His tentacle-ends twitched in involuntary search of the telepathic-contact songs that would go with the harps, and twitched in vain. Darkness grew deep and all the world a monstrous stillness held. His hearing organs craved for the eventide flip flop of sand-frogs, but there were no frogs. He wanted the homely drone of night beetles, but none droned. Except for once when something faraway howled its heart at the Moon, there was nothing, nothing.

In the morning he washed, ate, took out the sled and explored the site of a small town. He found little to satisfy his curiosity, no more than mounds of shapeless rubble on ragged, faintly oblong foundations. It was a graveyard of long-dead domiciles, rotting, weedy, near to complete oblivion. A view from five hundred feet up gave him only one piece of information: the orderliness of outlines showed that these people had been tidy, methodical.

But tidiness is not beauty in itself. He came back to the top of his hill and sought solace with the thing that was beauty.

His explorations continued, not systematically as Skhiva would have performed them, but in accordance

with his own mercurial whims. At times he saw many animals, singly or in groups, none resembling anything Martian. Some scattered at full gallop when his sled swooped over them. Some dived into ground-holes, showing a brief flash of white, absurd tails. Others, four-footed, long-faced, sharp-toothed, hunted in gangs and bayed at him in concert with harsh, defiant voices.

On the seventieth day, in a deep, shadowed glade to the north, he spotted a small group of new shapes slinking along in single file. He recognized them at a glance, knew them so well that his searching eyes sent an immediate thrill of triumph into his mind. They were ragged, dirty and no more than half-grown, but the thing of beauty had told him what they were.

Hugging the ground low, he swept around in a wide curve that brought him to the farther end of the glade. His sled sloped slightly into the drop as it entered the glade. He could see them better now, even the soiled pinkishness of their thin legs. They were moving away from him, with fearful caution, but the silence of his swoop gave them no warning.

The rearmost one of the stealthy file fooled him at the last moment. He was hanging over the side of the sled, tentacles outstretched in readiness to snatch the end one with the wild mop of yellow hair when, responding to some sixth sense, his intended victim threw itself flat. His grasp shot past a couple of feet short and he got a glimpse of frightened gray eyes two seconds before a dexterous side-tilt of the sled

enabled him to make good his loss by grabbing the less wary next in line.

This one was dark-haired, a bit bigger, and sturdier. It fought madly at his holding limbs while he gained altitude. Then suddenly, realizing the queer nature of its bonds, it writhed around and looked straight at him. The result was unexpected; it closed its eyes and went completely limp.

It was still limp when he bore it into the cave, but its heart continued to beat and its lungs to draw. Laying it carefully on the softness of his bed, he moved to the cave's entrance and waited for it to recover. Eventually it stirred, sat up, gazed confusedly at the facing wall. Its black eyes moved slowly around, taking in the surroundings. Then they saw Fander. They widened tremendously and their owner began to make high-pitched, unpleasant noises as it tried to back away through the solid wall. It screamed so much, in one rising throb after another, that Fander slithered out of the cave, right out of sight, and sat in the cold winds until the noises had died down.

A couple of hours later he made cautious reappearance to offer it food, but its reaction was so swift, hysterical and heart-rending that he dropped his load and hid himself as though the fear was his own. The food remained untouched for two full days. On the third, a little of it was eaten. Fander ventured within.

Although the Martian did not go near, the boy cowered away murmuring, "Devil! Devil!" His eyes were red, with dark discoloration beneath them.

"Devil!" thought Fander, totally unable to repeat the alien word, but wondering what it meant. He used his sign-talking tentacle in valiant effort to convey something reassuring. The attempt was wasted. The other watched its writhings half in fear, half with distaste, and showed complete lack of comprehension. He let the tentacle gently slither forward across the floor, hoping to make thought-contact. The other recoiled from it as from a striking snake.

"Patience," he reminded himself. "The impossible takes a little longer."

Periodically he showed himself with food and drink, and nighttimes he slept fitfully on the coarse, damp grass beneath lowering skies—while the prisoner who was his guest enjoyed the softness of the bed, the warmth of the cave, the security of the force-screen.

Time came when Fander betrayed an unpoetic shrewdness by using the other's belly to estimate the ripeness of the moment. When, on the eighth day, he noted that his food-offerings were now being taken regularly, he took a meal of his own at the edge of the cave, within plain sight, and observed that the other's appetite was not spoiled. That night he slept just within the cave, close to the force-screen, and as far from the boy as possible. The boy stayed awake late, watching him, always watching him, but gave way to slumber in the small hours.

A fresh attempt at sign-talking brought no better results than before, and the boy still refused to touch his offered tentacle. All the same, he was gaining ground slowly. His overtures still were rejected, but

with less revulsion. Gradually, ever so gradually, the Martian shape was becoming familiar, almost acceptable.

The sweet savor of success was Fander's in the middle of the next day. The boy had displayed several spells of emotional sickness during which he lay on his front with shaking body and emitted low noises while his eyes watered profusely. At such times the Martian felt strangely helpless and inadequate. On this occasion, during another attack, he took advantage of the sufferer's lack of attention and slid near enough to snatch away the box by the bed.

From the box he drew his tiny electro-harp, plugged its connectors, switched it on, touched its strings with delicate affection. Slowly he began to play, singing an accompaniment deep inside himself. For he had no voice with which to sing out loud, but the harp sang it for him. The boy ceased his quiverings, sat up, all his attention upon the dexterous play of the tentacles and the music they conjured forth. And when he judged that at last the listener's mind was captured, Fander ceased with easy, quietening strokes, gently offered him the harp. The boy registered interest and reluctance. Careful not to move nearer, not an inch nearer, Fander offered it at full tentacle length. The boy had to take four steps to get it. He took them.

That was the start. They played together, day after day and sometimes a little into the night, while almost imperceptibly the distance between them was reduced. Finally they sat together, side by side, and the boy had not yet learned to laugh but no longer did

he show unease. He could now extract a simple tune from the instrument and was pleased with his own aptitude in a solemn sort of way.

One evening as darkness grew, and the things that sometimes howled at the Moon were howling again, Fander offered his tentacle-tip for the hundredth time. Always the gesture had been unmistakable even if its motive was not clear, yet always it had been rebuffed. But now, now, five fingers curled around it in shy desire to please.

With a fervent prayer that human nerves would function just like Martian ones, Fander poured his thoughts through, swiftly, lest the warm grip be loosened too soon.

"Do not fear me. I cannot help my shape any more than you can help yours. I am your friend, your father, your mother. I need you as much as you need me."

The boy let go of him, began quiet, half-stifled whimpering noises. Fander put a tentacle on his shoulder, made little patting motions that he imagined were wholly Martian. For some inexplicable reason, this made matters worse. At his wits' end what to do for the best, what action to take that might be understandable in Terrestrial terms, he gave the problem up, surrendered to his instinct, put a long, ropy limb around the boy and held him close until the noises ceased and slumber came. It was then he realized the child he had taken was much younger than he had estimated. He nursed him through the night.

Much practice was necessary to make conversa-

tion. The boy had to learn to put mental drive behind his thoughts, for it was beyond Fander's power to suck them out of him.

"What is your name?"

Fander got a picture of thin legs running rapidly.

He returned it in question form. "Speedy?"

An affirmative.

"What name do you call me?"

An unflattering montage of monsters.

"Devil?"

The picture whirled around, became confused. There was a trace of embarrassment.

"Devil will do," assured Fander. He went on. "Where are your parents?"

More confusion.

"You must have had parents. Everyone has a father and mother, haven't they? Don't you remember yours?"

Muddled ghost-pictures. Grown-ups leaving children. Grown-ups avoiding children, as if they feared them.

"What is the first thing you remember?"

"Big man walking with me. Carried me a bit. Walked again."

"What happened to him?"

"Went away. Said he was sick. Might make me sick too."

"Long ago?"

Confusion.

Fander changed his aim. "What of those other children—have they no parents either?"

"All got nobody."

"But you've got somebody now, haven't you, Speedy?"

Doubtfully. "Yes."

Fander pushed it further. "Would you rather have me, or those other children?" He let it rest a moment before he added, "Or both?"

"Both," said Speedy with no hesitation. His fingers toyed with the harp.

Would you like to help me look for them tomorrow and bring them here? And if they are scared of me will you help them not to be afraid?"

"Sure!" said Speedy, licking his lips and sticking his chest out.

"Then," said Fander, "perhaps you would like to go for a walk today? You've been too long in this cave. Will you come for a walk with me?"

"Y'betcha!"

Side by side they went for a short walk, one trotting rapidly along, the other slithering. The child's spirits perked up with this trip in the open; it was as if the sight of the sky and the feel of the grass made him realize at last that he was not exactly a prisoner. His formerly solemn features became animated, he made exclamations that Fander could not understand, and once he laughed at nothing for the sheer joy of it. On two occasions he grabbed a tentacle-tip in order to tell Fander something, performing the action as if it were in every way as natural as his own speech.

They got out the load-sled in the morning. Fander took the front seat and the controls; Speedy squatted behind him with hands gripping his harness-belt. With a shallow soar, they headed for the glade. Many small, white-tailed animals bolted down holes as they passed over.

"Good for dinner," remarked Speedy, touching him and speaking through the touch.

Fander felt sickened. Meat-eaters! It was not until a queer feeling of shame and apology came back at him that he knew the other had felt his revulsion. He wished he'd been swift to blanket that reaction before the boy could sense it, but he could not be blamed for the effect of so bald a statement taking him so completely unawares. However, it had produced another step forward in their mutual relationship—Speedy desired his good opinion.

Within fifteen minutes they struck lucky. At a point half a mile south of the glade Speedy let out a shrill yell and pointed downward. A small, golden-haired figure was standing there on a slight rise, staring fascinatedly upward at the phenomenon in the sky. A second tiny shape, with red but equally long hair, was at the bottom of the slope gazing in similar wonderment. Both came to their senses and turned to flee as the sled tilted toward them.

Ignoring the yelps of excitement close behind him, and the pulls upon his belt, Fander swooped, got first one, then the other. This left him with only one limb to right the sled and gain height. If the victims had

fought he would have had his work cut out to make it. They did not fight. They shrieked as he snatched them and then relaxed with closed eyes.

The sled climbed, glided a mile at five hundred feet. Fander's attention was divided between his limp prizes, the controls and the horizon when suddenly a thunderous rattling sounded on the metal base of the sled, the entire framework shuddered, a strip of metal flew from its leading edge and things made whining sounds toward the clouds.

"Old Graypate," bawled Speedy, jigging around but keeping away from the rim. "He's shooting at us."

The spoken words meant nothing to the Martian and he could not spare a limb for the contact the other had forgotten to make. Grimly righting the sled, he gave it full power. Whatever damage it had suffered had not affected its efficiency; it shot forward at a pace that set the red and golden hair of the captives streaming in the wind. Perforce his landing by the cave was clumsy. The sled bumped down and lurched across forty yards of grass.

First things first. Taking the quiet pair into the cave, he made them comfortable on the bed, came out and examined the sled. There were half a dozen deep dents in its flat underside, two bright furrows angling across one rim. He made contact with Speedy.

"What were you trying to tell me?"

"Old Graypate shot at us."

The mind-picture burst upon him vividly and with electrifying effect: a vision of a tall, white-haired, stern-faced old man with a tubular weapon propped

upon his shoulder while it spat fire upward. A white-haired old man! An adult!

His grip was tight on the other's arm. "What is this oldster to you?"

"Nothing much. He lives near us in the shelters."

Picture of a long, dusty concrete burrow, badly damaged, its ceiling marked with the scars of a lighting system which had rotted away to nothing. The old man living hermitlike at one end; the children at the other. The old man was sour, taciturn, kept the children at a distance, spoke to them seldom but was quick to respond when they were menaced. He had guns. Once he had killed many wild dogs that had eaten two children.

"People left us near shelters because Old Graypate was there, and had guns," informed Speedy.

"But why does he keep away from children? Doesn't he like children?"

"Don't know." He mused a moment. "Once told us that old people could get very sick and make young ones sick—and then we'd all die. Maybe he's afraid of making us die." Speedy wasn't very sure about it.

So there was some much-feared disease around, something contagious, to which adults were peculiarly susceptible. Without hesitation they abandoned their young at the first onslaught, hoping that at least the children would live. Sacrifice after sacrifice that the remnants of the race might survive. Heartbreak after heartbreak as elders chose death alone rather than death together.

Yet Graypate himself was depicted as very old. Was this an exaggeration of the child-mind?

"I must meet Graypate."

"He will shoot," declared Speedy positively. "He knows by now that you took me. He saw you take the others. He will wait for you and shoot."

"We will find some way to avoid that."

"How?"

"When these two have become my friends, just as you have become my friend, I will take all three of you back to the shelters. You can find Graypate for me and tell him that I am not as ugly as I look."

"I don't think you're ugly," denied Speedy.

The picture Fander got along with that gave him the weirdest sensation of pleasure. It was of a vague, shadowy but distorted body with a clear human face.

The new prisoners were female. Fander knew it without being told because they were daintier than Speedy and had the warm, sweet smell of females. That meant complications. Forthwith he cut another and smaller cave for Speedy and himself.

Neither of the girls saw him for two days. Keeping well out of their sight, he let Speedy take them food, talk to them, prepare them for the shape of the thing to come. On the third day he presented himself for inspection at a distance. Despite forewarnings they went sheet-white, clung together, but uttered no distressing sounds. He played his harp a little while, withdrew, came back in the evening and played for them again.

Encouraged by Speedy's constant and self-assured flow of propaganda, one of them grasped a tentacle-tip next day. What came along the nerves was not a picture so much as an ache, a desire, a childish yearning. Fander backed out of the cave, found wood, spent the whole night using the sleepy Speedy as a model and fashioned the wood into a tiny, jointed semblance of a human being. He was no sculptor, but he possessed a natural delicacy of touch, and the poet in him ran through his limbs and expressed itself in the model. Making a thorough job of it, he clothed it in Terrestrial fashion, colored its face, fixed upon its features the pleasure-grimace which humans call a smile.

He gave her the doll the moment she awakened in the morning. She took it eagerly, hungrily, with wide, glad eyes. Hugging it to her, she crooned over it—and he knew that the strange emptiness within her was gone.

Though Speedy was openly contemptuous of this manifest waste of effort, Fander set to and made a second mannikin. It did not take quite as long. Practice on the first had made him swifter, more dexterous. He was able to present it to the other child by mid-afternoon. Her acceptance was made with shy grace; she held the doll close as if it meant more than the whole of her sorry world. In her thrilled concentration upon the gift, she did not notice his nearness, his closeness, and when he offered a tentacle, she took it.

He said, simply, "I love you."

Her mind was too untrained to drive a response, but her great eyes warmed.

Fander sat on the grounded sled at a point a mile east of the glade and watched the three children walk hand in hand toward the hidden shelters. Speedy was the obvious leader, hurrying them onward, bossing them with the noisy assurance of one who has been around and considers himself sophisticated. In spite of this, the girls paused at intervals to turn and wave to the ropy, bee-eyed thing they'd left behind. And Fander dutifully waved back, always using his signal-tentacle because it had not occurred to him that any tentacle would serve.

They sank from sight behind a rise of ground. He remained on the sled, his multi-faceted gaze going over his surroundings or studying the angry sky now threatening rain. The ground was a dull, dead gray-green all the way to the horizon. There was no relief from that drab color, not one shining patch of white, gold or crimson such as dotted the meadows of Mars. There was only the eternal gray-green and his own brilliant blueness.

Before long a sharp-faced, four-footed thing revealed itself in the grass, raised its head and howled at him. The sound was an eerily urgent wail that ran across the grasses and moaned into the distance. It brought others of its kind, two, ten, twenty. Their defiance increased with their numbers until there was a large band of them edging toward him with lips drawn back, teeth exposed. Then there came a sudden and undetectable flock-command which caused them to cease their slinking and spring forward as one, slavering as they came. They did it with the hungry, red-eyed

frenzy of animals motivated by something akin to madness.

Repulsive though it was, the sight of creatures craving for meat—even strange blue meat—did not bother Fander. He slipped a control a notch, the flotation-grids radiated, the sled soared twenty feet. So calm and easy an escape so casually performed infuriated the wild dog pack beyond all measure. Arriving beneath the sled, they made futile springs upward, fell back upon one another, bit and slashed each other, leaped again and again. The pandemonium they set up was a compound of snarls, yelps, barks, and growls, the ferocious expressions of extreme hate. They exuded a pungent odor of dry hair and animal sweat.

Reclining on the sled in a maddening pose of disdain, Fander let the insane ones rave below. They raced around in tight circles shrieking insults at him and biting each other. This went on for some time and ended with a spurt of ultra-rapid cracks from the direction of the glade. Eight dogs fell dead. Two flopped and struggled to crawl away. Ten yelped in agony, made off on three legs. The unharmed ones flashed away to some place where they could make a meal of the escaping limpers. Fander lowered the sled.

Speedy stood on the rise with Graypate. The latter restored his weapon to the crook of his arm, rubbed his chin thoughtfully, ambled forward.

Stopping five yards from the Martian, the old Earthman again massaged his chin whiskers, then said, "It sure is the darnedest thing, just the darnedest thing!"

"No use talking *at* him," advised Speedy. "You've got to touch him, like I told you."

"I know, I know." Graypate betrayed a slight impatience. "All in good time. I'll touch him when I'm ready." He stood there, gazing at Fander with eyes that were very pale and very sharp. "Oh, well, here goes." He offered a hand.

Fander placed a tentacle-end in it.

"Jeepers, he's cold," commented Graypate, closing his grip. "Colder than a snake."

"He isn't a snake," Speedy contradicted fiercely.

"Ease up, ease up—I didn't say he is." Graypate seemed fond of repetitive phrases.

"He doesn't feel like one, either," persisted Speedy, who had never felt a snake and did not wish to.

Fander boosted a thought through. "I come from the fourth planet. Do you know what that means?"

"I ain't ignorant," snapped Graypate aloud.

"No need to reply vocally. I receive your thoughts exactly as you receive mine. Your responses are much stronger than the boy's and I can understand you easily."

"Humph!" said Graypate to the world at large.

"I have been anxious to find an adult because the children can tell me little. I would like to ask questions. Do you feel inclined to answer questions?"

"It depends," answered Graypate, becoming leery.

"Never mind. Answer them if you wish. My only desire is to help you."

"Why?" asked Graypate, searching around for a percentage.

"We need intelligent friends."

"Why?"

"Our numbers are small, our resources poor. In visiting this world and the misty one we've come near to the limit of our ability. But with assistance we could go farther. I think that if we could help you a time might come when you could help us."

Graypate pondered it cautiously, forgetting that the inward workings of his mind were wide-open to the other. Chronic suspicion was the keynote of his thoughts, suspicion based on life experiences and recent history. But inward thoughts ran both ways, and his own mind detected the clear sincerity in Fander's.

So he said, "Fair enough. Say more."

"What caused all this?" inquired Fander, waving a limb at the world.

"War," said Graypate. "The last war we'll ever have. The entire place went nuts."

"How did that come about?"

"You've got me there." Graypate gave the problem grave consideration. "I reckon it wasn't just any one thing; it was a multitude of things sort of piling themselves up."

"Such as?"

"Differences in people. Some were colored differently in their bodies, others in their ideas, and they couldn't get along. Some bred faster than others, wanted more room, more food. There wasn't any more room or more food. The world was full and nobody could shove in except by pushing another out. My old

man told me plenty before he died, and he always maintained that if folk had had hoss-sense there might not—"

"Your old man?" interjected Fander. "Your father? Didn't all this occur in your own lifetime?"

"It did not. I saw none of it. I am the son of the son of a survivor."

"Let's go back to the cave," put in Speedy, bored with this silent contact-talk. "I want to show him our harp."

They took no notice, and Fander went on, "Do you think there might be a lot of others still living?"

"Who knows?" Graypate was moody about it. "There isn't any way of telling how many are wandering around the other side of the globe, maybe still killing each other, or starving to death, or dying of the sickness."

"What sickness is this?"

"I couldn't tell what it is called." Graypate scratched his head confusedly. "My old man told me a few times, but I've long forgotten. Knowing the name wouldn't do me any good, see? He said his father told him that it was part of the war, it got invented and was spread deliberately—and it's still with us."

"What are its symptoms?"

"You go hot and dizzy. You get black swellings in the armpits. In forty-eight hours you're dead. Old ones get it first. The kids then catch it unless you make away from them mighty fast."

"It is nothing familiar to me," said Fander, unable to recognize cultured bubonic. "In any case, I'm not a

medical expert." He eyed Graypate. "But you seem to have avoided it."

"Sheer luck," opined Graypate. "Or maybe I can't get it. There was a story going around during the war that some folk might develop immunity to it, durned if I know why. Could be that I'm immune, but don't count on it."

"So you keep your distance from these children?"

