AS 551 C 95¢

EXPLORING OTHER WORLDS

Edited and with an Introduction by
SAM MOSKOWITZ

STORIES by:
Poul Anderson • Eando Binder • Fredric Brown •
R. F. Starzl • Edmond Hamilton • Sam Moskowitz
• Ross Rocklynne • Stanley G. Weinbaum

The View from a Small, Green Asteroid

. . . Before them, a harsh raggedness of knife-edged rock swept to a horizon that seemed near enough to touch, the edge of forever lying beyond that wolf-jawed rim of hills. The ground was black, pits and craters and twisted frozen magma, dully lit, shadows like holes of blindness creeping over the rough slope. A tiny Sun, three hundred million miles away, glittered and threw a wash of dim, heatless luminance. . . .

And overhead wheeled the stars, the million suns of space, fire and ice and the giant sprawl of constellations, the Milky Way a rush of curdled silver, the far, mysterious glow of nebulae, hugeness and loneliness to break a human heart. There went the Great Bear, swinging light-years overhead, and it was not the friendly neighbor of Earth's heaven, but a god striding in flame and darkness, scorning the watchers, enormous and beautiful and cruel. The others followed, and the stars that Earth never sees threw their signals flashing and flashing across the years and the unthinkable distances, and no man knew what they were calling.

From "Garden in the Void,"
by Poul Anderson

EXPLORING OTHER

WORLDS

Edited, and with an Introduction,

by SAM MOSKOWITZ

COLLIER BOOKS, New York, N.Y.
Collier–Macmillan Ltd., London

A Collier Books Original

Published simultaneously by
Collier-Macmillan Limited, London

First Edition 1963

Collier Books is a division of The Crowell-Collier Publishing Company

Library of Congress Catalog Card Number: 63-10800

Hecho en los E.E.U.U.
Printed in the United States of America

Acknowledgments

GARDEN IN THE VOID by Poul Anderson, copyright 1952 by Galaxy Publishing Corp. for *Galaxy Science Fiction*. Reprinted by permission of the author and the author's agents, Scott Meredith Literary Agency, Inc.

MAN OF THE STARS by Sam Moskowitz, copyright 1941 by Love Romances, Inc. for *Planet Stories*. Reprinted by permission of the copyright owners.

THE MAD MOON by Stanley G. Weinbaum, copyright 1935 by Street & Smith Publications, Inc. for *Astounding Stories*. Reprinted by permission of Scott Meredith Literary Agency, Inc.

VIA ASTEROID by Eando Binder, copyright 1937 by Better Publications for *Thrilling Wonder Stories*. Reprinted by permission of Otto O. Binder.

AT THE CENTER OF GRAVITY by Ross Rocklynne, copyright 1936 by Street & Smith Publications for *Astounding Stories*. Reprinted by permission of the author and the author's agents, Scott Meredith Literary Agency, Inc.

THE DEAD PLANET by Edmond Hamilton, copyright 1946 by Better Publications, Inc. for *Startling Stories*. Reprinted by permission of the author.

SOMETHING GREEN by Fredric Brown, copyright 1951 by Fredric Brown. Reprinted by permission of the author and author's agents, Scott Meredith Literary Agency, Inc.

THE RADIANT ENEMIES by R. F. Starzl, copyright 1934 by Popular Publications, Inc. for *Argosy*. Reprinted by permission of the copyright owners.

Contents

Introduction

EARLY IN THE HISTORY of the science fiction magazine it was discovered by the "Father of Science Fiction," Hugo Gernsback (the man who published the first science fiction magazine, *Amazing Stories*, April, 1926), that his readers preferred stories of interplanetary travel and exploration above all others. He frequently commented on this fact in blurbs prefacing his stories and eventually translated this finding into action by making the Winter, 1931, issue of his magazine *Wonder Stories Quarterly* an all interplanetary number.

This idea proved so popular that he changed the policy of the magazine permanently, each issue bearing "Interplanetary Stories" above the title. In the Spring, 1931, issue of that publication he sponsored a contest to find new and original ideas for interplanetary stories. Gernsback realized that while few readers were capable of writing a good story, many of them were repositories of original ideas. He bought the ideas from the readers and turned them over to competent authors for development.

As a result of his action, competitors in this field were forced to pay more attention to the quality and originality of their interplanetary stories, which lead to the accelerated development of what was to become the most popular theme of science fiction.

At the time no analysis was attempted to discover

the "why" of interplanetary adventure popularity. The answer was so obvious that it eluded most; that is, that the compelling aspect that pushed the interplanetary story to the forefront was simply human curiosity. For centuries astronomy, queen of the sciences, had also been the most romantic science. To be told by astronomers that the planets in the sky were other worlds, but worlds *not* like ours, and then to stop there was almost more than the inquiring mind could endure.

Imagine it. Thousands of other "worlds" in our own solar system: some planets, other satellites like our moon, as well as innumerable asteroids and comets. What was on those worlds? Was intelligent life a possibility? If so, what form would it take and what sort of society and history might it possess?

Make no mistake about it: the true mother of science fiction was astronomy, and its father was curiosity. Man has always been curious about other lands and other places. Thousands of years ago civilization flourished only in the relatively small confines of the Mediterranean basin. Men speculated endlessly as to what lay beyond—to the north, east, south and, most mysteriously, to the west, across the Atlantic Ocean, whose extent was unknown.

Ancient scrolls reveal many references to tales and theories concerning what stretched beyond the perimeter of "civilization" or "known lands," and the imaginary adventures of exploration parties were as fantastic as anything concocted by science fiction. In fact, a good case could be made for their qualifying as science fiction.

No less distinguished a classic than *The Odyssey* by Homer is an excellent illustration of the old "travel tale," and if we judge that narrative by the knowledge of the period, it unquestionably is not only a classic of literature but a classic of science fiction as well.

The interplanetary story is an outgrowth of the travel tale and its popularity is similarly based on curiosity about little known and faraway places. Unlike the missing link of evolution, which gap seems to widen with each new discovery, there *is* a definite link between the travel tale and the interplanetary story. The first recorded trip-to-the-moon story appeared in a collection titled *Of Wonderful Things Beyond Thule* by Antonius Diogenes, written three or more centuries before the birth of Christ. His characters literally walk far enough into the unexplored northland until they reach the moon!

Lucian, the famous Syrian who wrote in Greek several centuries before Christ, provides another natural link between the travel tale and the interplanetary story by having a ship, which has been exploring strange places in a manner not unlike *The Odyssey,* seized by a whirlwind and carried to the moon. Titled *True History,* it sparked off a vogue for interplanetary stories when it was translated into English in 1634 by Francis Hicks. The unexplored places of the world were rapidly being used up. To tell a real whopper of a tale you had to get away from it all and there was scarcely a better place than Luna if you wanted to speak freely, without fear of contradiction.

The advances of astronomy, which made known

that the moon was an unlikely place for life or adventure in the heroic tradition, caused writers to consider the possibilities for interest and excitement on the nearer planets, Mars and Venus.

The theories of the great astronomer Percival Lowell (who calculated the existence of a trans-Neptunian planet many years before Pluto was discovered) as expressed in his book *Mars* published in 1895, captivated the imaginations of the writers of two continents and created a vogue in the Gay Nineties for tales of the Red Planet, the most famous of which was *The War of the Worlds* by H. G. Wells.

The desire to explore even beyond our solar system was inspired by another great astronomer, Camille Flammarion, who founded the Astronomical Society of France in 1887. His ideas on time travel may well have influenced the writing of H. G. Wells' *The Time Machine;* and there is no question at all that his imaginative expositions, presented in semifictional form as *Urania; Omega, The Last Days of the World;* and, most particularly, *Lumen, Experiences in the Infinite*—all published before the turn of the century—set the minds of writers speculating. Many books were dedicated to Flammarion, including *Around a Distant Star* by Jean Delaire, published in 1904. This novel sent a space ship at a speed two thousand times that of light to explore the world of a distant sun. So far did it outstrip light that the space travelers gazing back through their super telescopes caught images of Christ teaching in Galilee.

Many of the scientific romances concerning other

worlds were written primarily as social satire or allegory. Their aims were to picture a perfect society or utopia, serve a political end, or preach a sermon by paralleling events on other worlds with those on earth. Essentially all such stories were frauds, because without the tantalizing bait of interplanetary exploration they would have had few readers. The libraries are full of good adventure stories that have outlived poor philosophies. Today when a scholar picks up a voyage-to-the-moon book, even one written by personages as illustrious as Cyrano de Bergerac or Daniel Defoe, it is to search for the few crumbs of scientific invention and prophecy, not for the philosophical, sociological, and political aspects.

Admittedly those ingredients, used adroitly, may help flavor a good story; but when the author forgets that his main function is to entertain, any hope of effectively presenting his message is lost. The stories in this collection are not guilty on this count. They are not cheats. First and foremost they satisfy the curiosity of the reader about conditions and life that may exist on other worlds. Each of the stories in this volume fulfills that function within the classic framework of good short story writing.

Few worlds offer more fascinating possibilities than the planet Mars. In an engaging documentary, Eando Binder minutely explores that globe by having his characters send day-by-day reports back to earth. What they find, while within the bounds of plausible science, is scarcely ordinary or routine. There is a strong sense of wonder and no little ingenuity in "Via Asteroid."

In the nineteenth century, Urbain Jean Joseph

Leverrier, a French astronomer credited with the codiscovery of the planet Neptune, whose reality he forecast by applying mathematics to the perturbations of the planet Uranus, set about adapting his formula to explain the erraticism of Mercury's orbit. He theorized it was caused by a planet even closer to the sun, which he dubbed Vulcan after the Greek god of fire. A few astronomers then claimed to have caught glimpses of Vulcan. Other explanations have since justified the unorthodox behavior of Mercury, and it is now believed that astronomers may actually have sighted one of the several large asteroids which sweep very close to the sun in their orbits.

Nevertheless, if there was a world that close to the sun, what would it be like? Ross Rocklynne helps us satisfy our curiosity in that regard with his tale of a scientific problem, "At the Center of Gravity."

The most beautiful object seen in the night sky through a telescope is the ringed planet of Saturn. A great deal has been surmised concerning the nature of the rings, and it is generally accepted that they are composed of countless particles and fragments, each following its own orbit around the parent body.

The "surface" of the planet itself is such a mass of contradictions that nothing definite can be concluded. It apparently has a very thick atmosphere—an incredible 20,000 miles in depth—but gases cannot exist in vapor form under such pressures, nor is the temperature right for liquefaction. The only other explanation, a 20,000-mile-deep ice pack,

seems implausible. The result is that few space ships visit Saturn in science fiction.

One exception was this author who, at a somewhat younger and more daring age, decided that the exploration of Saturn was the ideal test for the truly heroic space figure he contemplated. The result was "Man of the Stars."

The tens of thousands of tiny rocks and miniature worlds revolving in orbit between Mars and Jupiter, which we call asteroids, will someday be charted, examined, and exploited by thousands of adventurers and business speculators. A few may possess something of value and fewer still may yield something of scientific interest. "Garden in the Void" by Poul Anderson explores one of the latter possibilities in as unusual and original a science fiction story as has ever been published.

Comets, the most spectacular sight in the sky, may be related to the asteroids and meteorites. The primary difference is that some comets have absorbed an atmosphere or a quantity of gases. As they approach the sun, the radiation pressure forces the gases out in a long, electrically charged, fanlike tail. Comets have regular, if highly eccentric, orbits around the sun. Tracking down and landing on the surface of a comet, in its pyrotechnic race around the sun, might prove a highly exciting experience. R. F. Starzl describes just such an undertaking in his most effective short story, "The Radiant Enemies."

Some of the satellites of our solar planets are so large that they deserve special consideration. Two of the moons of Jupiter, Ganymede and Callisto, are

actually bigger than Mercury! The first moon of Jupiter, Io, is larger than earth's own Luna. It is to this moon that the late Stanley G. Weinbaum, one of the most talented of all science fiction writers, turned his attention in his story "The Mad Moon," offering a truly delightful and memorable picture of alien life.

The stars beyond are other suns and many of them have their own planets. In such an immensity of worlds literally anything is possible. On one of these globes a man is stranded, and hunts endlessly for the location of a space ship that can save him. The title "Something Green" suggests the nostalgia for earth that peculiarly alters his psychology.

Finally there is the fascinating secret of "The Dead Planet" as related by Edmond Hamilton. This, too, is a tale of otherworldly exploration, but so dependent upon an O. Henry twist that nothing can be told concerning it without revealing its ending.

As can be seen, the worlds our authors have investigated are off the beaten track. They have moved into uncommon areas and interpreted their findings there with unusual imagination.

Someday, possibly in our lifetime, a spaceman will return from Mars or Venus and write a long book, illustrated with photographs, on what he found there. That book will become one of the best sellers of all time. Until that day arrives, I think you will find the tales of the authors in this anthology thought-provoking enough to subdue your impatience, if not to quench your curiosity.

October 1962 SAM MOSKOWITZ

The Mad Moon

The Mad Moon

Stanley G. Weinbaum

No single author in the last thirty years appears to have had a more persuasive influence on the writers that followed him in the science fiction magazines than Stanley G. Weinbaum. His first story, "A Martian Odyssey," was a literary nova that reaped spontaneous and immediate accolades. That story was published in the July, 1934, issue of Wonder Stories. *On December 14, 1935, only fifteen months later, he was dead. Probably the last story he ever saw in print was "The Mad Moon" though many others were published posthumously. This story has all the elements that established his reputation and which have so strongly influenced other authors. We find the humanizing of bizarre, alien creatures, which previously had been characterized as bug-eyed monsters or were merely cardboard stereotypes; we find easy dialogue in place of characters unable to open their mouths due to the author's lack of confidence or knowledge of how to sustain a conversation in print; we find light romantic interest, as well done as in the slick-paper magazines, in place of a mid-Victorian treatment of the female of the species. The smoothness of the style conceals the extraordinary care used in formulating the scientific background of the story, which is there in considerable quantity but scarcely noticed. Read this story and remember that Weinbaum was the first writer in science fiction history to write in this manner.*

The Mad Moon

"IDIOTS!" HOWLED GRANT CALTHORPE. "Fools—nitwits—imbeciles!" He sought wildly for some more expressive terms, failed and vented his exasperation in a vicious kick at the pile of rubbish on the ground.

Too vicious a kick, in fact; he had again forgotten the one-third normal gravitation of Io, and his whole body followed his kick in a long, twelve-foot arc.

As he struck the ground the four loonies giggled. Their great, idiotic heads, looking like nothing so much as the comic faces painted on Sunday balloons for children, swayed in unison on their five-foot necks, as thin as Grant's wrist.

"Get out!" he blazed, scrambling erect. "Beat it, skiddoo, scram! No chocolate. No candy. Not until you learn that I want ferva leaves, and not any junk you happen to grab. Clear out!"

The loonies—*Lunae Jovis Magnicapites,* or literally, Bigheads of Jupiter's Moon—backed away, giggling plaintively. Beyond doubt, they considered Grant fully as idiotic as he considered them, and were quite unable to understand the reasons for his anger. But they certainly realized that no candy was to be forthcoming, and their giggles took on a note of keen disappointment.

So keen, indeed, that the leader, after twisting his ridiculous blue face in an imbecilic grin at Grant,

voiced a last wild giggle and dashed his head against a glittering stone-bark tree. His companions casually picked up his body and moved off, with his head dragging behind them on its neck like a prisoner's ball on a chain.

Grant brushed his hand across his forehead and turned wearily toward his stone-bark log shack. A pair of tiny, glittering red eyes caught his attention, and a slinker—*Mus Sapiens*—skipped his six-inch form across the threshold, bearing under his tiny, skinny arm what looked very much like Grant's clinical thermometer.

Grant yelled angrily at the creature, seized a stone, and flung it vainly. At the edge of the brush, the slinker turned its ratlike, semihuman face toward him, squeaked its thin gibberish, shook a microscopic fist in manlike wrath, and vanished, its batlike cowl of skin fluttering like a cloak. It looked, indeed, very much like a black rat wearing a cape.

It had been a mistake, Grant knew, to throw the stone at it. Now the tiny fiends would never permit him any peace, and their diminutive size and pseudo-human intelligence made them infernally troublesome as enemies. Yet, neither that reflection nor the loony's suicide troubled him particularly; he had witnessed instances like the latter too often, and besides, his head felt as if he were in for another siege of white fever.

He entered the shack, closed the door, and stared down at his pet parcat. "Oliver," he growled, "you're a fine one. Why the devil don't you watch out for slinkers? What are you here for?"

The parcat rose on its single, powerful hind leg,

clawing at his knees with its two forelegs. "The red jack on the black queen," it observed placidly. "Ten loonies make one half-wit."

Grant placed both statements easily. The first was, of course, an echo of his preceding evening's solitaire game, and the second of yesterday's session with the loonies. He grunted abstractedly and rubbed his aching head. White fever again, beyond doubt.

He swallowed two ferverin tablets, and sank listlessly to the edge of his bunk, wondering whether this attack of *blancha* would culminate in delirium.

He cursed himself for a fool for ever taking this job on Jupiter's third habitable moon, Io. The tiny world was a planet of madness, good for nothing except the production of ferva leaves, out of which Earthly chemists made as many potent alkaloids as they once made from opium.

Invaluable to medical science, of course, but what difference did that make to him? What difference, even, did the munificent salary make, if he got back to Earth a raving maniac after a year in the equatorial regions of Io? He swore bitterly that when the plane from Junopolis landed next month for his ferva, he'd go back to the polar city with it, even though his contract with Neilan Drug called for a full year, and he'd get no pay if he broke it. What good was money to a lunatic?

The whole little planet was mad—loonies, parcats, slinkers and Grant Calthorpe—all crazy. At least, anybody who ever ventured outside either of the two polar cities, Junopolis on the north and Herapolis on the south, was crazy. One could live

there in safety from white fever, but anywhere below the twentieth parallel it was worse than the Cambodian jungles on Earth.

He amused himself by dreaming of Earth. Just two years ago he had been happy there, known as a wealthy, popular sportsman. He had been just that too; before he was twenty-one he had hunted knife-kite and threadworm on Titan, and triops and uniped on Venus.

That had been before the gold crisis of 2110 had wiped out his fortune. And—well, if he had to work, it had seemed logical to use his interplanetary experience as a means of livelihood. He had really been enthusiastic at the chance to associate himself with Neilan Drug.

He had never been on Io before. This wild little world was no sportsman's paradise, with its idiotic loonies and wicked, intelligent, tiny slinkers. There wasn't anything worth hunting on the feverish little moon, bathed in warmth by the giant Jupiter only a quarter million miles away.

If he *had* happened to visit it, he told himself ruefully, he'd never have taken the job; he had visualized Io as something like Titan, cold but clean.

Instead it was as hot as the Venus Hotlands because of its glowing primary, and subject to half a dozen different forms of steamy daylight—sun day, Jovian day, Jovian and sun day, Europa light, and occasionally actual and dismal night. And most of these came in the course of Io's forty-two-hour revolution, too—a mad succession of changing lights. He hated the dizzy days, the jungle, and Idiots' Hills stretching behind his shack.

It was Jovian and solar day at the present moment, and that was the worst of all, because the distant sun added its modicum of heat to that of Jupiter. And to complete Grant's discomfort now was the prospect of a white fever attack. He swore as his head gave an additional twinge, and then swallowed another ferverin tablet. His supply of these was diminishing, he noticed; he'd have to remember to ask for some when the plane called— no, he was going back with it.

Oliver rubbed against his leg. "Idiots, fools, nitwits, imbeciles," remarked the parcat affectionately. "Why did I have to go to that damn dance?"

"Huh?" said Grant. He couldn't remember having said anything about a dance. It must, he decided, have been said during his last fever madness.

Oliver creaked like the door, then giggled like a loony. "It'll be all right," he assured Grant. "Father is bound to come soon."

"Father!" echoed the man. His father had died fifteen years before. "Where'd you get that from, Oliver?"

"It must be the fever," observed Oliver placidly. "You're a nice kitty, but I wish you had sense enough to know what you're saying. And I wish father would come." He finished with a supressed gurgle that might have been a sob.

Grant stared dizzily at him. He hadn't said any of those things; he was positive. The parcat must have heard them from somebody else— Somebody else? Where within five hundred miles was there anybody else?

"Oliver!" he bellowed. "Where'd you hear that? Where'd you hear it?"

The parcat backed away, startled. "Father is idiots, fools, nitwits, imbeciles," he said anxiously. "The red jack on the nice kitty."

"Come here!" roared Grant. "Whose father? Where have you— Come here, you imp!"

He lunged at the creature. Oliver flexed his single hind leg and flung himself frantically to the cowl of the wood stove. "It must be the fever!" he squalled. "No chocolate!"

He leaped like a three-legged flash for the flue opening. There came a sound of claws grating on metal, and then he had scrambled through.

Grant followed him. His head ached from the effort, and with the still sane part of his mind he knew that the whole episode was doubtless white fever delirium, but he plowed on.

His progress was a nightmare. Loonies kept bobbing their long necks above the tall bleeding-grass, their idiotic giggles and imbecilic faces adding to the general atmosphere of madness.

Wisps of fetid, fever-bearing vapors spouted up at every step on the spongy soil. Somewhere to his right a slinker squeaked and gibbered; he knew that a tiny slinker village was over in that direction, for once he had glimpsed the neat little buildings, constructed of small, perfectly fitted stones like a miniature medieval town, complete to towers and battlements. It was said that there were even slinker wars.

His head buzzed and whirled from the combined effects of ferverin and fever. It was an attack of

blancha, right enough, and he realized that he was an imbecile, a loony, to wander thus away from his shack. He should be lying on his bunk; the fever was not serious, but more than one man had died on Io, in the delirium, with its attendant hallucinations.

He was delirious now. He knew it as soon as he saw Oliver, for Oliver was placidly regarding an attractive young lady in perfect evening dress of the style of the second decade of the twenty-second century. Very obviously that was a hallucination, since girls had no business in the Ionian tropics, and if by some wild chance one should appear there, she would certainly not choose formal garb.

The hallucination had fever, apparently, for her face was pale with the whiteness that gave *blancha* its name. Her gray eyes regarded him without surprise as he wound his way through the bleeding-grass to her.

"Good afternoon, evening, or morning," he remarked, giving a puzzled glance at Jupiter, which was rising, and the sun, which was setting. "Or perhaps merely good day, Miss Lee Neilan."

She gazed seriously at him. "Do you know," she said, "you're the first one of the illusions that I haven't recognized? All my friends have been around, but you're the first stranger. Or are you a stranger? You know my name—but you ought to, of course, being my own hallucination."

"We won't argue about which of us is the hallucination," he suggested. "Let's do it this way. The one of us that disappears first is the illusion. Bet you five dollars you do."

"How could I collect?" she said. "I can't very well collect from my own dream."

"That is a problem." He frowned. "My problem, of course, not yours. I know I'm real."

"How do you know my name?" she demanded.

"Ah!" he said. "From intensive reading of the society sections of the newspapers brought by my supply plane. As a matter of fact, I have one of your pictures cut out and pasted next to my bunk. That probably accounts for my seeing you now. I'd like to really meet you some time."

"What a gallant remark for an apparition!" she exclaimed. "And who are you supposed to be?"

"Why, I'm Grant Calthorpe. In fact, I work for your father, trading with the loonies for ferva."

"Grant Calthorpe," she echoed. She narrowed her fever-dulled eyes as if to bring him into better focus. "Why, you are!"

Her voice wavered for a moment, and she brushed her hand across her pale brow. "Why should you pop out of my memories? It's strange. Three or four years ago, when I was a romantic schoolgirl and you the famous sportsman, I was madly in love with you. I had a whole book filled with your pictures—Grant Calthorpe dressed in parka for hunting threadworms on Titan—Grant Calthorpe beside the giant uniped he killed near the Mountains of Eternity. You're—you're really the pleasantest hallucination I've had so far. Delirium would be—fun"—she pressed her hand to her brow again—"if one's head—didn't ache so!"

"Gee!" thought Grant, "I wish that were true, that

about the book. This is what psychology calls a wish-fulfillment dream." A drop of warm rain plopped on his neck. "Got to get to bed," he said aloud. "Rain's bad for *blancha*. Hope to see you next time I'm feverish."

"Thank you," said Lee Neilan with dignity. "It's quite mutual."

He nodded, sending a twinge through his head. "Here, Oliver," he said to the drowsing parcat. "Come on."

"That isn't Oliver," said Lee. "It's Polly. It's kept me company for two days, and I've named it Polly."

"Wrong gender," muttered Grant. "Anyway, it's my parcat, Oliver. Aren't you Oliver?"

"Hope to see you," said Oliver sleepily.

"It's Polly. Aren't you, Polly?"

"Bet you five dollars," said the parcat. He rose, stretched and loped off into the underbrush. "It must be the fever," he observed as he vanished.

"It must be," agreed Grant. He turned away. "Good-by, Miss—or I might as well call you Lee, since you're not real. Good-by, Lee."

"Good-by, Grant. But don't go that way. There's a slinker village over in the grass."

"No. It's over there."

"It's *there*," she insisted. "I've been watching them build it. But they can't hurt you anyway, can they? Not even a slinker could hurt an apparition. Good-by, Grant." She closed her eyes wearily.

It was raining harder now. Grant pushed his way through the bleeding-grass, whose red sap collected in bloody drops on his boots. He had to get

back to his shack quickly, before the white fever and its attendant delirium set him wandering utterly astray. He needed ferverin.

Suddenly he stopped short. Directly before him the grass had been cleared away, and in the little clearing were the shoulder-high towers and battlements of a slinker village—a new one, for half-finished houses stood among the others, and hooded six-inch forms toiled over the stones.

There was an outcry of squeaks and gibberish. He backed away, but a dozen tiny darts whizzed about him. One stuck like a toothpick in his boot, but none, luckily, scratched his skin, for they were undoubtedly poisoned. He moved more quickly, but all around in the thick, fleshy grasses were rustlings, squeakings, and incomprehensible imprecations.

He circled away. Loonies kept popping their balloon heads over the vegetation, and now and again one giggled in pain as a slinker bit or stabbed it. Grant cut toward a group of the creatures, hoping to distract the tiny fiends in the grass, and a tall, purple-faced loony curved its long neck above him, giggling and gesturing with its skinny fingers at a bundle under its arm.

He ignored the thing, and veered toward his shack. He seemed to have eluded the slinkers, so he trudged doggedly on, for he needed a ferverin tablet badly. Yet, suddenly he came to a frowning halt, turned, and began to retrace his steps.

"It can't be so," he muttered. "But she told me the truth about the slinker village. I didn't know it

was there. Yet how could a hallucination tell me something I didn't know?"

Lee Neilan was sitting on the stone-bark log exactly as he had left her with Oliver again at her side. Her eyes were closed, and two slinkers were cutting at the long skirt of her gown with tiny, glittering knives.

Grant knew that they were always attracted by Terrestrial textiles; apparently they were unable to duplicate the fascinating sheen of satin, though the fiends were infernally clever with their tiny hands. As he approached, they tore a strip from thigh to ankle, but the girl made no move. Grant shouted, and the vicious little creatures mouthed unutterable curses at him, as they skittered away with their silken plunder.

Lee Neilan opened her eyes. "You again," she murmured vaguely. "A moment ago it was father. Now it's you." Her pallor had increased; the white fever was running its course in her body.

"Your father! Then that's where Oliver heard—Listen, Lee. I found the slinker village. I didn't know it was there, but I found it just as you said. Do you see what that means? We're both real!"

"Real?" she said dully. "There's a purple loony grinning over your shoulder. Make him go away. He makes me feel—sick."

He glanced around; true enough, the purple-faced loony was behind him. "Look here," he said, seizing her arm. The feel of her smooth skin was added proof. "You're coming to the shack for ferverin."

He pulled her to her feet. "Don't you understand? I'm real!"

"No, you're not," she said dazedly.

"Listen, Lee. I don't know how in the devil you got here or why, but I know Io hasn't driven me that crazy yet. You're real and I'm real." He shook her violently. "I'm *real!*" he shouted.

Faint comprehension showed in her dazed eyes. "Real?" she whispered. "Real! Oh, Lord! Then take —me out of this mad place!" She swayed, made a stubborn effort to control herself, then pitched forward against him.

Of course on Io her weight was negligible, less than a third Earth normal. He swung her into his arms and set off toward the shack, keeping well away from both slinker settlements. Around him bobbed excited loonies, and now and again the purple-faced one, or another exactly like him, giggled and pointed and gestured.

The rain had increased, and warm rivulets flowed down his neck, and to add to the madness, he blundered near a copse of stinging palms, and their barbed lashes stung painfully through his shirt. Those stings were virulent too, if one failed to disinfect them; indeed, it was largely the stinging palms that kept traders from gathering their own ferva instead of depending on the loonies.

Behind the low rain clouds, the sun had set and it was ruddy Jupiter daylight, which lent a false flush to the cheeks of the unconscious Lee Neilan, making her still features very lovely.

Perhaps he kept his eyes too steadily on her face, for suddenly Grant was among slinkers again; they

were squeaking and sputtering, and the purple loony leaped in pain as teeth and darts pricked his legs. But, of course, loonies were immune to the poison.

The tiny devils were around his feet now. He swore in a low voice and kicked vigorously, sending a ratlike form spinning fifty feet in the air. He had both automatic and flame pistol at his hip, but he could not use them for several reasons.

First, using an automatic against the tiny hordes was much like firing into a swarm of mosquitoes; if the bullet killed one or two or a dozen, it made no appreciable impression on the remaining thousands. And as for the flame pistol, that was like using a Big Bertha to swat a fly. Its vast belch of fire would certainly incinerate all the slinkers in its immediate path, along with grass, trees, and loonies, but that again would make but little impress on the surviving hordes, and it meant laboriously recharging the pistol with another black diamond and another barrel.

He had gas bulbs in the shack, but they were not available at the moment, and besides, he had no spare mask, and no chemist has yet succeeded in devising a gas that would kill slinkers without being also deadly to humans. And, finally, he couldn't use any weapon whatsoever right now, because he dared not drop Lee Neilan to free his hands.

Ahead was the clearing around the shack. The space was full of slinkers, but the shack itself was supposed to be slinkerproof, at least for reasonable lengths of time, since stone-bark logs were very resistant to their tiny tools.

But Grant perceived that a group of the diminutive devils were around the door, and suddenly he realized their intent. They had looped a cord of some sort over the knob, and were engaged now in twisting it!

Grant yelled and broke into a run. While he was yet half a hundred feet distant, the door swung inward and the rabble of slinkers flowed into the shack.

He dashed through the entrance. Within was turmoil. Little hooded shapes were cutting at the blankets on his bunk, his extra clothing, the sacks he hoped to fill with ferva leaves, and were pulling at the cooking utensils, or at any and all loose objects.

He bellowed and kicked at the swarm. A wild chorus of squeaks and gibberish arose as the creatures skipped and dodged about him. The fiends were intelligent enough to realize that he could do nothing with his arms occupied by Lee Neilan. They skittered out of the way of his kicks, and while he threatened a group at the stove, another rabble tore at his blankets.

In desperation he charged the bunk. He swept the girl's body across it to clear it, dropped her on it, and seized a grass broom he had made to facilitate his housekeeping. With wide strokes of its handle he attacked the slinkers, and the squeals were checkered by cries and whimpers of pain.

A few broke for the door, dragging whatever loot they had. He spun around in time to see half a dozen swarming around Lee Neilan, tearing at her clothing, at the wrist watch on her arm, at the satin

evening pumps on her small feet. He roared a curse at them and battered them away, hoping that none had pricked her skin with virulent dagger or poisonous tooth.

He began to win the skirmish. More of the creatures drew their black capes close about them and scurried over the threshold with their plunder. At last, with a burst of squeaks, the remainder, laden and empty-handed alike, broke and ran for safety, leaving a dozen furry, impish bodies slain or wounded.

Grant swept these after the others with his erstwhile weapon, closed the door in the face of a loony that bobbed in the opening, latched it against any repetition of the slinker's trick, and stared in dismay about the plundered dwelling.

Cans had been rolled or dragged away. Every loose object had been pawed by the slinkers' foul little hands, and Grant's clothes hung in ruins on their hooks against the wall. But the tiny robbers had not succeeded in opening the cabinet nor the table drawer, and there was food left.

Six months of Ionian life had left him philosophical; he swore heartily, shrugged resignedly, and pulled his bottle of ferverin from the cabinet.

His own spell of fever had vanished as suddenly and completely as *blancha* always does when treated, but the girl, lacking ferverin, was paper-white and still. Grant glanced at the bottle; eight tablets remained.

"Well, I can always chew ferva leaves," he muttered. That was less effective than the alkaloid itself,

but it would serve, and Lee Neilan needed the tablets. He dissolved two of them in a glass of water, and lifted her head.

