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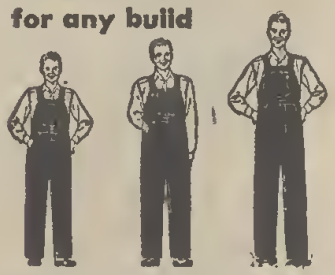

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THE BIG BOOK OF SCIENCE FICTION

VOL. 6 MARCH, 1950 NO. 3

A TRAIL-BREAKING NOVEL

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SHORT STORIES

DEPARTMENTS AND FEATURES

Cover by Saunders

Illustrations by Bok, Callé, Lawrence, Leydenfrost and Van Dongen

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FANDOM'S CORNER

Conducted by James V. Taurasi

THERE are few large cities today that do not have at least one fan organization, where lovers of science, fantasy or weird fiction can get together and discuss their hobby. We are trying in this column to compile a complete list of these clubs, so that interested readers can join. We will also be glad to publish announcements by fans who wish to organize clubs.

Rose Davenport has sent us the following information:

"The Golden Gate Futurian Society announces a membership drive. This is to invite you to become a member. Attend a meeting and learn what this friendly club offers to fans of San Francisco.

"The Golden Gate Futurian Society is a reorganized club and will be a year old in January (1950), at which time an election of officers will be held. Regular meetings are held every three weeks on Friday evening at 7:30 P.M. at the home of member Agnes Rundle, 419 Frederick St., San Francisco. A feature attraction is the club library; science-fiction books, magazines and fan mags are available at nominal cost.

(Continued on page 8)

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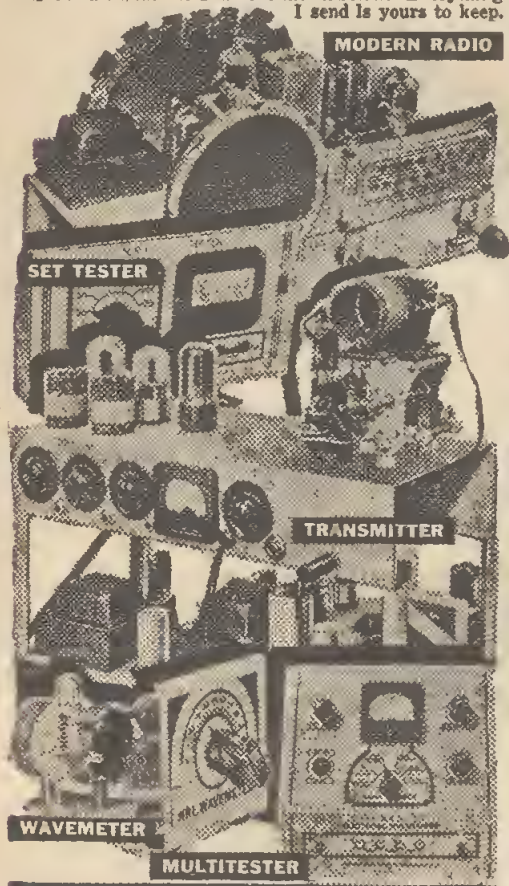

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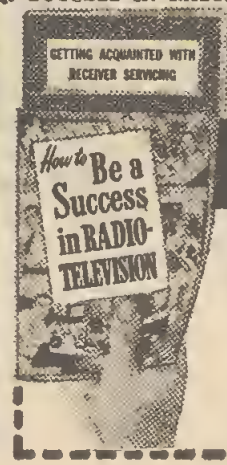

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(Continued from page 6)

Membership dues are 25¢ a meeting. First meeting for new members is free.

"The meetings are essentially informal, friendly, interesting and members give talks on their favorite science, current stories and authors.

"If the membership grows, the club hopes to send delegates to the next science fiction World Convention in Portland."

"Age, race, sex, and religion are no barriers in the G.G.F.S."

Thank you for the information, Mrs. Davenport. Keep us informed on your fine organization, and don't forget to let us know how that election came out. Fans who are interested in this organization should write to: Mrs. Rose Davenport, Sec-Treas. GGFS, 137 Cherry Ave., South San Francisco, Calif.

Rosco E. Wright, President of the Eugene Science Fantasy Society, has this to say about his club:

"The Eugene Science Fantasy Society meets twice a month, the second Wednesday of each month at 7:30 P.M., and the last Sunday at 2 P.M. Elaine Gething is our attractive new secretary. We now have about twenty-two members on the roster though only about a dozen are very active."

Maybe this notice will get you a few more active members, Rosco. Those who want to join should get in touch with Rosco E. Wright at 146 E. 12th Ave., Eugene, Oregon, or phone him at 5-5774. Keep us informed on what goes on up there, Rosco.

Fans in New York and New Jersey will be interested in the Eastern Science Fiction Association. They meet in Newark, New Jersey, the first Sunday of each month and usually have a well-known author or top fan as speaker. Sam Moskowitz is head man there; the readers of *Super Science* know him as the book reviewer in *Super's* companion magazine, *Fantastic Novels*. Write to him at 127 Shephard Ave., Newark 8, New Jersey for full information on this live-wire organization.

The next World Science Fiction Convention will be held in Portland, Oregon, over the Labor Day holidays. Write to: "Norwescon Committee", P.O. Box 8517, Portland 7, Oregon, for full information. Better inclose a 3¢ stamp.

English readers will be glad to learn that *Super Science Stories* is now obtainable in the British Isles. A special edition is published there and sells for one shilling. It contains 94 pages, same page size as the American edition, and the first British issue contains most of the stories and illustrations from the January 1949 American issue, but no departments or readers' column.

FAN MAG REVIEWS:

Bloomington News Letter, No. 13, published bimonthly by Bob Tucker, Box 260, Bloomington, Ill. It's free for the asking. This six-page photo-offset newspaper is one of the leaders of the field. The current issue contains a report on the recent "Cinvention", with three pictures of the shindig, including one of the luscious Miss Lois Miles of New York who was chosen "Miss Science Fiction of 1949". Nice! We agree with Redd Boggs on his comments on the "Cinvention" and conventions in general.

Spearhead, No. 4, Fall, 1949, published by Thomas H. Carter and the Spearhead Press, 817 Starling Ave., Martinsville, Va. 25¢. A super 52-page mimeographed magazine that contains about everything a fan could ask for. We like the fiction by Kennedy and Col. Keller and the many departments. The cover by Miller is really tops in mimeo art. You can't go wrong on this one; better get a copy while you can.

Science-Fantasy Review, No. 16, published quarterly by Walter Gillings, 115

(Continued on page 127)

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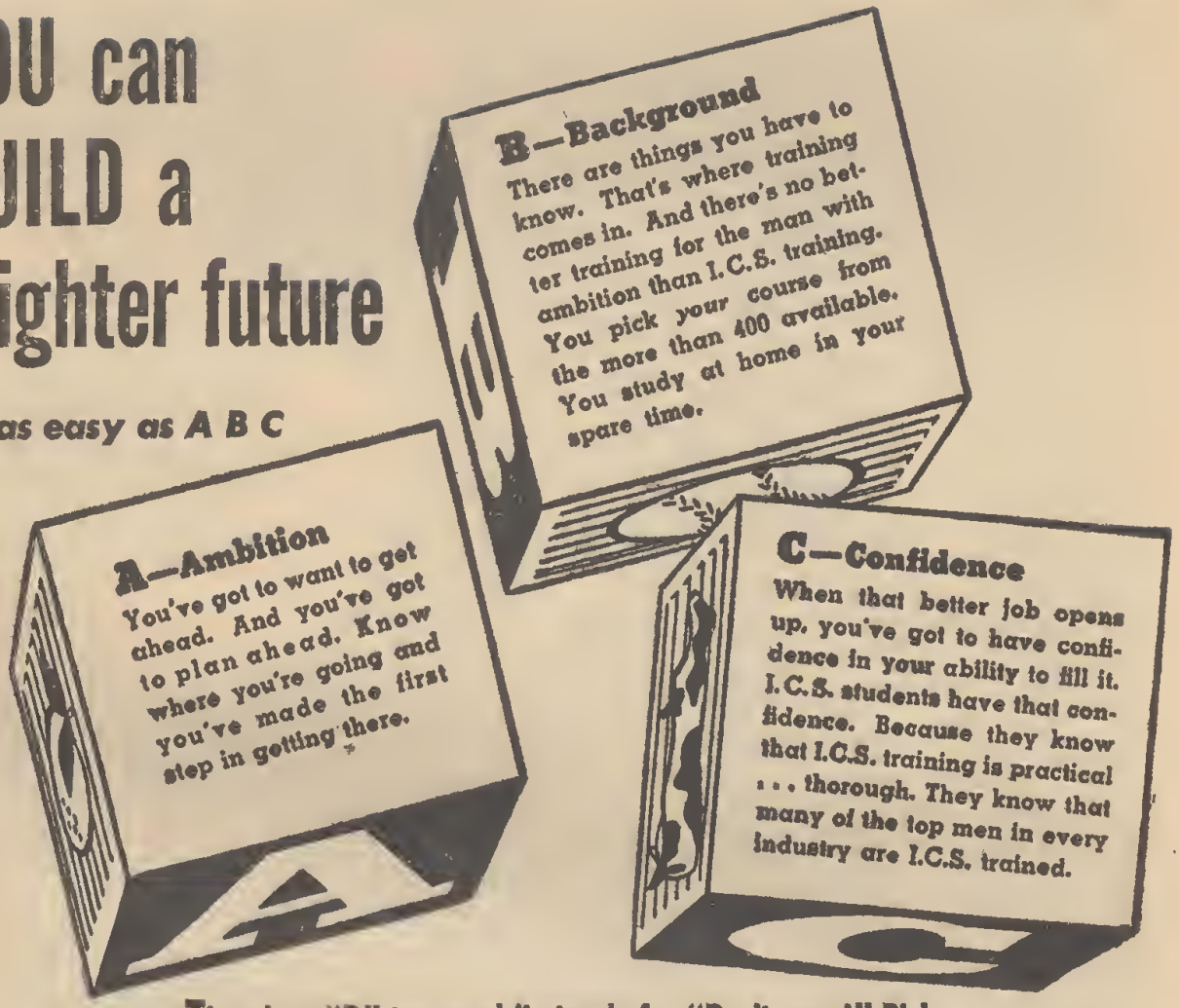

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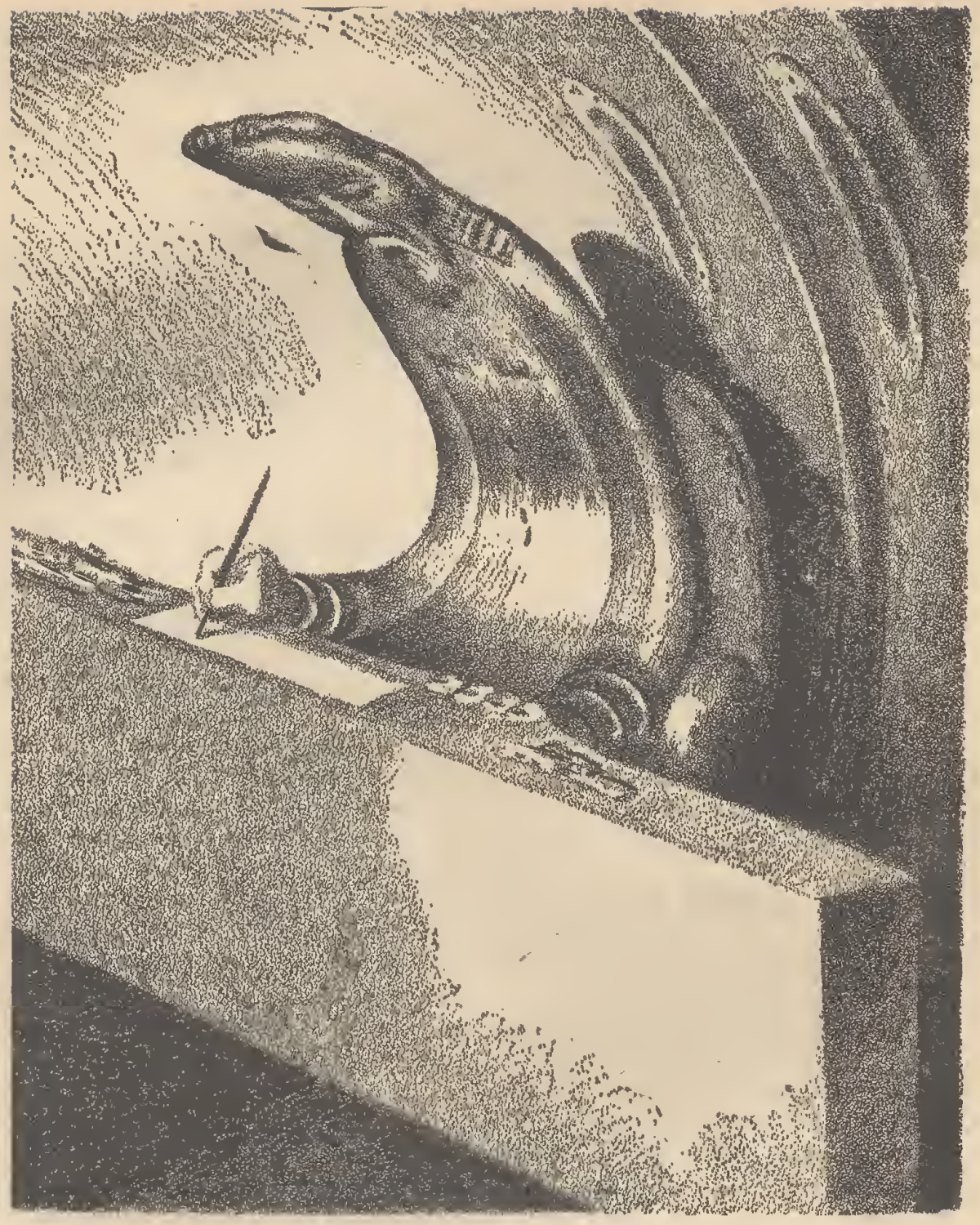
He was shocked, but not surprised when he saw that the man was only a few inches thick. . . .

By A. E. VAN VOGT



What cosmic irony had brought the* Hope of Man *back to Earth, scant hours before the planet's utter destruction? What forces had twisted its crew into nightmare caricatures? For the answers, Hewitt risked the future of the race, millenia distant—beyond the farthest star!

CHAPTER ONE

Strange Return

AVERILL HEWITT hung up the phone, and repeated aloud the message he had just been given:

"Your spaceship, *Hope of Man,* is entering the atmosphere of Earth."

The words echoed and re-echoed in his

mind, a discordant repetition. He staggered to a couch and lay down.

Other words began to join the whirlpool of meaning and implication that was the original message: *After six years... the* Hope of Man*...after six years, just about the time it should be approaching one of the Centauri sun...re-entering the atmosphere of Earth...*

Lying there, Hewitt thought: *And for ten years I've lived with the knowledge that our sun is due to show some of the characteristics of a Cepheid Variable—within months now!*

Momentarily, the memory distracted him. His mind went back over the ridicule that had been heaped on him. Scientists had rejected his evidence without giving him a hearing. When he had sent his new instruments to an observatory in a sealed crate, they had been sent back with the seal unbroken. A famous astronomer commented that the sun was not a Cepheid Variable; and with that icily withdrew from the controversy.

In reply, Hewitt had pointed out that he hadn't said the sun was a Cepheid Variable. He had merely stated it would show some of its characteristics. Actually, the ultimate effect would be that of a baby nova.

The phrase captured the headlines, but only as a one-week wonder. Gradually, he'd realized that the human race could not imagine its own destruction. He decided to use his private fortune to send a ship with colonists to remote Alpha Centauri.

Thinking back to those days, Hewitt recalled his efforts to find people who would go.

The problem had been brand-new. The newly-invented atomic space drive, already widely used for journeys among the planets, had yet to be tried on an interstellar trip.

Years ago, the Space Patrol had requested funds to make an exploratory journey, but the money had not even yet been appropriated.

Nobody actually put on much pressure. The prodigious task of exploiting the solar planets was barely begun.

THE first man who volunteered to go on the *Hope of Man* was Armand Tellier, a thin-faced young man with too-transparent skin and pale blue eyes.

He had majored in physics at the Sorbonne. He had said, "My wife and I feel that if we give ten years to this trip, I'll be an authority on Einsteinian physics when I get back."

He emphasized the "get back" ever so slightly.

Hewitt had pretended not to hear the qualification. It was enough for him if they were out of the solar system when the sun underwent the changes he had predicted.

Tellier was speaking again. "You understand," he said, "I'm making this journey because you have had the financial strength to install an atomic pile. That means acceleration can be continuous. But—" he paused to emphasize his point; his eyelids flickered— "I must have authority to maintain acceleration to the halfway point. I must have an opportunity to make a study of what happens when our ship approaches the speed of light."

Hewitt frowned at the floor of his study. He knew what he intended to say in substance. At thirty-eight he still worried about just how he should word it. In the end he was blunt. "You can have the authority, on one condition."

The pale blue eyes grew intent. "What is that?"

"Your wife must be with child at the time of take-off."

There was a long pause; then: "I'm sure," said Tellier in a formal voice, "that *we* are prepared to make even that sacrifice to further my career."

He departed. In describing him to his

wife that night, Hewitt called him a cold fish.

"Like you are now, Averill?" she said.

She was a dark-haired beauty with eyes that had starry glints in them. The stars were hard and bright, as she looked at him across the dinner table.

Hewitt almost laughed. Then he stared at her more intently. Finally he sighed, and put down his knife and fork. "I've seen this coming," he said.

She said bitterly, "You've made a fool of all of us with this prediction of destruction of the solar system. I can't take it any longer."

Hewitt said wretchedly, "I'll make a settlement, but I must have the children. I want to send them along."

She said in an uneven tone, "The children go with me. I'll take a lower settlement."

"No!"

She was trembling. The stars in her eyes were dulled. "If you don't let me have the children without a fight, I'll take you to court. I'll tie up your money by legal procedures. You won't be able to finish building the ship."

Silence; then: "You win, Joan."

She started to cry. He saw that she hadn't expected him to choose the ship instead of her.

One newspaper reported the next day: "BABY NOVA" MAN TO BE DIVORCED. But—the papers also described Tellier's reasons for wanting to go on the journey. As a result seven young scientists and their wives were stimulated to make the "sacrifice." And then in one week three visionaries came from different parts of the country. Each separately described how he had had a vision of Sol flaring up and engulfing Earth. That was not the way it would be, but Hewitt refrained from enlightening them. In his presence the wives separately expressed themselves as willing to carry out their share of the bargain.

A youthful soldier of fortune turned up with a young blonde who purported to be his wife. Hewitt did not require a wedding certificate. A doctor, a member of a narrow sect, said that he and his wife had decided that a medical man ought to go along. "The moment," he said, "that we realized the need, I knew it was my duty to go."

When no experienced space crewmen volunteered for the journey, Hewitt ran want ads offering fabulous wages. Five young couples responded. They didn't seem to realize the money would have no value where they were going.

There was only one reply to Hewitt's ad for a licensed spaceship commander. A grizzled fifty-year-old came, bringing a young girl with him. He introduced himself as Mark Grayson, and the girl as his ward, Juanita Lord. His enthusiasm was tremendous. "I've dreamed all my life of commanding the first ship to another star. If you accept me I plan to marry Juanita. She's very anxious to go, and of course she loves me very much. Isn't that right, dear?"

The girl nodded vigorously. Hewitt blinked at her, shocked in spite of himself. He started to protest, "But she's only a—" He stopped, gulping. He said doubtfully, "There's the matter of legal age. I question whether any court would give you two permission under such circumstances."

"I'm eighteen," said Juanita earnestly. She added plaintively, "I know I look young, but don't think I'm not grown up."

She was a startlingly pretty girl. She looked twelve or fourteen, at most. Hewitt stiffened himself. He said slowly, "It would be inadvisable for publicity reasons, for—"

He stopped himself. He thought, *What am I saying? The future of the race is at stake. Besides, I'm actually saving her life.*

Aloud, he said, "You're hired."

The spaceship, *Hope of Man,* bound for Alpha Centauri, had lifted up from the soil of Earth on April 30th, 2072 A.D., with thirty-eight people aboard.

Hewitt had stayed behind. He had considered that his fight was just beginning....

HIS BITTER reverie ended, as the phone began to ring again. He climbed off the couch; and as he went to answer, he thought, *I'll have to go aboard and try to persuade them. As soon as they land, I'll—*

This time his caller was an official of the Space Patrol. Hewitt listened shakily, trying to grasp the picture the other was presenting. It had proved impossible to communicate with those aboard, and the ship was now approaching the Earth apparently in a great descending spiral, because of the Earth's revolution, but actually in a straight-line course.

"We've had men in spacesuits at both observation ports, Mr. Hewitt. Naturally, they couldn't see in, since it's one-way-vision material. But they pounded on the metal for well over an hour, and received no response."

Hewitt hesitated. He had no real comment to make.

He said finally, "How fast is the ship going?"

"About a thousand miles an hour."

Hewitt scarcely heard the reply. His mind was working faster now. He said, "I authorize all expense necessary to get inside. I'll be there myself in an hour."

As he headed for his private ship, he was thinking, *If I can get inside, I'll talk to them. I'll convince them. I'll force them to go back.*

He felt remorseless. It seemed to him that, for the first time in the history of the human race, any means of compulsion was justified.

TWO hours later, he said, "You mean, the airlock won't open?"

He said it incredulously, while standing inside the rescue ship, *Molly D.,* watching a huge magnet try to unscrew the outer hatch of the *Hope of Man.* Reluctantly, Hewitt drew his restless mind from his own private purpose. He thought, *There must be something seriously wrong.*

Instantly, he felt impatient, unwilling to accept the need to adjust to the possibility that there had been trouble aboard. He said urgently, "Keep trying! It's obviously stuck. That lock was built to open in less than two minutes."

He was scarcely aware of how completely the others had let him take control of rescue operations. In a way, it was natural enough. The *Molly D.* was a commercial salvage vessel, which had been commandeered by the Space Patrol. Now that Hewitt was aboard, the representative of the Patrol, Lieutenant Commander Mardonell, had assumed the role of observer. And the permanent captain of the vessel took instructions, as a matter of course, from the man paying the bills.

More than an hour later, the giant magnet had turned the round lock-door just a little over one foot. Pale, tense and astounded, Hewitt held counsel with the two officers.

The altimeter of the *Molly D.* showed ninety-one miles. Lieutenant Commander Mardonell made the decisive comment about that. "We've come down about nine miles in sixty-eight minutes. At that rate we'll strike some high landmark in ten hours."

It was evident that it would take much longer than that to unscrew the thirty-five yards of thread on the lock-door at one foot per hour.

Hewitt considered the situation angrily. He still thought of this whole boarding problem as a minor affair, an irritation. "We'll have to get a big drill," he said. "Cut through the wall."

He radioed for one to be sent ahead. But, even with the full authority of the Space Patrol behind him, two and a half hours went by before it was in position. Hewitt gave the order to start the powerful drill motor. He left instructions: "Call me when we're about to penetrate."

He had been progressively aware of exhaustion, as much mental as physical. He retreated to one of the ship's bunks and lay down.

He slept tensely, expecting to be called any moment. He turned and twisted, and, during his wakeful periods, his mind was wholly on the problem of what he would do when he got inside the ship.

He awoke suddenly and saw by his watch that more than five hours had gone by. He dressed with a sense of disaster. He was met by Mardonell.

The Space Patrol officer said, "I didn't call you, Mr. Hewitt. Because when it became apparent that we weren't going to get in, I contacted my headquarters. As a result we've been getting advice from some of the world's greatest scientists." The man was quite pale, as he finished, "I'm afraid it's no use. All the advice in the world hasn't helped that drill."

"What do you mean?"

"Better go take a look."

The drill was still turning as Hewitt approached. He ordered it shut off, and with his mind almost blank examined the metal wall of the *Hope of Man*. It was penetrated—he measured it—to a depth of three-quarters of a millimter.

"But that's ridiculous," Hewitt protested. "This metal was cast right here on Earth eight years ago."

Mardonell said, "We've had two extra drills brought up. Diamonds don't mean a thing to that metal."

He added, "It's been calculated that she'll crash somewhere in the higher foothills of the Rockies. We've been able to pin it down pretty accurately, and people have been warned."

Hewitt said, "What about those aboard? What about—" He stopped. He had been intending to ask, "What about the human race?" He didn't say it. That was a special madness of his own, which would only irritate other people.

Trembling, he walked over to a porthole of the rescue ship. He guessed they were about fifteen miles above the surface of the earth. Less than two hours before crashing.

When that time limit had dwindled to twenty minutes, Hewitt gave the order to cast off. The rescue ship withdrew slowly from the bigger host, climbing as she went. A little later, Hewitt stood watching with a sick look on his face, as the round ship made its first contact with the earth below, the side of a hill.

At just under a thousand miles an hour, horizontal velocity, it ploughed through the soil, creating a cloud of dust. From

where Hewitt and his men watched, no sound was audible, but the impact must have been terrific.

"That did it," said Hewitt, swallowing. "If anybody was alive aboard, they died at that moment."

It needed no imagination to picture the colossal concussion. All human beings inside would now be bloody splotches against a floor, ceiling or wall.

Somebody shouted, "She's through the hill!"

Hewitt said, "My God!"

An improbable thing had happened. The hill, made of rock and packed soil, thicker than a hundred ships like the *Hope of Man,* was sheared in two. Through a cloud of dust, Hewitt made out the round ship skimming the high valley beyond. She struck the valley floor, and once again there was dust. The machine did not slow; showed no reaction to the impact.

It continued at undiminished speed on into the earth.

THE DUST cleared slowly. There was a hole three hundred feet in diameter, slanting into the far hillside. It began to collapse. Tons of rock crashed down from the upper lip of that cave.

The rescue ship had sunk to a point nearer the ground, and Hewitt heard plainly the thunder of the falling debris.

Gradually, the surface turmoil subsided. The *Molly D.* landed. Hewitt began numbly to issue orders that would begin the job of fencing in the danger areas. He thought of the problem as one that would be resolved by excavation. The *Hope of Man* had buried itself. It would have to be dug up.

He had the vague thought that the hard metal of the walls could have withstood the shock, and that the vessel might be reparable.

Rock and soil were still falling when a radio report arrived. A mountain had collapsed fifty miles away. There was a new valley, and somebody had been killed. Three small earthquakes had shaken the neighborhood.

For twenty minutes, the reports piled up. The land was uneasy. Fourteen more earthquakes were recorded. Two of them were the most violent ever known in the affected areas. Great fissures had appeared. The ground jumped and trembled. The last one had taken place four hundred miles from the first; and they all lined up with the course of the *Hope of Man.*

Abruptly, there came an electrifying message. The round ship had emerged in the desert, and was beginning to climb upward on a long, swift, shallow slant.

Less than three hours later, the salvage ship was again clinging to the side of the larger machine. Its huge magnets twisted stubbornly at the great lock-door. To the half-dozen government scientists who had come aboard, Hewitt said: "It took an hour to turn it one foot. It shouldn't take more than a hundred and five hours to turn it thirty-five yards. Then, of course, we have the inner door, but that's a different problem." He broke off. "Gentlemen, shall we discuss the fantastic thing that has happened?"

The discussion that followed arrived at no conclusion.

HEWITT said, "That does it!"

Through the thick asbesglas, they watched the huge magnet make its final turn on the inner door. As they watched from behind the transparent barrier, a thick metal arm was poked into the airlock, and shoved at the door. After straining with it for several seconds, its operator turned and glanced at Hewitt. The latter turned on his walkie-talkie.

"Come on back inside the ship. We'll put some air pressure in there. That'll open the door."

He had to fight to keep his irritation

out of his voice. The outer door had opened without trouble, once all the turns had been made. There semed no reason why the inner door should not respond in the same way. The *Hope of Man* was persisting in being recalcitrant.

The captain of the salvage vessel looked doubtful when Hewitt transmitted the order to him. "If she's stuck," he objected, "you never can tell just how much pressure it'll take to open her. Don't forget we're holding the two ships together with magnets. It wouldn't take much to push them apart."

Hewitt frowned over that. He said finally, "Maybe it won't take a great deal. And if we do get pushed apart, well, we'll just have to add more magnets." He added swiftly, "Or maybe we can build a bulkhead into the lock itself, join the two ships with a steel framework."

It was decided to try a gradual increase in air pressure. Presently Hewitt was watching the pressure gauge as it slowly crept up. It registered in pounds and atmospheres. At a fraction over ninety-one atmospheres, the pressure started rapidly down. It went down to eighty-six in a few seconds, then steadied, and began to creep up again. The captain barked an order to the engine room, and the gauge stopped rising. The man turned to Hewitt.

"Well, that's it. At ninety-one atmospheres, the rubber lining began to lose air, and didn't seal up again till the pressure went down."

Hewitt shook his head in bewilderment. "I don't understand it," he said. "That's over twelve hundred pounds to the square inch."

Reluctantly, he radioed for the equipment that would be needed to brace the two ships together. While they waited, they tried several methods of using machinery to push open the door. None of the methods worked. Hewitt was startled, and for the first time let into his foreconsciousness an idea that had been at the back of his mind now for several days.

It had to do with Armand Tellier. Tellier had been intending to do some experimenting, he recalled, uneasily. Carefully, one by one, he enumerated the fantastic things that had happened. He felt himself turn pale with excitement. On the basis of that first glimmering picture, he estimated that it would take *nine hundred atmospheres* of pressure to force open the inner lock door of the *Hope of Man.*

IT REQUIRED just under nine hundred and seventy-eight.

The door swung open grudgingly. Hewitt watched the air gauge, and waited for the needle to race downward. The air should be rushing through the open door, on into the Centauri ship, dissipating its terrific pressure in the enormous cubic area of the bigger machine. It could sweep through like a tornado, destroying everything in its path.

The pressure went down to nine hundred and seventy-three. There it stopped. There it stayed. Beside Hewitt, a government scientist said in a strangled tone, "But what's happened? It seems to be equalized at an impossible level. How can that be? That's over thirteen thousand pounds to the square inch."

Hewitt drew away from the asbesglas barrier. "I'll have to get a specially designed suit," he said. "Nothing we have would hold that pressure for an instant."

It meant going down to Earth. Not that it would take a great deal of time. There were firms capable of building such a suit in two days. But he would have to be present in person to supervise its construction.

As he headed for a landing craft, Hewitt thought, *All I've got to do is get aboard, and start the ship back toward Centaurus. I'll probably have to go along. But that's immaterial now.* It was too late to build more colonizing ships.

He was suddenly confident that the entire unusual affair would be resolved swiftly. He had no premonition.

It was morning at the steel city when he landed. The news of his coming had preceded him; and when he emerged from the spacesuit factory shortly after noon, a group of reporters were waiting for him. Hewitt gave them some crumbs of information, but left them dissatisfied.

As he headed for his own craft, he noticed that several men in uniform were waiting for him. They wore the uniform of the federal police. As Hewitt approached they sauntered casually toward him. Something in their attitude warned him. He turned, and started back toward the factory. A paralyzer beam flashed. He fell, twisting in anguish.

The papers reported that he had "resisted arrest."

CHAPTER TWO

The Twisted Men

FOR TWENTY-FOUR hours, Hewitt lay in a jail bunk, and thought about incredible things. The confinement seemed to have released his imagination, for his thoughts were on the wild side and partly, at least, untenable. But he calmed down, and presently he was able to write his ideas in logical sequence. He told himself that he did so to clarify his own thinking. He made the following points:

The *Hope of Man* was not affected by the gravitational forces of Earth. It was moving through the solar system as an independent body.

Coming in from outer space the ship had intersected the path of the earth around the sun. In pursuing its straight course, it had passed through the outer rim of Earth, but it was Earth that moved away from it, not it away from Earth.

The tremendous hardness of the metal and the fact that the solid earth offered no obstacle whatever to its movement, suggested that the round ship had enormous mass. Hewitt hesitated at that point. He was beginning to think he might give the account to the press after all. He added: "The density is clearly out of all proportion to any known substance." He gave the air pressure as evidence. He hinted at matter density almost, though not quite, comparable to that found in the interiors of certain stars. He meant white dwarfs. like Sirius B. He meant neutronium. But now that he was consciously writing for publication, he did not say so.

He had a purpose in mind. It seemed to him that if he made this explanation properly, he would be freed to help in boarding the *Hope of Man.*

But now he had an unpleasant point to make. For a man who had predicted that the sun would destroy Earth, his next statement was loaded with dynamite—for himself. Nevertheless, he finally wrote firmly:

"If the robot control is responsible for the ship's return, then it will still be in operation. It will accordingly start edging the *Hope of Man* over, so that the two bodies will presently meet again. We cannot reasonably expect that its passage will once more be limited to a shadow surface penetration. The ship may go down to the magma. I need hardly point out that an irresistible hundred-yards-in-diameter body may cause major planetary convulsions."

On reading that over, he realized it would shock the world. Other people would not take his attitude that, since such a disaster would happen later than the greater catastrophe of the baby Nova, it was a matter for concern because the ship might be destroyed. To them, the danger *from* the ship, not *to* it, would be important. Mobs might well try to lynch the owner of the vessel.

Shuddering, Hewitt tore up his account

and burned it. He was still shivering at what he considered his narrow escape when his lawyer came. It seemed there would be due process of law. Meanwhile, *habeas corpus,* bail, freedom. The government, it seemed, wasn't even certain it had a case against him. Somebody had acted hastily.

Several civil suits had been filed. People were suing him for damage to their property. Somebody had owned the mountain that had become a valley. Nearly a dozen people claimed to have been hurt. Hewitt ordered that all claims should be fought by every device of the law. Then he collected the specially-built spacesuit, and headed once more for the *Molly D.*

More than an hour was spent in testing. But at last a magnet drew shut the inner door of the *Hope of Man.* Then the air pressure in the connecting bulkhead was reduced to one atmosphere. Hewitt, arrayed in his new, motor-driven spacesuit, was then lifted out of the salvage ship into the bulkhead by a crane.

The door locked tight behind him. Air was again pumped into space. Hewitt watched the suit's air-pressure gauges carefully as the outside pressure was gradually increased to nine hundred and seventy-three atmospheres. When, after many minutes, the suit showed no signs of buckling, he edged it forward in low gear and gently pushed open the door of the big ship.

A few seconds later he was inside the *Hope of Man.*

DARKNESS!

The change had come at the instant he rolled into the ship. The difference was startling. From outside, the corridor had looked bright and normal.

He was in a ghastly gray-dark world. Several seconds went by as he peered into the gloom. Slowly, his eyes became accustomed to the dim lighting effect.

Six years had gone by since he had last been aboard the ship. Even in that half-night, he was struck by a sense of smallness.

He was in a corridor which he knew pointed into the heart of the ship. It was narrower than he remembered it. Not just a little narrower; a lot. It had been a broad arterial channel, especially constructed for large equipment. It was not broad any more.

Just how long it was he couldn't see. Originally, it had been just under three hundred feet in length. He couldn't see that far. Ahead, the corridor faded into impenetrable shadow.

It seemed not to have shrunk at all in height. It had been twenty feet high, and it still looked twenty.

But it was five feet wide instead of fifteen. It didn't look as if it had been torn down and rebuilt. It seemed solid, and, besides, rebuilding was out of the question. The steel framework behind the facade of the wall was an integral part of the skeleton of the ship.

He had to make up his mind, then, whether he would continue into the ship. And there was no doubt of that. With his purposes, he had to.

He paused to close the airlock door. And there he received his second shock.

The door distorted as it moved. That was something else that had not been visible from outside. As he swung it shut, its normal width of twelve feet narrowed to four.

The change was so monstrous that perspiration broke out on his face.

And the first, sharp, tremendous realization was in his mind. *But that's the Lorentz-Fitzgerald contraction theory effect!*

His mind leaped on to an even more staggering thought: *Why, that would mean this ship is traveling at near the speed of light.*

He rejected the notion utterly. It seemed a meaningless concept.

There must be some other explanation.

CAUTIOUSLY, he started his machine forward on its rubber wheels. The captain's cabin was on this floor, and that was his first destination.

As he moved ahead, the shadows opened up reluctantly before him. Presently he made out the door of the cabin. When he was ten feet from it, he was able to see the ramp in the distance beyond.

The reappearance of things he remembered relieved him. What was more important, they seemed to be at just about the right distance. First the airlock, then the captain's cabin, then the ramp.

The corridor opened out at the ramp, then narrowed again; and in the distance beyond was the second airlock.

Everything looked eerily cramped because of the abnormal narrowing effect. But the length seemed to be right.

He expected the door of the captain's cabin to be too narrow for his spacesuit to get into. However, as he came up to it, he saw that its width was as he remembered it.

Hewitt nodded to himself. *Of course, even by the Lorentz-Fitzgerald theory, that would be true. Contraction would be in the direction of flight.*

Since the door was at right angles to the flight-line, the size of the doorway was not affected. The door jamb, however, could probably be narrower.

The jamb *was* narrower. Hewitt had stopped his suit to start at it. Now, he felt himself pale with tension.

It doesn't fit, he told himself. *Like the hall, it's narrower only by a factor of three, whereas the air pressure varies nine hundred seventy-three to one.*

Once more, he assured himself that the explanation could not possibly include the famous contraction theory. Speed was not a factor here. The *Hope of Man* was practically at rest, whatever its velocity might have been in the past.

He stopped that thought. *I'm wasting time. I've got to get going.*

Acutely conscious again that this was supposed to be a quick exploratory journey, he shifted the softly spinning motor into gear, and moved forward through the doorway.

As he rolled all the way into it, he saw that Captain Mark Grayson sat at a long, extremely narrow desk. He seemed to be writing something.

The grizzled space veteran sat with unnatural steadiness. He did not look up as the machine rolled nearer, though he faced the door, and was in a position to catch the slightest movement from the tops of his eyes.

It was hard in that shadowy light to see what he was doing. His eyes seemed to be looking fixedly down at a sheet of paper. But his hand, holding the pen, did not move.

Slowly, watchfully, Hewitt rolled around the desk. He was shocked, but no longer so desperately surprised when he saw that the man was only a few inches thick. Seen in front view, he looked unchanged.

From the side, he was a tall man with a head and body that looked like a caricature of a human being, such as might be seen in a badly distorted circus mirror.

Right then and there, Hewitt suspended his judgment. Some of the phenomena suggested the Lorentz-Fitzgerald effect. Even the weird light could be the result of normally invisible radiation projected to visible frequency levels.

But that was as far as it went. Most of what he had seen could only be explained if the ship were traveling simultaneously at several different speeds.

He was beside, and slightly behind Grayson now. He had to strain his eyes to see what was on the paper. He read:

> Tellier is exhilarated. He informed me that yesterday, according to the instruments, we had attained a velocity of 177,000 miles per second. Today, though the pile is even

hotter, there has been no change in our registered speed. He admits he can only guess at what has happ

Whatever had happened at that moment must have struck like a secret knife. Grayson had no advance warning; his writing had been cut off in mid-word. He sat here now, a mute witness to the reality that disaster could catch a man between heartbeats.

Hewitt began his retreat from the control room. His mind now was almost blank.

Nothing he could think could compare with the fantastic reality.

AS HE raced his thick, tank-like suit along the corridor, Hewitt consciously braced himself, consciously accepted the abnormality of his environment. He grew more observant, more thoughtful—and more tense.

He came to the place where the corridor divided. He slowed. One side, he knew, curved up a spiral ramp to the living quarters of the crew. The other went down to the engine room, one of the storerooms and the apartments of the scientists.

There were no stairways or elevators in the *Hope of Man.* It had been intended that people should use their muscles for every necessary movement.

