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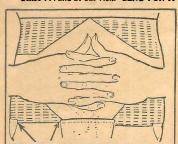
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VOL. 4

OCTOBER, 1942

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ager. S. W. N. knew nothing about bookkeeping. With ager. S. W. N. knew nothing about bookkeeping. With 19 months of training he passed the C. P. A. examination on first attempt and opened his own public accounting office. Although a university graduate, P. M. was a grocery clerk at small wages. Today he is Secretary and Credit Manager with an income 300 per cent higher. Already in cost work, G. N. P. within nine months was earning 40% more; within two years, 100% more. The third year his income went up still more Now he is manager.

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Editor's Note: It is the intention of this department to publish news and information about fans and their activities, plus interesting sidelighs about the professionals who write, edit or draw for the science fiction magazines. Viewpoints will be open to, and serve as the voice of, all readers and fans who care to make use of it. All items should be addressed to ASTONISH-ING STORIES, Fictioneers, Inc., 210 East 43 Street, New York City.

### Science Fiction and the War

IKE every kind of pursuit the world over, the future course of science fiction is going to show a marked change because of the war. Already differences can be seen clearly—a familiar name is missing from the contents page of the magazine you read; an artist stops drawing and learns how to shoulder a gun; a fan magazine suspends publication because its editor has a full-time job in a vital war industry.

L. Sprague de Camp, to name one prominent author, is now Lieut. de Camp. L. Ron Hubbard, with whom he collaborated on "The Last Drop" a few issues back, has a commission in the Navy, as has Lyle Monroe. Hubbard was wounded early in the war, and recovered quickly enough to be back in the thick of it by May. Henry Kuttner has been ordered to report for induction and may be in uniform by the time you read this. There will be no more "Professor Jameson" stories for the duration, for Neil R. Jones, their creator, is a trainee at a Southwest Army base.

Isaac Asimov is using his Master's degree in chemistry in vital war research. S. D. Gottesman and Dirk Wylie are

among "the men behind the men behind the guns", producing the tanks, planes and guns we fight with. Ray Cummings has taken on a civilian defense job, editing a newspaper for air raid wardens. E. E. Smith, Ph.D., is in charge of chemical research at a large war plant.

Astonishing's art staff has not yet been greatly affected, though John R. Forte, who drew the illustration for this column, is now in the Army. David A. Kyle volunteered almost a year ago, and cover artist Hubert Rogers, a Canadian, now has a commission with the Canadian Army.

The list could be expanded almost indefinitely. The war has taken some of these men out of science fiction entirely. All of them have been forced at least to curtail their activities. Science fiction will be hurt by their absence. The cure? It's simple—win the war quickly, by doing more than your part!

### **Personals**

R AY CUMMINGS was once surprised to receive an urgent command to visit the editor of a magazine in which his stories were ap-

(Continued on page 8)

The 97 Pound Weakling

-Who became "The World's Most Perfectly Developed Man"

"I'll prove that YOU, too, can be a NEW MAN!"

Charles atlas

KNOW, myself, what it means to have the kind of body that people pity! Of course, you wouldn't know it to look at me now, but I was once a skinny weakling who weighed only 97 lbs.! I was ashamed to strip for sports or undress for a swim. I was such a poor specimen of physical development that I was constantly self-conscious and embarrassed. And I felt only HALF-ALIVE.

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Name.... (Please print or write plainly)

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(Continued from page 6)

pearing. When he got there the editor spread a sheaf of letters on the desk and showed them to him. They were from a woman who said she had known Cummings very well and referred to him in endearing terms-while threatening to sue him for breach of promise! The redfaced Cummings immediately swore to his innocence of ever having known the woman, and demanded investigation. A thorough check showed that a man calling himself Ray Cummings had appeared in several places in that area. Trading on Cummings' reputation, he had spoken casually of his great success as a writer, and had used Cummings' name to make friends, to establish credit—and even to propose marriage! . . . "Doomsday on Ajiat", in this issue, is the sixteenth Professor Jameson story to appear, since "The Jameson Satellite", the first of the series, came out almost eleven years ago. The immortal Professor and his metalclad Zoromes have covered uncounted light-years and visited hundreds of strange solar systems in those sixteen stories, besides a trip into the fourth dimension and one that extended through forty million years in a time machine! . . . Artist Lawrence, who illustrated "The Vortex Blaster Makes War", was condemned to be shot as an Allied spy in occupied Belgium during the first World War! An eleventh hour escape and flight over the border in the best adventure-fiction style was all that saved him. . . . Mention "Mrs. Henry Kuttner" to most science fiction readers and the only reaction will be to say: "Oh -Henry Kuttner's wife." But The Little Woman is a top-notch fantasy writer in her own right. She created two famous characters, "Northwest Smith" and "Jirel of Joiry", writing under her maiden name, C. L. Moore. . . . Three of the authors in this issue of Astonishing have come up from the ranks of the fan magazine writers. Walter Kubilius has been reading science fiction since its infancy, and has belonged to numerous fan organizations, starting with the old and long extinct International Cosmos Science Club. His writing is not confined to science fiction, though—he is an editor of a daily newspaper published in the Lithuanian language! Joseph Gilbert is one of the nation's top fans today. An officer of such ranking fan organizations as The National Fantasy Fan Federation, he edits The Southern Star and other fan magazines, and was until recently a highly vocal letter-writer-to-the-editor. Martin Pearson is a recognized expert on science fiction and a member of The Futurians.

### Science Fiction Conventions

NE of the features of fan activity in recent years has been the regular and frequent pilgrimages between cities, terminating in what might be called anything from a special meeting to a full-fledged convention, depending on the size of the gathering. Besides the World Conventions, held once each year and in a different city each time, certain cities have had regular conferences annually, always at about the same time. Philadelphia has been the host to a conference every October since 1937, under the auspices of The Philadelphia Science Fiction Society.

More recently, the February "Boskone"—less familiarly called the "Boston Conference" came into prominence. The 1942 "Boskone" has already been held, of course, and the indications are that it will be the only conference, convention or what-have-you of this year. For the O.C.D.'s recent request that all inter-city meetings which do not directly aid the war effort be suspended to save transportation will undoubtedly halt any plans for future conventions.

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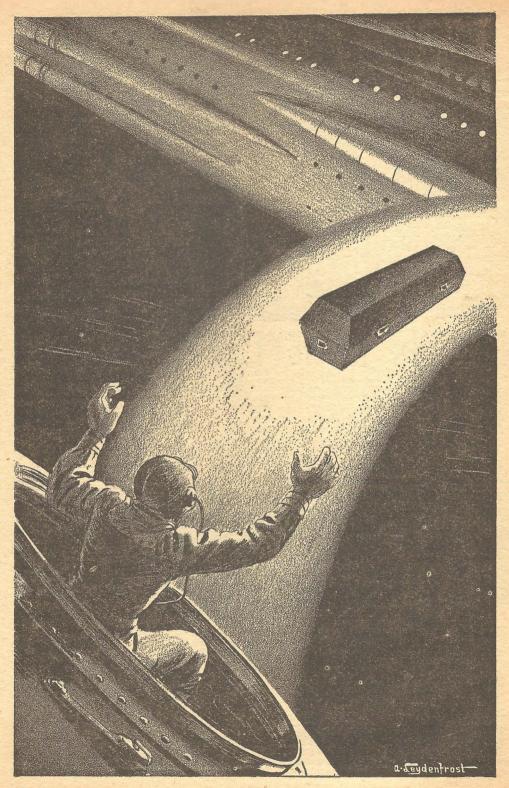
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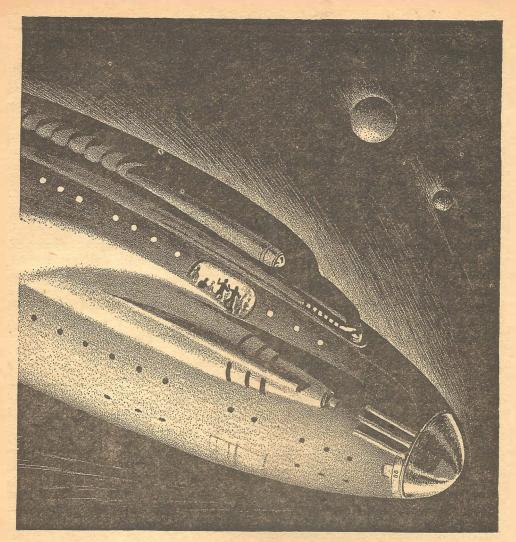
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by Henry Kuttner