She was not too inert to swallow, and he poured the solution between her pale lips, then arranged her as comfortably as he could. Her dress was a tattered silken ruin, and he covered her with a blanket that was no less a ruin. Then he disinfected his palm stings, pulled two chairs together, and sprawled across them to sleep.

He started up at the sound of claws on the roof, but it was only Oliver, gingerly testing the flue to see it if were hot. In a moment the parcat scrambled through, stretched himself, and remarked, "I'm real and you're real."

"Imagine that!" grunted Grant sleepily.

When he awoke it was Jupiter and Europa light, which meant he had slept about seven hours, since the brilliant little third moon was just rising. He rose and gazed at Lee Neilan, who was sleeping soundly with a tinge of color in her face that was not entirely due to the ruddy daylight. The *blancha* was passing.

He dissolved two more tablets in water, then shook the girl's shoulder. Instantly her gray eyes opened, quite clear now, and she looked up at him without surprise.

"Hello, Grant," she murmured. "So it's you again. Fever isn't so bad, after all."

"Maybe I ought to let you stay feverish," he grinned. "You say such nice things. Wake up and drink this, Lee."

She became suddenly aware of the shack's interior. "Why— Where is this? It looks—real!"

"It is. Drink this ferverin."

She obeyed, then lay back and stared at him perplexedly. "Real?" she said. "And you're real?"

"I think I am."

A rush of tears clouded her eyes. "Then—I'm out of that place? That horrible place?"

"You certainly are." He saw signs of her relief becoming hysteria, and hastened to distract her. "Would you mind telling me how you happened to be there—and dressed for a party too?"

She controlled herself. "I was dressed for a party. A party. A party in Herapolis. But I was in Junopolis, you see."

"I don't see. In the first place, what are you doing on Io, anyway? Every time I ever heard of you, it was in connection with New York or Paris society."

She smiled. "Then it wasn't all delirium, was it? You did say that you had one of my pictures—Oh, that one!" She frowned at the print on the wall. "Next time a news photographer wants to snap my picture, I'll remember not to grin like—like a loony. But as to how I happen to be on Io, I came with father, who's looking over the possibilities of raising ferva on plantations instead of having to depend on traders and loonies. We've been here three months, and I've been terribly bored. I thought Io would be exciting, but it wasn't—until recently."

"But what about that dance? How'd you manage to get here, a thousand miles from Junopolis?"

"Well," she said slowly, "it was terribly tiresome in Junopolis. No shows, no sport, nothing but

an occasional dance. I got restless. When there were dances in Herapolis, I formed the habit of flying over there. It's only four or five hours in a fast plane, you know. And last week—or whatever it was—I'd planned on flying down, and Harvey—that's father's secretary—was to take me. But at the last minute father needed him and forbade my flying alone."

Grant felt a strong dislike for Harvey. "Well?" he asked.

"So I flew alone," she finished demurely.

"And cracked up, eh?"

"I can fly as well as anybody," she retorted. "It was just that I followed a different route, and suddenly there were mountains ahead."

He nodded. "The Idiots' Hills," he said. "My supply plane detours five hundred miles to avoid them. They're not high, but they stick right out above the atmosphere of this crazy planet. The air here is dense but shallow."

"I know that. I knew I couldn't fly above them, but I thought I could hurdle them. Work up full speed, you know, and then throw the plane upward. I had a closed plane, and gravitation is so weak here. And besides, I've seen it done several times, especially with a rocket-driven craft. The jets help to support the plane even after the wings are useless for lack of air."

"What a damn fool stunt!" exclaimed Grant. "Sure it can be done, but you have to be an expert to pull out of it when you hit the air on the other side. You hit fast, and there isn't much falling room."

"So I found out," said Lee ruefully. "I almost pulled out, but not quite, and I hit in the middle of some stinging palms. I guess the crash dazed them, because I managed to get out before they started lashing around. But I couldn't reach my plane again, and it was—I only remember two days of it —but it was horrible!"

"It must have been," he said gently.

"I knew that if I didn't eat or drink, I had a chance of avoiding white fever. The not eating wasn't so bad, but the not drinking—well, I finally gave up and drank out of a brook. I didn't care what happened if I could have a few moments that weren't thirst-tortured. And after that it's all confused and vague."

"You should have chewed ferva leaves."

"I didn't know that. I wouldn't have even known what they looked like, and besides, I kept expecting father to appear. He must be having a search made by now."

"He probably is," rejoined Grant ironically. "Has it occurred to you that there are thirteen million square miles of surface on little Io? And that for all he knows, you might have crashed on any square mile of it? When you're flying from north pole to south pole, there *isn't* any shortest route. You can cross any point on the planet."

Her gray eyes started wide. "But I—"

"Furthermore," said Grant, "this is probably the *last* place a searching party would look. They wouldn't think anyone but a loony would try to hurdle Idiots' Hills, in which thesis I quite agree. So it looks very much, Lee Neilan, as if you're

marooned here until my supply plane gets here next month!"

"But father will be crazy! He'll think I'm dead!"

"He thinks that now, no doubt."

"But we can't—" She broke off, staring around the tiny shack's single room. After a moment she sighed resignedly, smiled, and said softly, "Well, it might have been worse, Grant. I'll try to earn my keep."

"Good. How do you feel, Lee?"

"Quite normal. I'll start right to work." She flung off the tattered blanket, sat up, and dropped her feet to the floor. "I'll fix dinn—Good night! My dress!" She snatched the blanket about her again.

He grinned. "We had a little run-in with the slinkers after you had passed out. They did for my spare wardrobe too."

"It's ruined!" she wailed.

"Would needle and thread help? They left that, at least, because it was in the table drawer."

"Why, I couldn't make a good swimming suit out of this!" she retorted. "Let me try one of yours."

By dint of cutting, patching, and mending, she at last managed to piece one of Grant's suits to respectable proportions. She looked very lovely in shirt and trousers, but he was troubled to note that a sudden pallor had overtaken her.

It was the *riblancha,* the second spell of fever that usually followed a severe or prolonged attack. His face was serious as he cupped two of his last four ferverin tablets in his hand.

"Take these," he ordered. "And we've got to get some ferva leaves somewhere. The plane took my

supply away last week, and I've had bad luck with my loonies ever since. They haven't brought me anything but weeds and rubbish."

Lee puckered her lips at the bitterness of the drug, then closed her eyes against its momentary dizziness and nausea. "Where can you find ferva?" she asked.

He shook his head perplexedly, glancing out at the setting mass of Jupiter, with its bands glowing creamy and brown, and the Red Spot boiling near the western edge. Close above it was the brilliant little disk of Europa. He frowned suddenly, glanced at his watch and then at the almanac on the inside of the cabinet door.

"It'll be Europa light in fifteen minutes," he muttered, "and true night in twenty-five—the first true night in half a month. I wonder—"

He gazed thoughtfully at Lee's face. He knew where ferva grew. One dared not penetrate the jungle itself, where stinging palms and arrow vines and the deadly worms called toothers made such a venture sheer suicide for any creatures but loonies and slinkers. But he knew where ferva grew—

In Io's rare true night even the clearing might be dangerous. Not merely from slinkers, either; he knew well enough that in the darkness creatures crept out of the jungle who otherwise remained in the eternal shadows of its depths—toothers, bullethead frogs, and doubtless many unknown slimy, venomous, mysterious beings never seen by man. One heard stories in Herapolis and—

But he had to get ferva, and he knew where it grew. Not even a loony would try to gather it there,

but in the little gardens or farms around the tiny slinker towns, there was ferva growing.

He switched on a light in the gathering dusk. "I'm going outside a moment," he told Lee Neilan. "If the *blancha* starts coming back, take the other two tablets. Wouldn't hurt you to take 'em anyway. The slinkers got away with my thermometer, but if you get dizzy again, you take 'em."

"Grant! Where—"

"I'll be back," he called, closing the door behind him.

A loony, purple in the bluish Europa light, bobbed up with a long giggle. He waved the creature aside and set off on a cautious approach to the neighborhood of the slinker village—the old one, for the other could hardly have had time to cultivate its surrounding ground. He crept warily through the bleeding-grass, but he knew his stealth was pure optimism. He was in exactly the position of a hundred-foot giant trying to approach a human city in secrecy—a difficult matter even in the utter darkness of night.

He reached the edge of the slinker clearing. Behind him, Europa, moving as fast as the second hand on his watch, plummeted toward the horizon. He paused in momentary surprise at the sight of the exquisite little town, a hundred feet away across the tiny square fields, with lights flickering in its hand-wide windows. He had not known that slinker culture included the use of lights, but there they were, tiny candles or perhaps diminutive oil lamps.

He blinked in the darkness. The second of the ten-foot fields looked like—it was—ferva. He

stooped low, crept out, and reached his hand for the fleshy, white leaves. And at that moment came a shrill giggle and the crackle of grass behind him. The loony! The idiotic purple loony!

Squeaking shrieks sounded. He snatched a double handful of ferva, rose, and dashed toward the lighted window of his shack. He had no wish to face poisoned barbs or disease-bearing teeth, and the slinkers were certainly aroused. Their gibbering sounded in chorus; the ground looked black with them.

He reached the shack, burst in, slammed and latched the door. "Got it!" he grinned. "Let 'em rave outside now."

They were raving. Their gibberish sounded like the creaking of worn machinery. Even Oliver opened his drowsy eyes to listen. "It must be the fever," observed the parcat placidly.

Lee was certainly no paler; the *riblancha* was passing safely. "Ugh!" she said, listening to the tumult without. "I've always hated rats, but slinkers are worse. All the shrewdness and viciousness of rats plus the intelligence of devils."

"Well," said Grant thoughtfully, "I don't see what they can do. They've had it in for me anyway."

"It sounds as if they're going off," said the girl, listening. "The noise is fading."

Grant peered out of the window. "They're still around. They've just passed from swearing to planning, and I wish I knew what. Some day, if this crazy little planet ever becomes worth human occupation, there's going to be a showdown between humans and slinkers."

"Well? They're not civilized enough to be really a serious obstacle, and they're so small, besides."

"But they learn," he said. "They learn so quickly, and they breed like flies. Suppose they pick up the use of gas, or suppose they develop little rifles for their poisonous darts. That's possible, because they work in metals right now, and they know fire. That would put them practically on a par with man as far as offense goes, for what good are our giant cannons and rocket planes against six-inch slinkers? And to be just on even terms would be fatal; one slinker for one man would be a hell of a trade."

Lee yawned. "Well, it's not our problem. I'm hungry, Grant."

"Good. That's a sign the *blancha's* through with you. We'll eat and then sleep a while, for there's five hours of darkness."

"But the slinkers?"

"I don't see what they can do. They couldn't cut through stone-bark walls in five hours, and anyway, Oliver would warn us if one managed to slip in somewhere."

It was light when Grant awoke, and he stretched his cramped limbs painfully across his two chairs. Something had wakened him, but he didn't know just what. Oliver was pacing nervously beside him, and now looked anxiously up at him.

"I've had bad luck with my loonies," announced the parcat plaintively. "You're a nice kitty."

"So are you," said Grant. Something had wakened him, but what?

Then he knew, for it came again—the merest

trembling of the stone-bark floor. He frowned in puzzlement. Earthquakes? Not on Io, for the tiny sphere had lost its internal heat untold ages ago. Then what?

Comprehension dawned suddenly. He sprang to his feet with so wild a yell that Oliver scrambled sideways with an infernal babble. The startled par-cat leaped to the stove and vanished up the flue. His squall drifted faintly back.

"It must be the fever!"

Lee had started to a sitting position on the bunk, her gray eyes blinking sleepily.

"Outside!" he roared, pulling her to her feet. "Get out! Quickly!"

"Wh-what—why—"

"Get out!" He thrust her through the door, then spun to seize his belt and weapons, the bag of ferva leaves, a package of chocolate. The floor trembled again, and he burst out of the door with a frantic leap to the side of the dazed girl.

"They've undermined it!" he choked. "The devils undermined the—"

He had no time to say more. A corner of the shack suddenly subsided; the stone-bark logs grated, and the whole structure collapsed like a child's house of blocks. The crash died into silence, and there was no motion save a lazy wisp of vapor, a few black, ratlike forms scurrying toward the grass, and a purple loony bobbing beyond the ruins.

"The dirty devils!" he swore bitterly. "The damn little black rats! The—"

A dart whistled so close that it grazed his ear and then twitched a lock of Lee's tousled brown hair.

A chorus of squeaking sounded in the bleeding-grass.

"Come on!" he cried. "They're out to exterminate us this time. No—this way. Toward the hills. There's less jungle this way."

They could outrun the tiny slinkers easily enough. In a few moments they had lost the sound of squeaking voices, and they stopped to gaze ruefully back on the fallen dwelling.

"Now," he said miserably, "we're both where you were to start with."

"Oh, no." Lee looked up at him. "We're together now, Grant. I'm not afraid."

"We'll manage," he said with a show of assurance. "We'll put up a temporary shack somehow. We'll——"

A dart struck his boot with a sharp *blup*. The slinkers had caught up to them.

Again they ran toward Idiots' Hills. When at last they stopped, they could look down a long slope and far over the Ionian jungles. There was the ruined shack, and there, neatly checkered, the fields and towers of the nearer slinker town. But they had scarcely caught their breath when gibbering and squeaking came out of the brush.

They were being driven into Idiots' Hills, a region as unknown to man as the icy wastes of Pluto. It was as if the tiny fiends behind them had determined that this time their enemy, the giant trampler and despoiler of their fields, should be pursued to extinction.

Weapons were useless. Grant could not even

glimpse their pursuers, slipping like hooded rats through the vegetation. A bullet, even if chance sped it through a slinker's body, was futile, and his flame pistol, though its lightning stroke should incinerate tons of brush and bleeding-grass, could no more than cut a narrow path through the horde of tormentors. The only weapons that might have availed, the gas bulbs, were lost in the ruins of the shack.

Grant and Lee were forced upward. They had risen a thousand feet above the plain, and the air was thinning. There was no jungle here, but only great stretches of bleeding-grass, across which a few loonies were visible, bobbing their heads on their long necks.

"Toward—the peaks!" gasped Grant, now painfully short of breath. "Perhaps we can stand rarer air than they."

Lee was beyond answer. She panted doggedly along beside him as they plodded now over patches of bare rock. Before them were two low peaks, like the pillars of a gate. Glancing back, Grant caught a glimpse of tiny black forms on a clear area, and in sheer anger he fired a shot. A single slinker leaped convulsively, its cape flapping, but the rest flowed on. There must have been thousands of them.

The peaks were closer, no more than a few hundred yards away. They were sheer, smooth, unscalable.

"Between them," muttered Grant.

The passage that separated them was bare and

narrow. The twin peaks had been one in ages past; some forgotten volcanic convulsion had split them, leaving this slender canyon between.

He slipped an arm about Lee, whose breath, from effort and altitude, was a series of rasping gasps. A bright dart tinkled on the rocks as they reached the opening, but looking back, Grant could see only a purple loony plodding upward, and a few more to his right. They raced down a straight fifty-foot passage that debouched suddenly into a sizable valley—and there, thunderstruck for a moment, they paused.

A city lay there. For a brief instant Grant thought they had burst upon a vast slinker metropolis, but the merest glance showed otherwise. This was no city of medieval blocks, but a poem in marble, classical in beauty, and of human or near-human proportions. White columns, glorious arches, pure curving domes, an architectural loveliness that might have been born on the Acropolis. It took a second look to discern that the city was dead, deserted, in ruins.

Even in her exhaustion, Lee felt its beauty. "How —how exquisite!" she panted. "One could almost forgive them—for being—slinkers!"

"They won't forgive us for being human," he muttered. "We'll have to make a stand somewhere. We'd better pick a building."

But before they could move more than a few feet from the canyon mouth, a wild disturbance halted them. Grant whirled, and for a moment found himself actually paralyzed by amazement. The narrow canyon was filled with a gibbering horde of slinkers,

like a nauseous, heaving black carpet. But they came no further than the valley end, for grinning, giggling, and bobbing, blocking the opening with tramping three-toed feet, were four loonies!

It was a battle. The slinkers were biting and stabbing at the miserable defenders, whose shrill keenings of pain were less giggles than shrieks. But with a determination and purpose utterly foreign to loonies, their clawed feet tramped methodically up and down, up and down.

Grant exploded, "I'll be damned!" Then an idea struck him. "Lee! They're packed in the canyon, the whole devil's brood of 'em!"

He rushed toward the opening. He thrust his flame pistol between the skinny legs of a loony, aimed it straight along the canyon, and fired.

Inferno burst. The tiny diamond, giving up all its energy in one terrific blast, shot a jagged stream of fire that filled the canyon from wall to wall and vomited out beyond to cut a fan of fire through the bleeding-grass of the slope.

Idiots' Hills reverberated to the roar, and when the rain of debris settled, there was nothing in the canyon save a few bits of flesh and the head of an unfortunate loony, still bouncing and rolling.

Three of the loonies survived. A purple-faced one was pulling his arm, grinning and giggling in imbecile glee. He waved the thing aside and returned to the girl.

"Thank goodness!" he said. "We're out of that, anyway."

"I wasn't afraid, Grant. Not with you."

He smiled. "Perhaps we can find a place here,"

he suggested. "The fever ought to be less troublesome at this altitude. But—say, this must have been the capital city of the whole slinker race in ancient times. I can scarcely imagine those fiends creating an architecture as beautiful as this—or as large. Why, these buildings are as colossal in proportion to slinker size as the skyscrapers of New York to us!"

"But so beautiful," said Lee softly, sweeping her eyes over the glory of the ruins. "One might almost forgive—Grant! Look at those!"

He followed the gesture. On the inner side of the canyon's portals were gigantic carvings. But the thing that set him staring in amazement was the subject of the portrayal. There, towering far up the cliff sides, were the figures, not of slinkers, but of—loonies! Exquisitively carved, smiling rather than grinning, and smiling somehow sadly, regretfully, pityingly—yet beyond doubt, loonies!

"Good night!" he whispered. "Do you see, Lee? This must once have been a loony city. The steps, the doors, the buildings, all are on their scale of size. Somehow, some time, they must have achieved civilization, and the loonies we know are the degenerate residue of a great race."

"And," put in Lee, "the reason those four blocked the way when the slinkers tried to come through is that they still remember. Or probably they don't actually remember, but they have a tradition of past glories, or more likely still, just a superstitious feeling that this place is in some way sacred. They let us pass because, after all, we look more like loonies than like slinkers. But the amazing thing is that they

still possess even that dim memory, because this city must have been in ruins for centuries. Or perhaps even for thousands of years."

"But to think that loonies could ever have had the intelligence to create a culture of their own," said Grant, waving away the purple one bobbing and giggling at his side. Suddenly he paused, turning a gaze of new respect on the creature. "This one's been following me for days. All right, old chap, what is it?"

The purple one extended a sorely bedraggled bundle of bleeding-grass and twigs, giggling idiotically. His ridiculous mouth twisted; his eyes popped in an agony of effort at mental concentration.

"Canny!" he giggled triumphantly.

"The imbecile!" flared Grant. "Nitwit! Idiot!" He broke off, then laughed. "Never mind. I guess you deserve it." He tossed his package of chocolate to the three delighted loonies. "Here's your candy."

A scream from Lee startled him. She was waving her arms wildly, and over the crest of Idiots' Hills a rocket plane roared, circled, and nosed its way into the valley.

The door opened. Oliver stalked gravely out, remarking casually. "I'm real and you're real." A man followed the parcat—two men.

"Father!" screamed Lee.

It was some time later that Gustavus Neilan turned to Grant. "I can't thank you," he said. "If there's ever any way I can show my appreciation for——"

"There is. You can cancel my contract."

"Oh, you work for me?"

"I'm Grant Calthorpe, one of your traders, and I'm about sick of this crazy planet."

"Of course, if you wish," said Neilan. "If it's a question of pay—"

"You can pay me for the six months I've worked."

"If you'd care to stay," said the older man, "there won't be trading much longer. We've been able to grow ferva near the polar cities, and I prefer plantations to the uncertainties of relying on loonies. If you'd work out your year, we might be able to put you in charge of a plantation by the end of that time."

Grant met Lee Neilan's gray eyes, and hesitated. "Thanks," he said slowly, "but I'm sick of it." He smiled at the girl, then turned back to her father. "Would you mind telling me how you happened to find us? This is the most unlikely place on the planet."

"That's just the reason," said Neilan. "When Lee didn't get back, I thought things over pretty carefully. At last I decided, knowing her as I did, to search the least likely places first. We tried the shores of the Fever Sea, and then the White Desert, and finally Idiots' Hills. We spotted the ruins of a shack, and on the debris was this chap"—he indicated Oliver—"remarking that 'Ten loonies make one half-wit.' Well, the half-wit part sounded very much like a reference to my daughter, and we cruised about until the roar of your flame pistol attracted our attention."

Lee pouted, then turned her serious gray eyes on

Grant. "Do you remember," she said softly, "what I told you there in the jungle?"

"I wouldn't even have mentioned that," he replied. "I knew you were delirious."

"But—perhaps I wasn't. Would companionship make it any easier to work out your year? I mean if —for instance—you were to fly back with us to Junopolis and return with a wife?"

"Lee," he said huskily, "you know what a difference that would make, though I can't understand why you'd ever dream of it."

"It must," suggested Oliver, "be the fever."

Garden in the Void

Garden in the Void

Poul Anderson

Poul Anderson is not only one of the most prolific of modern science fiction writers, he is also one of the best. He was guest of honor at the 19th World Science Fiction Convention, held in Seattle, September 2 to 4, 1961, and at that meeting he was presented with a "Hugo" for the best science fiction story of the year, The Longest Voyage. *He is a "new generation" science fiction writer, having begun his career, in collaboration with a friend, F. N. Waldrop, with "Tomorrow's Children"* (Astounding Science Fiction, *March, 1947*) *while still at the University of Minnesota. Writing was at first a means of financing his physics education, but after he graduated, he employed his scientific knowledge to lend authenticity to his science fiction and continued as a full-time writer. His most distinguished novel is* The High Crusade, *a near Hugo-winning effort, that concerns an alien space ship landing in fourteenth-century England when knighthood was still in flower. Almost neglected since its first publication in 1952, "Garden in the Void" is unquestionably one of his finest efforts, thought-stimulating in its high level of originality.*

Garden in the Void

"AN ASTEROID. A *green* asteroid."

His voice oddly resonant in the metal stillness of the spaceship, he looked through the forward port with an uncertain wonder in him.

There was darkness outside, the great hollow night of space, and a thousand stars flamed cold in the brass frame of the port. The asteroid showed as a tiny pale-green spark that only a trained eye would have seen among those swarming bitter-bright suns. The quality of it was different, a muted reflection of the Belt's weak light instead of naked fire leaping across a universe, and it flickered a little as the irregular stone spun on its axis.

"Green," said Hardesty again, the note of puzzlement grown stronger. "I never saw that before."

His wife shoved off from one wall of the cabin, her tall form weightlessly drifting past the glitter of control board to the instruments mounted on the farther side.

"Shall we have a look?" she asked practically.

Hardesty glanced at the meters and performed a mental calculation; one had to be sparing of fuel on a voyage like this.

"Yes, if the velocity isn't too different from ours," he said.

Marian's dark head bent over the telescope and her long, strong fingers spun a wheel, sighting on

the speck that flitted out among the constellations. There was a faint sighing of gears above the murmur of air blown through a ventilator. It was quiet out in space—so quiet. Hardesty's pulse was loud in his own ears.

He unclipped a pencil from a pocket of his coverall and scribbled the figures she announced on a pad clamped to the control board. When her readings were done, he took the slide rule from its rack and manipulated it with the easy speed of long practice. His gaunt frame hung in mid-air, one foot hooked through the arm of a recoil chair to keep him in place.

The *Gold Rush* was moving outward from the Sun with a velocity known closely enough from his last astrogational readings. It was a fair approximation to assume that the asteroid's motion was at forty-five degrees to the ship's path and its speed that to be expected of a body orbiting at this distance. Thus, from the observed transverse angular velocity, the separation could be estimated. It would take so much fuel to kill the ship's outward vector—a deceleration of two-point-five Gs should do it in the allowed distance—and then you added ten per cent for maneuvering and landing.

"Uh-huh," he nodded. "It's all right, honey."

Marian swam into her chair, adjusted the webbing, and plugged in her throat mike. She'd be taking the reading while Hardesty piloted the ship, but you needed a comcircuit to talk and hear when the rockets were going.

His mind quit gnawing at the problem of a green

asteroid and concentrated on the delicate job of working the ship in. Slowly, his whickering gyros swung the hull around. When the rockets started to roar, it was a thunder voice booming and crashing between the vibrant walls, shivering the teeth in his skull, and weight dragged cruelly at a body grown used to free fall. For a moment his eyes hazed, the constellations danced insanely through a suddenly reddened sky, and then his trained reflexes took over and he watched the asteroid swelling in the rearview telescreen.

They shot past it at a distance of ten miles, splashing the great dark with livid flame. Now it rolled in the forward port, and he notched the main switch ahead and felt his tissues groaning. Marian snapped out a string of instrument readings, and gyros whined as Hardesty brought the ship about, changing course, bearing down on the rock. They swung past it in a long curve. When it was centered on the cross-hairs of the rearview screen and could be held there, Hardesty backed down upon it.

A typical piece of space debris, he thought. It was roughly cylindrical, perhaps ten miles long and five thick, but the crags and gashes that scarred its surfaces made it a jumble of blackened stone. Here and there a patch of quartz or mica caught the thin sunlight in a swiftly harsh blink. The greenness was in patches, clustered on such hills and slopes as offered most Sun, but there seemed to be a delicate webbing—of veins?—connecting all those bunches. There were brown and gray and yellow mixed in. Like lichen, he decided, and his mind hearkened

back to the cool, mossy rocks of a New England forest and suddenly, almost bitterly, he wished he were there.

The radar screen flickered and danced. Not much level ground, but he had landed on worse places without toppling his ship. Even if he did fail now, it would mean only the nuisance of rigging the derrick to lift her—a bump in that feeble gravity couldn't hurt vessel or crew.

A motor sang above the dull thutter of rockets and the landing tripod slid out around the tubes. Electronic valves glowed, radar-controlled servos adjusting the lengths of the three legs to the sloping, pitted surface. In the sudden ringing stillness, as the rockets went dead, the hull boomed and sagged. Shale gave way beneath one leg, but the servo lengthened it till its foot rested on solidity, and then the whole ship was quiet.

Hardesty shook his head to clear it and looked across at his wife. Her thinly strong features smiled back at him, congratulating him, but no words were needed; they knew each other too well. He unbuckled the webbing and stood erect.

The vision of the sky was like a blow in the face when they stepped out. He could spend a hundred years in the Belt, thought Hardesty, and its eerie unhuman magnificence would be as cold in his heart as the first day he left Earth.

The *Gold Rush* was not a large spaceship—a two-passenger Beltboat with extraction and refining equipment, fuel and supplies enough for a year of cruising—but she loomed over their heads, a squat

metal tower against the stars, dully ashine in the pale, chill light. Before them, a harsh raggedness of knife-edged rock swept to a horizon that seemed near enough to touch, the edge of forever lying beyond that wolf-jawed rim of hills. The ground was black, pits and craters and twisted frozen magma, dully lit, shadows like holes of blindness creeping over the rough slope. A tiny Sun, three hundred million miles away, glittered and threw a wash of dim, heatless luminance.

It was quiet, the blank quiet of airlessness and emptiness, the only noise that of the muted scrunch of footsteps carried through the spacesuits, only that and the hot, rapid thud of heart and breath. The sound of his own life was almost deafening in Hardesty's skull, and yet it was the dimmest flicker in a room of night, a tiny frantic fist beating on iron gates of silence.

And overhead wheeled the stars, the million suns of space, fire and ice and the giant sprawl of constellations, the Milky Way a rush of curdled silver, the far, mysterious glow of nebulae, hugeness and loneliness to break a human heart. There went the Great Bear, swinging light-years overhead, and it was not the friendly neighbor of Earth's heaven, but a god striding in flame and darkness, scorning the watchers, enormous and beautiful and cruel. The others followed, and the stars that Earth never sees threw their signals flashing and flashing across the years and the unthinkable distances, and no man knew what they were calling.

Hardesty drew a deep breath and looked over to Marian. The declining Sun flared off her space

armor; a sheen on the helmet veiled her face from him. The armor depersonalized her and the voice over the radio was a metallic rattle. It was as if a robot stood at his side.

He threw off the oppression of solitude and forced a calm into his voice: "Come on, let's take a look at one of those green patches before sunset."

"I think there's one over that way." She pointed north with a gauntleted hand.

Hardesty had already located the asteroid's pole star. He noted the position of the other constellations and set off after her. Ten years' experience had taught him how easy it was to get lost in such a jungle of stone, and their tanks only held air for a few hours.

It was ghostly, bounding along in utter silence, almost weightless, between the high, dead crags and under the sharp stars. In all his time out here, Hardesty had not lost the eeriness of it. And yet Earth was blurring in his memory, green fields and tall trees and the feel of an actual wind, a low old house among a thousand shouting autumn colors, beat of wings across heaven—he couldn't always conjure up the images. A blaze of naked stars would rise between.

Well, maybe here, maybe somewhere else, this trip or next, we'll make the big strike. Then we'll go home.

It was the great chimera. For every man who reached it, a hundred broke their hearts or left their withered corpses on some unknown frozen rock.

Hardesty had been one of the luckiest. He'd made enough once to buy his own ship, and since that

time enough to pay his costs and even save a little money. And he'd met one of the Belt's few women in an office on Ceres, and married her and made her his partner.

How would Marian look at Earth? She'd never seen it. She'd been born on Mars.

The Sun sloped low as the asteroid spun on its hurried, timeless way. Wan light glimmered off Marian's armor as she topped a high ridge, pinning her against darkness and the scornful stars. Her voice was a sudden excited gasp in his earphones:

"Jim! Jim, come quick!"

He bunched his muscles and reached her side in a soaring bound, floating down and twirling a little like a dead autumn leaf. (*Autumn, a maple scarlet against October smoke, and a leaf scrittling across the sidewalk!*) Together they looked down the crazily tilted sheet of basalt to the seamed ledge jutting out against Orion.

The green was there. In the airlessness, it was as sharp and clear as if it touched his helmet. Leathery domes, coiling vines, thick strong leaves—

He breathed the word as if it were something holy: "Life."

"Life? But it's not possible, Jim. No asteroid has life."

His answer was flat, and a sudden coldness tingled in his hands. "This one does."

He strode across the black slabs in the seven-league boots of Belt gravity. The Sun hung between two pinnacles, throwing a horned shadow across the acre of green. Hardesty knelt at the boundary

of the patch and grasped one of the cactuslike leaves.

It seemed almost to shrink, and in the vague tricky light he thought that a pulse ran from it, through the webbing of vines, and out of sight along the filaments that reached from this ledge. He drew back his hand and squatted there, staring. Marian came up and stood against his side.

"I—" Her voice was low now, trembling faintly. "I don't know whether to—to be glad or interested or—frightened, Jim."

His long-jawed face slid into the expressionlessness of uncertainty. "I know. We've gotten so used to thinking of the Belt as inorganic that—well, our enemies have been cold and vacuum and distance, impersonal forces. We really don't know how to face something that could be actively hostile. And yet, that life could exist and evolve here is a wonderful feeling." He looked up to the stars as if throwing them a challenge.

"This can't hurt us. Plants. You don't think there could be—monsters here?"

"I wouldn't mind a good hot-breathed dragon. But germs? I suppose I'm being an old woman. But you know what they say about *bold* spacemen never becoming *old* spacemen. They don't live that long."

"How can any life exist here? No water, no air, nothing—"

"I don't know. It's obviously not terrestrial-type life, though I'm pretty sure it's protoplasmic. It's adapted to these conditions, that's all."

Decision brought him erect again. "I suppose we should try to study this out, make analyses and so

on, but we have neither the training nor the equipment to do so. We'll take some pictures, and get an accurate orbit for this pebble, and report the whole matter to Ceres. And we'll scout around for minerals as usual, avoiding these green patches. Our work is risky enough without taking even a tiny extra chance."

"You're right." Marian stood looking at the plants. They were small and grotesquely ugly, but — "A garden," she whispered. "A little garden, blooming out here on the edge of nothing."

"Come on," said Hardesty. "Let's get back to the ship."

The Sun sank under the farther rocks and night was abruptly on them. Their flashlights cast dull puddles of yellow haze on the ground, where elsewhere there was a sea of black under the streaming stars. The sky's light picked out the higher crags, etching them frost-gray against the dark, but the humans stumbled in shadow, floating to the ground to continue their careful low-gravity shuffle back toward the ship.

"I can't forget it," said Marian. "Those plants, blooming out here without air or heat or water—do you think that comets hover above them, Jim? Do you think their pollen is stardust?"

"Don't get poetic," he grunted.

In spite of their stellar observations, they had trouble locating the ship, approaching it finally from the other side. Thus they had walked around the massive tripod before they saw the figure waiting in front of the gangway.