"Sure." He glanced at Speedy. "I shouldn't really have come along with this kid. He's got a lousy chance as it is without me increasing the odds."

"That is thoughtful of you," Fander put over softly. "Especially seeing that you must be lonely."

Graypate bristled and his thought-flow became aggressive. "I ain't grieving for company. I can look after myself, like I have done since my old man went away to curl up by himself. I'm on my own feet. So's every other guy."

"I believe that," said Fander. "You must pardon me —I'm a stranger here myself. I judged you by my own feelings. Now and again I get pretty lonely."

"How come?" demanded Graypate, staring at him. "You ain't telling me they dumped you and left you, on your own?"

"They did."

"Man!" exclaimed Graypate fervently.

Man! It was a picture resembling Speedy's conception, a vision elusive in form but firm and human in face. The oldster was reacting to what he considered a predicament rather than a choice, and the reaction came on a wave of sympathy.

Fander struck promptly and hard. "You see how I'm fixed. The companionship of wild animals is nothing to me. I need someone intelligent enough to like my music and forget my looks, someone intelligent enough to—"

"I ain't so sure we're that smart," Graypate chipped in. He let his gaze swing morbidly around the landscape. "Not when I see this graveyard and think of how it looked in Grandpop's days."

"Every flower blooms from the dust of a hundred dead ones," answered Fander.

"What are flowers?"

It shocked the Martian. He had projected a mind-picture of a trumpet lily, crimson and shining, and Graypate's brain had juggled it around, uncertain whether it were fish, flesh or fowl.

"Vegetable growths, like these." Fander plucked half a dozen blades of blue-green grass. "But more colorful, and sweet-scented." He transmitted the brilliant vision of a mile-square field of trumpet lilies, red and glowing.

"Glory be!" said Graypate. "We've nothing like those."

"Not here," agreed Fander. "Not here." He gestured toward the horizon. "Elsewhere may be plenty. If we got together we could be company for each other, we could learn things from each other. We could pool our ideas, our efforts, and search for flowers far away —also for more people."

"Folk just won't get together in large bunches. They stick to each other in family groups until the

plague breaks them up. Then they abandon the kids. The bigger the crowd, the bigger the risk of someone contaminating the lot." He leaned on his gun, staring at the other, his thought-forms shaping themselves in dull solemnity. "When a guy gets hit he goes away and takes it on his own. The end is a personal contract between him and his God, with no witnesses. Death's a pretty private affair these days."

"What, after all these years? Don't you think that by this time the disease may have run its course and exhausted itself?"

"Nobody knows—and nobody's gambling on it."

"I would gamble," said Fander.

"You ain't like us. You mightn't be able to catch it."

"Or I might get it worse, and die more painfully."

"Mebbe," admitted Graypate, doubtfully. "Anyway, you're looking at it from a different angle. You've been dumped on your ownsome. What've you got to lose?"

"My life," said Fander.

Graypate rocked back on his heels, then said, "Yes, sir, that is a gamble. A guy can't bet any heavier than that." He rubbed his chin whiskers as before. "All right, all right, I'll take you up on that. You come right here and live with us." His grip tightened on his gun, his knuckles showing white. "On this understanding: the moment you feel sick you get out fast, and for keeps. If you don't, I'll bump you and drag you away myself, even if that makes me get it too. The kids come first, see?"

The shelters were far roomier than the cave. There were eighteen children living in them, all skinny with their prolonged diet of roots, edible herbs and an occasional rabbit. The youngest and most sensitive of them ceased to be terrified of Fander after ten days. Within four months his slithering shape of blue ropiness had become a normal adjunct of their small, limited world.

Six of the youngsters were males older than Speedy, one of them much older but not yet adult. He beguiled them with his harp, teaching them to play, and now and again giving them ten-minute rides on the load-sled as a special treat. He made dolls for the girls, and queer, cone-shaped little houses for the dolls, and fan-backed chairs of woven grass for the houses. None of these toys were truly Martian in design, and none were Terrestrial. They represented a pathetic compromise within his imagination: the Martian notion of what Terrestrial models might have looked like had there been any in existence.

But surreptitiously, without seeming to give any less attention to the younger ones, he directed his main efforts upon the six older boys and Speedy. To his mind, these were the hope of the world—and of Mars. At no time did he bother to ponder that the non-technical brain is not without its virtues, or that there are times and circumstances when it is worth dropping the short view of what is practicable for the sake of the long view of what is remotely possible. So as best he could he concentrated upon the elder seven, educating them through the dragging months, stimulating

their minds, encouraging their curiosity, and continually impressing upon them the idea that fear of disease can become a folk-separating dogma unless they conquered it within their souls.

He taught them that death is death, a natural process to be accepted philosophically and met with dignity—and there were times when he suspected that he was teaching them nothing, he was merely reminding them, for deep within their growing minds was the ancestral strain of Terrestrialism which had mulled its way to the same conclusions ten or twenty thousands of years before. Still, he was helping to remove this disease-block from the path of the stream, and was driving child-logic more rapidly toward adult outlook. In that respect he was satisfied. He could do little more.

In time, they organized group concerts, humming or making singing noises to the accompaniment of the harp, now and again improvising lines to suit Fander's tunes, arguing out the respective merits of chosen words until by process of elimination they had a complete song. As songs grew to a repertoire and singing grew more adept, more polished, Old Graypate displayed interest, came to one performance, then another, until by custom he had established his own place as a one-man audience.

One day the eldest boy, who was named Redhead, came to Fander and grasped a tentacle-tip. "Devil, may I operate your food-machine?"

"You mean you would like me to show you how to work it?"

"No, Devil, I know how to work it." The boy gazed self-assuredly into the other's great bee-eyes.

"Then how is it operated?"

"You fill its container with the tenderest blades of grass, being careful not to include roots. You are equally careful not to turn a switch before the container is full and its door completely closed. You then turn the red switch for a count of two hundred eighty, reverse the container, turn the green switch for a count of forty-seven. You then close both switches, empty the container's warm pulp into the end molds and apply the press until the biscuits are firm and dry."

"How have you discovered all this?"

"I have watched you make biscuits for us many times. This morning while you were busy, I tried it myself." He extended a hand. It held a biscuit. Taking it from him, Fander examined it. Firm, crisp, well-shaped. He tasted it. Perfect.

Redhead became the first mechanic to operate and service a Martian lifeboat's emergency premasticator. Seven years later, long after the machine had ceased to function, he managed to repower it, weakly but effectively, with dust that gave forth alpha sparks. In another five years he had improved it, speeded it up. In twenty years he had duplicated it and had all the know-how needed to turn out premasticators on a large scale. Fander could not have equaled this performance for, as a non-technician, he'd no better notion than the average Terrestrial of the principles

upon which the machine worked, neither did he know what was meant by radiant digestion or protein enrichment. He could do little more than urge Redhead along and leave the rest to whatever inherent genius the boy possessed—which was plenty.

In similar manner, Speedy and two youths named Blacky and Big-ears took the load-sled out of his charge. On rare occasions, as a great privilege, Fander had permitted them to take up the sled for one-hour trips, alone. This time they were gone from dawn to dusk. Graypate mooched around, gun under arm, another smaller one stuck in his belt, going frequently to the top of a rise and scanning the skies in all directions. The delinquents swooped in at sunset, bringing with them a strange boy.

Fander summoned them to him. They held hands so that his touch would give him simultaneous contact with all three.

"I am a little worried. The sled has only so much power. When it is all gone there will be no more."

They eyed each other aghast.

"Unfortunately, I have neither the knowledge nor the ability to energize the sled once its power is exhausted. I lack the wisdom of the friends who left me here—and that is my shame." He paused, watching them dolefully, then went on, "All I do know is that its power does not leak away. If not used much, the reserves will remain for many years." Another pause before he added, "And in a few years you will be men."

Blacky said, "But, Devil, when we are men we'll be much heavier and the sled will use so much more power."

"How do you know that?" Fander put it sharply.

"More weight, more power to sustain it," opined Blacky with the air of one whose logic is incontrovertible. "It doesn't need thinking out. *It's obvious.*"

Very slowly and softly, Fander told him, "You'll do. May the twin moons shine upon you someday, for I know you'll do."

"Do what, Devil?"

"Build a thousand sleds like this one, or better—and explore the whole world."

From that time onward they confined their trips strictly to one hour, making them less frequently than of yore, spending more time poking and prying around the sled's innards.

Graypate changed character with the slow reluctance of the aged. Leastways, as two years then three rolled past, he came gradually out of his shell, was less taciturn, more willing to mix with those swiftly growing up to his own height. Without fully realizing what he was doing he joined forces with Fander, gave the children the remnants of Earthly wisdom passed down from his father's father. He taught the boys how to use the guns of which he had as many as eleven, some maintained mostly as a source of spares for others. He took them shell-hunting; digging deep beneath rotting foundations into stale, half-filled cel-

lars in search of ammunition not too far corroded for use.

"Guns ain't no use without shells, and shells don't last forever."

Neither do buried shells. They found not one.

Throughout the course of history, Martian, Venusian or Terrestrial, some years are more noteworthy than others. The twelfth one after Fander's marooning was outstanding for its series of events each of which was pitifully insignificant by cosmic standards but loomed enormously in this small community life.

To start with, on the basis of Redhead's improvements to the premasticator, the older seven—now bearded men—contrived to repower the exhausted sled and again took to the air for the first time in forty months. Experiments showed that the Martian load-carrier was now slower, could bear less weight, but had far longer range. They used it to visit the ruins of distant cities in search of metallic junk suitable for the building of more sleds, and by early summer they had constructed another, larger than the original, clumsy to the verge of dangerousness, but still a sled.

On several occasions they failed to find metal but did find people, odd families surviving in under-surface shelters, clinging grimly to life and passed-down scraps of knowledge. Since all these new contacts were strictly human to human, with no weirdly tentacled shape to scare off the parties of the second part, and since many were finding fear of plague more to be en-

dured than their terrible loneliness, many families returned with the explorers, settled in the shelters, accepted Fander, added their surviving skills to the community's riches.

Thus local population grew to seventy adults and four hundred children. They compounded with their plague-fear by spreading through the shelters, digging through half-wrecked and formerly unused expanses, and moving apart to form twenty or thirty lesser communities each one of which could be isolated should death reappear.

Growing morale born of added strength and confidence in numbers soon resulted in four more sleds, still clumsy but slightly less dangerous to manage. There also appeared the first rock house above ground, standing four-square and solidly under the gray skies, a defiant witness that mankind still considered itself a cut above the rats and rabbits. The community presented the house to Blacky and Sweetvoice, who had announced their desire to associate. An adult who claimed to know the conventional routine spoke solemn words over the happy couple before many witnesses, while Fander attended the groom as best Martian.

Toward summer's end Speedy returned from a solo sled-trip of many days, brought with him one old man, one boy and four girls, all of strange, outlandish countenance. They were yellow in complexion, had black hair, black, almond-shaped eyes, and spoke a language that none could understand. Until these

newcomers had picked up the local speech, Fander had to act as interpreter, for his mind-pictures and theirs were independent of vocal sounds. The four girls were quiet, modest and very beautiful. Within a month Speedy had married one of them whose name was a gentle clucking sound which meant Precious Jewel Ling.

After this wedding, Fander sought Graypate, placed a tentacle-tip in his right hand. "There were differences between the man and the girl, distinctive features wider apart than any we know upon Mars. Are these some of the differences which caused your war?"

"I dunno. I've never seen one of these yellow folk before. They must live mighty far off." He rubbed his chin to help his thoughts along. "I only know what my old man told me and his old man told him. There were too many folk of too many different sorts."

"They can't be all that different if they can fall in love."

"Mebbe not," agreed Graypate.

"Supposing most of the people still in this world could assemble here, breed together, and have less different children; the children breed others still less different. Wouldn't they eventually become all much the same—just Earth-people?"

"Mebbe so."

"All speaking the same language, sharing the same culture? If they spread out slowly from a central source, always in contact by sled, continually sharing

the same knowledge, same progress, would there be any room for new differences to arise?"

"I dunno," said Graypate evasively. "I'm not so young as I used to be and I can't dream as far ahead as I used to do."

"It doesn't matter so long as the young ones can dream it." Fander mused a moment. "If you're beginning to think yourself a back number you're in good company. Things are getting somewhat out of hand as far as I'm concerned. The onlooker sees the most of the game and perhaps that's why I'm more sensitive than you to a certain peculiar feeling."

"To what feeling?" inquired Graypate, eyeing him.

"That Terra is on the move once more. There are now many people where there were few. A house is up and more are to follow. They talk of six more. After the six they will talk of sixty, then six hundred, then six thousand. Some are planning to haul up sunken conduits and use them to pipe water from the northward lake. Sleds are being built. Premasticators will soon be built, and force-screens likewise. Children are being taught. Less and less is being heard of your plague and so far no more have died of it. I feel a dynamic surge of energy and ambition and genius which may grow with appalling rapidity until it becomes a mighty flood. I feel that I, too, am a back number."

"Bunk!" said Graypate. "If you dream often enough you're bound to have a bad one once in a while."

"Perhaps it is because so many of my tasks have been taken over and done better than I was doing

them. I have failed to seek new tasks. Were I a technician I'd have discovered a dozen by now. Reckon this is as good a time as any to turn to a job with which you can help me."

"What is that?"

"A long, long time ago I made a poem. It was for the beautiful thing that first impelled me to stay here. I do not know exactly what its maker had in mind, nor whether my eyes see it as he wished it to be seen, but I have made a poem to express what I feel when I look upon his work."

"Humph!" said Graypate, not very interested.

"There is an outcrop of solid rock beneath its base which I can shave smooth and use as a plinth on which to inscribe my words. I would like to put them down twice: in the script of Mars and the script of Earth." Fander hesitated a moment, then went on. "Perhaps this is presumptuous of me, but it is many years since I wrote for all to read—and my chance may never come again."

Graypate said, "I get the idea. You want me to put down your notions in our writing so you can copy it."

"Yes."

"Give me your stylus and pad." Taking them, Graypate squatted on a rock, lowering himself stiffly, for he was feeling the weight of his years. Resting the pad on his knees, he held the writing instrument in his right hand while his left continued to grasp a tentacle-tip. "Go ahead."

He started drawing thick, laborious marks as Fan-

der's mind-pictures came through, enlarging the letters and keeping them well separated. When he had finished he handed the pad over.

"Asymmetrical," decided Fander, staring at the queer letters and wishing for the first time that he had taken up the study of Earth-writing. "Cannot you make this part balance with that, and this with this?"

"It's what you said."

"It is your own translation of what I said. I would like it better balanced. Do you mind if we try again?"

They tried again. They made fourteen attempts before Fander was satisfied with the perfunctory appearance of letters and words he could not understand.

Taking the paper, he found his ray-gun, went to the base-rock of the beautiful thing and sheared the whole front to a flat, even surface. Adjusting his beam to cut a V-shaped channel one inch deep, he inscribed his poem on the rock in long, unpunctuated lines of neat Martian curlicues. With less confidence and much greater care, he repeated the verse in Earth's awkward, angular hieroglyphics. The task took him quite a time and there were fifty people watching him when he finished. They said nothing. In utter silence they looked at the poem and at the beautiful thing, and were still standing there brooding solemnly when he went away.

One by one the rest of the community visited the site next day, going and coming with the air of pilgrims attending an ancient shrine. All stood there a long

time, returned without comment. Nobody praised Fander's work, nobody damned it, nobody reproached him for alienating something wholly Earth's. The only effect—too subtle to be noteworthy—was a greater and still growing grimness and determination that boosted the already swelling Earth-dynamic.

In that respect, Fander wrought better than he knew.

A plague-scare came in the fourteenth year. Two sleds had brought back families from afar and within a week of their arrival the children sickened, became spotted.

Metal gongs sounded the alarm, all work ceased, the affected section was cut off and guarded, the majority prepared to flee. It was a threatening reversal of all the things for which many had toiled so long, a destructive scattering of the tender roots of new civilization.

Fander found Graypate, Speedy and Blacky, armed to the teeth, facing a drawn-faced and restless crowd.

"There's most of a hundred folk in that isolated part," Graypate was telling them. "They ain't all got it. Maybe they won't get it. If they don't, it ain't so likely you'll go down either. We ought to wait and see. Stick around a bit."

"Listen who's talking," invited a voice in the crowd. "If you weren't immune you'd have been buried thirty-forty years ago."

"Same goes for near everybody," snapped Gray-

pate. He glared around, his gun under one arm, his pale blue eyes bellicose. "I ain't much use at speechifying, so I'm just saying flatly that nobody goes before we know whether this really is the plague." He hefted his weapon in one hand, held it forward. "Anyone fancy himself at beating a bullet?"

The heckler in the audience muscled his way to the front. He was a swarthy man of muscular build, and his dark eyes looked belligerently into Graypate's. "While there's life there's hope. If we beat it we live to come back, when it's safe to come back, if ever—and you know it. So I'm calling your bluff, see?" Squaring his shoulders, he began to walk off.

Graypate's gun already was halfway up when he felt the touch of Fander's tentacle on his arm. He lowered the weapon, called after the escapee.

"I'm going into that cut-off section and the Devil is going with me. We're running into things, not away from them. I never did like running away." Several of the audience fidgeted, murmured approval. He went on, "We'll see for ourselves just what's wrong. We mightn't be able to put it right, but we'll find out what's the matter."

The walker paused, turned, eyed him, eyed Fander, and said, "You can't do that."

"Why not?"

"You'll get it yourself—and a heck of a lot of use you'll be dead."

"What, and me immune?" cracked Graypate, grinning.

"The Devil will get it," hedged the other.

Graypate was about to retort, "What do *you* care?" but altered it slightly in response to Fander's contacting thoughts. He said, more softly, "Do you *care?*"

It caught the other off-balance. He fumbled embarrassedly within his own mind, avoided looking at the Martian, said lamely, "I don't see the reason for any guy to take risks."

"He's taking them because *he* cares," Graypate gave back. "And I'm taking them because I'm too old and useless to give a darn."

With that, he stepped down, marched stubbornly toward the isolated section, Fander slithering by his side, tentacle in hand. The one who wished to flee stayed put, staring after them. The crowd shuffled uneasily, seemed of two minds whether to accept the situation and stick around, or whether to rush Graypate and Fander and drag them away. Speedy and Blacky made as if to follow the pair but were ordered off.

No adult sickened; nobody died. Children in the affected sector went one after another through the same routine of liverishness, high temperature and spots until the epidemic of measles had died out. Not until a month after the last case had been cured by something within its own constitution did Graypate and Fander emerge.

The innocuous course and eventual disappearance of this suspected plague gave the pendulum of confidence a push, swinging it farther. Morale boosted itself almost to the verge of arrogance. More sleds appeared, more mechanics serviced them, more pilots

rode them. More people flowed in; more oddments of past knowledge came with them.

Humanity was off to a flying start with the salvaged seeds of past wisdom and the urge to do. The tormented ones of Earth were not primitive savages, but surviving organisms of a greatness nine-tenths destroyed but still remembered, each contributing his mite of know-how to restore at least some of those things which had been boiled away in atomic fires.

When, in the twentieth year, Redhead duplicated the premasticator, there were eight thousand stone houses standing around the hill. A community hall seventy times the size of a house, with a great green dome of copper, reared itself upon the eastward fringe. A dam held the lake to the north. A hospital was going up in the west. The nuances and energies and talents of fifty races had built this town and were still building it. Among them were ten Polynesians and four Icelanders and one lean, dusky child who was the last of the Seminoles.

Farms spread wide. One thousand heads of Indian corn rescued from a sheltered valley in the Andes had grown to ten thousand acres. Water buffaloes and goats had been brought from afar to serve in lieu of the horses and sheep that would never be seen again—and no man knew why one species survived while another did not. The horses had died; the water buffaloes lived. The canines hunted in ferocious packs; the felines had departed from existence. The small herbs, some tubers and a few seedy things could be rescued and cultivated for hungry bellies;

but there were no flowers for the hungry mind. Humanity carried on, making do with what was available. No more than that could be done.

Fander was a back number. He had nothing left for which to live but his songs and the affection of the others. In everything but his harp and his songs the Terrans were way ahead of him. He could do no more than give of his own affection in return for theirs and wait with the patience of one whose work is done.

At the end of that year they buried Graypate. He died in his sleep, passing with the undramatic casualness of one who "ain't much use at speechifying." They put him to rest on a knoll behind the community hall, and Fander played his mourning song, and Precious Jewel, who was Speedy's wife, planted the grave with sweet herbs.

In the spring of the following year Fander summoned Speedy and Blacky and Redhead. He was coiled on a couch, blue and shivering. They held hands so that his touch would speak to them simultaneously.

"I am about to undergo my *amafa.*"

He had great difficulty in putting it over in understandable thought-forms, for this was something beyond their Earthly experience.

"It is an unavoidable change of age during which my kind must sleep undisturbed." They reacted as if the casual reference to his kind was a strange and startling revelation, a new aspect previously unthought-of. He continued, "I must be left alone until this hibernation has run its natural course."