# THUNDER IN THE YOLD

**FOREWORD** 

ATE in the Twentieth Century
Man, for the first time, burst
through the invisible barrier that
had always kept him chained to his planet.
A new and almost uncharted ocean lay

before him, its vastness illimitable, its mysteries as yet unexplored. Magellan, Columbus, Leif Ericsson—these primitives expected great wonders as the searoads opened before the prows of their ships. But the first spacemen thought—mistakenly, as it proved—that the airless

void between the worlds could hold little unknown to them.

They did not foresee that actual experience of a thing is far different from abstract knowledge of it. They did not foresee the death that leaped upon them from the outer dark, the strange, enigmatic horror that killed men without leaving trace or clue. The ships came back, crews decimated. Out there lay a menace that slew with blind, ravening fury.

For a time space held its secret. And then the Varra spoke to us, warned us, told us why space was forbidden.

The Varra—glowing balls of light that hung in the void, vortices of electro-magnetic energy, alive and intelligent. For generations, they said, they had tried to Vampires of life.

But the Varra they could not touch or harm. The peculiar physical structure of the Varra rendered them safe from the Plutonian creatures.

A World Fleet was sent out to subdue Pluto, against the advice of the Varra. It did not return.

In the end we made a pact with the Varra. They conveyed us through space, protecting us, as far as they were able, from the Plutonian vampires, though they did not always succeed. Each man who ventured into the void was guarded and guided by a Varra, and therefore many lived who would otherwise have died. No ship went beyond the orbit of Neptune; even that was dangerous. No ship ever landed on Pluto.



"I keep my promises, my friend. I'm taking this boat to Pluto, and I'll kill a lot of them before they finally get me. But—even though you have won, you have lost as well. Because you're going with me too!"

# \*\*\*\*\*

communicate with us. But they could not exist except in airless space, or under specialized conditions. They were not protoplasmic in nature; they were beings of pure energy. But they were intelligent and friendly.

From them we learned the nature of the menace. A race of beings dwelt on Pluto, so different from both humanity and the Varra that they were almost inconceivable. This race had never mastered space travel; it had no need to leave its dark world. Only the immense power of the Plutonians' minds reached out through the void, vampiric, draining the life-energy from living organisms over incredible distances. Like medieval robber-barons they laired on their planet, and the tentacles of their minds reached impalpably out for prey. Vampires of energy.

Only those guarded by the Varra were permitted to leave Earth. For the rest—space was forbidden.

### CHAPTER ONE

### Hijacker from Hell

HE Arctic blizzard swept needles of stinging ice against Saul Duncan's face. Doggedly he plowed on, head lowered, heavy shoulders hunched against the fury of the winds. Once he heard the drone of a heliplane overhead, and flung himself flat till the sound had been swallowed by the gale. Then for a few moments his body refused to obey the grim demands of his mind. Deceptive warmth was stealing over him, inviting him to rest. But that,

he knew, meant death then and there.

If he kept going, there was a chance of safety and freedom—not much of a chance, though, for few men ever escaped alive from the Transpolar Penitentiary. Situated within the Arctic Circle, the grim, guarded fortress of stone and metal and tough plastics was safer than Alcatraz had been a century and a half ago. Yet Duncan had escaped. . . .

His bitter lips twisted in a harsh smile. Escape! Into a polar blizzard—but that was the only possible time when a prisoner could evade the guard planes that patrolled the frigid waste. And Duncan could not have made his escape without aid from outside.

With stiff fingers he fumbled out a compass-like instrument that had been smuggled to him in the penitentiary. The needle held motionless, pointing directly into the teeth of the gale. If he kept on in that direction, sooner or later he would reach Olcott's plane. But how long it would take he did not know.

Still, even dying in the blizzard was better than another five years in Transpolar—five years that had ravaged and embittered Saul Duncan, hardening his no-longer-youthful face, putting ice into his glance and hatred in his heart. But physically he had thrived. If a prisoner survived the first year at Transpolar, he grew tougher, harder—and more dangerous.

Duncan trudged on, shaking with cold. Ten years for murder—second degree murder. Well, he hadn't been framed. He'd wanted to kill Moriarty. And he had succeeded, in a moment of blind, crimson rage that had flooded his brain and sent his fist smashing into Moriarty's face with the impact of a pile-driver. The man had put his filthy hands on Andrea. . . .

Damn him! Even now Duncan's muscles grew tight at the memory. He recalled how he and Andrea had fought

their way up, slum-bred, facing a future of poverty and crime, and how they had seized a chance of escaping from that dark future. It meant arduous work, years of training, for learning to pilot a spaceship is no easy task. But he had done it, and Andrea had been willing to wait, scraping along on just a little more than nothing, in preparation for the day when Duncan could draw the pay of a first-rate pilot.

But Moriarty had been Duncan's superior officer. And there had been no witnesses except Andrea and Duncan. The verdict was murder, with extenuating circumstances. A recommendation for mercy.

Mercy—ten years in Transpolar, of which Duncan had already served five! Five years of knowing that Andrea, ticketed as a jailbird's wife, could scarcely earn enough to keep alive. Five years, and there were patches of iron gray along Saul Duncan's temples.

He had grown bitter. He hated the society that had sent him to a living hell, and when Olcott offered escape. . . . .

At a price, of course. But Duncan was ready to pay that price. His gray eyes were savage as he marched on, staggering sometimes, snow crusting on his lashes so that he could scarcely see.

O WELL was the plane camouflaged that he almost lurched into the white hull before he realized that he had reached the end of the march. Sudden weakness overtook Duncan, and he found it difficult to move the few steps to the cabin's door. He pounded on the alloy with fists that had no feeling.

There was a click, and the panel slid open. letting a gust of warm air play about Duncan's cheeks.

Brent Olcott stood there, tall, darkhaired and arrogantly handsome. He was a big man, like Duncan, but so well proportioned that his movements were tigerishly graceful. His teeth flashed under a well-kept mustache as he extended a hand.

It was impossible to speak above the gale's shriek. Not till the panel had been shut, cutting off the uproar, did Olcott say tersely, "Glad you made it, Duncan. I didn't count on a storm like this."

"I made it. That's the important part." It was difficult to articulate with almost frozen lips. Olcott looked at him sharply.

"Frost-bite? Can't have that. Strip down and rub yourself with that." He nodded toward an auto-refrigerated bucket of chopped ice on a shelf. "If we're ordered down, I've a secret compartment you can slide into. Crowded quarters, but you won't be found there. Now—" He turned to the controls as Duncan, shivering, peeled off his wet garments.