Hardesty thought with a flash of disappointment that some other prospector had beaten them to it. He had come far out of the usual lanes, without revealing his course to anyone, to avoid just that; matching velocities and landing was so expensive that, by law, the first man to set down on a new rock held all mining rights. Then, as he looked closer—

The space armor was awkward and bulky, a model which had been obsolete long before Hardesty left Earth, and its metal was patched and battered. There was no air tank. A thick-leafed vine coiled around the square old-fashioned helmet, across the shoulders and down the back, like ivy on an ancient university building. Hardesty saw with a jolting shock that a tendril ran into the helmet, sealed by a clumsy weld, and that tiny rootlets veined the face inside and were tangled in among the man's beard.

The—man?

Marian's stifled scream was loud in his earphones; she clutched at Hardesty's arm and they skipped back together. A dead man, a corpse, a revenant puppet of plants which grew where no life could be—

"Who are you? *What* are you?"

The other took a floating stride toward them. His face was hooded in darkness; they could barely see the glitter of starlight in his sunken eyes. Hardesty stood waiting, braced to meet the thing that neared him. The ship behind seemed infinitely remote.

Metal hands clasped Hardesty's shoulders and the square helmet leaned forward to ring faintly

against his own. That close, the miner could see the shaggy head inside, still veiled with shadow—a shattered gravestone of a face with ivy creeping over it and reaching into the cracks. He fought down an impulse to retch.

The voice that came was dim and slow: "You—from Earth?"

"Yes and no. Who are you, man? What is that you're wearing?" Hardesty's mouth was dry.

"My name? It's—I am the gardener." The stranger shook his big head, and the cactus leaves on his helmet rustled where there was never a wind to stir them. "No, wait. Yes, they called me, my name, yes . . . Hans Gronauer." A throbbing chuckle. "But that was long ago. Now I am the gardener."

"You mean you were shipwrecked?"

"Yes. How long ago? There are not years here. I think it was twenty Earth years ago. That is a guess. It could be more." The newcomer brushed a gauntleted hand over his faceplate, a strangely human gesture, as if he were trying to rub his weary eyes. "You will excuse. It is long since I talked. And my—my talker?—Yes, radio. My radio was broken in the crash. I must talk this way."

"By helmet conduction? Yeah, sure. But—my God, man! That plant growing—growing on you like that—"

The tiny gleam of teeth in the beard, the downcast eyes, it was a shy smile. "The plant gives air. So."

"So—*oh!*" Marian had heard the words over her husband's set. "Jim, of course, the plants release oxygen and he's used them— Twenty years, Jim!"

Turning his face, he saw the cold starlight gleam on her tear-streaked cheeks, and there was a sudden wrench of pity in his own heart.

Twenty years! Twenty years alone in naked space!

"Come into the ship," he said urgently. He didn't think he could stand out here on twisted black stone with a million frozen suns jeering at him. "Come into the ship, man, and get some food. Twenty years! My God!"

"No." Gronauer didn't shake his head, for that human gesture seemed forgotten, but he lowered his eyes. "No. Not yet, please."

"But—"

"The garden would not like it. Not yet."

"The garden?"

"World. We—don't dare. Not till we know. It has been so long."

"I think I see." It was Marian again; Hardesty had never stopped wondering at the cool quickness of her mind. She wasn't pretty, he supposed, but even on Earth he couldn't have had a better wife. "He's adapted in some odd way, or thinks he may have. He's not sure he can stand conditions inside our ship."

"Yes. The plant might die." Gronauer's faded voice held a sudden eagerness. His vocabulary was coming back to him in a rush. "I must think this out. Come with me and let us investigate the problem."

"Come where?"

"My home. It is safe for you. But—yes, bring food."

"You haven't eaten?"

"The garden feeds me. But for you it may not be safe—be safe for you yet. Come quick. Please."

"All right, if it isn't far. We have to watch our air supply, you know."

"The plants give air."

At the thought of tendrils around his head and roots going into him, Hardesty shivered. "No!"

"I mean air is in my house. You can breathe there. It is not far from here."

"Very well." Hardesty disengaged himself from Gronauer and thus from auditory contact. "Marian, fetch some canned stuff. And put my gun into a pocket. It's in the toolbox."

"Gun, Jim?"

"Yeah." His voice was a little ragged. "Never thought I'd need it, but let's not take chances. I'm not leaving you alone with him, either. I'm pretty sure he's harmless, but you can't tell. Twenty years! He's not acting like a normal human being. But who the hell would after living here like that for so long? Yes, I want the gun."

Wordlessly, she stepped up the gangway and disappeared into the airlock. Gronauer stood waiting, making no further attempt at conversation, and Hardesty was satisfied to keep it that way.

The wonder of his discovery was lost in worried calculation. They could certainly not refuse to take Gronauer with them when they left, but his extra mass and the supplies he would need could upset the whole cruise. There wasn't any outpost to take him to within some scores of megamiles. So unless a decent lode of fissionable ores was found soon, he

represented a heavy financial loss. Briefly Hardesty wondered if he could leave Gronauer to be picked up by a government rescue ship. After all, scientists would want to investigate this place . . . But it'd make Hardesty an outcast, being known to have abandoned a shipwrecked spaceman. And he'd have to live with himself. No, he'd have to take Gronauer back, whatever it cost.

All he could do was hope that there was a lode on this asteroid. Gronauer would know about that.

Marian came back, loaded with a sack of cans which Hardesty slung over one shoulder. Gronauer set off at once.

The path was dark, there under the ghostly arch of the Milky Way, but he picked his way with effortless speed. It didn't seem to occur to him that the others were having trouble keeping up. Hardesty cursed and stumbled. He noticed that there was a leathery bladder on the castaway's back, apparently part of the vine system. It glowed with the dimmest of red light. Heat?

After a mile or two of bare stone, they entered a patch of growth that seemed to stretch indefinitely far on every side. The frailer vines and leaves shrank aside from the human feet, and subliminally faint pulses rippled through the garden and over the edge of the little world. Hardesty estimated that they came, in all, some five miles from the *Gold Rush* before reaching the other spaceship.

It was a smashed ruin. Only the central part of the hull seemed intact, and that had been patched and welded. It lay in a small box canyon, against the low bluff at the farther end. The metal ribs and

the great broken tubes were scattered around it like raven-picked bones. And everywhere the steel was covered by green growth.

Here the plants had become a thicket, vines swarming over the cliffs and wrapped about the gaunt crags, leaves and tendrils and looming fluted columns hiding the rock in a ghost-gray sea, stirring without wind and rustling without sound under the chill stars. Gronauer's cabin was smothered in the dripping life. Hardesty could not suppress a shudder as the leaves framing the airlock brushed him.

Within the chamber there was a stifling darkness until Gronauer opened the inner door, and then feeble light shone. It was lost again as frost condensed on the space-chilled helmets. Hardesty and Marian helped each other out of their armor, careful not to touch it with bare hands, and followed Gronauer into the room beyond.

The miner's first glance was for the castaway, now that he had removed his ivy-covered, battered old armor. His hair and beard were streaked with gray, and he smelled unwashed, though there was no grime on him. It was the face that held Hardesty's gaze, the cruelly smashed face which had healed into lumps of scar tissue. It was pock-marked on cheeks and forehead, where he had gently pulled out the roots of the plant that still clung to his spacesuit. But the eyes were gentle, mutilated lips curved in a timid smile, and he stood aside for his guests.

The cabin was small, almost unfurnished, yet crowded. It was cold and the air had a musty reek. Plants covered walls and ceiling, made a springy carpeting underfoot, rustled and shivered as the

humans walked across them. There were a lot of the red bladders twined into the leafage, and light came from countless tiny—berries?—things which glowed a dull amber in the gray-green tangle.

"It is strange to you, I suppose," said Gronauer apologetically. "But it keeps me alive."

Hardesty touched a bladder. It was warm under his hand. Yes, the plants heated the room and aired it and illuminated it and fed the owner. He had a sudden dark wonder as to just who owned whom.

"It's like a dream," whispered Marian. The unspoken thought ran on: *A nightmare. A surrealist's delirium.* "Have you had this long, Mr. Gronauer?"

"Yes. At first I ate the garden, but then I saw that, that way, one of us must kill the other, and if I killed it there would be no food for me. So I made friends instead, and bit by bit the garden learned my needs and gave them to me."

As if exhausted by speech, Gronauer's rusty voice faded out and he answered no more questions. Hardesty repressed a revulsion. After all, this was a wonderful example of human ingenuity, the greatest Robinson Crusoe story in the universe, and certainly the plants were harmless. But he took out cans and can opener with the eagerness of a man clutching at familiarity in a strange land.

"Shall we eat?" he suggested.

Gronauer shook his head, smiling, when they offered him Bionate and one of their few, cherished cans of beer. "I—have no taste for it," he said. "It might even be dangerous. I will feed."

Carefully, he broke off one of the fleshy cactus-

like leaves and chewed on it. He held a trailing vine to his face, and Marian looked away as the tendrils stirred hungrily and slid into the pocks. At least, thought Hardesty a little sickly, the plants did everything for him. Everything except furnish human companionship—and it didn't seem as if Gronauer needed that any more.

Not after twenty years.

It was surprising how much difference a full stomach made. Hardesty hadn't really been aware of his own hunger till it was gone and strength was flowing back into his bloodstream. He sat down almost casually on a vine-begrown chair—there was a mossy plant intertwined, making a faintly warm cushion—and began to draw Gronauer out in talk. That wasn't easy; the castaway was too shy to do more than mumble answers while staring at his feet, but piece by piece the story was revealed. It was, in reality, quite simple.

Gronauer had been only twenty or so when he left his native Germany for the Asteroid Belt. That was thirty years ago, when the mineral riches of the flying mountains had just lately come to the attention of an Earth increasingly starved for fissionable ores, and the great companies were outfitting expeditions. A ship which cruised among the scattered worldlets, refining the substances it located, could return in a year or two to one of the asteroid cities with a cargo worth a good many millions of dollars.

Hard, dangerous, and profitable work has always commanded high wages, and no few of the pros-

pectors, Gronauer among them, had soon been able to buy their own ships and go out as independent operators.

He'd had a partner—he couldn't remember the man's name now—and they'd traveled and dug together for about five years. As the most accessible asteroids became worked out, the custom of not revealing one's destination grew up. That way, if you found a rich group of planetoids, you could make several trips without competition—but, of course, if you met with an accident there could be no rescue. Without more powerful radio equipment than a Beltboat could carry, there was no way to get help.

Gronauer had gone north of the ecliptic plane, looking for one of the many groups which traveled in crazily tilted orbits. He'd found this green world and come wonderingly in for a landing. But the asteroid had a satellite, a meteor which had suddenly flashed over the horizon and crashed through the ship's engines and sent it hurtling to its death.

The other man was killed. Gronauer had escaped with broken bones and a smashed face. He'd lain near extinction for a timeless age; only the fact that the weak gravity made no demands on his body had saved him. After that, the only thing to do was to survive somehow and hope that another prospector would happen by. That could be within a year or never. It was safest to assume that he would leave his bones here.

One man could live off the ship's food stores perhaps two years. But there was life, the plants, food. Gronauer had had no means of testing for poison

except his own metabolism. A few times he got sick but he learned what he could safely eat. Certain of the fleshy cactus growths were nourishing.

He harvested all of them within five miles or so of his ship. After a few days—or weeks, or months; he lost track—he'd gone out after more, and found that everything was dead in the area which he had exploited. And when he cut some plants elsewhere and ate them, he nearly died again.

Gronauer was no biologist, but a spaceman generally picked up a good knowledge of science and so he had heard of symbiosis. It was clear that the plants were in some way interdependent, that each species was necessary to the survival of the whole. And in some dim way they had sensed the enemy among them and reacted with deadly swiftness. Any type he tried to eat would soon become poisonous to him. Perhaps the garden would try something still more devastating. An unnoticed root, growing between two plates of the wrecked ship that housed him, could split it open and let out the air in a great and fatal rush.

With a quiet, methodical courage that Hardesty had to admire, he had given himself the urgent job of studying the symbiosis. He had no formal education in biology and almost no scientific instruments; most of his conclusions were guesswork from the sketchiest data. But given a year or two of patient slogging, and a good mind driven by a peasant's deep, strong will to live, one could accomplish more than Earth's cold intellectuals would ever admit.

He puzzled it out, observing and thinking in the

huge loneliness of his world. The life here was protoplasmic, chemically similar to his own. It even seemed to involve photosynthesis of some kind.

The tough skin of the "cactoids" admitted ultraviolet light—intense in airless space, even this far from the Sun—while preventing the loss of water by evaporation. Instead, the water circulated through vine systems to other species that used it in their own life processes, and carried organic compounds manufactured by various types of plants to the symbiotic whole. The water was obtained from gypsum and other minerals by certain roots which added alcohol to prevent its freezing. Even so, the bitter temperatures would long ago have turned it to ice, except that it circulated through the red bladders and these heated it with energy derived from fermentation or very slow combustion. The oxygen for that could also be cracked from mineral compounds beneath the surface.

Cross-fertilization and the subsequent spread of life over the whole asteroid depended on specialized vines. There even seemed to be hearts for this vascular system, slowly pulsing lumps of tissue scattered through the garden. A vast and unimaginably intricate network, each type fulfilling one of the many functions needed to maintain the whole in existence—

A trained biologist might well have needed as much time as Gronauer to puzzle out the life cycle.

"I still wonder if solar energy is enough to keep such a system going," said Hardesty. "It takes a lot to break up minerals, you know, even if the symbiosis manufactures catalysts."

"We are as far from the Sun as we ever get," answered Gronauer patiently. "The orbit is very—yes, very eccentric. I think the period is about seven years. At least we have three times come, I think, within the orbit of Venus while I was here. It gets hot then, special plants grow up to protect the others, and energy is stored chemically against the long cold which follows."

"I see. And with this highly tilted orbit, the asteroid hasn't been discovered even when it was that close to Earth."

The poor guy! Think of him sitting here, watching the Sun grow and glaze, watching Earth swell to a blue brilliance and her moon visible beside her, and still alone, still forever alone.

"How did life evolve here?" wondered Marian. "You need air and oceans for that, and this asteroid has been dead rock since the beginning of time."

Hardesty shrugged. "We'll probably never know, but I can make a guess. On some other world, maybe the world of another star, air and water disappeared slowly enough for life to adapt. Certain spores of that life were lifted on the last wisps of atmosphere up to where light pressure could drive them from that solar system. The old Arrhenius theory. They survived the trip. There were a lot of spore-clumps landing on many worlds, but this might be the only one in our system that had the conditions they needed for growth. Maybe not—the spores could be the ancestors of all life on our planets, but I doubt it. Too completely alien."

It was an eldritch thought, that the garden had been seeded from across that gulf of space, that it

was the child of a world millions of years in its grave, and that—perhaps, in the remote future, when all the planets were airless husks—gardens like this would bloom as the last defiance of the sunless night. He shivered in the chill must of the room.

"Go on," he said. "Tell us what you did."

Gronauer looked at him with gentle, frightened eyes.

"Don't be shy," said Marian softly. "It is a great and wonderful thing you've done. You make me proud to be human."

"Human?" The short laugh was jarring. A vague rustling went among the leaves. "I am—human?" After a moment, looking away: "Please to excuse. I have not been used to talking so much. I will try."

The words stumbled out, awkward, toneless, the words of a man who had begun by speaking German, changed to the English of the spaceways, and then not spoken at all except for the shadowy half-language of the garden. Hardesty had to fill in gaps; the castaway could only hint at a reality too far from human experience for communication—but the outline grew.

It had been plain that the symbiosis was highly adaptable. It probably had to be, to survive the extremes of the asteroid's wildly swooping orbit. Gronauer thought, too, that the impact of cosmic rays, unshielded by atmosphere, induced a high mutation rate; somehow, the garden weeded out unfavorable mutations and took those it could use. The pattern was not a rigid thing. It was constantly evolving.

There even seemed to be a primitive brain some-

where. Not a human-type brain—there probably wasn't a nervous system as Earth knew it—but *something* had to control that change. Something *had* altered the garden's metabolism and poisoned those leaves that the stranger ate.

Probably it had tried various compounds from the beginning of Gronauer's attacks until it hit on this one. The man had harvested the deadly leaves and disposed of them with a terrible feeling of being watched. But that was ridiculous—or was it? Was not the whole impossibly living world against him, ringing him in and waiting for him to die?

After a few weeks, he ate again, experimentally, and was not sick. He'd fooled the garden. Only it would keep on trying to kill him, and he would never know when it had made a successful attempt until too late. His one long-range chance of survival lay in making peace with the garden; and that could only be done by proving his potential usefulness to it.

Digging around a patch of growth, he discovered that certain thick roots went deep into the hard rock. Those must be for extracting buried minerals. Protoplasm required carbon and oxygen, among other things, and most likely the source of the former element was the various carbonates.

Gronauer went to an area where the plants had not yet penetrated and began to dig. His miner's eye and brain were more effective than the chance gropings of the blind roots, and it was slow work for them, forcing their way into solid rock.

Before long, he had a small heap of assorted carbonates. He macerated them and laid them beside

one of the big roots. A few hours later, tendrils had grown around his offering and most of it was being absorbed. Limestone was a favorite, he saw, while iron compounds were hardly touched. He went after more limestone. And there were other elements they must need—sulfates would be especially valuable—and with the tiny atomic heater that remained to him, he could concentrate nitrates.

It took time for the garden to understand. There probably was no conscious mind reasoning out what Gronauer wanted; there was simply a high mutation rate and a completely integrated ecology. By supplying minerals, by loosening rock about new roots, by guiding tendrils in their direction of growth, the man performed a service; and, the energy saved, the whole system could go into proliferation—some of which would be new, "experimental" forms.

Within a few months, there were pale leaves which seemed to be mostly protein. Gronauer harvested and ate them. Presently there were no more such leaves. They had apparently not fulfilled a real function, and the symbiosis had cut them off. Gronauer stopped working for the garden. He waited, and the slow weeks passed, and his supplies from Earth got horribly short. If he had guessed wrong—

No. The flesh-leaves budded out again. Gronauer rewarded the garden with a heap of limestone and copperas. Thereafter the leaves stayed. Whether it was blind natural selection within the framework of symbiosis, or whether there really was some dim brain capable of learned reflexes, the garden adapted

to the new fact that flesh-leaves meant free minerals.

"After that," said Gronauer simply, "we were friends. The problem was only to com—communicate our needs to each other."

He needed green food to prevent scurvy. An experimental taste made him ill, and again he withheld his services. Thereafter the garden produced more edible green leaves than it needed for itself, and he gathered the surplus.

It was to his advantage to have the garden change rapidly so that new possibilities would arise. He rewarded each discovered mutation with an extra mineral ration; if it turned out to be useful, he was lavish in his payments. Thus, over the years, he attained a remarkably balanced diet.

Meanwhile, the plants had grown back around his ship, and he transplanted vines inside. They died, and he tried again, and still again, until he struck a variety that would endure the conditions he needed. They gave light and heat to replace his failing generator, and proved to be much more efficient producers of free oxygen than the tanks of Martian swordgrass which was standard on spaceships.

He had been recovering water by the usual condensing methods, replacing losses by baking gypsum, but his new plants "learned" to give him as much alcohol-free water as he wanted. He could have had the alcohol, too, but he didn't like to drink alone. And surely few men had ever been as lonely as he.

"And all the time," said Gronauer, "I was trying

other things, learning more about the symbiosis. After a few years I got the—the feel of it. I have not the scientific words to describe, but I can understand in my own way what goes on. I can look at a patch of growth and tell what it needs. I can look at a mutant form and after a while know what it may do. By selecting new strains for several generations, I can create a species which will fit well into the symbiosis. It was thus I made the light-berries, for my own use, and roots which can use ferric carbonate—the symbiosis could not handle that before, and limestone was getting short. And other things."

"The—well, your spacesuit? The air plant on it?" Hardesty felt embarrassed at mentioning that.

"My air compressing pump was going to wear out soon, I knew that, and by then it was more natural for me to work with the plants rather than dead machinery. The plants growing on my helmet, they give heat and light and free the oxygen out of my own breath. They live from my bloodstream. It is not much they need and they give me vitamins in return. Their rootlets entered my skin quite painlessly.

"I have many kinds of food-plants now, with new tastes. You would like them, I think, but they are probably different from what you are used to. Go slow at first, eat only a little of the native food for a year, or however long your supplies last."

Hardesty and Marian did not stop then to consider Gronauer's odd phrasing of the invitation. It wouldn't have meant much to them; in twenty years

of solitude, anyone would develop a curious turn of speech.

Gronauer shuffled over to a desk, opened a drawer and took out an old logbook. Routine entries stopped with the shipwreck; what followed was page after page of fine script and painstakingly drawn illustrations.

"Here are my notes," he said with a humble pride. "I have described and pictured everything. It is all that you need to know."

Marian skimmed through it, and her thin intense features lit with a genuine glow.

"It's wonderful, Mr. Gronauer," she said after a moment. "This marks some kind of epoch in biology, you know. Your name will go down in history."

"Um, yes." Hardesty forced himself back to the practical side of things. "Tell me, though, how's this world for radioactives? Any good deposits?"

"A few deposits, but not worth working unless they have changed refining machinery a lot since my time."

"They haven't." The spaceman sighed. "Well, it was just a thought. We might as well blast off, then. Our ship's quarters are rather cramped, Gronauer, but we'll fix up the best we can for you."

"For me?" The soft eyes widened.

"Of course. Did you think we'd leave you behind?"

Gronauer shook his gray-maned head. "But I cannot go. I have to stay here. I am the gardener, you see."

Hardesty took a restless turn about the cabin. His feet fell so lightly in the low gravity that it was soundless; he drifted ghost-fashion between the cluttered instruments and controls of the Beltboat.

"I don't know what to do," he said. "We can't take him along. Imagine having a raving lunatic crowded in here with us for months. But, damn it, we can't abandon him either."

"We won't be abandoning him," said Marian. "No one can say the situation is our fault. We'll let the government know, and he'll be all right till they send a ship for him."

"Even so, it's the principle of the thing." He stared out the port, at the hugeness of night and frosty stars beyond, barren rock and mute loneliness, and the primal terror of it struck deep into him. "Leaving a man alone in *that!*"

"He's done all right for twenty years, dear. He can last one more. After that, it'll be up to the official rescue party. We can suggest that they take a psychiatrist along."

"You had no luck persuading him?"

"None at all. I tried every day. I went over to his place while you were exploring the asteroid and talked to him." Wistfulness tinged her voice. "I told him about mankind and about Earth and summer moons and smoky hills in autumn, the way we've always dreamed it—I've never seen Earth, Jim, except in pictures, but somehow it's more real to me than all this empty universe. He isn't interested. I had to quit when he started getting angry."

Hardesty went over and kissed her. "You're a good kid," he murmured. "Some day, some day

soon, we're going home to Earth. No more space for us. It'll be roses growing over a house by the seaside." His fists clenched impotently. "If only there'd been a strike right here on this damned lump! But I hunted everywhere. Not a thing worth digging out. Gronauer told the truth."

"Why should he have lied to us?"

"I don't know, except that he isn't normal any more. He doesn't react like a human being, even like a human who's been alone that long. Those plants have done something to him." Decision hardened Hardesty's lean face. "Well, he doesn't get many more chances to come along. We're not hanging around here another twenty-four hours. The sooner off, the sooner we'll find that lode and go home to Earth."

"Yes, I suppose so." Marian turned back toward the microscopic galley. "He's coming over for dinner, you know. I talked him into that much, at least."

"Well, I suppose there's no harm in it. Any special motive other than hospitality?"

"Oh, we'll make it as bright and cheerful as we can. Homelike. It may change his mind."

"I doubt that. But we'll have done our best."

Hardesty glanced out the port again. The Sun was rising, a tiny brilliant disc winged with the zodiacal light. Its thin radiance crept over blackened lava and tumbled granite, seeming only to add to the ruinous desolation.

Marian busied herself, getting the small luxuries they had saved for festive occasions out of the freezer, filling the ship with an aroma that made

her husband lick his lips and grin. She hummed as she worked, and somehow the table she set was like a bit of Earth—the gleam of plate and silver, a centerpiece of flame-red swordgrass blooms, even the tiny porcelain dachshund that was their mascot.

"We're putting on the dog," she explained solemnly. "Now you go dress, Jim."

He put on clean dungarees, knotted his one and atrocious tie, and slicked back his sandy hair. Marian had put on a print dress and dainty slippers; she suddenly looked pathetically young. Hardesty wished with irritation that there was no guest coming, that this might be for the two of them alone. Briefly, he knew that they'd never really fit in on Earth, for something of the high, cold solitude had entered them and they were too self-sufficient and aloof.

But that was a well-known psychological phenomenon. It was one reason why few prospectors went back till they'd made their pile and could live independently of society. Another was the difficulty, these days, of getting any kind of decent job on Earth.

It's not mankind we're going back to. We'll have neighbors, but our intimacy has become something that will never really let anyone else know us. It's Earth we want, Earth and clean winds and the tall trees above, Sun and sea and sky. We want an environment that is home instead of deadly foe. We want the heritage of our race's evolution.

The stars wheeled overhead, grand and lonely—he'd miss the sky of space now and then; he'd won-

der at the dimness of constellations—but there'd be summer around him, a whisper of leaves, the chirp of crickets and a firefly bobbing through the warm and sleepy dark. No more metal, no more tanked air and canned food and armored life—they would have come to their kingdom.

Harsh sunlight gleamed off the figure that approached. Gronauer. Hardesty sighed, pumped out the airlock and opened its outer valve. When he closed that again and opened the inner one, a breath of searing cold eddied from the figure which stood there.

Gronauer climbed out of his suit and looked timidly around him. He had dressed in an old coverall given him by Marian. It didn't fit well and he was obviously uncomfortable in it. For a moment, he shrank from his host's welcome.

"It is—warm in here," he mumbled.

"Sorry. Want me to lower the thermostat?"

"No, please not to bother, I will get used to it. You were good to ask me." Gronauer edged nervously into the cabin.

"Sit down. Dinner will be ready in a minute."

"I cannot stay too long." The stooped gray form placed itself on the edge of a recoil chair, as if ready to leap from sudden menace. "In here I am cut off. The garden might need me and I would not know."

"Isn't that the case in your own cabin?"

"No, no. There are roots growing through the plates. My children inside are part of the whole system. I have sealed around the roots so air does

not get out, but the garden can still call me." The words were jerky, stammering a little, and the eyes were never still.

"I noticed that every disturbance seemed to set up vibrations in the plants. Is that how they—communicate?"

"Yes. Formerly, before I came, those were just special stimuli causing certain stereotyped reactions. Like if a plant was hurt or killed by a rockfall, the vibrations triggered a reaction elsewhere, seeds were carried to the spot, a new plant was started. But after all these years, I can—read? understand?—more. Often I know just what is wrong even before I go there. By sending my own pulses out, I can usually cause to be done whatever must be done, even without going there to do the work myself."

"A sort of nervous system, then." Hardesty rubbed his chin. "And now you've become its brain." The thought was unpleasant, somehow.

Gronauer leaned forward eagerly. "And the eyes and hands, too. Many of the old functions have died out because I do it quicker and better, so the garden needs me. It would probably die without me. That is why I cannot go with you."

"Soup's on," called Marian gaily.

It was mostly synthetics and dehydrates, but you wouldn't have known it, for she was an inspired cook. Hardesty dug in eagerly. Gronauer, though, only picked unhappily at his share.

"I hope you like it, Mr. Gronauer," said Marian, a little stiffly.

His twisted face tried to smile an apology. "I am not used to such fare for a long time. Garden food

tastes different. It *feels* different." He waved a hand inarticulately. "How shall I make clear? It is that *you* eat things you have no kinship with; you kill them and devour them without any emotion. But *I* am nourished by something of which I am a part."

Wryly, Hardesty's mind wandered off on the subject of autophagy. Given perfect surgical tools, shockless and bloodless amputation, how long could a man survive by eating parts of himself?

"At first I wanted to go back." Gronauer's tongue seemed loosened all at once. Perhaps the beer he was not used to had taken hold already. "It is strange to remember how lonely I was—oh, for years I wept because there was no one and nothing else. But now I see that it is you who are lonely, each of you alone in a world of dead metal, shouting at someone else you cannot even be sure exists, cannot be sure what he is thinking of you or even if he is thinking at all."

His grin was rather terrible. "How do you know you are not the only consciousness in a world of robots? Alone, alone, and you go to your grave and that is the end. But I belong. I *feel* the other life. It is part of me and I am part of it. My life has meaning and beauty—my life, married to other sensitive life, all of us together against the void. No, no, I cannot go back to Earth!"

He lapsed into stillness, sat looking out of the port at the cruel brilliance of stars, and did not answer their remarks. Hardesty traded an exasperated look with Marian.

"We're leaving, you know, Gronauer," he said after they had finished and were sitting in the recoil

chairs again. "This is your last chance to come with us."

The gray, scarred head shook violently, so that the long hair swirled about the eyes.

"I suppose you'll make out all right," said Hardesty. "We'll plot an orbit that'll get us to the nearest radio station—I think that's Pallas right now—as soon as possible, and from there we can relay word to Ceres. It won't be many months before a government ship comes for you."

Gronauer shrank back and breath hissed between his teeth.

"What then?" he gasped. "What will they do?"

Despite himself, Hardesty was surprised at the violence of the reaction.

"Why, you have a legal right to stay here if you want, of course." *Unless the psychiatrists decide you're insane,* his mind added grimly. "But there'll be scientists to study your garden and your discoveries. There'll be supplies and companionship—"

"I do not want it!" Gronauer stood up, trembling. "I have all I want. I am the gardener. Is that not enough? Do not tell them I am here. They would come and hurt the garden."

"Under the law, I can't abandon you. It's all right to leave you, I guess, seeing that that's what you want, but not reporting a shipwrecked spaceman? I could get in trouble for that."

"Who would know?" interjected Marian. She threw a wink at her husband over Gronauer's shoulder. *Soothe him, humor him till we're away from here.* "If you wish, of course we'll keep your

secret. It's your right to stay here alone if you really want to."

"I want. I want!"

"But think, Mr. Gronauer." She smiled at him warmly. "Think of what that will mean. You're getting old. You can't live forever. You'll die here and perhaps no one will discover this asteroid for centuries, or perhaps never. The garden will die without a human to attend it. If you let the scientists come, they'd preserve it as a natural wonder even when you were gone."

"They would not understand." His voice was harsh and hostile. "The gardener must be part of the garden. He must grow into it, make it his life. Their scientific tending would not be enough."

I think, said Hardesty's mind, *that the old man is right. This is more than a mechanical set of duties to be performed. You can't replace a human brain with an electronic computer, even the best and latest model, even one which actually thinks. You can't replace the gardener with a paid attendant. Even if anyone would consent to live here alone, two or three years at a time, for any wages. Could you be hired to let roots tap your bloodstream?*

"Then that's that," he said aloud, coldly. "The garden will last your lifetime, undisturbed."

Orion wheeled mightily overhead, a glitter of frozen fire against an infinite clear dark. Gronauer sat still. There were trickles of sweat on his face, and he was breathing heavily.

Marian tried to break the embarrassed silence: "It has been a great privilege to know you, Mr.

Gronauer. And the garden. Was there anybody you once knew? Any message, perhaps?"

"No," he said abstractedly. "No one. Not any more."

After another minute, his eyes lifted to theirs with a kind of entreaty.

"I have thought of this before," he blurted. "I am, as you say, old. There should be a race of human gardeners here, to carry on. The garden is still growing, still evolving. It needs men, and it gives them rewards you cannot now imagine. Would—would you think of staying here yourselves, having children here, too?"

The thought was so grotesque that Hardesty had to laugh, a harsh sound jarring against the drumhead of tense silence. It seemed to strike Marian differently.

"Children," she repeated. "Yes, Jim, we have to get back to Earth soon, while we can still be young with our kids."

"You could have them now," said Gronauer. "Here."

"No. It isn't fair to a child to raise it anywhere but on Earth. It isn't right to grow up in metal." There was something haunted in her voice. "I know. It happened to me."

"A child growing up here—" The castaway's words trailed off. He drew a long breath. "Would you come with me?" he asked. "There is something I would like to show you. It will change your outlook on all this. You will at least see why I want to stay here alone."

"What's that?" Despite himself, Hardesty felt a resurgence of interest.

Damn it, the asteroid was unique.

"I cannot explain in words. You will have to see. It is not so far to go."

"Well—"

"It is the last gift I can give you."

"Certainly we'll come," said Marian. "We'll be glad to, won't we, Jim?"

"Sure," he said worriedly. He went to the spacesuit locker and opened it. "We'd better hurry, then. It'll be sunset again pretty quick."

"We will be following the Sun," said Gronauer. He lumbered over to his own suit where it stood in the airlock. Briefly, his gnarled hands stroked the gray-green vines that draped it—an odd, wistful caress.