Hewitt headed down. As he reached the third floor down, and glanced along that corridor, he saw that a man was standing at one of the entrances to the lower storeroom.

His posture was as unchanging as Captain Grayson's. His eyes were wide and staring: they seemed to glare straight at the motor-driven spacesuit. But neither the eyes nor the rest of the man's body showed any reaction to Hewitt's presence. His body, seen from the side, looked only inches in thickness. Because he was standing, he seemed even more inhuman than Grayson had been.

Hewitt recognized him as Draper, one of the scientists. Draper's field was plant biology.

He found three more scientists standing in various postures at the entrance of the engine room. Since they did not all face in the direction of flight, they presented an amazing assortment.

One, seen from the front, was as thin as a post, a gaunt, incredible looking creature. Another was foreshortened from a side view. He simply seemed crippled. The third one resembled Captain Grayson and Draper; his narrowness was through the thickness of his body.

Inside the engine room, Armand Tellier—a mere sliver of a man as seen from the side—was bending over a section of the instrument board. He stared down at it with unwinking eyes, and neither turned nor moved while Hewitt watched.

Dissatisfied, feeling he was missing something in this silent drama, Hewitt

gave his attention to the engines. His first glance at the line of meters shocked him.

The pile was as hot as a hundred hells. The transformer needle was abnormally steady, for the colossal load it was bearing. The drive was carrying an energy flow of ninety out of a possible hundred.

The resistance to acceleration must be tremendous, for the accelerometer needle registered zero. As he glanced at the speedometer, Hewitt's mind flashed back to what Captain Grayson had been writing in his logbook: ". . . 177,000 miles per second. . ."

That was what the speedometer showed.

For the second time, Hewitt thought, "But surely that doesn't mean it still—"

His mind refused to hold the thought.

Nevertheless, by the time he retreated from the engine room, his brain was beginning to relax. And part of the greater picture was forming there.

It would have to be discussed, thought about, clarified. Tremendously stimulated by the possibilities, but depressed by the death that was all around him, he started on what he intended to be a swift and routine round of the rest of the ship.

Mrs. Tellier sat in a chair with a child on her knee, a fixed smile on her face. Two scientists' wives had been caught by immobility as they were taking dishes from the automatic dish-washing machine. They made an oddly life-like domestic tableau. The other children were in a large play-pen, with several women sitting in chairs nearby, apparently watching them. All were distorted.

Upstairs, in the crew's quarters, Hewitt found not only the crewmen and their wives, but Warwick, the soldier of fortune, Marie, his blonde wife, and Juanita Lord, the child bride of Captain Grayson. The girl looked older, and she had a sullen expression on her immobile face. Warwick had a gun in his hand, which he had evidently been cleaning. The shells were spilled out on his lap.

Despite the hideous distorting effect from the light and the one-third contraction, the postures of those present were conventional. That puzzled Hewitt anew.

He had been trying to hold away from his consciousness the extent of the disaster that was here. Just for a moment it penetrated, in spite of himself. Just for an instant it hurt like fury. He had a brief but unnerving sense of guilt. From the corner of one eye, he saw a group of children. All were sitting or standing in the various positions that must have been the results of their final movements.

Hastily, not looking directly at the youngsters, Hewitt guided his machine out into the corridor. He was heading along it when he thought, *One of those babies was in an extremely odd position.*

He slowed down, disturbed. He oughtn't to have been so squeamish. He should have taken a good look at the scene.

The only thing is, he told himself, *I've got to get out of here. I can't stop for a second look.*

At the head of the ramp, he hesitated. He couldn't go back without checking. Very pointed questions might be asked him. He'd better have the answers.

CHAPTER THREE

Zone of Danger

BACK he went to the crew's quarters. The scene was unchanged. There were six children in one corner. They were all between two and three years old, he judged.

That was important because it gave some idea of how much time had actually gone by aboard the ship. At most, three and a half years. And yet the *Hope of Man* had been gone for six!

Unquestionably this ship had under-

gone some of the contraction effects predicted by the Lorentz-Fitzgerald theory. Even time had been telescoped.

It was a point Hewitt noted only in passing. Something else, something far more important—or so it seemed—absorbed him. Four of the children were sitting on the floor amid a wilderness of toys. One child stood flat-footed, in an awkward position. The sixth had been caught in the act of getting to his feet.

Hewitt stared at the boy in utter fascination. The sense of urgency in him was tremendous. It was time he was out of here.

But the youngster, in getting up, had got himself into an unusual position. He was balanced on the tip of one toe and the outspread fingers of one chubby hand. There he had frozen.

Almost blankly, Hewitt realized the truth. He had not, he saw, let his mind carry him far enough. The difference in air pressure, the immense tensile strength of the metal—these things had been but part of a greater whole.

There was a time difference also. These people lived one second while he lived nine hundred and seventy-three seconds. From their point of view, he was making his entire inspection of their ship in less than one second of their time.

He thought, *They're alive! But they're living so slowly compared to me that, even if I had a chance to listen to their heartbeats, I wouldn't hear anything.*

The question was, how could contact be established? And, when it was, what good would it do?

The uncertainty was still in his mind as he raced back to the airlock, and the *Molly D.*

DURING Hewitt's absence from the salvage vessel, a great man had come aboard. He listened with the others to Hewitt's account, and then remained silent and thoughtful through most of the discussion that followed. His presence had a subduing effect on the younger government scientists aboard. No one had very much to say. The attitude seemed to be, "You stick your neck out first!"

As a result, the conversation remained "close to the ground." Phrases like "a natural explanation" abounded. When he had listened to all he could stand, Hewitt said impatiently, "After all, these things *have* happened. What do we mean by natural?"

He was about to say more, when the great man cleared his throat and spoke for the first time since he had been introduced. "Gentlemen, I should like to try to clear away the debris that has accumulated at the beginning of this obstacle course."

He turned to Hewitt. "I want to congratulate you, Mr. Hewitt. For the first time in history, the mythical observer—that mathematical oddity—has come to life. You have seen phenomena that, till now, have never been more than a set of equations."

Without any further preliminary, he launched into an explanation for what had happened that was similar to what Hewitt had written—and destroyed—in jail. It differed in that he also offered a theory to account for the fact that the drive of the *Hope of Man* was nearly full on, and that apparently the ship was traveling at very near the speed of light in its own zone of existence, as he put it, "in a sort of parallel time to now, this minute, this second!"

Further knowledge might, among other things, account for one fact. How had this zone succeeded in bringing the *Hope of Man* back to Earth when the ship had accelerated in the opposite direction?

He broke off. "However, the time has come for a practical solution. I offer the following."

Duplicates of a carefully-written letter must be placed in the hands of Armand

Tellier and Captain Grayson. The circumstances would be described, and the men would be urged to cut off both the drive and the robot pilot. If this were not done within a certain time—taking into account the difference in time rate—it would be assumed that the letter had been misunderstood. At that point Hewitt would go aboard, shut off the robot and reverse the drive.

As soon as the *Hope of Man* had slowed to a point below the critical speed, personal contact could be established. Long before that, of course, the truth of the account in the letters would have been established to the satisfaction of everyone aboard.

Hewitt frowned over the suggestions. He could think of no reason why they shouldn't work. And yet, having been aboard that foreshortened, eerie ship, with its pile operating to the very limit of safety, its lopsided passengers moveless as in death, he had a feeling that some factor was being neglected.

He said slowly, "I'll have to take along food and water, if I have to do the shutting off. This time difference could become very involved."

It was also decided that the *Molly D* would cast off as soon as the letters were delivered. If it was later necessary to put him aboard again, it would connect up just long enough to do so, then once more it would pull clear, and stand by.

HEWITT helped prepare the letter. Then once more he was put into the mobile spacesuit. And again he crossed the threshold of the *Hope of Man*. As he moved through the outer doorway, something caught at his heart. He swayed in momentary nausea.

The feeling passed as quickly as it had come. He noted the reactions, and then without further incident he delivered one copy of the letter to Grayson and another to Tellier. He was greatly stimulated to notice that Grayson had finished writing the word "happened" during his absence. He could see no change, however, in the position of Tellier.

He returned to the *Molly D.*, but did not wait for them to cast off. He headed for Earth, and his doctor. After a complete examination, he was pronounced, as the doctor phrased it, "One hundred per cent physically fit."

Relieved that his brief nausea had had no pathological basis, Hewitt set about clearing up his affairs. It had been decided to give those aboard the *Hope of Man* fifteen minutes (their time) to react to the letters. That would be about ten days, normal time.

Among other things, Hewitt, after some hesitation, called up Joan, and asked her if he could call on her. She refused.

"It wouldn't be fair to the children," she said. "They were just beginning to live down the first publicity, and now there it is again."

Hewitt knew what she meant. Other young people were cruel. They taunted. They asked such questions as, "When is your old man going to fall into the sun?"

It was all very silly, but it was devastating too.

Yet he stayed on the phone. There was a purpose on his mind. Life without her had been bitter and empty. It was a lonely world for a man with his obsession.

Hesitantly, dreading her reaction, he explained what was in his heart. He would have three more spacesuits constructed.

"We can all go aboard together," he said urgently. "The whole thing is really very simple. As soon as we're on, I'll reverse the engines. It won't take long before we're at a one-to-one relationship with those aboard. It's a matter of reducing speed."

The silence at the other end told him at least a part of what she was thinking. He forced himself to go on:

"Joan, you can't just say no. You've got to give the children their chance to escape the holocaust. Beside that, a little ridicule is nothing. And, anyway, once we're on the way to Centaurus, we don't have to worry about what people think. Try to look on it as a colonizing venture—"

There was a click in his ear.

"Joan!" He spoke sharply.

There was no answer. With trembling fingers, he dialed her number again. The phone at the other end rang and rang. Convinced, finally, that she wouldn't even speak to him, he hung up. What hurt particularly was that she didn't seem to have realized that this was their good-by. They would never see each other again.

He could have justified her action, but he made no attempt to do so.

He put his affairs in order, as a man might who expected to die. Promptly on the tenth day, he reported back to the *Molly D.*, which was again attached to the larger vessel.

He had few doubts. With his armored suit, and his time-ratio advantage, he could dominate the situation aboard until he had reduced the ship's speed to the point where he and it were at unity.

First of all, he would lock up the ship's arsenal. He intended to search every person aboard. Individuals like Warwick, who played with weapons in their spare time, would receive special attention.

I'm not, Hewitt told himself, *taking the slightest chance. These people are going to Centaurus whether they like it or not.*

As he crossed into the airlock of the *Hope of Man,* a knife-like spasm of pain stabbed through his heart. It was so sharp, so agonizing, he almost fainted with nausea.

The shock staggered him, but—as it had the first time—the feeling passed.

Shaken, Hewitt crossed the inner threshold, and closed and locked the door that looked so normal from the outside, and so lopsided from the inside.

He found himself in the dim, gray-black world of the ship's interior.

As he turned to head along that unnaturally narrow corridor, something grabbed his body from behind and squeezed it mercilessly. The sensation of being caught by a giant hand was so realistic that he tried to turn back toward the door.

The great hand began to slip. He had the feeling then of being squirted from a space that was too small for him into something—vast.

That was the last thing he remembered before blackness closed over him.

HE MUST have been unconscious only a few moments. When he opened his eyes, he saw that the suit was still in the process of turning toward the door.

In a moment it would smash against the hard metal of the lock.

He had an impression that something else was—different—but there was no time to notice what it was.

He grabbed hastily at the controls and applied the brakes. The suit stopped as if it had struck a brick wall. He reeled in his saddle, breathing hard, then recovered his balance.

He thought tensely, *It's the effect of coming from normal space into the zone. The first time it didn't bother me on the sense level. The second time I must still have been overbalanced from the first attempt, and so there was a moment of pain. This time—"*

His mind poised. He felt his eyes grow large and round. With a kind of dreadful fascination, he stared at the closed airlock door.

It was no longer lopsided, but normal, just the way it would be if—

He whipped his machine around, and gazed wildly at the corridor. It was brightly lighted. The dim, eerie, shadowy effect was gone as if it had never been.

He noticed something else. The corridor was not narrow any more. He couldn't tell exactly, but he guessed that it was fifteen feet wide, its original width.

The tremendous truth burst upon Hewitt. He was no longer an observer of this scene.

He was part of it.

He also would now appear lopsided to another coming aboard for the first time. To himself, and to those caught as he was, he would be quite normal.

People affected by the Lorentz-Fitzgerald phenomena were not aware of any difference in themselves. The contraction influenced their bodies and the light that came to their eyes—everything was equally distorted.

Tensely, Hewitt remembered the sensation as of being squeezed. Readjustments within his body, unevenly distributed during the change. His front changing faster than his back.

He shuddered with the memory of pain.

With an effort, Hewitt caught his scattered thoughts: *I've got to get back on the* Molly D. *If I could get in here, I could also get out. I—*

Out of the corner of one eye, he caught sight of the air-pressure gauges of his suit. The one that registered the inside pressure didn't matter. It was at its norm of one atmosphere.

The gauge for outside pressure was also at one atmosphere.

The change was part and parcel of what had already happened. But actually seeing it was a shock almost greater than anything that had yet occurred.

There was a sound farther along the corridor. Nine men debouched from the Captain's cabin. Hewitt recognized Warwick among the group, and two members of the crew. He caught only a glimpse of their faces. They carried automatic pistols and paralyzers. They were intent on what they were doing, for none so much as glanced toward Hewitt.

They headed in a body towards the ramp. They were gone down it almost as they had come.

Behind them they left silence.

Hewitt was startled, and alarmed. So many weapons—for what?

He had to get back to the *Molly D.* This situation was out of hand.

He turned anxiously, unlocked the inner door, and, using the hand-arm attachments of his suit, tried to pull it open.

It wouldn't move. He strained at it, and pulled and twisted. But it wouldn't budge.

Abruptly, he realized the truth. The time factor! What had been a minute for him had been hours for the *Molly D.* Long ago, it had cast off. It would now be standing by, waiting to see what would happen.

He thought of launching himself in one

of the lifeboats. He even turned to manipulate the wall mechanism, started the ponderous outer door swinging and screwing shut. He was reaching with his mechanical hand for the valve that would let air into the airlock, and so equalize the pressure on the inner door. The moment the pressure was equal, the door would open.

At that point he stopped. He had a hideous thought: *Now that I'm adjusted to this zone, I won't necessarily go back to normal space. Where will I go?*

He couldn't decide.

And besides, he thought, *it'll take time. Five minutes to close the outer door, and eight minutes to reverse the process, and launch the lifeboat.*

That would be nearly nine days outside.

He began to stiffen. For there was no turning back. He was committed to the big ship's unnatural matter and energy state, irrevocably.

CHAPTER FOUR

Revolt!

HEWITT grew calm and cool and grim. He was here to persuade a shipload of people to start again on the long journey to the Centauri suns.

Or, if persuasion failed. to force them.

Or trick them.

The method was unimportant. Only the result counted.

I'll have to hide, he told himself. *I can't reveal myself now, when I don't know what's going on.* Besides, surprise might be an advantage in a crisis.

He knew just where to conceal himself. Having decided where he must go, he became conscious of the distance he had to cover. That made him anxious. Swiftly, he rolled along the corridor toward the ramp.

He was within a few yards of the captain's cabin when it struck him that Warwick and the others must have been inside for a reason. They must have attacked Grayson before going down to the engine room.

There might be a guard inside, keeping an eye on the prisoner—and on the open doorway. He would have to run that gauntlet, or attack the guard.

Attack, he decided. He thought of it as an icy-cold logical decision. To be seen at this moment could be disastrous.

He manipulated the controls of one of the hand-arm attachments of the suit, raised it into striking position; and paused to fix in his mind the arrangement of the cabin.

The pause also gave him time to remember that a paralyzer could be used effectively against him even though he was in the suit. He pictured what it might do to the muscles of his eyes, cringed in anticipation; and then put it out of his mind.

Attack, regardless.

Like a charging tank, the spacesuit raced forward. The tires squealed in protest, as he whipped it around and through the door. He was all the way inside before he slowed. He was halfway across the room before he was able to stop.

He saw that Grayson was alone in the room. The captain lay on the floor, his hands and feet bound. His face was streaked with blood, and his clothes torn and twisted. His eyes were open. They stared at the spacesuit, widening.

Hastily, Hewitt backed out of the cabin and headed down the ramp. He reached the top balcony of the lower storeroom without incident. Quickly, he manipulated the release mechanism of the spacesuit.

The rubber separated with a wheezing sound. The two sections of the apparatus were driven apart to the limit of the bolts that connected them. Hewitt crawled out between two of the bolts, and a moment

later stood on the floor on his own two feet.

He pushed the machine behind some packing cases, where it would not be visible from the door. And then, without taking any other precautions, he swung out onto a section of the thick fence-type wire net that held different parts of the cargo in place.

The lower storeroom—like the upper one—was seven levels high. He had come in on the seventh balcony. Using the strong, woven fence, he climbed down to the floor ninety feet below.

Now what?

He couldn't wait. He realized that. Already at least fifteen minutes had gone by since the change. Outside, that would be ten days.

All too swiftly, it would be twenty days, thirty, forty—many months. The time ration of 973-1 was no longer in his favor; it was against him. The proportion was so monstrously great that even a few seconds might make the difference between success and catastrophe.

He lay near the door in the shelter of a big box. It was hot and stuffy. Very little air circulated among these piles of packing cases. Tense, anxious, bathed in perspiration, Hewitt examined his situation.

It was not good. He had brought two paralyzers with him, but against a group of determined men, they wouldn't be effective. They couldn't kill. They couldn't even threaten death.

As his thought reached that point, a group of men walked noisily past the open doorway. Somebody was saying savagely, "Take these prisoners up to—" Hewitt wasn't sure, but it sounded like Warwick's voice. If that was so, then the prisoners were Tellier and the scientists who had remained loyal to him.

Hewitt came to his feet. He thought, *I'll give them half a minute to get started up the ramp. Then—* He moved over to the door and peered out into the corridor.

A guard stood in front of the engine-room door.

Hewitt drew back hastily in dismay. The man's head had been turned away, so he was still safe. But—a guard! How could he ever hope to get near the engine room?

Anger swelled inside him. What was the matter with Warwick? His side had won, hadn't it? And as far as Warwick knew, the ship was light-years out in space. From whom did he expect trouble? The man must be insane. . . .

His fury died as swiftly as it had come, as the guard shouted something. Hewitt caught only part of what he said; he was evidently speaking to someone inside the engine room: ". . . I don't get it!"

Hewitt didn't hear the answer. There was a pause; then the guard spoke again, belligerently: "But I thought we were going to shut off the drive—"

A pause, then: ". . . letter?"

Presently he added, "So we're going to wait a few hours and see what's going on—"

Silence, then grumpily, ". . . it doesn't make sense to me!"

It made sense to Hewitt. Warwick had found the letter he had delivered to Tellier. The original purpose of the rebellion must have been to stop the ship and turn back to Earth; but he had instantly guessed the possibilities of a much swifter return to the solar system.

Hewitt groaned inwardly. *So he's going to wait a few hours!*

He felt stunned—because that was out of the question. There wasn't that much time to play around with. One hour, possibly. But not a second longer.

I've got to capture somebody, if possible win him to my side, and use him as a decoy to get near that guard.

He had to get into the engine room, and shut off that drive.

Galvanized, he edged out over the boxes, and began to climb up to the seventh balcony. It was harder going up than it had been coming down.

He reached the seventh balcony, and peered quickly out into the corridor, first one way, then the other. He didn't really expect to see a sentry. But as he turned his head, he did see—

And was seen.

The guard was Juanita Grayson.

HEWITT's first and greatest advantage was that he was tensed, ready for action. He had told himself that, if he were seen, he would have no alternative but to attack.

He darted instantly out of his shelter. With paralyzer ready, eyes narrowed, lips compressed, he raced towards the girl.

He realized then that he had still another advantage. She was scared, and she had no training. Her eyes grew large with fright. Her hand, with the gun in it, came up shakily.

Hewitt stopped a dozen feet from her, and covered her. "Drop it!" he said. His voice was low but savage.

Her gun clattered to the floor.

She stood staring at him, and there was the incredulous beginning of recognition in her eyes. The fear changed. Stark unbelief replaced it.

She started to turn, started to run up the ramp. She staggered after three steps, and stopped. She looked back at his weapon with an expression of utter misery on her face. Slowly, she held up her hands. Standing there, she began to sway. Hewitt leaped forward and caught her as she fainted.

She was a dead weight in his arms, as he carried her rapidly back into the storeroom.

He lowered her to the floor, and blew on her eyes and into her nostrils. *Hurry!* he thought. His enormous anger was back. She *would* pass out on him at a time like this!

She stirred, and sighed like a tired child. For a few moments, then, she looked as she had when he had first seen her, not more than fourteen years old. She grew visibly older as she came awake. Her lips tightened; her face hardened; her expression grew sullen. She opened her eyes and stared up at him.

There was no fear in her now. She recognized him, and she didn't expect to be hurt. She said, "That letter—it was true!"

What startled him was the fact that she had fainted. In spite of knowing about the letter, she had reacted to the sight of him as if his presence were a complete surprise.

He forgot that. He had his story ready, and that was all that mattered. Briefly, he described what had happened to the *Hope*

of Man, how it had returned to Earth, and how in a few hours it would crash again into the planet, this time to be destroyed.

That last was true, but only in an oblique sense. Actually the sun was the danger. But she, like the others, didn't believe in that. So she had to be frightened by something that she could believe in.

He saw that she was looking at him, her eyes ever so slightly narrowed. They were brown, he saw, and hostile. "You're the person," she said in a low tone, "who made me marry an old man."

She flashed, "Don't deny it. If it hadn't been for you and your stupid ship, Mark would never have thought of marrying me."

There was some justice to her final accusation. But Hewitt had no time to discuss her problem. He cut her off. He said grimly, "Listen, the deadly thing about what I've told you is that we'll only be able to rescue three people. You help me, and you're one of them."

That caught her. Her eyes grew big. "What do you want me to do?"

"We've got to shut off the drive," said Hewitt. "That's first. If we don't, the ship will crash. You've got to help me capture the guard at the entrance to the engine room."

Her eyes flashed with scorn. "I know who that is. One of those crackpots, always spouting morality at you. But I'll decoy him. He joined us, didn't he? That shows he's no better than the rest of us."

It only showed that one of the religious visionaries had found the voyage drab. And so he had reinterpreted his dream about the sun destroying the earth, and fitted it in more closely with his current desires.

Hewitt helped the girl to her feet. "Let's go!" he said. "You first."

As he followed her down the ramp, he wondered which of the three "crackpots" was on guard. For the life of him, he couldn't recall what the sentry guarding the engine-room door had looked like. His one glance had been too quick for any identification. There had been a plump, genial individual named Mackarett, a younger, ascetic-looking man whose name was Rand, and a dark, intense person who called himself Andrew Sincere.

It turned out to be Mackarett, a little thinner, a little more sober-looking—and quite gullible. When Juanita shouted at him from the ramp, "Mr. Mackarett, quick—come!" he raced towards her.

When she turned and disappeared up the ramp, he followed her.

Hewitt was waiting around the first turn.

FOR a bare moment, the man acted as if he were going to fight, despite the gun that pointed straight at his face. His lips parted in a snarl. He started to bring up his weapon.

Abruptly, his arm seemed to grow weak. His eyes glazed, and appeared to turn inward. He looked like a visionary seeing a very unpleasant vision. He mumbled, "Mr. Hewitt, that letter—"

That was as far as he got. At that point, Hewitt stepped forward and deftly removed the automatic pistol from his nerveless fingers. That seemed to shock Mackarett even more. It was as if a momentary hallucination had come alive and touched him. The effect was out of all proportion to the reality. He collapsed to the floor, and lay there twisting and turning. Finally, his mind must have started working again. He looked up.

Before he could speak, Hewitt said, "Mackarett, there's no time to waste. Listen!"

He told the same story he had told Juanita. Only three or four people could be taken off the ship immediately. The rest would have to stay aboard, wait for the ship to slow down, and then come back the long way.

He finished, "You've got to help me get into that engine room, and shut off the drive. Right away!"

Mackarett mumbled, "But Mr. Hewitt, Warwick is at one of the airlocks. He's launching a lifeboat. He—"

"Now?" said Hewitt.

"Yes, sir."

The first shock passed. Hewitt stiffened to an examination of the possibilities. With Warwick out of the way, his main opposition would be gone.

One thing seemed certain. Warwick would not find himself in normal space, adjusted to Earth. That process appeared to depend on a series of unbalancing effects within the electronic and atomic structures of the affected object. A series, not just one; it had taken three entrances to do the job for Hewitt.

He pictured Warwick forever caught into slow-time, and unaffected by the gravity of the Earth. He would have to use intricate machines to adjust his body to the complex velocity of Earth through space.

He couldn't do it. He would die.

Hewitt was pale as he turned to Juanita. In a sense one man's life didn't matter. In a few months of outside time—*hours here*—the entire population of the planet of man's origin would die in a holocaust of heat. Even the outer planets would be engulfed by waves of super-hot gases.

Believing that, he still hesitated. It was not easy to say, *"This* man must die, so that we can live!" Twice he parted his lips to say, "Damn Warwick!"

He didn't say it. Instead, he asked, "Is anyone going with him?"

Mackarett said, "Oh, he's not going himself. He's sending Tellier and one of the other scientists."

Hewitt swore.

That settled it. If he had hesitated about his enemy, he could not possibly be responsible for ensuring the death of a man who would be his ally.

"Juanita!"

"Yes?"

"I want you to go upstairs, and see when they come back. Stay on the ramp, and just peek out, so you won't be seen. The moment the lifeboat noses back into the airlock, rush down here and tell me!"

He added, "And if he isn't back in fifteen minutes after you get up there, come back and tell me anyway." At that time he would have to make up his mind. He ended, "Will you do that?"

"Yes." But she did not move. Her face was white.

"What's the matter?"

"What are you going to do?" she demanded.

"Mackarett and I are going to seize the engine room."

Still she hesitated. There was misery in her eyes. Hewitt said, "Honey, please hurry.... What's the matter?"

"Are you sure you're going to take me? I'm *going* to be one of those who gets taken off with you?"

"You're first," said Hewitt. "I swear it!"

Tears came to her eyes. "I'm ashamed!" she whispered. "I don't want to be a deserter. But I've got to get off this ship."

Hewitt said, "Hurry, please! If we don't make speed, nobody will get away!"

Her shame did not prevent her from starting off at a run.

To Mackarett, Hewitt said, "How many men are there in the engine room?"

"Two."

Hewitt broke open one of the automatics and, while Mackarett watched, removed all but one shell from the magazine. Silently, he handed the weapon over.

Mackarett accepted the gun warily. "Am I also going to be rescued?" he asked.

Hewitt sighed. Ever since he had come aboard, he had felt as if he were moving in quicksand. It was the old story of

human beings intent on themselves, resisting the larger purposes of others.

Men were hard indeed to save from disaster.

"Absolutely." He spoke the falsehood firmly.

"What about my wife and child? Can I take them along?"

Hewitt had been turning his mind away. The question caught him unprepared. Unaccustomed to lying, he was momentarily flustered. He had forgotten that a man would think of his family first.

For a fateful moment he hesitated, trying to think what this would do to his hastily fabricated story. He said at last, lamely, "Yes, they can come too."

Mackarett flashed, "You're not sure. You didn't answer fast enough."

Hewitt was beginning to recover. He said frankly, "You can see how I've been operating. I came aboard this ship, and found a revolution in full swing. I had to act fast, but I'm handicapped by the fact that I can offer rescue to three, possibly four people—I think four can be managed. I don't really care who they are, but in each case it's got to be someone who helps me. Now you come along and say, my wife and child, also. Let me be blunt. To me, only one thing matters. The drive *has* to be shut off."

He was feeling much more confident now. He went on, "Why not leave your wife and kid here? They'll be all right. But I need those two vacancies to offer as bribes to the men in the engine room."

Mackarett said, "If we can capture those two men, so that no promises are necessary, then can I take my family?"

Under his breath, Hewitt cursed the man and his conditions. He had limited his lie as to how many could be rescued, because that was the only way he could put on the pressure. Now, he was being forced to use up his reserves faster than he had intended. But this was the critical moment.

He said, "Absolutely. I promise, on my word of honor."

He was sweating with anxiety. "For their sake, man! We're wasting time. You don't realize how many hours are going by outside. Hurry, for heaven's sake!"

Mackarett said, "I'll take your word."

CHAPTER FIVE

Centaurus or Death!

THE PLAN was for Mackarett to signal Hewitt when the crewmen were off guard. Before they could get over their surprise—or even be sure they were really threatened—Hewitt would rush in. Swiftly, the two men would be disarmed and tied up. And thus, in a few moments, the engine room would be conquered.

It was far indeed from being a perfect strategy. It involved risks—which he dismissed even as he thought of them. Its great merit was surprise.

It's got to work! he told himself.

It did.

When the two crewmen—Pratt and Leichter—had been tied up, Mackarett took up his position as guard outside the door, and Hewitt set up the device that would automatically shut off the pile.

Presently, uneasily, he went to the door where he could see Mackarett. "No sign of her?" he asked.

Mackarett shook his head.

Dissatisfied, Hewitt returned to his position at the pile. A dozen times, then, he fingered the lever that would begin to shut off the power. But each time he withdrew his hand.

He knew what it was. In spite of his conviction that all means were justified, actually he could not knowingly be responsible for the death of another human being. The very extent of what he had done, and tried to do, during the past ten

years, showed how strong was his motivation in that direction.

He had an obsession to preserve life, not destroy it. He could lie, steal and cheat for that purpose, but he could not kill. The pressure of that was so powerful that even to think of fighting it was to realize how hopeless such a fight would be.

Restlessly, he went again to the door. Mackarett saw him and said, "What's keeping that girl? She's driving me crazy!"

But he did not suggest that the pile be shut down, anyway. It struck Hewitt that this odd individual, who had come on the voyage because of some kind of hallucinatory experience—this man also did not think of dealing death to others to gain his own ends.

Even Juanita, embittered though she was, still little more than a teen-ager, had suffered a qualm of conscience.

Thought of the girl reminded him that she had left Grayson. He shook his head, uneasily. It was unfortunate. She would have to make a choice between two men—Grayson and himself. Every woman on this tremendous journey would have to bear children.

Mackarett said, "Here she comes!"

Hewitt jumped, and went back to the instrument board. He stood, waiting.

In a moment he would have to make up his mind. Tensely, he hoped that her news would be that Tellier was back.

He heard Mackarett speak to the girl. Then there was silence. Juanita said something Hewitt didn't catch, her tone was so low. Then more silence.

Hewitt was astounded at the delay. Didn't these two *realize?* He turned toward the door, and shouted angrily, "Hurry up! For heaven's sake!"

At that, she came through the door. Her face was the color of lead. Hewitt, on the verge of yelling at her again, swallowed his anger. "What's the matter?" he asked.

There was a sound at the door. For a fateful moment, Hewitt glared over the girl's shoulder at the men who were plunging into the room. Then, in a spasm of energy, he tried to do three things at once.

He started to turn back to the control board. He grabbed awkwardly with one hand for the lever that would shut off the drive. With the other hand, he clawed at his own weapon.

A paralyzer beam caught him in the shoulder, with all his actions still unfinished. He went down, cursing, his muscles twitching. He heard the clatter of his own paralyzer on the floor. Somebody kicked it out of his reach.

Through a blur, he saw Juanita Grayson. "I'm so sorry!" she sobbed.

She was cut off by Warwick, harshly. "What are you sorry about? You didn't do anything." He turned to Hewitt with a sneer. "I saw her peeking around the corner of the ramp, and there was something about her that made me suspicious. I got it out of her, by heaven!"

Hewitt groaned inwardly. It was an old, old story. Too many people were not just weak or strong of character. They wavered between the two. And it always showed.

As a result, his cause was lost, unless—

A FEW minutes later, Warwick said violently, "What do you mean only four can be rescued? Do you take me for a simpleton? If four, why not forty? What are you trying to pull off?"

He was a blond young giant with sea-blue eyes. His face was twisted with suspicion as he went on: "Listen, Hewitt, I don't get what's going on. Tellier was out just now in the lifeboat. He practically had to use a telescope to see our sun. We're just about half a light-year from Proxima Centauri. This ship must be in both places at once for you to have got aboard. Is that the explanation?"

"It's the zone—" Hewitt began. He broke off. "Proxima is *that* close?"

Not for the first time since the *Hope of Man* had come back to the Earth's atmosphere, he felt staggered. His picture of the "zone," never very clear, suffered another change. He had found it difficult, if not impossible, to imagine a "zone" actually traveling far in excess of the velocity of light. And yet, the indications were that the speed had been light-years in a day—which only made it more difficult to think of it as "speed" or "movement."

Most of the evidence seemed to be in now. According to Grayson's logbook, the ship had ceased registering acceleration at 177,000 miles a second. That fitted with the one-to-three telescoping effect he had observed when he first came aboard.

It didn't fit in with a 973-1 atmospheric pressure difference. It didn't fit with the matter density that had enabled the ship to penetrate the Earth's crust. Those more spectacular phenomena could only have occurred normally at a velocity so close to that of light-speed that the difference would be hard to measure by any known methods.

Was it possible the *Hope of Man* had continued accelerating in the zone? That might account for the fact that it was acting as if it were traveling at two different speeds at the same time.

On that basis, assuming the existence of the "zone," it was possible to conceive of the *Hope of Man* "simultaneously" occupying a position in normal space near the Centauri suns, and, four light years away, another position in the zone.

It would not, of course, be in two places at the same time with respect to the same observer. According to Einsteinian physics, there was no such thing as identical instant of time for more than one observer. To Hewitt, the ship was—or had been—in the solar system. To the people aboard, it was out in space.

Hewitt shook his head wonderingly. "But if that's how it is," he said aloud, half to himself, "it would mean—"

He caught himself, and pleaded, "Warwick, shut off the drive! Even as we talk here, hours are going by outside."

Warwick was cold. "You can't fool me. It'll be at least a year before the Earth's orbit could again intersect the orbit of the ship. In the letter—which you swear to—you say the ship is only traveling at ten miles an hour. At that speed, it can't catch up with the Earth, which moves through space at around eighteen miles a second."

He ended angrily. "What have you got to say to that, Hewitt?"

Hewitt said, "While you were talking, fifteen hours went by. Man, man, use your head."

HE FELT hopeless. At this final hour, he was up against the wall of another man's ignorance. Warwick's training was so limited, it did not strike him that the ten-mile apparent speed was *in addition* to Earth's orbital velocity. Explaining the details to Warwick could only lead to more questions. Nevertheless, Hewitt made the attempt.

When he had finished, Warwick said stubbornly, "I know what you've got on your mind. That stupid sun business, Well, don't think we're giving up our chance to get off this ship!"

It was the reaction Hewitt had expected: unthinking, concerned only with the man's own desires. Mentally, he gave Warwick up. No more scientific explanation. This fight was on a different level.

He said grimly, "Warwick, I'm the only man who knows how to get you off. I'll do it when you cut off the drive, not a second before."

Warwick persisted, "But you admit there's no immediate danger of plunging into the earth?"

It would happen in two hours, ship time. But long before that—in little more

than an hour—the sun horror would take place.

The impact of that made him raise his voice. Loudly, he called out to the others—both men and women—gathered in the corridor: "Stop this madman! If you listen to him, you'll be dead in forty minutes!"

That was a lie, but he had to have a few minutes leeway.

There was a stir. Several women looked uneasy, and tugged at the arms of their men. Hewitt saw Tellier under guard standing in the background. He called to the physicist in a piercing voice: "Tellier, when you were outside, you saw the Centauri suns nearby. Is that right?"

"Yes." The physicist spoke in a low tone.

"In your estimate how long will it take us to get there?"

"It'll take us about three months to slow down. Then a few weeks while we maneuver for a landing."

"That's normal time. With the time-contraction effect, part of that slowing down will seem only a half or a third as long?" That was only a guess.

Tellier hesitated. "That's about right."

Hewitt whirled on the group. "Think," he said, "you're only about two months from your destination. Surely after all this time, you won't give up when there's so little more time to go."

He saw that Warwick was about to speak. He rushed on: "Don't give up now! In less than eight weeks you'll be landing on a planet that will belong to you. And all the stuff aboard this ship, millions of dollars worth of material—yours, if you land!"

Warwick yelled, "Folks, it's the old sun-explosion nonsense that's driving him! If we slow down now, it'll take us four years to get back to Earth!"

Hewitt said earnestly. "It isn't as if this were an ordinary old-style colonizing expedition. We have tools and equipment, advanced machinery. Most of you will live better than you ever did on Earth!"

He went on before Warwick could speak: "What you don't seem to realize is that you rebelled in order to stop the drive. You risked your lives to do that. Now, one man among you has decided to prevent you. Are you going to let him? You have a right to make up your own minds. Don't let one man dictate to you!"

He stopped. Warwick was drawing an automatic. The man had a twisted smile on his face. He faced the group squarely, a big, arrogant, determined man. He said flatly: "I tell you, the only danger that Hewitt has in mind is from the sun. He's insane about that. You folks stick with me, and you'll be on good old terra firma in less than a day."

He waved his gun menacingly. "And now, if anybody wants to make trouble just let him step forward—"

No one moved. Hewitt shouted, "Don't let one man cow you. I tell you this is life and death—"

A fist that seemed to be made of iron caught him in the mouth. He half-fell, then recovered. Dizzily, he looked up into Warwick's face. The big man spoke from between clenched teeth: "Any *more* troublemakers?"

There were none. The tight smile was back on Warwick's face. He said in a silken tone, "You'll be living up in the crew's quarters from now on. If we have to go back the long way, believe me, you won't enjoy the trip. If you're so much as seen down at this level, you'll get a bullet where it'll do you the least good."

He turned to Mackarett. "You, too!" he said.

The plump man started to protest, but Warwick cut him off. "Get!" he said.

AS THEY headed for the ramp, Hewitt was already bracing himself. The choice, it seemed to him, was perfectly simple: Die now, or an hour from now!

He turned to Tellier, who was just behind him. He asked tensely, "When you were out in the lifeboat, did you have a hard time keeping up with the *Hope of Man?*"

The physicist shrugged. "It took all the power we had. Mr. Hewitt—" earnestly—"you cannot imagine against what resistance the *Hope of Man* is maintaining its velocity. And the lifeboat had to contend with the same resistance."

Hewitt, who had seen the relevant instruments, could imagine only too well.

He saw that the ramp was only a score of feet away. He said hastily, "Which airlock did you go out of? One or two?"

"Two."

Less than a dozen feet to go. He had the information he needed. But there were more questions in his mind.

"Tellier, what in your opinion will happen when the drive is shut off?"

The answer was prompt. "On the basis of what you said in the letter, and what I've heard you say, my opinion is that the ship will immediately revert to its position in normal space. That is, near Centaurus."

Hewitt drew a deep breath. "Tellier," he said, "why didn't you shut off the drive, as we asked you to do in the letter?"

The scientist stared at him. "You didn't give us time," he said. "Why, I'd barely finished reading it when—"

He stopped. He had lost his audience.

They were at the ramp.

The guard who had been ahead of them, stepped aside and partly blocked the ramp that led down. He motioned with his automatic. "Up!" he said curtly.

Hewitt started forward obediently, then turned and kicked the man in the stomach. It was the cruelest blow he had struck in his life. The guard doubled up with a cry.

Hewitt plunged down the ramp. A bullet screamed past his ear, struck the wall. Then he was around the curve of the spiral, temporarily safe. Behind him, he heard Warwick shout: "Phone the engine room! Shoot him in the legs!"

He wasn't going to the engine room.