It was a difficult take-off, despite the triple-powered motor. Only a gyro-equipped plane could have made it. The ship lurched and rocked dangerously in the blast.

Duncan fought his way beside Olcott. "Got rockets?"

"Auxiliaries, yes. But-"

"They won't be seen in this storm." Olcott spread his hands in a meaning gesture. Few atmosphere pilots could handle the tricky manipulations of rocket-tubes. They were for emergency only, but this, Duncan thought, was an emergency. He thrust Olcott away and slid into the cushioned cradle-chair. His fingers, still stiff, poised over the keys.

Then his old-time skill came back, the intricate series of what were really conditioned reflexes that made a pilot capable of handling a bank of tube keys. Split-second thinking wasn't quite enough. Reactions had to be almost without thought. The ship spun down, and Duncan's hands flashed into swift movement on the studs.

The sudden acceleration hit him in the pit of the stomach. Olcott had braced

himself, but was almost torn loose from his grip. For a moment the plane bucked and jolted madly, rocket fighting rocket, both fighting the gale. Then, without warning, they were above the storm, in air almost too thin for the prop, leveling off at an easy keel.

UNCAN set the course due south and turned to Olcott for instructions. The latter was at another keyboard, carefully studying a visiplate before him. It showed the sky, dark blue and empty. After a moment Olcott made a few adjustments and came back to take over the controls.

"Nice work. You're a better pilot than I'd hoped. But you'll need to be—" Olcott didn't finish.

Duncan was rubbing his skin with ice. "I know rockets. Say, isn't this dangerous? We may be spotted from below."

"We won't. This plane's a chameleon. The man we're going to see invented the trick for me. We've a double hull, and the outer skin's transparent plastic. The space between the skins can be filled with certain colored gases—I've a wide range of colors. On the snowfield I used white, to blend with surroundings. Here it's a blue gas. From below we're invisible against the sky." Olcott rose to make an adjustment. "I'd better lighten the color a bit. We're going south fast, and the sky's not so dark now."

Duncan nodded appreciatively. He had heard stories about Brent Olcott, few of them savory, but all hinting at the man's intelligence and power. He was one of those who, in the Twenty-first Century, made money without being too scrupulous about his methods. Technically Olcott owned a firm named "Enterprises, Ltd." Unlimited would have been more suitable. His finger was in plenty of pies, but he had always managed to pull out plums without getting his hands soiled. Legally his record was clean.

But he was dangerous. When Duncan had accepted Olcott's offer of help, he had known what that meant—a job, and a dirty one. Nevertheless, it would pay plenty—and it would mean freedom from Transpolar, and being with Andrea again.

Duncan dressed in the clothes Olcott had provided, an unobtrusive dark fabricoid blouse and trousers, gathered at the ankles in the conventional fashion. In the heated cabin no more clothing was necessary.

"There's a bottle over there," Olcott suggested.

Duncan gulped whiskey, feeling the hot tingling of the liquid spread out from his stomach. He felt better, though there was a curious air of unreality about the whole thing. A port showed him the storm cloud, below and behind now. Somewhere in that troubled darkness lay the grim fortress of Transpolar Penitentiary, the hell that had swallowed five years of Duncan's life, and drained him of hope and ideals.

There was hope again. But ideals—He up-ended the bottle.

Olcott looked up from the controls. The air was clear, and the tremendous power of the engines hurled them southward at fantastic speed.

"Sit over here, Duncan," he invited. "I want to talk to you."

"Okay. Let's have it. You've got a job lined up for me, I know that. The question is—why me?"

Olcott picked his words carefully. "There aren't many qualified space pilots in the system. And those are well paid; I couldn't get at any of 'em. I tried, I'll admit—but not after I heard about you. Would you like to make half a million credits?"

"Keep talking."

"With that many credits, you'd never need to work again. I know a good surgeon who'd remold your face and graft new fingers on your hands, so you wouldn't have to worry about prints. You probably couldn't be convicted even if they arrested you—not without complete identification."

Duncan didn't answer, but his lips had gone pale and thin. One is seldom transported instantly from hell to heaven. Yet Olcott's offer was—well, it meant everything, including Andrea.

"Go on," Duncan said hoarsely. "What d'you want me to do?"

Olcott's cool, watchful eyes met his own.

"Go into space," he said, "without a Varra Helmet."

The plane thundered on, and miles had been left behind before Duncan spoke again.

"Suicide."

"No. There's a way."

"When I was piloting, no one was allowed to space-travel without a Helmet. Even with the Varra convoys, people were sometimes killed by the Plutonians. I remember a few screwballs tried to slip out without the Varra, but they didn't live."

LCOTT said, "I've found a way of leaving Earth without a Helmet, and without being detected by the Plutonians. It isn't sure-fire, but all the chances are in your favor. Shall I go on?"

"Yeah," Duncan said tonelessly.

"I need money. I need it bad, just now. And there's a ship heading for Earth now that's got a pound of Martian radium aboard."

"A pound!"

"A hell of a lot, even considering the big radium deposits on Mars. With my connections, I can sell the stuff. You're going to hijack the *Maid of Mercury*, Duncan, and get that radium."

"Hijacking a spaceship? It's crazy."

"It's never been done, sure. Nobody's dared go into space without a Helmet.

And the government issues the Helmets. But look at the other side of it. We've got a few patrol boats—the Interplanetary Police. Which is a loud, raucous laugh. Rickety tubs with no real armament. You won't have to worry about them."

Duncan took another drink. "It still sounds like suicide."

"Hartman will explain—the man we're going to see now. Take my word for it that you can go into space without a Helmet and be safe. Fairly safe."

"Half a million credits-"

"The only danger," Olcott said carefully, "is that the *Maid* might send out an S. O. S. The I. P. ships are rickety, but they're fast, and they might stay on your trail. We can't have that. So we've planted somebody on the *Maid* who'll smash the radio apparatus just before you make contact. You can pick her up with the radium and head back to Earth."

"Her?"

"You know her, I think," Olcott said quietly, his eyes impassive. "Andrea Duncan."

Duncan moved fast, but there was a gun in Olcott's hand covering him.

The latter said, "Take it easy. You killed one man with your fists. I'm taking no chances."

A tiny scar on Duncan's forehead flamed red. "You rotten—"

"Don't be a fool. She's wearing a Varra Helmet. Of course she'll take it off when she joins you, or she'd have a Varra *en rapport* with her, one who'd spill the beans completely."

"Andrea wouldn't-"

"She doesn't know all of my plans. And she was willing to help me—as the price of your freedom. Listen!" Olcott spoke persuasively. "The girl's already on the ship. She's got her instructions. Tomorrow, at three P. M., she'll smash the radio. If you're not on hand to pick her up—and the radium—she'll get into trouble. Destroying communications in

space is a penal offense. She might go to Transpolar."

Duncan snarled deep in his throat. His face was savage.

Olcott kept the gun steady. "Everything's planned. Be smart, and in a couple of days you'll be back on Earth, with Andrea and half a million credits. If you want to be a damned fool—" the pistol jutted—"it's a long drop. And it'll be tough on the girl."

"Yeah," Duncan whispered. "I get it." His big fists clenched. "I'll play it your way, Olcott. I have to. But if anything happens to Andrea, God help you!"

Olcott only smiled.

### **CHAPTER TWO**

#### Invisible Pirate

R UDY HARTMAN was drunk. An overtured bottle of *khlar*, the fiery Martian brew, lay beside his cot, and he stumbled over it and cursed thickly as he blinked at tropical sunlight. The gross, shapeless body, clad in filthy singlet and dungarees, lumbered over to a crude laboratory bench, and Hartman, blinking and grunting, fumbled for a syringe. He shot thiamin chloride into his arm, and simultaneously heard the roar of a plane's motor.