Hardesty peeled off shirt and pants, revealing the insulated one-piece undergarment which served as padding below his armor. Marian exchanged her dress for a similar outfit. It looked well on her slim figure. Hardesty smiled as he helped her into her suit.

Gronauer donned his own armor. He was still breathing hard. Something very odd here. When he was looking away, Hardesty ambled quietly over to the tool chest, palmed his gun, and clipped it onto his spacesuit. Marian saw the gesture, started to say something, and throttled her words. Maybe he was right. There was at least no harm in it.

Or in Gronauer. He might have been a little crazy by normal Earth standards, but what did

those mean out here, three hundred million miles from the Sun? But he was not violent; he partook of the serene, timeless strength of the garden. A couple of hours' jaunt was not too much to please an old man trapped in a loneliness he himself no longer recognized.

They came out under a sky that was flashing ice and bitter dark, with a wan little sun low above ragged black stone. Gronauer led the way, a bounding figure of shadow and dazzling metal, now lost in a gully of night and now outlined grotesquely against the sprawl of stars. Hardesty swore at his speed, lengthened his own flat leaps, and felt rock and scree rattle beneath his boots.

They were moving into the far bleak eye of the Sun, faster than the planetoid's axial spin. As the stars reeled insanely backward and the Sun began to climb again, Hardesty had a sudden weird feeling that he was moving back in time. He choked it down and concentrated on picking his way through the jumbled, looming, crazily tilted stones, down riven gulches and up hillsides that were heaped slabs of igneous rock, a nightmare landscape of ruin and murk.

It was a zigzag path, he noticed dimly, leading into an area he had only skimmed through in his search, but he was too busy keeping up with Gronauer and watching Marian to think more deeply about it. His breath was harsh and loud in a suddenly hot spacesuit.

The Sun was halfway down to the opposite horizon when Gronauer went into another ravine and

out of sight. Hardesty followed him, scrambled awkwardly down its steep sides, the undiffused glow of his flash picking boulders out like distorted faces. The crack was long and deep; he had to fumble in shadow for several minutes before he came out at the other end. Then he looked around.

He stood on a gigantic basalt block sloping off to the edge of the world, overhead and around him the stars and the rime-frost arch of the Milky Way, and he was alone.

"Gronauer!" His voice echoed rattling in his helmet. "Where the hell are you?"

Useless, of course. Gronauer didn't have a suit radio. But how the devil could he have gotten lost?

Marian came leaping out of the ravine and over to stand by him. Her breathing was as hard as his.

"What became of the old man?" she asked anxiously.

"That's what I'd like to know. First he takes off like a bat out of Mars, and then he manages to lose us. Just went too fast? No, I was keeping up all right. He must have climbed the canyon wall ahead of me—I wouldn't have seen him—and taken off in some other direction."

"But why, Jim?"

"I don't know. He's mad, completely cracked, of course. Needs psychiatry in the worst way. But let the government worry about him. I'm fed up." Hardesty took a long stride forward. "Come on, let's get back to the ship."

"But he may just have made a mistake—"

"Then he can catch up with us and lead us properly. The hell with him."

"Well, he does seem a pretty hopeless case at that, doesn't he? The poor old man! I hope we see him again before we blast off."

Hardesty shrugged. "Personally, I don't give a hang. Now let's see, which way is the *Gold Rush?*"

"Why, I suppose—that way. Toward the Sun."

"We zigzagged quite a bit, remember." Hardesty's hand rang against his metal leg in a slap of exasperation. "Nuts! We're lost!"

"There's the asteriod's pole star, up there, dear, and the Sun was west of it at setting, so our general direction should be *that* way."

"Yeah. I hope it's not too general. Let's go."

They set off along the sloping hillside toward a razor-backed spine of rock, black against the Milky Way. Neither one said anything.

It was hard to orient yourself, if you didn't know every inch of the path. You had to twist and turn, picking a slow way across a narrow landscape of crags and gullies and craters, sometimes lost in darkness that was like a flowing liquid, sometimes blinded by the thin yet vicious sunlight directly in your eyes. There were no broad outlooks. Vision was bounded on every hand. Only the turning sky had depth.

Men had gotten lost on asteroids and wandered within a few miles of their ships till their oxygen gave out. It was not a comforting reflection. Hardesty shoved it resolutely out of his mind.

After an hour or so, they passed a region of plant growth. Hardesty looked at the stretch of garden with a rising bitterness in him.

Low, silvery shrubs, lichenous growth spotting naked rock with red and brown and yellow, high, gaunt, yuccalike boles and gallows branches, sullen blood-crimson glow of heat bladders, huge, muscular roots plunging deep into the little world's iron heart, delicate fairy tracing of vines looped and coiled between the shrubs, the throb and pulse of the garden's beating hearts—a reach of growth over the hills and out of sight, a frigid world made alive where no life should be, supreme triumph of organism over the chaotic waste of the frozen and hostile Universe—

But it was too alien. The eldritch forms only added to the strangeness and loneliness, and he hated them. He kicked viciously and saw the pulse of alarm ripple out through the garden and over the near horizon, leaves rustling and whispering in the windless vacuum of space, the garden talking to itself.

"Go ahead," he muttered. "Call your brain. That's all he is now, your brain and your hands. You've taken his soul away."

"Don't, Jim," said Marian. "Please don't."

"Oh, all right." He trudged in silence for a while before adding shamefacedly: "I'm being silly, I know. This is nothing but another instance of adaptation. Life on Earth is interdependent, too, a balance of nature. But I still don't like it."

The Sun crossed the sky again and lowered behind them. Hardesty glanced worriedly at his wrist chrono. They'd been out for a good two hours; their tanks didn't hold very much more air.

Don't get excited. That speeds up your metabo-

lism, makes you burn oxygen all the faster, blunts the cool judgment you need. Take it easy. Slow and easy. Lots of time.

Sunset, and darkness like a steel shutter slammed tight. Nothing around them looked familiar yet. Rather, everything looked the same. All these leaning spires and tumbled boulders and gnarled old craters looked alike and there was no way home.

Marian's hand crept into his and he squeezed it, grateful for the touch of human nearness.

"According to the stars, we're in the neighborhood now," he said as unemotionally as possible. "We'd better follow a spiral path—"

Out of the corner of an eye, he saw the blue-white sheet of flame that spurted up over the horizon, saw it rising and spreading in a terrible brilliance that veiled the stars, and flung an arm across his eyes with a shout. The next moment the ground heaved and buckled under him, flung him spinning upward in the light gravity and bounced him against a lurching granite cliff, then tossed him back to the shaking, sundering rock below.

"Marian!" he cried. "Marian!"

The fire was gone, but half the sky was blotted from sight by a column of smoke and dust, climbing and climbing like a monster spirit let out of Solomon's flask, and the ground shivered and rumbled and boulders danced on its surface. Hardesty clung to the rocks, clawing himself into naked stone, and his own screaming was loud and mad in his ears.

"Jim! Are you all right, Jim?"

They stumbled toward each other, falling and

struggling as earthquake waves raced around and around the tiny world. They locked arms and lay on the cracking ground together and looked wildly at the nightmare scenery.

The seasick roll died away. A miniature landslide came down a hill slope, slowly in the acceleration of feeble gravity, the slowness of fleeing through clinging mud.

Hardesty and Marian got up and stumbled toward the black jinni which rose against the stars.

He felt drained of emotion, a machine moving wearily toward some destined end. He topped a ridge and looked with blank eyes at the ruin of his ship. It was scattered to the horizon and beyond, and the molten slag was still aglow beneath its resting place.

"Gronauer," he said, just that one word, but it held loathing for the castaway and for himself, the time and anxiety he had wasted trying to help someone who didn't want to be helped, but mostly for his stupidity.

Marian stared around. "Where?"

"Gronauer? I don't know. He gave us the slip and came back, wrecked the safety controls and blew up the nuclear pile of the ship."

"No," she said. "He wouldn't. It must have been a meteor."

"Not where I landed. A meteor would have had to come straight down to hit the ship. Even then, it wouldn't blow up the pile." He kicked savagely at a boulder, which flew off like a bird winging south. "Gronauer did it. You know that yourself."

"Why?" Marian's whisper, like a dim voice from across that gulf of space that winked and jeered at him with a million hostile eyes, was so faint that even in his earphones he could scarcely hear it. "*Why?*"

They saw the figure lurching up the slope toward them, hands dangling empty, the helmeted head overgrown with vines like an ancient Greek nature god. Hardesty drew his gun and rested it on his free elbow for steadiness. "Jim! No!"

"Calm down," he said. "After what he did, I'm not taking any chances."

"Are you going to—kill him?"

"It's not a bad idea. He's insane, probably homicidal. We can't watch him all the time. . . ."

Gronauer must have seen the gun, but his slow pace did not slacken. One hand came up, tenderly caressing the vine that trailed off his shoulder.

Hardesty kept the gun level, but he did not fire, merely tensed his finger on the trigger when Gronauer suddenly broke into a staggering run toward them. Marian gripped Hardesty's arm.

The old man fell over a rock and tried to get up.

"First time I've seen him stumble," Hardesty said puzzledly, and lowered the gun. "Come on. The worst he can do is heave something at us. He's unarmed."

Gronauer was still trying to crawl toward them when they reached him. He stopped and rolled over on one side to look up at them. Blood and foam and twisted vines and tangled beard could not hide the smile on his battered lips.

Tears glistened on Marian's face in the keen

starlight. Hardesty heard a sob in the radio and wanted to hold her close and tell her it wasn't real, that it had never been real, and that the flame-colored woods of Earth's October lay just beyond the jagged, airless pinnacles. But he couldn't. Instead, he knelt when Gronauer motioned him closer, and put his helmet against the castaway's.

"Now you will have to stay," said Gronauer with feeble triumph. "I could not get away from the ship in time, but that does not matter. I am old and would have died soon. Then the garden would not have anyone to take care of it. Now it will."

"Killing yourself and marooning us for the sake of some lousy vegetation," Hardesty said bitterly. "I should have known you were crazy and taken off right away and sent help back to you."

Gronauer tried to shake his head. "Not crazy. You will gather the supplies that were not destroyed in the explosion and move into my cabin. You will read my notes and tend my plants . . . and become part of the symbiosis, as I was."

"I'd shoot Marian and myself first!"

"No, you will hope to be found by someone else. That hope will keep you from committing suicide. When you are ready to give up hoping, you will be —adjusted. You will like it here. This will be the home you were searching for; this will be your Earth. And you will have children—"

"So your damned garden can go on!"

Gronauer nodded and his smile grew wider even while his eyes lost their focus.

"The garden will go on," he said, just before his breath ceased altogether.

Hardesty stood up. Marian was clinging to him and her voice was insistent in his earphones, but he didn't hear her. He was looking at the stars, the bright stars which neither comforted nor mocked, being too remote to care, and the green of the plants in the distance, and he thought with a dull despair that even now it looked like New England in October.

At the Center of Gravity

At the Center of Gravity

Ross Rocklynne

A solidly consistent performer, Ross Rocklynne wrote before the era of science fiction anthologies and paperbacks, placing the cover on his typewriter in 1947. The result was that few of his well-done expositions into space were ever reprinted. He began his writing career in the August, 1935, issue of Astounding Stories, *with "Man of Iron," a tale of a man who could walk through a solid metal block. Although most of his stories were strongly scientifically based, he achieved considerable acclaim for his near-fantasy "Into the Darkness," the personal story of a spiral nebula! "At the Center of Gravity" is the first of a series of stories concerning Colbie and Deverel, each story based on a cosmic scientific problem. In every sense this is a special type of science fiction, in which all the drama and excitement hinge on natural scientific forces.*

At the Center of Gravity

THE TWO OF THEM, Lieutenant Jack Colbie and Edward Deverel, hung suspended without visible support in a space which, had it not been for the beam of light thrown by the lieutenant on his captured prisoner, would have been quite dark.

Jack Colbie was a direct social opposite of the other man. And Jack Colbie, of the Interplanetary Police Force, was widely known as a relentless tracker of criminals. Edward Deverel was the criminal, at the present instant, and Colbie had caught up with him. The case had started in Deverel's own domain, the domain of his piratical activities—the red deserts of Mars, and the broad canals that cut through them.

Both were clad in the tough, insulated, smoothly curving suits that man must wear in space. The transparent helmets afforded external vision, and now Deverel was looking through his at Colbie, insolently. But, since the scant illumination Colbie received came from the reflection of the beam he held on his prisoner, Deverel saw him as a gray shadow on the complete darkness stretching away behind.

"Well?" he inquired, with a disdainful flash of his white teeth, whiter still in the light of the beam.

"Well, nothing. Don't look so peeved. What else did you expect? You knew I'd catch up with you. I've got to maintain an unbroken record."

Deverel shrugged his shoulders. They could just be seen through his helmet. "Precedent doesn't prove anything."

"Oh, I suppose not. Forget it." Colbie studied the corsair's face. Deverel was good-looking, undoubtedly—better-looking than Colbie, certainly, who had a ravaged profile and a long jaw.

Deverel's nose was straight; he possessed attractive, but almost bitterly formed, lips; his eyes were blue, and the constant inner deviltry of his nature burned in their depths.

"Let's forget you're my prisoner. Let's talk a while. I'm curious as to why you landed on Vulcan."

"Why?" Deverel laughed. "Did you want me to take a dive into the Sun?

"Well, you were crowding me. I had to leave Mars, of course, when my band of canal marauders succumbed before Jack Colbie and his police. You chased me, Colbie, as I've never before been chased in this incarnation. I was going to land on Earth—I could have found a hide-out—but you headed me off. So I tried Venus. Same thing. So what was left but Vulcan? Mercury was fooling around somewhere on the other side of the Sun.

"Oh, I guess I was a fool to land, since I knew that was what you wanted me to do. But you know what empty space and stars do to a man. The bigness of things gives him a colossal inferiority complex, and it puts him in the mood for anything. What I mean is, a man doesn't care. I was feeling something of that, and besides, I was tired of running, of being chased. That's why I landed on

Vulcan, when I knew there wasn't a hiding place on its smooth surface."

"And, as it turned out," Colbie put in, "there was a hiding place. Only, I found you."

"And what good's it going to do you?" Deverel laughed in genuine amusement. "I've just been checking, and, according to the oxygen gauge, I won't live for twenty-four hours. I'll bet a binary your tank is in the same condition. There isn't any way of escape.

"Well," he went on in a dreamy fashion, "I suppose I've been skid-rayed. Skid-rayed by a cop at last. I always knew it would happen, though. That last stunt of breaking up the empress's canal excursion party was what got the I. P. after me."

He craned his eyes at Colbie. "But things have a habit of checking to zero. You're what you are, I'm what I am, and we're going to die. But who had the most kick out of it? Did you like to put men in prison? I wonder. But me! It was fun to slip the rings off the fat fingers of the empress!"

There was a shrug in Colbie's voice. "Maybe it was. Let's leave philosophy out of it. How did you happen to find the hole?"

"Well, I didn't look for it. Vulcan's never been considered worth a detailed investigation, and so nobody knew the startling facts about the little planet.

"I saw the hole during a jump of ten miles across the surface, revealed by starlight. As much as I remember, it was about forty feet across, and on the night side, with the day side only seventy or so

miles away. Anyway, I saw it, and I knew you were hopping after me somewhere on the night side, and I didn't give a damn any more, which, added to plain curiosity, made me jump in. The hole," said Deverel whimsically, "was deep, and I fell for hours. I suppose you knew I was down here, when you found the hole, eh?"

"After I had started falling," Colbie said. "I'd looked everywhere on the night side and hadn't found you. The day side was of course too hot. I was going back to the two ships. Wherever you were, you wouldn't escape the planet. Then I fell in, from a long jump. I couldn't avoid it.

"About seven hours down," he continued, "I began to suspect the truth—that Vulcan is as hollow as a bubble, probably is one, the result of a huge, internal explosion, just before it cooled, ages ago. Some other explosion pushed a hole through the crust.

"At first I thought I'd stop when even with the inner surface. Second thought showed otherwise. If the planet was actually hollow, I'd drop to the center, at a steadily decreasing speed. The law of gravitation says that every particle of matter in the universe attracts every other particle with a force that is directly proportional to the product of their masses, and inversely proportional to the square of the distance between their centers.

"Of course, Vulcan being a sphere, there was lateral attraction as well as vertical. The gravitational force pulling me away from center was less than that pulling me toward it, but as I went along they tended to become equal to each other until

here, at the center of gravity, where the forces of gravity neutralize. For every pull from one direction there's another of equal force from the opposite direction.

"We fell to Vulcan's center in a straight line, but on Earth, if it were hollow, we wouldn't. Weight manifests itself in a line somewhat removed from the center of gravity, because of centrifugal force on the Earth's surface. You'd fall in a spiral path. But Vulcan doesn't rotate."

Their two bodies, having tendencies to drift to the exact center of Vulcan, were touching. Colbie pushed Deverel away by raising his knee.

"You've remarked a few times that my taking you prisoner was a joke," remarked Colbie. "What makes you think so?"

"Because there's no way of escape," said Deverel calmly. "Maybe you think so, too, and don't know it. Else you'd have put me in handcuffs, in addition to taking my projector.

"Here's the situation! Vulcan is hollow. I'm sure there's only one outlet. We're at the center. Now how are we going to reach the outlet? It's a riddle, and I know your first guess."

"All right, I'll make it! How about reaction? I've got a hundred rounds for my projector, and—you've got at least fifty on your belt."

"First guess wrong." Deverel mockingly shook his head. "I've thought of reaction—the only thought, incidentally. I was here hours before you were, and I was able to pick the thing to pieces.

"No matter which way you take it, it won't work. Worse than that, it's suicide. Consider. Vulcan is

eight hundred and ninety miles in diameter, and hollow. Probably the crust is a hundred miles in thickness—a thinner one would crack up under the attraction of the Sun. That would give us three hundred and forty-five miles to travel by reaction —to the inner surface. Once we got there, our simple problem would be to find the hole, which is anywhere on the inner surface, quite a considerable area. But probably we wouldn't even get there, because we wouldn't know whether we were going toward the day side or the night side. Or, we might execute circles.

"But let's say we do reach the inner surface. How would we stay there? By hanging onto jutting rocks? Then what if we lost our holds? We'd drop back to center. Then, too, the inner surface is probably a hotbed of chemical action. Where else would these gases come from?" He swept his arm through a short arc, producing a swishing whine by way of illustration.

"It wouldn't be fun to grab hold of a smoking-hot spur of basalt, even though your doxite gloves are nearly perfect nonconductors.

"Don't think I'm afraid of taking a chance," he hastened to add. "But this isn't even a chance. It's simply quicker death. We'd drop back, I'll bet a binary, and there'd be a batch of explosive shells waiting for us. They wouldn't travel all the way to the surface, and the least contact with anything solid would set them off. And they'd drop back to center."

Colbie listened him out, and suddenly snapped

off his flashlight. "You picked the flaws in the tube," he said heavily. "But . . ."

"If it gets to that point," Deverel agreed with the unvoiced thought, "we'll try reaction. Or else, if we can discover some means beside reaction to get to the surface, we'll do that. But——"

There was infinite doubt in his voice.

He came out of the darkness, and rubbed against his captor. Almost peevishly Colbie pushed him away. Instantly he was contrite. The situation was too serious for a petty display of anger.

"Sorry," he said. "I'm a little on edge. Come on back."

"I'm subject to the whims of a universal law—gravitation," Deverel said cheerfully. "I'll be along presently. In the meantime, scion of law and order, that cop's mind of yours should be able to figure out what we'll do in the time remaining."

Colbie did not answer, and Deverel went on talking in his lighthearted way.

"We could eat, and sleep, think a while, and try that reaction business. Or else we wait until our oxygen tanks run low, and then cut a hole in the fabric of our suits. This atmosphere is most likely lethal."

Colbie's mind agilely grabbed a thought from his words. "Wait a minute!" he snapped. "Deverel—maybe I've hit it. We'll sleep!"

He cut the darkness with his beam, throwing it on Deverel's face.

"What do you know about Vulcan?" he demanded.

"What do I know about it?" Deverel cocked his

head in curiosity, and then said, "Vulcan was first discovered in the middle of the nineteenth century by a Frenchman who saw a spot moving across the face of the Sun. But nobody thought it was a planet; they thought it was a Sun spot. Later, everybody forgot about it. Then it was discovered to exist in actuality, when the first space flight was made in the twentieth century.

"It is eight hundred and ninety miles in diameter, presents one face to the Sun, has an extremely eccentric orbit, has a year of three Earth months; its orbit cuts the plane of the ecliptic at a greater angle than Mercury's; it has a high albedo——"

Colbie cut him off. "That's enough. I'm interested in the eccentric orbit. How far is it from the Sun when the planet's nearest, in perihelion, that is?"

"Little under five million."

"In aphelion?"

"Thirty-eight million miles."

Colbie nodded, and again pushed Deverel from him. While the danger both faced had placed their personal relationships in the background, Colbie didn't want to take a chance. At any moment since Deverel had been taken prisoner, Colbie reflected, the outlaw had had an opportunity to turn the tables.

"Vulcan's almost exactly in aphelion now. Listen to this: Suppose we were to take somnolene and sleep until perihelion, or, rather, near perihelion. The Sun would be——"

Deverel's blue eyes fairly snapped, and his finely

cut features lighted up in an expression of revelation. "I've got it!" he exclaimed.

"Certainly. But it doesn't call for that much enthusiasm, does it?" Colbie regarded Deverel curiously. "Are you thinking of the same thing I am?" he demanded.

Deverel hesitated for an instant. He smiled. "I am! You're thinking of the Sun pulling us from——"

"Right. And it seems reasonable, doesn't it? Near perihelion the attraction will be sufficiently powerful to exert a kind of tidal drag on us. We'd be pulled from center of gravity to the inner surface of the day side.

"That would leave us in the same predicaments you mentioned a while ago, except—there'd be no danger of falling back. And, of course," he added with a touch of unleashed irritation, "it'd be like climbing a precipice to reach the hole. But we have to take our chances. No use hanging here, using up oxygen with each idle moment."

Deverel looked at him with an enigmatic expression and nodded briefly. For a moment Colbie met his eyes with a frown of puzzled doubt; then they bumped against each other again. Colbie said: "You've got somnolene?"

"Got it, but never had occasion to use it."

"It's safe. Carter used it in 2490 when his ship broke down on Uranus. By the time he had it repaired, the fueling station on Ganymede, one of the moons of Jupiter, was so far away he couldn't make it. He took somnolene, slept fifteen years to con-

junction with Jupiter, and made it back from Ganymede none the worse. But we won't have to stay under more than a month—Vulcan makes the rounds in three. How does it sound?"

"Fine. But you needn't ask my advice, since I'm your prisoner, you know."

Colbie's eyes narrowed. He could hardly miss the undercurrent of mockery in the outlaw's manner. But since there was nothing tangible he could put his finger on, he cast the doubt from his mind, at least temporarily.

"Then it's us for somnolene. I don't really place much faith in the idea, but it's a chance, and we couldn't live to perihelion on the oxygen we've got. I wish we could put the stars where they ought to be, as the saying goes, but that's life."

They drifted together again. Colbie smiled a little, and grasping Deverel's shoulders, whirled him around.

"Very sorry," he apologized. "But if you woke up before I did, you might play tricks. There's a look in your eye, my fine fellow. Hands behind."

Deverel's answer to this was to break free, with a sudden twist of his body. He floated away, Colbie's beam calmly playing on him. The outlaw's lips were twisted, almost stubbornly.

Colbie smiled into his eyes. "Oh, no you don't. It's handcuffs for you, Deverel, or else this." He drew his projector, and leveled it at the outlaw.

For a moment their eyes locked. Deverel tossed his head. "You win," he said gruffly.

After a time he drifted back, and Colbie snapped the cuffs on with a click.

Colbie turned the outlaw around, flashed his beam on the waist of his suit. The belt held a row of white buttons as well as a projector holster and projectile compartments.

"Somnolene is third on the left," muttered Deverel.

Colbie pressed the third on the left. Instantly a thin rod arose, bearing in its grappling-hook clutches a pellet of somnolene. Deverel reached out his tongue and captured the drug. He swallowed it. The rod dropped back into the spacious interior of the suit, folded up inside the mechanism of which it was a part with a click.

"Water," murmured Deverel. "First on right."

Colbie elevated a thin metal tube. Deverel sucked and sighed.

"That'll keep us under a month. Right?"

Jack Colbie grunted. He watched the other man, noted the glazing eyes, the face set in a sleepy half smile.

Then he quickly swallowed his own pellet. He snapped off his beam, and lightlessness in the fullest sense of the word descended. He hung motionless. Deverel suddenly rubbed against him.

"Happy dreams."

"Good night," Colbie responded. He laughed to himself. There'd be no dreams with this sleep, for metabolism in the body ceased entirely with the introduction of somnolene into it.

His thoughts suddenly skipped into haze, and then, for one second, his mind worked at a furious rate. He found himself saying, "It won't work! It won't work!"

Then he found himself unable to follow the thought. He felt a weight on his eyes, and the darkness of Vulcan's interior rushed in upon his mind. His consciousness dwindled to tiny points of thought. Vulcan—a bubble—not a chance—Kepler! He slept.

He awoke, with the sensation of spinning up from an abyss. Little thoughts came back, added to themselves, and presently chained themselves together to perform that miracle called memory. Then he was fully conscious, and conscious of a burst of sound that filled the darkness and then died away.

"Deverel!" He shouted it. "What the——"

"Oh, you're awake. It's time."

Colbie collected his wits. He drew his flashlight. The beam caught Deverel in the face.

"How long've you been awake?" he demanded. "And what in blue hell was that sound?"

Deverel grinned. "That," he said. "was me. I've been awake about two hours. I'm heavier than you, and the somnolene didn't last as long." He expelled a long breath.

"That sound was just one of the devices I've been using to amuse myself. First, when I awoke, I pushed against you to see how far away I could get. It wasn't far. I always drifted back. I became horribly bored, and started shouting like a fiend. I was just wondering if the sound wouldn't be taken up by the cup-shaped sides of Vulcan, and reflected back a thousand times magnified. I haven't got an echo yet, but I'm hoping for one any minute now.

"Then I sang—terrible. You've noticed how flat

our voices are, and that's how, only worse, my song sounded. On Earth there are hundreds of blending echoes for a single sound. There's nothing here for sound to reflect from. And then I gave that last shout you just heard."

"I'm glad I wasn't awake for the singing," Colbie remarked dryly.

He paused, and said slowly, "Bad news, Deverel. Just before I slept, I had a thought. The Sun can't pull us from center."

Deverel evinced no surprise. "I know it," he said calmly. "I've been thinking deeper into the subject than I did before, and have come to the same conclusion. Do you know why, though?"

His arms were twisting around behind his back, trying to ease the stiffness.

"Kepler's Second Law," answered Colbie disconsolately, his eyes on Deverel's twisting arms. "Turn around," he said suddenly. "I'll take those damned things off—must be uncomfortable. And it doesn't make any difference now." He unlocked Deverel's wrists, and repeated, "Kepler's Second Law. The radius vector of a planet describes equal areas in equal times, which is another way of saying that the nearer a planet gets to its primary, the greater is its angular velocity. Which means that centrifugal force equals centripetal."

Deverel nodded. "So we'd have just as much tendency to be thrown toward the night side as to be drawn toward the day side."

They lapsed into a silence which Deverel broke by absently humming an air. Colbie looked at him in surprise.

Deverel shrugged his shoulders. "If we escape, I go to prison. The outlook is the same for me whether we escape or don't. Hm-m-m. We should've heard those echoes by now, if they're coming at all."

Colbie laughed. He wished he could share Deverel's view, but he decided he wasn't that kind. And then he suddenly wondered if Deverel's air of unconcernedness was based on something he knew that Colbie didn't know. Was there actually a means of escape?

His train of thought was broken when Deverel bumped against him again. He shoved the outlaw away, and then he felt himself spinning, head over heels. Suddenly he swept through the short distance separating him from Deverel, and contacted with a thud. He started spinning again, once, twice, and finally grabbed at Deverel's legs.

"I, too, am gyrating," Deverel murmured, laughter in his subdued tones. He took a quick half spin, and locked his long legs about Colbie's waist.

Colbie put his flashlight in a pocket. "What is it?" he inquired.

"Listen," Deverel replied.

Colbie listened, and heard a murmuring, sighing sound. The murmuring rushed into a whine. Colbie threw his arms around the outlaw. They spun madly, became motionless, and then felt themselves moving at a quickly accelerating speed. Colbie heard a whining, keening sound that gradually grew louder, snapped off, and became a steady, rushing whir.

Then, with an instantaneity that was startling,

they spun again, gyrating in the opposite direction with such pin-wheel rapidity that they lost their holds on each other.

After a moment they crashed together, the metallic parts of their suits clinking dully. Deverel was laughing as he locked his arms about Colbie. Colbie in turn hung on tightly. He had no time to think matters out, save that he knew they were in the grip of a swiftly moving current of gases. They continued to spin, even as they swept forward at constantly increasing speed.

Minutes of furious, driving speed passed. Colbie's mind became fogged, for the swift rotation of his body sent the blood to his head. Dimly, as from a far distance, he could hear a booming, thrashing, at times screaming, sound. He supposed, as in a dream, that numberless gas currents in conflict were causing the bedlam. The cause of the wind he could only dimly suspect.

How long their motion in this direction continued, Colbie did not know. But he calculated it to be some thirty or forty minutes. At the speed they had been going, fully half the distance between center and inner surface must have been consumed. After that time they began decelerating very rapidly. Simultaneously there was a rise in temperature.

Groggily, Colbie hung on to Deverel. To have done otherwise would have subjected them to the bombardment of each other's bodies. Perspiration began leaking through his skin and soaked his inner

clothing. He loosed an arm, and peaked a refrigeration unit up a notch, and gratefully felt the air in his suit cool off. Somewhat irrelevantly he wondered about Deverel's echoes, and decided that if they really had been on the way back to center, they would have been lost by now in shifting volumes of gases.

Gradually they became motionless, both in lateral motion and in rotatory. Somewhere off in the darkness whining, shrieking noises, the product of catapulting winds, still reigned. But here they were for a blessed moment becalmed, swaying back and forth in an indecisive, warm current.

Colbie collected himself, took a deep breath. He released himself from Deverel and drew his flash. For just a moment he saw the tense, anxious expression on the face of the outlaw, and then it was gone. Deverel was grinning.

"Some wind," he murmured.

"Yes, wind. But why? What caused it?"

Deverel hesitated, and then said, "Well, Colbie, consider. Vulcan's near the Sun, and the Sun's heat worked through the day-side crust. The high albedo of the planet's been fighting the heat, but the Sun got so close the heat sank through. The gases on the hot surface became heated and came in conflict with cooler gases above. Winds would result."

He assumed an expression of alertness; then his eyes rested, for a mocking moment, on Colbie's. Suddenly he threw his arms around Colbie.

"Hang on! Listen!"

Colbie listened. He heard a moaning, dipping cadence that seemed as if it were infinitely distant.

It grew in volume. Abruptly it took on a thousand discordant, screaming, weirdly chilling sounds.

Colbie waited apprehensively. Then, as if some imponderable force had hurled itself against them, they felt themselves flung forward, in a straight angle. There was an abrupt sense of acceleration. Whether this was the same direction they had first pursued, or whether it was perpendicular or at an angle to it, Colbie did not know. Again he and Deverel whirled. Again his mental powers were fogged by the onrush of blood to the head.

The wind that bore them shrieked and moaned, and rose to a crescendo roar that culminated in a clap of thunder. Abruptly they were tossed sidewise into the maw of a cooler current, and Colbie supposed they were falling toward the day side. The sudden change of direction did little to help him regain his full faculties.

The current which held them continued its straight course. It bellowed, and crooned, and quivered along false minors that were grotesquely plaintive. Then, point-blank, it met a head wind. It shuddered, broke up into countless tiny currents that spewed off in all directions. The oncoming wind veered off, and the two men found themselves decelerating, hovering in a gentle breeze that cooled them.

Colbie disentangled himself from the outlaw.

"We can't be far from the day side," he remarked, shining his beam on Deverel again.

"We've traveled a good distance," Deverel admitted. "And," he added, "we're going to travel more. Here comes another wind."

Colbie heard it, an awful, hurrying sound. He barely had time to attach himself to Deverel before the wind was on them.

It struck them with the force of a tornado. It plowed into them, took them from the grip of the disinterested current in which they swayed, and gave them a tremendous initial velocity. The shock was too much. They grunted, and lost consciousness.

Colbie regained his senses to find that he still held on to Deverel. They were eddying steadily but slowly. He heard a steady drone, tireless, relentless, and indicative of great speed. Though other sounds could be heard, they were subordinated. There was a tiny, faraway scream; a hissing, insidious whisper; a spasmodic, tearing, angry roar; and all seemed fighting for admittance. And because they could not enter, Colbie felt a sensation of security, as if he were in a sanctuary provided by a swift, kindly current.