"For how long, Devil?" asked Speedy, with anxiety.

"It may stretch from four of your months to a full year, or—"

"Or what?" Speedy did not wait for a reassuring reply. His agile mind was swift to sense the spice of danger lying far back in the Martian's thoughts. "Or it may never end?"

"It may never," admitted Fander, reluctantly. He shivered again, drew his tentacles around himself. The brilliance of his blueness was fading visibly. "The possibility is small, but it is there."

Speedy's eyes widened and his breath was taken in a short gasp. His mind was striving to readjust itself and accept the appalling idea that Fander might not be a fixture, permanent, established for all time. Blacky and Redhead were equally aghast.

"We Martians do not last forever," Fander pointed out, gently. "All are mortal, here and there. He who survives his *amafa* has many happy years to follow, but some do not survive. It is a trial that must be faced as everything from beginning to end must be faced."

"But—"

"Our numbers are not large," Fander went on. "We breed slowly and some of us die halfway through the normal span. By cosmic standards we are a weak and foolish people much in need of the support of the clever and the strong. You are clever and strong. Whenever my people visit you again, or any other still stranger people come, always remember that you are clever and strong."

"We are strong," echoed Speedy, dreamily. His gaze swung around to take in the thousands of roofs, the copper dome, the thing of beauty on the hill. "We are strong."

A prolonged shudder went through the ropy, bee-eyed creature on the couch.

"I do not wish to be left here, an idle sleeper in the midst of life, posing like a bad example to the young. I would rather rest within the little cave where first we made friends and grew to know and understand each other. Wall it up and fix a door for me. Forbid anyone to touch me or let the light of day fall upon me until such time as I emerge of my own accord." Fander stirred sluggishly, his limbs uncoiling with noticeable lack of sinuousness. "I regret I must ask you to carry me there. Please forgive me; I have left it a little late and cannot . . . cannot . . . make it by myself."

Their faces were pictures of alarm, their minds bells of sorrow. Running for poles, they made a stretcher, edged him onto it, bore him to the cave. A long procession was following by the time they reached it. As they settled him comfortably and began to wall up the entrance, the crowd watched in the same solemn silence with which they had looked upon his verse.

He was already a tightly rolled ball of dull blueness, with filmed eyes, when they fitted the door and closed it, leaving him to darkness and slumber. Next day a tiny, brown-skinned man with eight children, all hugging dolls, came to the door. While the young-

sters stared huge-eyed at the door, he fixed upon it a two-word name in metal letters, taking great pains over his self-imposed task and making a neat job of it.

The Martian vessel came from the stratosphere with the slow, stately fall of a grounding balloon. Behind the transparent band its bluish, nightmarish crew were assembled and looking with great, multifaceted eyes at the upper surface of the clouds. The scene resembled a pink-tinged snow-field beneath which the planet still remained concealed.

Captain Rdina could feel this as a tense, exciting moment even though his vessel had not the honor to be the first with such an approach. One Captain Skhiva, now long retired, had done it many years before. Nevertheless, this second venture retained its own exploratory thrill.

Someone stationed a third of the way around the vessel's belly came writhing at top pace toward him as their drop brought them near to the pinkish clouds. The oncomer's signaling tentacle was jiggling at a seldom used rate.

"Captain, we have just seen an object swoop across the horizon."

"What sort of an object?"

"It looked like a gigantic load-sled."

"It couldn't have been."

"No, Captain, of course not—but that is exactly what it appeared to be."

"Where is it now?" demanded Rdina, gazing toward the side from which the other had come.

"It dived into the mists below."

"You must have been mistaken. Long-standing anticipation can encourage the strangest delusions." He stopped a moment as the observation band became shrouded in the vapor of a cloud. Musingly, he watched the gray wall of fog slide upward as his vessel continued its descent. "That old report says definitely that there is nothing but desolation and wild animals. There is no intelligent life except some fool of a minor poet whom Skhiva left behind, and twelve to one he's dead by now. The animals may have eaten him."

"Eaten him? Eaten *meat?*" exclaimed the other, thoroughly revolted.

"Anything is possible," assured Rdina, pleased with the extreme to which his imagination could be stretched. "Except a load-sled. That was plain silly."

At which point he had no choice but to let the subject drop for the simple and compelling reason that the ship came out of the base of the cloud, and the sled in question was floating alongside. It could be seen in complete detail, and even their own instruments were responding to the powerful output of its numerous flotation-grids.

The twenty Martians aboard the sphere sat staring bee-eyed at this enormous thing which was half the size of their own vessel, and the forty humans on the sled stared back with equal intentness. Ship and sled continued to descend side by side, while both crews studied each other with dumb fascination which persisted until simultaneously they touched ground.

It was not until he felt the slight jolt of landing that Captain Rdina recovered sufficiently to look elsewhere. He saw the houses, the green-domed building, the thing of beauty poised upon its hill, the many hundreds of Earth-people streaming out of their town and toward his vessel.

None of these queer, two-legged life-forms, he noted, betrayed the slightest sign of revulsion or fear. They galloped to the tryst with a bumptious self-confidence which would still be evident any place the other side of the cosmos.

It shook him a little, and he kept saying to himself, again and again, "They're not scared—why should you be? They're not scared—why should you be?"

He went out personally to meet the first of them, suppressing his own apprehensions and ignoring the fact that many of them bore weapons. The leading Earthman, a big-built, spade-bearded two-legger, grasped his tentacle as to the manner born.

There came a picture of swiftly moving limbs. "My name is Speedy."

The ship emptied itself within ten minutes. No Martian would stay inside who was free to smell new air. Their first visit, in a slithering bunch, was to the thing of beauty. Rdina stood quietly looking at it, his crew clustered in a half-circle around him, the Earth folk a silent audience behind.

It was a great rock statue of a female of Earth. She was broad-shouldered, full-bosomed, wide-hipped, and wore voluminous skirts that came right down to her heavy-soled shoes. Her back was a little bent, her

head a little bowed, and her face was hidden in her hands, deep in her toil-worn hands. Rdina tried in vain to gain some glimpse of the tired features behind those hiding hands. He looked at her a long while before his eyes lowered to read the script beneath, ignoring the Earth-lettering, running easily over the flowing Martian curlicues:

Weep, my country, for your sons asleep,
The ashes of your homes, your tottering towers.
Weep, my country, O, my country, weep!
For birds that cannot sing, for vanished flowers,
The end of everything,
The silenced hours.
Weep, my country!

There was no signature. Rdina mulled it through many minutes while the others remained passive. Then he turned to Speedy, pointed to the Martian script.

"Who wrote this?"

"One of your people. He is dead."

"Ah!" said Rdina. "That songbird of Skhiva's. I have forgotten his name. I doubt whether many remember it. He was only a very small poet. How did he die?"

"He ordered us to enclose him for some long and urgent sleep he must have, and—"

"The *amafa,*" put in Rdina, comprehendingly. "And then?"

"We did as he asked. He warned us that he might

never come out." Speedy gazed at the sky, unconscious that Rdina was picking up his sorrowful thoughts. "He has been there nearly two years and has not emerged." The eyes came down to Rdina. "I don't know whether you can understand me, but he was one of us."

"I think I understand." Rdina was thoughtful. He asked, "How long is this period you call nearly two years?"

They managed to work it out between them, translating it from Terran to Martian time-terms.

"It is long," pronounced Rdina. "Much longer than the usual *amafa,* but not unique. Occasionally, for no known reason, someone takes even longer. Besides, Earth is Earth and Mars is Mars." He became swift, energetic as he called to one of his crew. "Physician Traith, we have a prolonged *amafa* case. Get your oils and essences and come with me." When the other had returned, he said to Speedy, "Take us to where he sleeps."

Reaching the door to the walled-up cave, Rdina paused to look at the names fixed upon it in neat but incomprehensible letters. They read: DEAR DEVIL.

"What do those mean?" asked Physician Traith, pointing.

"Do not disturb," guessed Rdina carelessly. Pushing open the door, he let the other enter first, closed it behind him to keep all others outside.

They reappeared an hour later. The total population of the city had congregated outside the cave to see the Martians. Rdina wondered why they had

not permitted his crew to satisfy their natural curiosity, since it was unlikely that they would be more interested in other things—such as the fate of one small poet. Ten thousand eyes were upon them as they came into the sunlight and fastened the cave's door. Rdina made contact with Speedy, gave him the news.

Stretching himself in the light as if reaching toward the sun, Speedy shouted in a voice of tremendous gladness which all could hear.

"He will be out again within twenty days."

At that, a mild form of madness seemed to overcome the two-leggers. They made pleasure-grimaces, piercing mouth-noises and some went so far as to beat each other.

Twenty Martians felt like joining Fander that same night. The Martian constitution is peculiarly susceptible to emotion.

COURTESY*

CLIFFORD D. SIMAK

★ ★
☆
★

Whatever else the explorers of space take with them on their journeys to the stars, the most complex apparatus of all will never appear on the cargo list. Human character is intangible, but it will determine the success or failure of expeditions, and sometimes the very lives of their members. There will be times, too, when the crucial point will not be what the space voyagers think about the inhabitants of other worlds, but what those beings think about men.

The big virtues—bravery, honesty, loyalty, piety—are the easier ones to write about, but sometimes the smaller ones can be crucial. Perhaps it is even stretching a point to say that courtesy is a virtue at all; Mr. Simak doesn't make that claim for it in his story. Instead, he creates a situation in which courtesy turns out to have survival value.

Not many science-fiction stories are as deftly constructed

This story is from Astounding Science-Fiction Magazine.

and simply told as this one, but a very large number of them are concerned with the same point this story makes. Character, virtue, morality—call it anything you like—is a part of human nature. Voyages to the stars will demand the utmost of the men who make them—not merely the utmost in strength and intelligence and endurance and discipline, but also the utmost in character and virtue.

However, as the reader will instantly discover, Mr. Simak did not set out to write a fictionalized sermon. This is a powerful story of an expedition to a remote and bleak planet, and what happened to the men who made it. They are the kind of men who have always opened up the new frontiers of Earth, and they are the kind of men who will go first to the stars. They have courage and strength and self-discipline. And one of them had something more. . . .

★ ★
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The serum was no good. The labels told the story.

Dr. James H. Morgan took his glasses off and wiped them carefully, cold terror clutching at his innards. He put the spectacles back on, probing at them with a thick, blunt finger to settle them into correct position. Then he took another look. He had been right the first time. The date on the serum consignment was a good ten years too old.

He wheeled slowly, lumbered a few ponderous steps to the tent flap and stood there, squat body framed in the triangular entrance, pudgy hands gripping the canvas on either side.

Outside the fantastic lichen moors stretched to gray and bleak horizons. The setting sun was a dull red glow in the west, and to the east, the doctor knew, night already was beginning to close in, with that veil of purplish light that seemed to fall like a curtain upon the land and billow rapidly across it.

A chill wind blew out of the east, already touched with the frigidity of night, and twitched the canvas beneath the doctor's fingers.

"Ah, yes," said Dr. Morgan, "the merry moors of Landro."

A lonely place, he told himself. Not lonely only in its barrenness nor in its alien wildness, but with an ingrained loneliness that could drive a man mad if he were left alone with it.

Like a great cemetery, he thought, an empty place of dead. And yet without the cemetery's close association, without the tenderness and the inevitability of a cemetery. For a cemetery held in sacred trust the husks of those who once had lived and this place was an emptiness that held no memory at all.

But not for long, said Dr. Morgan to himself. Not for long now.

He stood looking at the barren slope that rose above the camp and he decided that it would make an eminently satisfactory cemetery.

All places looked alike. That was the trouble. You couldn't tell one place from another. There were no trees and there were no bushes, just a fuzzy-looking

scrub that grew here and there, clothing the naked land in splotches, like the ragged coat a beggar wears.

Benny Falkner stopped on the path as it topped the rise and stood rigid with the fear that was mounting in him. Fear of the coming night and of its bitter cold, fear of the silent hills and the shadowed swales, and the more distant and yet more terrible fear of the little natives that might this very moment be skulking on the hillside.

He put up his arm and wiped the sweat off his brow with his tattered sleeve. He shouldn't have been sweating, he told himself, for it was chilly now and getting colder by the minute. In another hour or two it would be cold enough to freeze a man unprotected in the open.

He fought down the terror that choked his throat and set his teeth a-chatter and for an instant stood stock-still to convince himself he was not panic-stricken. . . . He had been going east and that meant he must go west to reach the camp again. Although the catch was that he couldn't be absolutely sure he had been going east all the time—he might have trended north a little or even wandered south. But the deviation couldn't have been enough, he was sure, to throw him so far off that he could not spot the camp by returning straight into the west.

Sometime soon he should sight the smoke of the Earthmen's camp. Any ridge, the next ridge, each succeeding hummock in the winding trail, he had assured himself, would bring him upon the camp it-

self. He would reach higher ground and there the camp would be, spread out in front of him, with the semicircle of white canvas gleaming in the fading light and the thin trail of smoke rising from the larger cook tent where Bat Ears Brady would be bellowing one of his songs.

But that had been an hour ago when the sun still stood a good two hands high. He remembered now, standing on the ridge-top, that he had been a little nervous, but not really apprehensive. It had been unthinkable, then, that a man could get himself lost in an hour's walk out of camp.

Now the sun was gone and the cold was creeping in and the wind had a lonely sound he had not noticed when the light was good.

One more rise, he decided. One more ridge, and if that is not the one, I'll give up until morning. Find a sheltered place somewhere, a rock face of some sort that will give me some protection and reflect a campfire's heat—if I can find anything with which to make a campfire.

He stood and listened to the wind moaning across the land behind him and it seemed to him there was a whimper in the sound, as if the wind were anxious, that it might be following on his track, sniffing out his scent.

Then he heard the other sound, the soft, padding sound that came up the hill toward him.

Ira Warren sat at his desk and stared accusingly at the paper work stacked in front of him. Reluc-

tantly he took some of the papers off the stack and laid them on the desk.

That fool Falkner, he thought. I've told them and I've told them that they have to stick together, that no one must go wandering off alone.

A bunch of babies, he told himself savagely. Just a bunch of drooling kids, fresh out of college, barely dry behind the ears and all hopped up with erudition, but without any common sense. And not a one of them would listen. That was the worst of it, not a one of them would listen.

Someone scratched on the canvas of the tent.

"Come in," called Warren.

Dr. Morgan entered.

"Good evening, Commander," he said.

"Well," said Warren irritably, "what now?"

"Why, now," said Dr. Morgan, sweating just a little, "it's the matter of the serum."

"The serum?"

"The serum," said Dr. Morgan. "It isn't any good."

"What do you mean?" asked Warren. "I have troubles, doctor. I can't play patty-cake with you about your serum."

"It's too old," said Morgan. "A good ten years too old. You can't use old serum. You see, it wouldn't—"

"Stop chattering," commanded Warren, sharply. "The serum is too old, you say. When did you find this out?"

"Just now."

"You mean this very moment?"

Morgan nodded miserably.

Warren pushed the papers to one side very carefully and deliberately. He placed his hands on the desk in front of him and made a tent out of his fingers.

"Tell me this, doctor," said Warren, speaking cautiously, as if he were hunting in his mind for the exact words which he must use, "how long has this expedition been on Landro?"

"Why," said Morgan, "quite some time, I'd say." He counted mental fingers. "Six weeks, to be exact."

"And the serum has been here all that time?"

"Why, of course," said Morgan. "It was unloaded from the ship at the same time as all the other stuff."

"It wasn't left around somewhere, so that you just found it? It was taken to your tent at once?"

"Of course it was," said Morgan. "The very first thing. I always insist upon that procedure."

"At any time in the last six weeks, at any given moment in any day of that whole six weeks, you could have inspected the serum and found it was no good? Isn't that correct, doctor?"

"I suppose I could have," Morgan admitted. "It was just that—"

"You didn't have the time," suggested Warren, sweetly.

"Well, not that," said Morgan.

"You were, perhaps, too pressed with other interests?"

"Well, not exactly."

"You were aware that up to a week ago we could

have contacted the ship by radio and it could have turned back and taken us off. They would have done that if we had let them know about the serum."

"I know that—"

"And you know now that they're outside our radio range. We can't let them know. We can't call them back. We won't have any contact with the human race for the next two years."

"I," said Morgan, weakly, "I—"

"It's been lovely knowing you," Warren told him. "Just how long do you figure it will be before we are dead?"

"It will be another week or so before we'll become susceptible to the virus," Morgan said. "It will take, in certain stubborn cases, six weeks or so for it to kill a man."

"Two months," said Warren. "Three, at the outside. Would you say that was right, Dr. Morgan?"

"Yes," said Morgan.

"There is something that I want you to tell me," Warren said.

"What is it?" Morgan asked.

"Sometime when you have a moment, when you have the time and it is no inconvenience to you, I should like to know just how it feels to kill twenty-five of your fellow-men."

"I," said Morgan, "I—"

"And yourself, of course," said Warren. "That makes twenty-six."

Bat Ears Brady was a character. For more than thirty years now he had been going out on planetary expeditions with Commander Ira Warren, although Warren had not been a commander when it started, but a second looey. Today they were still together, a team of toughened planet-checkers—although no one on the outside would have known that they were a team, for Warren headed the expeditions and Bat Ears cooked for them.

Now Warren set out a bottle on his desk and sent for Bat Ears Brady.

Warren heard him coming for some time before he finally arrived. He'd had a drink or two too many and he was singing.

He came through the tent entrance walking stiff and straight, as if there were a chalked line laid out for him to follow. He saw the bottle on the desk and picked it up, disregarding the glasses set beside it. He lowered the contents by a good three inches and set it back again. Then he took the camp chair that had been placed there for him.

"What's the matter now?" he demanded. "You never send for me unless there's something wrong."

"What," asked Warren, "have you been drinking?"

Bat Ears hiccuped politely. "Little something I cooked up."

He regarded Warren balefully. "Used to be we could bring in a little something, but now they say we can't. What little there is you keep under lock and key. When a man gets thirsty, it sure tests his ingen . . . ingen . . . ingen—"

"Ingenuity," said Warren.

"That's the word," said Bat Ears. "That's the word, exactly."

"We're in a jam, Bat Ears," said Warren.

"We're always in a jam," said Bat Ears. "Ain't like the old days, Ira. Had some he-men then. But now—"

"I know what you mean," said Warren.

"Kids," said Bat Ears contemptuously. "Scarcely out of didies. Got to wipe their noses—"

"It isn't that kind of a jam," said Warren. "This is the real McCoy. If we can't figure this one out, we'll all be dead before two months are gone."

"Natives?" asked Bat Ears.

"Not the natives," Warren told him. "Although more than likely they'd be glad to do us in if there was a chance."

"Cheeky customers," said Bat Ears. "One of them sneaked into the cook tent and I kicked him off the reservation real unceremonious. He did considerable squalling at me. He didn't like it none."

"You shouldn't kick them, Bat Ears."

"Well, Ira, I didn't really kick him. That was just a figure of speech, kind of. No sir, I didn't kick him. I took a shovel to him. Always could handle a shovel some better than my feet. Reach farther and—"

He reached out and took the bottle, lowered its contents another inch or two.

"This crisis, Ira?"

"It's the serum," Warren told him. "Morgan

waited until the ship had got too far for us to contact them before he thought to check the serum. And it isn't any good—it's about ten years too old."

Bat Ears sat half-stunned.

"So we don't get our booster shots," said Warren, "and that means that we will die. There's this deadly virus here, the . . . the . . . oh, well, I can't remember the name of it. But you know about it."

"Sure," said Bat Ears. "Sure I know about it."

"Funny thing," said Warren. "You'd expect to find something like that on one of the jungle planets. But no, you find it here. Something about the natives. They're humanoid. Got the same kind of guts we got. So the virus developed an ability to attack a humanoid system. We are good, new material for it."

"It don't seem to bother the natives none now," said Bat Ears.

"No," said Warren. "They seem to be immune. One of two things: they've found a cure or they've developed natural immunity."

"If they've found a cure," said Bat Ears, "we can shake it out of them."

"And if they haven't," said Warren, "if adaptation is the answer—then we're dead ducks for sure."

"We'll start working on them," said Bat Ears. "They hate us and they'd love to see us croak, but we'll find some way to get it out of them."

"Everything always hates us," Warren said. "Why

is that, Bat Ears? We do our best and they always hate us. On every planet that Man has set a foot on. We try to make them like us, we do all we can for them. But they resent our help. Or reject our friendliness. Or take us for a bunch of suckers—so that finally we lose our patience and we take a shovel to them."

"And then," said Bat Ears, sanctimoniously, "the fat is in the fire."

"What I'm worried about is the men," said Warren. "When they hear about this serum business—"

"We can't tell them," said Bat Ears. "We can't let them know. They'll find out, after a while, of course, but not right away."