Hastily Hartman left the *godown* and headed for the island's beach near by. The camouflaged amphibian was gliding across the lagoon—a quick flight, that had been, from the Polar Circle to the South Pacific! Hartman's eyes focused blearily on the plane as it slid toward the rough dock.

Two men got out—Olcott and Duncan.

"Everything's ready," Hartman said. His tongue was thick, and he steadied himself with an effort.

"Good!" Olcott glanced at his wristchronometer. "There's no time to waste." "When do I take off?"

"Immediately. You'll pick up the Maid

this side of the Moon, but it's a long distance."

Hartman was blinking at the convict. "You're Saul Duncan. Hope you're a good pilot. This is—um—ticklish work."

"I can handle it," Duncan said shortly. Olcott was already moving toward a trail that led inland from the beach. The other two followed for perhaps half a mile, till they reached the dead-black hull of a small cruiser-type spaceship, camouflaged from above with vines and pandanus leaves. The boat showed signs of hard usage. Duncan walked around to the stern tubes and carefully examined the jointures.

"Crack-up, eh?" he said.

Olcott nodded. "How do you suppose we got our hands on the crate? It was wrecked south of here, near a little islet. There weren't any survivors. It cost me plenty to have the ship brought here secretly, where Hartman could work on it.

But it has been put in good shape now."

"She—um—runs," the scientist said doubtfully, blinking. "And she has strong motors. Unless they're too strong. I spotwelded the hull, but there is—um—a certain amount of danger."

Olcott made an impatient gesture. "Let's go in."

HE control cabin showed signs of careful work; Duncan decided that Hartman knew his job. He moved to the controls and examined them with interest.

"Made any test-runs?"

"Without a pilot?" Olcott chuckled. "Hartman says it'll fly, and that's enough for me."

"Uh-huh. Well, I see you've painted the ship black. That'll make it difficult to spot. I'll have only occlusion to worry about, and a fast course with this little boat will take care of that." Duncan pulled



at his lower lip. "I noticed you put rocketscreens on, too."

"Naturally." Rocket-screens, like gunsilencers, were illegal, and for a similar reason. The flare of the jets are visible across vast distances in space, but a deadblack ship, tubes screened, would be practically invisible.

"Okay," Duncan said. "What about the Plutonians."

It was Hartman who spoke this time. "Just what do you know about the Plutonians?"

"No more than anyone else. No ship's ever landed on Pluto. The creatures are mental vampires. They can reach out, somehow, across space and suck the energy out of the brain."

Hartman's ravaged face twisted in a grin. "So. But their power can't break through the Heaviside Layer. That's why Earth hasn't been harmed. Only space travelers, unprotected by a Varra convoy, are vulnerable. Even with Varra Helmets, men are sometimes killed. All right. How do you suppose the Plutonians find their victims?"

"Nobody knows that," Duncan said. "Mental vibrations, maybe."

Hartman snorted. "Space is big! The electrical impulses of a brain are microscopic compared to interplanetary distances. But the ships—there's the answer. A spaceship is visible for thousands of miles—reflection, and the rocket-jets. It'd be easy for the Plutonians to locate our ships, if they have any sort of telescopes at all. So, we have here a ship they cannot find. Therefore, we do not need a Varra escort to protect us from the Plutonians."

"It would have been safer if we could have hired a Varra," Olcott said. "Still, that was impossible. They're hand in glove with the government."

"I know. They've convoyed me, in the old days," Duncan grunted. "Let me go over it again. I take this ship out, pick

up the Maid, Earthside of Luna, and get the radium—and Andrea."

"Right," Olcott nodded. "Then back here, and I hand over half a million credits."

"Going into space without a Helmet is risky."

"You will not be near Pluto," Hartman put in. "There is danger, yes, but it is minimized."

"But there is danger. I'm thinking of Andrea. When I pick her up, she's got to leave her Helmet in the *Maid*."

"Naturally," Olcott snapped, his lips thinning. "If she continues to wear it, she brings a Varra back to Earth with her—a spy."

Duncan looked at Hartman. "What armament are we carrying?"

"Six four-inch blaster cannons, fully charged."

"Okay." Duncan turned again to the controls, slipping into the cushioned basket-seat. "Everything oiled and clean, eh? Doors?" He touched a stud; the valve of the door closed silently.

"Everything is ready," Hartman said.
"Air-conditioning?" Duncan tried it.
"Good. Course?" He checked the spacechart before him. His back to the others,
he said quietly, "You're asking Andrea
to take a big risk, Olcott. You too, Hartman, going into space without a Helmet."

Olcott moved uneasily; Duncan could see him in the mirror above the instrument panel. "Hell! It was her own choice—"

"You blackmailed her into it."

Olcott's lips thinned. "Backing out? If you are, say so."

"No," Duncan said, "I'm not backing out. I'm going into space. But you two are going with me—right now!"

His poised fingers shot down on the instrument board. Olcott's oath and Hartman's startled yell were both drowned in a sudden raging fury of rockets. In the mirror Duncan could see the gun that

flashed into Olcott's hand, but at the same instant terrific acceleration clamped hold of the little ship.

COTT'S gun was never fired. The three men's senses blacked out instantly, mercifully, as the stress of abnormal gravities lifted the cruiser bullet-fast from the islet. Three figures lay motionless on the plasticoid floor, while the rockets' bellow mingled with the shrieking of the atmosphere. The insulated hull scarcely had time to heat before the ship was in free space, shuddering through all its repaired beams and joists, the dull, heavy thunder of the screened tubes vibrating like a tocsin of doom in every inch of the cruiser.

The hull was dead black, the jets screened. No eye detected the swift flight of the ship. Toward the Moon it plunged, rockets bellowing with insensate fury....

Duncan was first to awaken. Space flight was nothing new to him, and his body had been hardened and toughened by five years at Transpolar. Nevertheless, his muscles throbbed with pain, and he had a blinding headache as he dragged his eyelids up and tried to remember what had happened.

Realization came back. Spaceman's instinct made Duncan look first at the controls. The chronometer on the board told him that he had been unconscious for many hours. Watching the star-map, he figured swiftly. Fair enough. They were off their course, but the cruiser had been traveling at breakneck speed. It was still possible to keep the rendezvous with the *Maid*. Duncan readjusted the controls,

After that, he turned to Olcott and the scientist. Neither was seriously injured. Duncan relieved Olcott of his gun; Hartman was unarmed. Then he took a drink and sat down to wait.

Presently Olcott stirred slightly. His lashes did not move, but without warning his hand streaked toward his pocket.

"I've got your gun," Duncan said gently. "Stop playing possum and get up."

Olcott obeyed. There was a streak of blood on his cheek, and he swayed a little as he stood, straddle-legged, facing the pilot.

"What's the idea?"

Duncan grinned. "I'm carrying out your orders. I just thought I'd like company."

Olcott fingered his mustache. "You're the first man who ever played a trick like that on me."

For answer Duncan stood up and waved negligently at the controls. "Take over, if you like. Head the ship back to Earth."

The irony was evident. In free space, almost anyone could pilot a cruiser. But emergencies and landings were different matters. Years of training in split-second, conditioned reactions were necessary to make a pilot—and only Duncan had had that training. Olcott could easily turn the ship around, but he probably could not control it in atmosphere, and he certainly could not make a safe landing. Olcott was in a prison, and Duncan held the only key.