" . . . damn you, Tellier! Get out of the way!"

That was the last he heard, but it gave him a picture of Tellier blocking pursuit for just those vital few seconds.

HE REACHED the corridor on which was the entrance to the seventh balcony of the lower storeroom. At a dead run, he headed for it. *If I can make it,* he was thinking, *without their seeing me, they'll keep on going down—*

He made it. And still he forced himself to new exertions. With every ounce of strength left in his body he ran towards the spacesuit, where he had left it a seeming age before. Panting, he crawled be-

tween the up-ended bolts and scrambled onto the saddle. His fingers trembled as he pressed the button that started the upper section of the suit sliding down to join the lower. The two rubber linings squeezed together, and became air-tight.

He had a monster in his control now. Out into the corridor he raced, and towards the ramp. A crewman on the way down stopped, teetered on one leg, and then raised his automatic.

He fired one bullet. It jangled against the armored suit. The next second, with a yell of alarm, the man was flattening himself against a wall. Hewitt maneuvered past him, and raced on up the ramp to the airlock corridor.

Amazingly, it was deserted. Women and other noncombatants must have been rushed up the ramp when the shooting started. And Warwick and his men had followed him down. They'd be back—long before he could do all that he had to do. But for perhaps two minutes there would be no interference.

At top speed, Hewitt raced towards airlock number two, the one Tellier had used. He paused for seconds only. He took time for one action. He pressed the button that started the great outer door unscrewing.

He didn't wait for the door to open, but wheeled around, and headed for airlock number one.

And now he was where he wanted to be.

FIRST, he opened the door of the lifeboat. Then he activated the mechanism that started the inner airlock unscrewing. At that point, three men appeared at the head of the ramp. One of them was Warwick, who shouted: "Hewitt, you can't get away. We'll blast you with paralyzers."

But it was an automatic he held in his own hand. And it was an automatic that

(Continued on following page)

A MARTIAN ODDITY

A Martian saw people and said,
"Those things would be better off dead.
They are stupid and mean
And have hair on their bean
Where they should have antennae, instead!"

—E. E. Stuck

(Continued from previous page)

each of the other men carried. Seeing them. Hewitt felt an almost insane sardonic glee.

He guessed that these men had deliberately armed themselves with guns, because bullets could kill. Paralyzers could only incapacitate.

And now, for possibly another minute, they could do nothing against him.

The inner door was still unscrewing.

It swung ponderously as he watched. Hewitt swung his suit into the lifeboat, and set in motion the launching mechanism.

Automatically, the lifeboat rotated down on its launching arms, and rolled forward on a long line of rubber rollers that lifted up from the floor. It was propelled forward and into the lock.

When it was all the way inside, the inner door swung shut behind it.

Everything was automatic now. The process could no longer be stopped.

The air sighed as it was sucked out of the lock. Even before that noise faded, there was another sound. The great outer door—which had, by normal time, taken them more than four days to open—began to unscrew. Within minutes, as it had been built to do (it would still, of course, be hours, relative to Earth), it swung out and to one side.

The lifeboat radio clattered into life. "Hewitt," roared Warwick's voice, "you can't escape that way—you'll have to come back as Tellier did. If you leave the ship, we won't let you back in. You'll be stranded!"

Hewitt set the controls so that the outer door would remain open, if it was not interfered with. Then he launched the lifeboat.

And still he was only at the beginning of what he had to do.

And all he had was a theory.

As the lifeboat emerged from the lock, he turned its nose in the direction of flight, and adjusted the pile to nine-tenths of its potential. The small boat seemed to freeze in space; it held its position beside the yawning opening of the lock.

Carefully, he turned it around, and eased it back into the airlock.

Once!

For five seconds, by his watch, he let it rest there. Then he let the rollers launch it backwards.

That was easier. He could use the powerful backward thrust of the drive to edge it out. Almost the instant it was outside, he set the power.

Just in time. He felt a dizziness, an unmistakable sensation. For a bare moment he was not in control of the lifeboat. Then the feeling passed, and he pushed the boat's nose back into the airlock.

"Twice!" He spoke the word aloud.

Again, he waited five seconds, and then once more launched the lifeboat. As it moved clear of the opening, the great outer door began to swing shut.

Involuntarily, Hewitt called out, "Warwick, don't!"

There was a senseless series of sounds from the loudspeakers. With a sinking sensation, Hewitt realized the truth. Radio waves were already distorted. He had time to see that the door was too far shut for him to control, and then—

Two things happened at once. He applied power, so that the lifeboat would start to circle the big ship. As he was drawing clear of the controls, nausea struck him like a blow. The pain left him gasping, but it passed again almost as swiftly as it had come.

When he could see again, he thought, *I've got about fifteen seconds before the second wave of pain. If I can get into airlock number two before the final change takes place—*

Through the forward porthole, he saw that he was high up above the *Hope of Man*. He saw something else. It distracted him—just for a moment it held him.

He saw three points of white light, and one red. Two of the points were like jewels held close to his eyes, pinpoints in size, but so bright they dazzled him.

He thought: *The Centauri suns!* No longer did they look like one bright spot as seen from the southern hemisphere of Earth. They were separated now into four distinct bodies: Alpha, Beta and Gamma, and red Proxima.

Here they were, his hope for the future of man, the famous, nearest star system, only four and one-third light years from Earth.

So close, so wonderfully close. . . . And then he shook his head in astonishment. For in some kind of a negaspatial zone, this ship was visible at "this" moment only a few thousand miles above the surface of Earth.

He forgot that. For there ahead and to one side was the opening of airlock number two.

And it was open.

HIS FORESIGHT was justified. They had seen him only at airlock one. And so they hadn't suspected that he had also set in motion the opening mechanism of airlock two.

He guessed that he had seconds left. With utter concentration, he nosed his lifeboat into the lock, jabbed hard at the keys that started the outer door closing, and set in motion the whole process of entering.

Whatever he did now would save him hours—when the change came.

His good fortune, then, was that the outer door was actually beginning to screw shut, the air beginning to come into the lock, the inner door beginning to unscrew—when the blackout of the change struck him with all its terrible impact.

As a result, he only had to sit there thirty hours, before, with his 973-1 time-ratio advantage, he took full control of the *Hope of Man.*

AVERILL HEWITT stepped gingerly down to the soil of Earth from the patrol boat that had ferried him down from the *Hope of Man.* He had come back alone. Nearly ten years had gone by on Earth.

He started to push through the crowd of reporters assembled at the landing field. Then he realized he was not going to be allowed to escape.

He stopped, and smiled. He said, "I had the patrol boat commander radio ahead for old newspapers that would describe what happened to the sun. Did anybody bring one?"

"Here! Here!"

Several papers were held up, and passed forward.

Hewitt accepted them, and sat down on one of the landing-field benches. He

said, "I'll answer no questions till I've read this."

More than nine years before, about one week before his predicted Nova, the sun had suddenly increased in size about twenty per cent. Simultaneously, its temperature had gone down more than three thousand degrees.

For fifteen hours its paler light shone upon an Earth that was scarcely affected. It was as if a mist had come up in the atmosphere, blocking off the heat, or as if a partial night had fallen. The planet remained warm inside its envelope of air. The great waters and the thick crust retained their heat, and so absorbed the titanic shock of the sudden reduction in the sun's temperature.

In time, of course, all that accumulated warmth would have drained. The oceans would have frozen, the land chilled; and an ice-laden planet, virtually lifeless, would have resulted.

At the end of the fifteen hours, the sun began to shrink. The temperature went up. In six hours it was normal. There had been no change since.

Hewitt said, "It probably won't happen again for millions of years."

He put the papers aside, stood up and went on, "I have learned a lot about the behavior of matter and energy. I think I can explain why the sun reacted otherwise than I predicted."

He paused, and took a deep breath. He had been intent on the newspapers. For the first time, he saw how vast was the crowd that had come out to meet him.

Radio microphones were closely grouped around him. Television cameras pointed at his face. It startled him a little to realize that he was famous now, not notorious. Something had happened to the sun—not what he had predicted—but something tremendous. It justified all that he had done, the expedition to Centaurus, the methods he had used aboard the ship—everything.

He *might* have saved the human race. Actually, the truth of what had happened was far more startling than they realized.

He began, "The universe is more complex than anything we previously dreamed. The solar system, in its movement through space, periodically enters spatial "zones" that differ one from the other. At the time I made my prediction, our system had apparently just entered such a zone. The imbalance that started then took years to reach a critical point. I predicted that point on the basis of mathematics that examined the functional behavior without being aware of the cause. I thought the changes applied only to the sun.

"They didn't. The earth and all the other solar planets were affected also. And when the critical moment came, the earth —because it had entered the zone before the sun—was changed first.

"During that time, *the sun did not cool.*

"All the physical changes took place in your bodies and in the earth. And when the sun finally seemed to return to normal, it was actually flaring up as I originally predicted it would.

"It was being affected by the zone, fifteen hours after the earth itself had entered the zone."

For a moment, when he had finished, he looked grimly around his audience. Then slowly, he began to relax.

He regretted nothing. No one was happier than he over what had happened. During those years on Centaurus, he had struggled with the others to build the foundations of a great new civilization. He and Juanita, with their four children, had helped insure that man would survive any disaster that might now, or ever, strike the solar system.

Now that all was well, he was back for more colonists. Three planets, two passably hospitable, one a veritable paradise, waited for the pioneers.

Standing there, with the world listening, he launched into his sales talk.

By RAY BRADBURY

It held the whiteness of the moon and the blueness of the stars. . . .

OUTCAST OF THE STARS

To the mighty lords of infinity he sent a burning message—"You can deny a man everything—everything but his heritage . . . the stars!"

MANY nights, Fiorello Bodoni would awaken to hear the rockets sighing in the dark sky. He would tiptoe from bed, certain that his kind wife was dreaming, to let himself out into the

night air. For a few moments he would be free of the smells of old food in the small house by the river. For a silent moment he would let his heart soar alone into space, following the rockets.

Now, this very night, he stood half-naked in the darkness, watching the fire fountains murmuring in the air. The rockets on their long wild way to Mars and Saturn and Venus!

"Well, well, Bodoni."

Bodoni started.

On a milk crate, by the silent river, sat an old man who also watched the rockets through the midnight hush.

"Oh, it's you, Bramante!"

"Do you come out every night, Bodoni?"

"Only for the air."

"So? I prefer the rockets myself," said old Bramante. "I was a boy when they started. Eighty years ago, and I've never been on one yet."

"I will ride up in one some day," said Bodoni.

"Fool!" cried Bramante. "You'll never go. This is a rich man's world." He shook his gray head, remembering. "When I was young they wrote it in fiery letters: THE WORLD OF THE FUTURE! Science, Comfort, and New Things For All! Ha! Eighty years. The Future becomes Now! Do *we* fly rockets? No! We live in shacks like our ancestors before us."

"Perhaps my *sons*—" said Bodoni.

"No, nor *their* sons!" the old man shouted. "It's the rich who have dreams and rockets!"

Bodoni hesitated. "Old man, I've saved three thousand dollars. It took me six years to save it. For my business, to invest in machinery. But every night for a month now, I've been awake. I hear the rockets. I think. And tonight, I've made up my mind. One of us will fly to Mars!" His eyes were shining and dark.

"Idiot," snapped Bramante. "How will you choose? Who will go? If you go, your wife will hate you, for you will be just a bit nearer God, in space. When you tell your amazing trip to her, over the years, won't bitterness gnaw at her?"

"No, no!"

"Yes! And your children? Will their lives be filled with the memory of Papa who flew to Mars while they stayed here? What a senseless task you will set your boys. They will think of the rocket all their lives. They will lie awake. They will be sick with wanting it. Just as you are sick now. They will want to die if they cannot go. Don't set them that goal, I warn you. Let them be content with being poor. Turn their eyes down to their hands and to your junk yard, not up to the stars."

"But—"

"Suppose your wife went? How would you feel, knowing she had *seen* and you had not? She would become holy. You would think of throwing her in the river. No, Bodoni, buy a new wrecking machine, which you need, and pull your dreams apart with it, and smash them to pieces."

The old man subsided, gazing at the river in which, drowned, images of rockets burned down the sky.

"Good night," said Bodoni.

"Sleep well," said the other.

WHEN the toast jumped from its silver box, Bodoni almost screamed. The night had been sleepless. Among his nervous children, beside his mountainous wife, Bodoni had twisted and stared at nothing. Bramante was right. Better to invest the money. Why save it when only one of the family could ride the rocket, while the others remained to melt in frustration?

"Fiorello, eat your toast," said his wife, Maria.

"My throat is shriveled," said Bodoni.

The children rushed in, the three boys fighting over a toy rocket, the two girls

carrying dolls which duplicated the inhabitants of Mars, Venus and Neptune; green mannikins with three yellow eyes and twelve fingers.

"I saw the Venus Rocket!" cried Paolo.

"It took off, *whoosh!*" hissed Antonello.

"Children!" shouted Bodoni, hands to his ears.

They stared at him. He seldom shouted.

Bodoni arose. "Listen, all of you," he said. "I have enough money to take one of us on the Mars rocket."

Everyone yelled.

"You understand?" he asked. "Only *one* of us. Who?"

"Me, me, me!" cried the children.

"You," said Maria.

"You," said Bodoni to her.

They all fell silent.

The children reconsidered. "Let Lorenzo go, he's oldest."

"Let Miriamne go, she's a girl!"

"Think what you would see," said Bodoni's wife to him. But her eyes were strange. Her voice shook. "The meteors, like fish. The universe. The moon. Someone should go who could tell it well on returning. You have a way with words."

"Nonsense, so have you," he objected.

Everyone trembled.

"Here," said Bodoni, unhappily. From a broom he broke straws of various lengths. "The short straw wins." He held out his tight fist. "Choose."

Solemnly, each took his turn.

"Long straw."

"Long straw."

Another.

"Long straw."

The children finished. The room was quiet.

Two straws remained. Bodoni felt his heart ache in him. "Now," he whispered. "Maria."

She drew.

"The short straw," she said.

"Ah," sighed Lorenzo, half happy, half sad. "Mama goes to Mars."

Bodoni tried to smile. "Congratulations. I will buy your ticket today."

"Wait, Fiorello—"

"You can leave next week," he murmured.

She saw the sad eyes of her children upon her, with the smiles beneath their straight, large noses. She returned the straw slowly to her husband. "I cannot go to Mars."

"But why not?"

"I will be busy with another child."

"What!"

She would not look at him. "It wouldn't do for me to travel in my condition."

He took her elbow. Is this the truth?"

"Draw again, start over."

"Why didn't you tell me before?" he said, incredulously.

"I didn't remember."

"Maria, Maria," he whispered, patting

her face. He turned to the children. "Draw again."

Paolo immediately drew the short straw.

"I go to Mars!" he danced wildly. "Thank you, father!"

The other children edged away. "That's swell, Paolo."

Paolo stopped smiling to examine his parents and his brothers and sisters. "I *can* go, can't I?" he asked, uncertainly.

"Yes."

"And you'll *like* me when I come back?"

"Of course."

Paolo studied the precious broomstraw on his trembling hand and shook his head. He threw it away. "I forgot. School starts. I can't go. Draw again."

But none would draw. A full sadness lay on them.

"None of us will go," said Lorenzo.

"That's best," said Maria.

"Bramante was right," said Bodoni.

WITH his breakfast curdled in him, Fiorello Bodoni worked in his junk yard, ripping metal, melting it, pouring out usable ingots. His equipment flaked apart; competition had kept him on the insane edge of poverty for twenty years. It was a very bad morning.

In the afternoon a man entered the junk yard and called up to Bodoni on his wrecking machine. "Hey, Bodoni, I got some metal for you!"

"What is it, Mr. Mathews?" asked Bodoni, listlessly.

"A rocket ship."

"What?" Bodoni leaped down. "Are you crazy?"

"A rocket ship. What's wrong, don't you want it?"

"Yes, yes!" He seized the man's arm, and stopped, bewildered.

"Of course," said Mathews, "it's only a mockup. You know. When they plan a rocket they build a full-scale model first, of aluminum. You might make a small profit boiling her down. Let you have her for two thousand—"

Bodoni dropped his hand. "I haven't the money."

"Sorry, thought I'd help you. Last time we talked you said how everyone outbid you on junk. Thought I'd slip this to you on the q. t. Well—"

"I need new equipment. I saved money for that."

"I understand."

"If I bought your rocket, I wouldn't even be able to melt it down. My aluminum furnace broke down last week—"

"Sure."

"I couldn't possibly use the rocket if I bought it from you."

"I know."

Bodoni blinked and shut his eyes. He opened them and looked at Mr. Mathews. "But I am a great fool. I will take my money from the bank and give it to you."

"But if you can't melt the rocket down—"

"Deliver it," said Bodoni.

"All right, if you say so. Tonight?"

"Tonight," said Bodoni, "would be fine. Yes, I would like to have a rocket ship tonight."

THERE was a moon. The rocket was white and big in the junk yard. It held the whiteness of the moon and the blueness of the stars. Bodoni looked at it and loved all of it. He wanted to pet it and lie against it, pressing it with his cheek, telling it all the secret wants of his heart.

He stared up at it. "You are all mine," he said. "Even if you never move or spit fire, and just sit there and rust for fifty years, you are mine."

The rocket smelled of time and distance. It was like walking into a clock. It was finished with Swiss delicacy. One might wear it on one's watch fob. "I might even sleep here tonight," Bodoni whispered, excitedly.

He sat in the pilot's seat.

He touched a lever.

He hummed in his shut mouth, his eyes closed.

The humming grew louder, louder, higher, higher, wilder, stranger, more exhilarating, trembling in him and leaning him forward and pulling him and the ship in a roaring silence and in a kind of metal screaming, while his fists flew over the controls, and his shut eyes quivered and the sound grew and grew until it was a fire, a strength, a lifting and a pushing of power that threatened to tear him in half. He gasped. He hummed again and again, and did not stop, for it could not be stopped, it could only go on, his eyes tighter, his heart furious. "Taking off!" he screamed. *The jolting concussion! The thunder!* "The Moon!" he cried, eyes blind, tight. "The meteors!" *The silent rush in volcanic light.* "Mars, oh God, Mars! Mars!"

He fell back, exhausted and panting. His shaking hands came loose of the controls and his head tilted back wildly. He sat for a long time, breathing out and in, his heart slowing.

Slowly, slowly, he opened his eyes.

The junk yard was still there.

He sat motionless. He looked at the heaped piles of metal for a minute, his eyes never stopping. Then, leaping up, he kicked the levers. "Take off, damn you!"

The ship was silent.

"I'll show you!" he cried.

Out in the night air, stumbling, he started the fierce motor of his terrible wrecking machine and advanced upon the rocket. He maneuvered the massive weights into the moonlit sky. He readied his trembling hands to plunge the weights, to smash, to rip apart this insolently false dream, this silly thing for which he had paid his money, which would not move, which would not do his bidding. "I'll teach you!" he shouted.

But his hand stayed.

The silver rocket lay in the light of the moon. And beyond the rocket stood the yellow lights of his home, a block away, burning warmly. He heard the family radio playing some distant music. He sat for half an hour considering the rocket and the house lights, and his eyes narrowed and grew wide. He stepped down from the wrecking machine and began to walk and as he walked he began to laugh, and when he reached the back door of his house he took a deep breath and called, "Maria, Maria, start packing, we're going to Mars!"

"OH."

"Ah."

"I can't *believe* it."

"You will, you will."

The children balanced in the windy yard, under the glowing rocket, not touching it yet. They started to cry.

Maria looked at her husband. "What have you done?" she said. "Taken our money for this. It will never fly."

"It will fly," he said, looking at it.

"Rocket ships cost millions. Have you millions?"

"It will fly," he repeated, steadily. "Now, go to the house, all of you. I have phone calls to make, work to do. Tomorrow we leave! Tell no one, understand? It is a secret."

The children edged off from the rocket, stumbling. He saw their small, feverish faces in the house windows, far away.

Maria had not moved. "You have ruined us," she said. "Our money used for this—this thing. When it should have been spent on equipment."

"You will see," he said.

Without a word, she turned away.

"God help me," he whispered, and started to work.

THROUGH the midnight hours, trucks arrived, packages were delivered

and Bodoni, smiling, exhausted his bank account. With blowtorch and metal-stripping he assaulted the rocket, added, took away, worked fiery magics and secret insults upon it. He bolted nine ancient automobile motors into the rocket's empty engine room. Then he welded the engine room shut, so none could see his hidden labor.

At dawn he entered the kitchen. "Maria," he said. "I'm ready for breakfast."

She would not speak to him.

AT SUNSET he called to the children. "We're ready, come on!" The house was silent.

"I've locked them in the closet," said Maria.

"What do you mean?" he demanded.

"You'll be killed in that rocket," she said. "What kind of rocket can you buy for two thousand dollars? A bad one!"

"Listen to me, Maria."

"It will blow up. Anyway, you are no pilot."

"Nevertheless, I can fly *this* ship. I have fixed it."

"You have gone mad," she said.

"Where is the key to the closet?"

"I have it here."

He put out his hand. "Give it to me."

She handed it to him. "You will kill them."

"No, no."

"Yes, you will. I *feel* it."

He stood before her. "You won't come along?"

"I'll stay here," she said.

"You will understand, you will see, then," he said, and smiled. He unlocked the closet. "Come, children, follow your father."

"Good-by, good-by, mama!"

She stayed in the kitchen window, looking out at them, very straight and silent.

At the door of the rocket, the father said, "Children, we will be gone a week. You must come back to school, and I to my business." He took each of their hands in turn. "Listen. This rocket is very old and will fly only *one* more journey. It will not fly again. This will be the one trip of your life. Keep your eyes wide."

"Yes, papa."

"Listen, keep your ears clean. Smell the smells of a rocket. *Feel. Remember.* So when you return you will talk of it all the rest of your lives."

"Yes, papa."

The ship was quiet as a stopped clock. The airlock hissed shut behind them. He strapped them all, like tiny mummies, into rubber hammocks. "Ready?" he called.

"Ready!" all replied.

"Take-off!" He jerked ten switches. The rocket thundered and leaped. The children danced in their hammocks, screaming.

"Here comes the Moon!"

THE MOON dreamed by. Meteors broke into fireworks. Time flowed away in a serpentine of gas. The children shouted. Released from their hammocks, hours later, they peered from the ports. "There's Earth!" "There's Mars!"

The rocket dropped pink petals of fire while the hour dials spun, the child eyes dropped shut; at last they hung like drunken moths in their cocoon hammocks.

"Good," whispered Bodoni, alone.

He tiptoed from the control room to stand for a long moment, fearful, at the airlock door.

He pressed a button. The airlock door swung wide. He stepped out. Into space? Into inky tides of meteor and gaseous torch? Into swift mileages and infinite dimensions?

No. Bodoni smiled.

All about the quivering rocket lay the junk yard.

Rusting, unchanged, there stood the padlocked junk yard gate, the little silent house by the river, the kitchen window lighted, and the river going down to the

same sea. And in the center of the junk yard, manufacturing a magic dream, lay the quivering, purring rocket. Shaking and roaring, bouncing the netted children like flies in a web.

Maria stood in the kitchen window.

He waved to her and smiled.

He could not see if she waved or not. A small wave, perhaps. A small smile.

The sun was rising.

Bodoni withdrew hastily into the rocket. Silence. All still slept. He breathed easily. Tying himself into a hammock, he closed his eyes. To himself he prayed, oh, let nothing happen to the illusion in the next six days, let all of space come and go, and red Mars come up under our ship, and the moons of Mars, and let there be no flaws in the color film, let there be three dimensions, let nothing go wrong with the hidden mirrors and screens that mold the fine illusion. Let time pass without crisis.

He awoke.

Red Mars floated near the rocket.

"Papa!" The children thrashed to be free.

Bodoni looked and saw red Mars and it was good and there was no flaw in it and he was very happy.

AT SUNSET on the seventh day, the rocket stopped shuddering.

"We are home," said Bodoni.

They walked across the junk yard from the open door of the rocket, their blood singing, their faces glowing.

"I have ham and eggs for all of you," said Maria, at the kitchen door.

"Mama, mama, you should have come, to see it, to see Mars, mama, and meteors, and everything!"

"Yes," she said.

At bedtime, the children gathered before Bodoni. "We want to thank you, papa."

"It was nothing."

"We will remember it for always, papa. We will never forget."

VERY late in the night, Bodoni opened his eyes. He sensed that his wife was lying beside him, watching him. She did not move for a very long time, and then suddenly she kissed his cheeks and his forehead. "What's this?" he cried.

"You're the best father in the world," she whispered.

"Why?"

"Now, I see," she said. "I understand."

She lay back and closed her eyes, holding his hand. "Is it a very lovely journey?" she asked.

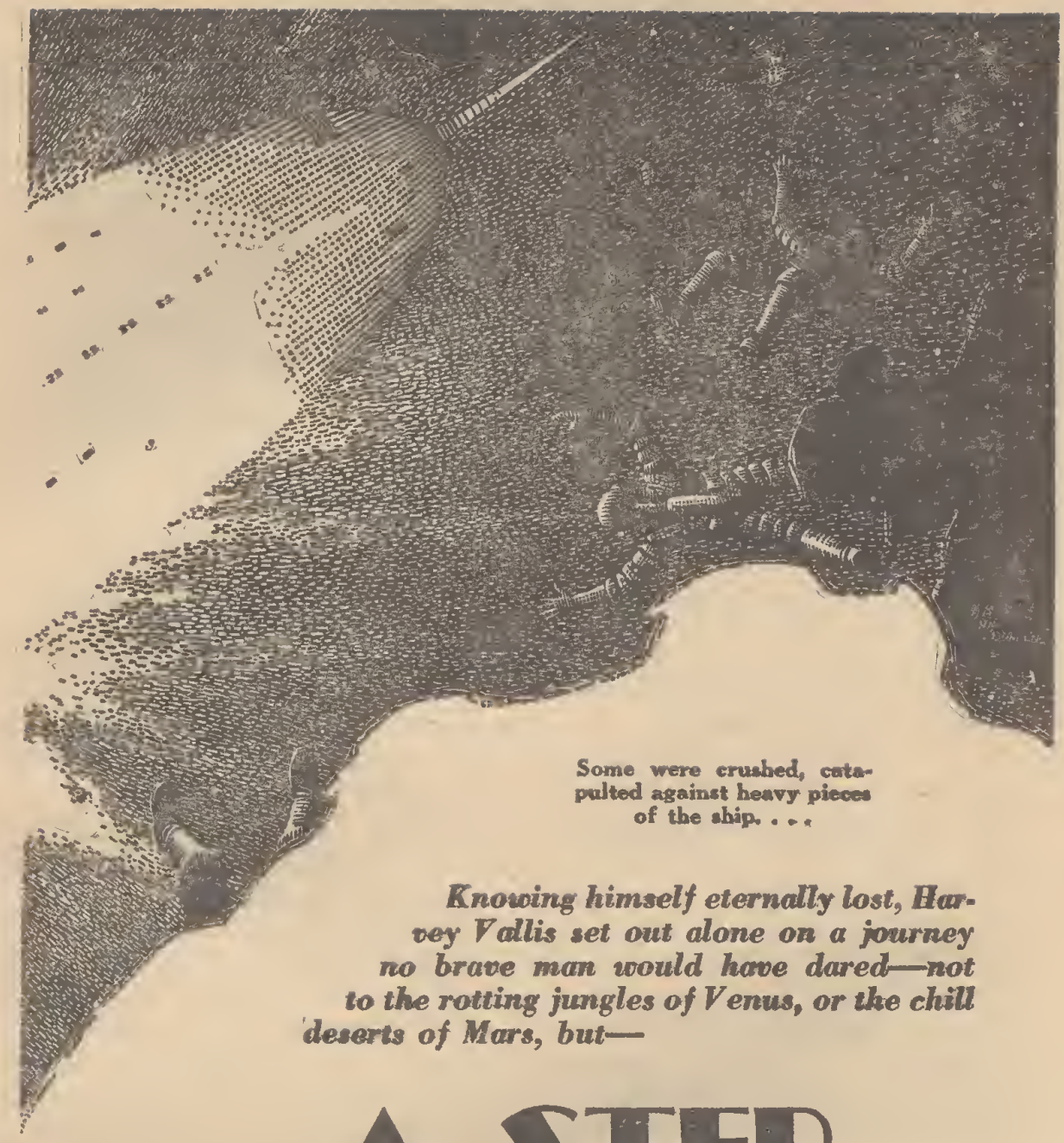
"Yes," he said.

"Perhaps," she said. "Perhaps, some night, you might take me on just a little trip, do you think?"

"Just a little one, perhaps," he said.

"Thank you," she said. "Good night."

"Good night," said Fiorello Bodoni.



Some were crushed, catapulted against heavy pieces of the ship. . . .

Knowing himself eternally lost, Harvey Vallis set out alone on a journey no brave man would have dared—not to the rotting jungles of Venus, or the chill deserts of Mars, but—

A STEP FARTHER OUT

By RAYMOND Z. GALLUN

FIFTY miles from the great spaceport at White Sands, New Mexico, the approaching roads end in guardposts and barbed wire. But before that lethal circumference is reached, signboards warn: RADIOACTIVE DUST. PROCEED

WITH CAUTION. ARE YOU WEARING YOUR RESPIRATOR? WHAT DOES YOUR GEIGER COUNTER SAY?

Beyond the guardposts and wire, no sane man ventures on the surface without wearing radiation armor. The spaceport itself is reached by tube-trains. The tunnels in which they move are bored far beneath the poisoned desert, where the dust of countless rocket takeoffs and landings has made even the cacti still more grotesque and monstrous by disturbing their genes.

Lead, superheated and vaporized by a slow chain-reaction of the fissionable metals with which it is alloyed, is the chief constituent of the incandescent gases ejected by the atomic jet-motors of spacecraft. It congeals to a heavy, tainted powder, which, fortunately, soon settles to the ground, limiting the radius of its poisonous effect.

Within the restricted area, there are, of course, no towns left, and almost no buildings except the heavily-shielded structures of the spaceport itself, depots, hotels, and covered gangways by which passengers can enter the space liners without contact with the atmosphere.

Such, then, is the hell-guarded gate to High Romance. . . . But something of its essence reaches out much farther than the dust of mankind's greatest adventuring. Some might call it another, more insidious poison. Others, a stimulant, a tonic. To White Sands, life-hungry youth comes from far and wide, seeking a future on a frontier that can never be used up. But more certainly than from anywhere else, they come from nearby—from the ranches, the farms, and the little crossroad towns near the fringes of the circle of death.

For in such places, the call, the fascination, is forever present, and can never be forgotten. There, hour after hour, day and night, the incandescent trails of rockets, are visible. They are both awful and beautiful. They tingle one's spine with a joy that is at the edge of fear. One's mind associates with them the names of places such as Vananis, Mars, or Finchport, Venus. Ah, yes—how sweet and rotten smells the jungle, in one's fancy; and how strange and thrilling is that desert world called Mars, where man cannot live without his oxygen helmet and his dome-cities, where once there was a great native civilization that destroyed itself, but where youth labors and dreams now, to build a smaller, and perhaps better earth. . . .

But all that is but a foretaste—a beginning. Beyond Mars, both newer and older, lies the asteroid belt—wreckage of a world that exploded, but that was peopled once, too. It is a wonderful, terrible region. Far beyond it lie Jupiter and his moons. As yet, very few rockets have ever gone that far. Then comes ringed Saturn. Then Uranus, Neptune, Pluto . . . Then the eternal and inconceivably distant stars. . . .

Is it remarkable, then, that there are scarcely any young men left in the little towns around the White Sands spaceport? The opportunity is close at hand. Always, men are needed. Whether they achieve satisfaction, or even the glory of progress made, or merely hurl themselves into the maw of a new kind of Moloch, is a matter of viewpoint and chance. For out there are both danger and opportunity. Out there are swift death in many forms, incalculable riches, and gut-twisting strangeness. . . .

Few can stay behind. So there are empty chairs and saddles, and unslept-in beds in boyhood rooms. And the stories come back—of success and disaster. All this stamps itself into the local attitude of life. It is a hard attitude, that worships courage, and smiles a knowing and contemptuous challenge to those youths who seem to lack it.

Of all the stories, perhaps there is none quite as whimsical and strange, in its own

way, as that of Harvey Vellis. He was born, it seemed, to be the butt of bullies. That was only part of his ill luck. For what can anybody really do about being a skinny little twerp? Besides, he had a certain kind of mother. "Yes, Ma. All right, Ma," was about all he ever said to her. Some people thought that she was the kindest woman on Earth. But maybe she was a cruel, possessive tyrant. On the other hand, maybe she was just a frightened widow who remembered too well that her husband had joined the crew of the *Artemis,* and had died in a crash on the moon.

Harvey Vellis became a clerk in Mr. Finkel's General Store, in the little town of Dos Piedras, where he had been born. For a vegetative type of youth, this might have been all right, for Mr. Finkel was a kind, understanding man. The trouble was that Harvey was far from vegetative. The trouble, further, was that people who had always been around him, had drawn their own picture of what his soul was like. Their belief in that picture was so strong that they had made him believe in it too. They had never let him be himself.

Day after day, year after year, he heard the same challenge and the same joke, flung at him in one form or another, by one person or another. First it was by his swashbuckling contemporaries—big Dink Darrell was the best example—then, as they vanished into the space wilderness, by younger boys, even by tots. . . .

"Hey, Harv—when you blasting out? Next year, maybe? Think your Mamma'll let you?"

It is an old tale. The repetitious cruelty of it sits on the shoulders of its victims, a vulture, destroying not courage so much, but confidence. The laughs have a jagged edge. In the focus of attention from all sides, one becomes self-centered—not in a proud way, but in another way that makes one feel that, in all the world and in all history, there has never been another as gutless and pink-livered as one's own self.

IT WAS doubly hard for Harvey Vellis, for all of his wishes and dreams belonged to space. How many books about Venus, Mars, and the outer planets had he read? How often did he fondle the quarra weed, dry and dead now, which he used as a book-marker?

A spaceman, who had picked it casually near the point of Syrtis Major, that strange, triangular depression thousands of miles in extent, near the equator of Mars, had dropped it as casually on Main Street in Dos Piedras, and Harvey, recognizing it for what it was from his book-lore, had pounced upon it as a treasure.

How often had he sniffed its faint, dry aroma, as if to it clung the frosty pungence of dusty, dehydrated winds that no longer contained enough oxygen to sustain Earthly human life? Of such stuff is the fabric of romance woven. And it was to such pathetic trifles that Harvey Vellis clung. Echoes they were, from a great distance; and they touched Harvey as echoes of music touch the ears of a music lover, starved for what he needs.

Time went on. Harvey worked and dreamed. In his spare time he studied the blueprints of spacecraft and space armor, until he knew their structure by heart. And he tinkered with odds and ends of equipment, learning all that he could about things related to the distance that it seemed he could never reach. He even achieved a certain adjustment to his unpleasant lot. His cheeks forgot how to flush under the hazing; his response, instead, became a small, wry smile, and a shrug that hid some of the hurt inside him.

Death comes just as surely to those who live sheltered lives as it does to those who live dangerously, and it came at last to Harvey Vellis' mother. "I suppose you'll blast out, now, Harvey," she said to him near the end, not realizing the heavy handicaps she had laid upon him. "You

won't have to look after me any more."

Those were the words that she poured into the gulf of grief and disorientation that her passing meant to him. It was a mockery. And more of a mockery was the honest if contemptuous pity which he read in other eyes. People, it seemed, were no good to him, even when they meant well. For a week he kept to himself, fogged and lost.

There was one good thing about what his life had been like—perhaps. Frustration had been like the restraining of a steel spring, or the wiring-down of the safety valve of a boiler. It had built up the power of the drives in him, impelled them to push past fear and ruined confidence, toward what he had always wanted.

What he wanted was not entirely clear or simple. He was too naive and too full of dreams to aim quite practically. His goal was a vagueness. Out, somewhere toward the vastness, was as far as his thinking about it went—and that, certainly, was dangerous. Just what he would do to live, he did not know. . . .

He had saved up twelve hundred dollars. Passages to Mars cost a thousand. How was it that he did not simply go to the employment offices of the space lines so near at hand? How was it that, instead, he drove his old car to Albuquerque, and bought a ticket to Mars there? That, when he might easily have gotten a job, and saved his money?

The answer is easy and old. His emotions were ill, so he could not do things so directly. People that he knew would see him; they'd wonder, they'd laugh, they'd pity. They'd stare at him as if they had caught him trying to commit suicide. Maybe, in fact, what he contemplated amounted to the same thing. For him, the inept, helpless coward—when it was so terrible and wonderful out there. . . . No, he could never face those eyes that knew him. Before he felt that he would curl up and die in an agony of stage-fright. It was better to slip away quietly, seek the shelter of anonymity on a strange planet.

Maybe, in all that he forced himself to do, there was courage of a sort. No human can live for years with a handicap or with fear without achieving a kind of courage.

He put his affairs in order as quietly as he could. Mr. Finkel pretended not to know what was happening, for that was the kindest way. In his heart he was both glad and worried about what Harvey Vellis was doing.

Harvey boarded the train for the short journey to the spaceport at midnight—the best time to slip away. There were many faces around him—mercifully those of people that he did not know. Hard, bronzed faces—eyes that had seen much that he had not seen—that took coolly what to him was so new and different. They were blasé and unruffled. Their luggage bore stickers from New York, London, Paris—Kaie-Yeel, Venus; Vananis, Mars. Among such company, Harvey Vellis felt like the awkward yokel that he was.

The girl beside him in the train smiled at him. Her blonde hair was cut in a long bob, and she sat casually. Her blue dress was elegantly simple. She was pretty, but not too pretty. She even looked a bit rough-hewn. Her eyes were gray. For a second they probed him, and he felt like an insect on a pin. He suspected, with the ready suspicion of the self-conscious, that all of his frustrated personal history was stamped in his face and figure for her to see, and laugh about silently, just as if she were one of those others who had always known him; and that he could never escape from himself with her, even for a minute. All of this was at least half so true. . . .

But the sophisticate must often play parts that mask a true understanding for a reason. The reason can be kindness. Or

it can be curiosity—especially in the case of a woman.

LILLETH THOMAS was both kind and curious about the people who traveled with her. It was an old need in her—the need of the rolling stone for quick acquaintance—especially when the rolling is not started by one's own desire to move, but by a parent's love of the strange and different. Lilleth Thomas had been dragged around by her explorer father, everywhere. Not that she minded much—she loved newness herself. But deep in her was that primal need of all women—permanence and stability. A vine-covered cottage, maybe in Maine, or perhaps California....That she saw nothing of the sort—and in fact nothing of any permanent meaning to her—in the worried, thin face beside her, did not stop her from being kind. "Hi, friend," she said.

"Hello, miss," Harvey Vellis answered, feeling the first flash of companionship, a little of the release from self, a little of the velvet padding of enjoyment and romance. It was a golden net—a stepping into a dream that had never been real to him before.

"First time Out?" he ventured.

She shrugged, and did not lie directly. "There always has to be a first time," she chuckled.

An awful impulse to brag and lie and fourflush—to build himself up as an adventurer before this girl, seized Harvey Vellis. He resisted it, not from reasons of honor, but from fear of being found out, later, maybe, when they were blasting off from Earth, and the black sky of the void was beginning to be visible to eyes that dimmed under the pressure of an awful acceleration. . . . Or was it too because a big hulk of a man passed him on the train—a spaceman that he knew? Harvey Vellis hunched his shoulders, and turned his face away, so that he would not be recognized, while the hulk with the glittering insignia passed by. Then he breathed again.