"Morgan is the only one who knows," said Warren, "and he blabs. We can't keep him quiet. It'll be all over camp by morning."

Bat Ears rose ponderously. He towered over Warren as he reached out a hand for the bottle on the desk.

"I'll drop in on Morgan on my way back," he said. "I'll fix it so he won't talk."

He took a long pull at the bottle and set it back.

"I'll draw a picture of what'll happen to him if he does," said Bat Ears.

Warren sat easily in his chair, watching the retreating back of Bat Ears Brady. Always there in a pinch, he thought. Always a man that you can depend on.

Bat Ears was back in three minutes flat. He stood

in the entrance of the tent, no sign of drunkenness upon him, his face solemn, eyes large with the thing he'd seen.

"He croaked himself," he said.

That was the solemn truth.

Dr. James H. Morgan lay dead inside his tent, his throat sliced open with a professional nicety that no one but a surgeon could have managed.

About midnight the searching party brought in Falkner.

Warren stared wearily at him. The kid was scared. He was all scratched up from floundering around in the darkness and he was pale around the gills.

"He saw our light, sir," said Peabody, "and let out a yell. That's the way we found him."

"Thank you, Peabody," said Warren. "I'll see you in the morning. I want to talk to Falkner."

"Yes, sir," said Peabody. "I am glad we found him, sir."

Wish I had more like him, thought Warren. Bat Ears, the ancient planet-checker; Peabody, an old army man; and Gilmer, the grizzled supply officer. Those are the ones to count on. The rest of them are punks.

Falkner tried to stand stiff and straight.

"You see, sir," he told Warren, "it was like this: I thought I saw an outcropping—"

Warren interrupted him. "You know, of course, Mr. Falkner, that it is an expedition rule you never

are to go out by yourself; that under no circumstance is one to go off by himself."

"Yes, sir," said Falkner, "I know that—"

"You are aware," said Warren, "that you are alive only by some incredible quirk of fate. You would have frozen before morning if the natives hadn't got you first."

"I saw a native, sir. He didn't bother me."

"You are more than lucky, then," said Warren. "It isn't often that a native hasn't got the time to spare to slit a human's throat. In the five expeditions that have been here before us, they have killed a full eighteen. Those stone knives they have, I can assure you, make very ragged slitting."

Warren drew a record book in front of him, opened it and made a very careful notation.

"Mr. Falkner," he said, "you will be confined to camp for a two-week period for infraction of the rules. Also, during that time, you shall be attached to Mr. Brady."

"Mr. Brady, sir? The cook?"

"Precisely," said Warren. "He probably will want you to hustle fuel and help with the meals and dispose of garbage and other such light tasks."

"But I was sent on this expedition to make geologic observations, not to help the cook."

"All very true," admitted Warren. "But, likewise, you were sent out under certain regulations. You have seen fit to disregard those regulations and I see fit, as a result, to discipline you. That is all, Mr. Falkner."

Falkner turned stiffly and moved toward the tent flap.

"By the way," said Warren, "I forgot to tell you. I'm glad that you got back."

Falkner did not answer.

Warren stiffened for a moment, then relaxed. After all, he thought, what did it matter? With another few weeks nothing would matter for him and Falkner, nor for any of the rest.

The chaplain showed up the first thing in the morning. Warren was sitting on the edge of his cot, pulling on his trousers when the man came in. It was cold and Warren was shivering despite the sputtering of the little stove that stood beside the desk.

The chaplain was very precise and businesslike about his visit.

"I thought I should talk with you," he said, "about arranging services for our dear departed friend."

"What dear departed friend?" asked Warren, shivering and pulling on a shoe.

"Why, Dr. Morgan, of course."

"I see," said Warren. "Yes, I suppose we shall have to bury him."

The chaplain stiffened just a little.

"I was wondering if the doctor had any religious convictions, any sort of preference."

"I doubt it very much," said Warren. "If I were you, I'd hold it down to minimum simplicity."

"That's what I thought," said the chaplain. "A few words, perhaps, and a simple prayer."

"Yes," said Warren. "A prayer, by all means. We'll need a lot of prayer."

"Pardon me, sir?"

"Oh," Warren told him, "don't mind me. Just wool-gathering, that's all."

"I see," said the chaplain. "I was wondering, sir, if you have any idea what might have made him do it."

"Who do what?"

"What made the doctor commit suicide."

"Oh, that," said Warren. "Just an unstable character, I guess."

He laced his shoes and stood up.

"Mr. Barnes," he said, "you are a man of God, and a very good one from what I've seen of you. You may have the answer to a question that is bothering me."

"Why," said Mr. Barnes, "why I—"

"What would you do," asked Warren, "if you suddenly were to find you had no more than two months to live?"

"Why," said Mr. Barnes, "I suppose that I would go on living pretty much the way I always have. With a little closer attention to the condition of my soul, perhaps."

"That," said Warren, "is a practical answer. And, I suppose, the most reasonable that anyone can give."

The chaplain looked at him curiously. "You don't mean, sir—"

"Sit down, Barnes," said Warren. "I'll turn up the stove. I need you now. To tell you the solemn truth, I've never held too much with this business of having you fellows with the expedition. But I guess there always will be times when one needs a man like you."

The chaplain sat down.

"Mr. Barnes," said Warren, "that was no hypothetical question I asked. Unless God performs some miracle we'll all be dead in another two months' time."

"You are joking, sir."

"Not at all," said Warren. "The serum is no good. Morgan waited to check it until it was too late to get word to the ship. That's why he killed himself."

He watched the chaplain closely and the chaplain did not flinch.

"I was of a mind," said Warren, "not to tell you. I'm not telling any of the others—not for a while, at least."

"It takes a little while," said Mr. Barnes, "to let a thing like that soak in. I find it so, myself. Maybe you should tell the others, let them have a chance—"

"No," said Warren.

The chaplain stared at him. "What are you hoping for, Warren? What do you expect to happen?"

"A miracle," said Warren.

"A miracle?"

"Certainly," said Warren. "You believe in miracles. You must."

"I don't know," said Mr. Barnes. "There are cer-

tain miracles, of course—one might call them allegorical miracles, and sometimes men read into them more than was ever meant."

"I am more practical than that," said Warren, harshly. "There is the miracle of the fact that the natives of this place are humanoid like ourselves and they don't need any booster shots. There is a potential miracle in the fact that only the first humans who landed on the planet ever tried to live on Landro without the aid of booster shots."

"Since you mention it," said the chaplain, "there is the miracle of the fact that we are here at all."

Warren blinked at him. "That's right," he said. "Tell me, why do you think we're here? Divine destiny, perhaps. Or the immutable performance of the mysterious forces that move Man along his way."

"We are here," said Barnes, "to carry on the survey work that has been continued thus far by parties here before us."

"And that will be continued," said Warren, "by the parties that come after us."

"You forget," the chaplain said, "that all of us will die. They will be very wary of sending another expedition to replace one that has been wiped out."

"And you," said Warren, "forget the miracle."

The report had been written by the psychologist who had accompanied the third expedition to Landro. Warren had managed, after considerable digging in the file of quadruplicates, to find a copy of it.

"Hogwash," he said and struck the papers with his fist.

"I could of told you that," said Bat Ears, "before you ever read it. Ain't nothing one of them prissy punks can tell an old-timer like me about these abor . . . abor . . . abor—"

"Aborigines," said Warren.

"That's the word," said Bat Ears. "That's the word I wanted."

"It says here," declared Warren, "that the natives of Landro have a keen sense of dignity, very delicately tuned—that's the very words it uses—and an exact code of honor when dealing among themselves."

Bat Ears snorted and reached for the bottle. He took a drink and sloshed what was left in the bottom discontentedly.

"You sure," he asked, "that this is all you got?"

"You should know," snapped Warren.

Bat Ears wagged his head. "Comforting thing," he said. "Mighty comforting."

"It says," went on Warren, "that they also have a system of what amounts to protocol, on a rather primitive basis."

"I don't know about this proto-whatever-you-may-call-it," said Bat Ears, "but that part about the code of honor gets me. Why, them dirty vultures would steal the pennies off a dead man's eyes. I always keep a shovel handy and when one of them shows up—"

"The report," said Warren, "goes into that most exhaustively. Explains it."

"Ain't no need of explanation," insisted Bat Ears. "They just want what you got, so they sneak in and take it."

"Says it's like stealing from a rich man," Warren told him. "Like a kid that sees a field with a million melons in it. Kid can't see anything wrong with taking one melon out of all that million."

"We ain't got no million melons," said Bat Ears.

"It's just an analogy," said Warren. "The stuff we have here must look like a million melons to our little friends."

"Just the same," protested Bat Ears, "they better keep out of my cook tent—"

"Shut up," said Warren savagely. "I get you here to talk with you and all you do is drink up my liquor and caterwaul about your cook tent."

"All right," said Bat Ears. "All right. What do you want to know?"

"What are we doing about contacting the natives?"

"Can't contact them," said Bat Ears, "if we can't find them. They were around here, thicker than fleas, before we needed them. Now that we need them, can't find hide nor hair of one."

"As if they might know that we needed them," said Warren.

"How would they know?" asked Bat Ears.

"I can't tell you," Warren said. "It was just a thought."

"If you do find them," asked Bat Ears, "how you going to make them talk?"

"Bribe them," said Warren. "Buy them. Offer them anything we have."

Bat Ears shook his head. "It won't work. Because they know all they got to do is wait. If they just wait long enough, it's theirs without the asking. I got a better way."

"Your way won't work, either."

"You're wasting your time, anyhow," Bat Ears told him. "They ain't got no cure. It's just adap . . . adap—"

"Adaptation."

"Sure," said Bat Ears. "That's the word I meant."

He took up the bottle, shook it, measured it with his thumb and then, in a sudden gesture, killed it.

He rose quickly to his feet. "I got to sling some grub together," he said. "You stay here and get her figured out."

Warren sat quietly in the tent, listening to Bat Ears' footsteps going across the compound of the camp.

There was no hope, of course. He must have known that all along, he told himself, and yet he had postponed the realization of it. Postponed it with talk of miracles and hope that the natives might have the answer—and the native answer, the native cure, he admitted now, was even more fantastic than the hope of a miracle. For how could one expect the little owl-eyed people would know of medicine when they did not know of clothing,

when they still carried rudely chipped stone knives, when their campfire was a thing very laboriously arrived at by the use of stricken flint?

They would die, all twenty-five of them, and in the days to come the little owl-eyed natives would come boldly marching in, no longer skulking, and pick the camp to its last bare bone.

Collins was the first to go. He died hard, as all men die hard when infected by the peculiar virus of Landro. Before he was dead, Peabody had taken to his bed with the dull headache that heralded the onset of the malady. After that the men went down like tenpins. They screamed and moaned in delirium, they lay as dead for days before they finally died while the fever ate at them like some ravenous animal that had crept in from the moors.

There was little that anyone could do. Make them comfortable, keep them bathed and the bedding washed and changed, feed them broth that Bat Ears made in big kettles on the stove, be sure there was fresh, cold water always available for the fever-anguished throats.

At first the graves were deep, and wooden crosses were set up, with the name and other information painted on the crossbar. Then the graves were only shallow holes because there were fewer hands to dig them and less strength within the hands.

To Warren it was an eternity of nightmare—a ceaseless round of caring for his stricken men, of helping with the graves, of writing in the record

book the names of those who died. Sleep came in snatches when he could catch it or when he became so exhausted that he tottered in his tracks and could not keep his eyelids open. Food was something that Bat Ears brought and set in front of him and he gulped without knowing what it was, without tasting what it was.

Time was a forgotten thing and he lost track of days. He asked what day it was and no one knew nor seemed to care. The sun came up and the sun went down and the moors stretched to their gray horizons, with the lonely wind blowing out of them.

Vaguely he became aware of fewer and fewer men who worked beside him, of fewer stricken men upon the cots. And one day he sat down in his tent and looked across at another haggard face and knew it was nearly over.

"It's a cruel thing, sir," said the haggard face.

"Yes, Mr. Barnes," said Warren. "How many are there left?"

"Three," said the chaplain, "and two of them are nearly gone. Young Falkner seems to be better, though."

"Any on their feet?"

"Bat Ears, sir. Just you and I and Bat Ears."

"Why don't we catch it, Barnes? Why are we still here?"

"No one knows," the chaplain told him. "I have a feeling that we'll not escape it."

"I know," said Warren. "I have that feeling, too."

Bat Ears lumbered into the tent and set a pail upon the table. He reached into it and scooped out a tin cup, dripping, and handed it to Warren.

"What is it, Bat Ears?" Warren asked.

"Something I cooked up," said Bat Ears. "Something that you need."

Warren lifted the cup and gulped it down. It burned its way clear into his stomach, set his throat afire and exploded in his head.

"Potatoes," said Bat Ears. "Spuds make powerful stuff. The Irish found that out, years and years ago."

He took the cup from Warren, dipped it again and handed it to Barnes.

The chaplain hesitated.

Bat Ears shouted at him. "Drink it, man. It'll put some heart in you."

The minister drank, choked, set the cup back on the table empty.

"They're back again," said Bat Ears.

"Who's back?" asked Warren.

"The natives," said Bat Ears. "All around us, waiting for the end of us."

He disdained the cup, lifted the pail in both his hands and put it to his lips. Some of the liquor splashed out of the corners of his mouth and ran darkly down his shirt.

He put the pail back on the table, wiped his mouth with a hairy fist.

"They might at least be decent about it," he declared. "They might at least keep out of sight until

it is all over. Caught one sneaking out of Falkner's tent. Old gray buck. Tried to catch him, but he outlegged me."

"Falkner's tent?"

"Sure. Snooping around before a man is dead. Not even waiting till he's gone. Didn't take nothing, though, I guess. Falkner was asleep. Didn't even wake him."

"Asleep? You sure?"

"Sure," said Bat Ears. "Breathing natural. I'm going to unsling my gun and pick off a few of them, just for luck. I'll teach them—"

"Mr. Brady," asked Barnes, "you are certain Falkner was sleeping naturally? Not in a coma? Not dead?"

"I know when a man is dead," yelled Bat Ears.

Jones and Webster died during the night. Warren found Bat Ears in the morning, collapsed beside his stone-cold stove, the empty liquor pail beside him. At first he thought the cook was only drunk and then he saw the signs upon him. He hauled him across the floor and boosted him onto his cot, then went out to find the chaplain.

He found him in the cemetery, wielding a shovel, his hands red with broken blisters.

"It won't be deep," said Mr. Barnes, "but it will cover them. It's the best that I can do."

"Bat Ears has it," Warren told him.

The chaplain leaned on his shovel, breathing a little hard from digging.

"Queer," he said. "Queer, to think of him. Of big, brawling Bat Ears. He was a tower of strength."

Warren reached for the shovel.

"I'll finish this," he said, "if you'll go down and get them ready. I can't . . . I haven't the heart to handle them."

The chaplain handed over the shovel. "It's funny," he said, "about young Falkner."

"You said yesterday he was a little better. You imagined it?"

Barnes shook his head. "I was in to see him. He's awake and lucid and his temperature is down."

They stared at one another for a long time, each trying to hide the hope that might be upon his face.

"Do you think—?"

"No, I don't," said Barnes.

But Falkner continued to improve. Three days later he was sitting up. Six days later he stood with the other two beside the grave when they buried Bat Ears.

And there were three of them. Three out of twenty-six.

The chaplain closed his book and put it in his pocket. Warren took up the shovel and shoveled in the dirt. The other two watched him silently as he filled the grave, slowly, deliberately, taking his time, for there was no other task to hurry him—filled it and mounded it and shaped it neat and smooth with gentle shovel pats.

Then the three of them went down the slope together, not arm in arm, but close enough to have

been arm in arm—back to the white tents of the camp.

Still they did not talk.

It was as if they understood for the moment the dedicatory value of the silence that lay upon the land and upon the camp and the three that were left out of twenty-six.

Falkner said, "There is nothing strange about me. Nothing different from any other man."

"There must be," insisted Warren. "You survived the virus. It hit you and you came out alive. There must be a reason for it."

"You two," said Falkner, "never even got it. There must be some reason for that, too."

"We can't be sure," said Chaplain Barnes, speaking softly.

Warren rustled his notes angrily. "We've covered it," he said. "Covered everything that you know, everything that you can remember—unless you are holding back something that we should know."

"Why should I hold back anything?" demanded Falkner.

"Childhood history," said Warren. "The usual things. Measles, a slight attack of whooping cough, colds—afraid of the dark. Ordinary eating habits, normal acceptance of schools and social obligations. Everything as if it might be someone else. But there has to be an answer. Something that you did—"

"Or," said Barnes, "even something that he thought."

"Huh?" asked Warren.

"The ones who could tell us are out there on the

slope," said Barnes. "You and I, Warren, are stumbling along a path we are not equipped to travel. A medical man, a psychologist, even an alien psychologist, a statistician—any one of them would have had something to contribute. But they are dead. You and I are trying to do something we have no training for. We might have the answer right beneath our noses and we would not recognize it."

"I know," said Warren. "I know. We only do the best we can."

"I have told you everything I can," said Falkner, tensely. "Everything I know. I've told you things I would not tell under any other circumstance."

"We know, lad," said Barnes gently. "We know you have."

"Somewhere," persisted Warren, "somewhere in the life of Benjamin Falkner there is an answer—an answer to the thing that Man must know. Something that he has forgotten. Something that he has not told us, unintentionally. Or, more than likely, something that he has told us and we do not recognize."

"Or," said Barnes, "something that no one but a specialist could know. Some strange quirk in his body or his mind. Some tiny mutation that no one would suspect. Or even . . . Warren, you remember, you talked to me about a miracle."

"I'm tired of it," Falkner told them. "For three days now you have gone over me, pawed me, questioned me, dissected every thought—"

"Let's go over that last part again," said Warren wearily. "When you were lost."

"We've gone over it," said Falkner, "a hundred times already."

"Once again," said Warren. "Just once again. You were standing there, on the path, you say, when you heard the footsteps coming up the path."

"Not footsteps," said Falkner. "At first I didn't know they were footsteps. It was just a sound."

"And it terrified you?"

"It terrified me."

"Why?"

"Well, the dark, and being lost and—"

"You'd been thinking about the natives?"

"Well, yes, off and on."

"More than off and on?"

"More than off and on," Falkner admitted. "All the time, maybe. Ever since I realized I was lost, perhaps. In the back of my mind."

"Finally you realized they were footsteps?"

"No. I didn't know what they were until I saw the native."

"Just one native?"

"Just one. An old one. His coat was all gray and he had a scar across his face. You could see the jagged white line."

"You're sure about that scar?"

"Yes."

"Sure about his being old?"

"He looked old. He was all gray. He walked slowly and he had a limp."

"And you weren't afraid?"

"Yes, afraid, of course. But not as afraid as I would have expected."

"You would have killed him if you could?"

"No, I wouldn't have killed him."

"Not even to save your life?"

"Oh, sure. But I didn't think of that. I just . . . well, I just didn't want to tangle with him, that is all."

"You got a good look at him?"

"Yes, a good look. He passed me, no farther away than you are now."

"You would recognize him again if you saw him?"

"I did recognize—" Falkner stopped, befuddled. "Just a minute," he said. "Just a minute now."

He put up his hand and rubbed hard against his forehead. His eyes suddenly had a stricken look.

"I did see him again," he said. "I recognized him. I know it was the same one."

Warren burst out angrily. "Why didn't you tell—?"

But Barnes rushed in and headed him off: "You saw him again. When?"

"In my tent. When I was sick. I opened my eyes and he was there, in front of me."

"Just standing there?"

"Standing there and looking at me. Like he was going to swallow me with those big yellow eyes of his. Then he . . . then he—"

They waited for him to remember.

"I was sick," said Falkner. "Out of my head, maybe. Not all there. I can't be sure. But it seemed

that he stretched out his hands, his paws, rather—that he stretched them out and touched me, one paw on each side of my head."

"Touched you? Actually, physically touched you?"

"Gently," said Falkner. "Ever so gently. Just for an instant. Then I went to sleep."

"We're ahead of our story," Warren said, impatiently. "Let's go back to the trail. You saw the native—"

"We've been over that before," said Falkner bitterly.

"We'll try it once again," Warren told him. "You say the native passed quite close to you when he went by. You mean that he stepped out of the path and circled past you—?"

"No," said Falkner, "I don't mean that at all. I was the one who stepped out of the path."

You must maintain human dignity, the manual said. Above all else, human dignity and human prestige must be upheld. Kindness, yes. And helpfulness. And even brotherhood. But dignity was ahead of all.

And too often human dignity was human arrogance.

Human dignity did not allow you to step out of the path. It made the other thing step out and go around you. By inference, human dignity automatically assigned all other life to an inferior position.

"Mr. Barnes," said Warren, "it was the laying on of hands."

The man on the cot rolled his head on the pillow

and looked at Warren, almost as if he were surprised to find him there. The thin lips worked in the pallid face and the words were weak and very slow in coming.