"What do you want?"

"Not a thing. I'm going through with the job. I'll get the radium for you, and pick up Andrea. But if the Plutonians harm her, without a Helmet, she won't die alone. We're all in the same boat now."

Olcott came to a decision. "All right, You've got aces. Later, we can settle things—not now."

Duncan turned to the star-map. "Fair enough."

In the mirror he watched Olcott kneel beside the unconscious Hartman and break an ammonia capsule under the scientist's nose. Yes, fair enough. He had Olcott in a trap. Dangerous as the man was—and Duncan made no mistake about

that—he would scarcely be fool enough to cause trouble till his own safety was assured.

It wouldn't be assured till the cruiser was back on Earth. Meanwhile, they were in free space—without Varra Helmets. Duncan shivered a little. His eyes sought the enigmatic blackness where Pluto swung in its orbit, invisible and menacing. The Plutonian mind-vampires. Apparently Hartman's trick had worked. The creatures had not yet discovered the blacked-out cruiser.

Not yet. But the scope of their powers was unknown. After all, the Plutonians were the reason why space was forbidden.

Instinctively Duncan's teeth showed in a snarl of savage defiance.

THERE was hilarious excitement aboard the Maid of Mercury. The big passenger-cargo ship had just crossed the Line—Luna's orbit—and that entailed a ceremony involving those who had never crossed before. An officer, grotesquely costumed as the Man in the Moon, presided from a makeshift throne in the main salon, and Andrea Duncan, smiling a little, watched the victims each get their dose of crazy-gas. She'd already had her initiation, and the effects of the mildly intoxicating gas were wearing off.

It was difficult to believe that outside the hull lay empty space, dark and limitless. Andrea turned her mind away from the thought. But another came—Saul—and she bit her lip and caught her breath in a tiny gasp. Saul! Had Olcott managed the escape? Was Saul Duncan free from Transpolar?

He must be. Olcott wouldn't fail. That meant that in a few hours Andrea must destroy the communication system. Olcott had told her the best way. Yes, she was ready. It would mean freedom for Saul.

If she failed, Olcott had said, her husband would be sent back to Transpolar,

with an additional heavy sentence—ten more years, perhaps. Well, she wouldn't fail.

A man brushed past her. "Your hair's mussed up—"

Instinctively Andrea lifted a hand, only to be checked by the hard plastic curve of her Helmet. It was an old gag, but she forced herself to smile. The necessity of wearing Helmets in space had become a joke to most of the passengers. Probably only the officers realized the true danger of the Plutonian mind-vampires.

Everyone in the salon, of course, wore a Helmet-even the Man in the Moon. under his disguise. Cumbersome as they looked, they rested lightly on the wearers' shoulders, and were actually so light that one easily became accustomed to them. Andrea studied her reflection in a nearby mirror. Her small, heart-shaped face seemed dwarfed by the Helmet. Experimentally, like an interested child, she pressed a stud and saw the transparent, air-tight shield slide into place an inch from her nose. Within the ship the shields were not necessary, nor were complete But the Helmets were space-suits. vital.

A NDREA knew little or nothing of the technical details. The secret of the Helmets lay in the luminous, intertron knob atop each one. It was this that provided a two-way hook-up with the Varra. She remembered what an officer had told her, when she had first donned a Helmet at the Atlantic Spaceport.

"Never done it before, eh, miss? Well, don't be frightened. Let me help you." He had adjusted the bulky Helmet. "The power won't be turned on till we hit the Heaviside Layer. The Varra can't safely enter our atmosphere, you know."

"I didn't know. It seems so strange—"
The officer chuckled. "Not really. It's like being in radio communication with

somebody. You see, when the juice is turned on, a Varra instantly hooks itself up to your Helmet. You can even talk to him—it—if you like. They're intelligent; nice people, in fact."

"Can they read thoughts?"

"Everybody asks me that. No, they can't. The idea is that without a Helmet, you'd be exposed to the Plutonian mind-vampires. As it is, the Varra throws up a mental shield that protects you."

Andrea hesitated. "It doesn't always work, though, does it?"

"Almost always. You were warned of that—" His manner became officially rigid. "You signed a release blank, in case of accident. But there's no danger to speak of. Space flight is exhausting; you'll feel pretty bad by the time we hit Mars. Somehow there's an energy drain that even the Varra can't neutralize."

"The Plutonians?"

"We think so. But without the Helmets—" He grinned in a comforting fashion. "You'll be okay, miss."

Later, at the Heaviside Layer, the power had been turned on in each Helmet. There was no apparent change, except for the sudden luminosity of the intertron knobs. But a voice, friendly despite its curious alienage, had spoken wordlessly inside Andrea's brain.

"I'm taking over now. Don't remove your Helmet or turn off the power till you're in atmosphere again."

"Atmosphere—" Andrea had spoken aloud without realizing it. The Varra answered her.

"Each planet has a Heaviside Layer, an electronic barrage that disrupts mentalenergy vibrations. We find it dangerous to pass that Layer, but so do the Plutonians."

Another passenger had told Andrea somewhat more—that the Varra, even before space travel, were not unknown to science. Charles Fort had been one of the first to collect data about them—

inexplicable balls of fire appearing on Earth, with their life-forces warped and harmed by the Heaviside Layer, moving at random out of their native element.

Two hours after crossing the Lunar Line Andrea slipped noiselessly into the radio room. The long space trip had told on her; like all the others, she was conscious of exhaustion and mental drain. Glancing at her chronometer, she realized that in a few minutes Saul would make contact with the *Maid*.

She clicked off the power in her Helmet. She wanted no Varra spying on her now.

The radio operator did not turn. He had not seen her or heard her silent approach. Andrea's hand poised over an intricate array of wires and tore the cables free.

A lance of cold fire plunged into her brain. It was too quick for pain. Her terrified thought, *The Plutonians!* was cut off instantly. Her mind drowned, as in dark water, chill and horrible.

The radio operator whirled, startled, at the thud of Andrea's falling body.

### CHAPTER THREE

#### Destination—Death!

QX! CQX! Calling Maid of Mercury!"
Saul Duncan looked up

from the mike. "No answer. Their radio's dead."

"Your wife did her job," Olcott grunted, fingering his mustache. He had regained his usual impassivity, though Hartman, in the background, had not. The scientist, without his daily quart of khlar, was a nervous wreck, puffing cigarette after cigarette in a vain attempt to calm himself.

"There she is." Duncan nodded at the visiplate, where the bulk of the *Maid* lay, occulting stars. "We'll use visual sig-

nals. First, though, we'll have to-"

His fingers moved swiftly. A four-inch blaster cannon sent its bolt of electronic energy ravening through space, across the *Maid's* bow. Lights on the cruiser's hull blinked into rainbow colors.

Paralleling the *Maid*, steadily drawing closer, the smaller ship kept on its course.

Duncan said, "They noticed that. They'll be watching the visiplate—"

"What are you telling them?"

"To send over the radium, or we'll blast 'em to hell."

"Good!"

But Duncan's lips were tight. He was bluffing, of course. Blasting an unarmed ship full of passengers—well, if it came to a showdown, he could not do it, even if Andrea had not been on board. However, the *Maid's* captain couldn't know that. He wouldn't dare take the risk.

Answering lights flashed on the larger ship's hull. Duncan read them aloud with the ease of long practice.

"No radium aboard. Is this a joke?"
"Send another blast," Olcott suggested.