He relaxed in relief, though danger had certainly not passed them by. Below somewhere, perhaps only a few miles, was the jagged inner surface of the planet.

He felt Deverel move in his arms. Up to this time the outlaw had been unconscious.

Long moments passed. The outlaw chuckled devilishly in his ear.

"What's amusing?" Colbie shouted above the drone.

"What's amusing?" Deverel reiterated. He laughed again and then stilled himself to say, "Colbie, I'll tell you. But you won't like the joke. I've

just been thinking how I'll hate the prison bars, and the workshops on Mercury. I am a desperate criminal who needs freedom, so——"

With a sudden jerk he freed himself. Then he placed his great space boots against Colbie and pushed—hard.

"So," he concluded, "au revoir!" His voice dwindled away into the darkness, and was swept away at the last by the drone.

Though the reason for Deverel's sudden exodus was not apparent, Colbie's reaction was sudden. With one hand he sent a beam of light stabbing into the darkness. With the other, he grabbed for his projector, and found it—gone.

Colbie cursed, and continued to send the beam forth. For one instant he thought he saw Deverel, and with flailing arms he tried to make his way in that direction. He contacted nothing of a solid nature, but still he strove.

At last, swearing steadily, venomously, but in real puzzlement, he relaxed. Then he listened. Nothing but the monotonous drone and the evanescent, pleading sounds outside met his ears. Deverel was gone, but where had he intended going?

He abandoned action and put his mind to work. He was spinning again, but slowly.

Somehow Deverel had known a means of escape from Vulcan's interior. Ever since Colbie had mentioned the Sun, he had known it. Colbie knew that now. And since then his actions had been suspicious. He had been more reluctant than was necessary when Colbie locked his wrists together. He had

been restrained in discussing the currents raging about them. Of course, the convection currents were the whole thing.

Colbie cursed at his own idiotic lack of understanding, for now he knew.

The winds! Sun heat had warmed up the day-side atmosphere; cooler winds had been pushed and drawn from the central portion of the planet as the day-side winds rushed up along the sides of the planet. He and Deverel had been drawn Sunward by falling currents. Erratic currents had grasped at them, some warm, some cooler.

But the main thing was that the gases, in warming, would also expand. Vulcan was filled to capacity with gases produced within itself. The expanding volumes of gas would have to escape. The only avenue of escape was the hole.

Deverel had figured it out, step by step. He knew they would fall toward the day side in the arms of the descending currents. He had kept his secret merely to keep Colbie off guard. It had worked splendidly. Colbie had had both projectors. Deverel had had ample opportunity to confiscate both. Colbie could adequately grasp his motive there.

"Damned good," Colbie muttered angrily, more in resentment against his own stupidity than against Deverel. "First, he'll use reaction to shove himself into the current of escaping gases. That'll leave me out in the cold, unless I'm picked up by the current anyway. Second, if I do escape, I won't be able to push myself toward the surface of Vulcan when I get out. That'll give him plenty of time to effect a good escape and throw me off his trail. Smart."

He waited patiently. He cocked his ears for sound of a shot, but he didn't hear it. Possibly Deverel had not thought reaction necessary; possibly the bedlam of noise swallowed the sound. Colbie didn't know.

The steady drone went on endlessly. Then, when Colbie was beginning to fear that he was merely traveling in a huge circle, the drone changed from its monotone to a struggling, beating roar, like that of surf breaking on rocks. It would die away in a furious churning, surge up again into a poisonous, screaming fury, and then recede again to the sound of rushing waters.

Then its velocity broke, slackened, and its mighty, unchallenged superiority was gone, as currents from a dozen angles smote it. A maelstrom of conflicting winds tore at Colbie. He was caught up in a devil whirl, flung violently about, like a puppet attached to innumerable contrarily pulled strings.

Then another purposeful wind stream caught him, transferred to him a sensation of security, and moved him along at acceleration. The temperature rose swiftly, and Colbie felt a leap of joy. He was in the grip of the escaping current!

A drop of perspiration grew on his nose. He blew it off with a breath expelled upward. He waited, bracing himself for the next shock. It came, a soul-wrenching jerk, a burst of speed that eclipsed all others. At the same time the screaming and ranting of the winds opposing each other rose to unprecedented heights and almost destroyed coherent reasoning in an awful cacophonic blast.

Then it was gone, and all that could be heard was a rising, keening note that eventually passed beyond

the limit of audition. Another single sound was born and rose to nonexistence. And Colbie heard a gurgling, choking, belching, sucking polyphony like the death rattle of a giant. He began spinning, slowly, evenly. He knew now that he was on the way through the crust of Vulcan.

Apprehensively he waited, hoping he would not be brushed against the sides of the hole. But the current was twisting, the region of low pressure at center. The greater pressure on the outside of the column, he reflected, would keep him at the center. A tornado, or twister, did the same thing when it sucked objects up.

A second later, he burst into the cold of Vulcan's night. The stars stared down frigidly as he was spewed forth.

Eagerly, he looked about. But Deverel was not to be seen, either above or below. He arose swiftly in the arms of the ascending current. He scanned the billowing, uniformly white surface of the planet from one horizon to the other, but he saw no sign of Deverel. Down below, not more than five or six miles from the outlet, were the two ships, black cruisers anchored from chance external forces by metal bits that ate deep into the surface.

Deverel was still inside the planet, undoubtedly. Probably he had tried reaction, but the force had sent him the wrong way. It was hardly possible, Colbie reflected, that Deverel would not be thrown out, considering his own ease of escape.

He went up and up. He suddenly saw the Sun, large as Jupiter from Ganymede. Its boiling rays

brought beads of perspiration. He kept his refrigeration unit working at full power.

Vulcan receded, its horizons drawing in toward each other. Colbie kept his eyes on the hole. And then—Deverel was erupted!

He came up, tumbling head over heels. He arose at tremendous velocity, a thousand and more feet below Colbie. Colbie watched, saw him draw a projector, and fire it, straight up. Colbie winced as the projectile whizzed past his ear at two miles per second.

Deverel, however, was not attempting to annihilate Colbie. His purpose had been to check his own velocity. He succeeded. He came to a halt. For a moment he was still; then he fired again. The reactionary force sent him spinning awkwardly from the up-blast, and down toward the white, wavy surface of Vulcan.

Colbie was still rising when Deverel landed. In a single leap the outlaw reached his ship. Then he stood in front of it, and waved his arms, both of them. Colbie halfheartedly waved back.

Deverel turned back to the ship, worked on the door for a moment, opened, and stepped into the air lock. The door shut after him.

A few moments elapsed, and then the cruiser rose. With a backfiring of rockets, it swiftly disappeared into black, star-speckled space. Colbie kept it in sight as long as he could.

He smiled in chagrin. Skid-rayed! He felt like a child who has missed lessons in school. But he found that he didn't really care. Deverel would escape, yes, but not for long.

Hours later, he started drifting back. Bubble it was, but Vulcan had enough pull to save him from the Sun.

Something Green

Something Green

Fredric Brown

Few science fiction writers are more accomplished stylists than Fredric Brown. He can quite literally make the written word perform tricks. There is a vitality and movement about his prose distinctly his own. His greatest reputation was made in the detective story field, where one of his novels, The Fabulous Clipjoint, *won the Mystery Writers of America's "Edgar" award. He scored a mild sensation when he shipped off a mouse with a thick German accent by rocket to the moon in "The Star Mouse," published in the Spring, 1942,* Planet Stories. *A devilish note of humor became a trademark of most of his stories after that, particularly pronounced in his novel* What Mad Universe, *a hilarious spoof on science fiction itself. "Something Green" has a grim, ironic note of humor, but most important, it is one of the cleverest short stories ever to appear in the science fiction genre.*

Something Green

THE BIG SUN was crimson in a violet sky. At the edge of the brown plain, dotted with brown bushes, lay the red jungle.

McGarry strode toward it. It was tough work and dangerous work, searching in those red jungles, but it had to be done. And he'd searched a thousand of them; this was just one more.

He said, "Here we go, Dorothy. All set?"

The little five-limbed creature that rested on his shoulder didn't answer, but then it never did. It couldn't talk, but it was something to talk to. It was company. In size and weight it felt amazingly like a hand resting on his shoulder.

He'd had Dorothy for . . . How long? At a guess, four years. He'd been here about five, as nearly as he could reckon it, and it had been about a year before he'd found her. Anyway, he assumed Dorothy was of the gentler sex, if for no other reason than the gentle way she rested on his shoulder, like a woman's hand.

"Dorothy," he said, "reckon we'd better get ready for trouble. Might be lions or tigers in there."

He unbuckled his sol-gun holster and let his hand rest on the butt of the weapon, ready to draw it quickly. For the thousandth time, at least, he thanked his lucky stars that the weapon he'd managed to salvage from the wreckage of his spacer had

been a sol-gun, the one and only weapon that worked practically forever without refills or ammunition. A sol-gun merely needed exposure to the rays of a sun—any bright and close sun—for an hour or two a day; it soaked up energy. And, when you pulled the trigger, it dished it out. With any weapon but a sol-gun, he'd never have lasted five years here on Kruger III.

Yes, even before he quite reached the edge of the red jungle, he saw a lion. Nothing like any lion ever seen on Earth, of course. This one was bright magenta, just enough different in color from the purplish bushes it crouched behind so that he could see it. It had eight legs, all jointless and as supple and strong as an elephant's trunk, and a scaly head with a bill like a toucan's.

McGarry called it a lion. He had as much right to call it that as anything else, because it had never been named. Or if it had, the namer had never returned to Earth to report on the flora and fauna of Kruger III. Only one spacer had ever landed here before McGarry's, as far as the records showed, and it had never taken off again. He was looking for it now; he'd been looking for it systematically for the five years he'd been here.

If he found it, it might—just barely might—contain, intact, some of the electronic tubes which had been smashed in the crash landing of his own spacer. And if it did, he could get back to Earth.

He stopped ten paces short of the edge of the red jungle and aimed the sol-gun at the bushes behind which the lion crouched. He pulled the trigger, and there was a bright green flash, brief but beautiful—

oh, so beautiful—and then the bushes weren't there any more, nor was the eight-legged lion.

McGarry chuckled softly. "Did you see that, Dorothy? That was *green,* the one color you don't have on this bloody red planet of yours. The most beautiful color in the universe, Dorothy. *Green!* And I know where there's a world that's mostly green, and we're going to get there, you and I. Sure we are. It's the world I came from, and it's the most beautiful place there is, Dorothy. You'll love it."

He turned and looked back over the brown plain with brown bushes, the violet sky above, the crimson sun. The eternally crimson sun Kruger, the sun that never set on the day side of this planet, which always faced it as one side of Earth's moon always faces Earth.

No day and night—unless one passed the shadow line into the night side, which was too freezingly cold to sustain life. No seasons. A uniform, never-changing temperature, no wind, no storms.

He thought for the thousandth—or the millionth—time that it wouldn't be a bad planet to live on, if only it were green like Earth, if only there was something green upon it besides the occasional flash of his sol-gun. Breathable atmosphere, moderate temperature—ranging from about forty Fahrenheit near the shadow line to about ninety at the point directly under the red sun, where its rays were straight instead of slanting. Plenty of food, and he'd learned long ago which plants and animals were, for him, edible, and which made him ill. Nothing he'd tried was poisonous.

Yes, a wonderful world. He'd even got used, by

now, to the solitude of being the only intelligent creature on it. Dorothy was helpful, there. Something to talk to, even if she didn't talk back.

Except—Oh, God—he wanted to see a *green* world again.

Earth, the only planet in the universe where green was the predominant color, where plant life was based on chlorophyll.

Other planets, even in the solar system, Earth's neighbors, had no more to offer than greenish streaks in rare rocks, an occasional tiny life-form of a shade that might be brownish green if you wanted to call it that. Why, you could live years on any planet but Earth, anywhere in the system, and never see green.

McGarry sighed. He'd been thinking to himself, but now he thought out loud, to Dorothy, continuing his thoughts without a break. It didn't matter to Dorothy. "Yes, Dorothy," he said, "it's the only planet worth living on—Earth! Green fields, grassy lawns, green trees. Dorothy, I'll never leave it again, once I get back there, I'll build me a shack out in the woods, in the middle of trees, but not trees so thick that grass doesn't grow under them. *Green* grass. I'll paint the shack green, Dorothy. We've even got green pigments back on Earth."

He sighed and looked at the red jungle ahead of him.

"What's that you asked, Dorothy?" She hadn't asked anything but it was a game to pretend that she talked back. A game that helped him to keep sane. "Will I get married when I get back? Is that what you asked?"

He gave it consideration. "Well, it's like this, Dorothy. Maybe and maybe not. You were named after a woman back on Earth, you know. A woman I was going to marry. But five years is a long time, Dorothy. I've been reported missing and presumed dead. I doubt if she's waited this long. If she has, well, yes, I'll marry her, Dorothy.

"Did you ask, what if she hasn't? Well, I don't know. Let's not worry about that till we get back, huh? Of course, if I could find a woman who was *green,* or even one with green hair, I'd love her to pieces. But on Earth, almost everything is *green* except the women."

He chuckled at that and, sol-gun ready, went on into the jungle, the red jungle that had nothing green except the occasional flash of his sol-gun.

Funny about that. Back on Earth a sol-gun flashed blue. Here under a red sun it flashed green when he fired it. But the explanation was simple enough. A sol-gun drew energy from a nearby star and the flash it made when fired was the complementary color of its source of energy. Drawing energy from Sol, a yellow sun, it flashed blue. From Kruger, a red sun, green.

Maybe that, he thought, had been the one thing, aside from Dorothy's company, that had kept him sane. A flash of green several times a day. Something green to remind him what the color was. To keep his eye attuned to it, if he ever saw it again.

It turned out to be a small patch of jungle, as patches went on Kruger III. One of what seemed countless millions of such patches. And maybe it really was millions; Kruger III was larger than

Jupiter. Actually it might take more than a lifetime to cover it all. He knew that, but he didn't let himself think about it. It might be bad if he once let himself doubt that he would ever find the wreckage of the only ship that had ever preceded him here. Or if he let himself doubt that, once he found the ship, he would find the parts he needed to make his own spacer operative again.

This patch of jungle was a mile square but it was so dense that he had to sleep once and eat several times before he had finished it. He killed two more lions and one tiger. And when he had finished, he walked around the circumference of it, blazing each of the largest of the trees along the outer rim so he wouldn't repeat by searching this particular jungle again. The trees were soft; his pocket knife took off the red bark down to the pink core as easily as it would have taken the skin off a potato.

Then out across the dull brown plain again.

"Not that one, Dorothy. Maybe the next. The one over there, just on the horizon. Maybe it's there."

Violet sky, red sun, brown plain, brown bushes—

"The green hills of Earth, Dorothy. Oh how you'll love them—"

The brown endless plain.

The never-changing violet sky.

Was there a sound up there? There couldn't be. There never had been. But he looked up, and saw it.

A tiny black speck high in the violet. Moving. A *spacer. It had to be a spacer. There were no birds on Kruger III. And birds didn't trail jets of fire behind them—*

He knew what to do; he'd thought of it a million

times, how he could signal a spacer if one ever came in sight. He yanked his sol-gun from the holster, aimed it straight in the violet air, and pulled the trigger. It didn't make a big flash, from the distance of the spacer, but it made a *green* flash. If the pilot were only looking, or if he would only look before he got out of sight, he couldn't miss a green flash on a world with no other green.

He pulled the trigger again.

And the pilot of the spacer *saw*. He cut and fired his jets three times—the standard answer to a signal of distress—and began to circle.

McGarry stood there trembling. So long a wait, and so sudden an end to it. He put his hand on his left shoulder and touched the little five-legged pet that felt, to his fingers as well as to his naked shoulder, so like a woman's hand.

"Dorothy," he said. "It's—" He ran out of words.

The spacer was circling in for a landing now. McGarry looked down at himself, suddenly ashamed at the way he would look to his rescuer. His body was naked except for the belt that held his holster and from which dangled his knife and a few other tools. He was dirty and he probably smelled. And under the dirt his body looked thin and wasted, almost old; but that was due, of course, to diet deficiencies; a few months of proper food—Earth food—would take care of that.

Earth! The green hills of Earth!

He ran now, stumbling sometimes in his eagerness, toward the point where he saw the spacer landing. It was low now, and he could see that it was a one-man job, as his had been. But that was all

right; a one-man spacer can carry two in an emergency, at least as far as the nearest habitated planet where he could get other transportation back to Earth. To the green hills, the green fields, the green valleys—

He prayed a little and swore a little as he ran. There were tears running down his cheeks.

He was there, waiting, as the door opened and a tall slender young man in the uniform of the Space Patrol stepped out.

"You'll take me back?"

"Of course," said the young man. "Been here long?"

"Five years!" McGarry knew he was crying now, but he couldn't stop.

"Good Lord!" said the young man. "I'm Lieutenant Archer, Space Patrol. Of course I'll take you back, man. We'll leave as soon as my jets cool enough for a take-off. I'll take you as far as Carthage, on Aldebaran II, anyway; you can get a ship out of there for anywhere. Need anything right away? Food? Water?"

McGarry shook his head dumbly. His knees felt weak. Food, water—what did such things matter now?

The green hills of Earth! He was going back to them. *That* was what mattered, and all that mattered. So long a wait, so sudden an ending. He saw the violet sky suddenly swimming then it went black as his knees buckled under him.

He was lying flat and the young man was holding a flask to his lips and he took a long draught of

the fiery stuff it held. He sat up and felt better. He looked to make sure that the spacer was still there and he felt wonderful.

The young man said, "Buck up, old timer; we'll be off in half an hour. You'll be in Carthage in six hours. Want to talk, till you get your bearing again? Want to tell me all about it, everything that's happened?"

They sat in the shadow of a brown bush, and McGarry told him about it. Everything about it. The landing, his ship smashed past repair. The five-year search for the other ship he'd read had crashed on the same planet and which might have intact the parts he needed to repair his own ship. The long search. About Dorothy, perched on his shoulder, and how she'd been something to talk to.

But, somehow, the face of Lieutenant Archer was changing as McGarry talked. It grew even more solemn, even more compassionate.

"Old-timer," Archer said gently, "what year was it when you came here?"

McGarry saw it coming. How can you keep track of time on a planet whose sun and seasons are unchanging? A planet of eternal day, eternal summer—

He said flatly, "I came here in forty-two. How much have I misjudged, Lieutenant? How old am I —instead of thirty, as I've thought?"

"It's twenty-two seventy-two, McGarry. You came here thirty years ago. You're fifty-five. But don't let that worry you too much. Medical science has advanced. You've still got a long time to live."

McGarry said it softly. "Fifty-five. *Thirty years.*"

Lieutenant Archer looked at him pityingly. He said, "Old-timer, do you want it all in a lump, all the rest of the bad news? There are several items of it. I'm no psychologist, but I think maybe it's best for you to take it now, all at once, while you can throw in the scale against it the fact that you're going back. Can you take it, McGarry?"

There couldn't be anything worse than he'd learned already—the fact that thirty years of his life had been wasted here. Sure, he could take the rest of it—as long as he was getting back to Earth, green Earth.

He stared up at the violet sky, the red sun, the brown plain. He said quietly, "I can take it, Lieutenant. Dish it out."

"You've done wonderfully for thirty years, McGarry. You can thank God for the fact that you believed Marley's spacer crashed on Kruger III. It wasn't Kruger III; it was Kruger IV. You'd never have found it here, but the search, as you say, kept you—reasonably sane." He paused a moment. His voice was gentle when he spoke again. "There isn't anything on your shoulder, McGarry. This Dorothy has been a figment of your imagination. But don't worry about it; that particular delusion has probably kept you from cracking up completely."

Slowly McGarry put his hand to his left shoulder. It touched—his shoulder. Nothing else.

Archer said, "My God, man, it's marvelous that you're *otherwise* okay. Thirty years alone; it's almost a miracle. And if your one delusion persists, now that I've told you it *is* a delusion, a psychiatrist

back at Carthage or on Mars can fix you up in a jiffy."

McGarry said dully, "It doesn't persist. It isn't there now. I—I'm not even sure, Lieutenant, that I ever *did* believe in Dorothy. I think I made her up on purpose, to talk to, so I'd remain sane except for that. She was—she was like a woman's hand, Lieutenant. Or did I tell you that?"

"You told me. Want the rest of it now, McGarry?"

McGarry stared at him. "The rest of it? What rest can there be? I'm fifty-five instead of thirty. I've spent thirty years—since I was twenty-five—hunting for a spacer I'd never have found because it was on another planet. I've been crazy—in one way, but only one—most of that time. But none of that matters, now that I can go back to Earth."

Lieutenant Archer was shaking his head slowly. "Not back to Earth, old-timer. To Mars, if you wish, the beautiful brown and yellow hills of Mars. Or, if you don't mind heat, to purple Venus. But not to Earth, old-timer. Nobody lives there now."

"Earth—is—gone? I don't—"

"Not gone, McGarry. It's there. But it's black and barren, a charred ball. The war with the Arcturians, twenty years ago. They struck first, and got Earth. We got *them*, we won, we exterminated them, but Earth was gone before we started. I'm sorry, old-timer, but you'll have to settle for somewhere else."

McGarry said, "No Earth." There was no expression in his voice. No expression at all.

Archer said, "That's it, old-timer. But Mars isn't so bad. You'll get used to it. It's the center of the

solar system now, and there are four billion Earthmen on it. You'll miss the green of Earth, sure, but it's not so bad."

McGarry said, "No Earth." There was no expression in his voice. No expression at all.

Archer nodded. "Glad you can take it that way, old-timer. It must be rather a jolt. Well, I guess we can get going. The tubes ought to have cooled by now. I'll check and make sure."

He stood up and started toward the little spacer.

McGarry's sol-gun came out of its holster. McGarry shot him, and Lieutenant Archer wasn't there any more. McGarry stood up and walked over to the little spacer. He aimed the sol-gun at it and pulled the trigger. Part of the spacer was gone. Half a dozen shots and it was completely gone. Little atoms that had been the spacer and little atoms that had been Lieutenant Archer of the Space Patrol may have danced in the air, but they were invisible.

McGarry put the gun back into its holster and started walking toward the red splotch of jungle on the far horizon.

He put his hand up to his shoulder and touched Dorothy and she was there, as she'd been there for four of the five years he'd been on Kruger III. She felt, to his fingers and to his shoulder, like a woman's hand.

He said, "Don't worry, Dorothy. We'll find it. Maybe this is the jungle it landed in. And when we find it—"

He was near the edge of the jungle now, the red jungle, and a tiger came running out to meet him and eat him. A mauve tiger with six legs and a head

like a barrel. McGarry aimed his sol-gun and pulled the trigger, and there was a bright green flash, brief but beautiful—oh, so beautiful—and then the tiger wasn't there any more.

McGarry chuckled softly. "Did you see that, Dorothy? That was *green,* the color there isn't any of on any planet but the one we're going to. The most beautiful color in the universe, Dorothy. *Green!* And I know where there's a world that's mostly green, the only one that is, and we're going there. It's the most beautiful place in the universe, Dorothy, and it's the world I came from. You'll love it."

She said, "I know I will, Mac." Her low, throaty voice was familiar to him. It was not odd that she had answered him; she had always answered him. Her voice was as familiar as his own. He reached up and touched her, resting on his naked shoulder. She felt like a woman's hand.

He turned and looked back over the brown plain studded with brown bushes, the violet sky above, the crimson sun. He laughed at it. Not a mad laugh, a gentle one. It didn't matter because soon he'd find the spacer he was looking for and in it the parts that would repair his own spacer so he could go back to Earth.

To the green hills, the green valleys, the green fields.

Once more he patted the hand upon his shoulder and then turned back. Gun at ready, he entered the red jungle.

The Dead Planet

The Dead Planet

Edmond Hamilton

Few authors have been privileged to remain as popular over so long a period of time as Edmond Hamilton. He sold his first story "The Monster God of Mamurth" to Weird Tales *for its August, 1926, issue. It not only was a roaring success but was subsequently reprinted many times. However, it was his second story, a short novel,* Across Space, *which began in the following issue, that established his early reputation for interplanetary stories. There followed a long series in which the earth was invaded by the most astonishing variety of menaces ever conceived by a single man. This won him the title of "World Saver," which took him many years and many excellent stories to live down. He also gained special recognition when it was discovered that under a pen name he had written all but a few of seventeen novels concerning the exploits of Captain Future, a heroic adventurer of the spaceways. These appeared during the complete run (seventeen issues) of a publication bearing the name of its feature character. Best known today for a series of high-grade space novels, among them* The Star of Life, The Haunted Stars, *and* Battle for the Stars, *Hamilton is also a crack writer of the short story as a reading of "The Dead Planet" will attest.*

The Dead Planet

IT DIDN'T LOOK like such a forbidding little world at first. It looked dark, icy, and lifeless, but there was no hint of what brooded there. The only question in our minds then was whether we would die when our crippled ship crashed on it.

Tharn was at the controls. All three of us had put on our pressure suits in the hope that they might save us if the crash was bad. In the massive metal suits we looked like three queer, fat robots, like three metal globes with jointed mechanical arms and legs.

"If it hadn't happened here!" came Dril's hopeless voice through the intercom. "Here in the most desolate and unknown part of the whole galaxy!"

"We're lucky we were within reaching distance of a star system when the generators let go," I murmured.

"Lucky, Oroc?" repeated Dril bitterly. "Lucky to postpone our end by a few days of agony? It's all we can look forward to on *that*."

The system ahead did look discouraging for wrecked star explorers. Here in a thin region at the very edge of the galaxy, it centered around a sun that was somber dark red, ancient, dying.

Six worlds circled that smoldering star. We were dropping toward the innermost of the six planets, as the most possibly habitable. But now, we could

clearly see that life could not exist on it. It was an airless sphere, sheathed in eternal snow and ice.

The other five planets were even more hopeless. And we could not change course now, anyway. It was a question of whether the two strained generators that still functioned would be able to furnish enough power to slow down our landing speed and save us from total destruction.

Death was close, and we knew it, yet we remained unshaken. Not that we were heroes. But we belonged to the Star Service, and while the Star Service yields glory, its members always have the shadow of death over them and so grow accustomed to it.

Many in the Star Service had died in the vast, endless task of mapping the galaxy. Of the little exploring ships that went out like ours to chart the farther reaches of stars, only two-thirds or less ever came back. Accidents accounted for the rest—accidents like the blowing of our generators from overload in attempting to claw our way quickly out of a mass of interstellar debris.

Tharn's voice came to us calmly.

"We'll soon hit it. I'll try to crabtail in, but the chances are poor. Better strap in."

Using the metal arms of our suits clumsily, we hooked into the resilient harnesses that might give us a chance of survival.

Dril peered at the largening white globe below.

"There look to be deep snows at places. It would be a little softer there."

"Yes," Tharn replied quietly. "But our ship would remain buried in the snow. On the ice, even

if wrecked it could be seen. When another ship comes, they'll find us, and our charts won't be lost."

Well, for a moment that made me so proud of the Star Service that I was almost contemptuous of the danger rushing upon us.

It is that wonderful spirit that has made the Service what it is, that has enabled our race to push out from our little world to the farthest parts of the galaxy. Individual explorers might die, but the Service's conquest of the universe would go on.

"Here we go," muttered Dril, still peering downward.

The icy white face of the desolate world was rushing up at us with nightmare speed. I waited tensely for Tharn to act.

He delayed until the last moment. Then he moved the power bar, and the two remaining generators came on with a roar of power.

They could not stand that overload for more than a few moments before they too blew out. But it was enough for Tharn to swing the falling ship around and use the blast of propulsive vibrations as a brake.

Making a crabtail landing is more a matter of luck than skill. The mind isn't capable of estimating the infinitesimal differences that mean disaster or survival. Use a shade too much power, and you're bounced away from your goal. A shade too little, and you smash to bits.

Tharn was lucky. Or maybe it wasn't luck as much as pilot's instinct. Anyway, it was all over in a moment. The ship fell, the generators screamed, there was a bumping crash, then silence.

The ship lay on its side on the ice. Its stern had crumpled and split open at one place, and its air had puffed out, though in our suits we didn't mind that. Also the last two generators had blown out, as expected, from the overload in cushioning our fall.

"We made it!" Dril bounded from despair to hope. "I never thought we had a real chance. Tharn, you're the ace of all pilots."

But Tharn himself seemed to suffer reaction from tension. He unstrapped like ourselves and stood, a bulky figure in his globular suit, looking out through the quartz portholes.

"We've saved our necks for the time being," he muttered. "But we're in a bad fix."

The truth of that sank in as we looked out with him. This little planet out on the edge of the galaxy was one of the most desolate I had ever seen. There was nothing but ice and darkness and cold.

The ice stretched in all directions, a rolling white plain. There was no air—the deep snows we had seen were frozen air, no doubt. Over the gelid plain brooded a dark sky, two-thirds of which was black emptiness. Across the lower third glittered the great drift of the galaxy stars, of which this system was a borderland outpost.

"Our generators are shot, and we haven't enough powerloy to wind new coils for *all* of them," Tharn pointed out. "We can't call a tenth the distance home with our little communicator. And our air will eventually run out."

"Our only chance," he continued decisively, "is to find on this planet enough tantalum and terbium

and the other metals we need, to make powerloy and wind new coils. Dril, get out the radio sonde."

The radio sonde was the instrument used in our star mapping to explore the metallic resources of unknown planets. It worked by projecting broad beams of vibrations that could be tuned to reflect from any desired elements, the ingenious device detecting and computing position thus.

Dril got out the compact instrument and tuned its frequencies to the half dozen rare metals we needed. Then we waited while he swung the projector tubes along their quadrants, closely watching the indicators.

"This is incredible luck!" he exclaimed finally. "The sonde shows terbium, tantalum, and the other metals we need all together in appreciable quantities. They're just under the ice and not far from here!"

"It's almost too good to be true," I said wonderingly. "Those metals are never found all together."

Tharn planned quickly.

"We'll fit a rough sledge and on it we can haul an auxiliary power unit and the big dis-beam, to cut through the ice. We'll also have to take cables and tackle for a hoist."

We soon had everything ready and started across the ice, hauling our improvised sledge and its heavy load of equipment.

The frozen world, brooding beneath the sky that looked out into the emptiness of extra-galactic space, was oppressive. We had hit queer worlds before, but this was the most gloomy I had ever encountered.

The drift of stars that was our galaxy sank behind the horizon as we went on, and it grew even darker. Our krypton lamps cut a white path through the somber gloom as we stumbled on, the metal feet of our heavy suits slipping frequently on the ice.

Dril stopped frequently to make further checks with the radio sonde. Finally, after several hours of toilsome progress, he looked up from the instrument and made a quick signal.

"This is the position," he declared. "There should be deposits of the metals we need only a hundred feet or so beneath us."

It didn't look encouraging. We were standing on the crest of a low hill of the ice, and it was not the sort of topography where you would expect to find a deposit of those metals.

But we did not argue with Dril's findings. We hauled the auxiliary power unit off the sledge, got its little ato-turbine going, and hooked its leads to the big dis-beam projector which we had dismounted from the bows of our ship.

Tharn played the dis-beam on the ice with expert skill. Rapidly it cut a ten-foot shaft down through the solid ice. It went down for a hundred feet like a knife through cheese and then there was a sudden backlash of sparks and flame. He quickly cut the power.

"That must be the metal-bearing rock we just hit," he said.

Dril's voice was puzzled.

"It should be seventy or eighty feet lower to the metal deposits, by the sonde readings."

"We'll go down and see," Tharn declared. "Help me set up the winch."

We had brought heavy girders and soon had them forming a massive tripod over the shaft. Strong cables ran through pulleys suspended from that tripod and were fastened to a big metal bucket in which we could descend by paying out cable through the tackle.

Only two of us should have gone down, really. But somehow, none of us wanted to wait alone up on the dark ice, nor did any of us want to go down alone into the shaft. So we all three crowded into the big bucket.

"Acting like children instead of veteran star explorers," grunted Tharn. "I shall make a note for our psychos on the upsetting effect of conditions on these worlds at the galaxy edge."

"Did you bring your beam guns?" Dril asked suddenly.

We had, all of us. Yet we didn't know quite why. Some obscure apprehension had made us arm ourselves when there was no conceivable need of it.

"Let's go," said Tharn. "Hang onto the cable and help me pay it out, Oroc."

I did as he bade, and we started dropping smoothly down into the shaft in the ice. The only light was the krypton whose rays Dril directed downward.

We went down a hundred feet, and then we all cried out. For we saw now the nature of the resistance which the dis-beam had met. Here under the ice there was a thick stratum of transparent metal,

and the dis-beam had had to burn its way through that.

Underneath the burned-out hole in that metal stratum there was—nothing. Just empty space, a great hollow of some kind here beneath the ice.