"Yes, Warren, it was the laying on of hands. A power these creatures have. Some Christ-like power that no human has."

"But that was a divine power."

"No, Warren," said the chaplain, "not necessarily. It wouldn't have to be. It might be a very real, a very human power, that goes with mental or spiritual perfection."

Warren hunched forward on his stool. "I can't believe it," he said. "I simply can't. Not those owl-eyed things."

He looked up and glanced at the chaplain. Barnes' face had flushed with sudden fever and his breath was fluttery and shallow. His eyes were closed and he looked like a man already dead.

There had been that report by the third expedition's psychologist. It had said dignity and an exact code of honor and a rather primitive protocol. And that, of course, would fit.

But Man, intent upon his own dignity and his own prestige, had never accorded anyone else any dignity. He had been willing to be kind if his kindness were appropriately appreciated. He stood ready to help if his help were allowed to stand as a testament to his superiority. And here on Landro he had scarcely bothered to be either kind or helpful, never dreaming for a moment that the little owl-eyed native was anything other than a Stone Age crea-

ture that was a pest and nuisance and not to be taken too seriously even when he turned out, at times, to be something of a menace.

Until one day a frightened kid had stepped out of a path and let a native by.

"Courtesy," said Warren. "That's the answer: courtesy and the laying on of hands."

He got up from the stool and walked out of the tent and met Falkner coming in.

"How is he?" Falkner asked.

Warren shook his head. "Just like the others. It was late in coming, but it's just as bad."

"Two of us," said Falkner. "Two of us left out of twenty-six."

"Not two," Warren told him. "Just one. Just you."

"But, sir, you're all—"

Warren shook his head. "I have a headache," he said. "I'm beginning to sweat a little. My legs are wobbly."

"Maybe—"

"I've seen it too many times," said Warren, "to kid myself about it."

He reached out a hand, grasped the canvas and steadied himself.

"I didn't have a chance," he said. "I stepped out of no paths."

NIGHTMARE BROTHER*

ALAN E. NOURSE

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This is not a comforting story to read. The vast gulfs of space in which the Earth swims are alien to Man. They may well hold dangers too great for any human being to overcome, and even if they do not, the very difference between what is there and what is here will be terrifying to the first travelers who land on worlds beyond any present imagining. One thing seems fairly certain—no matter how many other worlds there may be, and no matter how many of them human beings manage to reach, they will all be different from the Earth and from each other. The men who go to them will be aware of these differences, or at least of some of them, and that awareness will be, at the start, a panicky one.

Every living person has experienced terror in his own

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life. The most familiar example is in nightmares, which are made up of bits and pieces of the real world and real life, all jumbled and twisted and warped by the sleeping mind into shapes of fear. What is so frightening about nightmares is exactly what the explorers of worlds in outer space may also experience—the sense of the differences and the sense of the dangers.

The first spacemen will have to have a special kind of strength. Athletes' muscles and co-ordination, swiftness of body and mind will not be enough, even when supplemented by power of endurance and the willingness to accept pain, loneliness, monotony and the knowledge that they may never come home again. The first spacemen will need, also, the inner strength that comes from the mind. They will need every scrap of will power, every pattern of discipline over their own minds and thoughts which the human race can produce. A single member of an expedition whose mind is not as trained and ready as his body may bring disaster to himself and his companions.

How are the people who select the members of the first space explorations going to locate men with the mental strength to stand up under the experience? It will not be easy—much more is known about the human body than about the human mind. In this story, Mr. Nourse proposes an answer to this problem of selection in terms of a test stranger than any ever given in a college or laboratory. It is a story written with great skill. The fears through which its central character passes are fears that everybody has known sometime in one form or another. What happens when a man is subjected to these fears—his own fears and those of everybody else as well—horrifyingly intensified?

Only the men and women who can react as Robert Cox does in this story have much hope of surviving the first phase of space exploration.

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He was walking down a tunnel.

At first it didn't even occur to him to wonder *why* he was walking down the tunnel, nor how he had got there, nor just what tunnel it was. He was walking quickly, with short, even steps, and it seemed, suddenly, as if he had been walking for hours.

It wasn't the darkness that bothered him at first. The tunnel wasn't bright, but it was quite light enough, for the walls glowed faintly with a bluish luminescence. Ahead of him the glowing walls stretched as far as he could see. The tunnel was about ten feet wide, and ten feet high, with smooth walls arching into a perfectly smooth curve over his head. Under his feet the floor seemed cushiony, yielding slightly to the pressure as he walked, and giving off a soft, muffled sound in perfect measure to his tread. It was a pleasant, soothing sound, and he hardly thought to wonder at all just what he was doing. It was quite obvious, after all. As simple as simple could be. He was walking down a tunnel.

But then little tendrils of caution and question crept into his mind, and a puzzled frown crossed his quiet face. He stopped abruptly, standing stock-still in the tunnel as he squinted at the glowing walls

in growing confusion. What a very odd place to be, he thought. A tunnel! He glanced about him, and cocked his head, listening for a long moment, until the stark silence of the place chilled him, forced him to sniff audibly, and scratch his head, and turn around.

My name is Robert Cox, he thought, and I am walking down a tunnel. He pondered for a moment, trying to remember. How long had he been walking? An hour? He shook his head. It must have been longer than that. Oddly, he couldn't remember *when* he had started walking. How had he got here? What had he been doing before he came into the tunnel? A chill of alarm crept up his spine as his mind groped. What had happened to his memory? Little doors in his mind seemed to snap quickly shut even as his memory approached them. Ridiculous, he thought, to be walking down a tunnel without even knowing where it was leading—

He peered forward in the silence. Quite suddenly he realized that he was absolutely alone. There was not a sound around him, not a stir, no sign of another human being, not even a flicker of life of any kind. The chill deepened, and he walked cautiously over to one wall, tapped it with his knuckles. Only a dull knock. For the merest fraction of a second an alarm rang in his mind, a cold, sharp intimation of deadly danger. He chuckled, uneasily. There was really no reason to be alarmed. A tunnel had to have an end, somewhere.

And then he heard the sound, and stared wide-

eyed down the tunnel. It came to his ears very faintly, at first, the most curious sort of airy whistling, like a shrill pipe in the distance. It cut through the stillness cleanly, like a razor, leaving a strange tingle of dread in his mind. He listened, hardly breathing. Was the light growing fainter? Or were his eyes not behaving? He blinked, and sensed the light dimming even as the whistling sound grew louder and nearer, mingling with another, deeper sound. A throbbing roar came to his ears, overpowering the shrillness of the whistle, and then he saw the light, far down the tunnel, a single, round, yellow light, directly in the center of the passage, growing larger and larger as the roar intensified. A sharp wind suddenly stirred his dark hair as he stared fascinated by the yellow light bearing down on him. In a horrible flash, an image crossed his mind—the image of a man trapped on a railroad track as a dark engine approached with whistle screaming, bearing down like some hideous monster out of the night.

A cry broke from the man's lips. *It was a train!* Roaring down the tunnel toward him, it was moving like a demon, with no tracks, screeching its warning as it came, with the light growing brighter and brighter, blinding him. Relentlessly it came, filling the entire tunnel from side to side, hissing smoke and fire and steam from its valves, its whistle shrieking—

With a scream of sheer terror, Cox threw himself face down on the floor, trying frantically to burrow

deeper into the soft mat of the tunnel floor, closing his mind down, blanking out everything but horrible, blinding fear. The light blazed to floodlight brilliance, and with a fearful rush of wind the roar rose to a sudden thundering bellow over his head. Then it gave way to the loud, metallic *clak-clak-clak* of steel wheels on steel rails beside his ears, and faded slowly into the distance behind him.

Trembling uncontrollably in every muscle, Cox stirred, trying to rise to his knees, groping for control of his mind. His eyes were closed tightly, and suddenly the floor was no longer soft matting, but a gritty stuff that seemed to run through his fingers.

He opened his eyes with a start, and a little cry came to his lips. The tunnel was gone. He was standing ankle-deep in the steaming sand of a vast, yellow desert, with a brassy sun beating down from a purple sky. He blinked, unbelieving, at the yellow dunes, and a twisted Joshua tree blinked back at him not ten feet away.

Two men and a girl stood in the room, watching the motionless body of the dark-haired man sprawled on the bed. The late afternoon sun came in the window, throwing bright yellow panels across the white bedspread, but the man lay quite still, his pale eyes wide open and glassy, oblivious to anything in the room. His face was deathly pale.

The girl gasped. "I think he's stopped breathing," she whispered.

The taller of the men, dressed in white, took her

by the shoulder, gently turning her face away. "He's still breathing," he reassured her. "You shouldn't be here, Mary. You should go home, try to get some rest. He'll be all right."

The other man snorted, his pink face flushed with anger. "He shouldn't be here either," he hissed, jerking a thumb at the man on the bed. "I tell you, Paul, Robert Cox is not the man. I don't care what you say. He'll never get through."

Dr. Paul Schiml drew a deep breath, turning to face the other. "If Cox can't get through, there isn't a man in the Hoffman Medical Center who can—or ever will. You know that."

"I know that there were fifty others in the same training program who were better fitted for this than Bob Cox!"

"That's not true." Dr. Schiml's voice was sharp in the still room. "Reaction time, ingenuity, opportunism—not one in the group could hold a candle to Bob." He stared down at the red-faced man, his eyes glittering angrily. "Admit it, Connover. You're not worried for Bob Cox's sake. You're worried for your own neck. You've been afraid since the start, since the first ships came back to Earth, because you've been in charge of a program you don't believe in, and you're afraid of what will happen if Bob Cox doesn't come through. It wouldn't matter who was on that bed—you'd still be afraid." He sniffed in disgust. "Well, you needn't worry. Bob Cox will do it, if anyone can. He *has* to."

"And if he *doesn't* get through?"

The tall doctor stared angrily for a moment, then turned abruptly and walked over to the bedside. There was hardly a flicker of life in the man who lay there, only the shallowest respiration to indicate that he *was* alive. With gentle fingers Dr. Schiml inspected the small incision in the man's skull, checked again the multitude of tiny, glittering wires leading to the light panel by the bedside. He stopped, staring at the panel, and motioned sharply to Connover. "Here's the first, already," he whispered.

For a moment, only the faintest buzz of sound could be heard from the panel; then Connover let out a soft whistle. "A tunnel. That makes sense. But what a device—" He turned wide-eyed to Schiml. "He could kill himself!"

"Of course he could. We've known that from the start."

"But *he* doesn't know—"

"He doesn't know anything." Schiml pointed to the panel. "A train. Ingenious? It's amazing. Could you think of anything worse?" He watched for a moment. "No room on either side for escape—he'll go under it."

All three watched, hardly breathing. Suddenly the girl was sobbing uncontrollably, burying her face on the doctor's shoulder. "It's horrible," she choked. "It's horrible . . . he'll never make it, never, he'll be killed—"

"No, Mary, not Robert. Not after the training he's had." The doctor's voice was grim. "You've got to

believe that, Mary. This is the test, the final test. He can't let us down, not now—"

He could feel danger all about him. It was nothing at all tangible, just a deep, hollow voice in his mind, screaming out the danger. Cox shuddered, and glanced up at the brassy yellow sun, his forehead wet with perspiration. It was hot! Steaming hot, with an unrelenting heat that seemed to melt him down inside like soft wax. Every muscle in his body was tense; he stood poised, tingling, his pale eyes searching the barren yellow dunes of sand for the danger he knew was there—

Then the Joshua tree moved.

With a gasp, he threw himself on the sand, ten feet from it, watching it wide-eyed. Just a slight movement of the twisted arms of the thing—he could have been mistaken, his mind could have played tricks. He trembled as he squinted through the shimmering heat at the gaunt, twisted tree.

And then, quite suddenly, realization struck him. Desert! He had been in a *tunnel*—yes, that was right, a tunnel, and that light, that roaring thing—*what was he doing here?* He sat up slowly in the sand, ran his fingers through the hot grains, studying them with infinite curiosity. No doubt about it—it *was* desert! But how? How had he reached the tunnel in the first place? And what in the rational universe could have transported him to *this* place?

Eagerly his mind searched, striking against the

curious, shadowy shield that blocked his memory. There was an answer, he knew; something was wrong, he shouldn't be there. Deep in his mind he knew he was in terrible danger, but such *idiotic* danger—if he could only think, somehow remember—

His shoulders tensed, and he froze, reactively, his eyes on the yellow mound of sand across the ridge from him. Hardly breathing, he watched, his mind screaming *danger, danger,* his eyes focusing on the yellow hillock. Then it moved again, swiftly, in the blinking of an eye, and froze again, ten feet closer—

It had looked in that fraction of a second, remarkably like a *cat*—a huge, savage, yellow cat. And then it had frozen into a hillock of sand.

Swiftly Cox moved, on hands and knees, at angles across the slope of sand from the thing. The sand burned his hands, and he almost cried out as the grit swirled up into his eyes, but he watched, every muscle tense. It moved again, at a tangent, swiftly sliding down the slope parallel to his movement, a huge, yellow, fanged thing, moving with the grace and flowing speed of molten gold, little red eyes fixed on him. Then it froze again, melting into the yellow, shimmering sand.

Stalking him!

In blind panic he pulled himself to his feet and ran down the sandy slope away from it, his eyes burning, running with the devil at his heels until a dune lay between him and the creature. Then he threw himself flat on the sand, peering over the rim of the dune.

There was a swift blur of yellow movement, and the sand-cat was on the slope behind him, twenty yards closer, crouching against the sand, panting hungrily. Frantically, Cox glanced around him. Nothing! Nothing but yellow, undulating sand hills, the scorching sun, and the tall, twisted Joshua trees that moved! He looked back suddenly, and saw the sand-cat creeping toward him, slowly, slowly, not thirty yards away.

His breath came in panting gasps as he watched the creature. It was eight feet long, with lean, muscular haunches that quivered in the sun, the red eyes gleaming in savage hate. It moved with a sure confidence, a relentless certainty of its kill. Cox tried to think, tried to clear his mind of the fear and panic that gnawed at him, tried to clear away the screaming, incredulous puzzlement that tormented him. He had to get away, but he couldn't run. The creature was too fast. He knew his presence there was incredible; something in his mind tried to tell him not to believe it, that it wasn't true—but he felt the gritty sand under his sweating palms, and it was very, very real. And the sand-cat moved closer—

In a burst of speed he ran zigzagging down the slope and up the next, watching over his shoulder for the flash of yellow movement. With each change in direction, the sand-cat also shifted, stalking faithfully. If only he could get out of its sight for a moment! If it wasn't too bright, if that savage brain were starved enough, he might force it into a pattern response— He ran ten feet to the right, paused, and rushed on ten feet to the left, heading toward

the huge boulder which stood up like a naked sentinel on the dune ahead. The sand-cat followed, moving to the right, then to the left. Again Cox sped, sure now that the pattern would be followed, moving right, then left. A long run away from the rock, then a long run toward it. The cat was closer, just twenty yards away, closing the distance between them with each run. Panting, Cox tried to catch his breath, taking a steel grip on his nerves. He knew that panic could kill him. Swiftly, he scuttled up over the edge of the dune, far to the right of the boulder, then abruptly switched back, keeping the boulder between him and the cat, reaching it, peering cautiously around—

Warm excitement flooded his mind. Slowly, ever so slowly the sand-cat was edging up over the dune, peering down in the direction he had run, slipping up over the dune on its belly, freezing, peering, a savage, baffled snarl coming from its dripping mouth. Eagerly Cox searched the sand around the boulder, picked up a chunk of sandstone as big as a brick. Then he took a huge breath, and plunged from behind the boulder, toward the cat, moving silently in the soft, hot sand. With a mixture of fury and fear he fell on the beast, raising the stone, bringing it down with all his might on the flat yellow head. The sand-cat snarled and whirled, claws slashing the air; his hot, rank breath caught Cox full, gagging him as he raised the stone again and again, bringing it down on the creature's skull. Razor claws ripped at

his side, until the cat screamed and convulsed, and lay twitching—

And suddenly there was darkness, and a cold winter breeze in his face, and the stars were twinkling in the frigid night air above him. The sandcat was gone, the desert, the Joshua trees. He lay in a ditch, half-soaked in icy mud, and his side was bleeding angrily.

He stared around him, and shivered. He was at the bottom of the ditch, his body lying in an icy rivulet of water. Above him, he could see the embankment, topped by a small iron fence. A road! Painfully he dragged himself up toward the top, peered over. The strip of polished metal gleamed in the starlight, as icy gusts of wind and snow swept down to bite his ears and bring tears to his eyes. The tears froze on his eyelids, and the sharp coldness of the dark air bit into his lungs, bringing pain with every breath.

In the distance he heard a rumbling sound, felt the road tremble as the gargantuan vehicles approached. Instinctively Cox ducked below the road surface, froze immobile as the long line of grotesque metallic monsters roared by, glimmering within their dull fluorescent force-shields. They showed no sign of life, but rumbled past him, moving steadily down the glittering highway. He could see the curious turrets, the gunlike projections, stark against the bleak night sky. Weapons, he thought, huge, tanklike engines which lumbered and roared along the road on some

errand of death. Suddenly the last of the convoy lumbered past, and he eased himself cautiously up onto the road. A burst of thunder roared in his ears, and abruptly it began to pour, huge icy drops that splattered with the force of machine-gun bullets, stinging his skin and soaking his hair and clothes. He shuddered, miserably, his mind groping in confusion. If he could only find a place to *think*, somewhere to rest and collect himself, somewhere to try to dress the wound in his side. In the gloom across the road he thought he could make out the gaunt ruins of a building standing against the starlight, and with infinite pain and slowness he dragged himself across the frigid steel strip, and down into the ditch on the other side. His feet were growing numb, and the pain in his side had turned to a dull, angry throbbing, but he somehow stumbled and staggered across the field, every ounce of his strength focused on reaching some sort of shelter.

It was a building—or it had been, once. Two walls had been completely shattered, bombed out, and the roof had fallen in, but one intact wall stood like a gaunt sentinel in the darkness. Inside, the building had been gutted by fire, and Cox was forced to rip rubble and debris away from the door. He forced it open on squeaking, long-neglected hinges. Finally he found a corner that was dry, and located a bit of blanket from the rubble inside. He sank into the corner, shaking his head, trying desperately to orient himself.

His side had stopped bleeding. A quick examination revealed four shallow, ugly-looking lacerations running down to his thigh. Four claws—the cat! Of course, the sand-cat had clawed him in its last, desperate snarl of rage. Cox leaned back, scratching his black hair with a grimy finger. The sand-cat was in the *desert,* not *here.* But before that, it was a tunnel, with a roaring train bearing down on him, a train that moved without tracks. And now, a frigid, war-beaten world—

It didn't add up. Desperately he tried to remember what had happened in between. Nothing, it seemed. He had slipped from one to the other in the blinking of an eye. But that was impossible! You just couldn't shift like that, from one place to another. At least—he didn't *think* it was possible.

He heard his breath, short and shallow, echoing in the silence of the ruined building. He was here. This building was real, the icy coldness and the darkness were very real. But the wound in his side was real, too. That hadn't happened here, that had happened somewhere else. How had he come here? Had he *wanted* to come? He shook his head angrily. It was ridiculous. But three different places—there *had* to be something in common, some common denominator. What had he found in all three places that was the same, what possible connection was there?

Danger! He sat bolt upright, staring into the blackness. That was it! A tunnel, and danger. A

desert, and danger. Now this cold, hostile place, *and danger!* Not danger to anyone else, just danger to himself. *Pure, raw, naked danger.*

He pondered for a while, his mind whirling. Somehow, it seemed that danger had been his entire life, that all he could think of, the only thing he had ever known was danger. Could that be true? Instinctively, he knew it wasn't. There *had* been peace, before, somewhere, and love, and happy hours. But superimposed in his mind was the acute, barren awareness of imminent death, a sure knowledge that he could die here, abruptly, at any moment, and only his own resourcefulness could save him.

It was like repeating the well-rehearsed words of a play. Somebody had told him that. It wasn't original in his own mind. It was propaganda, conditioned information, something he had been *taught!*

Could Mary have told him?

He gasped. Mary! He repeated the name over and over, excitedly. There was the link. Mary, his wife—certainly there had been peace, and warmth, and comfort, and love. Mary was his wife, he had known those things with her, in some remote corner of his memory. He felt himself glow as he suddenly remembered Mary's lovely face, the depth of love in those dark eyes, the warmth of her arms around him, the consuming peace and contentment in her sweet kisses and soft, happy murmurings—somewhere there had been Mary, who loved him beyond anything in the world.