Duncan's response was to fire a bolt that melted two of the *Maid's* stern tubes into slag. That didn't harm anyone in the passenger ship, but it showed that he was presumably in earnest. And he had to get Andrea aboard now. She had smashed the radio, and probably was already under arrest. Well—

"Sending radium. Don't fire again."
"Send one of your passengers also.
Jane Horton." Andrea was booked under that alias, Olcott had said.

There was a pause. Then—"Jane Horton victim of Plutonians. Must have turned off power in Helmet. Found dead in radio room just before you made contact."

Saul Duncan's fingers didn't move on the keys. Deep within him, something turned into ice. He was hearing a voice, seeing a face, both phantoms, for Andrea was dead. Andrea was dead.

The words were meaningless.

He became conscious of Olcott at his side, talking angrily.

"What's wrong? What did they say?"

Duncan looked at Olcott. The dead, frozen fury in the pilot's eyes halted Olcott in mid-sentence.

Automatically Duncan's hand moved over the keyboard.

"Send the body to me."

Then he waited.

On the visiplate was movement. A port gaped in the *Maid's* hull, the escape-hatch with which all ships were provided. Based on torpedo-tube principle, powered by magnetic energy, the projector was built to hurl crew or passengers out of the ship's sphere of attraction. Sometimes the rockets would fail, in which case the vessel would crash on any nearby body. If that danger threatened, a man in a spacesuit, equipped with auxiliary rockets, could survive for days in the void, provided he was not dragged down with the ship. The projector took care of that.

Now, tuned to minimum power. it thrust a bulky object out into space, pushing it toward the cruiser. Gravitation did the rest. The spacesuit dropped toward the smaller vessel, thudded against the hull. Duncan threw a series of hull magnets, one after another, till the suit was at an escape valve.

Five minutes later the space coffin lay at Duncan's feet.

THROUGH the bars that protected the transparent face-plate he could see Andrea, her long lashes motionless on her cheeks. Duncan's face was suddenly haggard. Olcott's voice jarred on his taut nerves.

"What happened? Did they-"

"The Plutonians killed her," Duncan said. "She turned off her Helmet, and they killed her."

Hartman was staring at a lead box at-

tached to the spacesuit. "They sent the radium!"

Duncan's lips twisted in a bitter smile. With a quick movement he went to the controls and turned the cruiser into a new course. On the visiplate, the *Maid* began to draw away.

Olcott said, "How long will it take us to get back to Earth?"

"We're not going back." Duncan's voice held no emotion.

"What?"

"Andrea's dead. The Plutonians killed her. You and Hartman helped."

Olcott's big body seemed to tense. "Don't be a fool. What good will it do to murder us? What's done is done. You—"

"I'm not going to murder you," Duncan said. "The Plutonians will take care of that."

"You're crazy!"

Briefly a flash of murderous fury showed in Duncan's eyes. He repressed it.

"I'm taking this boat to Pluto. I'm going to blast hell out of the Plutonians. They'll get us eventually, all of us. That'll be swell. I don't want to live very long now. But before I die, I'm going to smash as many of the Plutonians as I can, because they killed Andrea. And you two are going with me, because you got Andrea into this mess."

Hartman said shakily, "It's suicide. No ship can get within a million miles of Pluto!"

"This ship can. It's dead black, with rocket screens. And the Plutonians haven't found us yet—which proves something. Hold it!" The gun flashed into Duncan's hand as Olcott jerked forward. "I'll kill you myself if I have to, but I'd rather let the Plutonians do it." He motioned the others to the back of the cabin as a light flashed on the board. After a moment Duncan nodded.

"That was the Maid. They managed

to repair their radio. Andrea didn't have time to smash it thoroughly before. They're talking to a patrol boat."

Olcott's teeth showed. "Well?"

"We don't want to be stopped—now." Duncan fingered the controls. The bellow of rockets grew louder. A shuddering vibration rocked the little cruiser.

"Not too fast!" Hartman said warningly. "This ship crashed once. It's still weak."

For answer Duncan only increased the power. The thunder of the tubes grew deafening. Already they had crossed the Lunar Line, heading outward in the plane of the ecliptic.

Duncan rose and went to the spacesuit that held Andrea's body. He wrenched the intertron knob free from the Helmet.

"We want no Varra spy here." The knob was not glowing, and, without power, the Varra was not *en rapport* with the Helmet, but Duncan was taking no chances.

Grimly he went back to the controls. Hartman and Olcott watched him, vainly trying to fight back their fear.

The heavy, crashing roar of the rockets mounted to a deafening crescendo.

#### CHAPTER FOUR

### The Destroying Avenger

AMED after the Greek god of the underworld, desolate, lifeless and forbidding as Hell itself, Pluto revolved in its tremendous orbit, between thirty-seven hundred million and four thousand million miles from the Sun. Such distances are staggeringly inconceivable when we attempt to use human yard-sticks. Men cannot stand the strain of such voyages without special precautions. Suspended animation is usual on the long hops, and Duncan had made use of the cataleptic drug he found at hand in the cruiser's emergency supply locker.

For a long time the three men had been unconscious as the ship, with increasing acceleration, hurled itself toward Pluto. Duncan had carefully measured the Sherman units of the drug, calculating so that he would awaken hours before the others. But he forgot one thing—the terrific resistance *khlar* builds up within the human body.

So it was Rudy Hartman who first opened his eyes, groaned, and stared uncomprehendingly about him. He was strapped in a bunk, Duncan and Olcott near by. Memory came back.

Sick and weak from the long period of catalepsy, Hartman nevertheless forced his aching limbs into motion. Staggering, he presently reached Duncan and took the latter's gun. That done, he searched for a means of binding his captive securely.

The bunk-straps were of flexible metal -not long enough, but they might serve a purpose. Hartman, scarcely conscious of his actions, fumbled at a panel and slid it back. Within the cubicle spacesuits were stacked, each with its Varra Helmet. Olcott had ordered them removed when Hartman was repairing the vessel, but the scientist had not obeyed. He had not felt entirely certain that the cruiser would not be detected by the Plutonians, and perhaps he had felt a twinge of compunction at the thought of sending a helpless man to possible suicide, if his theory proved wrong. So he had concealed the Helmets behind a panel. Now he blessed the lucky chance that had made him do so.

Duncan was still unconscious. Hartman rolled him out of the bunk and dressed him in a suit, fitting the Varra Helmet in place. With the flexible straps he bound Duncan's arms to his side; a makeshift job, but it would serve. Finally he pried the intertron knob from the Helmet and sighed with relief.

Hesitantly he went to the controls. The star-map told him little, except that they were approaching Pluto. Should they begin deceleration? Hartman's fingers hovered over the studs— Damn! He dared not alter the course. He wasn't a pilot, and it took trained hands to control a spaceship.

Well, that didn't matter. There was another way—with the Varra Helmets.

E BROKE an ammonia capsule under Olcott's nose and applied artificial respiration. After a time Olcott stirred.

"Hartman?" His tongue was thick. "Where—what's happened?"

"A great deal. Lie still and get back your strength. I'll tell you—"

But Olcott struggled to rise. "Duncan!"

"He's safe." Hartman nodded toward the bound figure. Then he sucked in his breath and sprang up. Duncan's eyes were open.

"Stay where you are," Hartman said, showing the gun. "I won't hesitate to kill you, you know."

Duncan grinned. "Go ahead. You can't pilot this ship. I can wait."

Olcott got up unsteadily. "You'll pilot it—back to Earth. Damn you, Duncan—"

"I'll pilot it to Pluto. Nowhere else."
Hartman intervened. "Wait. Listen,
Duncan. We have several Varra Helmets
aboard. You didn't know that."