"But dad does a good deal of traveling," the girl went on. "He's sent me a few thousand photographs from just about everywhere. It's a kind of propaganda that gets under your skin after a while. You want to travel, too."

"Any of the pictures handy?" Harvey asked eagerly.

Lilleth fumbled with her purse. A moment later they were looking at color photographs—gigantic Venusian mountains, their peaks lost in the eternal cloud blankets; monsters that wallowed, slug-like, in vast marshes that corresponded to the Coal Period swamps on earth; men in vacuum armor, tramping over a Martian desert, where fantastically carven monoliths, fifty million years old, loomed against a purple sky. . . . Harvey Vellis' blood quickened.

"That's the kind of stuff that folks like us are made for!" he said fervently. The spell of strangers was upon him. He felt history, everywhere. What was happening, now. What had happened long ago. The civilizations that had risen and fallen. The far future. The universe . . . Maybe his own day was at hand. Good fortune and fulfillment at last. It was at least a wonderful illusion. It was good that he did not know. . . .

The train moved swiftly. Incident followed incident, in the pattern of anyone's first approach to a great spaceport. Presently, in the great waiting room, he was helping Lilleth Thomas with her luggage. His mind was full of wonder at each small detail of his surroundings. The white tile walls. The numbered exits to the various blasting-off platforms. The drone of the speaker: "Vananis— Gate nineteen— Vananis—"

They moved with the other passengers, across the floor in a long line. Up the shielded gangway . . . Harvey's senses continued to grab hungrily at every impression. This was the liner *Aries*. Even its airlock portals looked wolfish, suggestive of distance and power. Within, everything was a combination of compactness, luxury, and careful preparation for danger.

White was the predominant color here. Meaning cleanliness, and the precision of intricate machinery, functioning perfectly. . . . You could feel a kind of wordless poetry here. The contrast, the struggle between two sides of something. On one side, Nature, harsh, empty space, the planets, which, for ages had been symbols of the absolutely unattainable . . . And on the other side something that was harsh and wolfish, too—power, plan, design, shape, and strength—all to match and dominate fearsome distances and dangers. Here was the mind of man, thinking, studying—beginning to rule at last even the once-unattainable.

There was a little of the brassy taste of fear on Harvey Vellis' tongue, but not nearly as much as he had expected. For romance and companionship were like a velvet shell around him.

"The red lights are on, Lilleth," he said almost gleefully—her name and his had both come out in their conversation. "Fasten your safety belt. Just another thirty seconds more. Wait until we get out there, and see the stars of space. Wait till we reach Mars! It's a frosty place. The air pressure there is the same as at a fifty-thousand foot altitude on Earth. Everything's different—" He talked on, not lying directly, but hoping that she'd believe that he'd been there, seen the things he spoke about. . . .

The takeoff thrust began gently, but it grew and grew till even consciousness dimmed to the threadiness of a dream. But Harvey took it well enough. For him this trifle, this thing that millions of people had already experienced, became a pathetic triumph that gave him more confidence than he should have had. Mars lay ahead—yes—and he was ill-equipped for life there. But this was not the worst. How was he to know that he was to be hurled much farther than Mars, missing the red planet entirely?

It was already decided by a chain of cause and effect. In the stout shell of one of the *Aries'* atomic motors, there was a tiny flaw, almost beyond the power of the radar instruments that constantly checked every brace and plate and part of the space ship, to detect. In one of the bars of alloyed lead and heavy radioactive elements that served as fuel, there was a portion of metal where the mixture was too rich. Normally, there would have been no danger. But use that bar with the overrich flaw at full throttle, and in mid-space, and things would be terribly different. . . .

But as yet this incident was fifteen days off.

CHAPTER TWO

Adrift In the Infinite

AS IT went up into space, accelerating toward the velocity that would enable it to glide on indefinitely, the *Aries* began to rotate on its central axis, like a projectile. And the rotation provided, by centrifugal force, a substitute for gravity in the rooms and compartments arranged around the central light-well of the ship. The slightly curved floors of those rooms were all against the outer, cylindrical shell of the craft.

For fifteen days life went on, more or less pleasantly, as it does on any great liner, of sea or air or interplanetary space. There were games, music, dining, dancing, making love. . . . Harvey walked with Lilleth, and, conforming to pattern, fell for her hopelessly.

The best was at the beginning, when he did not know that she was not a greenhorn like himself. The worst was when the truth about her came out—when people aboard the ship said things to her:

"Hiyuh, Lilleth? Is Venus too small for you? What do you do, *live* on these rockets?" A young ship's officer said that. A sleek, middle-aged woman added her bit: "How was it there in Koboláh, in the jungles, Lilleth? I got your letters, but you never finished the story about that *tus* plague. My dear, it must have been terrible. . . ."

Such knowledge, to Harvey Vellis, was hopeless separation from her. It brought on a hollow ache, and an exposure, again, to the rough edges of truth. But in such things Harvey had become toughened by long experience. He'd had too many disappointments in his time. Lilleth looked at him and smiled kindly. She might have explained things to him as to a child—that there were other friends who needed her time, too. But he only shrugged, and grinned back. So it wasn't necessary. He accepted his position as one of the lesser members of the crowd.

But something sheltering was gone from him, and he felt weak and clumsy before harsh reality. He began to see his motives more starkly—his running away toward what he hoped was a new beginning of life—the thing that many people try to do, in spite of the old platitude that nobody can run away from himself.

The days passed. The stars rolled around the ship, as the metal shell rotated steadily. In that rotating procession, Mars swelled to a beautiful, mottled globe. And then came the moment when small corrections of direction of flight had to be made, while at the same time the speed of the ship had to be checked somewhat, for the time of landing on Mars was not far off.

So the forejets roared and flamed, hurling their dazzling incandescence, with a steady soughing, at full. . . . And then it happened. There was a hissing, roaring, rending sound, and a sense of impossible motion, as the ship began to spin, end over end, now, impelled to do so by the flood of fire that burst from her side. Alarm sirens hooted; airtight doors clanged; the pressure of the air around Harvey Vellis kept dropping, hurting his eardrums, deadening sounds, making his lungs feel tight.

Into Harvey Vellis stabbed the jagged knife of pure terror, as he was hurled across the lounge. But he was not the only one to be frightened, for the strongest of men could feel open fear now.

Lilleth had been among the crowd in the lounge, too. He saw her form hurtling among the others. Then he hit the wall with a solid thump. After that, most impressions were vague. Once he yelled, "Lilleth—I'll—I'll—" But she answered back, her voice trembling, "I'll take care of myself, fella!"

Against the wall stood a spacesuit, lashed into place. For a dragging second all that he saw was the legend in big white

print: LOWER BODY INTO LEG UNITS. PULL RED TAB UPWARD TO CLOSE ZIPPER SEALER. PUT ON HELMET. TURN SEAL SCREWS AT THROAT. OPEN OXYGEN VALVE AT LEFT SHOULDER.

His shaking fingers seemed slower than they were. Lilleth and some other people were at his side to help him, before he was finished. She fastened the last screw at his throat. "There, son," she grated, a little contemptuous anger showing through her own fear. "Now jump!" Her voice came to Harvey through his helmet radio.

There was no time to jump. For then the final blast came. Harvey was hurled out of the broken lounge. Out, out, and out, toward the rotating, sardonic stars . . . Some people were crushed, catapulted against more passive pieces of the disintegrating ship. Some spacesuits were torn, so that the air in them spewed out, and the blood in the flesh within began to boil away as the pressure dropped to zero.

Man's body is not made for outer space —for the beat of cosmic rays, and of hard ultra-violet light that can kill when there is no adequate shielding; for the absence of weight, that feels exactly like falling. It is only the human mind that has any connection with, or dominance over, such things. And sometimes the mind itself is broken in that awful abnormalcy.

For Harvey Vellis' fear, then, there was ample excuse. There was an excuse, too, for the screams that came to his ears through his helmet phones from other people. But for him the fear was special, for he had been rated a coward. His spacesuit protected him from cosmic and other radiations, and he was breathing good air. But his feet, in heavy space boots, kicked against the awful void, beneath him, all around him. It was like a dizzying height, infinitely extended, infinitely terrible. All of his reflexes were wrong. He could not swim, fly, or walk. He was in a far worse position than any fish out of water.

He tried to scream, but his horror was too great. Only a ragged squawk came out of his constricted throat. He clutched at anything he could reach, trying to suppress that awful sense of separation from everything. Thus he got hold of another drifting, space-suited figure. And another . . . One was a little Mexican steward. The other was Lilleth Thomas. Both figures were limp. They had been hit by flying fragments.

One thing more Harvey did. Maybe the impulse deep behind it was the desire to prove himself a man. Mostly, though, it was just clutching reflex action, and an instinctive urge to seek shelter. He grabbed at a great bale that hurtled past, blown from the hold of the *Aries*. It was fabric-covered, and tied with cord. Somehow he managed to tear into the fabric, and get under it, and draw the other two forms in after him. To him it seemed safer there under the fabric; and the great bale was something to cling to. Futile, of course . . . He knew it right away. This was the end. The end of his wild lunge toward a better life.

He did not realize that hiding himself and the others in the bale was the worst thing he could have done. He could not think reasonably. When he fainted, he thought it was death. . . .

HE DID not awaken for hours. By then the life rockets that had not been destroyed in the blast of the *Aries* had already landed on Mars. They had picked up all visible survivors. The rescue ship from Vananis had likewise come and gone.

Harvey regained his senses gradually, with the prayers of the little Mexican steward to his matron saint droning in his earphones. The two other spacesuits were still in contact with his own. He felt one of them squirm a little. He turned toward it, and some dumb and hopeless curiosity caused him to peer through its face plate.

There he saw the features of Lilleth Thomas. They were ghastly pale. Her eyes were very big. Her lips trembled. There were beads of sweat on her cheeks.

"Are you all right?" he stammered thickly.

Her lips moved stiffly. "I guess so," she answered hollowly through the phones. "I was knocked out—I think. Something hit me across the shoulders. No harm done to my spine—or anything. At least I can still move my toes. I'm all in one piece—if that makes things all right. Only—only I'm scared to death...."

Her words ended with a choking sob.

It was then that the little Mexican grabbed hold of her spacesuit and clung to it. "Ayudame!" he pleaded. "Help me, lady! I know you are strong and smart. I've heard the stories. You are Lilleth Thomas, daughter of the great explorer. Ojalá—perhaps you might know what to do. But no—not even God can help us now. I am José Eugenio Palmas Alvarez, and I've got to die out here—slow...."

Joe Palmas was not visibly hurt, either. Like Lilleth, he had been hurled in the same direction as whatever it was that had hit and stunned him—hence the force of the blow had been lessened. But the scare in his face was an awful thing to see. His voice was a squeaky rustle in that terrible stillness.

The stars all around were bleak, hard pinpoints in the black distance. And the small, rusty crescent that was Mars was shrinking away to sunward. Harvey and his companions had passed Mars, and were hurtling on, outward, toward that region of the wreckage of an exploded planet—the asteroid belt. Around them, moving with them in a gently spinning swarm, were the fragments of the *Aries*, its cargo and appointments.

There was no hope of being found or rescued now. For Harvey there was only the thought that, ten thousand or a million years hence, someone might discover their spacesuits, with their mummified bodies still inside. For to all intents and purposes they had been buried alive—in an unbreathable vacuum many millions of miles deep. When the air-purifiers in their suits gave out—

Could Lilleth Thomas be blamed so much, when now in her own terror, the fairness in her gave way, and she began to hurl wild, half-hysterical accusations? She was strong and just, but human.

"It's your fault!" she shrilled at Harvey Vellis. "We'd all have been seen and rescued, if you hadn't hidden us in this bale! You greenhorn fool—you—you—" She stopped, as if realizing suddenly that it was she who had spoken like this. "Oh—I'm sorry! I didn't mean— How could you know? How could anybody know?"

They were all clinging to the bale—half

inside its fabric wrapper and half out. Harvey might have remained unaware of the result of what he had done, if the girl hadn't spoken. But now he knew. Her words went stinging through his mind like bullets. Should he mind being accused and called names by her, now? Should such trifles matter? But they did matter, as truth always does.

He might then have gone hysterical, as he thought he must. But there was far more strength in him than he realized. It was not courage that he lacked, but confidence. He was used to blundering, feeling the fool. That kind of experience had hardened a part of his nature, and that hardness was courage.

All that they still had to lose was life. That loss seemed inevitable—if they succeeded in prolonging life, it seemed only a prolongation of mental torture toward madness. Still, Harvey Vellis could not quite accept such logic. He was like a cat responding to the instinct of self-preservation. But he was also a man trying to think of a way to make some amends for guilt. Without the latter, he might have been wholly animal, not trying to plan.

He grew angry. He growled too—in self-defense, for once, hurling his words against her far greater experience. "All right!" he snapped, his frayed nerves making his voice quiver. "You needn't try to take anything back! I heard what you said!"

For a minute he looked around them at the drifting wreckage. It was a fantastic display of things that were utterly out of place in the depths of space. There was a milling cloud of beautifully upholstered chairs and other furniture, fragments of metal plating, crates, boxes, bits of wood and paper . . . The wood, paper and fabrics were already turning black, as if they were being charred. Not in the ordinary manner, by oxygen and fire, but by the awful dryness of space, which, aided by the sun's fierce rays, unscreened by any atmosphere, was sucking the oxygen and hydrogen in the proportions of water, out of all organic substances, leaving behind the black carbon.

Hurry, he thought. *Hurry, hurry . . . Maybe it's a matter of time. Oxygen to breathe, first, or the apparatus to provide it. Then water, if it can be obtained. Then food, before it becomes inedible. With luck, maybe we can last a week. Or even a month.*

HARVEY was like a man doomed by an incurable disease, hoarding his last few days. In fact, to collect and hoard was part of the driving impulse in him.

There was no great planning necessary for what he had to do. It was only the naive audacity of it that was strange. For a moment more he searched among the swirling wreckage for a beginning point. Then, with quivering, clumsy fingers, he began to tear cord from the great bale. He tied the pieces of cord together, and left one end attached to the bale; the other end he tied about his middle. Then, desperate to get things done, he leaped.

He did not leap wildly, without purpose. His theoretical book knowledge about how material objects behave in space was complete enough. Only his physical actions were clumsy.

He shot toward a great fragment of the ship, drawing the cord after him. He clutched at the fragment, found an airtight door broken from its hinges; but he could see that it was not beyond repair. There were two richly appointed staterooms inside, and part of a corridor. The fragment of the ship was rotating slowly, but what did that matter, here, where there was no appreciable gravity—no up or down? The artificial gravity once produced in the *Aries* by the centrifugal force of its rotation was lost here, for the arrangement was wrong. The fragment was only pivoting lazily upon its own center.

In an emergency-supply compartment, Harvey found that ever-present testing device, the Geiger counter, used wherever there was any danger that atomic energy might go wild. After the explosion of the jet-motors of the *Aries,* much of its ruins might be tainted—"hot" with deadly radioactivity. Here, now, he watched the tube of the counter for the little flash, that, in the airlessness, where no sound could exist, replaced the familiar clicking. Only once it came in a minute, and that was not enough to be dangerous.

Now he went back to the unhinged door, and pulled the cord. Easily, in frictionless space, the great bale that harbored his two friends came toward him, bumping against the chunk of the wreck. With flying awkward hands, he lashed it down. Then he prepared himself another, even longer cord from the lashings of the bale, tied it to his middle and to a torn piece of plating on his island of safety, and leaped again, this time toward a great cylinder of oxygen. The Geiger counter he carried showed it to be untainted, so he grasped it with his legs, locked his feet around it, and drew himself back to his chosen perch, by gathering in the cord toward him hand over hand. As with the bale, he tied the cylinder down.

The process was repeated again and again, furiously. Often he had to discard things that were too "hot", but his hoard began to grow. There were great flasks of water, cases of canned goods, furniture, crated machines meant to be used on Mars—the first bale actually contained, folded up, a huge, flexible, plastic dome. In the thin air of Mars it could be inflated, supported by the pressure of the air of normal Earth-density inside it—used as a habitation or a warehouse.

Harvey Vellis labored like a demon. He labored awkwardly, like a person seldom required to do violent physical work, straining himself far more than necessary. But his conscientiousness was dogged and savage. Industry he had always had. And now, in it, he found a certain balm. It is always that way. Work diverts attention from disaster, releases tension. And bit by bit, as he became more adept at what he was doing, a little confidence—the thing he had always lacked—came to him. It was tragic that it should come so late, when he seemed inevitably doomed, no matter what he did. Still, it was something.

At first he had just an audience. Joe Palmas, the little Mexican steward, gawped at him as at some mad fool. Lilleth Thomas stared at him, too. At first her gray eyes had a derisive bitterness, then a speculative puzzlement. The sweat dried on her cheeks, and she looked almost pretty again. Almost, she smiled. Almost, a little of that old dry humor came back. Did she say, "What are you doing—trying to grow up, son?" No, but she thought it gently, and with a chip of awe. And somehow, in spite of everything, the awe was a comfort to her.

"A new game?" she said into her helmet phone. "May I play?"

The sullen Harvey Vellis did not answer, but just the same she found cord for herself, and imitated him. Joe Palmas, his dark face very grave, followed suit, in his plodding, precise way.

For hours, maybe days—for how could you tell out here where the sun seemed hardly to move?—the toil went on. Inside space gloves, hands developed vast blisters which went as unnoticed as the ache in muscles pushed to the limit of their capacity. Of course three humans could never have done so much work on Earth, but here there was no gravity.

Lilleth Thomas even tried at last to lighten the situation with some scraps of humor. "We make a big bundle and take it to market," she chanted almost gaily, sweat again coursing down her cheeks, but this time it was the sweat of toil. "What do we do with all this stuff?"

"Try to live for a while!" Harvey Vellis snapped back.

"Sure—I know. That's at least partly a good answer," she said almost contritely. "Only—" But there she stopped. They were going away from the sun—they were powerless to turn back. They might even jury-rig a jet-motor. But they could never make it drive this great, crude, spherical bundle that they were building around the two-room fragment of the *Aries*. It lacked utterly the perfect balance of a ship of the void. It would never go the way they wanted it to go. So they'd hurtle on, perhaps through the mysterious asteroid belt, to be smashed by flying fragments; or perhaps they would pass it, to freeze out there in the awful darkness, maybe returning sunward years later, when the gravity of the sun pulled them back, locking them in an elongated cometary orbit.

But Lilleth Thomas did not wish to talk of such things. It was bad enough to remember.

CHAPTER THREE

Terror Belt

AT LAST the task of collecting flotsam was almost finished. It was then that Lilleth Thomas took up action of her own. "Come on, Joe," she said to the Mexican steward. "Our great master of ceremonies doesn't like us. But we could maybe fix the door of the place where we're supposed to live."

She was not unhandy with tools, and the latter were among the items they had collected. Through the tunnel left in the packed load of stuff, that completely enveloped the piece of the spaceship, they crept to the door, and proceeded to fix its hinges, and the packing around it. So when Harvey came through the tunnel, trying to drag at one time a crate of charred grapefruit, a small atomic stove, a cylinder of compressed air, and a small air-purifying machine, still in its box, and intended for some remote human encampment on Mars, the door was ready to be airtight again.

Harvey Vellis' face, beyond the window of his helmet, was so haggard and sweat-streaked now, that it hardly looked human. "Come on, you two," he growled. "Don't gawp. Help me with the other stuff."

So they did. They brought in cylinders of water and oxygen; they brought in more food. And at last, panting, Harvey closed and bolted the door. He bolted it with furious haste, as if there were some terrible enemy just outside, in hot pursuit. A thing that he had to shut out. But it was only the terrible, harsh stillness of space, and the sardonic stars. Harvey was reacting against the things he had feared, though he had thought he would love them.

Again Lilleth tried to inject a bit of humor into the moment. "A nice two-room apartment," she chuckled. "I used to dream of a vine-covered cottage, in Maine or California. Oh, well, this is all right too. We've even got lights and a stove. Boy! Are we riding space in luxury! The lights still burn because each lamp has its own atomic battery. It's almost like home here!"

But somehow her words, and her mild, kidding sarcasm, grated against Harvey Vellis' raw nerves. "Oh," he growled. "You want a real apartment, do you? Even a house, with all the comforts of home, eh? What do you expect? Don't you realize our position—yet?"

He'd never been rated a grouch. And, yes, he knew what was the matter with him. It was what space, and the dark future, did to people. It was his guilt for their being in their present position, and his helplessness to really right matters—especially for Lilleth. It was his feeling of inadequacy and inequality before her. It was his desperate wish for other cir-

cumstances, in which he might try to give her all that she wanted. . . .

She understood some of how it was with him. It made her feel tender toward him. But his awful seriousness exasperated her.

"You know darn well that I was just joking!" she stormed. "That ought to help us some—if you could only see it! You've done fine, Mr. Harvey Vellis. Now just simmer down!"

He looked startled and ashamed, for there was even a little sob in her voice. "Sorry," he mumbled. "Only—well—skip it."

"Skip what?"

"Nothing. Except, I suppose, you ought to have things like that. A home. A place for kids. Any girl—" He was down on his knees on the floor, releasing compressed air from a cylinder with a wrench, so that the sealed-up rooms would have an atmosphere.

Lilleth looked at him. Oh, gosh—why did people yearn for things most, when they were most impossible? Cockeyed human nature! And about Harvey, here—he looked such a twerp, and yet he struggled so hard. Lilleth Thomas was confused.

Now he had the air-purifier mechanism out of its box. He set its little atomic motor going. There was a cartridge in the mechanism, containing a special set of electrodes. Till it burned out, it could split up the carbon-dioxide that lungs exhaled, setting the oxygen free to be breathed again.

Lilleth forced a small, hard laugh. "Me with a home?—nonsense!" she said. "I'm a drifter."

But for a second his glance at her was both stern and very soft, as if he knew that she was lying. It was a wrong thing for him to do to her—make her yearn more and more for the impossible.

"Listen, Pal Harvey," she said. "You're all fizzled out. Go into that stateroom. tie yourself to a bunk so you won't go drifting off, and get some sleep. Take Joe with you."

For once, he grinned. "Not until I get out of this spacesuit and chew on a grapefruit," he answered.

"Not any more than a grapefruit," she told him. "You know that the space-sickness is coming, don't you? Lots worse than sea-sickness. Lack of weight does it, after a while. The nervous system gets disoriented. The lymph-glands bog down before they adjust—and in some people they never do. The mind is disturbed—as if being adrift in space isn't enough. Me—I feel a bit queasy already. . . ."

Harvey only nodded, grimly. Joe Palmas, having removed his space armor, was clinging to the wall. He had begun to pray to Santa Guadalupe again.

Harvey and Lilleth punched holes in two grapefruit, and sucked the juice out. It was the only practical way, for they

never could have put the juice in a glass; it would have globed out and floated gently away.

As they sucked on the grapefruit, Harvey and Lilleth somehow fell into a whimsical conversation.

"I wonder what the asteroid belt is like," she mused. "Really."

"A world blew up," he answered. "One as big as Mars—and inhabited by beings that weren't men. It happened maybe fifty million years ago. You know the theory of the structure of planets. On the outside are the lighter materials—air, water, lighter rocks. But during the molten stages of a planet, when it's new, most of the heavier materials sink naturally toward its center—forming spheres, or layers in order of density. Rock on top, then a lot of iron and nickel. Then the heavier things, thousands of miles deep, near the center. Gold, lead, osmium, uranium.

"On that planet, according to somebody's theory, a pocket of Uranium 235, somehow almost pure, and unalloyed with the more stable Uranium 238, which is generally far more common, began to form, growing progressively more pure, more dangerous. If you get together a sufficient mass of U-235, the stray neutrons speeding through it become concentrated enough so that a spontaneous chain-reaction is set off. That such a relatively pure mass was formed was probably a freak—because it hasn't happened on any of the other planets. It must have happened quite suddenly, perhaps under the influence of a quake or volcanic action—no one can really know just how. But it blew that inhabited planet beyond Mars apart—exposed its insides—all the rich and the dangerous metals that are seen only in relatively small quantities on the surface of large worlds. Treasure—gold, of course, in huge amounts. And platinum, silver, radium. If it means anything. Stuff still almost untouched. . . .

"Treasure—too much to count—"

UNCONSCIOUSLY, Hervey Vellis was trying to build up romance to push away the shadows a little, to gild the dark facts. But what he had said of treasure was no exaggeration.

Lilleth carried the picture along. "Yes, I know," she said. "Even pop hasn't been out there, yet. And that's saying something. The asteroid belt was visited for the first time only about two years ago. There are a few men there now—beginning to look things over for the exploitation of resources. But I saw some pictures, somewhere. Some parts of the belt suggest the wreck of a spaceship. Things float in it besides rock and metal. Cornices of buildings. Machines. There's more archaeology there than even on Mars. It's supposed to be the strangest region in the solar system."

She paused. Trying to create a sense of glamor about the asteroids wasn't easy. For all of that region was deadly, and it was so huge that the few thousand men who had gone there hardly mattered, as far as population went. How could you find any of them? Or how could they find you? To find a special grain of dust in a cornfield must inevitably seem easier.

Lilleth and Harvey broke up the conversation at last. The men took one stateroom, and Lilleth the other. Harvey Vellis slept a deep, uneasy sleep, shot through and through with feverish nightmares. Sometimes it seemed that childhood acquaintances of his were hazing him again—laughing at him. Especially Dink Darrell, with the huge body and the booming guffaw.

At other times it seemed to Harvey that he groped through endless cobwebby distances, while the whole universe tumbled around him, and the awful space vertigo hammered at his stomach and head. . . . And it could hardly have been any better for his companions. . . .

It was like that for days, certainly. Harvey Vellis' wristwatch was not now

covered by the sleeve of his spacesuit, but he hardly bothered to look at it.

They all came out of the sickness gradually. On the small atomic stove, Harvey warmed some canned soup in a small sealed pot. The liquid was transferred by steam pressure through a tube to flexible plastic flasks, which are part of the regulation equipment of all space-rescue kits. You squeeze the flasks, and the liquid, that you cannot pour where there is no weight, is forced into your mouth.

Lilleth went around straightening things in the two rooms. She did not walk, she floated, shoving herself from wall to wall.

Harvey said, "You look domestic."

Joe Palmas actually laughed.

And Harvey felt that old pang of guilt, and the strange wish that he could give Lilleth what she wanted for the little time that remained to them. A bit of hominess could soften the harshness of the cold, unfriendly stars. . . .

That was why, when she said absently, "I wish we had a chessboard," he closed the airtight doors of the two staterooms, so that the passage and the door outside could be used as an airlock, and went out to search among the hoard of stuff they had collected. He found chess equipment easily enough, in a drawer of a table from the game-room of the *Aries*. He also brought a phonograph and records—of use on spacecraft because radio and television programs do not easily reach as far as the ships go. Besides, he found some steaks, still palatable since they were in a sealed chest.

"Harv, you're nuts—you're absolutely nuts!" Lilleth said. But they cooked a steak, and anchored it to their plates with special clamps, and learned to eat it with pincers and surgical scissors. They played chess, gumming the bottoms of the pieces, and played the records, and some of the illusion that they wanted came to them.

More days passed. They read, they slept. Until Joe Palmas announced, nodding toward a circular window: "I see some specks up ahead. Lots of 'em in a little row. Maybe we live some more—maybe not, eh? But so far I eat good. Like they say in Guadalajara—Belly full, heart happy. *Barriga llena, corazón contento . . . Verdad? . . .*"

Maybe that was all there was left, but Harvey Vellis wasn't ready for it. You could call it fear, or whatever you liked. He just wasn't ready, and he didn't want Lilleth to be ready, either. He'd been thinking about it for a long time.

Nor was Lilleth a fatalist. "So we're catching up with the asteroids," she said. "We could get into spacesuits, and try to rig a jet from the spare supplies. We can't make it work very good, but maybe we could reduce speed some—lessen the danger of a crash. Come on, Joe—you too—"

She was cool, alert, and ready, then. She was the girl who had nursed victims of the plague on Venus. Harvey felt proud of her. Maybe he even guessed that she was proud of him. It was a great thing to feel. They had a job and a viewpoint to share, at last.

So, again, the three of them were furiously busy, on the outside of the great bundle of things from the wreck of the *Aries*. They broke out a spare jet from its crate. After six hours of toil, they had mounted it crudely but firmly, by clamping it between two great crates that contained machines, and wiring it into place. Further, they had bound the huge bundle more firmly together, so that it would not be scattered by the kick of the jet, by running wire around it in every direction. Close to the jet mounting, they placed thick sheets of lead, to shield their hoard from radioactive contamination. Then they were ready to fire.

EVERY time the thin line of luminescent specks, that marked the position of the nearing asteroid belt, came into view as the bundle rotated,

Harvey fired the jet, by remote control through an electric wire, from beneath lead shielding several yards away, while his companions crouched beside him. Each burst was a great plume of blue-white incandescence, whose temperature approached fifty thousand degrees.

There was of course no sound in the vacuum—only a quiver in the great bundle, and a wavering of its rotation. Time and again, as the hours passed, the rotation changed both direction and axis under the thrust. No one could have told how erratic the movement of that great mass of material became, across space. But it was jerked away from the vicinity of the radiation-tainted wreckage that Harvey and his companions had left adrift. And one thing was fairly certain—the velocity of their approach to the asteroids, a matter, originally, of many miles per second, was dropping off fast.

"They're getting bigger, though," Lilleth said. "We must be coming into the thickest part of the belt. There's one of the big ones—you can see its shape! Not round, like a real planet, but jagged, like a broken hunk of rock! Harv—maybe we'll have a little luck. Some kind of break—"

Funny how easy it is to start up optimism in people.

"Maybe so!" Joe Palmas said. "We're coming in with a steep slant—going the same direction as the asteroids on their trip around the sun, and it looks like maybe almost the same speed. Nothing going the same speed and direction as us can smash us up, huh? Keep the fingers crossed. But it looks like *buena suerte,* no?"

Good luck. Yeah. . . . Maybe Harvey Vellis had some of it coming to him for once in his life. But maybe it was just another sorry joke. For what good is it to be stranded on an asteroid, one of a great scattered ring of broken fragments five hundred million miles across, with the sun at its center? Talk about one's chances of being rescued from a desert island on Earth, say in the 19th century. Here the chances must seem infinitely slimmer.

But somehow the faces of all three castaways were beaming. That's human nature, again. Put people in a really hopeless spot for a while, and then give them just a faint ray of hope, and see how their spirits come back, even though their situation is still more or less hopeless.

A few tense, eager minutes passed, while no one spoke, and the belt loomed nearer.

But finally Lilleth had to talk. "We're gonna miss the big one, you guys—it must be anyway twenty thousand miles away. But we're going almost exactly toward that smaller one, there. You can see nearly every detail of the rocks on it. It must be close. It's maybe two miles long, and a half-mile thick—just a big, white chip, torn out of the middle of a planet, airless, now, and not good for much. I'll bet it hasn't even got a number in the astronomer's books, much less a name—but, boy, does it look good to me!"

The enthusiasm of her voice had an edge to it, which Harvey began to recognize. Another side of possible space hysteria— distorted values and viewpoint. He grasped Lilleth's plastic-gloved hand. "Easy," he warned. "Take it easy—"

Her expression became surprised, then awed, as at a narrow escape. "Yeah," she mused. "Funny—I was as excited about a dead chunk of rock as I once was about finding my first four-leafed clover, when I was a kid. Back in Minnesota . . ."

She caught herself without being prompted. Thoughts of an old home could lead to nostalgia here that might make one raving crazy.

Joe Palmas spoke up, now. "Three long cords, we need," he said. "Tie 'em to the bundle of stuff, and to us. Then jump, same like we did before. Land.

She knew what he meant. A livable home for their last days. Some slight compensation for the house in Maine or California that would never be. . . . He didn't have to say it. He could even have yelled it in fury. The devotion of it still would have spelled love . . .

She felt tender toward him. "Thanks, Harv," she said gratefully, seeing no twerp at all, now. "It's the same with me—for you. I wonder if we could make a cleric out of Joe?"

In another moment, they were as furiously busy as they had ever been. They began sorting supplies, separating them into categorical stacks.

It was strange seeing Lilleth's small form carrying huge loads. "I'm better than twenty stevedores," she laughed.

Now they unbaled three huge plastic domes, fitted each with an airlock, drew one over each of three separate stacks of supplies, and inflated them with air from many cylinders. They joined the domes by means of prefabricated passageways of similar plastic.

Joe was about ready to stop working, then; but Harvey, now inside one of the great bubble-like shelters, and out of his space armor, had found a brush and opened a can of paint.

"Good night, Harv—what are you going to do—label everything?" Lilleth asked.

"Just in a general way, so we can find what we want," he answered. "Too bad we haven't got shelves for some of this stuff."

"Hmm—still methodical, I see," she said. "It's a wonder you haven't thought of a hydroponic garden under a dome, like they have on Mars. The plastic is more transparent than glass to visible light, but it cuts off all dangerous radiations. And I've noticed that tins of seeds were included in the cargo of the *Aries*. Meant for Mars, of course—"

She was kidding. But he didn't take it quite that way. "Maybe—" he muttered. Then a wild optimism seized him. He considered. "We've got a good deal of water and air," he said. "Besides, a hydroponic garden, with some people to breathe its air and supply carbon-dioxide to the plants, doesn't use up its original quota of air and water. At least, not very fast. It can be almost self-contained, like a well-balanced aquarium. Then too, there are certain pieces of apparatus among our equipment—also intended for Mars. Some rock crystals contain water, which can be extracted. And even space isn't completely empty. Quite a few oxygen, hydrogen, nitrogen, water, and other molecules that have escaped from the atmospheres of planets, are floating in it. There are ways of attracting them—slowly. And collecting them. If we can ever set up the apparatus—"

Later, as if it were only a bubble, and not tons of metal, they carried the great fragment which had been part of the *Aries,* and which contained the two rooms, and set it up against one of the domes. By means of a tunnel-section of plastic, they attached it.

It was the very lightness of things that exhausted them—it encouraged them to work to the limits of their strength, as if the real need, in itself, were not enough. And they were still clumsy—always exerting too much force for a given task, always having to exert more energy to check the first overstrong impulses of their efforts, they never seemed to notice the tiring—at first. It was when they relaxed a bit that the weariness hit them.

The asteroid was rotating slowly, the axis along its greatest length. Now, when they had their encampment tentatively in order, the sun disappeared behind the western edge of the plain; and like a knife-blade turning over, the side of the asteroid that had been in daylight was plunged into Stygian darkness—except for the glow of the atomic lamps that had been set up

Pull the stuff down to that asteroid . . ."

Several minutes later, they had accomplished all of this. Light as feathers, they landed on porous rock, after a long, slow leap. They were on a kind of plain, near the mid-section of the asteroid, which was large enough to have a barely perceptible gravity. In response to their tugs on the cords, the huge bulk of equipment and supplies that they had gathered drifted toward them, and came to rest like a slightly underinflated balloon.

They took a moment to look around them. The plain was littered with other lumps of rock that once had been drifting free in space, but which had come to rest, here, drawn by the tiny gravity. In fun Joe picked up a rock, that on Earth would have weighed twenty tons, and hurled it. It did not even fall back. Joe flexed his muscles and grinned.

One rock looked like the capital of a pillar. It was obviously carven. Near it was a blackened, dried thing, fifty million years old, but quite well preserved, considering. Human? No—there was no resemblance, except that it must have been a two-armed and two-legged creature, and intelligent. You couldn't be sure whether it had had a face or not, it was that different.

Somehow it had managed to escape disintegration in the awful blast that had ended its world. Maybe many of the bodies of its kind had, for the surface of that planet might have broken up in great chunks, which had simply been hurled out into space, with their terrain intact. Near the body were some blackened fragments that might have been vegetation. And the body wore both clothes and beautiful golden ornaments.

Harvey bent down and touched the pale blue fabric, that looked like silk. "It must be of mineral," he said. "Anything like ordinary cloth would char out here in an hour."

No one commented. Joe Palmas just picked up the body, looked for a moment at a golden thing attached to its garment—it might have been a timepiece of some kind, and he was partial to timepieces. But now he muttered a brief prayer under his breath, glanced questioningly at his companions, received their nods, and hurled the corpse far into space.

CHAPTER FOUR

One Foot On a Star

IT WAS a full minute later before Lilleth managed to smile. "Well, Harv," she said. "Here we are, marooned on an airless hunk of stone. Want me to tell you what's in your mind? And how long do you think we can last—six months?"

He grinned back. "Depends," he answered. "If we can civilize space in the raw, here, just a little, to keep ourselves from going bats—" His gaze was gentle.

in the dome where the castaways were, and except for the cold blaze of the stars

And, perhaps unwarily, Harvey Vellis gave himself up to an illusion—that Out, space, other worlds, were the glamorous things that he had wanted them to be. It was fulfillment of a sort. He was a full-fledged man of space, in his own belief, now, needing to feel no inadequacy in anyone's presence. He was aware that his girl knew it, and was proud of it. There was just one big defect—eventual doom when time and space had their way with them—when their irreplacable supplies gave out or wore out. But Harvey Vellis did not think of this so much, now.

Lilleth and he had removed their helmets. He grew bold. "Honey," he asked, "is it so bad—being like this?"

She looked at her little, homely, thin-faced man, and if she lied at all to reassure him, she did so without hesitation. "I feel at home already," she answered.

He kissed her. Joe Palmas stepped discreetly behind some boxes.

Harvey went on: "Considering uncertainty and shortage of time, honey, do you suppose it would be all right to do what you once said, about Joe?"

"Maybe we should," she answered. "Things like that often become necessary on a frontier. You have to improvise, make the beginnings on which later law is founded—"

So they called Joe, and Harvey Vellis said to him, "Joe—do you suppose you could ever be a pastor, priest or a justice of the peace?"

Joe's grin was a mile wide. He had a big and sentimental heart. "I catch," he said. "Sure—all three—maybe more!"

They ordained Joe in writing, on space-darkened paper: "We, being a community of three, on an unknown asteroid, do declare José Eugenio Palmas Alvarez, one of our number, to be, and to assume the duties of, our civil magistrate. . . ."

Then, on another paper, Harvey wrote: "Before the laws of man and nature, I, Harvey Vellis, of Dos Piedras, New Mexico, U.S.A., Earth, do enter into marriage with Lilleth Thomas, of New York, by pledge of my honor and life, for all the time that is left to us, this contract being written and pledged with solemn respect to the codes of our native planet and nation, now out of reach, but to be conformed with in full and directly, if chance and earnest effort permit."

Joe used his own ring and pocket Bible. With Harvey and Lilleth, he went through familiar lines and pledges in English. Then he muttered a prayer in his own language.

It was a reckless thing for these young people to do. But they could not have been more solemn or earnest. Life had become infinitely precious.

Above them the stars were brilliant and hard. There was a tap on the roof of the dome. A little rock had drifted in from space—part of the asteroid belt. Its speed, relative to the sun, was probably around fourteen miles per second. But all the belt was moving at approximately that speed, and in the same direction. So there was no harm in it.

"How do you feel, honey?" Harvey asked.

"Fine—perfect!" she answered, and meant it.

It was more illusion, for even what they seemed to have of life and home was not yet theirs.

THE FLAW lay in the human element, as affected by space, and, more specifically, by the conditions peculiar to the asteroid belt itself. Scattered thinly around its tremendous ring-like expanse were perhaps three thousand men—newcomers to this latest colonial frontier—a place of tremendous resources, unorganized as yet, even for proper exploitation, much less by law, order, or civilization.

These men were ordinary men, for the most part, even though high romance and the eagerness for wealth had touched them. But can a man keep himself civilized or sane, while living as they lived?