The wind stirred through the ruined building, bringing a sifting of damp snow into his face. There was no Mary here. Somehow, he was here, and he was in danger, and there was no warmth nor love here. His mind swept back to reality with a jolt. He hadn't wanted to come here. It *couldn't* have been his will. There was only one other possible answer. *He had been put here.*

His mind struck the idea, and trembled. Like the fit of a hand in a glove, the thought settled down in his mind, filling a tremendous gap. Yes, that was it, he had been placed here, for some reason. He wasn't willfully changing from place to place, he was *being changed* from place to place, against his will and volition. From danger into danger, he was being shifted, like a chessman in some horrible game of death. But no one was touching him, no one was near him—how could these changes be happening? The answer sent a chill through him, and his hand trembled. It was obvious. The changes were happening in his own mind.

He rubbed his stubbled chin. If this were true, then these things weren't really happening. He hadn't actually been in the tunnel. There hadn't actually been a sand-cat. He wasn't really lying here in a cold, damp corner, with deadly frost creeping up his legs. Angrily he rejected the thought. There was no room for doubt, these things were real, all right. The slashes on his side were real. He knew, beyond the shadow of a doubt, that there *had* been

a sand-cat. He knew it would have killed him if it could have, and if it had, he would have been quite dead.

You can die, and only your own resourcefulness will save you—who had said that? There had been a program, training him, somewhere, for something —something vastly important. His mind groped through the darkness, trying to penetrate the fuzzy uncertainty of his memory. Those words—from a small, red-faced man, and a tall, gaunt man in white—*Schiml!* Schiml had said those words, Schiml had put him here!

Suddenly he thought he saw the whole thing clearly. He was in danger, he must overcome the danger, he wasn't supposed to know that it wasn't really happening! There had been a long training program, with Connover, and Schiml, and all the rest, and now he was on his own. But nothing, *nothing* could really hurt him, because these things were only figments of his imagination.

He shivered in the coldness. Somehow, he didn't quite dare to believe that.

Dr. Schiml sat down on the chair and wiped drops of perspiration from his brow. His eyes were bright with excitement as he glanced at the pallid form on the bed, and then back at the red-faced Connover. "He's taken the first step," he said hoarsely. "I was sure he would."

Connover scowled and nodded, his eyes fixed on the panel beside the bed. "Yes, he took the first step

all right. He's figured out the source of his environment. That's not very much."

Schiml's eyes gleamed. "When we first computed the test, you wouldn't even concede the possibility of that. Now you see that he's made it. He'll make the other steps, too."

Connover whirled angrily on the doctor. "How can he? He just *doesn't have the data!* Any fool could deduce that these are subjective mental phenomena he's facing, under the circumstances. But you're asking for the impossible if you expect him to go any further along that line of reasoning. He just doesn't have enough memory of reality to work with."

"He has Mary, and you, and me," the doctor snapped. "He knows there's been a training program, and he knows that he's being tested. And now he knows that he's living in the nightmares of his own mind. He's got to solve the rest."

Connover snorted. "And that knowledge itself increases his danger a thousand times. He'll be reckless, overconfident—"

The girl stirred. She had been staring blankly at the man on the bed; her face was drawn and pallid, and her eyes were red. She looked dully at Dr. Schiml. "Connover's right," she said. "He has no way of knowing. He may just stand there and let himself—" she broke off with a choked sob.

"Mary, can't you see? That's exactly what we've got to know. We've got to know if the training was valid. He may get reckless, true, but never *too* reck-

less. The cat, remember? It hurt him. It *really* hurt him. He'll take the next step, all right. He may be hurt first, but he'll take it."

The girl's face flushed angrily. "It may kill him! You're asking too much, he's not a superman, he's just an ordinary, helpless human being like anybody else. He doesn't have any magical powers."

The doctor's face was pale. "That's right. But he does have some very unmagical powers, powers we've been drumming into his mind for the past year. He'll just have to use them, that's all. He'll *have* to."

Mary's eyes shifted once again to the motionless form on the bed. "How much proof do you need?" she asked softly. "How much more will he have to take before you stop it and bring him back?"

The doctor's eyes drifted warily to Connover, then back to Mary. A little smile crept onto his lips. "Don't worry," he said gently, "I'll stop it soon enough. Just as soon as he's taken the necessary steps. But not until then."

"And if he can't make them?"

She didn't see his hand tremble as he adjusted the panel light gently. "Don't worry," he said again. "He can make them."

Gradually the numbness crept up Robert Cox's legs. He lay on the cold, grimy floor of the ruined building, staring into the blackness about him. His realization had brought him great relief; he was breathing more easily now, and he felt his mind re-

laxing from the strain he had been suffering. He knew, without question, that he was not in the midst of reality—that this cold, hostile place was *not* real, that it was merely some horrid nightmare dredged from the hidden depths of his own mind, thrust at him for some reason that he could not ponder, but thrust at him as an idiotic, horrible substitute for reality. Deep in his mind something whispered that no harm could really come. The sense of danger which pervaded his mind was false, a figment of the not-real world around him. They were testing him, it was quite obvious, though he couldn't pierce the murky shield of memory to understand why they were testing him, for what purpose. Still, having realized the unreality, the test must be ended. He couldn't be fooled any longer. He smiled to himself. Armed with that knowledge, there was no longer any danger. No real danger. Even the wound in his side was imagined, not really there—

And still the cold crept up his legs, insidiously, numbing them, moving higher and higher in his body. He didn't move. He simply waited. Because with the test all over, they would surely bring him back to reality.

Like an icy microtome blade, something slashed at his brain, swiftly, without warning. He screamed out, and his mind jerked and writhed in agony at the savage blow. He tried to sit upright, and found his muscles numb, paralyzed. Again the blow came, sharper, more in focus, striking with a horrid power that almost split his brain. He screamed again,

closing his eyes tight, writhing on the floor. He tensed, steeling himself for another blow, and when it came his whole body jerked as he felt his own mental strength trying to rally like a protecting barrier.

Frantically, he twisted and wriggled the upper part of his body, desperately and unthinkingly trying to stand and run, and toppled over onto his face in the rubble. Again the blow came, grating and screaming into his mind with an unrelenting savagery that baffled and appalled him. Twisting along the floor, he gained the door, peered sickly out into the blackness.

He could barely make out the gray shape of one of the steel monoliths he had seen rumbling down the road a little before. It was resting on the rocky, frozen tundra of the field, standing motionless, the glow of power surrounding it like a ghostly aurora. He knew that the attack came from there, frightening, paralyzing bolts that shook him and sent his mind reeling helplessly, an attack of undreamed-of ferocity. He struggled, trying to erect some sort of mental patchwork against the onslaught. He had been wrong, he *could* be harmed, the test wasn't over—but why this horrible, jolting torture? Again and again the jolts came, until he screamed, and writhed, and waited in agonized anticipation of the next, and the next.

Then suddenly he felt his mind sucked down into a pool of velvet-soft warmth, of gentle sweet-

ness, a welter of delightful tenderness. His mind wavered in sweet relief, relaxed to the throbbing, peaceful music that whirled through his mind, sinking easily into the trap—and then, abruptly, another savage blow, out of nowhere, threw him into a curled, agonized heap on the floor. *No, no, no,* his mind screamed, *don't give up, fight it,* and he fought to reinforce a barrier of protection, tried feebly to strike back at the hideous, searing blows. This isn't real, he thought to himself, this isn't really happening, this is a ridiculous, impossible nightmare, and *it couldn't possibly hurt him*—but it *was* hurting him, terribly, until he couldn't stand it, he couldn't — Another blow came, more caustic, digging sharp, taloned fingers into his brain, wrenching and twisting it beyond endurance.

He was going to die! He knew it, in a horrible flash of realization. Whatever was out there in the field was going to kill him, going to wrench him into a blubbering mass of quivering protoplasm without mind, without life—*like the men who had come back on the starship.*

He took a gasping breath. Miraculously, he felt another link in the chain fall into place. *The starship*—he had seen it, sometime so long ago. Somewhere back in a remote corner of his mind he could remember the starship which had returned, after so many years, to its home on Earth, a gaunt, beaten hulk of a ship, with the lifeless, trampled men who had started it on its voyage. Men who were alive,

but barely alive, men with records of unimaginable horror on their instruments, and nothing but babbling drivel coming from their lips. Men who had gone to the stars, and met alien savagery with which they could not cope; men who had been jolted from their lethargy into naked, screaming madness at the thought of ever, ever going back—

Was *this* why he was being tested? Was this why he had been trained, subjected to this mind-wrenching, grueling ordeal? Another searing blow struck him, scraping at the feeble strength he had left, benumbing him, driving the picture from his mind. Was *this* what those men had faced? Was it this that had destroyed them, so infinitely far from their home, so very much alone on some alien world? Or was it something else, something a hundred-fold more horrible? He reeled and screamed, as anger beat through to his consciousness, a certain awareness that, imagination or not, the danger was *real,* so horribly real that he was falling apart under the onslaught, reaching that limit of his endurance beyond which was certain death.

Coldly, he searched for a weapon, coldly struggled to erect a shield to block the horrible blows—to fight horror with horror, to die fighting if need be. Bitterly, he closed off his mind to hate and fear, dipped into the welter of horror and hatred in his mind, something to match and conquer the monstrosity he was facing. With a howl of rage he sent out searing pictures of everything he knew of savagery, and hellish violence, and diabolical hatred

and destruction, matching the alien onslaught blow for blow.

They could try to kill him, he knew they *could* kill him, and he fought them with all the strength of mental power he could drag from his brain, feeling the balance between his mind and the shrieking horror from the field rise, and sway, like a teeter-totter, back and forth, up and down, until somewhere he heard a scream, fading into silence, a scream of alien fear and hatred and defeat.

And then he sank to the floor in exhaustion, his lips moving feebly as he groaned, "I've got to fight them, or they'll kill me. They'll kill me. They'll kill me."

The girl's sobs echoed in the silent room. "Oh, stop it," she groaned, "stop it, Paul, please—he can't go on. Oh, it's horrible—"

"I've had about as much as I want to watch," Connover rasped hoarsely. His face had gone very pale, and he looked ill. "How can you go on with this?"

"It's not me that's going on with it." Dr. Schiml's voice was quiet. "I'm not concocting these things. All I'm doing is applying tiny stimuli to tiny blocks of neural tissue. Nothing more. The rest comes from his own mind—"

Mary turned to him, fiercely. "How could that be true? How could there be such . . . such horror in his mind? *That* isn't Robert, you know that. Robert's kind, and fine, and gentle—how could he find such nightmares in his mind?"

"Everyone has nightmares in his mind, Mary. Even you. And everyone has the power of death in his mind."

"But he's taken all the steps we planned," Connover cried. "What more do you expect?"

"Some of the steps," Schiml corrected angrily. "Connover, do you want to throw all these months of work out the window? Of course he's come a long way. He's realized that he's in danger that *can* kill him—that was desperately important—and he realizes the reason that he's being tested, too, though he hasn't actually rationalized it out in that way. He's beginning to realize why the starships failed. And he's realizing that he really *must* fight for survival. From the evidence he started with, he's gone a long way—a remarkably long way. Without the training, he wouldn't have survived the tunnel. But we can't stop now. He hasn't even approached the most vital realization of all. He's too strong, too confident, not desperate enough. I can't help him, Connover. He's got to do it himself."

"But he can't survive another attack like the last," Connover snapped. "Training or no training, no man could. You're deliberately letting him kill himself, Paul. Nobody could survive more of that—"

"He'll *have* to. The crews of the starships couldn't face what they found out there. That's why they came back—the way they did."

Connover's face was working. "Well, I wash my hands of it. I'm telling you to stop now. If that boy

dies"—he glared at the tall doctor—"I won't be responsible."

"But you agreed—"

"Well, I've stopped agreeing. It's going too far."

Schiml stared at him for a long moment in disgust. Then he sighed. "If that's the way it's going to be"—he glanced helplessly at the girl—"I'll take full responsibility. But I've got to finish."

"And if he dies?"

Schiml's eyes were dull. "It's very simple," he said. "If he dies, we'll never have another chance. There'll never be another starship."

He couldn't tell how long he had been unconscious. Groggily, he raised his head, wincing as the pain stabbed through his brain, and blinked at the reflection of himself in the cold, mirror-steel wall. He stared at the reflection, startled to recognize himself. Robert Cox, his black hair muddy and caked, his face scratched in livid, grimy welts, his eyes red with strain and fatigue. With a groan, he rolled over on the polished floor, staring. Hesitantly he rubbed his side; the pain was still there, sharp under his probing fingers, and his head ached violently. But the room—

Then he knew that there had been another change. The room was perfectly enclosed, without a break, or window, or seam. It was a small, low-ceilinged room, with six sides—each side a polished mirror. The ceiling and floor also reflected his image

as he struggled to his feet and sniffed the faint, sharp ozone-smell of the room. In the mirrors, a hundred Robert Coxes struggled unsteadily to their feet, blinking stupidly at him and at each other. A hundred haggard, grimy Robert Coxes, from every angle, from behind and above, reflecting and re-reflecting in the brilliant glow of the room.

And then he heard the scream. A long, piercing, agonized scream that reverberated from the walls of the room, nearly splitting his eardrums. It came again, louder, more piercing. Cox involuntarily clapped his fingers to his ears, but the sound came through them, pounding his skull. And then he heard the grinding sound along with the scream, a heavy, pervading grate of heavy-moving machinery, grinding, clanking, squealing in his ears. The scream came again, louder, more urgent, and a maddening whir joined the grating machinery. Cox stood poised in the center of the room, waiting, wary, ready for any sort of attack, his whole body geared to meet anything that came to threaten him. Deep in his mind a weariness was growing, a smoldering anger, at himself for being a party to this constantly altering torture, at Dr. Schiml, and Connover, and anyone else who had a hand in this. What did they want? What conceivable point could there be to these attacks, this horrible instability? Why should he be subjected to such dangers that could kill him so easily? He felt a weakness, a terrible feeling that he couldn't go on, that he would have to lie down on the floor and be killed, that his limit was approaching, as he stood

poised, fists clenched, waiting. How much could a man stand? What were they getting at, what did they want of him? And beyond all else, *when were they going to stop it?*

The thought broke off abruptly as a creeping chill slid up his spine, and he stared at the mirror opposite his face, almost gagging. He blinked at the image, then pawed at himself, unbelieving. Something was happening to him. Somehow, he wasn't the same any more—

Another scream cut through the air, a harsh, horrible whine of pain and torture, sending chills up his back as he winced. The image of him was different, somehow, melting and twisting before his eyes as he watched. Fascinated, he saw his hand melting away, twisting and turning into a tentacled slimy mess of writhing worms. He tore his eyes from the image, and glanced down at the hand—and a scream tore from his own throat. His cry echoed and re-echoed, as if every mirror image was screaming too, mocking him. No, he thought, *no*—it can't be happening, it *can't!* The room rumbled about him, with the cracking, grating sound of machinery with sand in its gears, and the screams pierced out again and again. Now the arm was changing, too, twisting like something independently alive—

He had to get out of that room! With a scream of helpless rage he threw himself against the mirror, heard it give a strained twang as he bounced back in a heap on the floor. His mind raced, seeking a way out; his eyes peered about, searching for a

door, but there was nothing but mirrors, mirrors doing hideous things to his arm, creeping toward his shoulder. Every time he looked for a door in one wall, he could see nothing but the reflection of another wall, and another. Down on his hands and knees, he crept about the room—four, five, six walls —was it seven and eight? Or was he repeating? He couldn't tell. Every glance drew his eyes back to the horrible, changing arm, until with superhuman control he reached down, seized the writhing thing with his good hand, and wrenched it away, a twisting, quivering, jellylike mass. And the stump continued to melt and change, and he couldn't see anything but the mirror.

A thought slid through his mind, and he caught it, frantically, a straw in the wind. Reflection. He couldn't see anything but the reflection. How many walls? He couldn't count. He couldn't be sure. But he had to get out of that room, he *had* to get out! He closed his eyes, closing out some of the brilliant light, bringing the piercing screams still closer to his mind. Slowly, painfully, he backed up to the wall of the room, keeping his eyes tightly closed, refusing to follow his actions in the mirrors, groping behind him with his good arm, seeking over the smooth surface—

A crack. Follow it. Smoothness—then metal. A knob! With a cry that was half a sob of relief he twisted the knob, felt the wall give, slipped outside onto rough, uneven ground with his eyes still closed, and slammed the door behind him. He stood pant-

ing as the grinding and the screams peeled away like a cloak, leaving him in absolute, almost palpable silence.

There was light. He opened his eyes, then closed them again with a swift gasp, his mind rocking with shock and fear. Cautiously he opened them a slit, peering down, fighting back the terrible, age-old fear, and then slammed them shut again in a rush of vertigo.

He was standing on the top of a thousand-foot pinnacle!

Instantly he fell down flat, gripping the smooth edges of rock with a desperate grip. The section of flat rock on which he stood was the size of a coffin, six feet long and three wide. Above him was a cool, blue sky with fleecy white clouds. But on all sides, inches from where he stood, was a sheer, cruel, breathtaking drop to the pounding sea below.

A shadow passed over him, and he glanced up, tense, fearful. High above he saw huge black wings, a long, naked red neck, cruel talons, black and shiny, and a hooked beak that glinted in the sunlight. A bird such as he had never seen before, sweeping down toward him, then away, making huge circles in the bright blue sky. A bird far larger than he, with evil little button-eyes that stared down at him, unblinking—he sobbed, clinging for dear life to the rock, watching the bird circling lower and lower. Why? Why didn't they stop this torture? Why didn't they stop it, bring him back?

He sensed that the end was near—his strength

was failing, his will was failing. Little streamers of hopelessness and despair were nibbling at his brain, despair of holding out much longer, despair that was almost overpowering the fear of death which had sustained him so long. The bird was so low he could hear the hungry flap of its wings as the steel-tipped talons scraped nearer and nearer to his shoulders. He peered over the edge of the precipice, seeking some kind of descent, some toe hold, finding none. He *had* to get down, he could never fight the creature. He blinked down at the blue water so far below. To climb down would be imbecility. He could feel the shredded end of his arm, loose in the cloth of his sleeve. With only one arm to hold on with, he couldn't hope to fight off the bird, even if there were a way to climb down.

A steely talon ripped his shirt as the bird skimmed by, sending a stab of pain through him, crystallizing his mad idea into action. Such a sheer drop above the water *could* mean a sheer drop below its level. An impossible choice, but there was nothing else to do. Taking a gasp of air he edged to the rim of the drop, gathered his strength, and threw himself off into space—and pure hope.

The water struck with a horrible impact, driving the wind from him, but he fought desperately toward the surface with his good arm, waiting for release, his mind begging that they would now be satisfied, that now they would stop, bring him back, not make him take any more. Finally he broke surface, and then, quite abruptly, felt solid ground under his feet. Glanc-

ing back, he saw that the pinnacle was gone, and the sky had turned a horrid orange-yellow color. Panting, his strength spent, he staggered up on the shore.

But the shore wasn't right. With a burst of anger he saw the fearful, distorted shore line upon which he stood, the sand under his feet writhing and alive as little wisps of it rose about his ankles, twisting them, as if to throw him down to his knees. Stars were blinking up at him from the ground, and great boulders of black granite scudded through the sky, whizzing past his ears like huge, unearthly cannon balls. The world was changing, turning and twisting into impossible shapes and contortions, and he smelled the dank, sharp odor of chlorine in the pungent air.

With a scream of rage he threw himself onto the writhing sand, pounding his fist against it in helpless fury, screaming out again and again. He couldn't stand it any longer, this was the end, he couldn't fight any more— They'd *have* to bring him back now, they'd *have* to stop—

A horrible thought split into his mind, bringing him to his knees abruptly. His eyes were wide, hollow-rimmed as he stared unseeing at the impossibly distorted landscape. Fear struck into him, deep, hollow fear that screamed out in his mind, a desolate, empty fear. Carefully he reviewed his ordeal, everything he had thought, and seen, and felt. For so long, he had been running, fighting—enough to satisfy any test, as much as he was humanly capable of fighting. To test his reactions, conscious and unconscious, his

resourcefulness in the face of danger, his ingenuity, his resiliency, his fight, his drive, his spirit—they couldn't ask for more. Yet they still hadn't brought him back. Surely, if any human being had ever proved himself capable of surviving the fearful alienness of the stars and the worlds around the stars, he had proved himself.

But they hadn't brought him back—

The thought came again, strongly, growing into horrible certainty. He shuddered, a huge sob breaking from his lips. He knew, he was sure. He had been waiting, hoping, fighting until he had satisfied them and they would stop. But now he saw the picture, from a different angle, with terrible clarity.

They weren't going to stop. They were *never* going to stop subjecting him to these horrors. No matter how much he took, no matter how long he kept going, they would never stop.