"So what?"

"We do not need you as a pilot. If we make connections with the Varra, we can chart a course back to Earth by letting them instruct us."

Duncan's eyes changed.

He said, "You're crazy." But his voice lacked conviction.

"The Varra!" Olcott scowled. "But—"
Hartman whirled on him. "I know!
It will mean giving up the radium. But
there's no other way. We're near Pluto.
The Plutonians may detect us at any

moment. If they do—" He shrugged. "We can keep the radium and die here. Or we can use the Helmets, summon the Varra, and have them guide us back to Earth."

"Can they do that?"

"Easily. If they had tangible bodies, they could pilot spaceships as well as Duncan, or anyone else. As it is, they can tell us how to handle the controls."

"We'll lose the radium. It'll mean prison too."

"Not necessarily. Our lives are worth more than the radium—eh? And the Varra can't read minds. Suppose we have a convincing story to tell? We planned this space-flight as a scientific expedition, nothing more. We didn't know Duncan was an escaped convict. We didn't know he planned to hi-jack the *Maid*—"

Olcott rubbed his mustache. "Plenty of holes in that. But you're right. We can fiix up some sort of story. And there'll be no legal proof—"

He looked toward the helpless Duncan. "Except him. We don't want him talking."

Hartman touched the gun, but Olcott shook his head. "No. Listen. Duncan. You're licked. We can get back to Earth, with you or without you. But if we get the Varra to help, we lose the radium. Why not be smart? Play along with us, and you'll still get your half a million credits."

"Go to hell!" Duncan suggested.

Hartman said, "We've no time to waste. We're not far from Pluto—" He didn't finish, but there was a suggestion of panic fear in his voice.

"Right. This ship's got an escape hatch, hasn't it? Good." Olcott hurriedly began to don spacesuit and Varra Helmet. At a gesture, Hartman followed his example.

"Don't use the power yet. Help me." Olcott picked up Duncan by the shoulders. Grunting and straining, the two men carried their captive into the airtight bow chamber, sealing the valve behind them. The magnetic projector, looking like an oversized cannon, faced the circular transparent port through which they could see the starry darkness of empty space.

"Know how to work one of these?"
"They're simple," Hartman said. "This switch—" He indicated it. "Obviously it closes the circuit. Yes, I can operate this."

UNCAN remained silent as he was roughly thrust into the projector's gaping muzzle, feet-first. Olcott bent over him.

"You've got auxiliary-suit rockets and enough oxygen. And you can untie your-self, if you work fast, before you hit Pluto. You can make a safe landing—till the Plutonians find you. Well?"



Duncan didn't answer.

Olcott said, "Don't be a fool! You'll die rather unpleasantly on Pluto. You know that. Will you take us back to Earth?"

There was a long silence. Abruptly, with a muffled curse, Olcott snapped Duncan's faceplate shut, and then his own. Hartman did the same, and, with a wry face, touched the power-button on his Helmet that would summon the Varra.

In a moment the intertron knob began to glow, with a cold, unearthly brilliance. Olcott hastily turned the power on in his own Helmet. Now there was no time to waste. Soon the Varra would come. . . .

Cold eyes dark with fury, Olcott gestured. Hartman, in response, swung the projector's muzzle into position; both men closed their faceplates. The transparent shield of the bow port slid aside, and the air within the escape hatch blasted out into space.

Hartman moved a lever. Electro-magnetic energy blasted out from the projector, blindingly brilliant. One flashing glimpse the men had of Duncan's bound, spacesuited body hurtling into the void—and then it was gone, racing toward Pluto at breakneck speed.

Hartman closed the port and pumped air back into the tiny chamber. Abruptly a voice spoke within his brain.

"Who are you? Why do you summon the Varra? And why are you so near to Pluto?"

Olcott had heard the message too. He framed the thought: "You are a Varra? We need help."

"We are Varra. What help do you require?"

Olcott explained.

E HAD fallen for many minutes. Beneath him the jagged darkness of Pluto lay, cryptic and forbidding. It was time to use the rockets, but still Duncan hesitated, though he had freed himself from his bonds. The flares would certainly attract the attention of the Plutonian mind-vampires, and then—

A shadow occulted the stars. For a moment Duncan thought it was a meteor; then he recognized the cruiser. Jets screened, almost invisible, it was still driving on its course toward Pluto!

He did not stop to ponder the reason. Instinct sent his gloved fingers to the studs built into his suit. The tiny emergency rockets burned white in the darkness of space. Duncan was hurled toward the cruiser. Involuntarily he held his breath, looking downward at the vast circle of Pluto. Would he die now?

The rockets had flared only briefly; perhaps they had not been noticed. He did not use them again. Instead, he waited, moving steadily onward with no atmosphere to slow him down by its friction. The gravitation of Pluto pulled at both man and ship, but each fell at the same rate—no! The cruiser was pulling away! That meant its masked tubes were still on.

Duncan risked another jet. This time his space-boots thumped solidly on the hull. He levered himself toward the side port, which could be opened from without, unless it had been locked. True, when the valve slid aside, the ship's air would be lost in space, and anyone within the cruiser would die. Duncan grinned savagely. Bracing himself awkwardly, he tugged at levers.

The port opened. Duncan was almost flung away from the ship by the blast of air that gusted out. He recovered his balance, swung himself across the threshold—

At his feet lay two space-suited bodies, Olcott and Hartman. The faceplates of their Varra Helmets were open, but they had not died of lack of oxygen. That was evident. The frozen, strained whiteness of their features told a different story that Duncan read instantly. The Plutonians had brought death to Hartman and Ol-

cott; they had died in the same manner as Andrea.

Duncan closed the port behind him, his face expressionless. Inwardly he was tense as wire, in momentary expectation of cold fury striking at his brain. He stood waiting.

The star-map on the instrument panel flared. That meant atmosphere ahead. Duncan was at the controls in two strides. His number might be up, but he had no intention of dying in a crash—not while there was still a possibility of revenging himself on the Plutonian creatures.

He checked the ship's course, decelerating as much as he dared. So keyed-up were his nerves that he jumped sharply when a voice spoke inside his brain.

"Who are you, Earthman? Why are you here?"

Before Duncan could frame a response, he felt a thrill of sudden urgency flame through him. Something, cold and deadly as space itself, reached into his mind. There was an instant of sickening giddiness—

It was gone. The sky-screen flamed crimson. The cruiser was within Pluto's atmosphere blanket.

UNCAN gasped for breath. He was scarcely conscious of manipulating the cruiser, leveling off into a long, swooping glide. Death had touched him very nearly—and had been avoided miraculously by a fantastically small margin. The implications of what had happened turned Duncan white with incredulous shock.

For the thing that had been en rapport with his mind had tried to kill him. And that thing had been not a Plutonian, but a Varra! Duncan was certain of that. In his space-piloting days he had been in close touch with the Varra, and had learned the distinctive feel of the creatures—there was no other word—within his mind.

But the Varra were friendly to Earthmen!

The rough terrain of Pluto lay below. A cold, bluish radiance, almost invisible, seemed to flicker here and there. Duncan set the ship down with trained skill, landing on a broad plateau at the base of a high range of alps.

He was on Pluto, shunned and feared by Earthmen for a hundred and fifty years. He was in the very lair of the mind-vampires.

And nothing happened.

Slowly Duncan rose and turned the valves on the oxygen tanks. He divested himself of his spacesuit and made a careful examination of the two bodies. Both Olcott and Hartman had been killed, apparently, by the Plutonians. They had the stigmata.