The belt is a strange region, with no counterpart elsewhere in the solar system. Those tiny minor planets, those fragments of a real world, have so little gravity that a real spaceship is not needed to travel among them. A specially designed and balanced spacesuit, with a small atomic jet-motor fitted into its back-plate, is sufficient. So men can skip from asteroid to asteroid, wandering like nomads.

But consider how they live, sleeping in their armor, drawing their arms out of the heavy sleeves of their spacesuits to feed themselves pellets of concentrated rations inside their helmets, smelling the rank perspiration of their own unwashed bodies, and the accumulation of the fumes of the few cigarettes they can allow themselves, to avoid overtaxing their perishable air-purifiers.

This is only a sketchy picture of the truth. Consider the constant worry of having their air-purifiers give out, of consuming all of their food and water, of being hopelessly lost. Add a stiff dose of wealth-hunger. Add homesickness. Add the inevitable effect of icy stars. Add the instinct of self-preservation, when death by suffocation is perhaps only scant hours away.

Then, have you the same fellow, who, on Earth, used to grin genially to his friends, and say "Hiyuh, pal!" Or do you have an individual dominated by the instincts of the wolf-pack on the hunt, who would gladly murder for a breath of fresh air, that his hoarded wealth of metal cannot buy?

About three months after the landing of Harvey Vellis, Lillith Thomas Vellis, and Joe Palmas on the asteroid, there was such a group of nine men a scant million miles away. Their supplies were very low. They'd wandered far. Gold they had scorned in their hunt for treasure. It was worth less than dirt, here.

Here in the belt, formed by the explosion of a world from natural, atomic causes, all buried wealth was exposed. Not just soft, useless gold, but uranium, radium, and half a dozen other costly metals, needed to feed the space fleets, and the wheels of industry and comfort at home . . .

They had gathered it in a great wire net, which they towed by means of cables, as they hurtled along in free flight. And they had more than just these metals. They had treasures from that destroyed civilization of fifty million years ago. Beautifully wrought jewelry, small, ornate vases, fabrics and tapestries of gorgeous design that never aged. The lot was worth twenty fortunes.

Still, they were in desperate straits. They knew that a supply-ship was due—maybe already overdue. You were never quite sure of supply-ships. They moved erratically, landing here and there. You never knew quite when or where.

In space you can see a long way. That helps to make the vastness of distance less significant. One of the nine men peered ahead, through a small telescope that swung into place over the face-plate of his helmet. "Dammit," he growled to his companions, "I was sure I saw a little star wink on and off—" He was a big man with a growling voice—one of a type. A rough leader.

They passed into the shadow of a small asteroid, and there, in the intense blackness, the seeing was better. "There she is again!" the big man snapped.

"The ship?" another man asked. "Never heard of 'em botherin' to signal their position with lights. They'd be afraid guys like us would mob 'em."

"Could be what's left of a liner," the big man answered. "Heard of one crackin' up. Hmm—what if it was so, boys?

Them signalin' for help. Imagine . . And us needing to help ourselves! Worth looking into, anyhow. Can't be a natural light. So let's get clear of the belt, where we can't hit anything, and pour on what's left of the juice. Thirty miles a second'll bring us to that light in short order."

Of the gang, one had been a jeweler with many friends, one had been a policeman, another had been a hospital steward. Two had been carpenters, who had taken their wives and kids out riding on Sunday. But life in the belt had changed them. All carried blasters, useful in asteroid mining, equally useful to kill.

They came toward the big rotating searchlight that Harvey and Joe had rigged as a distress beacon, as unheralded as ghosts, for by luck it was still night on the side of the asteroid where there were now five domes. Five minutes after they landed, the small sun appeared over the eastern edge of the plain, and revealed a strange spectacle to the intruders.

"Well, whatdyuhknow!" the big man chirped in falsely naive and harmless wonder. "They even got a garden, with sweet corn and stuff growing in it, in one of those domes. Loosen up your belts, guys. First thing you know, a little gal with an apron'll come marchin' out!"

It was all terribly easy. Space was partly responsible, again. On the part of Joe and Harvey, there was that first awful gladness at seeing other human beings after having been hopelessly stranded. For a critical few seconds, it made them as trusting as children.

Joe opened the airlock to the pack, and they came tramping into the main dome, with its chairs, rugs, and its zinnias, growing in jars filled with bits of rock and hydroponic solution.

Harvey was armed with a blaster, for he was not wholly green. But another thing threw him—it was the sight of the big man. For a second he thought it was Dink Darrell, who had hazed him most when he was a kid. It wasn't Dink, but it was a guy like him. It hit the raw edge of an old complex in Harvey Vellis—a complex which no longer had a basis in fact, since he'd worked out of it. But its shadow was still there, for a critical moment—that old fear of big men laughing, kidding, that old unfaceable dread of being discovered in a place where it used to seem that he could never belong.

It made Harvey quiver; it made his cheeks turn pale—for just long enough to prevent him from getting his weapon from its holster, when it could have been of some use.

THE LEERS went around the dome—mocking travesties of friendly smiles. "Hello, friend," said the big guy. "Gosh, you've got a nice place here!"

He removed his helmet, and pushed himself into a chair. But it wasn't hard to see how the hands of the others lingered near their weapons.

"Nice and homelike," the big guy went on. "Bet we can even get breakfast here, hunh? Glory, how I'd go for a good home-cooked meal! Notice you got a lot of equipment, too, stacked up in the other domes out there. We need an awful lot of stuff—"

Nowhere in the big man's words themselves was there anything yet that was definitely out of line. It was only the coarsely gentle tone, and the grins of the other members of the pack, and the gleam in their slitted eyes, that made it perfectly plain that these men were bent on pillage at the very least—pillage, that, out here, where supplies were vital, amounted to murder.

Harvey and Joe stood passively sullen. They hadn't disarmed Harvey, for, still white-cheeked, he had the look of the harmless twerp, again. Maybe that was their mistake; but it didn't amount to

much, because they had a lot of blasters. They didn't even bother to draw. But that didn't help Harvey much, either. He had to think of something....

The big guy's gaze went dreamy. He even seemed to relax. "Yeah," he mused "Nice. Real nice. Six months I been out here—six lousy, stinkin' months without a bath. So this is civilization!"

You could sense it, at a certain moment. A subtle shift from sincerity. Not only in the big man, but in the others. More of the treachery of space—aimed, this time, at them. Fearfully hard living—then the relief, the relaxation, the unwariness, encouraged by the presence of a little desperately needed comfort. . . .

HARVEY Vellis sensed that moment; matched it, he hoped, with the probable meaning of a faint, shadowy movement beyond a door, which led to the two rooms that had been part of the *Aries*. Then he acted.

He drew and fired his blaster at the leg of the chair in which the big leader had sprawled with such insolent confidence. As the chair and man toppled lazily, and while the place was full of dazzling light and dazing sound, he leaped to close quarters, and jerked the blaster from the holster at chief's hip, at the same time jerking him erect against the feeble gravity, to use him as a momentary shield against the others' guns.

The latter maneuver wasn't necessary, for just then the muzzle of a heavy-gauge blaster appeared from the shadowy doorway, with a space-armored figure behind it. One blurp from that weapon would have mowed most of the intruders down, and blown their vaporized atoms straight through the wall of the collapsing dome. Harvey and Joe would have had to gasp for a moment in the vacuum, before they were rescued . . .

But that didn't happen.

The big leader's jaw dropped. His surprise looked almost hurt, as if his mind were bogged down somewhere between law, order, and the comforts of regular living, and the brutality of a space frontier.

Lilleth stood, grim and ready, behind the heavy blaster.

"Hey—this is downright unfriendly!" the big guy protested, too fuddled, now, to be sarcastic.

"Oh, so?" Lilleth challenged. Joe was collecting the blasters and belt knives from the others.

Harvey took over. It wasn't primarily generosity that moved him now, but a plan must have been growing in his subconscious for a long time. A beginning for something big. "Not unfriendly—just careful," he said. "It seems that people go belt-daffy. So that's over. I just had an idea—"

He let go of the big leader, and backed away from him, and lowered the muzzle of his own weapon.

"We do have a lot of supplies here, which are ours by right of salvage, and a lot of work and danger," he continued. "If you have anything to trade you can buy what you need that we have, at a price that is fair for these regions—considering what it took to salvage the stuff, and considering the enormous value of the things within easy reach of asteroid miners. Yes, you must have stuff to trade. Or if you have nothing, we'll give you enough on credit, to tide you over. And you could wash up and sleep, here, and get a meal.

"Fair enough?"

The big guy had a strange, puzzled light in his eyes, as if he had just discovered that this was the way that he wanted things to be out here—orderly, and on the level, like at home. The weariness after long months of harsh living in the belt was too great for the result, now, to have been otherwise.

He looked at his men questioningly,

and they nodded. They felt the same way.

"My name's Dave Barrow," he said to Harvey. "What's yours?"

Harvey told him.

"Your offer looks okay to me," Barrow said. "And we have plenty to trade—more than all the stuff you got could ever be worth!"

"You could trade some of it, and store the rest—for a fee," Harvey Vellis said. "Right now there doesn't seem to be any way for us to cheat you, even if we wanted to. Besides, we can list everything by measure, and give you a receipt. How does that sound?"

Barrow grinned, as if he too visualized, in what was here, another outward step toward the stars, and was pleased. "You go fast, Friend Vellis," he laughed. "But okay. We could use your hospitality, also some new electrodes for our air-purifiers, also concentrated rations and canned goods and water and tools and fuel-bars. Also a couple of new spacesuits, maybe—of the belt-hopping variety, balanced, and with built-in jets—"

"If we had such suits, we would have gotten away from here," Harvey answered. "But we can give you the other things you want, plus repair service—maybe. Or—unless I'm getting too far ahead of myself—maybe we might find a way to order those suits for you. Yeah, we just might do that. . . ."

Harvey was getting a little dizzy over his own words, which seemed to come out without any assistance from himself. Habit and training were coming into play in him.

"We'll probably see the supply ship after we leave here," Dave Barrow offered. "Most likely they'll be sold out; but we could tell 'em to land here, and take your orders. Though I'll probably come back with it myself, to make sure you don't try to rook me when they take my stuff aboard."

Harvey chuckled. "Now *I'll* say fair enough!" he replied. "Only I'd better go into conference with my associates, before I promise too much." He looked at Lilleth. "Honey—do we stay here to do business or do we shove back to Earth, or Mars?"

She glanced around her for half a minute before she answered. At the chairs. At the flowers. At the corn and carrots and lettuce and radishes in the adjacent garden-dome. At the rugs. Her gaze grew fond, and possessive. It seems that a woman can make a home anywhere. Especially an adventurous woman like Lilleth Thomas Vellis. It doesn't have to be in Maine, or even in California. It can be on a barren hunk of rock, a million miles from nowhere. . . .

"We stay here, Harv," she said. Joe Palmas nodded.

THAT'S about all there is to the really important part of the whimsical story of Harvey Vellis, that drifted back to Dos Piedras from the belt, from Out, where it seemed that the scared little clerk from Mr. Finkel's store could never go. But the tale goes on and on—part of mankind's outward surge across the face of the universe. . . .

They were married again by the captain of the supply-ship. But an hour after it had left, they were painting a sign together. A symbol of a beginning of something in the belt. Something that most everybody wanted. A touch of home and safety. A beginning, around which a domed city is rising, to push the frontiers outward and outward. And the start of a fortune for themselves.

Harvey Vellis painted the letters of the words at his wife's dictation: TRADING POST—GENERAL STORE—HOSTELRY—BANK—SPACEMAN'S REFUGE. VELLIS AND PALMAS—OWNERS.

Lilleth laughed, and kissed Harvey. "Now put in 'Mail posted and received,' " she told him.

THE ULTIMATE ONE

By JOHN D. MacDONALD

It was the strangest bedtime story ever told—told when all Earth's children were asleep—in a night that held no dawn!

CLAIRE and Andy had a very special date, an early date, and their sitter wasn't able to show, so Claire came across the hall to my apartment and asked me if I wouldn't watch the kids, "just this once?"

As I saw no point in reminding her that it was probably the fortieth time, and as there is usually beer in their icebox, and as their video set is better than mine, and as I like their two brats anyway, I agreed.

Fifteen minutes later Claire and Andy left. I was sprawled out in the best chair in the room. Andy Junior, commonly known as Bugs, is five and a half and Marilyn is close to eight.

I heard them hurrying through the last of their meal and then they came in and piled on me, yapping about how glad they were to have "Uncle" Ed instead of that blank-blank sitter.

Marilyn hollered for a story and Bugs chimed in. I said, "Look, kids. All you got to do is turn that dial and you'll get kid stories put together by experts."

Marilyn said, "But they're for *everybody*. Your stories are just for us."

"Roboman, roboman," Bugs screamed. "Tell us about the first roboman."

"I've told you that one twenty times," I complained.

"And we want to hear it twenty times more," Marilyn said firmly.

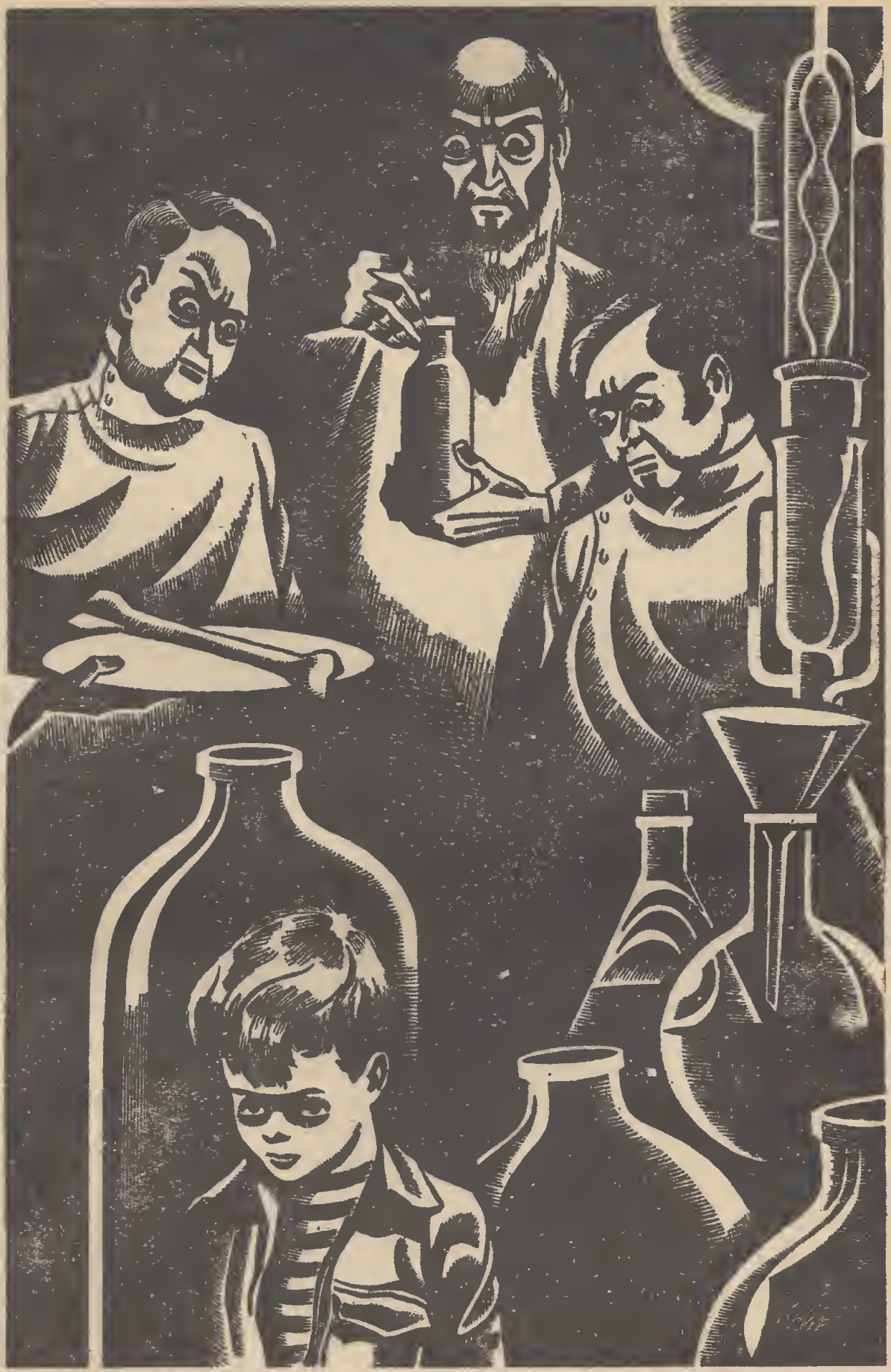
I promised and they let me go get myself a bottle of beer. Bugs sat in my lap and Marilyn sat on the floor and leaned her head against my knee.

"Once upon a time, a long, long time ago, there was a very rich man who had a sickly son. This was back in the days long ago when airplanes had propellers and the automobiles were made of metal."

"How silly," Marilyn said with a superior sniff.

"They didn't know any better, honey. Anyway, this son had a good mind, but his body was weak and soft and sick. The father had about half the money in the world and he sent messages all over the world, and he said in those messages, 'Send me the best doctors.'

"When the doctors came, the rich man said, 'They tell me my son will soon die. I do not wish that to happen. You will please save him.' So the wise doctors looked at the son and they found he had a disease of the bone which was very serious. At that time diseased bone was being replaced in small areas by stainless, rustless metal. This disease could not be stopped. So they began to operate on the boy, very cleverly. They started at his



One doctor claimed that he could make a better skin for the boy. . . .

feet and, in two years, they had removed every last bone and replaced each one with steel. Permanent lubricant was sealed into every joint, and the muscles were cleverly attached so that the boy had a better body than before."

"But his heart," Marilyn said.

"Please don't get ahead of me, honey. You're right. The hundreds of operations had so weakened the boy's heart that once again he was in danger of dying. The last operation, removing the skull, resetting his eyes in the steel skull case, had been the worst of all. One of the doctors said that, after all, the heart was only a pump, and not a very good one at that. Within six months they had devised a tiny plastic pump, half the size of the heart, which would perform all the functions of the heart and do them better. They made nerve grafts in such a way that exertion would speed up the heart, just the way the old one had worked. Better yet, the pump was so small that they made a dual hookup and installed, in the boy's chest cavity, a standby pump, just in case.

"The boy still lived, but he couldn't move outside the electrical field which transmitted power to the heart pump. His father blanketed their vast estate with the power field, so that the boy could roam the fields like a normal boy."

"And his skin," Bugs said.

"Bugs, you're getting as bad as Marilyn. The boy's body was further weakened by all these changes that had taken place, and the doctors found that whenever the boy cut himself or scratched himself, he was very slow to heal. In fact, he had two cuts that didn't seem to heal at all. Again they conferred, and they decided that the boy's skin was pretty inefficient. One doctor claimed that he could make a better skin for the boy. It took him nearly two years because he had to solve the problems of senses as well as cooling for the body. At last he worked out a nerve graft which would enable the boy to feel heat and cold and pressure, but not pain. And, by planting thermostatic devices in the skin, moisture would be released in proper quantity to serve as a cooling agent. Best of all, the new skin was a beautiful tan color, and only the sharpest knife could make the tiniest cut in it. Seventeen operations over a whole year were needed before the boy had his new and perfect skin. It was applied in such a way that, if the boy had cut himself badly, a new section could be installed."

I saw Marilyn open her mouth to interrupt again, so I hurried along. "And all the doctors watched this boy for two more years, and he was a man instead of a boy, though, of course, he grew no taller. Then they went to the boy's father and they said, 'Your son will have a long life.' The father was satisfied and he rewarded them greatly, but ever after that the father was uncomfortable in the presence of his son, because the father was made of the crude materials of life itself, whereas his son had the strong, proud body of the first roboman."

Both Marilyn and Bugs sighed deeply. "It's such a *good* story," Marilyn said dreamily.

"Yah," said Bugs.

I had a revolt on my hands when I tried to get them to bed. But when I was about worn out, they consented and I took them back to the bedroom. They washed, with many complaints.

When they were at last tucked in, I turned out the lights and stood there in the warm half-darkness, looking down at them.

At times like that you wish you had kids of your own.

Good strong healthy kids like Marilyn and Bugs, with the very newest kind of Gro-Form metallic bone, Extenso-Plasticon skin, Duble-Force hearts, Lense-Rite eyes and the best bottled blood that money can buy.

Pausing not, they turned and came right back. . . .

The WHEEL of TIME

By ROBERT ARTHUR

IT WAS a lovely Sunday morning in July when Jeremiah Jupiter called me to suggest a picnic. I must have been feeling slightly suicidal that day, because I accepted.

Jeremiah Jupiter has a mint of money and a yen for scientific experimenting—on me, if he can. His mind and lightning work the same way — fast, in zig-zag streaks. He's either the greatest scientist who ever lived, or the worst screwball who ever trod this mundane sphere.

But I had an excuse this time for not realizing he was up to something. I

Master of the eons, Jeremiah Jupiter found a moment he could live over again—to his timeless regret!

thought he meant a real picnic——the kind with lots of cold chicken and lobster salad. If there's anything Jupiter loves besides science, it's eating, especially on picnics. The lunch basket his Javanese boy packs up would lure Oscar of the Waldorf away from his skillet.

I stipulated, however, that I absolutely must be back in New York by evening, for I had an important dinner engagement with an out-of-town editor. He was returning to Chicago Monday morning, so at dinner we were going to settle on terms for a serial of mine he wanted to buy, provided he could take it with him and rush it to the press the minute he got back to Chicago. Since I figured on getting at least two thousand for the story, I was anticipating that dinner with considerable interest.

Jupiter promised we would be back in time, said he'd call for me in an hour and rang off. I dressed, in some lightweight flannels, one of the new Pandanus grass hats decorated with a bright-colored band, and an appetite. Promptly in an hour I heard Jupiter's honk, and went out.

When I got outside, though, I stopped in amazement. Jupiter wasn't driving his usual V-16 touring car. Instead, he was at the wheel of a Jeremiah Jupiter lab truck, with an enclosed body. My suspicions were instantly aroused.

"Lucius!" Jupiter caroled. His bright blue eyes in his chubby pink face sparkled behind their powerful horn-rimmed spectacles. "I'm so glad you can make it. What a day for a picnic, eh? We'll have the time of our lives!"

He put a queer emphasis on the word time, and chuckled. I looked at him darkly as I clambered in beside him.

"Jupiter," I demanded, "since when have you been a truck driver?"

"Er—" Jupiter coughed—"I have some guests. I thought it best to bring them in a truck. Avoid the stares of the Sunday crowds."

"Guests?" I whirled around, and peered into the body of the truck through a panel opening. The inside was quite light. I could see perfectly. I realized that after I had rubbed my eyes twice, and what I saw still stayed the same.

And what I saw were three large chimpanzees, wearing clothes and horn-rimmed spectacles, hanging from support rods in the top of the truck while they read volumes of the Encyclopedia Britannica!

"Jupiter!" I said. Jeremiah Jupiter flinched.

"Don't scream, Lucius," he reproved. "If you make a habit of it, you'll get cancer of the vocal cords. Anyway, they aren't really reading the encyclopedia. It's part of the act. There are thin candy wafers between the pages, and they turn the pages looking for them. When they pop the wafers into their mouths, they seem to be licking their thumbs. That gives them the appearance of studying. Really, they never actually read anything but the comic sheets."

"Jupiter!" This time the word came out in a strangled voice, as I kept control of myself by an effort. "I won't ask you why you're bringing three trained chimpanzees along on a picnic. I won't ask you what that very sinister-looking apparatus under the tarpaulin is. I won't ask you what madness your sly, serpentine, Machiavellian mind is bent upon. But one thing I do want to know.

"What are those three motorcycles in the back of the truck for?"

"Lucius," Jeremiah complained, dashing at a space between a bridge abutment and a ten-ton truck that would not have accommodated a stout bicyclist, "you will really get cancer of the vocal cords. I detected a distinct crack in your voice then."

"Hah!" I breathed. "Hah! What a chance for a *mot juste* on my part. But I'll restrain yourself—if you'll explain

why we are going on a picnic with three chimpanzees who read the Britannica while hanging by their heels, and three undersized motorcycles painted vermillion, gold, and silver!"

"They're part of the act, too," Jeremiah chirped, finding the bridge clear and roaring the truck down it at breakneck speed. "The chimpanzees ride the motorcycles around and around while they study the encyclopedia."

"Jupiter—" now I was just whispering —"I do not say that makes sense, but I'll accept it. On looking closer, however, I see that beside the motorcycles are three bass drums. *What the devil are the drums for?*"

"You will have to let me X-ray your throat when we return, Lucius," Jupiter said, with a worried expression. "You sounded so strange then . . . Why, the drums are—"

"Part of the act!"

"Yes, indeed," he agreed brightly. "The drums fasten to the handlebars of the motorcycles Then the chimps ride the motorcycles around on the stage—I bought them from a vaudeville animal act —beating the drums, reading the encyclopedia, and throwing out oranges to the audience."

I WAS reduced to speechlessness for a good half hour as we drove up the Jersey shore of the Hudson. At last I made an effort and blinked the glassy feeling from my eyes.

"You," I said, "brought along three chimpanzees who ride motorcycles, beat bass drums, study the encyclopedia, and throw oranges at people, all at one and the same time—you brought along these intelligent, educated, amiable, sociable, versatile creatures to keep us entertained while we picnic? You did all this just to while away the time and amuse us as we eat? Is that it, Jeremiah?"

My chubby companion shook his head.

"Not at all, Lucius," he piped. "They will play an important part in the epochal scientific achievement you are going to witness. Although I have food with me, this is really going to be a picnic of science, Lucius, a feast of knowledge rather than a mere gorging of the corporeal body. Aren't you excited at the thought?"

I gurgled slowly and collapsed.

"No," I murmured hollowly. "No, I won't help you."

"Help me do what, Lucius?"

"Whatever it is you're planning. I won't help you."

"I was afraid of that," my small friend sighed sadly "That's why I brought the chimpanzees. They're highly trained, very intelligent, and they shall be my only assistants in the precedent-shattering feat I am about to perform. You need do nothing but look on. And applaud, of course."

"What——" I hardly dared ask it— "what is the experiment, Jeremiah?"

Jeremiah Jupiter's face took on the rapt, dreamy look I knew too well.

"I am going," he said, "I am going, Lucius, to upset the time rhythm of the universe!"

THERE is nothing small about Jupiter. When he takes a notion to investigate space and distance, he short-circuits infinity. Now that it had occurred to him that time would make a fascinating scientific plaything, he was preparing to upset the universe's time rhythm, whatever that was.

"Jupiter," I said in the merest whisper, "Jupiter, let me out right here. I'm going to walk back."

"I really am worried about you, Lucius," Jupiter told me, swinging the truck off the road into a muddy lane leading through a wood. "I'm positive there's something wrong with . . . But anyway, here we are. Here's where we're going to have our picnic."

He pulled the truck to a stop in the middle of a grassy meadow, dominated by a large oak tree. A hundred yards away was a section of the Palisades, dropping sheer to the blue of the Hudson River. In the other direction, the field sloped gently.

There were, however, several large grassy mounds in the middle of the meadow, and one of these showed signs of having been dug into recently. The spot where Jupiter chose to stop was between the tree and the mounds, and he immediately jumped down and ran around to open up the back of the truck.

"Come, Lucius!" he called. "I need your help. That's a boy, King. Good girl, Queenie. Come on now, Joker. Give me the books. Get down and romp in the grass. This is going to be a picnic."

The three chimpanzees hopped lightly down and began doing somersaults in the grass at the word picnic, which they seemed to recognize. Little did they know!

The largest of the chimps had a broad, apish face, fringed by graying hair. He was tastefully costumed in an Indian suit, with plenty of bright beadwork around the cuffs and pockets. From time to time he paused to pick a bead off and eat it, chewing reflectively. Then he went back to turning somersaults.

The chimp Jupiter had called Queenie had on a skirt and blouse, also Indian, but the smallest and youngest of the three—my companion informed me that King and Queenie were his parents, which was why he was called Joker, or in full, Jack Joker—was gaily decked out in an acrobat's silk shorts and jersey, with an American eagle across his chest.

He did flipflops around his parents, while Jupiter and I sweated to unload the truck.

We ran the motorcycles, one crimson, one gold, one silver, and smaller than standard models, down an extensible ramp onto the grass. Each had a small sidecar attached, and in these I saw some glittering objects like gargantuan liver pills, but I had no chance to investigate them.

Jupiter handed me down the three small bass drums, each with a portrait of its owner painted on the head, and I placed these beside the motorcycles. King, Queenie, and Joker recognized their property and made sounds of anticipation, but Jupiter shooed them away.

"Go on, play," he told them. "First we're going to eat. The drums come later."

Either recognizing the voice of a master before whom Nature herself quailed, or because he was now unloading the large vacuum lunch hamper, the chimps scampered around in circles, playing tag and chattering. Jupiter handed me the hamper and jumped down. I tottered with it to the shade of the oak, and he trotted at my side, rubbing his hands and exuding enthusiasm.

"*Hmm,*" he said, peering into the hamper. "No reason why we shouldn't eat now. Put you in a better mood perhaps, Lucius. Now let's see, what have we here? Breast of Hungarian pheasant? Ah!"

Munching, he flung himself down on the grass. He tossed a bag of peanuts to each of the chimps, and they swung happily up into the lower branches of the oak, where they squatted, eating peanuts and tossing the shells at me. Moodily I chewed on squab in jelly, and blasphemed the base appetites that had lured me into this expedition.

"Now, Lucius," Jeremiah said brightly, licking his fingers, "I dare say I'll have to outline for you what it is I'm going to do. In the first place, time is nothing but rhythmic forces—"

"How do you know?" I asked rudely.

"I deduced it logically," he informed me, sinking his teeth into a turkey leg. "It came to me in a flash one night when

I was setting my alarm clock. Everything else in Nature, I realized, is rhythmic. The seasons, the progressions of the stars, birth, life, light waves, radio waves, electrical impulses, the motions of molecules—everything. All move according to fixed and definite rhythms. Obviously, I deduced, since the Universe is constructed upon a pattern of rhythm, time must be rhythmic too. It's just that nobody ever thought of it before."

"And now that you've thought of it," I asked, opening a bottle of Moselle from the cooling compartment, "what has it gotten you?"

"Just this, Lucius!" Jupiter bubbled with excitement. *"Any rhythm can be interrupted by a properly applied counter-rhythm!"*

I OPENED my mouth and forgot to put anything in it. "Now surely," Jeremiah said patiently, "even though you do spend all your time swinging golf clubs, waving tennis racquets, or whirling polo mallets, when you're not writing the puny little pieces of fiction you compose as an excuse for not working, you must know some elementary physics.

"I am positive you must have read of experiments in which two light waves of the proper lengths, being made to interfere with each other, produce darkness? And the fact that two sounds, properly chosen for pitch, can get in each other's way, with complete silence as the result?"

I nodded.

"Yes," I admitted. "I know about that. What's that got to do with time?"

"The time rhythm," he corrected me. "Or, the Jeremiah Jupiter Time-Rhythm Effect, as succeeding generations will call it. Why, it's quite obvious. If you can interfere with light and produce darkness, if you can interfere with sound and produce silence, then obviously you can interfere with present time and produce past time."

It was not obvious to me, and I said so.

My companion sighed.

"Very well, Lucius," he remarked. "I've made it as plain as I can, and if you don't understand I'm sorry. Your attitude is no surprise to me In fact it accurately reflects what my professional colleagues would say, and that is the reason we are here today To provide irrefutable proof which, upon being presented to certain contemporaries calling themselves scientists, will force them to respect the monograph on the subject I'm now writing."

His eyes glittered. Jeremiah Jupiter has had notable encounters with his fellow scientists in the past, but he has never yet emerged the loser.

"A demonstration, Lucius," he explained, "they would claim was faked. Consequently I am going to prove I can interrupt the time rhythm of the present and produce the past so that even the most skeptical dolt cannot doubt."

He poured himself a tall glass of Moselle and drank it with great appreciation. Perceiving that the chimps in the tree overhead had finished their peanuts, he tossed each of them a bottle of soda pop, which they drank with avid gurglings.

"That is where King, Queenie and Joker come in," he informed me. "I knew that you, Lucius, would balk. They, however, are equally competent to do what is necessary, and much less skeptical. You see, I have prepared a number of time capsules—"

"Time capsules!"

"To use a layman's terminology. I have one here."

He produced from one of his bulging pockets an article shaped like a gelatine capsule, about as big as his fist, and made apparently of platinum, for it was very heavy.

It seemed solid; at least there was no way of opening it. On the polished surface was deeply engraved, in bold script, *Jeremiah Jupiter Time Capsule. A.D.*

1965. Melt at left-hand tip to open.

"In it," Jupiter told me, "there is a microfilm of the New York Times, another microfilm containing my autobiography and listing some of my more noteworthy discoveries, a third microfilm announcing that I shall presently publish my findings concerning the Jupiter Time-Rhythm Effect, and a small compartment containing the merest pinch of radium."

"But—"

"Those mounds—" he gestured—"are recently discovered barrows containing ruins of an ancient barbaric civilization on this spot. In digging, the archeologists have also discovered that beneath this meadow is a clay stratum, once part of a swampy coastline, containing tremendous numbers of fossils. The digging has only begun. In a short time it will be undertaken more extensively, and this whole area sifted for fossils and other finds.

"And among the objects found, Lucius, will be one or more Jeremiah Jupiter Time Capsules! Clever, eh?"

He gazed at me brightly, but I could only scowl.

"You mean," I demanded, "you're going to dig down in this meadow and plant your time capsules for the archeologists to find next week, or next month? But I don't see—"

The pink, cherubic face clouded over.

"Lucius, sometimes I despair of you," he sighed. "Of course not. I am going to set up an interference in the time rhythm at this particular spot. Then the chimpanzees will enter it with my time capsules—since I know *you* won't—and *they will deposit the capsules here a million years ago!*"

He gazed at me anxiously.

"Are you sure you're well, Lucius? Your throat isn't bothering you again? You seem to be choking. Now you understand, of course. My time capsules, deposited here a million years ago, will have been resting beneath this meadow all that time. The archeologists, digging down into strata they know were laid down before the dawn of history, will find at least one time capsule.

"There will be only one possible explanation—that it was actually placed there in the past. By measuring the disintegration of the radium inside, they will know the exact number of years it has been lying there, waiting to be found by—

"Here, Lucius, drink this wine, please!"

I drank it. I felt stronger then, but not strong enough to argue with him.

"I do not understand, Jupiter," I told him. "But let that pass. I will take your word for it. You are going to set up an interference in the time rhythm, making today yesterday, a million years removed. But why yesterday? Why not tomorrow too? Why not have a peep into the future as well?"

He placed his plump fingers together and pursed his lips.

"I can excuse you for asking that question," he chirped, "because I asked it myself when first the idea came to me. But it is impossible. I logically established its impossibility and dismissed the thought from my mind.

"I think I can make it plain why, though I can reduce the present to the past, I cannot resolve it into the future. Let us assume that you have a grandchild someday."

"But I'm not even married," I told him.

"Please don't be irrelevant. In the course of events your grandchild grows up and develops an inflamed appendix that must be operated upon."

"More likely peptic ulcers from traveling around too much via the Jupiter Spatial By-pass," I suggested wickedly.

He remained unruffled. "Let us say I

am a doctor. In the course of time, your grandchild comes to me and I cut into him, remove his appendix. I do it *then*. But obviously I could never do it now, because neither grandchild nor appendix has yet occurred. So it is with the future. As it hasn't occurred, I can't penetrate into it. Now to the business at hand."

He rose and strode briskly over to the truck. I followed. Together we slid the heavy apparatus under the tarpaulin down the ramp and set it up on the grass.

WHILE we were doing this I noticed that the three chimps had dropped out of the tree and were chattering excitedly about something, but I was too busy to see what.

The object that my companion was now handling with such loving care was large and square, something like one of the old cabinet television sets of my boyhood. It had similar dials on the front, and when he lifted the top, I saw bank after bank of tubes inside, as well as a large drum that apparently revolved.

The middle of the front was given over to a speaker-like opening, and a long insulated wire depended from the rear. This wire was attached to a steel prong, which Jupiter drove into the earth several feet behind the unwholesome apparatus.

"That forms a ground connection," he remarked. "Now we're ready to make a preliminary test of my Time Rhythm Resonator. Where are the chimps?"

I looked up.

"They're drinking the Moselle!" I yelled. "They're getting tight!"

Jupiter, in the midst of adjusting something, jerked upright. The chimps certainly were getting intoxicated, and in a hurry. Having finished off their soda pop, they'd dropped down out of the oak as soon as we'd left and picked up the Moselle. Now they were guzzling it as fast as they could get it down, giving guttural calls and cries of enjoyment.

"They can't get drunk!" Jupiter cried. "That might spoil the experiment! Lucius, we must take the wine away from them!"

We rushed across the grass. As soon as they saw us coming, King, Queenie and Joker took to their heels, scampering away with knuckles touching the ground to give them extra speed. They dashed for their motorcycles, leaped into the seats, and got under way.

The motorcycles were electric, and could be started, stopped, or steered with one hand—or foot. King took off first. He grabbed the handlebar control with his foot, the machine hummed, and then shot toward us. With a tipsy whoop Queenie followed. Joker paused long enough to grab up his drum. Then, steering with one foot, holding on with the other, grasping the drum with one paw and banging it with the other fist, he charged after his parents.

"Jump, Lucius!" Jupiter shrilled. He leaped one way and I the other. King and Queenie whizzed between us, and Joker, banging lustily on the drum and emitting a kind of simian war-whoop, zipped past behind them.

Jeremiah Jupiter fell on his face. I banged against the tree trunk. The three chimpanzee Barney Oldfields went whooping around the tree, turned and started back.

"Look out!" I yelled. Jupiter got dazedly to his feet just as the chimps came around the second lap. Then I leaped, and King and Queenie and Joker, all abreast, rocking and swaying, roared by underneath me and were gone again.

I was in the lower branches of the oak by then. Turning, I discovered Jupiter on the next limb.

"You and your discoveries!" I grated.

But he wasn't listening. He was staring at his apparatus, and he looked worried.

"Er—Lucius," he remarked. "I think

my Time Rhythm Resonator is working."

I looked. I could see the tubes glowing, right enough.

"Well?" I asked. "Nothing's happening."

"Um—I think I'd better go turn it off anyway. The revolving drum was not working properly and I was about to adjust it—"

He dropped to the ground and started toward the thing. I dropped behind him and started that way too, just as the three tipsy chimps on their gaudy motorcycles came past a third time, still rocking and swaying, whooping, Joker beating the drum.

"Look out!" I yelled, and leaped. They went past underneath, dust spurting, and back in the tree again I turned, to discover Jupiter on the next branch.

"You and your discoveries!" I grated between my teeth.

But he wasn't listening. He was staring at his apparatus, and he looked worried.

"Er—Lucius," he said. "I think my Time Rhythm Resonator is working."

I could see the tubes glowing, right enough.

"Well?" I asked. "Nothing's happening."

"Um—I think I'd better go turn it off anyway. The revolving drum was not working properly and I was about to adjust it—"

He dropped to the ground, and I after him. Just as we did so, I saw the three chimpanzees on their vaudeville-act cycles roaring around the oak at us again, and it flashed through my mind that all this was very familiar. That we had, in fact, just done it all a moment before—

Then, leaping, I was in the tree again, the chimps were zooming by underneath, and Jupiter was clinging to the next branch.

And I knew! Jupiter's machine was stuck, like a phonograph with a cracked record! It wasn't changing the present to the past, but *repeating the present over and over again!*

Bitter horror overwhelmed me. We were doomed to keep leaping up into that oak while three drunken chimpanzees tried to run us down until—until—My brain reeled.