He had been fighting for a lost cause, fighting to satisfy the insatiable. And he could keep fighting, and running, and fighting, *until he toppled over dead.*

Anger broke through the despair, blinding anger, anger that tore at his heart and twisted his mouth into a snarl of rage. He had been bilked, fooled, sold down the river. He was just another experiment, a test case, to see how much a live danger-trained spaceman could stand, to be run to death on a treadmill like a helpless, mindless guinea pig—

For the greater good of humanity, they had said. He spat on the sand. He didn't care about human-

ity any more. To enable men to go to the stars! *Bother the stars!* He was a man, he'd fought a grueling battle, he'd faced death in the most horrible forms his own mind could conceive. He wasn't going to die, not in the face of the worst that Connover and Schiml and their psych-training crews could throw at him!

He leaned back on the sand, red anger tearing through his veins. It was his own mind he was fighting, these things had come from his own mind, directed by Schiml's probing needles, stimulated by tiny electrical charges, horribly real, but coming from his own mind nevertheless. They could kill him, oh yes, he never lost sight of that fact.

But he could kill *them,* too.

He saw the huge rock coming at quite a distance. It was black, and jagged, like a monstrous chunk of coal, speeding straight for his head, careening through the air like some idiotic missile from hell. With bitter anger Robert Cox stood up, facing the approaching boulder, fixing his mind in a single, tight channel, and screamed *"Stop!"* with all the strength he had left.

And the boulder faltered in mid-flight, and slowed, and vanished in a puff of blue light.

Cox turned to face the shifting, junglelike shore line, his muscles frozen, great veins standing out in his neck. It's not true, his mind screamed to him, you can wake yourself up, they won't help you, but you can do it yourself, you can make it all go away, *you yourself can control this mind of yours—*

And then, like the mists of a dream, the world

began fading away around him, twisting like wraiths in the thin, pungent air, changing, turning, changing again, as the last of his strength crept out of his beaten body, and his mind sank with the swirling world into a haze of unconsciousness. And the last thing he saw before blackout was a girl's sweet face, tearful and loving, hovering close to his, calling his name—

He was awake quite suddenly. Slowly, he stared around the bright, cheerful hospital room. His bed was by a window, and he looked out at the cool morning sun beaming down on the busy city below. Far below he could see the spreading buildings and grounds of the Hoffman Medical Center, like a green oasis in the teeming city. And far in the distance he saw the gleaming silver needlepoints of the starships that he knew were waiting for him.

He turned his face toward the tall, gaunt man in white by his bedside. "Paul," he said softly, "I came through."

"You came through." The doctor smiled happily, and sat down on the edge of the bed.

"But I had to terminate the test all by myself. You couldn't have stopped it for me."

Schiml nodded gravely. "That was the last step you had to take, the really critical step of the whole test. I couldn't have told the others about it, of course. They'd never have let me start the test if they had known. Connover wouldn't even stick with the part that he'd agreed upon. But without that last step, the test would have been worthless. Can you see that?"

Cox nodded slowly. "I had to rise above the physical reaction level, somehow, I had to force myself—"

"There's no way for us to know what you'll find, out there, when you go." Schiml said slowly. "All we knew was what the others found, and what it did to them. They couldn't survive what they found. But we knew that training in reactive, fight-or-flight level of response to danger wouldn't be good enough, either. You would have to have razor-sharp reactions *plus* full rational powers, even at the very end of your physical rope. We *had* to know that you had that—" He reached over to inspect Cox's bandaged head for a moment, his fingers infinitely gentle. "If the horrors you faced had been fakes, to be turned off when the going got tough, you wouldn't have been driven to that last ebb of resourcefulness that will save you—when you go to the stars. That was the final jump, the one the others didn't realize—that you had to discover, finally: That *we* weren't going to help you; that if you were to be saved, ultimately, it *had* to depend on you and you alone. You see, when you go where the other starmen went, no one will be with you to help. It'll be you and you alone. But whatever alien worlds you find, you'll have a strange sort of guardian angel to help you."

"The training—"

"That's right. Training on an unconscious level, of course, but there in your mind nevertheless, a sharpening of your senses, of your analytical powers—an overwhelmingly acute fight-or-flight sense to protect

you, no matter what nightmares you run into."

Cox nodded. "I know. What you called it, at the beginning of training—a sort of brother, hidden, but always there. And this testing was the final step, to see if I *could* survive such nightmares."

"And you'll take it with you to the stars, the nightmare knowledge and experience. It's hidden deep in your mind, but it'll be there when you need it. You'll be the next man to go—you and your nightmare brother."

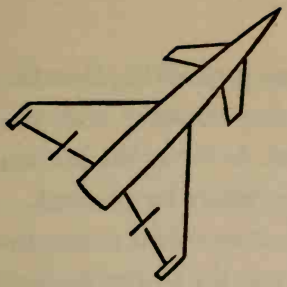
Cox stared out the window for a long moment. "Mary's all right?" he asked softly.

"She's waiting to see you."

Robert Cox sat up slowly, his mind clear in the remembrance of the ordeal he had been through—a hideous ordeal. Terrible, but necessary, so that when he came back, he would not be as the others had been. So that men could go to the stars with safety, and come back with safety.

Slowly he remembered his anger. He gripped the doctor's hand, squeezed it tightly. "Thanks, Paul," he said. "If I come back—"

"You mean, when you come back," said Dr. Schiml, grinning. "When you come back, we'll all have a beer together. That's what we'll do."



SECOND CHANCE*

WALTER KUBILIUS and
FLETCHER PRATT

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The human imagination is a curious mechanism. It is almost impossible for people to believe something until they have actually experienced it. Ever since 1945, for instance, the atom bomb has been a reality, and the possibilities of global destruction implied in it are familiar to anyone who can read or listen to a radio. And yet little has been done to stave off the fearful dangers to humanity which a world war of atomic weapons would unleash. Almost everyone expects another war, and an atomic war at that, yet practically all effort and thinking is directed toward winning such a war, not forestalling it.

As atomic weapons increase in power, it will be impossible to limit their ultimate effects to the enemy, as this story makes very plain. If the atomic stockpiles of the next

*This story is from Fantastic Story magazine.

war are large enough, there is a strong probability that the Earth will become something like the smoking ruin described by Mr. Kubilius and Mr. Pratt. As far as the human race is concerned, that will almost certainly be the end.

Less than a century ago, the human race had a demonstration of what violent explosions can do to the surface of the Earth. In August of 1883 an obscure island volcano in Sunda Strait blew up in the course of an eruption. Enormous tidal waves followed. An atmospheric wave traveled to the opposite side of the world four times, and returned to its point of origin three times. Dust from the explosion spread to every corner of the Earth and reddened sunsets and dawns from Scandinavia to the Cape of Good Hope. This explosion of the volcano of Krakatoa was probably the most violent physical event in recorded history, but today hardly a person in a thousand has so much as heard of it.

Krakatoa should serve as an object lesson to every sensible person. If the dust from its explosion had been radioactive, it is probable that a large part of the human race would have perished less than a century ago. There is no hiding place from poisoned air except in the sort of military citadel the authors of this story describe. So, if a new world war spreads radioactive dust through the Earth's atmosphere, humanity may be exterminated like so much vermin. It is not an attractive prospect.

Science-fiction writers have sounded a warning of this possibility in story after story, even before the first atom bomb was detonated. Not many of them hold out as much hope for a second chance as Mr. Kubilius and Mr. Pratt. Their story has a happy ending, but not a very likely one.

The wisest thing will be not to have the war at all. Second chances aren't frequent.

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General-of-the-armies Alvin Weinburger jabbed stubby fingers at the map, spearing the chief cities of the Cominworld. The little circle of six tarnished stars on his collar glinted dully.

"I think I can promise you," he said, "that this time there will be neither retaliation nor recovery. We have enough of the V-68s to wipe them out in a single offensive. In fact, we are so certain of the results that our request for the concurrence of the civilian authority may be regarded as almost a pure formality. Gentlemen, World War IV is practically over!"

His eyes swung round the semicircle. Behind him, the hatchet face of Chief of Staff Sir Barnaby Malcolm cracked into a smile, and Maréchal Laporte's long, gloomy moustaches vibrated rather like the whiskers of a cat.

Clifford Dayton, Chairman of the Civilian Authority, said quietly: "Has the Staff established what would be the physiographical and meteorological effects of the release of this additional number of hydrobombs in the region between Kazan and Lake Balkhash?"

Weinburger turned toward his Chief of Staff. Malcolm stood up. "Undoubtedly, they would be

somewhat severe," he said. "We are making one of the heaviest concentrations of hydro-bombs in history, and we could expect a certain number of volcanoes to break out along the line of their underground release. But—" he smiled again, and where previously it had been charming, it was now somewhat wolfish—"this will only make it the more difficult for those of our enemies who survive the original shock."

There was a little stir among the members of the Civilian Authority, but it was Dayton who spoke again:

"I see. Then you have no objection to exterminating their civilian population, in spite of our declarations?"

General Weinburger's face flushed a trifle, and he seemed to gather himself for a few seconds; the silence was punctuated only by the soughing of the air-machines that supplied the general command post far beneath the South Dakota prairie. Then the general said, in the tone of patience one might adopt toward a child that was rather slow of comprehension:

"Mr. Dayton, may I point out to you that under the conditions of this war the term 'civilian population' is a purely legalistic definition? Every man, woman and child in the territory of the Western Alliance is engaged either in the production of war materials or in providing food for those who do produce them. We have every reason to believe that it is not different in the Cominworld."

Sir Barnaby cut in. "Mr. Dayton is old enough to

remember the days of World War III, when the distinction between military and civilian population still had some validity. I am not suggesting that we abolish the wise provision by which the assent of the Civilian Authority is necessary to major strategic decisions, but I quite agree with General Weinburger when he says that the assent is a pure formality. In all of us, the would-be civilian has been swallowed up by military necessity."

Without answering the last part of this speech, Dayton said slowly: "Yes, I am old enough to remember World War III—on the civilian front. I was in New York when the ruins were still radiating and the bodies were unburied. Gentlemen, have you any concept of what that was like?"

Sir Barnaby shrugged. "Not much worse than Chicago or Tver today, I fancy," he said.

Old Maréchal Laporte made a sound in his throat. "Time is of the essence. Please to sign." He reached over and his hand pushed impatiently at the authorization papers.

Without appearing to see him, Dayton turned. "General Weinburger and his Staff do not appear to have looked deeply into the question I first proposed. Perhaps we can enlighten him. Dr. Sanchez, will you have that recording made by the robot plane over the Andes thrown on the screen, then the ones from the Caucasus and from Indonesia?"

The lights snapped out, and the men turned to face the telescreen that filled one wall of the com-

mand post. At first nothing was visible but rolling clouds of smoke that changed color and thinned, but never so much as to permit even a sight of ground. Then the plane that carried the recording apparatus dipped; an ominous booming came from the sound-track, and the watchers could see the long range of Andean peaks, one after another, some merely sending thin columns of smoke into the swirling overcast, some shooting up jets of flame in which boulders bounced like marbles.

"Behold the fate of my unhappy continent!" said Sanchez, with a slight catch in his voice.

The picture changed—not so much in character as in location, for the mountains were not quite so steep here. But there was the same range upon range of smoking mountains, and from the side of one a slow flow of lava was making its way down to quench itself boilingly in a sullen grey sea.

"The Caspian end of the Caucasus," explained Dr. Sanchez.

Weinburger barked a laugh. "Ha! And they thought they could keep their war plants safe by putting them underground in the mountains!"

"Yes, these are the effect of hydro-bombs e-driven into the mountains by penetrating rockets, as you of the military have wished," said Sanchez.

On the screen the picture had changed again. This time the chain of mountains appeared to rise directly from the sea, and at one point to the right of the vision a vast boiling and a cloud of steam indicated an underwater eruption.

Sanchez said: "These conditions are not individual, but everywhere—everywhere."

"They are something we all know about," said General Weinburger. "Is it your purpose to tell us that the same conditions will exist where the Russian underground cities now lie? We know that already, too. That is the purpose of our offensive."

"I have only to say that these volcanoes increase daily the quantity of carbon dioxide in the atmosphere. Already our Earth is almost blanketed in cloud. We see the sun no more."

Weinburger started to say something, but Dayton held up his hand. "Van Zandt," he said. "Now your recording."

This time there were no volcanoes visible on the screen, only a picture of ominous black mountains that turned and twisted as the robot plane carried the camera above and across them. In a few of the valleys lay what appeared to be little streaks of snow under the dark overcast sky.

The voice of Van Zandt spoke: "This picture was made less than a week ago above the south polar cap. You gentlemen will see that it is almost entirely melted, and that what is left of it is going rapidly. I need not remind you that the seaboard cities are already drowned out, and the whole Mississippi valley is flooded as high as St. Louis."

"Well, conditions in the Cominworld are no better," said General Weinburger, "and after our coming offensive they will be worse. Gentlemen, this is war and destruction, a question of their lives or ours.

We can have no security as long as they exist; and I remind you, gentlemen, that you cannot have an omelette without breaking eggs."

Dayton said: "General, the trouble is that too many eggs have already been broken. Tell him, Dr. Sanchez."

The South American said, soberly: "There is no hope whatever of a decrease in the CO_2 content of the atmosphere. The volcanoes produce more; the cloud banks become thicker. Our Earth is becoming a tropical planet. I have flown over Central America—only a string of green slime between these continents, not habitable."

Sir Barnaby Malcolm gave an audible sniff. Maréchal Laporte shrugged his shoulders.

"This is not the only question," said Dayton, soberly. "You gentlemen know very well that the Vladisoff anti-germ virus has wiped out all the wheat, barley, rye, corn and oats grown above ground, just as the bombings have wiped out a third of our people —a third of those left after World War III. What Dr. Sanchez is telling you is that on the tropical planet the Earth has become, there is no possibility of recovering these resources. The only thing our ground will produce is tropical growths, all lush stems and no grains."

"For ten thousand years," said Sanchez.

Sir Barnaby stood up again. "An appalling prospect," he said. "But as I remember, not exactly one on our agenda. I understand we were met to discuss the prospect of the V-68 offensive."

"That's the reason I brought the matter up," said Dayton. "The Civilian Authority wishes to use the V-68s for another purpose."

For a moment there was silence in the room. The Englishman was the first to speak. "May I ask what this other purpose is?"

"We propose to use them to reach and colonize the planet Venus."

Weinburger's face wore the expression of a man who talks rapidly to cover the fact that he has not thought of the idea being presented to him. "Could they do it?" he asked.

"Dr. Thierrin," said Dayton.

The scientist addressed put on his nose a black pince-nez which promptly tilted to one side. "When I originally designed the V-68, it was with long-range space experiment in mind," he said. "With the war-head removed, each should carry several dozen people, and if they were to go as colonists, with no return in mind, several score. After all, we have attained Mars with weaker rockets, but alas! it is not habitable."

Maréchal Laporte lifted a hand. "Ah, the project exposes itself!" he said. "Very well, Mars is not habitable; but no more is Venus. I am not ignorant, my friend. It is blanketed in cloud and CO_2, as Dr. Sanchez describes our own planet as becoming."

Dr. Thierrin regarded him solemnly, then began to fumble in a portfolio, talking the while. "That, my friend, is precisely a point on which we lack certainty," he said. "A century ago, it was true beyond

doubt. Even it was thought that there might be no water on Venus; that it was a planet of perpetual dust. In my younger days, we could make out nothing on the surface. But by accident one of our stratosphere weather rockets, in making photographs four months ago, turns its camera against our sister planet. The results are incredible; now I show them to you."

He extended a sheaf of photographs toward the three military men.

"The upper one," he said, "is the picture originally taken by our weather rocket; the others were taken in consequence. Observe how all the banks of cloud are penetrated by large, dark holes, by gaps of varying shape. The climate, the upper atmosphere of Venus is undergoing a radical alteration."

The three military men bent over the pictures. Maréchal Laporte said: "You go too fast. Have you made spectroscopic analysis to prove the existence of oxygen? Of water? Without these how can you say that Venus is even remotely habitable? The whole atmosphere might be of a poisonousness most deadly."

Dr. Thierrin shook his head, his rather disorderly hair bobbing. "It is true that the clouds in our own atmosphere and the destruction of the astronomical stations have prevented analysis. However, we know from the law of planetary similarity, so well demonstrated in the case of Mars, that the chances are favorable."

The marshal frowned. "To me, the demonstration—"

General Weinburger seemed to have adjusted his sights. Now he cut in. "Laporte, you are wasting your time," he said, "in arguing the details of this cowardly and treasonable proposition. Brought down to its essentials, what these civilians are telling us is simply this: that instead of punishing the beasts who have brought this destruction upon the Earth, and incapacitating them from doing any further damage, we should run away and leave them in possession of just what they are fighting for. Mr. Dayton, members of the Civilian Authority, I remind you that your proposal requires the assent of the Staff. You shall never have it; never. My oath as an officer would be violated if I gave it."

Clifford Dayton sighed. "I was afraid you would take that attitude, General," he said. "And therefore, not altogether unprepared for it." He turned to one of the guards at the door. "Will you show in the visitors who are waiting in Chamber Number Six?"

The guard snapped to attention and went out. Within the room there was an ominous silence, in which the sound of Dr. Thierrin fiddling with a pencil was distinctly audible. Then the door opened again and the guard stood aside to permit the entrance of two officers in the grey-green uniform of the Cominworld.

Weinburger's face turned beet-red and Laporte sprang to his feet, fingering his moustache. Dayton said: "In case you do not recognize our guests, gentlemen, permit me to introduce Agronomist Nicholas

Vladisoff, of the University of Vilnius, holder of the Lysenko Banner, and Upper Physicist Jurevich, of the Peiping Foundation."

Jurevich's heavy features seemed utterly unperturbed as he took the chair that was placed for him. Vladisoff had a thin, scraggly beard, behind which he seemed to be smiling.

Weinburger turned coldly to Dayton. "By what authority do you bring Cominworld prisoners to a Council meeting?" he demanded.

"Both these gentlemen are here under a flag of truce, and specifically for the purpose of discussing the flight to Venus," said Dayton, calmly.

"The Staff refuses to consent to the flight," said Weinburger, "or to hold any conversation with war criminals."

Vladisoff's smile became overt. "General Weinburger is at the head of the Cominworld's list of war criminals," he said. "But in view of the nature of the present discussion, our Central Committee has voted to waive that document."

Sir Barnaby touched the high commander's arm. "May as well listen to them. Good intelligence practice."

Weinburger slowly sank into his seat again as Dayton nodded to Vladisoff, saying: "Will you explain?"

The agronomist nodded. "General Weinburger," he said, "when I began my journey here, it was as an ambassador of the Central Committee to demand the surrender of the Western Alliance. The

Red Banner army has prepared a fleet of penetrating rockets capable of finding and destroying every underground city of the Western Alliance at a single blast."

He paused. Sir Barnaby's face wore a look of interested skepticism. Weinburger said: "White of you not to do it—if you could."

"One moment. The project was not halted by any inability to carry it through, I assure you. Here are the calculations." He drew several sheets of papers held by a clip from his pocket and passed them down the table. "I was instructed to present these to the members of your Civilian Authority as proof that we could accomplish what we claimed. Before I could make this presentation, our geographers determined that the world had become nearly uninhabitable, and the explosion of further concentrations of sub-surface hydro-bombs would render it wholly so. The scientific members of the Central Committee therefore refused to allow the firing of the rockets at your cities under any conditions."

Sir Barnaby Malcolm laughed. Vladisoff regarded him with mild eyes. The Englishman said: "Excuse me for seeming discourteous, but I find the picture of anyone refusing to allow old Marshal Mourevitch to do anything he wishes rather absurd." He glanced at Vladisoff.

The Russian merely blinked twice. "Marshal Mourevitch is no longer in authority," he said. "My instructions were changed. I am to present you with these figures, and offer the Western Alliance a cer-

tain number of our rockets for joint attempts to explore and colonize either Venus or Mars, the pro tempore colonial government to be neither Cominworld nor Western Alliance, but simply Earthian. What I have learned since coming here confirms this decision."

General Weinburger regarded him steadily for a long minute, then swung to face Dayton. "Perhaps I am not very intelligent today," he said, "but I don't quite see what you expect to gain by engaging with these Russians in this transparent and treacherous trickery. I have sworn to defend the peoples of the Western Alliance against external and internal enemies, and believe me, I shall do my duty." He got up, stepped to the phone on a stand, and said: "General Weinburger speaking. I want an armed guard detail in the command post. At once."

Without paying him the slightest attention, Thierrin said to Jurevich: "Your people also must have hit upon the plan of doubling the jet velocity by an induced secondary explosion."

"No," said Jurevich. "Ours is a different solution. We have a feed tank, so." He drew an imaginary outline with his finger. "Into it there comes—"

The door opened. A lieutenant and four armed soldiers came in.

Weinburger pointed to the civilians. "Arrest those men," he said. "All of them."

The lieutenant stood still.

"Arrest those men," Weinburger repeated. "It's an order."