Tharn's voice throbbed with excitement.

"I'd already begun to suspect it. Look down there!"

The krypton beam, angling downward into the emptiness below us, revealed a spectacle which stunned us.

Here, beneath the ice, was a city. It was a great metropolis of white cement structures, dimly revealed by our little light. And this whole city was shielded by an immense dome of transparent metal which withstood the weight of the ice that ages had piled upon it.

"Our dis-beam cut down through the ice and then through the dome itself," Tharn was saying excitedly. "This dead city may have been lying hidden here for ages."

Dead city? Yes, it was dead. We could see no trace of movement in the dim streets as we dropped toward it.

The white avenues, the vague façades and galleries and spires of the metropolis, were silent and empty. There was no air here. There could be no inhabitants.

Our bucket bumped down onto the street. We fastened the cables and climbed out, stood staring numbly about us. Then we uttered simultaneous cries of astonishment.

An incredible thing was happening. Light was

beginning to grow around us. Like the first rosy flush of dawn it came at first, burgeoning into a soft glow that bathed all the farflung city.

"This place can't be dead!" exclaimed Dril. "That light—"

"Automatic trips could start the light going," said Tharn. "These people had a great science, great enough for that."

"I don't like it," Dril murmured. "I feel that the place is haunted."

I had that feeling, too. I am not ordinarily sensitive to alien influences. If you are, you don't get accepted by the Star Service.

But a dark, oppressive premonition such as I had never felt before now weighed upon my spirits. Deep in my consciousness stirred vague awareness of horror brooding in this silent city beneath the ice.

"We came here for metal, and we're going to get it," Tharn said determinedly. "The light won't hurt us, it will help us."

Dril set up the radio sonde and took bearings again. They showed strongest indications of the presence of the metals we needed at a point some halfway across the city from us.

There was a towering building there, an enormous pile whose spire almost touched the dome. We took it as our goal and started.

The metal soles of our pressure suits clanked on the smooth cement paving as we walked. We must have made a strange picture—we three in our grotesque metal armor tramping through that eerily illuminated metropolis of silence and death.

"This city is old indeed," Tharn said in a low

voice. "You notice that the buildings have roofs? That means they're older than—"

"*Tharn! Oroc!*" yelled Dril suddenly, swerving around and grabbing for his beam pistol.

We saw it at the same moment. It was rushing toward us from a side street we had just passed.

I can't describe it. It was like no normal form of life. It was a gibbering monstrosity of black flesh that changed from one hideous shape to another with protean rapidity as it *flowed* toward us.

The horror and hatred that assaulted our minds were not needed to tell us that this thing was inimical. We fired our beams at it simultaneously.

The creature sucked back with unbelievable rapidity and disappeared in a flashing movement between two buildings. We ran forward. But it was gone.

"By all the devils of space!" swore Dril, his voice badly shaken. "What was *that?*"

Tharn seemed as stunned as we.

"I don't know. It was living, you saw that. And its swift retreat when we fired argues intelligence and volition."

"Ordinary flesh couldn't exist in this cold vacuum—" I began.

"There are perhaps more forms of life and flesh than we know," muttered Tharn. "Yet such things surely wouldn't build a city like this—"

"There's another!" I interrupted, pointing wildly.

The second of the black horrors advanced like a huge, unreared worm. But even as we raised our pistols, it darted away.

"We've got to go on," Tharn declared, though his

own voice was a little unsteady. "The metals we need are in or near that big tower, and unless we get them we'll simply perish on the ice above."

"There may be worse deaths than freezing to death up there on the ice," said Dril huskily. But he came on with us.

Our progress through the shining streets of that magically beautiful white city was one of increasing horror.

The black monstrosities seemed to be swarming in the dead metropolis. We glimpsed and fired at dozens of them. Then we stopped beaming them, for we didn't seem able to hit them.

They didn't come to close quarters to attack us. They seemed rather to follow us and *watch* us, and their numbers and menacing appearance became more pronounced with every step we took toward the tower.

More daunting than the inexplicable creatures were the waves of horror and foreboding that were now crushing our spirits. I have spoken of the oppression we had felt since entering the city. It was becoming worse by the minute.

"We are definitely being subjected to psychological attack from some hostile source," muttered Tharn. "All this seems to be because we are approaching that tower."

"This system is on the edge of the galaxy," I reminded. "Some undreamed-of creature or creatures from the black outside could have come from there and laired up on this dead world."

I believe we would at that point have turned and

retreated had not Tharn steadied us with a reminder.

"Whatever is here that is going to such lengths to force us to retreat is doing so because it's afraid of us! That argues that we can at least meet it on equal terms."

We were approaching the wide flight of steps that led up to the vaulted entrance of the great tower. We moved by now in a kind of daze, crushed as we were by the terrific psychic attack that was rapidly conquering our courage.

Then came the climax. The lofty doors of the tower swung slowly open. And from within the building there lurched and shambled out a thing, the sight of which froze us where we stood.

"*That* never came from any part of our own galaxy!" Dril cried hoarsely.

It was black, mountainous in bulk and of a shape that tore the brain with horror. It was something like a monstrous, squatting toad, its flesh a heaving black slime from which protruded sticky black limbs that were not quite either tentacles or arms.

Its triangle of eyes were three slits of cold green fire that watched us with hypnotic intensity. Beneath that hideous chinless face its breathing pouch swelled in and out painfully as it lurched, slobbering, down the steps toward us.

Our beams lashed frantically at that looming horror. And they had not the slightest effect on it. It continued to lurch down the steps. And, most ghastly of all, there was in its outlines a subtly hideous suggestion that it was parent, somehow, to

the smaller horrors that swarmed in the city behind us.

Dril uttered a cry and turned to flee, and I stumbled around to join him. But from Tharn came a sharp exclamation.

"Wait! Look at the thing! It's *breathing!*"

For a moment, we couldn't understand. And then dimly, I did. The thing was obviously breathing. Yet there was no air here!

Tharn suddenly stepped forward. It was the bravest thing I have ever seen done by a member of the Star Service. He strode right toward the towering, slobbering horror.

And abruptly, as he reached it, the mountainous black obscenity vanished. It disappeared like a clicked-off televisor scene. And the black swarm in the city behind us disappeared at the same moment.

"Then it wasn't real?" Dril exclaimed.

"It was only a projected hynotic illusion," Tharn declared. "Like the others we saw back there. The fact that it was breathing here where there is no air, gave me the clue to its unreality."

"But then," I said slowly, "whatever projected those hynotic attacks is inside this building?"

"Yes, and so are the metals we want," Tharn said grimly. "We're going in."

The ceaseless waves of horror-charged thought beat upon us even more strongly as we went up the steps. Gibbering madness seemed to shriek in my brain as we opened the high doors.

And then, as we stepped into the vast, gleaming

white nave of the building, all that oppressive mental assault suddenly ceased.

Our reeling minds were free of horror for the first time since we had entered this dead city. It was like bursting out of one of the great darkness clouds of the galaxy into clear space again.

"Listen!" said Tharn in a whisper. "I hear—"

I heard, too. We didn't really hear, of course. It was not sound, but mental waves that brought the sensation of sound to our brains.

It was music we heard. Faint and distant at first, but swelling in a great crescendo of singing instruments and voices.

The music was alien, like none we had ever heard before. But it gripped our minds as its triumphant strains rose and rose.

There were in those thunderous chords the titanic struggles and hopes and despairs of a race. It held us rigid and breathless as we listened to that supernal symphony of glory and defeat.

"They are coming," said Tharn in a low voice, looking across the white immensity of the great nave.

I saw them. Yet oddly, I was not afraid now, though this was by far the strangest thing that had yet befallen us.

Out into the nave toward us was filing a long procession of moving figures. They were the people of this long-dead world, the people of the past.

They were not like ourselves, though they were bipedal, erect figures with a general resemblance to us in bodily structure. I cannot particularize them, they were so alien to our eyes.

As the music swelled to its final crescendo and then died away, the marching figures stopped a little away from us and looked at us. The foremost, apparently their leader, spoke, and his voice reached our minds.

"Whoever you are, you have nothing more to fear," he said. "There is no life in this city. All the creatures you have seen, all the horror that has attacked you, yes, even we ourselves who speak to you, are but phantoms of the mind projected from telepathic records that are set to start functioning automatically when anyone enters this city."

"I thought so," whispered Tharn. "They could be nothing else."

The leader of the aliens spoke on.

"We are a people who perished long ago, by your reckoning. We originated on this planet"—he called it by an almost unpronounceable alien name—"far back in your past. We rose to power and wisdom and then to glory. Our science bore us out to other worlds, to other stars, finally to exploration and colonization of most of the galaxy.

"But finally came disaster. From the abyss of extra-galactic space came invaders so alien that they could never live in amity with us. It was inevitable war between us and them, we to hold our galaxy, they to conquer it.

"They were not creatures of matter. They were creatures made up of photons, particles of force—shifting clouds capable of unimaginable cooperation between themselves and of almost unlimited activities. They swept us from star after star, they destroyed us on a thousand worlds.

"We were finally hemmed in on this star system of our origin, our last citadel. Had there been hope for the future in the photon race, had they been creatures capable of creating a future civilization, we would have accepted defeat and destruction and would have abdicated thus in their favor. But their limitations of intelligence made that impossible. They would never rise to civilization themselves nor allow any other race in the galaxy to do so.

"So we determined that, before we perished, we would destroy them. They were creatures of force who could only be destroyed by force. We converted our sun into a gigantic generator, hurling some of our planets and moons into it to cause the cataclysm we desired. From our sun generator sprang a colossal wave of force that swept out and annihilated the photon race in one cosmic surge of energy.

"It annihilated the last of us also. But we had already prepared this buried city, and in it had gathered all that we knew of science and wisdom to be garnered by future ages. Some day new forms of life will rise to civilization in the galaxy, some day explorers from other stars will come here.

"If they are not intelligent enough to make benign use of the powers we have gathered here, our telepathic attacks should frighten them away. But if they are intelligent enough to discern the clues we leave for them, they will understand that all is but hypnotic illusion and will press forward into this tower of our secrets.

"You, who listen to me, have done this. To you, whoever and of whatever future race you may be, we bequeath our wisdom and our power. In this

building, and in others throughout the city, you will find all that we have left. Use it wisely for the good of the galaxy and all of its races. And now, from us of the past to you of the future—farewell."

The figures that stood before us vanished. And we three remained standing alone in the silent, shimmering white building.

"Space, what a race they must have been!" breathed Tharn. "To do all that, to die destroying a menace that would have blighted the galaxy forever, and still to contrive to leave all that they had gained to the future!"

"Let's see if we can find the metals," begged Dril, his voice shaky. "All I want now is to get out of here and take a long drink of *sanqua*."

We found more than the metals we needed. In that wonderful storehouse of alien science, we found whole wave generators of a type far superior to ours, which could easily be installed in our crippled ship.

I shall not tell of all else we found. The Star Service is already carefully exploring that great treasury of ancient science, and in time its findings will be known to all the galaxy.

It took labor to get the generators back up to our ship, but when that was done, it was not hard to install them. And when we had fused a patch on our punctured hull, we were ready to depart.

As our ship arrowed up through the eternal dusk of that ice-clad world and darted past its smoldering dying sun on our homeward voyage, Dril took down the bottle of *sanqua*.

"Let's get these cursed suits off, and then I'm

going to have the longest drink I ever took!" he vowed.

We divested ourselves of the heavy suits at last. It was a wonderful relief to step out of them, to unfold our cramped wings and smooth our ruffled feathers.

We looked at each other, we three tall bird-men of Rigel, as Dril handed us the glasses of pink *sanqua*. On Tharn's beaked face, in his green eyes, was an expression that told me we all were thinking of the same thing.

He raised the glass that he held in his talons.

"To that great dead race to whom our galaxy owes all," he said. "We will drink to their world by their own name for it. We will drink to Earth."

The Radiant Enemies

The Radiant Enemies

R. F. Starzl

R. F. Starzl belongs to that select group of authors who achieve considerable impact and remain in memory even though they have written only a handful of stories. Starzl's first story gained the cover of Amazing Stories Quarterly *for the Summer, 1928, issue. It deserved the distinction, for it added a new twist to the old idea of shrinking a man so small that he could visit an atom. In those days the mark of a science fiction author's prowess was whether he succeeded in selling to* Argosy. *That magazine was then a weekly adventure pulp, which nurtured a number of fiction greats, including Erle Stanley Gardner, Edgar Rice Burroughs, Cornell Woolrich and H. Bedford Jones. But particularly it printed a special brand of science fiction and fantasy. "The Radiant Enemies" is one of the stories which Starzl succeeded in selling to* Argosy, *and it is easy to understand what qualities in it intrigued the editor.*

The Radiant Enemies

INGRAHAM shifted the broad restraining belt around his waist a little with awkward hands, for the terrific deceleration of the ship made his arms seem almost too heavy to lift. Held in place before the astrogation panel, Ingraham fought against dizziness, for at this critical time even the slightest mistake might easily dash them in ruins upon the jagged nucleus of the comet.

Radiant Comet, Ingraham had named it, for the spectroscope had shown it to be rich in radium, the universally used "starter" for all atomic disintegration processes. A tiny speck of radium activated the atomic motors of this very ship, and without radium the slender silver rods which slowly fed into the bulky power domes about them, . . . above and below them, were inert and useless.

Ingraham permitted himself a backward glance to where Durphee's gross form gasped for breath.

"Be there in fifteen minutes," he said jerkily, struggling against the weight of his own diaphragm.

Durphee did not answer, except to moan, and Ingraham turned to his panel. As the image of the nucleus slowly enlarged on the teletab, crossing the graduations marked thereon, he plied the levers and dials until their speed was well under control. He breathed a sigh of relief and unclasped the safety belt.

Skillfully he permitted the ship to settle, until a slight jar proclaimed that they had landed.

Durphee lurched to his feet. He was a trifle taller than Ingraham's five feet ten, and thicker about the waist. Durphee looked older than his indulgence-sated forty years, and Ingraham younger than his thirty. Ingraham was the scientist who had discovered the true nature of Radiant Comet, looping in a vast parabola around the sun and already well on its way to the outer spaces again—well beyond the orbit of Saturn—because of the delay in adapting an ordinary Earth-to-Moon ship for this mad adventure.

But Durphee had raised the money, in a last desperate gamble to recoup a wasted fortune.

"How much radium is there?" Durphee asked, staring out of one of the thick ports.

Ingraham did not answer immediately. He also stared over the strange landscape. He saw a desolate inferno. They had landed on the side away from the small, brightly yellow sun, and looked upon night. But not a true night. Everywhere the rocks gave forth a light, faint and spectral, a light too weak to dim the unwinking stars. But light enough, it would seem, to allow a man to walk over the sandy plain.

"Millions of tons of radium," Ingraham said at last. "My spectroscopic analysis—"

"Millions of tons?" exclaimed Durphee in a loud voice. "What are we waiting for? Let's get going!" He made as if to turn the handwheel that locked the oblong door.

"Wait!" Ingraham commanded sharply. "Open

that door, and you're a dead man. And I am, too. Put on this suit."

He opened a locker and brought out a single garment, which included a helmet and boots shod with lead. It was a typical space suit, and Durphee knew how to put it on, while Ingraham produced a similar suit for himself.

"Notice the fine metal mesh, almost like chain mail," Ingraham explained, "over the outside of the regular fabric. That is, you might say, a radiation screen, activated by a small oscillator in your back pack, along with the respirator tank. It will protect you from the emanations, which would otherwise burn you up. You see—"

"Let's get going!" Durphee insisted. "Millions of tons—"

"Don't be a hog!" Ingraham cut in coolly. "We've only room for a couple hundred pounds of the stuff in our insulated cases. Some of the stuff is pretty thinly distributed. We have to look for the richest, say, for metallic radium, if we can find it."

"All right, come!" Durphee begged. He slipped on the helmet, sliding up the sealing wedge. His eyes glittered greedily back of the vitrine faceplate.

Ingraham slipped on his own helmet.

"All in good time," he said levelly, speaking into the inductance phone. "This atmosphere is mostly helium, given off by the disintegration of the radium. Sure your respirator is working?"

They opened the lock, and the door flung outward from the pressure of the air within, and their suits instantly inflated, standing out firmly. Valving off a little air they stepped out upon the surface of

the Radiant Comet. They carried their tools and instruments and a cylindrical container for the radium. Although the possibility of meeting hostile inhabitants was remote, they carried at their belts light little deionizer tubes, those deadly modern weapons that destroy life by inducing a chemical change within the body.

"Look back once in a while," Ingraham cautioned. "Keep an eye on the ship. We don't want to be marooned here."

"Let's start picking the stuff up," Durphee proposed, staring about him.

"Richer ahead, where those rocks crop out."

They arrived at the designated place after a long walk, and here the levelness of the sands was broken by a mad confusion of splintered rock, huge upended masses, and giant crystalline forms. It was a scene of malefic fairyland, lighted by radiance that streamed silently out from every side. Overhead was the foggy luminescence of the comet's tail, stretching out into infinity, but it was cold and unreal compared to the living light that came from the rocks.

Durphee gave a hoarse cry.

"Look! Look! Veins of it! Nuggets! I'm rich! I'm rich!"

"Not till we get it back to earth!" Ingraham reminded him.

Durphee fell to his knees and snatched up fragments of the dangerous heavy metal, fondling it, holding it to the faceplate of his helmet.

"Don't do that, you fool!" Ingraham said. "Do you want to go blind or crazy? Drop it into the canister. We're going to fill that and leave as fast as we can."

Both fell to work, filling the can with their incredible hoard, Durphee almost tearful at the thought of leaving so much of it, Ingraham sharply reminding him that no man could use so much wealth.

They had nearly enough when overhead appeared a light. At first it might have been merely another star, but soon it resolved itself as some object that was rapidly approaching them. Other lights appeared, fast growing.

In a few minutes the Earthmen were gazing up at strangely beautiful beings slowly circling about them at a distance of a few feet from their heads. One may imagine a multiplicity of diaphanous ruffles, like crumpled cellophane, all aglow with prismatic light of their own.

They were not wings, those thin, radiant processes, and yet they might have served as fourth-dimensional models of butterflies. They did not move at all and appeared to have no part in sustaining themselves in the air. They might have been merely large absorption surfaces, to absorb and hold the radiant energy pulsating everywhere on that comet. A fittingly strange form of life in strange surroundings, thought Ingraham, looking at them wonderingly and with appreciation of their beauty. Looking through them, he saw no body, no nucleus; merely thin, shimmering, membranous matter.

"Hey, listen!" came Durphee's sharp voice in the receiver. "Are those things dangerous?"

"They don't seem to be unfriendly."

"Well, I don't like the looks of the damned things!"

Suddenly one of the radiant beings ceased its movements, hung, as it were, helplessly. In its shimmering membranes a hole had appeared, a hole through which the cold stars showed. Quickly, like a fire eating through cloth, the hole widened, spread through the complex ramifications of its being. It reached the tips of the ruffles, and went out. The prismatic light disappeared.

"You fool!" Ingraham tried to knock the deionizer from Durphee's hand, but the heavy space suit hindered him, and another of the radiant creatures died. And yet another, before Ingraham wrenched the tube from the other's grasp. Like glowing bubbles before a gale, the visitors swept upward and away, and in a few seconds there was no sign of them.

"What's the matter with you?" Durphee growled, stooping and resuming his excited mining operations.

"Those beautiful things; why kill them?"

"They're no damn good."

"As I may have mentioned before, Durphee, you're a hog. Men like you blasted the ancient Moon dwellings, out of pure cussedness. If you didn't care what you destroyed, you might have considered that it's dangerous to antagonize them—"

"Get busy with this stuff," Durphee snapped crossly. "As for them, we're damn well rid of 'em."

"Don't be too sure. I think they're coming back."

They were coming back. Sweeping up on a long arc from some place a mile or two across the plain, they were sweeping back like avenging fireflies, hundreds of them.

"Now we're in for it," Ingraham said angrily, handing Durphee his deionizer. "Wait till they attack."

"Will they attack?" Durphee asked, with growing anxiety.

"They've got plenty of reason to," Ingraham reminded him. "Stand still."

The radiant beings flung themselves upon the Earthmen in a frenzy of movement. It seemed that they must be annihilated beneath the weight of that attack. But when it was over, and they recoiled, the puzzled men realized that they had hardly felt as much as a touch. The radiants hovered about uncertainly, as if undecided, and made no further hostile move.

"Thank God!" Ingraham exclaimed. "We're immune to their offense. It's some form of radiant discharge, and our suits protected us. See, they're sluggish now. It may take them some time to regenerate enough energy to attack us again."

The colors of the diaphanous multiple ruffles were in fact dim, lacking the living fire they had owned before.

"You mean they can't hurt us?" asked Durphee with returning courage.

"It seems not."

"Then let 'em have it!"

This time the weakened Radiants winked out in

death almost instantly before Durphee's deionizer, and the survivors fled precipitately.

"You murdering fool!" Ingraham raged, grabbing for the tube.

"No you don't!" Durphee replied, backing away warily. "Not with me owning half of a few billion dollars' worth of radium. I'm taking no chances."

"Keep it, then!" Ingraham yielded with disgust. "When there's plenty for both of us, why should I rob you?"

They fell to work, and in a few minutes the canister was full. Despite the slight gravity on that comet, it was all the two of them could do to carry their treasure. When they arrived at the ship they were both weary.

Once inside they prepared to lock the door and leave at once, for the comet was steadily carrying them away from the Earth. With a word of warning to Durphee about handling radium unprotected, Ingraham started to lock up and set the air machine to working. Suddenly he gave a cry:

"They've stolen our fuel rods!"

Through the plate of Durphee's helmet his face was ashen as he looked up. The slender silver rods were indeed missing.

"It's them damned—whatyoucallems!" he swore. "The thieving—" He wallowed in foul language.

"Keep your suit on!" Ingraham warned him briskly. "We've got to find those bars or we're marooned here forever. We'll die here, you understand?" He added, not without bitterness:

"It seems those things are intelligent. If you

hadn't been so quick to murder them, they might have been friendly to us. I think they were friendly —at first."

Durphee tottered to the door.

"Wait!" Ingraham called. "I think I know where they come from. They may have taken the rods there."

The low cliffs stretched like the frozen surf of a phosphorescent sea across the plain. Somewhere along that low line must be the dwelling of the Radiants. Ingraham looked back once, regretfully, at the ship. There was no way of locking it from the outside, for the builders had anticipated the danger of being locked out by oversight. Now this precaution stood them in ill stead, but they must risk the chance of having the ship tampered with again.

The cliffs were nearer than they seemed. After a walk of about two miles the Earthmen arrived and skirted along their base until they came to an opening in the rock. The interior was illuminated with the same milky-white light, and Ingraham went in.

"Follow me," he instructed Durphee, "and don't use the tube unless you have to."

They passed through a corridor for several hundred feet, and, traveling downward, came to a lofty chamber three or four hundred feet in diameter. Until then they had seen none of the Radiants, but now, as if by signal, thousands of them appeared, floating in the air over their heads. Durphee pointed the deionizer at them defensively, but did not discharge the weapon, and the Radiants hovered, apparently waiting for something.

Ingraham called excitedly:

"Look, Durphee! In the center of the room! See, on that round thing?"

A round boss, like the stump of an enormous tree, but crystalline in character, was in the center of the great room. Through the transparent mineral, liquid, flowing fires in all the colors of the rainbow could be seen, slowly ebbing and flowing, sending out streams of silent color that bathed the lofty vaults and arches like the long slow surges of a ground swell. But Ingraham was looking at the little bundle of silver rods lying on the tablelike rock—the stolen fuel bars.

Swiftly he strode toward them, Durphee following; and as the Earthmen approached, the light seemed to ebb, while the Radiants retreated to the farthest extremities of the room.

But as Ingraham extended his hand and took the silver rods, a light as dazzling as lightning and as overwhelming as a geyser burst from the boss, blinding him. Nevertheless he took the rods, and, turning, groped for Durphee.

The latter was shielding his eyes with his forearm.

"What is it? What's that light?" he asked, in alarm.

"Some powerful form of radiant energy," Ingraham replied. "I'll bet those things are wondering why we weren't killed. Our radiation screens saved us. Let's get out and get back!"

The great light ebbed, and as the Earthmen turned to go the Radiants reappeared, seemingly imbued with the greatest excitement. They whirled

about their heads with the fury of a tornado, and Durphee laughed.

"That for you, firebugs! Wish I had time, I'd take your god, or whatever that thing is, with me."

"Keep your tube in its clip," Ingraham warned.

"Who the hell are you—" Durphee flared. But he got no further. A rock as big as a man's fist toppled out of some niche or cranny high overhead, struck his shoulder, ripping out a triangular rent in the mesh of the radiation screen covering his space suit. Instantly one of the Radiants flung itself on the vulnerable spot and clung there limpetlike. A cry of desperate agony rang in Ingraham's induction phone: "Help! It's burning me to death!"

As Durphee fell, Ingraham leaped forward and caught the Radiant in his clumsy gauntlets. He crumpled the gauzy ruffles of its being as easily as paper, and saw its shimmering light go black under his hands. Then, before another of the creatures could fasten itself on the place, he lifted back the torn flap and twisted the thin wire ends together as well as he could.

"Can you stand now?" he asked.

Durphee scrambled to his feet, cursing and groaning.

"It burned the liver out of me," he muttered.

Rocks were still raining about them, as if the Radiants had just discovered by accident this primitive method of fighting and were making the most of it.

Suddenly, Ingraham, struck on the head, fell to the ground.

He must have been unconscious only an instant, for when he got to his knees he could see Durphee walking away, scarcely ten feet from him.

"Durphee!" he called. But his partner paid him no heed. He had already entered the corridor.

Ingraham saw that his own body was literally covered with the Radiants, but the rocks had torn none of the protective screen, and he was impervious to their attack. Reeling, he rose to his feet, brushing the fragile beings from him, and so followed Durphee, raging with anger. Too cowardly to murder him, the avaricious Durphee nevertheless was willing to abandon him to death, he thought. Durphee was running, and Ingraham ran after him. The Radiants did not follow.

Just then Durphee turned and saw him. In that uncertain light, with the handicap of the clumsy space suits, Ingraham was not sure, but he thought he saw his partner start.

Durphee spoke first: "Close squeak!" he congratulated thickly.

"Durphee," Ingraham asked coldly, "did you see what happened to me?"

"I didn't see anything," was Durphee's sullen reply.

"You didn't see me fall, and keep going?"

"You had the fuel rods," Durphee retorted. "What good would it do me to leave you?"

Ingraham felt a sense of shame.

"We're both unstrung. This unholy place! Lead on, Durphee; let's be on our way."

Their tracks in the luminous sand were clear and pointed unmistakably to the ship. In less than an

hour they were close to the shiny ovoid. Durphee was the first to reach it. At the door he stopped and waited for his partner to come up.

Ingraham stepped beside him unsuspectingly. In an instant Durphee had snatched the weapon out of the clip at Ingraham's belt and delivered a staggering blow to his solar plexus. Ingraham went down, and Durphee fell on top of him. His weight, on that small world, was not great, but the shock of the fall paralyzed Ingraham's breathing.

Something was thudding on the vitrine faceplate of his helmet; repeated blows from the heel of Durphee's hand, trying to break the glass.

Blind anger gave the under man strength, and in a fury of despair he struck back at the muffled body of his betrayer. He clamped an arm around the other's neck, only to have it painfully wrenched free. He took hold of the folds of Durphee's space suit. There was a metallic rip as the insulating screen tore away, but Durphee rolled free and staggered to his feet.

Ingraham tried to rise also, but as he did the glowing sand came up to meet him. He sprawled, and the thud of a kick in the ribs came to him only impersonally. He gave himself up for dead, and before his eyes the sand under the faceplate glowed mockingly.

But Ingraham was not dead. With faint surprise he came to that realization some time later, and immediately afterward the freezing horror of his fate bore in upon him. Marooned! Marooned on a comet and speeding away from the Sun—already

far beyond all past limits of human travel and drifting remorselessly into the void. Betrayed by the greed of a man to whom he had unhesitatingly entrusted his life.

He lifted his body, supporting it on his hands, and stared ahead of him, wondering if he had overestimated the passage of time, for the ship was still there, just as it had been, and the tracks in the sand showed where Durphee had stepped in, letting the door fall shut, but a narrow line showed that it had not yet been drawn tight and locked from within. The silver fuel rods were gone.

With wild hope Ingraham tottered to the ship. Had Durphee relented, or was he battening the cruel streak in him on his victim's despairing efforts?

Ingraham felt for his deionizer. It was gone, and was nowhere on the ground. He was still at Durphee's mercy then!

After many clumsy failures he managed to insert the thick fingers of his space gloves into the crack of the door. Quickly, he flung it open and stepped inside, ready to fight again for his life.

His first glance showed him that he would not have to fight Durphee. His partner lay at full length on the floor, and as Ingraham came in, ten or more Radiants rose from the prostrate body and hovered in the air, as if expectant, projecting, one might imagine, a question. There was no need to examine the charred fabric of Durphee's space suit where the Radiants had fastened, undeterred because the radiation screen was torn. Durphee had paid, in full.

Fear lifted from the soul of Ingraham, and then

shrouded it again as he saw the slender bars suspended, by some invisible force, beneath the bodies of the hovering Radiants—the silver fuel rods—the key to his escape into a normal world.

A quick glance out of the corner of his faceplate showed him that he had left the door open, and he knew beyond doubt that before he could take one step his visitors would be gone, taking the rods with them. But even as that appalling truth sank into him, Ingraham was thinking of the prismatic beauty of these exquisite creatures, and as he did so something passed between the Earthman and the Radiants, and something like a benediction and a sense of understanding flowed from them to him. They drew together, and light streamed from one to another. The silver rods fell to the floor of the ship about Ingraham, and swiftly the radiant beings flew out of the door and were gone.

Via Asteroid

Via Asteroid

Eando Binder

"Gordon A. Giles," the by-line under the first publication of "Via Asteroid," was born when the August, 1937, issue of Thrilling Wonder Stories *was readied for the printer with two Eando Binder stories in the line-up. As was the policy in those days, one of the Binder stories would have to appear under a pen name and "Vision of the Hydra," a strong tale about a man who increases the power of his mind ten times to become a superman, was elected. It won unusual popularity with the readership and was followed in the next issue by "Via Etherline," a story of the first landing on Mars told in the form of radio reports. The readers demanded a sequel, which is the story presented here, "Via Asteroid," one of the best of a highly praised series that ran for nine stories. As a result, Binder was frequently the* two *most popular authors in any given issue of a science fiction magazine. Binder, or Giles, in stories like "Via Asteroid," was one of the popularizers of scientific realism in science fiction as opposed to romanticism.*

Via Asteroid

HELLO, EARTH! Mars Expedition Number One resuming contact with Earth, via Mars etherline. Seven hundred and ninety-first day. Gillway speaking. Your message requesting code contact, in place of the click signal, was received yesterday, and today I hooked up all available batteries. Hope this is going through to you.

We certainly are overjoyed to establish code contact once again. In fact, we went wild when your message came in yesterday. The Martian year is a long one. We have been once around the sun, while Earth has circled it twice, since we last exchanged messages. Fred Markers has computed that just eleven months ago we were 260,000,000 miles apart. The thought alone was rather frightening.

The 791 Earth-days value is another of Markers' calculations. He requests a check on that—wants to satisfy his own curiosity. He figured that Earth's International Dateline shifted across the Martian meridian twice: at opposition two years ago and at conjunction a year ago. His other values are: 740 Earth-days for the time we've been on Mars; 721 Martian-days for the same. Thus the coming opposition will occur fifty days from now. Is he right?

There is much to tell. First of all, I'll say that the seven of us—Alado is dead—are in good health and feel like native Martians. But, we haven't renounced Earth. In fact, we are at present busily engaged in

manufacturing rocket fuel for the return trip. My last report, made almost two years ago, stated that our ship was a ruined tangle, so I will have to explain.

The situation two years ago was this. The ferocious three-foot ant-creatures had besieged us in our clay house and were attacking each day. Proosett and Cruishank had lost their lives. Our sole defense had been the seleno-cell which we were using to electrocute the enemy. A spark had leaped to our ship and exploded our fuel reserves. Thus we seemed faced with doom—we were automatically marooned, and hemmed in by a numberless enemy.

I must admit now that I had unwittingly painted the picture darker than it was. For, a week later, the situation had changed. Unaccountably, the insects vanished. They simply failed to appear one day, though we had seen legions of them in the hills. We never saw them again. Swinerton, our biologist, reasoned that they were similar to the driver ants of Earth—warring nomads that never stay in one locale, but march onward steadily.

They attack and eat all in their way; but our clay house and space ship were indigestible, fortunately. Though they got Proosett and Cruishank, damn them!

When we were free from the insect menace, we found that our space ship was not as badly damaged as had seemed. More on that tomorrow. My batteries are low.