"You and your discoveries!" I screamed.

Jupiter did not answer. He was staring at his machine—

It was after the little act had been repeated for the tenth time—I think it was the tenth, though it seemed as if we spent days hopping up and down out of that tree—that King and Queenie and Joker, instead of trying to run us down, swerved and brought their motorcycles to a stop. They leaped off and began turning somersaults, as if waiting for the applause. Jupiter rushed across to his machine and clicked a switch. Then he mopped his brow.

"Goodness," he said mildly. "I'm certainly glad I put in that automatic cut-off switch. The drum was caught in one position, and—"

"—and time kept repeating itself around here!" I yelled hoarsely. "We were stuck in time! Talk about being in a rut! If that machine hadn't stopped we'd have spent eternity dodging intoxicated chimpanzees on motorcycles!"

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"Any apparatus may have a bug or two in it at first," Jeremiah Jupiter said, but I could see he was slightly shaken. It had been hot work, jumping up and down out of that oak, and Jeremiah does not like exercise. His pink face was bedewed with perspiration.

"However," he went on briskly, "I have that fixed now. Now to turn the resonator around, so its field of operation will be directed toward the mounds, and we're all ready."

HE MOVED the square box about, did a few things to it, and turned toward the chimps. Sobered and abashed now, they crouched beside their cycles as if expecting to be punished. Jupiter patted them on the shoulders reassuringly, and got them back onto their motorcycles. Then he fastened King and Queenie's drums to the handlebars, retrieved Joker's drum and fastened that in place too, and lined them up facing toward the mounds.

From the truck he brought out three volumes of the encyclopedia, and gave one to each. The chimps immediately brightened up.

"Now they feel at home," Jupiter informed me. "They have all the trappings of their act. Nothing is missing, so they're reassured. Like children. Everything's all right now. They won't lose control of themselves this time. You'll see."

He pointed into the small sidecars attached to the machines. I saw now that the glittery objects in the sidecars were platinum time capsules.

"Oranges," Jeremiah Jupiter said, drawing the chimps' attention to them. "Oranges," and he made a throwing motion.

"As they ride around throwing out oranges in their act," he told me, "they will throw out my time capsules. Perhaps you understand at last, Lucius.

"In a moment I am going to create a temporal rhythm interference which will reduce the present over these mounds to the past of a million years ago.

"The chimps will ride into that area of the past on their cycles—if only you were more cooperative, Lucius, none of this rather elaborate scheme would be necessary—and as they ride around they will throw the time capsules broadcast over the whole area. One or more is bound to sink into the ground, be covered over, and remain there until the present, to be dug up by the archeologists.

"When I whistle, the chimps will ride back to us, in the present. I will turn off the resonator. In due time one of my capsules will be found. Then I will explain how it came to be there, and no one will be able to doubt my time-rhythm effect thereafter. It is a little complicated, but remember, that is your fault."

"You could run in there and plant a capsule for yourself, Jupiter," I suggested, but he only shook his head.

"It wouldn't be feasible," he retorted. "Now—"

He clicked a switch on his apparatus.

This time nothing went wrong. In an instant a large area of haze formed over the old mounds. This haze thickened at first, but Jupiter fiddled with a dial, and gradually it thinned down until it was just a shimmery area.

Within that space, a great change in the meadow had taken place.

Now great broad fronds grew up from the ground, long tentacles of unhealthy-looking moss drooping from them. In the background were tall spiky trees distantly resembling palms. In the foreground, a hard, sandy beach, covered with curious shells. It was rather like a stage setting seen through a gauze curtain.

Jeremiah Jupiter took a deep breath.

"Lucius," he said, "this is a solemn moment. We are standing here today, and there is yesterday . . . All right, King, Queenie, Joker. Start!"

Unhesitatingly the three chimps started their motorcycles bouncing across the meadow toward the shimmery area of the past that Jupiter's resonator was producing. Steering with one foot, banging their drums with one hand, holding out their encyclopedias as if reading in the other, they charged bravely back into the remote past of their distant forefathers.

Jupiter watched them go, entranced. But I tapped his shoulder and pointed to a spot behind us.

"And there," I said, "is tomorrow!"

Jeremiah Jupiter turned, and his eyes bugged in disbelief.

Behind us was a second hazy area, as large as the first and the same distance away. But within this one there was a glitter of glass and crystal. We saw a wide street, along which low-roofed buildings stretched into the distance. Jewel-like façades shone in the sunshine, and over the roofs of the buildings airships were swooping so rapidly we could not make out what they looked like.

"G-good heavens!" Jupiter stuttered. "My resonator is giving out a harmonic!"

Calling what we were looking at a harmonic seemed to me an understatement.

"Now," I asked, with malicious amusement, "how do you explain that?"

"I—" Jupiter muttered, struggling to collect himself. "I—"

But before he could get his thoughts in order, a shriek of terror sounded behind us. We wheeled.

The three chimps had plunged into the past area, banging bravely on their drums, and for an instant their motorcycles spurned the primordial sands. Then, beyond the trees, a great, toothed head arose, and red eyes stared at them. Above them a shadow swooped down, and King, Queenie, and Joker, pausing not, turned and came right back.

They threw away their books. They threw away their drums. They threw away everything but the time capsules, and crouching low, yelling in horror, they swept straight back at us.

The head of the brontosaurus that had reared up disappeared, and the pterodactyl that had swooped down on them flapped its bat-like wings and zoomed back up into the sky, out of our sight. Jupiter yelled, but the chimps had only one thought now. They wanted to get back to nice, peaceful today.

They came bounding at us, eyes rolling, teeth chattering, and I made one wild leap.

"Duck, Jupiter!" I shouted. "They're going to run us down! They're scared silly!"

Jupiter tumbled after me, just in time. The chimps bounded over the spot where we had been standing and kept on going . . . straight for that future which had appeared where it shouldn't!

"Oh, goodness!" Jupiter squeaked in dismay. "No, they mustn't!"

He scrambled up and dashed for his apparatus. By now King and Queenie and Joker, still howling, were at the very edge of the second hazy space, and still accelerating. Directly before them, broad and smooth, lay the street we could see running into the heart of that crystal and silver city of the future.

As they reached it, Joker, in an automatic response to his training, I dare say, reached down into the sidecar, seized one of the time capsules, and tossed it high into the air. Then—

Then Jupiter, rushing for his resonator, tripped over the ground wire, plunged into the apparatus, and sent it crashing to the earth beneath him.

The silver city, into whose street King and Queenie and Joker had just ridden in their headlong flight, vanished.

So did the chimps.

We were surrounded by nothing but peaceful Jersey meadow.

(Continued on page 129)

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By ARTHUR C. CLARKE

EXILE OF THE EONS

Exiled to an utterly remote future, Trevindor thought he suffered the ultimate punishment . . . until he met the second exile—and learned that the Universe holds things more fearful even than loneliness!

ALREADY the mountains were trembling with the thunder that only man can make. But here the war seemed very far away, for the full moon hung over the Himalayas and the blinding furies of the battle were still hidden below the edge of the world. Not for long would they remain. The Master knew that the last remnants of his fleet were being hurled from the sky as the circle of death closed swiftly on his stronghold.

In a few hours at the most, the Master and his dreams of empire would have vanished into the past. Nations would still curse his name, but they would no longer fear it. Later, even the hatred would be gone and he would mean no more to the world than Hitler or Napoleon or Genghis Khan. Like them he would be a blurred figure far down the infinite corridor of time, dwindling towards oblivion.

Far to the south, a mountain was suddenly edged with violet flame. Ages later, the balcony on which the Master stood shuddered beneath the impact of the ground wave racing through the rocks below. Later still, the air brought the echo of a mammoth concussion. Surely they could not be so close already! The Master hoped it was no more than a stray torpedo that had swept through the contracting battle line. If it were not, time was even shorter than he feared.

The Chief of Staff walked out from the shadows and joined him by the rail. The Marshal's hard face—the second most hated in all the world—was lined and beaded with sweat. He had not slept for many days and his once gaudy uniform hung limply upon him. Yet his eyes, though unutterably weary, were still resolute even in defeat. He stood in silence, awaiting his last orders. Nothing else was left for him to do.

Thirty miles away, the eternal snow-plume of Everest flamed a lurid red, reflecting the glare of some colossal fire below the horizon. Still the Master neither moved nor gave any sign. Not until a salvo of torpedoes passed high overhead with a demon wail did he turn and, with one backward glance at the world he would see no more, descend into the depths.

The lift dropped a thousand feet and the sound of battle died away. As he

No, he would not, he dared not dream. He would only sleep . . . sleep . . . sleep. . . .

stepped out of the shaft, the Master paused for a moment to press a hidden switch. The Marshal smiled when he heard the crash of falling rock far above, and knew that pursuit and escape were equally impossible

As of old, the handful of generals sprang to their feet when the Master entered the room. He walked to his place in silence, steeling himself for the last and the hardest speech he would ever have to make. Burning into his soul he could feel the eyes of the men he had led to ruin. Behind and beyond them he could see the squadrons, the divisions, the armies whose blood was on his hands And more terrible still were the silent specters of the nations that now could never be born.

At last he began to speak. The hypnosis of his voice was as powerful as ever, and after a few words he became once more the perfect, implacable machine whose destiny was destruction.

"This, gentlemen, is the last of all our meetings. There are no more plans to make, no more maps to study. Somewhere above our heads the fleet we built with such pride and care is fighting to the end. In a few minutes, not one of all those thousands of machines will be left in the sky.

"I know that for all of us here surrender is unthinkable, even if it were possible, so in this room you will shortly have to die. You have served our cause and deserved better, but it was not to be. Yet I do not wish you to think that we have wholly failed. In the past, as you saw many times, my plans were always ready for everything that might arise, no matter how improbable. You should not, therefore, be surprised to learn that I was prepared even for defeat."

Still the same superb orator, he paused for effect, noting with satisfaction the ripple of interest, the sudden alertness on the tired faces of his listeners.

"My secret is safe enough with you," he continued, "for the enemy will never find this place. The entrance is already blocked by many hundreds of feet of rock."

Still there was no movement. Only the Director of Propaganda turned suddenly white, and swiftly recovered—but not swiftly enough to escape the Master's eye. The Master smiled inwardly at this belated confirmation of an old doubt. It mattered little now; true and false, they would all die together

All but one

"Two years ago," he went on, "when we lost the battle of Antarctica, I knew that we could no longer be certain of victory. So I made my preparations for this day. The enemy has already sworn to kill me. I could not remain in hiding anywhere on the Earth, still less hope to rebuild our fortunes.

"But there is another way, though a desperate one.

"Five years ago, one of our scientists perfected the technique of suspended animation. He found that by relatively simple means all life processes could be arrested for an indefinite period. I am going to use this discovery to escape from the present into a future which will have forgotten me. There I can begin the struggle again, with the help of certain devices that might yet have won this war had we been granted more time.

"Good-by, gentlemen. And once again, my thanks for your help and my regrets at your ill fortune."

He saluted, turned on his heel, and was gone. The metal door thudded decisively behind him. There was a frozen silence; then the Director of Propaganda rushed to the exit, only to recoil with a startled cry. The steel door was already too hot to touch. It had been welded immovably into the wall.

The Minister for War was the first to draw his automatic.

THE MASTER was in no great hurry, now. On leaving the council room he had thrown the secret switch of the welding circuit. The same action had opened a panel in the wall of the corridor, revealing a small circular passage sloping steadily upwards. He began to walk slowly along it.

Every few hundred feet the tunnel angled sharply, though still continuing the upward climb. At each turning the Master stopped to throw a switch, and there was the thunder of falling rock as a section of corridor collapsed.

Five times the passageway changed its course before it ended in a spherical, metal-walled room. Multiple doors closed softly on rubber seatings, and the last section of tunnel crashed behind. The Master would not be disturbed by his enemies, nor by his friends.

He looked swiftly around the room to satisfy himself that all was ready. Then he walked to a simple control board and threw, one after another, a set of tiny switches. They had to carry little current —but they had been built to last. So had everything in that strange room. Even the walls were made of metals far less ephemeral than steel.

Pumps started to whine, drawing the air from the chamber and replacing it with sterile nitrogen. Moving more swiftly now, the Master went to the padded couch and lay down. He thought he could feel himself bathed by the bacteria-destroying rays from the lamps above his head, but that of course was fancy. From a recess beneath the couch he drew a hypodermic and injected a milky fluid into his arm.

Then he relaxed and waited.

It was already very cold. Soon the refrigerators would bring the temperature down far below freezing, and would hold it there for many hours. Then it would rise to normal, but by that time the process would be completed, all bacteria would be dead and the Master could sleep, unchanged, forever.

He had planned to wait a hundred years. More than that he dared not delay, for when he awoke he would have to master all the changes in science and society that the passing years had wrought. Even a century might have altered the face of civilization beyond his understanding, but that was a risk he would have to take. Less than a century would not be safe, for the world would still be full of bitter memories.

Sealed in a vacuum beneath the couch were the electronic counters operated by thermocouples hundreds of feet above, on the eastern face of the mountain where no snow could ever cling. Every day the rising sun would operate them and the counters would add one unit to their store. So the coming of dawn would be noted in the darkness where the Master slept.

When any one of the counters reached the total of thirty-six thousand, a switch would close and oxygen would flow back into the chamber. The temperature would rise, and the automatic hypodermic strapped to the Master's arm would inject the calculated amount of fluid. He would awaken. Then he would press the button which would blast away the mountainside and give him free passage to the outer world.

Everything had been considered. There could be no failure. All the machinery had been triplicated and was as perfect as science could contrive.

The Master's last thought as consciousness ebbed was not of his past life, nor of the mother whose hopes he had betrayed. Unbidden and unwelcome, there came into his mind the words of an ancient poet:

To sleep, perchance to dream . . .

No, he would not, he dared not dream.

He would only sleep . . . sleep . . . sleep. . . .

TWENTY miles away, the battle was coming to its end. Not a dozen of the Master's ships were left, fighting hopelessly against overwhelming fire. The action would have ended long ago had the attackers not been ordered to risk no ships in unnecessary adventures. The decision was to be left to the long-range artillery. So the great destroyers, the airborne battleships of this age, lay with their fighter screens in the shelter of the mountains, pouring salvo after salvo into the doomed formations.

Aboard the flagship, a young Hindu gunnery officer set vernier dials with infinite care and gently pressed a pedal with his foot. There was the faintest of shocks as the dirigible torpedoes left their cradles and hurled themselves at the enemy. The young Indian sat waiting tensely as the chronometer ticked off the seconds. This, he thought, was probably the last salvo he would ever fire. Somehow he felt none of the elation he had expected; indeed, he was surprised to discover a kind of impersonal sympathy for his doomed opponents, whose lives were now ebbing with every passing second.

Far away a sphere of violet fire blossomed above the mountains, among the darting specks that were enemy ships. The gunner leaned forward tensely and counted. One-two-three-four-five times came that peculiar explosion. Then the sky cleared. The struggling specks were gone.

In his log, the gunner noted briefly: "0124 hrs. Salvo No. 12 fired. Five torps exploded among enemy ships, which were destroyed. One torp failed to detonate."

He signed the entry with a flourish and laid down his pen. For a while he sat staring at the log's familiar brown cover, with the cigarette burns at the edges and the inevitable stained rings where cups and glasses had been carelessly set down. Idly he thumbed through the leaves, noting once again the handwriting of his many predecessors. And as he had done so often before, he turned to a familiar page where a man who had once been his friend had begun to sign his name but had never lived to complete it.

With a sigh, he closed the book and locked it away. The war was over.

FAR AWAY among the mountains, the torpedo that had failed to explode was still gaining speed under the drive of its rockets. Now it was a scarcely visible line of light, racing between the walls of a lonely valley. Already the snows that had been disturbed by the scream of its passage were beginning to rumble down the mountain slopes.

There was no escape from the valley: it was blocked by a sheer wall a thousand feet high. Here the torpedo that had missed its mark found a greater one. The Master's tomb was too deep in the mountain even to be shaken by the explosion, but the hundreds of tons of falling rock swept away three tiny instruments and their connections, and a future that might have been went with them into oblivion.

The first rays of the rising sun would still fall on the shattered face of the mountain, but the counters that were waiting for the thirty-six-thousandth dawn would still be waiting when dawns and sunsets were no more.

In the silence of the tomb that was not quite a tomb, the Master knew nothing of this. And he slumbered on, until the century was far behind—very far indeed.

After what by some standards would have been a little while, the earth's crust decided it had borne the weight of the Himalayas for long enough. Slowly the mountains dropped, tilting the southern plains of India towards the sky. And presently the plateau of Ceylon was the highest point on the surface of the globe,

and the ocean above Everest was five and a half miles deep. Yet the Master's slumber was still dreamless and undisturbed.

Slowly, patiently, the silt drifted down through the towering ocean heights onto the wreck of the Himalayas. The blanket that would one day be chalk began to thicken at the rate of an inch or two every century. If one had returned some time later, one might have found that the sea bed was no longer five miles down, or even four, or three. Then the land tilted again, and a mighty range of limestone mountains towered where once had been the oceans of Tibet. But the Master knew nothing of this, nor was his sleep troubled when it happened again and again and yet again.

Now the rain and the rivers were washing away the chalk and carrying it out to the strange new oceans, and the surface was moving down towards the hidden tomb. Slowly the miles of rock were winnowed away until at last the sphere which housed the Master's body returned to the light of day—though to a day much longer, and much dimmer, than it had been when the Master closed his eyes.

LITTLE did the Master dream of the races that had flowered and died since that early morning of the world when he went to his long sleep. Very far away was that morning now, and the shadows were lengthening to the east; the sun was dying and the world was very old. But still the children of Adam ruled its seas and skies, and filled with their tears and laughter the plains and the valleys and the woods that were older than the shifting hills.

The Master's dreamless sleep was more than half ended when Trevindor the Philosopher was born, between the fall of the Ninety-seventh Dynasty and the rise of the Fifth Galactic Empire. He was born on a world very far from Earth. Few were the men who now set foot on the ancient home of their race, so distant from the throbbing heart of the Universe.

They brought Trevindor to Earth when his brief clash with the Empire had come to its inevitable end. Here he was tried by the men whose ideals he had challenged, and here it was that they pondered long over the manner of his necessary fate.

The case was unique. The gentle, philosophic culture that now ruled the Galaxy had never before met with opposition, even on the level of pure intellect, and the polite but implacable conflict of wills had left it severely shaken. It was typical of the Council's members that, when a decision had proved impossible, they had appealed to Trevindor himself for help.

In the whitely gleaming Hall of Justice, that had not been entered for nigh on a million years, Trevindor stood proudly facing the men who had proved stronger than he. In silence he listened to their request; then he paused in reflection. His judges waited patiently until at last he spoke.

"You suggest that I should promise not to defy you again," he began, "but I shall make no promise that I may be unable to keep. Our views are too divergent and sooner or later we should clash again.

"There was a time when your choice would have been easy. You could have exiled me, or put me to death. But today —where among all the worlds of the Universe is there one planet where you could hide me if I did not choose to stay? Remember, I have many disciples scattered the length and breadth of the Galaxy.

"There remains the other alternative. I shall bear you no malice if you revive the ancient custom of execution to meet my case."

There was a murmur of annoyance from the Council, and the President replied sharply, his color heightening.

"That remark is in questionable taste.

We asked for serious suggestions, not reminders—even if intended humorously—of the barbaric customs of our remote ancestors."

Trevindor accepted the rebuke with a bow. "I was merely mentioning all the possibilities. There are two others that have occurred to me. It would be a simple matter to change my mind pattern to your way of thinking so that no future disagreement can arise."

"We have already considered that. We were forced to reject it, attractive though it is, for the destruction of your personality would be equivalent to murder. There are only fifteen more powerful intellects than yours in the Universe, and we have no right to tamper with it. And your final suggestion?"

"Though you cannot exile me in space, there is still one alternative. The river of Time stretches ahead of us as far as our thoughts can go. Send me down that stream to an age when you are certain this civilization will have passed. That I know you can do with the aid of the Roston time-field."

There was a long pause. In silence the members of the Council were passing their decisions to the complex analysis machine which would weigh them one against the other and arrive at the verdict. At length the President spoke.

"It is agreed. We will send you to an age when the sun is still warm enough for life to exist on the Earth, but so remote that any trace of our civilization is unlikely to survive. We will also provide you with everything necessary for your safety and reasonable comfort. You may leave us now. We will call for you again as soon as all arrangements have been made."

Trevindor bowed, and left the marble hall. No guards followed him. There was nowhere he could flee, even if he wished, in this universe which the great galactic liners could span in a single day.

FOR THE first and the last time, Trevindor stood on the shore of what had once been the Pacific, listening to the wind sighing through the leaves of what had once been palms. The few stars of the nearly empty region of space through which the sun was now passing shone with a steady light through the dry air of the aging world. Trevindor wondered bleakly if they would still be shining when he looked again upon the sky, in a future so distant that the sun itself would be sinking to its death.

There was a tinkle from the tiny communicator band upon his wrist. So, the time had come. He turned his back upon the ocean and walked resolutely to meet his fate. Before he had gone a dozen steps, the time-field had seized him and his thoughts froze in an instant that would remain unchanged while the oceans shrank and vanished, the Galactic Empire passed away, and the great star clusters crumbled into nothingness.

But, to Trevindor, no time elapsed at all. He only knew that at one step there had been moist sand beneath his feet, and at the next hard, baked rock. The palms had vanished, the murmur of the sea was stilled. It needed only a glance to show that even the memory of the sea had long since faded from this parched and dying world. To the far horizon, a great desert of red sandstone stretched unbroken and unrelieved by any growing thing. Overhead, the orange disk of a strangely altered sun glowered from a sky so black that many stars were clearly visible.

Yet, it seemed, there was still life on this ancient world. To the north—if that were still the north—the somber light glinted upon some metallic structure It was a few hundred yards away, and as Trevindor started to walk towards it he was conscious of a curious lightness, as if gravity itself had weakened.

He had not gone far before he saw that

he was approaching a low metal building which seemed to have been set down on the plain rather than constructed there, for it tilted slightly with the slope of the land. Trevindor wondered at his incredible good fortune at finding civilization so easily. Another dozen steps, and he realized that not chance but design had so conveniently placed this building here, and that it was as much a stranger to this world as he himself.

There was no hope at all that anyone would come to meet him as he walked towards it.

The metal plaque above the door added little to what he had already surmised. Still new and untarnished as if it had just been engraved—as indeed, in a sense, it had—the lettering brought a message at once of hope and of bitterness.

> To Trevindor, the greetings of the Council.
>
> This building, which we have sent after you through the time-field, will supply all your needs for an indefinite period.
>
> We do not know if civilization will still exist in the age in which you find yourself. Man may now be extinct, since the chromosome K Star K will have become dominant and the race may have mutated into something no longer human. That is for you to discover.
>
> You are now in the twilight of the Earth and it is our hope that you are not alone. But if it is your destiny to be the last living creature on this once lovely world, remember that the choice was yours. Farewell.

Twice Trevindor read the message. recognizing with an ache the closing words which could only have been written by his friend, the poet Cintillarne. An overwhelming sense of loneliness and isolation came flooding into his soul. He sat down upon a shelf of rock and buried his face in his hands.

A long time later, he arose to enter the building. He felt more than grateful to the long-dead Council which had treated him so chivalrously. The technical achievement of sending an entire building through time was one he had believed beyond the resources of his age. A sudden thought struck him and he glanced again at the engraved lettering, noticing for the first time the date it bore. It was five thousand years later than the time when he had faced his peers in the Hall of Justice.

Fifty centuries had passed before his judges could redeem their promise to a man as good as dead. Whatever the faults of the Council, its integrity was of an order beyond the comprehension of an earlier age.

Many days passed before Trevindor left the building again. Nothing had been overlooked: even his beloved thought records were there. He could continue to study the nature of reality and to construct philosophies until the end of the Universe, barren though that occupation would be if his were the only mind left on Earth. There was little danger, he thought wryly, that his speculations concerning the purpose of human existence would once again bring him into conflict with society.

Not until he had investigated the building thoroughly did Trevindor turn his attention once more to the outer world. The supreme problem was that of contacting civilization, should such still exist. He had been provided with a powerful receiver, and for hours he wandered up and down the spectrum in the hope of discovering a station. The far-off crackle of been speech in a tongue that was certainly not human. But nothing else rewarded his search. The ether, which had been man's faithful servant for so many ages, was silent at last.

The little automatic flyer was Trevindor's sole remaining hope. He had what was left of eternity before him, and Earth was a small planet. In a few years at the most, he could have explored it all.

So the months passed while the exile began his methodical exploration of the there was a burst of what might have static came from the instrument and once

world, returning ever and again to his home in the desert of red sandstone.

Everywhere he found the same picture of desolation and ruin. How long ago the seas had vanished he could not even guess, but in their dying they had left endless wastes of salt, encrusting both plains and mountains with a blanket of dirty gray.

Trevindor felt glad that he had not been born on Earth and so had never known it in the glory of its youth. Stranger though he was, the loneliness and desolation of the world chilled his heart; had he lived here before, its sadness would have been unbearable.

Thousands of square miles of desert passed beneath Trevindor's fleeting ship as he searched the world from pole to pole. Only once did he find any sign that Earth had ever known civilization. In a deep valley near the equator he discovered the ruins of a small city of strange white stone and stranger architecture. The buildings were perfectly preserved, though half buried by the drifting sand, and for a moment Trevindor felt a surge of somber joy at the knowledge that man had, after all, left some traces of his handiwork on the world that had been his first home.

The emotion was short-lived. The buildings were stranger than Trevindor had realized, for no man could ever have entered them. Their only openings were wide, horizontal slots close to the ground; there were no windows of any kind. Trevindor's mind reeled as he tried to imagine the creatures that must have occupied them. In spite of his growing loneliness, he felt glad that the dwellers in this inhuman city had passed away so long before his time. He did not linger here, for the bitter night was almost upon him and the valley filled him with an oppression that was not entirely rational.

And once, he actually discovered life. He was cruising over the bed of one of the lost oceans when a flash of color caught his eye. Upon a knoll which the drifting sand had not yet buried was a thin, wiry covering of grass. That was all, but the sight brought tears to his eyes.

He grounded the machine and stepped out, treading warily lest he destroy even one of the struggling blades. Tenderly he ran his hands over the threadbare carpet which was all the life that Earth now knew. Before he left, he sprinkled the spot with as much water as he could spare. It was a futile gesture, but one which made him feel happier.

The search was now nearly completed. Trevindor had long ago given up all hope, but his indomitable spirit still drove him on across the face of the world. He could not rest until he had proved what as yet he only feared. And thus it was that he came at last to the Master's tomb as it lay gleaming dully in the sunlight from which it had been banished so unthinkably long.

THE MASTER'S mind awoke before his body. As he lay powerless, unable even to lift his eyelids, memory came flooding back. The hundred years were safely behind him. His gamble, the most desperate that any man had ever made, had succeeded! An immense weariness came over him and for a while consciousness faded once more.

Presently the mists cleared again and he felt stronger, though still too weak to move. He lay in the darkness gathering his strength together. What sort of a world, he wondered, would he find when he stepped forth from the mountainside into the light of day? Would he be able to put his plans into—? What was that? A spasm of sheer terror shook the very foundations of his mind. Something was moving beside him, here in the tomb where nothing should be stirring but himself.

Then, calm and clear, a thought rang through his mind and quelled in an in-

stant the fears that had threatened to overturn it.

"Do not be alarmed. I have come to help you. You are safe, and everything will be well."

The Master was too stunned to make any reply, but his subconscious must have formulated some sort of answer, for the thought came again.

"That is good. I am Trevindor, like yourself an exile in this world. Do not move, but tell me how you came here and what is your race, for I have seen none like it."

And now fear and caution were creeping back into the Master's mind. What manner of creature was this that could read his thoughts, and what was it doing in his secret sphere? Again that clear, cold thought echoed through his brain like the tolling of a bell.

"Once more I tell you that you have nothing to fear. Why are you alarmed because I can see into your mind? Surely there is nothing strange in that."

"Nothing strange!" cried the Master. "Who are you—what are you, for God's sake?"

"A man like yourself. But your race must be primitive indeed if the reading of thoughts is foreign to you."

A terrible suspicion began to dawn in the Master's brain. The answer came even before he consciously framed the question.

"You have slept infinitely longer than a hundred years. The world you knew has ceased to be for longer than you can imagine."

The Master heard no more. Once again the darkness swept over him and he sank down into unconsciousness.

IN SILENCE Trevindor stood by the couch on which the Master lay. He was filled with an elation which for the moment outweighed any disappointment he might feel. At least, he would no longer have to face the future alone. All the terror of the Earth's loneliness, that was weighing so heavily upon his soul, had vanished in a moment. *No longer alone. . . .* no longer alone!

The Master was beginning to stir once more, and into Trevindor's mind crept broken fragments of thought. Pictures of the world the Master had known began to form. At first Trevindor could make

nothing of them; then, suddenly, the jumbled shards fell into place. A wave of horror swept over him at the appalling vista of nation battling against nation, of cities flaming to destruction. What kind of world was this? Could man have sunk so low from the peaceful age Trevindor had known? There had been legends of such things, from times incredibly remote, but man had left them with his childhood. Surely they could never have returned!

The broken thoughts were more vivid now, and even more horrible. It was truly a nightmare age from which this other exile had come—no wonder that he had fled from it!

Suddenly the truth began to dawn in the mind of Trevindor as, sick at heart, he watched the ghastly patterns passing through the Master's brain. This was no exile seeking refuge from an age of horror. This was the very creator of that horror, who had embarked on the river of time with one purpose alone—to spread contagion down to later years.

Passions that Trevindor had never imagined began to parade themselves before his eyes: ambition, the lust for power, cruelty, intolerance, hatred. He tried to close his mind, but found he had lost the power to do so. With a cry of anguish, Trevindor rushed out into the silent desert.

It was night, and very still, for the Earth was now too weary ever for winds to blow. The darkness hid everything, but Trevindor knew that it could not hide the thoughts of that other mind with which he now must share the world. Once he had been alone, and he had imagined nothing more dreadful. But now he knew that there were things more fearful even than solitude.

The stillness of the night, and the glory of the stars that had once been his friends, brought calm to the soul of Trevindor Slowly he turned and retraced his footsteps, walking heavily, for he was about to perform a deed that no man of his kind had ever done before.

THE Master was erect when Trevindor re-entered the sphere. Perhaps some hint of the other's purpose dawned upon his mind, for he was very pale. Steadfastly, Trevindor forced himself to look once more into the Master's brain. His mind recoiled at the chaos of conflicting emotions, now shot through with sickening flashes of fear. Out of the maelstrom one coherent thought came timidly quavering.

"What are you going to do? Why do you look at me like that?"

Trevindor made no reply, holding his mind aloof from contamination while he marshaled his resolution and all his strength.

The tumult in the Master's mind was rising to crescendo. For a moment his mounting terror brought something akin to pity to the gentle spirit of Trevindor, and his will faltered. But then there came again the picture of those ruined and burning cities.

With all the power of his intellect, backed by thousands of centuries of mental evolution, he struck at the man before him. Into the Master's mind, obliterating all else, flooded the single thought of—death.

For a moment the Master stood motionless, his eyes staring wildly. His breath froze as his lungs ceased their work; in his veins the pulsing blood, which had been stilled for so long, now congealed forever.

Without a sound, the Master toppled and lay still.

Very slowly Trevindor turned and walked out into the night. Like a shroud the silence and loneliness of the world descended upon him. The sand, thwarted so long, began to drift through the open portals of the Master's tomb.

THE SCIENCE FICTIONEER

Conducted by Frederik Pohl

These reviews are offered as a service to science-fiction readers, to help guide them in the selection of worthwhile science-fiction and fantasy books. For further information on these or any other fantasy books, send a stamped, self-addressed envelope to the Book Review Editor in care of this magazine.

WHAT MAD UNIVERSE *by Fredric Brown. E. P. Dutton & Co.*

Here is a genuinely funny science-fiction story that manages to be good science-fiction, too! When Keith Winton gets in the way of an exploding Moon rocket, he finds himself cast through a dimensional warp into another universe—a strange and unfamiliar world that looks like his own Earth but has significant differences: A druggist joyfully pays him two hundred dollars for a silver quarter, but tries to kill him when Keith offers half a dollar; New York City makes him homesick by day, but after dark it becomes a weird death-trap infested with the deadly "Nighters"; General Eisenhower is a headline name, all right—but because he commands Venus Sector in Earth's desperate defense against spacial invaders.

There are surprises, shocks and laughs by the googol in Fred Brown's *What Mad Universe,* and the only complaint this reviewer has to make is that all the other Fredric Brown books in print are mysteries. If you don't buy another science-fiction book all year, make sure you get this one!

PATTERN FOR CONQUEST *by George O. Smith. Gnome Press.*

Cliff Lane and Stellor Downing, the bitterest enemies of the Solar System, are called to Earth to take on a strange task—to follow a strange little man from another star to fight an unearthly battle and to share in each other's minds. But this is only the beginning, for they find that they have undertaken a lifetime struggle against the enemies of Earth that leads them to far-off solar systems and even to other dimensions before Earth's "secret weapon" can come into action.

George Smith, a radio engineer by profession, has produced scores of entertaining science-fiction stories in the past decade, but none better than *Pattern For Conquest.* This novel has everything—dramatic adventure in interstellar space, glittering intrigue with alien races, and touches of genuine humor. Best of all, it has a "surprise" ending that really surprises . . . and which is not an insult to the reader's intelligence. A big, handsome book, with an outstandingly attractive jacket by Edd Cartier, *Pattern For Conquest* deserves a place in every fan's library.

JOHN CARSTAIRS: SPACE DETECTIVE ***by Frank Belknap Long. Frederick Fell, Inc.***

This is a collection of five novelettes and a short novel detailing the adventures of one John Carstairs, a latter-day Nero Wolfe who collects rare plants and rarer criminals with equal gusto. His adventures include a brush with a wild Diamond Plant, a specimen from his own collection which threatens to destroy New York; an invisible man-killer; a sort of space-warp called a "crater whorl"; and a mutant human with an I.Q. of 310.

Frank Belknap Long is a writer of sensitivity and talent, but neither of these qualities is evident in *John Carstairs: Space Detective,* for the characters are stereotypes and the stories themselves are, in five cases out of six, nothing more than routine detective adventure yarns with some science-fiction grafted on. The sixth story—the short novel called *The Hollow World*—is by no means Long's best work, but it is competent and entertaining, and you are likely to enjoy it.

THE HOMUNCULUS ***by David H. Keller, M.D. Prime Press.***

Colonel Horatio Bumble, U. S. Army Retired, is a man of pleasant will-power; when he decides he wants to do something, he tries not to offend anyone, but neither does he let anything keep him from his goal. Not even when his goal is as strange as the one with which the present book deals: the desire to produce a baby *solo.* With the ancient formula of Paracelsus and the willing cooperation of his wife and two immortals who happen to pass by, Colonel Bumble starts work on his project.

Dr. Keller, who bears a distinct resemblance to his chief character in terms of background and disposition, has been writing science-fiction stories for a quarter of a century. It is inexact to call his work either satire or farce, but it is wrong to call it plain fiction too, for what actually happens in a "Kelleryarn" is of no importance. It is the moral that makes the story. You will find neither "gadget" science-fiction nor guffaws in *The Homunculus,* but you will find amusement and a number of interesting, and utterly fantastic, ideas.

SHOT IN THE DARK, ***an anthology, edited by Judith Merril. Bantam Books, Inc.***

Twenty-two stories and a poem are in this carefully chosen little collection of science-fiction and fantasy, and almost every one is a shocker that you will want to read—and to keep. A dozen favorite science-fiction authors are represented—Sturgeon, Bradbury, Asimov and Tenn among them—but for science-fictionists the stories of greatest interest will probably be those by writers who have made their marks in other fields. Gerald Kersh, Jack London and Philip Wylie are here; so are Stephen Vincent Benét with one of his brilliant "Nightmare" poems, James Thurber with a bit of satire, and Edgar Allan Poe with one of his most shock-producing horror stories. You'll want a copy of this one, but you might as well buy several while you're at it: At its price, and in view of the distinguished names represented, it makes a wonderful bait to tempt your non-science-fiction-reading friends into the fold!

THE STAR KINGS ***by Edmond Hamilton. Frederick Fell, Inc.***

John Gordon, accountant in a humdrum insurance office in New York of the present day, finds himself swept into the future to inhabit the body of the heir-apparent to an Emperor of the Stars. In his new form he is plunged into a dramatic conflict between warring star-kingdoms, but his troubles don't really begin until he finds himself involved in a strange romantic triangle involving the girl he loves, and the other woman, to whom the body he inhabits is married.

The Star Kings is a straightforward science-adventure story, written by a man whose 250 published stories are a reliable indication of his proficiency as a story-teller. There is little subtlety in *The Star Kings,* but there are no dull moments, either.

EXILES OF TIME ***by Nelson Bond. Prime Press.***

Lance Vidor, trapped in an ancient Arabian tomb by revenge-maddened natives, reconciles himself to dying but is snatched out of the closing jaws of danger by a time machine, operated by a man from ancient Lemuria. The Lemurian has an axe to grind: he wants Vidor's "super-scientific" civilization to avert the threatened destruction of Lemuria by an approaching comet. His hopes are shattered when Vidor reveals that the twentieth century, far from being the technologic paradise the Lemurian had hoped, is so dismally backward that they haven't even got time machines of their own. All the same, Vidor does his best, along with a score of other persons kidnaped in time for the same purpose. But it is in vain; the comet strikes, Lemuria is destroyed, and Vidor flees back to his own age.

The author of *Exiles of Time* evidently felt that, if one idea is a good thing to have in a science-fiction story, then twenty ideas must be twenty times as good. Almost nothing is left out of this curious hodge-podge of a book, the items included being as diverse as time-travel, the ancient legend of Ragnarök, some muddled metaphysics and a quantity of plain action-adventure, comprising almost a third of the book, which serves no purpose except to get the hero into the dangerous spot from which the time machine extricates him.

It is a tribute to Bond's unquestioned skill with words that all these things are tied together tolerably well and entertainingly, in spite of everything. But even so, the book, which is further handicapped by an obtrusive and difficult type face, does not compare with his other work.