The lieutenant's hands seemed to be trembling. "I'm sorry, sir," he stammered, "but—but—he's the *Chairman.*"

Dayton said: "A little while back Sir Barnaby remarked that civilians had been swallowed up by military necessity. I think, General, that you will find the process has reached the end of the pendulum swing, and that the military have been swallowed by civilian necessity. You may go, Lieutenant."

The door closed behind the men. Sir Barnaby said: "If you people are going to make peace behind our backs, it would seem to me more logical to try to save what is left of our world."

Vladisoff shook his head. "Our scientists have reached the same conclusion as yours. Humanity has lost its chance on Earth. Whether it can survive elsewhere—"

"Urgent! Priority!" suddenly blared the speaker beside the screen. "Attention, Staff! Unknown objects approaching command post, approximate position over northern Scotland." The screen flashed suddenly and all eyes turned toward it. "We have a spy rocket up, General, and we're watching," said the speaker. The picture showed, against the star-studded black of space—something that looked like a tiny seed, and then, as the spy rocket rose higher, grew to a series of marbles, then of tennis-balls, shining along their edges like crescent moons where they reflected the light of the sun.

Weinburger turned furiously toward the Russians. "Is this some of your work?" he demanded.

"No," said Jurevich. "These are not Russian. I never saw anything like them before."

Weinburger threw a switch. "Weinburger. What are the co-ordinates?"

The dark sides of the spheres began to twinkle with little lights, like so many fireflies, and then the spheres began to diminish in size again.

"Our spy rocket is coming down now, but we're sending another," said the speaker. "The spherical objects are approximately three hundred fifty miles beyond the atmosphere, approximately two miles per second, speed rapidly diminishing. Commander Holmgren thinks they are of extraterrestrial origin."

"So do I," said Dr. Thierrin, and Jurevich nodded, as the spy rocket's picture faded into the greyness of the clouds that banked the Earth.

An excited babble of conversation broke out in the group, but Weinburger held up his hand and said into the communication box: "Get a beam on them if you can."

"We're setting it up now, sir. There's something already coming in the radio, like a kind of regularly spaced static. The commander thinks they're trying to communicate."

As the second spy rocket rose, the spheres came into view again, arranged in a long triangle, like a flight of wild geese. "Diameter of each sphere, about 400 meters," announced the speaker. "They appear to be falling into an orbital course around the Earth. Over North Atlantic—" The speaker

clicked a couple of times, then another voice said: "Priority! Chairman Dayton."

Dayton stepped to the box beside Weinburger. "Dayton here."

"Alaskan outpost has a message from Cominworld Central Committee. Asks your reaction to Vladisoff proposal, urgent, in view of current event."

"Tell Alaskan outpost to signal back that Vladisoff and we are in full agreement," said Dayton, and immediately stepped aside for Weinburger, who was plucking at his arm. The screen had gone blank.

"Weinburger here," the general said. "Have operations set up a battery of S-13s for radar-controlled fire on those spheres if they prove unfriendly."

"Yes, sir," said the speaker. "They shot down our second spy rocket, and they appear to be fitted with radar absorbers, but they have made no attempt to attack, and they seem to be trying to use our beam to get a reaction on video."

"Very well. If you pick up anything, flash it in here."

Dr. Thierrin said: "Whoever is operating those spheres seems to be a highly intelligent form of life. They didn't want stray rockets prowling around until they knew more about our purposes."

"Well armed, too," remarked Jurevich, a trifle grimly.

The screen gave another series of flashes. "We got a picture sequence. Here it comes," said the speaker.

Those in the room saw an outline of an equilat-

eral triangle, apparently formed of narrow strips of metal standing on edge. An invisible hand placed a series of little blocks along each edge; then rapidly these detached themselves into two groups, one from the hypotenuse, one from the two sides.

"The Pythagorean theorem," said Sanchez, smiling.

But Maréchal Laporte frowned. "My General," he said to Weinburger, "we shall never communicate with these beings on this level. I suggest that we have two or three stations flash them simple mathematical problems in systems of dots and dashes."

"Do you hear that, Communications?" said Weinburger. "Make it so."

On the screen the geometric drawing had been replaced by one, still worked in metal, that evidently represented the solar system. Out from the second planet toward the third arched a line of dots.

"We might have guessed as much," said Dayton. "I wonder what they look like?"

"They aren't giving that away yet," said Weinburger. He seemed to have recovered some of his poise, now that the problem before him had become one of translating a policy into executive detail. "Communications, what are you getting?"

The box spoke metallically. "They've put out a couple of beams of their own, and are sending pictures accompanied by sound. We have the cryptographers on it. Some of them are meaningless, but

we're building up a word-bank, and we believe we'll get it, sir."

"Report progress." The General turned back to the waiting room. He said: "Gentlemen, in view of the fact that I have apparently been relieved as a policy-making officer, I ask you to determine what line we shall take toward these visitors."

Vladisoff cleared his throat.

"Go ahead," said Dayton.

"M'm," said the agronomist. "One little thing. Visitors, yes, but why so many? It seemed to me there were hundreds of those spheres. This is not a visit; it is a mass movement, a colonization."

Dr. Sanchez gave a grim little laugh. "An irony; they choose a moment to colonize when Earth has lost the ability to support its own population."

"We can resist an invasion," said Sir Barnaby.

"We don't know yet whether they intend one," said Dayton. "In fact, we don't know what they look like or what they can do—except that their science is highly—"

"Command post," pronounced the box. "Cryptography reports the Venusians use an agglutinative language. They are requesting that we show them pictures of the surface of the planet."

"Can you say the same sort of thing to them?" said Weinburger. "Of course, or you couldn't have understood. All right, send them that volcano sequence—and the pictures of the lower Mississippi valley. Ask them their intentions. Tell them that the High Council of Earth wants to know." He glanced at the two Rus-

sians, then at Dayton, who nodded approvingly, and then swung to Vladisoff. "Will your Central Committee accept the result of our negotiation here?"

"As a member of it, yes," said Vladisoff, "unless there is already a negotiation being carried on by other means."

"Hadn't thought of that," said Dayton. "General, will you contact the Cominworld Central Committee via Alaska Outpost, and cut them in on this circuit? They may soon have to be our allies, and we should withhold nothing from them."

The General grunted, and seemed about to object; then he shrugged and gave the order. Nobody seemed to have anything more to say; Laporte shifted in his chair and twisted at his moustaches. Then, suddenly, the box said: "Command post. We are ready."

The screen sprang into light. There was a series of gasps around the table as the members of the Council saw themselves looking at a humanoid—but what a humanoid! Two massive, pillar-like legs supported a squat, almost shapeless body that seemed to be clad in something gleaming, like fishskin. The arms were disproportionately thin—but it was the head that really drew attention. It was as if all the features of a human face had been pushed to the top of the head: a pair of small eyes, a broad nose with nostrils pointed upward, and an extraordinarily broad mouth that was opening and closing on an even row of flat cubic teeth.

A series of high-pitched sounds came through the speaker, then cut out, and the voice from Communi-

cations took up again. "He is speaking to us. I will translate:

" '. . . means of destruction. We have seen the pictures of the surface of your planet. It is'—I don't get a phrase in here—'by our mathematicians you have shown us the portions of your surface that are least attractive to you.' Make him go slower, Ed . . . ' have observed your surface for a long period. We know that unless there has been some great change, these picures show places that can only be on your equator.

" 'However, we do not resent this deception. It is exactly because we hoped your planet contained such areas that we have come as beggars. They must be unsuitable for your species, but they would be ideal for ours. We ask permission to settle on your swamps and volcano-lands. We will give the necessary guarantees against proceeding beyond whatever bounds you set.

" 'If you refuse us, our race will have lost its last chance. I think we have learned our lesson, but we have learned it too late. For listen, people of the third planet, who have been living in comfort with each other ever since we have observed you. We have made our own planet unsuitable for life. Through a tragic error, the two great'—I think he says empires—'of which our planet is composed, fell into conflict with each other. They employed means of combat that have nearly stripped our atmosphere of carbon dioxide and of the cloud blanket which kept our heat from escaping into space. Our planet has become too terribly cold to support life. At the same time diseases

were introduced which caused our food plants to turn into wholly inedible hard grains. As proof of what we say, here is a picture of the surface of our planet, taken as this fleet was leaving it forever.' "

The strange, hippo-like humanoid disappeared. In his place was a picture of a landscape, taken from a low altitude and gradually rising. It showed wide patches of fields with yellow grain ripening in the wind; here and there a little grove of unfamiliar trees, and a little lake. At one edge of the picture some building had tumbled into ruins; the bright sunlight shone starkly on the broken walls. The viewpoint rose; now it was above the clouds and little white cloudlets chased each other across the scene, almost obscuring the view of a river that wound gently toward a blue sea.

" 'This is the state in which our planet is now,' " said the translator's voice. " 'There is even ice at one of the poles.' "

Once again there was a period of silence in the command post. Then General Weinburger said: "The Staff approves the Venus expedition, Chairman."

He tore up the order for the bombardment of the Cominworld cities, and the fragments fluttered to the floor.

LIKE GODS THEY CAME*

IRVING COX, JR.

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Here is the last story in this book. Perhaps it is also the last page in the Book of Earth, too, though that is for the reader to decide.

Nothing, so far as we know, endures forever. The last dinosaur is dead; there are no more carrier pigeons. The great Egyptian and Mayan empires have vanished except for certain structures their citizens erected and for the heritage of myth and legend they left behind. It took decades of intensely skilled mathematical research to rediscover the lost arithmetic of the Mayas, engraved though it was on thousands of stone monuments. So, as some of Man's greatest civilizations have perished under his very eyes and within the span of recorded history, the day may come when the whole of Earth's parent culture may crum-

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ble to ruin in the midst of a galaxy peopled by Earth's children.

In such a galaxy, the Legend of Earth would endure for a long time. Milleniums as they passed would not wipe out the myth of the Original Home, the planet from which all men had once come, the satellite of Sol which had peopled those of Rigel, Arcturus, Sirius, Procyon I, Wolfe II and all the thousands of others. Many people today still believe in the myth of Atlantis with far less reason. And during those thousands upon thousands of years of galaxy-wide colonization, the myth of Earth would spread out into the farthest reaches of the stars.

Almost sixty years ago Rudyard Kipling wrote a poem called "To the True Romance," which tells in a few of its lines how that myth would seem to the people who took it with them:

> The children wise of outer skies
> Look hitherward and mark
> A light that shifts, a glare that drifts,
> Rekindling thus and thus,
> Not all forlorn, for Thou hast borne
> Strange tales to them of us.

Sometime a last voyage will be made through space to Terra from Kipling's "outer skies." The "children wise" who make it will not come again; there will be no reason to do so. Perhaps the Earth will be deserted. Or, as Mr. Cox suggests, perhaps what remains of the original race will not be recognizable to its own children. But in any event those final visitors will feel a strange emotion as they look about them.

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We returned to a strangling bleakness, to a whole people suddenly lost and drifting without purpose. Naturally the news had preceded us; it was inconceivable that we should not have sent back the truth as soon as we knew it.

No one blamed us, of course, but the heart was torn out of the celebration. Long before our sleek space sphere settled into the landing ways the flags and streamers had been taken down. There were no cheering crowds to greet us, no clattering mobs of reporters, no batteries of teleview machines. For all the notice that was taken of our expedition, we might have been nothing more than a routine flight in from one of our own planet-colonies.

And it was better so.

I took the slow surface tube home. I needed the time to think, to organize the story I would tell Alyria. I hadn't expected her to meet me at the field, for we had intentionally made no announcement of the time of our arrival. We wanted as little fuss about it as possible.

It was painful for me to remember the exciting light of hope that had been in Alyria's eyes the night before we left. When all the civic ceremonies were over, I took her to the Recreo-roof. We had planned to share a whiff of neurogas by way of a private celebration of our own. But we both found the banter and the

laughter of the throng too much for us. We went out on the roof where we could be alone.

We sat on one of the benches just beyond the rocket runway. Below us we could see the glitter of city lights, flashing gems forming a geometric pattern on the night velvet; and, above us, the curving sphere of the universe. Like a naive schoolgirl, Alyria pointed out the planets of our own system, naming them and their colonies. Then her finger swept in a dramatic arc toward a tiny pinpoint of light, and a shiver of nervous anticipation shook her body.

"There it is," she whispered, reaching for my hand. "How long will it take?"

"The trip? With the new power, perhaps a year," I answered.

"And a year more before you return." She sighed. "We have waited so long, two years should mean nothing. But I have so little patience! Now that we are about to find them again, a day stretches into an eternity."

"But you can follow us on the view-screen. You will see what we do."

"That isn't the same thing! I want to see them as they really are, to talk to them, to know their thoughts and their wisdom as our ancestors did!" She got up and leaned against the guard-rail, staring up at the sky. A mystic, dreamy tone crept into her voice. "Think what it means. Think what it means! After so many centuries, we have found them again!"

I never flatter myself that I am anything more than an ordinary technician, a designer of machines. My

art and my understanding are commonplace beside Alyria's. She is a researcher into the mechanism of society, a Keeper of the Legend. I can never follow her into her loftier visions; her intuitions and insights are wonders to me as our first space spheres must have been to my grandfather. Yet I understood Alyria's feelings then. There was not a man in our world who did not share it. There was no child, no tottering Elder, who was not looking up at the skies that night and whispering the same golden words.

For as long as the history of our people has been recorded we have dreamed the same dream. A thousand years ago our intelligentsia laughed at it; they told us it was a story invented by a primitive people to explain things they could not understand. As our society matured in its control of physical things, the story of the gods came to seem more and more improbable. Only a few faithful visionaries preserved it; we honor them, today, in their children, by calling them Keepers of the Legend.

It was not until we conquered space and established colonies in the planets of our own sun system, not until our astronomers had devices for measuring the ends of the universe, that we suddenly understood the truth.

The Legend told us we had been established in the beginning as a planet colony of a great race. They were a people who had all wisdom and knew all science. The universe was theirs, and we were the last outpost of their civilization. We thrived as long as they kept in touch with us.

Then, suddenly, they no longer came to our world. Why, we never knew. They had been our teachers and technicians, and without them we were helpless. The Golden Age died and became a legend itself. We forgot everything we had learned from them. Our society collapsed into savagery; we could no longer speak their tongue or use their symbols; we forgot their law and their ethic.

On the brink of chaos our descent halted. We began to climb slowly back to knowledge. One by one we mastered the sciences. We experimented blindly with politico-economic systems until greed and war taught us how to build a planetary brotherhood. And we discovered the power for space travel. Only then did we begin to examine the old Legend seriously. The pattern conformed to our most recently verified data. The Legend, then, was the ultimate truth of our being; it was within our power to find the gods again!

That was a century ago.

Our astronomers and our historians for a century examined and reinterpreted the ancient records. For a century they studied the limitless reaches of the universe, seeking the home-place of the gods. It required a patience and a persistence that only the united hope of a whole people could support. Everything we did was channeled toward that one goal. At last we had our reward. Two years ago we isolated the distant sun system from which we had come, and six months later our scientists knew precisely which of the planets in that system was the home of our gods.

All this Alyria talked of as we stood on the roof looking up at the stars. Her words had the familiar incantation of an enchantment, for she spoke from the soul of our people. Our hope lit stars in her eyes.

Just before dawn I took her home. She said she preferred watching our departure on the view-screen, so the children could be with her.

Except for the monotony, our trip through space was uneventful. In one day less than the anticipated time we were within the sun system of the gods; ten hours later our sphere plunged toward the planet.

Our excitement mounted as we watched the green globe on the landing visor. Point magnification showed us a wonderful, fertile countryside spread with forests and fields, and dotted by blue lakes. The technology of the gods far exceeded ours, for nowhere had the bulk of a city been reared to mar the beauty of their world. We saw occasional sections of highway curling gracefully, like silk ribbons, among the trees. It was obvious (so we thought then) that their cities, concealed underground, would be close to a place where several of the roads joined. Near such a junction we set the space sphere down in a broad valley rimmed by low hills.

We did not believe it would be necessary to wear the regulation landing helmets, but we tested the atmosphere to be sure and found it similar to our own. How could it have been otherwise? We were a colony established by these people; we would naturally be like them in the chemistry of our bodies.

We turned up the landing port and descended to the ground. The air smelled fresh and unbelievably clean, like a city park after a spring rain.

I had expected that we would be met as soon as we landed; and I was subtly frightened when we saw no one. After a while we walked to the confluence of highways near by. The white roads were cracked and broken, overgrown with plant life. We all knew the truth even then, yet no one had the courage to say it.

We followed the highway for a little while until we came to a place where the surrounding ground was a mass of jagged masonry overgrown with moss and grass. Two of us had the heart to dig out one of the larger pieces of shattered granite. On it were symbols that we knew, a word from the tongue of the ancients.

There was no doubt after that. Silently we turned back.

As we approached our space sphere a group of fierce beasts sprang at us, throwing long, pointed sticks which they apparently used as weapons. They were disgusting to look at because they were like caricatures of ourselves: thin, white, hairless, naked things who walked almost erect and used their forepaws like arms. To scare them off we shot our flare guns into the air. They were terrified, but instead of scurrying back into the forest they flung themselves at our feet, crying piteously.

We had no idea how many of them might be concealed in the woods; by sheer weight of numbers they could overwhelm us. We pushed through them and made haste to enter the sphere.

I looked back just before we fired the take-off. The beasts were pouring into the field from all sides, prostrating themselves at intervals, raising their ugly, hairless paws toward us. It was such a mockery of a human gesture that it sickened me. I was glad when the flame of our exhaust burst over them and I could see them no longer.

We remained on the planet for almost a week, and we made numerous landings wherever we thought we might find people. But everywhere it was the same. The cities were scattered ruins, some utterly deserted, others inhabited only by the hairless, white beasts.

There was a possibility, of course, that our scientists had miscalculated. With some hope, we went to the other planets in the system. We found nothing, not even the dust of broken cities.

Thus, the home of the gods.

It has all been told before. The shock is gone, but the smashed dream of centuries cannot be healed.

I had to carry some comfort to Alyria, some new reason for hope, and there was nothing. I could invent nothing. She is a dreamer, a Keeper of the Legend; I am a technician. I can go on building; I can design more efficient power units, faster space spheres; I can help plant new colonies on the unexplored planets. I can pretend my work has meaning; I can pretend I have a reason and a purpose for what I do.

But what of Alyria? My soul is in the dexterity of my hand and brain; hers, in the elusive magnificence of the Legend. She had the vision, the insight into meaning and cause, the ultimate understanding of ab-

solute truth. And in a breath it was taken from her. She had nothing, and she cannot delude herself with pretense.

Is it any wonder that I took the surface tube home after we had landed? That I left it a block short of our dwelling unit and walked the rest of the way, racking my brain frantically for some shadow of consolation I could take her?

Mechanically I shut the door of the vacuum-vertishaft and set the dial for the third level, fifty-three. Alyria was waiting at the door. And she was smiling!

"I allowed the children to stay up past their bedtime so they could eat with us," she said. But instead of letting me go into the house, she put her arm around me and drew me into the little garden at the back. Beyond the plastic guard-rail we could see the pattern of city lights at our feet, as we had two years before, and overhead the eternal rooftop of space.

"I hope you're ready to talk yourself hoarse," Alyria said.

"If you like, but it might be easier for you if . . ."

"The children have a thousand questions. As far as they're concerned, you've had an incredibly exciting adventure. I do hope you had at least one narrow escape. They've invented such wonderful stories; you'll have to live up to some of them."

I kissed her then; I was proud of her. No Keeper of the Legend could have suffered more than she had, and none could have maintained her poise. She drew me down on the garden seat beside her.

"At first it was very hard," she whispered. "Sometimes at night I would come out here and look up at the stars. There was one terrible question pounding in my mind, and I never found an answer. What had happened to the gods who gave us our beginning? What did the Legend really mean? Had they destroyed themselves? But that was impossible; they were too wise to fall into discord. Had another race attacked them? Then what had become of it, and why had we been spared? Or perhaps the hairless things you found in the ruins had conquered them? But that was the most fantastic notion of them all! There is no answer; perhaps there were no gods. I was utterly lost and depressed, until I began to listen to the stories the children were inventing for themselves. None of it had meaning to them, except as an adventure. Slowly they taught me the truth. The past is a pretty story, but we cannot turn back to it. The future is ours. We can make what we like of it. We are gods in our own right!"

She looked at me and I saw the light of the stars was in her eyes again. She put both her arms around me and clung to me tenderly; she was no dreamer then, no visionary, no Keeper of the Legend, but a woman. Her arm lay beside mine in the moonlight, its long, sleek, green hair as downy as air. It was a fascinating contrast to the bristling stubble that covered my own purple skin. I wondered, as I kissed her again, what our next child would be like. The others are all so different! Alyria and I are like any parents; we think the baby is the prettiest of the lot.

"The people of the Earth are gone," she said. "We do not know what happened to them, and it hardly matters. The Earth-people were men like ourselves, not gods. We possess what the Earth has lost, and perhaps something they never found."