Can you give us some music? We haven't heard any for two years, though Dordeaux plays his guitar

well and we struck up a passable quartet—Swinerton, Greaves, Parletti, and Captain Atwell.

Seven hundred and ninety-second day.

Thanks for the accurate check-up on Markers' figures, though it has the doubtful virtue of confirming our belief that we cannot cross during this opposition. We are faced with the hard fact that we cannot possibly manufacture enough fuel for a return trip at any decent speed. But we're hoping to scrape up enough to get us drifting toward Earth's orbit, to be picked up a year later. That is, on the supposition that our ship will survive the trip, not to mention our supplies and ourselves.

About the ship. The fuel tanks, as you know, were distributed in circular form at the rear, adjacent to the hull. The explosion tore the rear end to shreds. Since that was the end visible to us from the clay house, our impression was that the entire ship had blown up. But when we looked it over, we saw that the forward part, including the fore engine, was intact. Fortunately, all supplies had been removed earlier from the ship to our house.

Captain Atwell promptly announced that we would make repairs. It would be useless to detail just what we did over a period of three months, working with the few tools we had. Using a makeshift hydro-oxy torch devised by Alado—both gases from our electrolysis plant at the pool—the ruined back part of the ship was shorn away.

A bulwark of scrap metal was built over the unsealed end and welded as carefully as possible. As a further precaution, an inch of tar was coated over

all seams. The tar we made from partial combustion of native shrubbery in underground kilns.

There it stands, outside the window now, a half-ship. Actually, though, it is two-thirds of its former length. The gyroscope was set up in the ship's mathematical center of gravity, so the thing was ready to sail, except for one thing—fuel.

That, Captain Atwell said, we would see about. With characteristic foresight, he had planned for the future. And not until all that was done, and our camp had been thoroughly established, did he allow exploration, which was the main purpose of our expedition. We had been on Mars, then, fifteen weeks.

As I mentioned yesterday, we are at present making the fuel that we hope will take us back to Earth in our half ship. Yet, a few, long months ago, we despaired of ever having the fuel. For it was just two months back that Parletti, with his indefatigable pick and shovel and microscope, found a natural deposit of rich selenium ore, not fifty miles from our camp. But that, and other details about this all-important manufacturing of fuel, will come up later in my reports.

Thanks for the music. Our favorite number was the song dedicated to us, "Moons Over Mars."

Seven hundred and ninety-third day.

After the repair of our ship, we had about a month left before the fall season set in. The seasons here, of course, are just twice as long as Earth's.

Captain Atwell picked an exploring party composed of Swinerton, Dordeaux, and Parletti. Well-

armed, carrying knapsacks of food and canteens of water sufficient for a week's rations, they struck out westward for the nearest canal. The large oxygen tanks strapped on their backs did not bring their total mass to even three-quarters of Earth weight.

Markers, Greaves, Alado, and myself remained behind to keep things going. There was always something to do at camp. The electrolysis plant must be run and tended six hours a day to maintain our oxygen supply. The seleno-cells must be periodically adjusted or they will overcharge. The sun-power mirror on the roof must be polished twice a day; this supplies us with the current to heat the clay house.

The rest of the time we amused ourselves playing cards and chess. Now and then we'd go hunting in the bush-wilds of our pool for small game. We have developed quite a taste for the lobsterlike steak they furnish, these semi-insectal creatures of Mars.

The party returned in due time, tired and frostbitten. Captain Atwell was calm, but Dordeaux and Parletti were excited. They both poured out simultaneous explanations. Swinerton didn't help by chiming in with the chorus. Atwell shook his head with an amused grin when we turned to him. Evidently he wanted them to tell about it.

It was a dozen minutes before their incoherent archaeological, geological, and biological jargon made any sense. In fact, it wasn't until Markers took command, shut them up, and had them each speak in turn that the story came out with any degree of clarity.

One of my batteries just faded out. Will repair and continue tomorrow.

Seven hundred and ninety-fourth day.

The party had reached a canal about a hundred miles west, after two days of rapid hiking in the light Martian gravity. It looked like the shore of an empty lake at first. But the startling straightness of the shoreline indicated that it was really one of those remarkable canals that have puzzled Earthman's eyes since the telescope was invented. The other bank was not visible. As Earth's astronomers have estimated, the canals must be at least fifty miles in width to be visible from Earth.

Starting down the slope, and growing ever thicker toward the bottom, was a jungle of dwarfed plant growth. Though they did not investigate, it was evident that an appreciable current of water must still be circulating in the center of the enormous canal, enough to give life to this oasis in the surrounding desert land.

They could only grasp at the thought of what a tremendous river must once have swept down that great waterway, ages and ages ago. Perhaps all the land which we have seen as desert, and which is ocher-red in our telescopes, was once irrigated by this amazing sluiceway.

They decided to follow the line of the canal southward for two days. Many forms of life were sighted among the bushes and trees they skirted. Swinerton swears he saw a creature with two heads, one at each end of its body. The others did not see it, but they did see a ten-legged monster a dozen

feet across that was like a giant spider. Also, a creature that was nothing more than a huge wheel rolling along, with a head in the center.

In explanation, Swinerton reminds us that evolution has had many more ages to produce odd monsters here than on Earth. Yet he says they are just vanishing remnants of what Martian zoology must have had in its flower, about a million years ago.

Seven hundred and ninety-fifth day.

Well, they had to drag Swinerton along by force to keep him from running into the jungle for closer looks, and tramped on.

The next day Parletti became excited when the shore changed into a cliff and exhibited striations which, to his scientific eye, meant much. He counted them, examined them with binoculars, and began to babble about Martian geology.

He declared that Mars had once had oceans as mighty as those of Earth, in proportion. Highly saline oceans that must have been rich in gold. This ties up with Greaves' analysis of the desert sand, formerly ocean sediment, which is thick with red gold. Gold is what gives the Red Planet its ruddy color in Earth's telescopes.

Greaves seriously maintains that every time we take a step on Mars we are walking over a dollar's worth of gold! Swinerton subsequently established that even the life of Mars is impregnated with gold. He coagulated a sample of blood with a tin salt from his biological kit and obtained the characteristic iridescent purple of colloidal gold.

To get back to the canal, Parletti estimated the

beginnings of life on Mars as three billion years ago! The planet, he says, passed its prime over a billion years ago, when Earth was still a hot, restless globe of steaming rocks.

But the man that was most astounded and really stirred with interest was Dordeaux. This happened late that day when they saw something come up over the horizon. It was a broken line of walls and towers glinting in the sharp sunlight. The ruins of an ancient city!

As he told this, the four of us who had not been along hung on every syllable. There was nothing so intriguing, so compelling, on this strange, new world as the thought of former civilizations.

"Huh!" grunted Dordeaux, eyes snapping. "You fellows wouldn't believe me when I said I had seen those ruins from our space ship while we were landing. Now who's right?"

As a matter of fact, we had kidded him an awful lot about it, taking nothing for granted, but were just as thrilled as he was to hear the news. For it was the first definite proof of another intelligent race in the Solar System besides Earth's.

The party reached the city-ruin the next morning and investigated its hoary, lichen-covered remnants. Not much remained beyond broken, eroded walls of stone and a general debris of rock and heavy dust. However, they could make out the general plan of the huge city, built much like an Earthly city in squares. Numerous bas-reliefs showed clearly that physically the Martians had been more insect than animal, with wide wings. The early heavy

atmosphere, coupled with the light gravity, had made flying a natural equipment of life.

Captain Atwell had had to keep a sharp eye on Dordeaux. His archaeological instincts had been fully aroused and all others submerged. He was liable to dart off any second to examine some new thing that had caught his eye. No wonder; here he was in a complete new world of archaeology, uncatalogued, mysterious, alien. His enthusiasm was so contagious that it fired us all as we listened to him.

At any rate, the grandest thing of all was discovered later that day, as the four stood at the canal bank's edge. Broken edges of a smooth, wide sheet of metal speared up from the canal's bottom, caked with ages of rust. At once it was apparent that it was a section of what had been a tremendous pipe fitted into the canal, and as wide! The Martians had undoubtedly used a pump of some kind to move the water from the poles along that pipe. The water itself would never have flowed uphill in the canals from the depressed poles.

Dordeaux pictured for us the colossal engineering achievement of a network of canals all over Mars. Giant pumping stations such as this one every few hundred miles. Millions of square miles of parched land irrigated. A dying world made fit for life long after its prime. A heroic struggle against the inevitable. And now this, the shards of civilization!

Dordeaux, from careful microscopic examination of rocks and bones, has since come to the conclusion that that city, and perhaps all the others, had

been flourishing not more than fifty thousand years ago!

Seven hundred and ninety-sixth day.

Those were the results of the first exploration away from our immediate vicinity. Dordeaux maintains that it is not unreasonable to suppose that Martians are surviving today. Perhaps some few groups have managed to withstand the rigors of cold near the poles and live near its plentiful water supply. We all agree it is possible.

Another trip was made to the canal. This time Markers brought his photographic equipment along. They came back with several hundred excellent views of the canal, city, animal life, and geological formations. The home staff of scientists will find these pictures highly interesting—if we ever get back with them. Markers also took a hundred feet of moving film, photographing the city from the highest broken wall he was able to clamber.

Thanks for the program dedicated to us yesterday. Particularly give our thanks and appreciation to President Mason for his fine, inspiring speech. We feel a little guilty about all the praise and eulogy he heaped on us. We don't consider ourselves "cosmic heroes," President Mason, but we like the words anyway!

Seven hundred and ninety-seventh day.

No more explorations were made as the fall and winter set in. And what a winter! The highest temperature we recorded in six months was 20 below zero. Once it dropped to a record low of 120 below.

During that time we stayed in our clay house,

venturing out only to perform the necessary chores of readjusting the seleno-cells, polishing the sun mirror on the roof, hauling ice from the pool for the electrolytic plant, etc. Captain Atwell took a regular part in this and all other things. He is the one, we unanimously agree, who should get credit for all our success. A leader and a man!

There was no snow, of course, but at times during the coldest snaps a light frost coated our windows —of carbon dioxide snow! Wind storms that lashed sand against our walls rose at frequent intervals but never lasted more than a day.

We were quite snug in our sturdy clay house, our heater supplied by the current of the sun mirror. But during the coldest spell, when old Sol was lowest on the horizon and our mirror did not build up much charge, we had to put on our heaviest clothes to offset the freezing temperature in our house. Even our drinking water froze for three days. We had to warm our protein sticks next to our skins before eating them.

Greaves came in once with a badly frozen pair of feet from tending the electrolysis outfit. He had been out only an hour. Atwell had us take fifteen-minute shifts on our outside chores after that. Greaves was well taken care of by Parletti, but lost two toes. However, that extreme spell lasted only seventeen days. The rest of the time it was more like a severe Arctic winter on Earth.

Monotony set in with the winter, of course. We would have given our souls at times for music, or even an advertiser's voice from Earth. We played games until we were sick of them. A rotating game

of bridge lasted for almost a month between the eight of us. Nobody won, though the rubbers ran into three digits. The law of averages evened everything out over that long stretch. We then paired off with permanent partners. Alado and Swinerton ran up so many points in two months that if paid off at a thousandth of a cent a point, they would have owned us lock, stock, and barrel.

Alado chuckled at his winnings.

"By glory," he said, "when we get back to Earth, we ought to challenge the Culbertsons, eh, Swinny?"

He didn't know—God rest him!—that seven months later he would be buried under the red sands of Mars.

Quarrels arose, an inevitability. Yet they never became bitter or prolonged. The feeling of being alone on an alien world knitted us together like brothers. Our strict system of share and share alike, under the iron discipline of Captain Atwell, gave no permanent grounds for differences.

We celebrated Christmas and New Year's by singing all the appropriate hymns and songs we knew, accompanied by Dordeaux' guitar, and having a feast of an extra bowl of hot bouillon each. We celebrated the Fourth of July, too, before the long Martian winter was over!

Seven hundred and ninety-eighth day.

A waterless thaw came with the rise of the sun toward the zenith. The daily temperatures began to average around zero. We were able to go out and relieve our cramped muscles in short hikes.

It was at this time that we talked over the fuel question seriously. We had been afraid to before

that. Our only hope, of course, was to find a supply of selenium. Greaves promised to extract it from the ore, if some ore were found.

Captain Atwell commissioned two search parties to make constant explorations in all directions. Parletti, Swinerton, and Alado as one; Dordeaux, Greaves, and himself in the other. As soon as weather permitted, his plan was carried into operation. Each party leader was to make tests of underlying soil every mile, carrying along small chemical kits for flash tests. The others were free to catalog any other phenomena on the way, if it did not mean too much delay.

Atwell had worked out a system of routes and directions which made it simple to survey new territory every time. The constant sun and strange but true compass that had a north pole in the east were their guides. In all, the two parties made a total of sixteen one-week and ten two-week treks into the surrounding territory, in a period of nine months.

It was during one of these trips that Alado came down with inflamed lungs. He was put to bed and nursed carefully, but pneumonia set in. He was dead a week later. Not a hero's death, but he died with a smile. His last words, with his eyes fixed on the brilliant evening star, were simply: "Good-by, Earth!"

We buried him at night under the two moons of Mars. We will not broadcast tomorrow in his memory.

Eight hundredth day.

Opposition time is drawing near. How we would

like to cross at this time! Yet we won't be able to do it. We will have barely enough homemade fuel, crude and inefficient, to drag the ship away from Mars and set up a drift sunward. We will have to time it just right or we will miss Earth next year.

We are not trying to fool ourselves. Our chances of a successful navigation with a half-ship and crude fuel are small. Most of all, it will be a close race between time and oxygen starvation for that year-long trip. But we can't stay on Mars, either. Our preserved food supply is running short. We could never live on what we hunt—our ammunition is almost gone. Even our sun-power units are beginning to balk, and they are the only thing between us and freezing on this cold, cold planet.

So we will have to take our chances in our half-ship.

It was nine months ago that the two exploring parties began to range over our surrounding territory, searching for selenium.

Markers and I, who were left in camp all this time, had enough to do to keep us going from dawn until dark. But Markers, with energy enough for two men, found time to make careful observations through his four-inch telescope on the roof. He has discovered two new moons of Jupiter, tiny far-flung ones. Also one for Saturn and even one for Pluto. He says the thin air makes telescopic observation on Mars ideal.

He has made complete records and computed orbits of the moons, and of the eleven new asteroids he has charted. He spent most of his time with the asteroids. He is especially interested in the one

called Anteros, which he says has a very eccentric orbit. He has worked its orbit out to seven decimal places.

Several times he had me look through his tube at the beautiful sights of Jupiter with his colored bands and Saturn with his remarkable rings. But the sight that fascinated me most was that of Earth itself, a green-gold half-sphere with bright cusps. The north polar cap sparkled like a diamond and most of the surface was covered by a filmy gauze of white clouds. But through it could be seen the continents and oceans, so familiar that it made me choke.

This is perhaps unbelievable, but the city of Chicago is visible as a tiny pinpoint of light. I saw it just as that longitude of the American continent swung past the terminator, from light to dark. Chicago, from this distance, seems to lie in a great dark hollow edged by the shimmering-white Lake Michigan. Just as it swings into its sunset, the lake becomes utterly black and the hollow blacker, and the city flames out like a tiny jewel.

Markers, who is from Chicago, looked when I pointed it out. Then he walked away and didn't say much for the next hour. But then, nostalgia has hit us all pretty hard.

One other man-made landmark is visible, the great Chinese wall. It appears as a winding silver thread over the dark mountains of Mongolia.

Markers and I had a scare once. In the middle of the day we heard a loud explosive noise from outside. We put on heavy clothes and air helmets and ran out. It was the electrolytic outfit, down by the

pool. A leak had allowed oxygen and hydrogen to accumulate in an explosive mixture. A spark had set it off. Much of the glass tubing had been shattered.

Having just sent the two expeditions out with all our surplus oxygen, we were faced with an immediate shortage of that gas for ourselves. We set to work like demons. Markers, an all-round expert in any laboratory, blew the necessary tubing and I helped as much as I could in setting it in place. It was an all-day job. For the last three hours, we breathed and lived in Martian air, having run out of oxygen.

Both of us came down with heavy bronchial colds that night. We drank boiling hot—138 degrees on Mars—water and wrapped ourselves up with blankets to bring on a sweat. A week later, when Parletti's party returned, we were still weak and feverish. Parletti, changing from geologist to doctor in a second, nursed us out of it.

That was how close, at times, we played the game with death.

Eight hundred and first day.

As a brief summary of what the two search parties found in their constant exploration, I'll mention first the strange desert crypt that Atwell, Dordeaux, and Greaves came across to the east.

It was a pyramid so similar to those of ancient Egypt that they thought they were having hallucinations. Dordeaux fell to his knees in the sand and almost fainted. The whole thing was a puzzle. The inscriptions around the base were unlike those of the Egyptians, but had a haunting familiarity.

There was no way to enter it. Dordeaux would just as soon have begun hacking away with his pick, but Atwell emphatically vetoed the idea. Pictures were taken of the inscriptions for analysis on Earth. Dordeaux raves—it is the only word—about a Martian visitation of Earth, only ten thousand years ago. It remains a mystery. Perhaps it will be cleared up in the future by other explorers with the necessary equipment to enter the crypt—if it is one.

If that is startling, what about the other party finding in the ruins of a canal city a perfect representation of Neanderthal Man of Earth? It cannot be of the Martian race, for they are insectal. Does it mean that Mars once had a humanlike race, which vied with the intelligent insects who built the canal system? Or that the Martians had visited Earth before the dawn of our history?

Swinerton, as anthropologist, has complete pictures of and voluminous notes of this find. He is saving them for leisurely examination on Earth.

Eight hundred and second day.

The most important find of all, of course, was Parletti's, just over two months ago. His spade turned up a rich ore of selenium, fifty miles from camp. All other pursuits were immediately abandoned. Greaves made his analyses, and with the collaboration of Markers, and the wholehearted help of the rest of us, set up a plant to manufacture fuel.

His method was simply chlorination of the ore, producing selenium tetrachloride, a heavy liquid that could be separated from the by-products mechanically. Chlorine came from electrolysis of brine;

the brine from our salt pool. The tetrachloride was treated with water, producing selenium oxychloride, which is perhaps the most active liquid known next to the fluorine compounds. And the fuel whose powerful explosions bring life to rocket engines.

We have been working like slaves. Parletti was stationed at the ore deposit to dig up the hard, rock-like material as fast as he could. Atwell and myself, the two heaviest men, made the treks back and forth, dragging the ore along in a huge canvas toboggan.

At the camp, Swinerton pounds the ore with a large mallet, making it fine-grained. Greaves then gets it and dumps it into his chlorination vat. Markers tends the electrolytic outfit that produces chlorine.

How fortunate that Mars is a dry world without clouds or rain. One day without the energy of the sun to give us electrical power and we would be lost!

Greaves' complicated chemical manipulations finally produce the fuming yellow liquid that Dordeaux carefully pours into valveless oxygen tanks and stores in the ship.

For six weeks now we have been working eighteen hours a day at this project. We have made a gallon of fuel a day. Just today Parletti limped into camp, cold and aching from his labors, and announced that the selenium deposit had run out. The remaining ore was poor and useless for our purpose.

Make it or break it, we will have to get along on what fuel we have. It is barely enough, Markers computes, to get us away from Mars and set us on a slow crawl toward Earth's orbit.

Markers has a strange gleam in his eyes, and has had for days. Atwell is watching him carefully. I didn't think Markers was the type to break down, but it looks that way.

Eight hundred and third day.

Markers speaking! We will cross during this opposition! By some cosmic chance the asteroid Anteros will pass no more than five million miles back of Mars ten days from now. We can build up a speed of five miles a second and meet it. Allowing it to sweep by our ship close enough, we will be caught in its gravitational field and take up an orbit —providing our ship stands the strain.

Anteros has an extremely eccentric orbit, more so than even Eros. Some decades ago, I forgot just when, it passed within a million miles of Earth, nearer than any celestial body except the moon. My calculations show that it will repeat this maneuver at this opposition, passing within one and a half million miles of Earth.

Riding the asteroid from Mars to Earth, we will have fuel enough to escape Anteros at the proper moment and fall to Earth's moon. If we have fuel enough, we will attempt a landing on Earth itself, although since Anteros will pass in front of Earth in its orbit, Earth will bear down on us at its orbital speed of fifteen miles a second.

However, the moon will be receding at the time, lessening the speed of her approach to our ship to nine miles a second. We can more easily take up an orbit around the moon, without danger of being burned up in an atmosphere such as Earth has.

Captain Atwell speaking! We will ride the asteroid Anteros as Markers has explained. It is perhaps a dangerous experiment, but a lesser evil than drifting in space for a year, and that is a lesser danger, in turn, than staying on Mars. We will be circling the moon, if all goes well, forty days from now. We will contact you at that time by etherline and plan a landing at some known Lunar location, where we will wait for a rescue ship.

Gillway speaking. Markers had that plan in his mind for months, ever since he caught Anteros in his telescope and plotted its course. He exploded the news like a bombshell this morning. We all became madmen for hours. Then we set about seriously to plan our strange trip via asteroid.

We will leave tomorrow morning. I will not be able to broadcast again until we have safely hooked our ship in an orbit around Anteros, ten days from now, as all available battery power will be needed for the gyroscope.

Au revoir. Mars Expedition signing off at Mars.

Eight hundred and thirteenth day.

We have succeeded! We are circling Anteros! The ship is bearing up nicely. All else is well. Markers says the worst is yet to come. The landing on the moon or on Earth itself will be hazardous. But we have something of a fuel reserve and plenty of hope and courage.

Will not broadcast again until near Earth, a month from now, as the sun-power mirror has gone dead and my batteries are low.

Mars Expedition Number One signing off.

Man of the Stars

Man of the Stars

Sam Moskowitz

Times have undoubtedly changed and with them the aspirations of the young science fiction fan. But when this author was a teen-ager, there were two dreams he shared in common with almost every other enthusiast in the field: the first was to someday sell a science fiction story to a professional magazine; the second, to have his work in amateur magazines regarded so favorably by a publisher that he would be offered a job as editor of a science fiction magazine. In those uncomplicated days nothing sublimer could be conceived of under the starry canopy of heaven. The first dream came true as a result of this author's thesis put into fictional narrative, namely, that men would not turn every effort to change the face of the future or go out to explore the planets for glory alone; there would be many heroic figures motivated by much more fundamental human drives, whose contributions might prove even nobler. "Man of the Stars" was one of the stories written with that idea in mind. When World War II ended, there were easier and more practical ways of making a living than writing, so for me science fiction became merely a pleasant hobby. Long after all the sheen had disappeared from the notion of the realization of dreams, Hugo Gernsback offered me the editorship of Science-Fiction Plus *because of what I* knew *about science fiction. So the second dream also came true.*

Man of the Stars

THOUSANDS OF MEN HAVE SPUN a trail of daring adventure and pioneering in the spaceways. There are statues in virtually every park on the planet dedicated to their truly magnificent achievements. Statues of rugged men, with set chins and purposeful eyes. Pioneers who blasted open the greatest frontier of them all, so you cannot blame us if doggedly we persist in revering their magic names to honor their memories.

Aye, their adventures were glorious. It was said that they were men of iron, with muscles of flexible steel and a scarcity of emotion that inured them to the worst the cosmos could offer. Men who could stand the pounding, the rigors of nature at her worst —and who left their emotions home where they belonged. *All except one!*

I met him under conditions under which I hope I shall never meet a man again. The ship was a brother to madness the day he came aboard. Quarantined and tightly sealed. For all Earth knew and feared the fact that madness lurked aboard our vessel. Madness in the form of that innocent-sounding scourge which men have named—Space Sickness.

Space Sickness. The very utterance of its name is sufficient to make strong men cringe in abject fear, to make an entire crew drop to their knees in religious fervor.

Those rays. Rays which men know as Cosmic Rays. They were the cause. Penetrating even a foot of lead, bathing every atom of a man's soul in its never-ceasing mysterious rays.

And somewheres in a man's body, dormant bacteria were aroused into activity by their proddings, and swarmed to attack—the brain! The brain! That was the only part of man's structure which was attacked, and the disease rarely killed—oh so rarely; but a thousand new insane asylums, overflowing with tens of thousands of new victims bore mute testimony to its effectiveness!

Men have survived the disease, but always after there was a slowness of mind and body about them that told you, more eloquently than words, that key centers in their brains had burned out!

And just as quickly as it would strike, it would disappear—as though it worked in infinite cycles.

Our brig was full, packed with a dozen dull-eyed morons and gibbering maniacs. Men who had survived the disease—but would never know it.

It was under those conditions that I first saw the Captain!

Our former commander raved incoherently in the brig, and our quarantine had not been lifted for twenty-four days when the space lock was commanded to be swung open and through its roundness paced three bizarre figures that might have been some past writer's version of the men from Mars.

From head to foot they were cloaked in protective masses of armor and lead—gas masks on their

faces, and they walked with the slow, cautious step of men who are afraid.

And then, behind them, came the Captain! *Unprotected except for a uniform designating his rank and the skin he was born with!* Unafraid, unhesitatingly, he strode into the atmosphere that meant for him the fearful uncertainty of awful madness.

And it wasn't just the fact that there were still men on the face of the Earth who were not afraid to unhesitatingly walk into the face of insanity. It was that this man resembled anything but that fearless breed.

He stood a little more than five foot ten. He had smooth, black hair and a handsome, soft-featured face. He looked soft. Perhaps in a city gymnasium he might have passed as being in fair condition, but among hardened space rats he was little more than a red-cheeked, cherubic babe.

His skin was naturally a little dark, a beautiful tan color. And his chin seemed weak—weak in the sense that it was the good-natured, nice-boy type of chin.

Perhaps he was twenty-two, his age was hard to determine. His voice was heavy and emotional—he would have made a fine orator. And he talked in the half-cultured, half-down-to-earth way in which men who have had to acquire their culture by themselves sometimes talk.

And just one other thing. There was a haunting wistfulness, an air of detached embarrassment that made you feel just a little sorry for him, though you didn't particularly know why.

By the eleven moons of Jupiter, what? What in all creation could have prompted this man, this young creature that must have had everything in the world to live for, who could have carved a name for himself in any of a thousand diverse occupations—what had prompted him to head aboard a hell ship stamped with the stigma of madness, trailed by the specter of death which followed every space vessel?

And those others. Those others who had come with him protected by every method known to science. They did not even give him time to change his mind. Did not fling back as much as a glance of pity for a martyr in a day and age when the breed seemed virtually extinct. They hustled the mentally broken remnants of the crew who had succumbed to Space Sickness from the brig into an airtight container waiting outside, and then left to deposit them in a convenient insane asylum.

And so they left him. Left the new Captain to the uncertainty of his future existence. I saw them hand him papers, papers which I knew well and recognized. Papers commanding the exploration of Saturn. Saturn, in whose rings a dozen expeditions had perished. Saturn, the ultimate destiny of men doomed to madness.

The first time the Captain addressed us remains vivid in my mind. He lined up the crew and stood a moment, self-consciously, slightly abashed at the sullen and taciturn attitude of the entire group.

"Men," he began in a loud voice.

The crew was silent.

"This is the first time I've ever been placed over a large group of men. I've been fortunate in obtaining this job, and I'm going to do my darnedest to make good. Many of you men here know a lot more about space and conditions outside than I do, but——"

Simultaneously shouts resounded in the closed confines of the ship, cutting off the Captain's words abruptly.

All eyes stared with horror. Stared at Big Murphy!

Big Murphy. Mightiest of all space men. Terror of the ranks. Powerful giant that had pounded dozens of men into helpless pulp. He had straightened to his full height, and from his brow. . . . God! *From his brow dripped glistening, yellow beads of sweat!* Yellow beads of madness. Big Murphy had been struck by Space Sickness!

His eyes. Oh, how can I describe the terror of them. The gleaming insanity that directed itself toward the puzzled, youthful form of our new Captain.

And that mighty, terrible destructive machine that was Murphy broke ranks and strode toward the Captain.

And we. We the crew. We stood by. Paralyzed with fright. Helpless, and not yet quite callous enough to dare to touch a man afflicted by the dread ravages of Space Sickness.

As we stared Big Murphy hit the Captain, a short, terrific blow with one calloused hand.

The youngster reeled dizzily against the inside hull of the ship. If ever I saw shocked surprise in a man's face it was portrayed on his.

Murphy was a rock-solid two hundred pounder. Veteran of a dozen space voyages. The new Captain, who, up to now, had not been granted a chance to give his name could hardly have weighed more than one hundred and eighty pounds—one hundred and eighty pounds of easy living.

Still, he had more guts than we gave him credit for. He came off the wall with his fists clenched, and the attitude of a man who knows he's going to lose, but refuses to be totally disgraced in doing it.

That was just what Murphy wanted. I've seen Big Murphy fight a twenty-minute battle with a Venusian Heleguite—monstrous six-limbed, half-reptilian creatures—and emerge the bloody victor. I've seen him win so many fights that the idea of his losing never entered my mind. The entire question when a man fought Murphy was: How long could he last? How long could the awful smashes of those killer fists be endured? And what of that demoniac brightness that glistened in his eyes?

Ordinary men, knowing Murphy's reputation, knowing the horror of Space Sickness, would have closed their eyes as he moved in for the slaughter. But space rats are not ordinary men. They know the meaning of no emotions other than fear and hatred, who blink in puzzlement at the mention of such abstract things as pity—or love!

So they fairly licked their lips in anticipation.

With one powerful backhand swipe Murphy swept away the Captain's defense. With the other he planted a terrible blow on the chin of the newcomer.

The Captain's head snapped back at the impact.

His knees wobbled; his hands rose feebly to ward off further punishment.

Murphy's lips curled cruelly. He smashed a blow right through the Captain's upheld arms. It landed with a sickening thud.

What held the man up I don't know. His features mirrored excruciating pain—and suddenly, something else—anger! Anger was spreading over his cheeks like an expanding gas balloon. An anger of such feverish intensity that it seemed it would consume him where he stood.

And then, with suicidal impatience, the Captain plunged toward Murphy, red rage expressed in every line of his body. Suddenly those arms seemed a little less soft, the legs soundly competent.

Astonishment reflected in Murphy's face, and then joy. The joy of a man who finds pleasure in beating his fellows to helpless pulp; who hopes a man will not fall just yet, not until he has hit him a few more times.

Thud! Thud! Murphy pounded left and right into the Captain's body. But it didn't stop him! He pushed on! Crash! a terrible right-hand punch delivered with all of Murphy's strength exploded on the jaw. The Captain went down, but just for the tiniest fraction of an instant. Then he was on his feet again. And as though he had never been hit, he rushed toward Murphy.

There was something more than disdain in the faces of the watching men. There was disgust. The disgust strong men reserve for someone who is unwilling to concede unquestionable superiority.

But disgust soon turned to amazement. The Cap-

tain had connected with his first two punches. A glancing right to Murphy's cheek, and then a pounding left to the midsection.

Murphy threw his entire weight behind a bone-crushing wallop calculated to end the fight then and there.

Clumsily the Captain avoided it, and sent three sharp lefts ringing off Murphy's ear in return.

Murphy was murderous with rage. He was swinging like a madman. Right, left, right, left—but hit mostly empty air. By accident, by clumsy footwork, by pure luck the Captain avoided the punches. Then he was in again, with a vivid tattoo upon Murphy's midsection.

Minutes passed, and incredulity was mirrored upon every face present. The previous record any man, up to now, had held against Murphy was two minutes. More than three minutes had passed, and still the fight raged with murderous intensity.

Where the Captain drew his incredible vitality from no one knew. Certainly there hadn't been a line in his entire bearing to suggest endurance and grit.

A dozen times Murphy connected with resounding wallops that should have abruptly culminated the affair—only they didn't.

Blood streamed from the Captain's nose and eye. Half the top of his uniform was torn away, and the lower half was dyed crimson.

But again and again he attacked, driving himself with unquestionable courage into volley after volley of Murphy's blows.

Somehow the smashing strength that had laid a

hundred men silent before seemed insufficient to cope with the "softy" who was our Captain.

Undoubtedly it was a matter of endurance. Simply a question of time before the supreme effort of the Captain would bend and collapse before the never-ceasing storm of Murphy's blows. For though the spirit is willing, the flesh is often too weak. Now we began to understand how he had achieved rank of Captain, eliminating thousands of capable men. There was an unshakable purpose of mind, an insane strength that could be called upon to meet and conquer obstacles. The spirit of survival was unbelievably strong.

It was a question of endurance all right. Just when it seemed that Murphy had quieted the Captain, and that the next punch would dispose of him, new energy seemed to flood into the Captain's arms and legs and he dived headlong into Murphy. Pounding. Smashing.

And then one of them gave—but it wasn't the Captain! Murphy's mighty lungs were fairly screeching for air. His brutal arms rose and fell slowly, with failing strength.

And as Murphy grew weaker the Captain seemed to get stronger. His face was on the verge of tears from the strain of the effort he was making. His continuous punching defied every law of sensible nature.