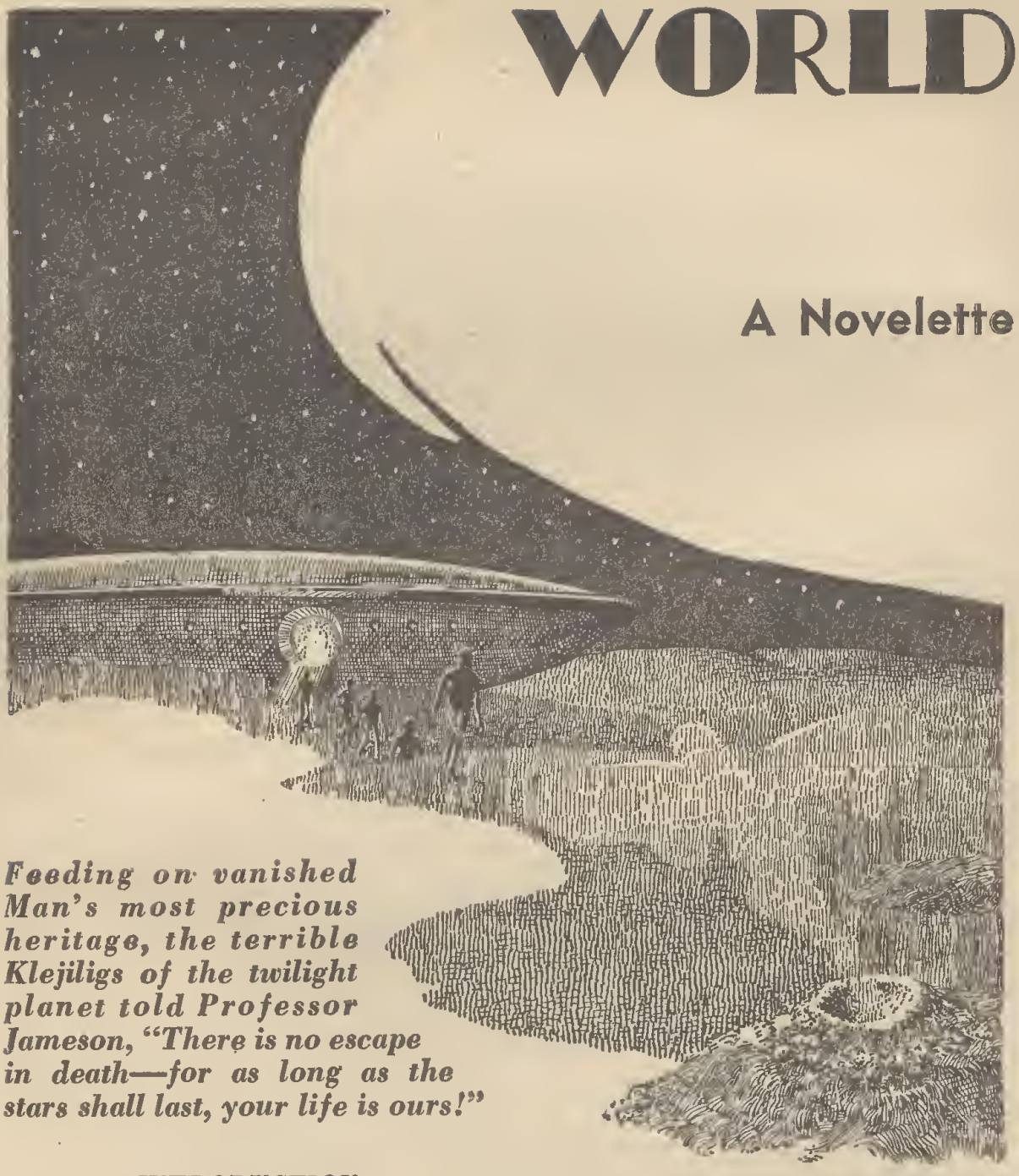
Forthcoming Fantasy

The coming spring and early summer will have a heavier dose of fantasy books blossoming into print than any previous six months in history. Doubleday & Co., possibly the world's hugest publishing company, is following up its highly successful first science-fiction book, *The Big Eye,* with a lineup of four first-class novels: Isaac Asimov's *Pebble in the Sky,* Ray Bradbury's *The Martian Chronicles,* Hal Clement's *Needle,* and an untitled book by Robert A. Heinlein. Pellegrini & Cudahy is doing Fritz Leiber's *Gather, Darkness!,* a dramatic novel of a world under the heel of a pseudo-religious tyranny. Simon & Schuster have announced Will Stewart's *Seetee Shock* and a novel by A. E. van Vogt called *Cruise of the Space Ship Beagle.* Gnome Press starts off with an anthology edited by Martin Greenberg, *Men Against the Stars,* which traces the future history of space exploration in stories by Asimov, Hubbard, Clement, Walton and others, and follows up with Clifford Simak's *Cosmic Engineers, The Castle of Iron* by L. Sprague de Camp and Fletcher Pratt, and more. Fantasy Press announces a new novel by E. E. Smith, Ph.D., called *First Lensman,* as well as *Genus Homo* by P. Schuyler Miller and L. Sprague de Camp.

More than that, the readers of four major book clubs will soon be treated to science-fiction novels as regular selections, *Pebble in the Sky* and *The Big Eye* being two of the books so honored. No fewer than three weekly science-fiction television shows are in prospect or in production, and five Hollywood studios have science-fiction movies in progress, with Robert A. Heinlein and L. Ron Hubbard each working on a scenario right now. It looks as if science fiction's here to stay!

WORLD

A Novelette



Feeding on vanished Man's most precious heritage, the terrible Klejiligs of the twilight planet told Professor Jameson, "There is no escape in death—for as long as the stars shall last, your life is ours!"

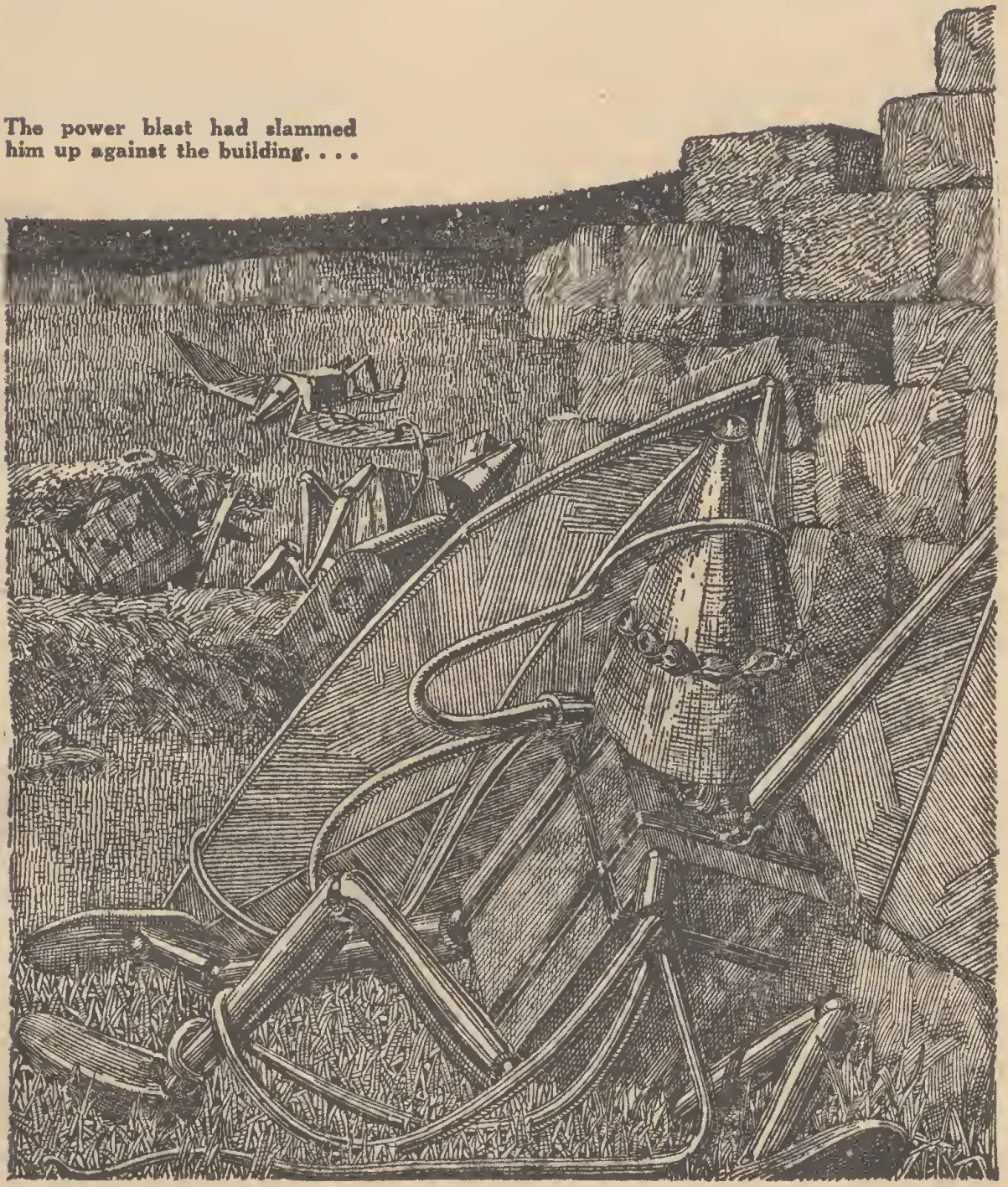
INTRODUCTION

PROFESSOR JAMESON'S first love had been the age-old science of preservation of the dead. He had looked upon the best the Egyptians could do, including the remarkably preserved General Ossipumphnoferu. There must be a better way, he argued. It was not until he cultivated his later interests in rockets that the perfect answer blazed into his imagination.

Interment in space. No bacteria, no earthquakes, no fire or water, and no danger from the ever-questing spade of the archaeologist. The Egyptians had striven for achievement measured in thousands of years, and their results, though impressive, had been found wanting. The professor's ambitions encompassed millions of years. He determined to be his own guinea pig. He would build a funeral rocket for himself and have his body shot into the cosmic void to become a second

WITHOUT • • DARKNESS

by NEIL R. JONES



The power blast had slammed him up against the building. . . .

satellite of the Earth. On the privacy of his estate near the little village of Grenville, he built the rocket. It lay at the foot of its long ejector tube in a leaning tower. Instructions were left with a nephew.

Professor Jameson died early one December morning. It was not until then that Douglas Jameson became aware of the sealed plans which were left for him. Mystified, he did what he was told. He robbed the grave vault at night, placed the body in the rocket, set off its mechanism, retreated to a safe distance and watched the glistening projectile take off in a blaze of glory. He then set fire to the laboratory and buildings as directed.

Forty million years after, in the shadow of a dying world from which humanity and subsequent cycles of life forms had long ago departed, cosmic wanderers from the planet of another star chanced upon the Jameson satellite in their eternal explorations throughout the universe.

These strange adventurers appeared to be machines, with their metal cubed bodies, four metal legs, six metal tentacles and a metal coned head, but they were not entirely so. Beneath the mechanical eye which stared straight up from the apex of the coned head, and within the circle of similar eyes surrounding the head, an organic brain transferred from what had been an intelligent organism directed the functions of the mechanism. They were from the planet Zor. Professor Jameson had found immortality of the body in death. The Zoromes had done better than that. They had found conscious immortality in brain transposition to deathless machines. When a part wore out, it was replaced.

Approach of their spaceship to the rocket satellite was difficult, the machine men found. The professor had planned well, and the installation of proximity detectors automatically operated the radium repulsion rays which were a safety device against wandering meteors. Telepathic thoughts flew thick and fast among the excited machine men as they found it necessary to use gravitational force and proximity nullifiers to close with the elusive coffin.

Opening the professor's rocket satellite, they found him as perfectly preserved as on the night of his pilgrimage out into the depths of interplanetary space. They effected a brain transposition to one of the machines and recalled to life his long-dormant brain. In this manner Professor Jameson became a Zorome, one of the cosmic crew always in search of the unusual as they traveled from star to star. He took a new name—21MM392.

In the years that followed, Professor Jameson became a seasoned mariner of the interstellar spaceways, and his adventures were innumerable. Once, he and his companions returned to the planet Zor, and a new expedition was outfitted under the leadership of the professor and 744U-21. Strange worlds and strange forms of life occasionally punctuated the scientific routine of their travels. It is one of these occasions which the reader will find chronicled.

CHAPTER ONE

Doom Planet

THE BLAZING star which the machine men were approaching grew larger. They watched the blue-white giant expand as the spaceship raced into its planetary system. "Planetary system", however, was almost an overstatement. There was only one planet, moving away from them toward opposition.

The ship of the Zoromes sped onward. They soon came near enough for the planet to take form.

"It seems quite bright and full for the position it holds," Professor Jameson observed. "Its position is little more than past quadrature, and by rights all that

should be visible would be scarcely more than a sunlit first quarter."

This oddity became more noticeable as the planet loomed larger. Not only did the sunlit side of the world gleam brightly, but what they were able to see of the hemisphere away from the sun was also illuminated, though with a more subdued glow. It was like moonlight, yet the planet had no moon. Also, as 6W-438 pointed out, the light was stronger than moonlight.

"What we see from this particular angle is probably a refraction of light from the sunlit half," ventured 744U-21. "The atmosphere of the planet is probably of a peculiar quality which enhances the refraction."

This seemed a reasonable theory until the spaceship came closer. There was the usual refraction, but it was not abnormal, and the strange illumination continued. Moving over the darkened half, the machine men found this night light of a steady, uniform quality. The soft glow was not strong enough, however, to encourage telescopic observation of the darkened hemisphere, so the Zoromes focussed their attention on the sunlit side of the slowly rotating world. The period of rotation slightly exceeded that of Professor Jameson's own Earth at the time of his death, he found.

"Is there life on the planet?" 744U-21 wanted to know.

"Yes—and evidently intelligent life, too," 29G-75 concluded from his telescopic observation. "There are cities, or at least some kind of communities."

Skirting the vicinity of what appeared to be a city of major size and importance, the machine men selected a smaller group of dwellings. It would be well to become acquainted with a few of the planet's inhabitants and find out how they would be received.

On the daylight side of the planet, 20R-654 piloted the ship to a stop near a group of low, dome-shaped buildings which were not very high and appeared to be interlocked and cross-connected with one another by corridors. From a distance, these habitations were a dull red in color. The machine men found later that they were made from small pieces of rock cemented together. The cement was red. High, narrow doors and triangular windows characterized the dwellings.

6W-438 was first out of the ship. "There is no one about."

"I feel thought waves now and then," Professor Jameson said.

"I get it, too, 21MM392," 744U-21 assured him, "yet the quality of the thoughts is not that of a frightened or hostile populace. In fact, they are thoughts from creatures who seem not yet aware of our presence."

"They must be in those buildings," said 12W-62. "If they do not come out, let us go and look for them."

Several machine men entered the domes through doorways much higher than their heads. To those outside, they radiated the impressions of what they saw. There were evidences of interrupted daily life, yet they found no life of any kind.

"The thought impressions are a little stronger," 41C-98 radiated. "We seem closer to them now. I think that they have subterranean retreats here. The thought impressions are of a character which suggests a sleep period."

From all the habitations entered, the same report emanated. No one at home.

"Do not seek them out further," the professor advised. "We shall wait for them to come to us. Let us see what their period of night brings forth. We shall see then, too, how it stays light on this world after the sun is gone."

But the Zoromes did not have to wait for the illuminated night to come. As afternoon grew old, and while a cooling, subdued sun still hung above the horizon short of sunset, the machine men saw

something emerge from a doorway and walk wonderingly towards them. Others, of a like appearance, followed on the heels of the first.

As the machine men had previously surmised from the height of the doorways, these upright creatures were a good eight feet in height. A pair of jointed, stalk-like legs supported the small body of pale green over which was worn a scanty tunic and various bright-colored straps. A pair of long, thin arms ending in three-pincered claws hung almost to the knee-joints. Large, bulging eyes stared curiously at the Zoromes from a round head. The mouth was but a thin slit, and instead of hair a horny growth projected from the head. What the space wanderers supposed to be organs of hearing were several short and angular antennae on each side of the head, slightly above and behind the large eyes.

A ROUGH, grating jangle of sound vibrated from the lips of the foremost giant.

"Are you come from the Klejiligs for those who die?" the machine men gathered in the thought.

"No, we are not from your world at all," Professor Jameson impressed on their brains. "We are strangers, peaceful visitors from space."

He waved a tentacle which took in the ship and the sky illustratively along with his silent thought impression, but the creatures did not entirely comprehend. They only gathered that the machine men were not from the source they had mentioned and that they came in peace and meant no harm. They were confused to find they understood something they had not heard. The professor sought to allay this confusion in order to learn from them what the machine men wanted to know.

"We are speechless and without the ability to make sounds like you," he told them, "but our thinking is so strong that talking is made unnecessary and we can put our ideas into your heads as well as read what is in your minds."

This both relieved and reassured the creature. Others of the species were coming out of the buildings to join the little gathering, and a crowd slowly collected and grew larger during the subsequent exchange of thoughts.

"I am Zryp." The chief spokesman spoke his name emphatically several times. "Why do you come to a village of the Bronimids?"

"To learn about you and your ways of life."

"They are none too happy ways," Zryp said dolefully. "It is time for those who must die to be taken by the Klejiligs."

"What sort of sacrifice is this?" asked Professor Jameson. "Why must they go and die?"

"They would die anyhow, even if they hid and did not go with the Klejiligs," said the Bronimid, staring down at his metal audience. "I have seen this happen once the marks of death appeared, and we know such a one to be doomed."

"But why do they go with these Klejiligs, which I gather from your thought impressions are a scientific race of beings smaller than yourselves?"

"They do a great many good things for us if we let the condemned go with them," Zryp replied simply, "and they can do us much harm if we do not go when we are marked by death."

"But why do they want your dead and dying?"

"They do not tell us that."

There was something resigned and fatalistic in the Bronimid's attitude towards the mysterious transaction. It had always been so. It was. It would always be.

"We thought you came from the Klejiligs to get those of us who will soon die. We know that they create many machines and thought that you were a new kind."

"Where were you when we came?" 744U-21 inquired. "We saw no one about and even looked into your houses and could not find you."

"Most of us were asleep down below. We all go below during the time of much light."

"Why then?"

"It is always so."

Now another of the creatures stepped forward.

"I am Ajik," he announced. "I have been to Greoow. There are those in Greoow who say we have always kept in out of the brighter light because we live longer if we do. Is it not so, Blopk?"

Ajik's nearby companion, who had also been to Greoow, not only admitted the truth of the other's statement but added to it. "We do live longer by staying in out of the period of greater light, but it is because we live slower this way. Those who live too much in the greater light die more quickly. Their life span is cut short sooner by the signs of the coming death."

"What is this coming death like?" Professor Jameson asked.

Ajik called into the crowd, and four of the Bronimids slowly elbowed their way out of the crowd and stood before the machine men.

"Look at their eyes," directed Ajik.

The machine men saw that their eyes were of varying shades of red pigmentation. By contrast the normal color of the eyes was a dull blue.

"Look at their skins," continued Ajik.

The machine men now clustered around the four who were to die and noticed that their skins had taken on a bluish cast. The natural color was light brown, almost yellow.

It was becoming a little more difficult for the machine men to see. The sun had gone down. They wandered back and forth among the Bronimids, noticing the differences between those in health and those marked by the premature death which was taking them out of the prime of their lives. The Bronimids, with their unusually large eyes developed from having lived in the lesser light all their lives, did not notice the change in visibility. The machine men gathered that coming out at all during the later hours of the day had been a luxury undulged in by the Bronimids because of the curiosity they had aroused. Philosophically, they expected to pay for this extra time by losing that much time from the ends of their lives.

"Look!" 12W-62 suddenly announced. "These poor devils they say are soon to die show another symptom! Look at the soft glow of light coming from him!"

"Yes," 119M-5 said, "and the other three are commencing to glow a bit, too."

"But how about this one?" 6W-438 demanded, designating still another Bronimid. "He is not among those who are supposed to die. His eyes and skin are natural, yet he is glowing, too."

"If you will look around you," said Professor Jameson, waving a sweeping tentacle, you will notice that all these creatures are starting to glow."

The machine men, who had been engrossed in those near to them, looked around them. It was so.

6N-24 made a further discovery. "Their houses are glowing, too!"

"The very ground we are standing upon glows!" exclaimed 240Z-42. "Everything in sight but ouselves and the spaceship sheds this glow!"

"Then that explains the night-side illumination," 41C-98 summed it up. "The planet itself and everything which grows here has a phosphorescent character."

THE MACHINE men decided to wait for the coming of the Klejiligs, inasmuch as they were expected. Meanwhile, they learned something more of their strange hosts. They reached maturity, but very rarely died of old age.

Those who were lucky enough to escape an early death were hustled away by the Klejiligs once the latter discovered them. In this entire village of almost a thousand individuals, the machine men saw no more than two old Bronimids. The Zoromes estimated that the strange death was robbing these creatures of better than half of their lifetimes, or most of the adult stage. Besides the four Bronimids they had already seen marked for death, the machine men found that there were eleven more awaiting the coming of the Klejiligs. All fifteen, on examination, showed a complex syndrome which the machine men found puzzling. Without having had their subjects under observation over a long period, they found it difficult to separate cause from effect.

The machine men were also unable to find out much about the Klejiligs. The Bronimids seemed disinclined to discuss them. A small minority of the populace betrayed a resentment and a disciplined antagonism towards the Klejiligs, but fear, too, was always present, partly because of the grisly errand the Klejiligs came upon and partly because of their superior knowledge.

"No wonder they know more than these people," the professor said. "They have a chance to live out their lifetimes and progress; these people do not. What is more, the Bronimids have no ambition for the same reason—they are fatalists, because they know their lives will be too short to accomplish anything of value."

The following night, if night it could be called on this planet which the Bronimids called Ilinikit, the Klejiligs came in a large airship which was dwarfed in size, however, by the spaceship of the Zoromes. The airship circled above the spaceship several times before landing almost inside the village.

Out of the airship walked seven figures which the machine men took for Klejiligs. They were little more than half the size of the creatures they held in subjugation. It seemed clear to the Zoromes that the two races had descended from a common ancestor, for there were marked resemblances. As the Klejiligs walked into the village where the machine men and the villagers awaited them, the differences between the two species stood out more strongly. The Klejiligs were a physically weaker but mentally stronger race than the Bronimids. Their features, although resembling those of the Bronimids, were more refined.

The greatest difference the machine men found between the two races was in their mental structure. In the minds of the Klejiligs, the open simplicity and direct honesty of the Bronimids had no place. Suspicion, distrust and fear of the great spaceship and of the machine men lay in the minds of the newcomers. And once they became aware of a probing intelligence comparable or superior to their own, they betrayed another of their accomplishments which the machine men did not often find among intelligent lifeforms in their travels. The Klejiligs instantly threw an impenetrable veil across their thoughts.

"What are these things?" they asked of the Bronimids.

"Strangers who come in peace among us," Zryp told them.

"And in search of knowledge," Professor Jameson radiated strongly.

"You are machines," one of the Klejiligs spoke mechanically as he felt his unguarded thought instantly picked up and understood. "Who made you? Where are you from?"

"From out among the stars," the professor told him. "We made ourselves, for once we were flesh and blood, even as you. Now, only our brains remain; the rest of each of us is a machine guided by the brain."

The Klejiligs were visibly impressed but they also divined that the coming of

another intelligent race to Ilinikit boded no good to them. "We are glad that you come in peace, and we hope that you will depart so. We come to befriend these larger but less fortunate creatures than ourselves."

"By burying their dead for them?" 744U-21 asked.

An embarrassed and irritated frame of mind among the Klejiligs resulted from this remark. Conversation buzzed among them momentarily. The machine men found that the leader and spokesman for them was named Gnoob.

"We also use them in scientific experiment," Gnoob informed them. "It is for their good as well as ours."

"It does not seem to have extended their lives beyond reach of the strange sickness," Professor Jameson pointed out at once.

"They die when it is time for them to die," came the censored thought impression from Gnoob. "They do not live as long as we do, it is true; our natural span of life is longer than theirs. Their death is marked by these preliminary symptoms which you metal things have mistaken for sickness. On this world, we all must die eventually. There is no antidote for death."

Gnoob turned to the business at hand which consisted of taking aboard the airship all those marked with the symptoms of approaching death.

"How many are there?"

"Fifteen."

"Gather them here and let us be gone back to Greoow."

Word was quickly passed around, and soon the silent little group marked for death stood ready beside the airship. Heads were counted.

"There are only thirteen," Gnoob said. "Two are missing. See if they are not already dead. Bring their bodies."

A thorough search was made, but no sign of them was found.

CHAPTER TWO

Winged Death

IT WAS a taciturn and gloomy Bronimid among the condemned group by the airship who finally threw light on the whereabouts of the missing pair.

"I saw Gilik and Mig near the big flyer of the metal ones."

"They are hiding from their destiny and duty in that thing, then," one of the Klejiligs said. "Let them be removed and brought here. Such a thing cannot be allowed."

The machine men alerted their companions inside the spaceship, and a search was made. The luckless stowaways were found by 199Z-073 and brought forth.

"Come—this is against law and tradition," Gnoob sternly counseled them.

"Whose law—theirs or yours?" Professor Jameson asked. "It is their privilege to stay here and die if they wish."

"And pollute the air with the stench from their rotting bodies?" Gnoob demanded.

"They will be buried in the ground after they die."

This seemed an entirely new idea to the Klejiligs. Gnoob parried the suggestion.

"What difference? They will die anyway. It seems to me that you metal things take too much upon yourselves. You would be better off not to interfere with our customs. All but two of these people come willingly."

"I wonder," said 744U-21, then directed a mental radiation to the doomed group. "You need not go with the Klejiligs in their airship unless you wish to. You have the privilege of staying here and dying in your own village. Those among you who would stay, go and join Gilik and Mig."

Confusedly, the thirteen Bronimids considered the thought. Two of them broke the uncertainty by joining Gilik and Mig.

Another straggled over soon afterwards, and finally another. The remaining nine appeared bound by tradition, or else did not see any difference either way.

"This sacrilege has gone too far!" raged one of the Klejiligs.

For the first time, the machine men noticed that the superior race carried weapons. A metal rod was whipped from the Klejilig's harness and aimed quickly at 744U-21, who was knocked down in a clattering heap. The Klejilig had no opportunity for further damage as Professor Jameson raised a fore tentacle which carried a built-in heat ray. The belligerent Klejilig was quickly burned into a smouldering mass of ashes as his companions and the startled Bronimids looked on. Meanwhile, 744U-21 arose to his feet and announced himself unharmed.

"Some kind of force gun," he said. "It has considerable power and would probably kill one of the Bronimids."

"Take those among the dying who would go with you and begone," Professor Jameson told the Klejiligs. "Otherwise, we shall destroy all of you as well as your ship."

The angry Klejiligs hurriedly gathered the nine Bronimids into the airship, fearing that more of them might change their minds and stay in the village. Also, they were impressed by Professor Jameson's threat. As they left, however, the machine men caught veiled thoughts of reprisal. They expected to have more trouble with the Klejiligs.

The machine men took the six doomed Bronimids into the spaceship and put them under the observation of 65G-849 and 168P-75, who had already been examining the condemned creatures prior to the arrival of the Klejiligs.

In the days that followed, first one of the Bronimids died, then immediately afterwards another one. This left four. Both 168P-75 and 65G-849 were examining healthy Bronimids in various stages of their interrupted lifetimes, as well as those marked for death. They also had one of the rarities of the village, old Hilig, under observation.

"I have to hide when the Klejiligs come," he confided, "else they would take me away. It is against the law and customs for any of us to be old."

"What happened to you?" 168P-75 asked. "Why are you different from the others?"

"I don't know. There are some of us who do not die like the others; but no one knows why."

The intelligence of Hilig and the other oldster was higher than that of the other Bronimids, they discovered. The wily old dodger had learned to efface this advantage. He wanted to remain inconspicuous and live.

"There is something strange about their bloodstream," 65G-849 reported. "It seems to have a kind of corpuscle which remains dormant until they attain maturity. Then it becomes activated, and we see the various symptoms preceding their death."

"What about old Hilig?" the professor asked.

"He does not have the corpuscle at all. Probably he never had it. As the Bronimids approach closer to death, there seems to be a congestion of these corpuscles around the heart. Several other organs also undergo change during the symptomatic period."

The two dead Bronimids were buried outside the village in the shadow of a ruined building. The living Bronimids watched this unheard-of ritual at the new graveyard. There was an uneasy muttering that the Klejiligs would not permit it. Old Hilig offered a strange prophecy.

"They will not stay dead that way. . . ."

Then three more of the condemned group died almost at the same time. The machine men buried them also.

Finally, the last of the six Bronimids died. It was during the last burial that the machine men noticed that the first grave had been tampered with. The ground at one point was loose and disturbed.

"The grave could not have been robbed," was 6W-438's opinion. "The point of entrance is too small. It looks as if a small creature had scented the body and dug down to it."

Questioning of the Bronimids shed no light on the matter. They knew of no animal capable of digging down into the ground, even though it was easy digging where the soil had recently been turned. The machine men thought little more of the matter until a Bronimid reported to them a day later that he had found two more of the graves in the same condition as the first. The bodies of all three disturbed graves were exhumed. It was found that something had eaten into the bodies.

"The hearts of all three are gone and nearby organs and tissue have been partly consumed," 168P-75 reported. "It is exactly the same in all three cases."

"We shall set a guard over the remaining three graves," the professor decided, "and be on the watch for these things, whatever they are."

FROM that time on, five Zoromes kept constant vigil by the graves through both periods of varying light. Nothing happened until two days afterwards. It was during the lesser period of light, when the sun lay on the opposite side of the world.

"Look!" 119M-5 called to the other four sentinels.

The machine man waved a tentacle towards one of the graves. There was a strange agitation of the ground, like a tiny earthquake. As the five watched, the ground belched upward slightly in a small area near the middle of the grave and something emerged and shook the dirt from itself. The five Zoromes were not entirely in agreement over what happened next. There was not much to see in the first place; and it happened too quickly.

"It was small," 119M-5 remembered. "And after shaking off the dirt, it was difficult to see."

"It was colorless, almost invisible," 12W-62 added.

"Whatever it was," said 284D-167, "the thing ran off so swiftly I could scarcely see it go."

"No—it flew," 27E-24 said. "At first it went close to the ground, but I saw it rise and veer upwards."

On one thing they all agreed. The thing had come from the ground. It had not entered the ground at any point within their vision and burrowed down to the grave. A close search of the vicinity, including the ruins, showed no other entry or betrayed any burrows, either old or new.

"One point is clear," Professor Jameson summarized. "Something in the ground is desecrating these graves and feeding on the dead—possibly a worm or grub which undergoes a physical change once it has eaten. It could possibly develop wings. We know of such things in our travels. On my own world, a common fly developed in much the same manner."

"We must catch one of the things," 744U-21 decided. "It seems certain that it will happen with the two remaining graves. The sentinels will wear the metal wings this time. And also, a pair of X-ray machines will be mounted over the graves, and we shall see what goes on down there, and where these things come from."

Everything was done as 744U-21 had suggested. Professor Jameson selected 6W-438, 47X-09, 5ZQ35, 6N-24 and himself to handle the assignment. All five wore the metal wings. Two of the ma-

chine men were always at the X-ray machines, watching the shadowy outlines of the two buried Bronimids and on the alert for any alien forms burrowing into their field of vision. Although they watched carefully, they saw nothing.

"Although we have seen nothing enter the bodies from the outside, there nevertheless seems to be activity inside them," 6N-24 reported.

"It is the usual gathering of the strange corpuscles in the bloodstream," 47X-09 offered in explanation.

"But they are dead," Professor Jameson pointed out.

"To my knowledge, neither 65G-849 nor 168P-75 kept the Bonimids under observation after death," 6W-438 hinted. "It might have been well had they done so instead of burying them so soon."

While they digested these thoughts, 6N-24 made a further discovery. "Something is forcing its way out."

The others looked. It was so. Something small had left the body and was burrowing upward.

"Get the trap!" exclaimed the professor. "Be ready to catch it when it breaks through the surface!"

The machine men held a metal box ready to clap down and release a sliding panel once they had their quarry.

"Watch the other corpse," the professor warned.

Slowly but steadily, the thing burrowed upward, holding the attention of the five Zoromes. 5ZQ35 kept a wary eye upon the other grave, and the first thing had almost reached the surface when he excitedly announced the emergence of the second one from the grave of the last Bronimid.

So engrossed were the five machine men at what went on below them, they did not notice a large, shadowy oblong shape glide above them in the night sky like a phosphorescent ghost. They were almost ready to lay the trap over the thing which was making little quakes in the soil, when a terrific blast of power sent the five Zoromes, their trap and X-ray machines flying in all directions.

Professor Jameson picked himself up some distance from the graves. The blast of power had slammed him up against the crumbling old building near the graveyard. He saw the shadowy ship of the Klejiligs land softly. He saw his four metal companions lying about helter-skelter, dazed and disorganized. He saw the wreckage of the X-ray machines, and he saw something else. It was the strange thing from out of the ground, emerging from its ghoulish feast on the inner organs of the dead Bronimid they had buried many days ago.

The thing shook the dirt from its body, and then he saw that it was almost transparent. While he stared fixedly at this strange demon from the ground, he scarcely noticed the aperture in the airship which had opened noiselessly to let out several of the Klejiligs. His mechanical eyes never left the thing from the grave, and he saw it rise and fly on almost invisible wings straight into the opening of the airship where the Klejiligs had emerged. The Klejiligs saw it, too, but gave it only passing attention. These ghoulish flying animals, then, were minions or emissaries of the master race of Ilinikit.

6W-438, near the airship, staggered to his feet but instantly went down from a power blast wielded by a Klejilig. Four Bronimid lackeys leaped out of the ship to secure the machine man with chains and dragged him back inside a prisoner. The act was quickly repeated with 5ZQ35 and 47X-09. Professor Jameson tried to rise to his feet and forestall the capture of the machine men but the force of the blast which had thrown him against the building had bent three of his mechanical legs, and he could only drag himself in a small, futile circle.

IN SWIFT, workmanlike manner, a Klejilig now led the four servile Bronimids to secure the professor. Professor Jameson recognized the Klejilig as Gnoob, but Gnoob did not recognize him. Gnoob raised his power tube a split second too late as Professor Jameson flicked his tentacle ray blazing a charred circle through the Klejilig's head. Gnoob fell dead, and the terrified Bronimids fled to the airship. The ship took off in the night, the door slamming shut.

Only the professor and 6N-24 remained. After carefully noting the direction the airship had taken, Professor Jameson found that although his metal legs were crippled he could still fly with the metal wings, and he glided over to where 6N-24 lay. He found the machine man recovering from a mental confusion occasioned by a severe blow to his head.

Bronimids from the village came running on their long legs, and the machine men were not far behind them. They had heard the screams of the burned Bronimids. The professor found 6N-24's wings crumpled and his legs bent, his tentacles tangled with the wreckage of an X-ray machine through which he had been watching the upward progress of the thing out of the ground. Watching the ghoulish creature dig upward had been the last thought on his mind when the power blast came; it was his first thought when he recovered his senses.

"See, 21MM392!" he cried. "The ground over the last grave!"

The professor looked and saw the last thing from the ground shaking the dirt from its body. Then it flew into the sky. Quickly, Professor Jameson turned and flew after it in fast pursuit above the heads of the running machine men and taller Bronimids beneath him. The thing flew rapidly, but not too quickly for the professor to follow. He was glad that it flew a straight, direct route. Otherwise, he might have lost sight of it, so vague and wraithlike, a mere foggy halo against the sky. He flew behind and underneath to keep from losing it against the luminosity of the landscape.

It was his first intention to capture and return the thing to the spaceship, but on second thought he recognized the wisdom of letting it guide him to the airship's destination, which he suspected was somewhere in Greoow. He was confident that the flying ghoul would instinctively go wherever the other one had gone in the airship. So he slowed his flight, keeping the white, ghostly blur within a safe distance.

It was not a long journey by air flight, he found. Greoow soon expanded upon the horizon.

Not until they were over the center of the city did the thing swoop downward. The machine man almost lost it, but recovered in time to see it glide down towards a broad, high building in the center of the city which the professor guessed to be the headquarters of the Klejiligs. The building sprawled like a great, flattened giant over the center of Greoow and made the other buildings around it appear dwarfed by contrast. The thing from the ground flitted down into a courtyard where the professor lost sight of it.

Professor Jameson flew low above the gloomy pile. He had a double purpose. He wanted to reconnoiter against a later return, and he desired to find where his three metal comrades had been taken and if they were safe. He kept up a continual mental radiation as he coursed back and forth, ignoring the fact that members of both races had sighted him and were running excitedly over the roofs.

He finally received a reply. It was 6W-438, deep in a subterranean retreat of the forbidding stronghold. "We are in a dungeon deep down in this building, 21MM392. All three of us are safe but heavily chained and locked up."

"I am alone, but I shall return with the

spaceship and free you," the professor radiated.

He veered in his flight as he neared a group of Klejiligs and their slaves grouped around a long tube which they swung in his direction. He was too late to escape the terrific blast of power as the end of the giant tube glowed warningly. He was hurled off into the sky.

Where the air had screamed past him in his forced flight, it now sobbed on a rising scale as his fall accelerated. The machine man realized that had he hit anything during his flight upward, it would have meant his end. It would still mean death unless he gained control of his flying apparatus. Buildings on the outer edge of the city rushed up at him sickeningly; then his desperate efforts at control of the wings commenced to brake his descent. But it was too late; he realized that it was no use trying to recover his flight in the air. Frantically, he put every effort into braking his downward plunge. The city rushed up at him, and a sloping roof smashed into and around his metal body as he cut through it and ended up inside the building. With a shock, Professor Jameson jarred into something soft.

A babbling sound greeted him. He recognized the voices of Bronimids as he caught their excited thought impressions. With his tentacles, he threshed his way out of a vegetable mass of leaves and stalks. He had fallen into a food warehouse. He found that his wings still worked after a fashion, and he lurched here and there as frightened Bronimids fled from his path and ran out of the building. Following them, he found himself in the open after some difficulty in which he had flown uncontrollably into many objects.

With difficulty, he lifted himself into the air and pursued an erratic course above and out of the city, several times almost falling to the ground again. He deemed himself fortunate that only the Bronimids saw him and that word did not get back to the Klejiligs who might have pursued him. They would have found him an easy prey. One leg was gone entirely, the others smashed and bent. He had lost a tentacle, and although he still had the one with the heat ray, it did not function. The bottom of his cubed body had received a great dent. It was a badly battered and wrecked machine man who staggered back to the village and the spaceship after more than a day of slow, off-the-course flying.

CHAPTER THREE

The Secret of the Klejiligs

HIS STORY was soon told and repairs made to his metal body. 6W-438, 5ZQ35 and 47X-09 were captives of the Klejiligs and had to be released. That their captors would not give them up easily, the machine men were convinced. Preparations were rapidly made for departure. Several of the Bronimids were taken along, including Ajik, Blopk and old Hilig.

The spaceship rose and left the village behind. Greoow was quickly reached, and the spaceship veered low over the broad sanctuary of the Klejiligs, thought amplifiers groping for mental activity among the captured Zoromes. The spaceship was expected, however, by the enemy as well as by the three prisoners, and the force cannons opened their barrage. Close shots buffeted the ship.

"We are safe but heavily chained," 6W-438 radiated. "They haven't had time to decide what to do with us."

At the end of the long building stood a broad battery of the force cannon, the big tubes focused ahead of the spaceship. Through it they raced, and Zoromes went reeling off their feet and clattering into each other. The three Bronimids, already frightened by their first trip of this kind,

made their peace with the forces of life and death, convinced that it was the end. A few bad bruises were their only injuries. The ship was more badly shaken up than its occupants.

"That doesn't do the ship any good," said 744U-21. "A good thing those cannon don't shoot solid projectiles."

"They have never had any opposition to use weapons on," Professor Jameson pointed out. "Force charges were sufficient to quell any possible revolt by the Bronimids."

"We should take a few of the Klejiligs prisoner. They may come in handy. We can find out more about this place."

"And ask them a few questions about those things out of the ground," the professor added.

"Let us return and knock out one of the isolated force cannon and capture the gun crew."

"Using flying machine men?" Professor Jameson suggested.

744U-21 agreed. "Six should be enough."

20R-654 was acquainted with the strategy, and the veteran pilot and bombardier turned back towards the end of the sanctuary which they had first approached. Six machine men stood ready at an opened port to leap out at the right moment. The gun crew, comprising several Klejiligs and as many more Bronimid cannoneers, recognized the maneuver as a return across their position and waited, confident as they saw the spaceship gradually slowing its speed. But before the ship came within range of the lone force cannon, a stab of destruction leaped out and fused the Klejiligs' gun and mechanism, killing two or three of the crew.

Then out of the spaceship leaped six Zoromes, their metal wings settling them down among the stunned survivors. Bronimids were disregarded, and the three surviving members of the over-race gathered up. Meanwhile, 20R-654 had swerved the ship in a curving arc which brought it almost level with the roof-top. With their burdens, the machine men flew back into the ship which rose high into the sky, yet never out of reach of the mental radiations of their three comrades.

"You are Klejiligs," the professor addressed the three prisoners. "We told you, even as your people hold three of us. We can take more of you and also rescue our companions. You saw what we did to your weapons. What were those things who dug themselves out of the graves of the Bronimids and flew back here to Greoow? Why are the Klejiligs interested in Bronimids who are about to die before their lives are half over?"

"We three might better die than to tell you our secrets," replied one who identified himself as Hruung.

"We have ways of probing this out of your minds," 744U-21 told them.

Klyyv, another of the three Klejiligs, expressed disdain. "Klejiligs have guarded secrets for ages and no one can learn anything we are not willing to tell."

"They have concentrated on this for limitless generations," said the professor in an aside to 744U-21. "That is why we learned nothing from them before. They are able to close up their minds. They must indeed have something to guard."

"We may be able to operate on their brains and dig out the information later, if it is necessary. Lock each one up in a separate compartment until we have 6W-438, 47X-09 and 5ZQ35 safely back in the ship."

The professor and two more of his metal companions led the three Klejiligs to little cells.

"Are we dying then, because we will not betray our race and civilization?" sneered Klyyv, half in defiance and half in fear.

"It will be the easiest way," the professor replied.

"We shall go bravely then, and join those who have gone before us," Klyyv resolved, fully believing he was to be executed.

On the chance that one of them might relax his mental vigilance, Professor Jameson waited hopefully outside the three cells, his brain alert to the thoughts which rambled through the minds of the captives. But the three were far too intelligent to fall into this error. The professor gathered that the Klejiligs possessed a quasi-scientific religion, and Klyyv was already looking forward to a life after death. But though he waited patiently, the professor found no thoughts of the Bronimids in the minds of the captives.

PROFESSOR Jameson was about to turn away and rejoin 744U-21 in the observation chamber when the spaceship careened wildly and sent him crashing against the wall. There followed the elevating feeling he had felt twice before, once when he was all alone with only a pair of battered metal wings between himself and a terrifying drop to the ground. Why, he wondered, had 20R-654 driven through that barrage of force cannons again? The lights flickered and went out, leaving him in the dark. Weird thought emanations emerged from Klyyv beyond the metal door of his cell. The three Klejiligs must have taken some nasty knocks. He could get no spark of thought from Hruung. Blouv seemed the only one still rational, and he was mystified at the darkness around him. It suddenly occurred to the professor that darkness was something entirely new and alien to a creature of this phosphorescent world. Nowhere was there such a miracle as darkness on this planet.

"They did kill me. I really am dead."

It was Klyyv, recovering his senses and finding himself in the dark. The professor listened, fascinated.

"Who is come to guide me? Who will take me with them?" pleaded Klyyv. "I have just arrived."

"I will guide you," the professor suddenly radiated as inspiration struck him. "Are you Bronimid or one of us?"

"I am not a Bronimid!" was Klyyv's somewhat disgusted reply.

"Both come this way in the hereafter ere their paths divide," was the professor's solemn rejoinder. "If you are a Bronimid, then I must leave you to wander through the darkness alone. We only guide our own species. I take it that you can prove yourself to be a Klejilig?"

"Yes—yes!"

"Why are Bronimids important to you?"

"Our race would die out without them."

"Why do Bronimids die so quickly once they are full grown?"

"That we may be born—that the end of their lives may be the beginning of ours."

"In what form were you before you were born, before the death of the Bronimid from which you came?"

"A part of the bloodstream."

"How did you become a part of the bloodstream?"

"Why—elements of my beginning were always there, ever since the Bronimid was bred animal-like. The blood content of a Bronimid always becomes one of us when it reaches maturity. We are the sublimated perfection of their lower beginning."

"How did this evolutionary process get started?" the professor queried.

"Only a few of the highest among the Klejiligs know that, as you must realize," pleaded Klyyv. "Why don't you come and guide me? Why are these metal walls still hemming me in?"

"You are condemned to eternal confinement in the dark," Professor Jameson replied. The professor was the only one

of the machine men with a sense of humor. "You are so condemned for confiding so readily all the secrets you once vowed never to reveal."

Professor Jameson hurried to the observation room with the answers to most of the enigmas which had puzzled the machine men since their landing on the phosphorescent world. He found that all the force cannon mounted on the sanctuary had been destroyed. Quickly he told what he had learned from Klyyv.

"It is a strange state of affairs," 744U-21 remarked. "How could it have happened?"

"I do not believe by natural means," said the professor. "Why are the Klejiligs without means of propagation?"

"They could not have been an alien race from another world," 744U-21 said. "They bear a resemblance to the Bronimids. It seems that the Klejiligs represent the latter half of the Bronimids' life cycle."

"Old Hilig lived the rest of his own lifetime," the professor reminded him. "And we know that there are others like Hilig whom the Klejiligs immediately destroy when they find them."

The details remained unanswered as plans went forward to rescue the captured machine men. Professor Jameson decided to take ten machine men with him, all armed with ray projectors. The spaceship blasted a hole in the roof of the gloomy sanctuary, not far from where the three captive machine men lay in a subterranean chamber. The professor and his task force of ten climbed out of the ship as it settled down on the roof, and entered through the hole in the roof.

They found themselves in a broad, dimly lit chamber amid fallen debris. At first, they could not see well, their mechanical eyes being accustomed to the daylight outside. 41C-98 pointed to the head of a dead Bronimid projecting from under the blasted rubble.

"Killed when the hole was made."

"There's another," said 29G-75.

"They have been dead a long time," said Professor Jameson, drawing their attention to the telltale complexion and red eyes of the strange death.

"Look!" cried 27E-24. "This broad room is full of them! They are lying everywhere!"

The machine men walked down among orderly rows of dead Bronimids, most of them waiting for a fledgling Klejilig to escape from them. Several had already fulfilled their destiny, as was evidenced by their emaciated and deflated bodies.

It was 19K-59 who first saw the flying things. Several of them flitted about the ceiling or perched somewhere on the grisly cadavers they had recently quitted. The machine man raised his ray projector, and a pencil stab of light knocked one of the things to the floor. Eagerly, the machine men examined it. The thing was small, colorless and translucent. Its inside organs were visible through transparent skin and tissue. A pair of transparent wings fitted the ugly-looking little parasite for flight. At a later stage of development, evidently, these wings dropped off. The fledgling itself was a weird, undeveloped caricature of a Klejilig which it more closely resembled than the Bronimid from which it came.

"COME," Professor Jameson urged. "Our three companions lie in chains below us. We shall have opportunity later to examine these things in detail."

Through two more such chambers as those above the machine men hurried before they discovered a ramp leading downward. In the chambers below, they found the young Klejiligs in a later state of develpment. Here, the wings were commencing to deteriorate and gradually shrivel up and disappear. Only a few of the occupants were able to use their wings

any more for flying, and then imperfectly like the short flight of chickens on the professor's world of long ago. Most of them walked about on their legs and showed a childish intelligence.

The eleven Zoromes wasted no time here but hurried down to the next level. Something whirred out of the darkness and 948D-21 was tumbled back against his fellows.

"Force guns!"

Another stab of power from a concealed tube whirled 41C-98 around dizzily.

The room in which they now found themselves had once been used for dead Bronimids. The empty stone pallets were laid out in orderly rows. It was from behind these that the Klejiligs and their Bronimid slaves fought a delaying action. In the simpler minds of the Bronimids, the machine men detected a fear of them which the Klejiligs had placed there. The Bronimids believed they were fighting for their own lives as well as those of their masters. The machine men tried to convince them that they were there to help all Bronimids get their freedom from the Klejiligs, but the Bronimids had been too long under their masters to accept such a radical thought at this crucial moment.

The machine men made one mistake they did not repeat—rushing across the chamber in a body. They became a focal point for every power tube and were staggered, knocked down and rendered an ineffectual tangle of cubed bodies and appendages. During this temporary debacle, one Klejilig was emboldened to leap out from his concealment and seize a disengaged ray projector which went clattering across the floor. He was almost back to his vantage point with the prize when a quick shot from 41C-98 cut him down. No other Klejilig or Bronimid made for the strange weapon the dead Klejilig still held, and the machine men retrieved it as they recovered themselves and advanced slowly.

The eleven machine men took a heavy toll of their enemies and the latter's allies. Those still concealed in the chamber among the many pallets finally ceased firing and let the machine men past into the next chamber. If the Zoromes, however, expected decreased resistance, they were disappointed. They knew that they were close to their metal companions, and getting closer. Thought communications flew back and forth. The captive Zoromes were unharmed and waiting. A few Klejiligs in passing by to join the resistance had sent spiteful flashes of power at them from their tubes, but aside from knocking them down violently and rattling their chains no harm had been done.

The Klejiligs and their servants in the next chamber had erected a long pile of stone blocks clear across the middle of the room, and they opened fire on the first machine man to step over it. The concentrated volley hurled 27E-24 so violently back among his companions that he lay stunned where he had fallen, one of his metal legs bent beneath him.

"We must get in there and hide behind the stone mounts which were not used to make the barricade," said the professor.

"It will be hard getting through the doorway," 41C-98 pointed out.

"If only a few of us could get in there first. They have to show some part of themselves in order to aim their tubes."

"Let us use hostages," offered 29G-75. "The Klejiligs who are still in here hiding. We can line them up and send them in ahead of us."

"Good. Hunt them out."

An intensive search was made for skulking Klejiligs. The thought that they would not be fired upon by the machine men but must give themselves up and act as message-bearers to their companions behind the barrier produced half-hearted results. Although the Klejiligs did not

come out of their own will, when discovered they offered no resistance.

"March into the next room," Professor Jameson ordered them.

"We shall be killed with the force tubes," they protested.

"Call in and tell them you are coming and to hold their fire."

Ray projectors were lifted and pointed significantly at the laggards. The Klejiligs called in shrill accents to their brethren behind the barrier.

The seven Klejiligs walked through the narrow doorway and towards the barrier. Behind them, four Zoromes gained the inner chamber and dove quickly in as many directions for refuge, dividing up the barrage from behind the barrier.

As the professor had pointed out, to use the power tubes, the Klejiligs had to show some part of their bodies. For the fearless, coolly sniping machine men with their ray projectors, this was all they needed. Partly concealed, they had little to fear. Only a direct hit by one or more of the power tubes could knock them over. A stabbing thrust by one of the ray projectors showed the Klejiligs the futility of defense by flesh against metal.

IT WAS the beginning of the end when more machine men, in pairs, filtered into the chamber of last defense. The Klejiligs, showing themselves to form a barrage with their power tubes, were vulnerable to the four machine men already inside and awaiting such a target as an exposed head or arm. It was not long before all eleven of the machine men were in the room.

The Klejiligs reached a quick decision and retreated. They left softly behind their barricade, but the Zoromes sensed the sudden absence of their mental radiations and were in quick pursuit. The over-race did not stop to try another defense, and the machine men let them go. Ahead lay the ramp to the lower level and the three imprisoned machine men. Down it they raced. Huge, massive chains, heavier than the machine men they held to the wall and to each other, festooned the metal bodies of 6W-438, 47X-09 and 5ZQ35.

"Quick, 21MM392!" 6W-438 urged him. "Get to the next dungeons beyond this and guard the prisoners there! They are Bronimids—wise, old Bronimids who know much of what puzzled us!"

Professor Jameson waved his metal minions on as he personally burned through the chains of his three fellow sentinels of the graveyard vigil.

"We know much already, 6W-438, but not all," the professor told him. "Here is my ray projector. Protect yourselves if you must while I join the others."

Into the further dungeons Professor Jameson raced, but he found his ten machine men well in command of the situation. Here were many Bronimids in smaller chains than those which had held the three Zoromes. The faces of these Bronimids showed something other than the effects of imprisonment. They showed advanced age, wisdom and intelligence. As the professor and his machine men went around and released nearly a hundred of these unfortunates, they learned the story which the Bronimids had already told 6W-438, 47X-09 and 5ZQ35. Once more, the machine men heard what the professor had learned from Klyyv, with additional enlightening detail. One of the prisoners, Jipit, told it to them. Jipit and Koloft were Bronimid scientists of a secret society.

"Ages ago, we Bronimids were the only intelligent species here on Ilinikit. We built cities, had machines to work for us and rose high in science. Too high! My ambitious ancestors were not satisfied with the long lifetimes they already enjoyed. In trying to achieve immortality, they blundered upon a biochemical change in the bloodstream. This change created a sublimated but coldly selfish fission of life."

"We know much of that already," the professor told Jipit. "But how did all Bronimids get this way, and how did the Klejiligs gain their power?"

"A microorganism was used to create the change. It proved to be contagious, slowly at first and then more rapidly. The malady spread before the danger was realized, finally all over Ilinikit. The newly-created Klejiligs we prized as scientific achievements were actually heralds of the doom of our race. As the change spread, all Bronimids died soon after maturity, and from their dead bodies sprang the Klejiligs. The Bronimids naturally degenerated to what you see today, and we have become the slaves of the Klejiligs. You can well understand that in a measure the Klejiligs are concerned over the health and welfare of the Bronimids. The Klejiligs are sexless and can never propagate."

"You—why didn't you die at maturity and transfer your life to a fledgling Klejilig?"

"A tiny fractional percentage, probably less than one out of two thousand, is immune to the change. I am one of these. So is Koloft. So are all of us here. All of us who are like that are either imprisoned or killed when caught. A few of us escape, and others remain in hiding. Among the minority who escape and remain fugitives are those who carry on and hand down the old sciences and secrets. Koloft and I are among those."

"There must be a way to halt this disease and let the race of Klejiligs die out," the professor remarked.

"There is!" Koloft exclaimed, his eyes blazing with a determination and intelligence which seemed unnatural to the machine men after knowing the dull, beaten Bronimids so long. "I know where to get the formula! It is in the safe and competent hands of those among us who have eluded the Klejiligs and who have had it handed down to them from generation to generation!"

"Then you have in us powerful friends and allies who will help you put this cure into effect before we leave this world of yours," Professor Jameson told them. "Your race has suffered enough. We shall help you free yourselves from these monsters you unwittingly created from your own blood!"

THERE are a couple of questions before the house this time around. Several people, notably our senior editor, want to know what the figures in the story ratings represent. Well, that's easy.We add up the point scores—1 for first place, 2 for second, and so on—and divide by the number of votes for each story. This gives us an average rating of the story which is accurate to one decimal, statistically interesting but scientifically meaningless.

The second question is one that occurs at least twice in every batch of letters, and we personally are getting good and tired of it. Once and for all, a BEM is a bug-eyed monster. Anybody who asks us this question hereafter is an UWP (unwashed peasant).

Dear Editor:

I enjoyed the November SS a great deal better than the previous issue, in which I found so few stories that caught my interest that having so little to praise I thought I'd better keep quiet. Which doesn't mean to say that the previous issue was bad: too few people remember that criticism is merely an expression of preferences and prejudices.

The Nov. issue is so full of my preferences that it's hard to say which I prefer most. Possibly *The Timeless Man* for catching the spirit of the true artist and for so neatly carrying it full circle.

On its heels, though philosophically at the opposite pole, *Gateway to Darkness,* because the story moved with vigor and so did the rough-diamond hero with the characteristic name, Crag. It drops a point because Crag has, apparently with the author's approval, the blind end-justifies-the-means philosophy which we keep getting thrust at us via American films as something admirable. (There's a typical crop just arrived in London glorifying Gable as a gambler, Bogart as a night-club owner, various others as "smart" reporters with no regard either for truth or people's feelings, and interminable gangsters and racketeers slapping each other down monotonously. In these things violence seems to be accepted as the only worthy solution to any problem, and the crazy values are just—crazy. Pitiable—and dangerous.)

Crag batters a guard to death and then feels peeved and wronged when the dead man's fellow-guards rough him up a bit. He even takes their names and addresses with a view to avenging this "wrong." It's possible that the guard might have had a loving wife and children; they don't count in Crag's philosophy—only Crag does, and he imagines, it seems, that he's a lord of life and death. Rather too many people are getting that idea these days, and rather too many other people—especially authors—are taking it for granted.

One of the things wrong with the last issue was—no Bradbury. One reads his stories to the end, even when the idea is hackneyed, as in *Impossible.* (He'd used this before in *Referent,* and Margaret St. Clair has used it recently in TWS—anyway, it goes way back, to Weinbaum's *Volley of Dreams* at least.) It's the unoriginality this time that drops him from his usual first place. And—may I breathe it?—the style is, like the Martian setting, beginning to show signs of wear. Or is it that he doesn't stop to polish these days? Ray at his best is unbeatable, but he's trying to do too much too quickly. (Brad takes a couple of months to a year to finish a short story, working on a number of them alternately. Reaction to Bradbury seems to be unpredictable.—Ed.)

Child of Void certainly had atmosphere, and was well written, and is a good fourth. It wasn't sciencefiction—but does that mat-

ter nowadays? I'll always give pages of the old ray-gun blasting, space-ship Marathon runs, and jaw-breaking technical terms (not to mention just plain jaw-breaking) for just one human &/or believable character.

Leinster's story (with a bow toward *Before Adam*) was entertaining, and the twist good—but expected. Fifth.

I see nothing to choose between the merits of the remaining three stories. I read them all, but had to force myself now and again.

As for the cover: more funny than vulgar this time. I still think these covers are more liabilities than assets.

On the whole, I'm quite sure the quality of the story content of SS is improving with its printing, and you're really getting somewhere now.

With best wishes for continued progress and congratulations on the amount achieved so far,

Yours sincerely,
William F. Temple
7 Elm Road
Wembley
Middlesex
England

We think violent and amoral fiction is unpleasant as a symptom of our *Zeitgeist*, Bill, but not necessarily unpleasant, or dangerous, or reprehensible in itself. What value has popular fiction if it *doesn't* reflect the temper of the times?

Incidentally, you evidently haven't noticed the goriness of some of your own work, but we have. In "The Brain Beast", you killed off an inoffensive, even a comic doctor in an extremely messy fashion, for what seemed to us no good reason. We couldn't eliminate the doctor's death, so we edited out the comedy instead. The contrast was too much for us.

Dear Willy,

I'm conducting a one-man campaign against editors who are shrouded with anonymity. Thus, from now until the shroud is burnt, I think I shall tag you "Willy." Better than "Editor."

Before I go into a perusal of the November issue, I've got a few other things to bring up. To begin with: Out comes a new mag—well, new to me, anyway. They didn't get it around here, before. I look it over, am highly pleased. The second ish comes out, and once again things look pretty—but then comes the blow: No third; no fourth. I rant and rave at the newsstands, but what good does it do? In my travels, I get #5. Number six, they get here. But #3 & #4 are lost, as far as I'm concerned. Do you have any extra copies that I could buy lying around? Or is there any fan that has them, and would be willing to part with same? Please! (Some copies left at this writing. Try our circulation department.—Ed.)

Next, a gripe about the ads: They're supposed to indicate the type of people that a magazine is aimed at. Briefly, it would give me the impression that fans are (1) Drunkards (2) Deef (3) Suckers (4) Uneducated (5) Unkempt and (6) Unshaven. Maybe it *is* so, but no need telling us about it. It's the ads, as much as anything else, that keep a mag in the 'pulp' group. I get more ashamed of *those* things than I do of the covers.

Which, thru devious and unknown ways, brings us to the November tripled S. Altho I was rather disappointed with it, I still place Brown's Gateway first. In some places it was hack, and the ending displeased me, in a vague, uncertain sort of way, but—well, the story was kind of like the way I prefer bacon—crisp, and decidedly Brown. . . .

Lawrence's depiction of Evadne was definitely off—made her look like a weak, insipid character—which she surely *wasn't*.

Parasite Planet, by Jones—second. The formula for the series shows a little too clearly, being almost a duplicate of the one in #5, if you strip it down to a handful of the most important events. The metal men help the underdog, win their battle, move them to another place. But it hasn't been used enough to wear it out—yet. The first two I liked. But I hope he changes the next a little more.

Murray Leinster's story of the cave men, This Star Shall Be Free, and their eventual evolution, was pleasing. One thing about Leinster's work—his fictions often have a neat way of explaining mysteries; explanations that sometimes make you sit and wonder. . . .

OPINION TALLY

November, 1949

1.	Gateway To Darkness	3.2
2.	This Star Shall Be Free	4.3
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There was a tie, here. Bradbury's Impossible stepped right out of the short story ranks. Some may gripe about his repetition of Mars, as a background, or the similarity of one story to another, but—altho I wouldn't mind a change—I still like his distinctive, unique touch. That's what makes me read—and like—his stories.

Appointment For Tomorrow—MacDonald usually does turn out good ones. So it was with this one. And stricly s-f.

S. Clair's Child Of Void tied it. Unique idea, vividly written.

Farrell's story, The Sleepers, was another of the old style s-f. I like these, occasionally. But Brush's illustration stank.

Frank Belknap Long turned out a well written piece of nothing.

M&M was, of course, the best of the features. I guess Shaw scrammed. After such a complete reversal, I don't blame him. Oh, well, he served his purpose. He stirred up plenty of interest. . . . And a word, now, to Richard Smith, who wants to argy. Sorry. I'm afraid I agree with you on everything, except Shaver. You said he was a good writer. . . .

Fandom's Corner was second, and the Science Fictioneer third mainly because I work in a library. Get enough book reviews.

Has everybody with a wire recorder heard about the futuristic correspondence club, the FFSP (Fan Federation for Sound Productions)? All you need is a recorder or access to one. We send letters by wire, and have an Official Organ, WIREZ, the Wirezine, the Fanzine of Tomorrow. If you're interested, write

Shelby Vick
Box 493
Lynn Haven, Fla.

Dear Editor,

Which is as good a way as any of starting off a letter. I'm a semi-newcomer to fandom but not to stf. I've been reading the stuff steadily for five years which entitles me to at least one hash mark. While I can't say this is my first letter to an editor it practically is the same as. And my correspondence with fans is slight enough and recent enough to be practically nil. In fact, I have yet to see my first fanzine (though one is promised for the future) which shows how uninfected I am with the deadly virus of fandom. However, I always did like dangerous experiments so if there are still one or two souls among this column's readers unscarred enough to feel pity, let them shed a tear or two for such naivete.

I just can't think of anything better to do today. Five years from now I'll probably wish I'd taken up gin rummy.

To start off with I guess I need a gripe. Everybody seems to have at least one or their licenses to write stf letters are revoked.

Mine is "why does everybody ignore two of the best writers in stf, John MacDonald and Fredric Brown?" Not that I don't like van Vogt and Kuttner. Perish forbid. But they get plenty of attention already. Everyone ignores John D. and Fredric. Brown is usually superb though "Gateway To Darkness" was something less than a milestone. As long as you keep those two as regular contributors you'll keep getting my quarter every (other month? Third month?).

I have a suggestion. Why not put Bradbury into an amnesia machine and erase all his memories of Mars. Then maybe we could get some stories about people being stranded on Venus. Or do you think that would deprive him of his ability to write?

Incidentally, I'll spell it out for all fans who haven't caught on yet. Larry Shaw was K-I-D-D-I-N-G! This paragraph will probably prevent the letter being printed but I have it all figured out. SSS, to start a stimulating letter column in its first issue produced a fantastic letter under a house name (or just a captive fan?) ((Yes, Virginia, there *is* a Larry Shaw.—Ed.)) Denouncing every conception and plot type ever conceived by stf writers. This, naturally, brought out a spate of anguished cries from our more humorless fans which hasn't died down yet. All other letters were evidently censored. (Nope.—Ed.) Then after the column was nicely rolling in the wake of Mr. Shaw's atomic blast, he made a communist-type recantation and has doubtless been liquidated by now. Right?

Are you about to run out of those pre-war Professor Jameson stories? I hope so.

In this issue the orchid goes to Leinster's "This Star Shall Be Free," the cleverest cave man story I've ever read. The rest were about average which, I suppose, is about all we can expect though I keep hoping for another of those superlative issues like the one you produced last spring which led off with "The Brain Beast."

V. L. McCain
c/o Western Union
Bend, Ore.

Dear Editor:

Without embellishments, let me say this is my first missile or missive to any mag since before the fracas. Therefore, I have just cause to enter my complaint.

Just read "Gateway To Darkness" in your November ish. One of the most terrific adventures of the year. Combines good scientific interest with fast moving, effective adventure. Hero is excellent, a welcome departure from the hackneyed pretty-boy-goodie-goodie of which we've seen so much. Never slows down—gets my vote of the year.

But the complaint—here 'tis. Why bump the hero, and him with more force and realism than any this year? If Fred Brown can do it again, I'll be his unshakable fan forever. Tell him to cast his palsied hands upon his typewriter and frustrate starvation by bringing back the hero.

In conclusion—here's a horrible threat. If

I don't see a promise for a sequel in your next issue, I'll quit buying your mag and turn to "Ickey Love" stories. I'll tell all my friends too—both of 'em. Orchids to Fred Brown if he does—cactus if he don't.

John S. Townsend, Manager.
Selma-Smithfield B'casting Co.
P. O. Box 900
Wilson, N. C.

Dear Editor:

Perhaps the letter of Rosco Wright printed in the Nov. issue was intended to stir up a controversy about reprints. If so, it was in extremely bad taste. There is no point in trying to bring to life an old argument which serves no useful purpose.

The fans demanded the return of FN and the old Munsey classics and Popular is rendering a great service to fantasy lovers by bringing these stories back, as most of them are unobtainable. Practically every fantasy reader and S-F club over the country has written in and asked for these old reprints, and it is very strange to read a letter like R. Wright's, who claims to be associated with an active fan society in Oregon.

As for authors and market for new stories, there are plenty of S-F magazines in print today, of which SUPER SCIENCE is one, which make it their business to provide an outlet for the new writings. But there is also a definite place for a fantasy and S-F reprint magazine to bring back those old classic tales of the early days of this field, particularly since we have a generation of new fans with us now.

To advocate no reprints is like saying we should not have such things as the READER'S DIGEST and others of the reprint group. And I suppose a book publisher should not bring out more editions of his popular books after the initial edition is exhausted, regardless of how badly he guessed the demand the first time. Where would our literature be today if none of our authors of bygone years were reprinted?

I hope there will be no more thoughtless readers who write in and advocate ideas such as contained in Rosco Wright's letter.

C. W. Wolfe
Box 1109
Las Vegas, N. M.

Look How We Get Around Dept.:

Dear Editor:

I have just read the July issue of S.S.S. Although I've not a subscription on your magazine, my sister is married with a Canadian and sometimes (now and then) she sends me science fiction magazines. So you see, your magazine travels sometimes great distances to be read.

I like those magazines very much, espe-

(Continued on page 124)

They Never Knew It Was SO EASY To Play

Thousands Now Play Popular Songs Who Didn't Know a Note of Music Before

You, too, can learn your favorite instrument at home, without a teacher, this quick, easy, money-saving way

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Well Worth Money. "The course is fully self explanatory. When one is finished with it there is little one need learn. It is well worth the money and I fully believe you have the finest course on the market today." *R. E. G., Clarksburg, W. Va.

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*Actual pupils' names on request. Pictures by Professional models

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(Continued from page 122)

cially S.S.S. and I am always very glad when I get one.

The July issue was very good. I rate the stories so:

1. "The Brain Beast"
2. "The Hunted"
3. "The Hand From The Stars"
4. "Gravity Trap"
5. "Changeling"
6. "Dreadful Dreamer"
7. "Spaceman, Beware!"
8. "The Survivors"
9. "The Wall Of Darkness"

The covers are always good but I don't like always those half nude ladies who are always very beautiful. Not that I don't like beautiful ladies but not so much in science fiction! My name is T. Van Ingen and I'm twenty-five years and just married. I'm sorry I cannot subscribe to your magazine because I cannot pay in dollars. I've a great collection of science fiction mags because my brother has been in South America where he always sends me mags. He is also fond of science fiction as well as a friend of mine who has been in England where he found s.f. mags too. This friend had also a great collection and I've exchanged many mags with him. I've collected now 120 mags. So you see, in Holland there are fans too, but not many. Most people don't like s.f. fiction, the reason I don't know. There is only one s.f. fiction mag in Holland: Science and Fantasy but it is not much read.

I must end now with my best wishes to your beautiful magazine with kindly regards.

T. Van Ingen
2 E Willemstraat 20 a
Groningen
The Netherlands

P.S. Forgive me my bad English. I can better read it!

Dear Editor:

It is with very much delight I sit and write you about your wonderful story book. Books coming to Berlin have been forbidden from America until just soon. Now can I write from behind the iron curtain and tell you I like Super Science. This comes with movie books to me from United States. Let me tell I like all these stories. Best was the one of the brains in the metal, as I like astronomy, my name is after it, Astrid. It is prima if all would stop this crazy fight all the time and use intellects to make space ships to find these worlds.

Maybe somebody will send me more Super Science. Too I would like to write with other readers. Please put my address in. We do not have such things in Berlin. I know besides English, German, French and Russian. I have written on coupon as you say to write about stories. Best was "The Metal Moon" by Neil R. Jones. Also "Bride Of Eternity" was prima by Margaret St. Clair. Is she a woman writer? Or is it pseudo-

nym? "World Of No Return" by Bryce Walton did not end good. "Minions Of Chaos" by John D. MacDonald is like world might become. I understand what he means by dead city.

I am a medical student. Soon I will be a doctor. I hope life will be better then. To Super Science I give my best regards.

Sincerely,
Astrid Klopsch
Bozener Strasse 19
Berlin Schoneberg
American Zone
Germany

Go Climb a Lemon-Colored Arboreal Dept.:

Dear Editor:

"The Big Book," etc., etc., arrived at my newsstand today, five days after the announced publication date. But who cares? I detest these letters which complain of the inferior artists, covers, stories, letter columns, so on ad infinitum et ad nauseam. SSS does not have the best artists in the trade; the covers are not equal to some of the other mags' production. The letters are neither intelligent nor constructive, for the most part. It is not even near the top of the promag list. Yet, I like it!

I notice Taurasi has come in for quite a bit of panning in his fan column. I can't understand this. Fans such as he work quite hard at their hobby; as "fans" I do not include those whose sole fanactivity is to write to promags. I know, as a member, that the world of actifandom is fascinating to all but those last-mentioned, misbegotten swampdogs.

May I add a feeble plea for the resuscitation of ASTONISHING? Why don't you try it as a quarterly first, and if circulation merits it, advance it to bi-monthly status?

I'm also a stamp collector of sorts, and am willing to trade a buck's worth of stamps, Scott catalogue value, for any issue of a promag from 1948 back (Super Science especially wanted). Also I'd like to mention my little fanzine, SPACESHIP, which costs a nickel per copy.

Robert Silverberg
760 Montgomery St.
Brooklyn 13, N. Y.

To: *Garbage Disposal Squad.*
1. Missives & Missiles. 2. Child of Void. 3. Parasite Planet. 4. Impossible.
To: *Education Department*
1. Appointment for Tomorrow (J. D. MacDonald is the one who needs re-education in some institution if he can't do better). 2. Farrell should do a short stretch there too, but not to the extent demanded for MacDonald. That is for the Sleepers.

In the case of Missives and Missiles, perhaps a further word should be inserted. I've tried, honestly I've tried, to get some enjoyment out of those departments, in your mag and in your competitors and I can't continue without having my say. Don't print this, because I won't see it, I don't read that portion of the mag. That's what makes me slightly prevoked. I like to finish a book or magazine, to completely cover said article from cover, and when I see the large number of pages left after I've had the enjoyment of the stories, I can't see the reason for it.

It would not be correct for me to leave without placing in your mind, a plug for the science fiction type story I rave about. Have you heard of the Amazon Group of stories? I read it when it is published at irregular intervals in the novel section of the Toronto Star Weekly. Don't ask me the name of the author. I never pay much attention to authors. They are only the ones who are responsible for the stories. (Publishers don't count either.) No, that is one thing I don't worry about. If I like a story, it's not because Leinster or Bradbury or all others wrote it, I'll like for its sake, not for the author's sake.

What I said about Missives and Missiles applies equally well for Fandom's Corner, Science Fictioneer and why you list the Lawrence Portfolio under Departments and Features I can't understand.

The only illustration I have any complaint against is the what you call it on page 62 for "Child of Void" and I don't know the so-called artist and the less he advertises himself the better, after a pict like that. It's part of the story, yes, but those faces, couldn't he do better.

A. Hayes
Box 135
Matachewan
Ontario
Canada

Dear Editor:

In the first place, just exactly what was the cover this time supposed to represent? I kind of liked it, but I just can't figure it out. Most of these covers that have nothing to do with a story tell a story of their own. Maybe I'm just dumb but I don't quite get the drift of this one. (We'll be glad to explain. The period is 3904, late in July. The world is ruled by Og-Gluk and his horrible monsters ((see them down there by the left-hand Bunsen burner?)) Now, Og-Gluk ((who holds the human race in slavery, natch)) finds that all these half-dressed babes running around the planet distract the males and monsters from their duties. Not being human, he can't see any use for them. So he's shooting them all off into space in supertough soap bubbles. Is *he* going to be surprised!—Ed.)

Frank E. McNamar
Granger, Mo.

(Continued from page 8)

Wanstead Park Road, Ilford, Essex, England. 25c. This is the leading fan mag of the current crop. A 32-page, well printed fan mag, filled to the brim with information that every stf. fan or reader will want. Book reviews, pro mag reviews, latest fan news and articles of interest. You're not a fan if you don't get this one.

Operation Fantast, No. 2, published quarterly by Capt. K. F. Slater, 13 G. P. R. P. C., B. A. O. R., 23, c/o G.P.O. England. 15c. Sixteen well-printed pages of interesting articles, with the exception of the "Shaver Mystery" trash.

PSFS News-Bulletin, September 1949, published by the Portland Science-Fantasy Society, 1219 N.E. Roselawn, Portland 11, Ore. No price listed. Four pages, badly mimeoed. Come, come, PSFSers, you can do better.

The Burroughs Bulletin, No. 9, published by Vernell Coriell, 1314 Janssen, Pekin, Ill. Free. A must for all Burroughs fans. This is the first photo-offset issue, 6 pages. We liked the interview with Tarzan.

Torcon Report, published by Edward N. McKeown, 1398 Mount Pleasant Rd., Toronto 12, Ontario, Canada. 50c. This is a beautifully mimeographed report of the 1948 World Science Fiction Convention (the Torcon) held in Toronto. It contains full information on all the speeches and goings-on of the Torcon. Sixty-two pages, some in two colors, the best mimeographing we've ever seen. Limited to 200 copies, few of which are left. We suggest you get a copy as soon as possible.

Orb, "With an eye on Fandom", No. 1, published bimonthly by Bob Johnson and Charles Hames, 811 9th St., Greeley, Colo. 15c. Nine pages, legal size, photo-offset. Excellent cover, in green, by John Grossman. Should improve with future issues. Give it a try.

Fantasy-Times, No. 93, the oldest news

mag in fandom, published semimonthly by James V. Taurasi, Fandom House, 137-03 32nd Ave., Flushing, N. Y. 10c. Contains the latest news of the pro mags, books, movies, television and radio. Eight to 10 pages, mimeographed. Cover, this time, by Bob Sheridan.

Postwarp, No. 1, published monthly for the National Fantasy Fan Federation by Arthur H. Rapp, 2120 Bay St., Saginaw, Mich. 10c, only to NFFF members in good standing. Ten pages of letters, most of which are very interesting. As a letterzine this fan mag should go far. We think it would go farther if that NFFF-only rule were relaxed.

Shangri-La, No. 15, published eight times a year by the Los Angeles Science Fantasy Society, 1305 Ingraham, Los Angeles 14, Calif. 15c. This issue features a report of Westercon II (local convention) by Sneary and Woolston. Jean Cox's reports of the club's meetings are always entertaining. Good printed cover, neat! But, yipe! what happened to the mimeographing? Till now, the west coast fans have been famous for their fine mimeo.

The Outlander, No. 3, official organ of the Outlander Society. co-edited by Freddie and Alan Hershey, 6335 King Ave., Bell, Calif. No price listed. An excellent humorous fan mag, well mimeographed with a printed cover. Best in the issue was *Land of OS* by Alan U. Hershey.

Tiempo-De-Fantasia, No. 2, (the Spanish edition of Fantasy-Times) edited by Carmela Marceau and published by James V. Taurasi, 137-03 32nd Ave., Flushing, N. Y. 5c. First fan mag published completely in Spanish. Contains the most interesting items from the American edition. Cover by John Giunta.

Fan mags for review should be sent to Fandom's Corner, Super Science Stories, 205 E. 42nd St., New York 17, N. Y. Don't forget to keep this column informed of any changes in your organization.

(Continued from page 84)

I PICKED up Jupiter and then the resonator. The resonator was just a tangle of broken tubes and loose wires; but I opened the bottle of Moselle that remained and restored Jupiter to normalcy.

He drank the wine, but his look remained thoughtful. After he had wiped his lips, he said, "Naturally, my resonator gave off a harmonic. Almost any resonating apparatus, from a flute to a radio, will. What happened, Lucius, is that the harmonic, instead of interfering with the time rhythm, *amplified* it."

He got up, straightened his clothes, and carried the hamper to the truck.

"You understand, Lucius," he said then, his voice reflective, "that two vibrations don't *have* to interfere with each other. Two light waves may combine to make one stronger light. Two sound waves may combine to produce one louder sound. Obviously what the overtone from my resonator did was to strengthen the time rhythm, thereby driving the present into the future.

"Thus the main vibratory wave was working in one direction, and the harmonic directly opposite, producing equal but opposite reactions. So the future we saw was just as far ahead of us as the past I created was behind us. A million years, I'd say, offhand, though as unfortunately none of the time capsules were deposited, we'll never know."

He started to climb into the driver's seat of his truck. At that moment something glittered down out of nowhere and fell on his toe. Yelling, he hopped around holding his foot, while I picked the object up.

It was a Jeremiah Jupiter time capsule. It was, in fact, the one Jack Joker had tossed out at the instant he started into the future.

We had just caught up to the moment

in which the chimp had thrown it away.

Preserving a stony silence after that, Jupiter drove us back to New York through the pleasant summer twilight. The time capsule he tossed into the Hudson as we crossed the bridge. From time to time he glanced at me in irritation.

"I can't for the life of me imagine what you're chuckling about," he muttered, as he drew up before my apartment building.

"I was just thinking of King and Queenie and Joker charging down the streets of New York a million years from now on motorcycles, throwing time capsules at the startled inhabitants," I told him. "It will give them a very queer impression of what their ancestors in the twentieth century were like. And you know something, Jupiter?"

"What?" he grumbled.

"They all wore silver discs around their neck with their initials on them," I said. "Of course Joker's initials are J.J., the same as yours. They're bound to think they stand for Jeremiah Jupiter, and that he's you, and King and Queenie are your parents. They'll put your name under his picture in their history books, I expect . . . Are you going to build another resonator?"

Jupiter shifted gears with a clash.

"No," he snapped. "I have too many other things to do. I haven't time enough."

And he hurried off. It was the first time I'd ever had the laugh on him, and I made the most of it. I went inside laughing, and was still laughing after I'd bathed and dressed for my dinner engagement with the editor who was so anxious to have my serial to take back with him to Chicago on the Monday morning plane.

I didn't really stop laughing, in fact, until I got downtown and discovered that it was Tuesday night . . .

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