One half hour after the battle had begun Murphy was reeling drunkenly from wall to wall, with an insane upstart pounding away with killing, untiring ferocity.

It is not a beautiful sight to see a great champion go down to defeat before an obviously inferior man. Even when he is definitely in the wrong. And despite his previous cruelty, and present madness, I could not help feeling a little sorry for Murphy. It's no disgrace to be beaten by a bigger man, but to be beaten by a smaller man, even when that "smaller" man weighs one hundred and eighty pounds, definitely is a disgrace.

Twice within the next few seconds Murphy desperately tried to save his slipping prestige with all-out, do or die right-hand swings. Both landed! And neither stopped the Captain! Only when Murphy had fallen three times, and three times tottered to his feet, did the Captain let up his attack.

The Captain stopped hitting Murphy as he started to fall a fourth time.

Mercy was something the men remembered reading about in books but could not recollect having viewed—until now. Particularly mercy to a crazed potential killer. And they regarded him as crazy when he helped Murphy over to, and set him down in, his own seat.

"Quick," he gasped at one of the men. "Get some water."

The man obeyed!

Somewhere, during the fiasco, Murphy's immense vitality had survived the crisis of Space Sickness. But he never was quite the same.

But this unexpected victory did not gain for the Captain the respect it should have commanded. They did not regard him as a hero merely because

he had survived a situation of whose catastrophic nature he was totally ignorant. Men like him they suspected of being fools, not heroes.

And besides, his talk was too nice. He seemed ignorant of good, honest profanity. And the day after the battle he pursued his duties, and was to all appearances as incompetent as we had expected.

Luck was with us and Space Sickness did not show itself again. It had disappeared as enigmatically as it had come.

If it were not for the fact that the journey had begun, any one of a dozen men would have challenged the Captain to battle. One simply couldn't believe that he was capable of beating a man like Murphy.

Somehow things progressed all right. The men took orders grumpily, and chafed at the ignorance often displayed by the Captain, but worked in harmony once the voyage had begun.

Now I am not a big man. I've acted more as the Captain's menial servant than anything else. There are some small men who seem capable of enduring anything a big man can—and more—and who are accepted, despite the good-natured "Shorties," as equals. I did not consider myself in that class.

Still, I felt infinitely superior to the Captain!

There was more age in his eyes than his face divulged. There was a haunting, drifting sadness about them as he gazed out of the ports into the blackness of space. Stared at the knifing rays of light that were stars far distant, and moped in ill-disguised homesickness. There was a sort of loneliness, an ever present pensiveness, that, as I said

before, made you feel just a little sorry for him and a bit more inclined to put up with his shortcomings.

"Shorty," he said to me one day, "this is a devil of a life. Cut off here in space, away from everything, throwing away months, years of your life."

I stared at him as one stares at a madman. "What do you mean, throwing away years of one's life?" I demanded.

There was a penetrating understanding about him —the gift of looking into another's mind and divining just how you felt. An incredible sensitivity that took the form of anger instead of despair when hurt. Perhaps that was what lifted him above the common horde—pushed him into momentary glimpses of greatness.

"Shorty," he answered, "I'm afraid you don't understand me. Yes, this life is thrilling, it is adventurous, and I can understand how it could get into a man's blood and drive the thought of any other life out forever.

"You, and this, are part of the greatest achievement of mankind to date. You are fortunate, Shorty. I wish I could be like you. But I was born different. For me, there is no finer life than a home and a wife of my own. A fireplace to sit before when the day's work is done. A companion to walk down life's road with. Children to watch, to mold, to love.

"I know you think I'm crazy, Shorty. To you, a women is some space-port girl, with whom you can carouse a night and then forget. To me," and his eyes were sad and wistful, "to me, a woman is something fine, something beautiful, to treasure, to understand, to love.

"Space flying is your entire life. Everything that counts at all. For me, it is just a job. A job that I can endure just as long as some girl is proud of me because of it. A means to an end. And just as long as I have my dream, that long, because of it, shall I work with everything in me to be successful. But should that dream be shattered to bits there would be no more meaning to my life. No reason why I should go on in this type of work—and then . . ."

Then I knew! Here was a man in love. A man forced beyond his depth by the power of love. That defeat of Murphy could never have occurred under ordinary circumstances. It was just that it was Murphy or his dreams—and he would die for his dream!

Day by day Saturn, the objective of our voyage, grew larger in the Visa-Screen.

And the Captain chafed impatiently, his high-strung nervous system enduring the tortures of the damned in this seemingly endless confinement.

All his energy was directed to arranging, in minute detail, the operations that would take place upon Saturn.

Space suits were gone over and reconditioned. The few available maps of Saturn were checked painstakingly for the best part of the world to land upon. And an air of general excitement seemed to fill the air as Saturn expanded.

The gravitational pull of the giant was slightest at the equator around which bulge circled the great rings of Saturn. In order to conserve fuel, we edged in as closely as possible to the rings before beginning

our descent, but, as others before us, we came too close.

The Captain was at the mike shouting orders. The deflector rays, inactive since emergence from the asteroid zone went up, pinkishly comforting.

Then the ship nosed down, down through the ceaseless stream of tiny rocks that made up the great rings of Saturn. The Captain watched the screen indicators with ill-concealed concern.

Every time a particularly large sky-rock smacked into us the impact would register, often a fraction below the red danger line.

No one had ever penetrated the great rings of Saturn. A few intrepid explorers had mapped the world from a distance of millions of miles. Half a dozen expeditionary parties had perished in its rings.

The moving rocks outside rained down upon the screen like wind-driven hail, pounding with increasing ferocity, attempting to destroy this impudent invader.

And more than once the entire ship shuddered from stem to stern as even the deflecting rays failed to provide sufficient cushion for the rocks. At such times only the thick hull of the ship stood between us and death, and hardened though we were, involuntary shivers rippled up and down our spines.

The Captain's features were taut. He stared ahead just as an emotional actor vicariously living the same scene might have, but here there was more than bluff—more than play acting—for I knew that his spirit was unconquerable—while he had his dream!

And then we were through the rings!

Every few miles we fell, we ejected a violent blast through the rockets to break our fall.

We slipped into the atmosphere—thick and hot as boiling soup. The ports misted over, and the fog-piercing infrared-ray lamps were directed through them to facilitate vision.

All we could hear was the continuous slushing of the steamy atmosphere dripping off the hull of our ship.

The infrared-ray operator peered intently ahead, relaying directions back to the pilot.

And the Captain stood by, fists clenching and unclenching.

The altimeter clanged out at every hundred feet, as the meters slipped stiffly down the dials.

At five hundred feet the Captain gave the order for heavy blasting of the forward rockets.

There was a deafening roar, and the ship lurched violently. All but the pilot were sent spinning to the floor.

Some of the men cursed. Cursed the Captain's inexperience. But he pretended not to hear.

Then the ship hit! And it seemed that we were overwhelmed by a torrent of noise. And even after it hit it settled, foot by foot, inch by inch, into the hot, porous soil.

The Captain called the men to attention. They lined up before him in the pilot room.

"I want several men to take a small ship and scout around the immediate territory," he said.

There was no response.

"Any volunteers?"

Silence.

"What's the matter?"

"That's *your* job," someone rasped.

The Captain turned to me, puzzled.

"The Captain, being the most capable man in the expedition, always assigns himself to the more dangerous tasks," I imparted. "It is the accepted code of the spaceways."

"All right!" he snapped. "I'll do it. But I don't know how to run the ship."

No one volunteered. I felt sorry for him.

"I know how to handle the ship, sir," I said, cursing myself every word of the way.

He stared at me a moment as though he saw me for the first time.

"All right, Shorty," he acknowledged softly. "It's you and me."

Blood pounded like hell-driven vitriol in my brain as I seated myself at the controls of one of the auxiliary rocket ships. I knew only too well that this job was one for a man with ten times my experience and fortitude—but someone had to look out for the Captain.

My hand shook as I pulled the control lever. I muttered a soundless prayer as the rockets behind me blasted and the little ship shot away from its parent at a tangent. Shot into a boiling-hot mist of unknown gases, with visibility zero.

The Captain wore a strained expression as he clumsily manipulated a small infrared-ray camera through one of the ports. He seemed pale and uncertain, lost at this unfamiliar work. Right now, I could imagine the thoughts of home and fireside

were reaching up for him in drowning waves of nostalgia.

But I didn't have much time to think. Suddenly the little ship lurched violently. It spun round and round like a top. Desperately I worked at the controls, trying to hold them into place by the exertion of every iota of strength I possessed. Vicious, powerful currents in the almost liquid air tossed us about like a chip on a stormy sea.

The altimeter jumped insanely up and down. Two thousand feet. Zoom. Five hundred feet. One thousand feet. Zoom. One hundred. And somehow I would pull the ship out of it, sweat pouring over me like a deluge of water.

The Captain was doing what he could. Every time the nose dipped he threw himself down at the back of the ship to balance the weight. When the control stick stuck, he helped me pull it with all his strength.

The altimeter was plunging again, one thousand. Seven hundred. Five hundred. Two hundred. The Captain leaped to the controls, thrusting me out of the way. He grabbed the stick and bracing his feet against the control board, pulled. The muscles of his neck popped from the effort. Back, back he pulled the stick. The nose of the ship began to edge up. It was a battle between man and the elements.

Magnificently the Captain held out. Incredible dogged strength that refused to give one single inch. For a moment I almost dared to hope. Then the control stick snapped!

Like a man catapulted from the wrong end of a springboard the Captain hurtled across the interior

of the ship and hit the far wall with a sickening dull thud.

The little ship was screaming down. Down, down, down. I grabbed the seat and prayed.

It seemed an avalanche caved in on us. Rolling waves of noise that poured endlessly across my brain. Then pain, excruciating pain.

Somehow I maintained enough calmness to pull the air helmet over my face. My body was one mass of stabbing pains.

The ship lay almost in pieces about us. I tried to rise to my feet and almost died there and then from the awful bolts of fire that seared to my brain. Both my legs were broken!

The red, soup air poured through the ship, obscuring all in reddish haze.

The Captain moved! At first I thought it was the pain. Then I could only stare in paralyzing amazement. The Captain was moving. Living! Breathing this hell-spawned atmosphere and living! No, it couldn't be. No one could breathe in this liquid fire and live. No one! No one!

He rose to his feet. How can I describe it? The terrible, infinite agony on his face. The hideous, horrible, gasping of his lungs. God!

He stumbled toward me. Tears of pain rolling down his cheeks. His legs sagging beneath the exacting gravity of enormous Saturn.*

*Saturn, despite its many times greater surface area, exerts a gravitational pull roughly a little less than one and one-half times that of earth. This because the greater part of its bulk is made up of gases and liquids of comparatively low density. A two-hundred pound man would have to carry anywhere from seventy to ninety extra pounds.

I couldn't look at him. His face was a cooked red color from the heat of the air. His eyes were pools of water. His hair steamed on his head.

Then he tripped across me! He looked, and his hands reached down.

"Leave me!" I cried. "Save yourself. My legs are broken."

Have you ever seen pity cross the eyes of a cripple for a man who has sprained his ankle? Would you know what it meant to give your last drop of water to a dying man on the desert, when it might save your own life? Could you understand how a man seated in the electric chair could feel sorry for the executioner who had burnt his fingers?

Then you can imagine how I felt when I saw concern cross that tortured, steaming face. Concern for me!

There was a kindness behind that pain. The kindness that I had seen behind his wistfulness before. A great heart that could not hold a grudge.

He grasped me about the waist. Heaved! The muscles of his arms split his sleeves at the strain of lifting a weight under the crushing gravitational pull of Saturn, half again that of earth.

"Get a helmet!" I begged him. "God! Get a helmet!" He didn't hear me. Or if he did, thought it was but delirious ravings.

Telescopes show there is much shifting of the surface and an atmosphere in constant motion on Saturn. This would indicate powerful storms.

In a world of such enormous gas volume, it is conceivable that there would be enough of the essential oxygen to support life for a short while in an emergency.

The very quantities of gas, the shifting surface, would lend credence to the theory that Saturn is still in semimolten state.

He hoisted me to his shoulder, his entire body sagging six inches. Then he took a step. And at each step the joints of his knees gave and dropped within inches of the ground. Somehow he staggered on.

Some day in hell a man will duplicate that nightmarish trip.

A gasp rent from his lungs at every step. His mouth opened and closed like a grief-stricken man. And liquid hell burnt about him. Swirled and eddied in tormenting, steaming heat. Burnt into his skin, into his mouth, into his eyes. How could a man walk and breathe and live in air like that?

Then I saw the ground! Live, turgid lava! I saw the soles of his shoes flame at every step, watched his uniform burn methodically from him.

And his eyes wept pools of water. But this time I knew they were tears. The man didn't know where he was going; he simply moved on, on and on into a trackless desert of live, shivering heat.

Now he was climbing. Climbing! How did he walk, let alone climb! Up and up, around and around. Across stretches of ground that burnt in open flame.

Once he fell to his hands and knees, and I was glad! Glad, I tell you. For I thought we would die there, and I wouldn't have to live and watch an unquenchable spirit push a body on that should have died long ago.

Then he got up! I cursed him. Cursed him like I have never cursed a man before. Cursed him because he would not lie down and die. Because he walked on. Walked? How did those legs keep moving? What kept him erect?

And then he teetered a moment on the brink of a cliff, and I screamed. He slipped and we dove off a precipice—a precipice of five hundred feet. Then the miracle happened.

His arm flashed up and caught the rim of the pass. A lurch that started at his fingertips and exploded through his body stopped us. That hand should have been torn from its socket!

We swung there a moment and then he started to pull. I laughed insanely. That arm would never move again.

But I was wrong. Somehow he inched us up. Torturously, inch by inch, painstakingly, maddeningly, he pulled us up with an arm that should have been incapable of pulling himself up at his normal weight, let alone both of us.

Now he was on his hands and knees, crawling forward.

He crept to the side of the pass, and grabbing a rock pulled himself to his feet and tottered on.

We were descending. Descending into nothingness. It was impossible to see more than ten feet in front of us. Down into a lake of living flame—and he was breathing it! I stared at him. He was mad! Must be mad—or inhuman!

A broad river flowed beneath us. A river throwing off such intense heat that I almost fainted from it—and I was wearing the helmet!

He waded into that river of flame. Waded into it and through it! The current drove at his legs. Threatened to throw him off balance. Perhaps it was our unguessable weight that saved us. Perhaps it was something else. But he was on the other side.

And his legs were black almost to the hip! Crusted with burnt skin!

The rest I don't know. Excepting that the crew said they heard a thumping on the outside of the ship and sent one of the men in an extra-thick asbestos space suit to investigate. He drew both of us into the ship, then collapsed from the heat and the strain!

And they say more. They say the Captain wasn't unconscious when he entered the ship! They say he wasn't even insane! They say he kept repeating over and over again:

"Soon, Mary. Soon."

They patched him up as best they could. Swathed his burnt legs in rags soaking with oil. Constructed a pair of steel arches for his broken ones. Ground eye glasses for his dimmed eyes. And grafted new skin onto his head, where once hair had grown.

His lungs were unharmed! His legs, arms, and trunk, were strained muscularly, but otherwise all right! The ship's doctor gasped when he examined the Captain's lungs. They were in perfect working order, not even burnt from the noxious, flaming vapors which had contained scarcely enough oxygen to keep him alive.

The doctor said those lungs were a miracle of nature. Said that his whole trunk was a miracle of natural inborn strength. And one hardened space rat even murmured something of courage—in an awed, subdued tone.

Courage? I say no! I saw that man's face. I saw those tears streaming from his eyes, tears that were not of heat alone. I saw the fear, the godliness in

his face. I saw the despair in every line of him as he took step after step. And I know the meaning of those three words:

"Soon, Mary. Soon!"

Super strength? I know men and I know builds. Any man on the ship should have been able to beat him to helpless pulp—none of them could.

Then how did he ever win through that flaming? How did he defeat Murphy? The answer is *he* didn't. His dream did! Perhaps some day you will understand.

Well, we charted Saturn. Charted it from the big ship itself, and sailed back up through the pounding of those deadly rings, whose substance wanders vaguely and treacherously thousands of miles in every direction, out into space again.

The Captain was at his post. And all the men were *kind* to him. They knew what to do—he didn't. Still they didn't respect him! But they came as close to loving him as the hardened soul of a space man is capable of loving anyone. They went out of their way to make him think it was his ability, and his ability alone, that kept the ship so carefully on the trajectory. That maintained the engines in perfect working order. That executed every phase of the journey in such smooth style.

I watched him at the ports of the ship. He wore thick glasses, and there were only a few strands of hair left to comb back on his head. Yet he was handsome. Magnificently so.

Glasses, bald head and all, the straight nose, the perfectly shaped mouth and chin, those black, deep, moody eyes, added up to masculine beauty.

He spoke to the others only occasionally now—but he often talked to me while I lay in my bunk, my legs swathed in plaster casts.

"Sure, this space job's tough," he said. "But it's worth it. A few years out here and they pay you enough to live comfortably the rest of your life. When I get back to earth, after our work's done, I'm quitting this job, and I'm going to get married, settle down."

"This life's all right for men like you, Shorty," he kept telling me. "You don't appreciate what it means to have someone at your side to share your sorrows and triumphs; to come home after a hard day's work and find someone you love waiting for you; to have children and live a new life again through them." Then he would sigh and grow silent.

Three months out of Saturn we ran into one of those things that space-liner companies don't advertise—an ether storm! A storm of pure, incredible force.

We were in the center of it before we could fully realize what was happening. Something seized our ship and whirled it around and around so fast that we could simply hold on and pray.

The storm picked us up and whisked us away. At various times the universe would blink as though light couldn't keep up with us.

We seemed to be hurled across the cosmos, sent spinning on a mad journey of tremendous distances and incalculable speeds.

And just as suddenly as the storm hit us it quit. Left us stranded alone, in the midst of a strange universe!

Today people call the members of the Alpha Centauri expedition speed demons. They traversed the distance of four light years in something less than six years. Our ship covered the same distance at the core of an etheric storm in *hours!*

We were a confused bunch when we finally had patched up all the broken bones and bruises among us. All previous space travel had been reckoned in millions of miles, not trillions!

Like a duck heads for water the Captain headed our ship for the nearest planet. It was a prosaic-appearing world, perhaps the size of Mars, perhaps smaller. Occasionally over its surface we could make out patches of what we believed was vegetation.

But needing orientation, something solid to begin our computations from, we landed.

You've doubtlessly read of the experiences space explorers have had with the inhabitants of other worlds. Perhaps fiction stories based upon such encounters have thrilled you.

Well, then, here is one to clip and put in your notebook. Our ship had hardly bounced from the horny soil of the planet when every man aboard was as stiff and paralyzed as if he had been placed in a vise.

No one could wiggle as much as a finger.

And then the locks opened—*opened from the outside!*

And the most unbelievable sort of man I have ever seen entered.

He was undeniably shaped in the form of a human. His features were as finely, as beautifully molded as a man can conceive. And his skin was

brown! But *such* a brown. It glittered. Light played over it in rippling waves of radiant color, accentuating in beautiful bas-relief every line of his superb body.

The thing's eyes were as deep and limitless as the depths of a ruby.

Then we heard him!

"Strangers from space. We sighted you from afar. We have read your distant thoughts. You are primitive, evil, unspeakably evil things that we do not care to have contaminate our world. We order you to leave and never return. If you do not do so immediately we shall destroy you and your ship!"

And somehow you knew, darn well, he could do it. Do it as easily as he could snap a finger.

Then, suddenly the alien was only secondary and the Captain had taken the center of attention.

Every one of us was utterly paralyzed by a mental force that we could no more hope to fight than one can hope to blow back an avalanche, *but the Captain moved!* Moved a little finger!

Sweat poured off him as, with maddening slowness, he pushed one foot forward.

The brown creature stared at him as if he could not believe the testimony of his own eyes.

And then the Captain spoke! Spoke in a low, calm, deliberate, reproachful tone. Have you ever heard a man reprimand a saint? We did then!

There was contempt in the Captain's voice. "You ought to feel ashamed," he began. "You ought to drop to your knees and beg these men's forgiveness. They're cruel, yes, they have never denied it. They are ruthless, certainly. Have they ever pretended to

be lambs? They may be the scum of the universe, quite possibly, but when have they posed otherwise?

"They were thrown into this universe by a force of nature stronger, greater than you or I can ever hope to be. They landed here in total ignorance of your existence. Only desiring to estimate their position with the poor wits at their disposal, so they might, some day, perhaps in decades, return to the planet that spawned them.

"They are more desirable, more courageous than you. They weren't afraid to embark in their chip of metal; to battle the immense forces of nature. You, in all your superiority, are too cowardly to risk helping them out of their dilemma."

The brown creature stood motionless. A chastened expression upon his face.

Then we all heard, or thought we heard, "You are right, O strange one. We have acted shamefully. You have shown us that we are not omnipotent."

He dropped to his knees. "Will you please accept my apologies and the apologies of my people, and allow us to help you?"

The vise of paralysis dropped from every man. Stiff limbs cracked their protest at renewed motion. Glaring eyes stared from angry minds, wavering between revenge and fear. Fear of the great powers this alien commanded.

Instantly, with supreme understanding, he dispelled their doubts. A wave of his hand and three more of his race entered the ship.

"These men can help you solve your problems," he stated simply.

Uneasily at first, and then with the smoothness of

men spurred on to common purpose, they began work with our pilots, attempting to divine the ship's position and place in the stars.

The leader of the men approached the Captain. "You have a mind as great, as understanding, as kind as any I have ever probed," he complimented. "Could I have the honor of showing you our city?"

The Captain accepted and I accompanied him. We emerged from the ship, and where we had landed there was no longer a wide, rocky waste, but a beautiful garden of plants and statues of exquisite construction. It was startling what the power of their minds had done to us. A little beyond there was a city. A city that reminded us somehow of the Orient, or how the Orient might have been if it had progressed forward, virile, instead of lapsing into premature decadence.

There were gigantic pagoda-like buildings. There were doorways with beautiful, grape-color drapes. There were plants that twined their way in harmonious taste up the sides of the buildings. And everywhere there were these graceful people.

But that was in general. There was one in particular. Llola!

Llola was a woman, a beautiful, brown woman. With eyes of golden glow, and a radiant, pulsant skin that lent irresistible charm to the shapely contours of her body. She was so desirable she took my breath away.

And she was introduced to the Captain.

Suddenly my mind discarded the thought of her physical charm for me. There was something else. There was the Captain's dream!

How would, how *could*, his dream compete with *her!*

Nature had gifted her with every device of beauty ever bestowed upon a woman, and the wonderful brain that all her people were endowed with.

Now I have seen women, breathtaking women, but I tell you, and I speak as a man who has been around, there was no woman, in all the nine worlds of Sol's brood, that could hope to compare with her!

So when they stood on a balcony beneath the seven moons of this world, with an atmosphere of inspired romance permeating the air, I clung to the shadows and listened, listened.

"Your ship will be ready to leave tomorrow," she began.

"That's fine," the Captain replied.

"But you do not need to go with them," she said.

I thought sure the pounding of my heart would give me away.

"You are different from them. You are a single gem among billions. You do not belong out there, out there in the void. You are a man who lives for love and loyalty alone. You would be happy here. Here where there are others who think like you. Who would understand and respect you."

"It is very sweet of you to ask me to stay, Llola," he replied. "You and all your people are wonderful. I could never hope to realize one iota of their greatness. But I cannot stay here. I can't tell you why. It's just that I can't."

I wanted to scream out. "Captain! Captain! Don't be a fool. She's right, you would be happy here. She loves you! She's done everything but throw herself

at your feet. She's offering you a chance at a life greater than any you could ever hope to know. Say yes! Stay here, with her, and let us space rats return where we belong."

But I couldn't! Something stilled my tongue. Ice chilled my brain into inactivity. I could only pray, pray for him.

"Captain," she said. "I know. I understand. But I understand too that you will only meet tragedy back there. Your mind is too sensitive to last long beneath the bludgeonings of a young, calloused civilization that is still fighting its way toward its distant dream of tomorrow. Always there will be things beyond your grasp. Always you will wish and wish and yearn. Always you shall say: 'When I have that, then I shall be happy.' But when you have the desired object in your hand, you shall find the world has exacted so terrible a price for it that it crumbles to ashes in your hands."

"And if I stay here," the Captain answered. "I shall always wonder. Wonder if I killed a soul back there. A soul that possibly loves me, and I should be unhappy here too, eternally unhappy."

And when she turned away I knew his dream had won. His dream had beaten her as it had beaten every other thing it encountered. A dream that could not lose, even when it was the right thing to do!

I grabbed her hand as she emerged from the building.

"Llola," I said. "That poor sap doesn't know what's good for him. Save him, save him from himself."

And she looked at me, with wise, young, beautiful eyes that were brimming with tears and said: "I am steeped in the lore of the ages, crude one, and even *I* am helpless to stop him!"

Then I wondered. Wondered at this dream—this Mary. What was she, that this godly thing should meet defeat at the distant vision of her? How *could* a man love so true, so stubbornly, over a gap of light years? And I turned away in frustration, my poor mind incapable of a solution.

Well, it didn't take us years to get back to civilization. No, it took us days! The brown men handed the Captain one tiny pill and said: "Drop this in your fuel chambers and steer the course we have mapped for you."

When we opened the fuel chambers four light years from Alpha Centauri nothing of the amazing pill remained. Wisdom beyond our understanding had kept them from giving the secret of it to us permanently.

It took us days to travel four light years, it took us months more to traverse the distance from Pluto to Venus which was in closer conjunction to our direction of approach at the time than Earth.

We landed at the primitive refueling station in the heart of the jungle to take on supplies.

The entire crew emerged from their cramped quarters to stretch their legs in the steaming jungles of Venus.

The Captain strode off into the fantastic flora alone. I knew he was thinking. Thinking long, deep thoughts, so I did not disturb him.

Then we heard a shout—and a scream—not a

human scream—but the scream of the most dreaded of Venusian beasts—a Heleguite! Only one man had ever defeated a Venusian Heleguite in pitched battle—Big Murphy. And the Captain was out there alone.

Twenty of us leaped forward as one, armed with ray guns. We splashed through the boggy swamps and then drew up before a clearing. There stood the Captain, and advancing, scarcely ten feet away, was a Venusian Heleguite. Its six powerful limbs groping hungrily for him. Its cavernous, reptilian mouth drooling saliva over its enormous teeth.

Before we could fire, the monster had leaped at the Captain and buried him beneath its bulk! We closed our eyes to shut out the sight of the slaughter, and then almost fell to our knees in stunned surprise.

The Captain had squirmed out from beneath the creature and set it back on its haunches with a terrific blow of a large, heavy branch he had picked up from the soggy ground!

It was as effective as holding off a wild dog with a stinging twig. The Heleguite came on, its six arms trying to grab the Captain, to draw him into its deadly embrace.

Two of them encircled his body. And he fought back. Fought with the desperate incredible strength of a man who has everything to live for and doesn't want to die.

The glasses were knocked from his eyes and he stopped dead. Despair on his face. Those eyes of his, dimmed during the Saturn adventure, could scarcely see more than shadows without them.

The Heleguite tore away at him. One huge talon ripped down the Captain's cheek and blood gushed forth.

The Captain screamed out one word.

"Mary!"

Then tooth and nail he tore into the animal. Over and over he whirled, the smaller trees snapping at the fury of the battle. Twice the Captain was whacked to the ground so hard that it scarcely seemed he could rise again, but always he strained upward, fighting back.

Have you ever seen a civilized, gentle, sensitive man tear a wild beast's throat with his teeth? We saw it then!

With his teeth, his poor blunt teeth, he bit into the Heleguite's throat with fanatical strength. And tore away like a wolf! And he must have snapped a vital artery for the green, foul blood that issued forth bathed him from head to foot, and he staggered off.

We rayed the dying Heleguite into a roasted mass of stinking flesh. Then carried the Captain back to the ship.

He was all right, but there was a jagged scar extending down the entire right side of his face that would be with him as long as he lived!

We docked at Earth two weeks later. There were wild, cheering crowds in the streets. Two bands played raucously, but could scarcely be heard above the shouting of the multitude. Radio and television casters hemmed us in on every side, ready to hear

from our own lips the unbelievable tale we had radioed to them from space.

The entire planet lay at our feet. We were the men of the hour. To be feted and dined and forgotten! Forgotten as soon as the next batch of heroes came to port.

This was their hour of glory so the men drank it in to the utmost. All but the Captain—the Captain and I.

He didn't know I was behind him. Those gleaming eyes of his took cognizance of no one. He elbowed through the crowd, staring blankly ahead.

A vacuum car shot us with the speed of a bullet through the greatest metropolis of Earth.

We emerged from the tear-shaped car, and raced up the stairway to the street, three steps at a hop.

Then I followed him—it was impossible to keep pace—through a maze of sideways, passages, and short-cuts—and stopped before a door—a very ordinary door, to me!

He opened the door without knocking. The door closed behind him and I waited.

I've always laughed at those jokes about "We've never lost a father yet" that are cracked pretty regularly around maternity wards. I'll never laugh at them again. I can understand just how the poor guys feel.

Twenty minutes passed, and I heard the door swing open. I turned, my face wreathed in smiles, my hand ready for congratulations—and froze still!

His face, burned by the cosmic rays, was ashen white! He staggered off the doorway and I caught him before he fell.

"I should have known," he wept. "Those poor eyes of mine. My hairless head, that awful scar—how *could* she still love me!"

My own heart was bursting in two. A great sob welled in my throat and stayed there.

Gently as a mother, I guided him along the street, wishing the ground might open then and there and swallow us both.

Then a cripple from a doorway cackled.

"So you're the great explorer, eh? What do you know about *real* suffering? You've got it soft—a few months out in space—and you're set for life. You wouldn't know what it really meant to be hurt."

A red haze obscured vision. I stepped forward, ray gun in hand, to *kill* that cripple.

The Captain's voice stayed me.

"No! Shorty," he cried, "no!"

He turned to the fear-stricken cripple. "You're right," he told him. *"I wouldn't know what it really meant to be hurt!"* And he tossed the miserable man a roll of bills big enough to choke a horse!

He returned to the dock and begged for an assignment to work on a ship leaving the very next day. They gave him the job, as Captain, and everyone of the rest of us enrolled with him!

"Shorty," he said, shortly after the take-off, his eyes still burning with terrible hurt. "My dream isn't all gone. Not all. Half of it remains. I can still marry another girl, have children, forget myself and live their lives."

But he never returned to Earth.

The crew cursed her. They cursed her in a tongue

that I heard them use on a man once, who had deliberately sent ten thousand of his followers to their deaths. They cursed her with words that would remain, indelibly engraved on their minds.

They say the Captain died trying to mend a breach in the hull.

You will excuse me if I smile. Assuredly any other man would have died under similar circumstances, but not the Captain—not while he had his dream!

With his dream he was a superman, urged on to superheroic deeds of strength and daring which his body and mind were incapable of under ordinary circumstances.

No, the Captain didn't die trying to repair a breach in the hull. He couldn't have, because there had never been a hole in the side of that ship!

It was simply that we could not go on any longer watching him fight back the pain as the blood choked over the fragments of his broken heart.

So one sleeping period I turned on the emergency alarm, sent out a fake S.O.S., and as the crew blasted away in their safety ships I had the medico inject the sleeping Captain with a solution calculated to hold him in suspended animation for six years.

We left him there, on the couch, after setting the automatic controls for Alpha Centauri, four light years away.

And as I watched the red flare of the ship's rockets wink out in that infinity of darkness, I whispered softly, under my breath, so others of the crew might not hear:

"He's all yours now, Llola."

Your Ticket to Interplanetary Adventure

The worlds that whirl in outer space may still be out of reach, but they are neither out of sight nor out of mind.

As you travel with the authors of the eight exciting short stories in this anthology, you'll see how those worlds have been explored and charted—in the imagination!

Here, journeying in the gleaming spaceships of the future, you visit weird moons, asteroids, and planets, and meet their even stranger citizens. You roam in the red jungles of Kruger III, map the forbidding terrain of Saturn, and match wits with the horrifying creatures on a dead planet. You track down and land on a comet, and dine on exotic plants in an uncanny cosmic garden.

These tales have been chosen by the editor because they also meet the test of good fiction. They entertain, they arouse and satisfy curiosity about conditions and life on other worlds, and they do so within the classic framework of short story writing. And perhaps—in five years or in fifty years—some of their fascinating "other worlds" will not be imaginary.

Sam Moskowitz has been reading, collecting, and studying science fiction since he was thirteen. He has been writing short stories and factual articles for nearly as many years. His work has been published in every leading magazine in the field, as well as in many anthologies. Mr. Moskowitz' other anthologies include *The Coming of the Robots*, a Collier Books original.

ORIGINAL

COLLIER BOOKS

PRINTED IN U.S.A.