But Duncan was thinking a rather impossible thought—that there were no Plutonians.

With half of his mind he made tests. There was atmosphere, almost pure chlorine. Nor was it unduly cold. An electroscope gave him the answer. Pluto was a radioactive planet, warmed from within by the powerful radiations of the ore.

Duncan took the dead Olcott's helmet and adjusted it upon himself. Turning on the power made the intertron knob glow, but there was no other result. The Varra, of course, could not safely venture within the Heaviside Layer of any planet, and Pluto had a Layer, since it had an atmosphere. Chlorine — radium — Duncan shook his head, trying to fit the puzzle together.

There were no Plutonians. Why, then, had the Varra fostered the legend of the mind-vampires? Creatures composed of pure energy could not exist on a radioactive planet; the radiations would be fatal to their complicated electronic structures.

Duncan thought for a long time. At last he had the answer, so astoundingly

simple that he found it difficult to believe. But it checked. And that meant—

He rose and went slowly to where Andrea's body lay, still in the spacesuit, her face composed and lovely in death. Duncan's lips twisted. He knelt.

"Andrea-"

She was trying to tell him something, he thought. What?

"Tell Earth what I've found out? Is that it?"

He hesitated. "It's no use. We're forty thousand million miles from the Sun. The radio won't carry that far, even if it'd get through the Heaviside Layer on Pluto. There's no way to send a message back."

There was no way. Nor could the cruiser retrace its course. There was not enough fuel left. The jets would be exhausted before Saturn's orbit was reached, and the speed would increase as the ship plunged Sunward, increase to a point where deceleration would be impossible.

"There's no way, Andrea. I can't send the message—"

Duncan stopped. There was a way, after all, though it meant death.

E SEATED himself before the radio-recorder and adjusted it to automatic-repeat. His message would be imprinted on metal wire-tape, and continue to be sent out into the void till the ship itself was destroyed.

Duncan pulled the microphone toward him. His voice was coldly emotionless. "CQX. CQX. Recorded on Pluto. All ships copy. Relay to proper authorities. Pluto is uninhabited. Its atmosphere is pure chlorine. No lifeform known to science can exist in a chlorine atmosphere or on a radioactive world. The Plutonian mind-vampires do not exist. The legend was created by the Varra for their own purposes. The actual mind-vampires are the Varra themselves."

Now it would be theorizing, but Duncan was certain that his guess was correct.

"The Varra live on life energy. When man conquered space, they foresaw danger to themselves. They are vulnerable, and if Earth suspected their motives, they'd be relentlessly destroyed. So-as I see it—they pretended to be friendly, and blamed the mind-vampirism on imaginary creatures living on Pluto. The Varra can communicate with us without the need for Helmets. They can kill too. But they seldom do that. Instead, pretending to protect space-travelers from the Plutonians, they drain a certain amount of lifeenergy from each person wearing a Helmet. We're like cattle to them. We think they're friendly, and so far we haven't suspected the truth. As long as we didn't suspect, the Varra were safe, and could keep on vampirizing 'us, without our knowledge. Once in a while a Varra badly in need of energy would drain too much, which would kill its host."

That was what had happened to Andrea. The Varra had tried to stop her from wrecking the *Maid's* radio, and—Duncan's teeth showed.

He went on telling his story, explaining what had happened. He made no excuses; there was no need for them now.

Finally he said: "The Varra can be destroyed. And we can protect ourselves against them. That'll be up to the scientists. If this ship gets through, it will mean that the Varra couldn't stop me. I've got radium aboard. So I'll put a Heaviside Layer around the cruiser—and blast off Sunward."

Duncan clicked the switch. No need to say more. Earth would understand, would believe.

But now—

He opened the port, after donning a suit and Helmet, and let the ship fill with the chlorine atmosphere. It would be better than oxygen, for his purposes. Iodine vapor would be even more effec-

tive, but he could not create that. If only he were a scientist, a technician, he could probably discover some other way of creating an artificial Heaviside Layer.

But it didn't matter. This way was surest and quickest, and there would be no machinery to fail him.

Sealed within the ship once more, Duncan found the shipment of Martian radium, hi-jacked from the *Maid*, and removed it from its thick leaden container. He left it exposed, and went to the controls.

The cruiser lifted from the surface of the plateau. It slanted up through the chlorine atmosphere, rockets bellowing.

There was no need for split-second timing or unusual accuracy—within certain limits. He was heading Sunward. Nothing more was necessary. Except power—

THE tubes thundered with ravening fury. The cruiser blasted up, acceleration jamming Duncan back into his seat. Then they were out of the air-envelope, in free space, controls locked. There was nothing more to do now but to drive on. The rockets would blast their fury into the void till the fuel was ex-

hausted. Even then, the ship would speed on, into the tracks of commerce and the orbits of the inhabited planets.

On the visiplate specks of light glimmered, resolving themselves into a nebulous cloud—the Varra.

It was the final proof. Duncan was the first man who had ever landed on Pluto. The Varra intended to destroy him, giving him no opportunity of telling what he knew to Earth.

Duncan checked the radio. It was repeating his message, sending it steadily into space. At this distance from the Sun there was no chance that it would be picked up. But later—

He clicked the power on in his Helmet. There was no response. The Varra, as he had thought, could not penetrate his artificial barrier, his pseudo-Heaviside Layer.

It was nothing, actually, but a blanket of ionization. But the Varra could not break through it. Duncan glanced at the exposed radium on the floor. A pound of it, sending out its powerful emanations, gamma, beta and electrons, ionizing the chlorine even more effectively than it would have affected oxygen—invisible

# On land and sea—in the dark of the night—

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armor, protecting Duncan from the Varra.

They were massing ahead, determined to stop him. Thoughts began to penetrate his mind, furtive, random, but indications that the group power of the Varra was stronger than he had expected.

Duncan seated himself at a panel, the one controlling the blaster cannons. His face, haggard and strained, twisted in a bitter smile.

"Okay, Andrea," he whispered. "I'm taking the message back for you. But I'm doing this—for myself! Because they killed you, damn them—"

The chill tentacles probed deeper into Duncan's brain. He swung a cannon into position, pressed a stud, and watched a streak of electronic energy go blasting across space, silent thunder in the void, smashing relentlessly at the Varra. It struck in a maelstrom of flame.

"Vulnerable!" Duncan said. "Yeah, they're vulnerable as all hell!"

The Varra closed in. Through their massed ranks the cannon blazed and pounded, till space seemed afire. The rocking recoil of the blasts, mingled with the booming of the rockets, thudded in Duncan's ears even through the Helmet.

And he fought them. There were no witnesses to that battle, none to see the black cruiser plunging on through the cloud of attackers, belching Jove's lightning, shaking with the vibrations of its murder-madness. For the spaceship was mad, Duncan thought, a relentless, destroying avenger, a dark angel bringing the terror of Armageddon to the Varra. And the energy-beings never paused; their life and their future was in the scales. If Duncan broke through, they were doomed. He must be stopped.

HEY could not stop him! Almost blind with the agony burning within his brain, Saul Duncan nevertheless hunched over the controls, while the cannons thundered their demoniac message into space. By dozens and hundreds the Varra died, their energy-matrices wrenched and broken by the electronic bolts. Duncan and the ship were one—and both were mad.

He got through. He had to. Nothing could have stopped Saul Duncan, not even the Varra. In the end, the black cruiser raced Sunward, cannons silent, for the Varra were scattered.

Duncan got up wearily. He stood above Andrea's body, watching the still features, the long lashes that would never rise.

"It's done," he said. "Finished. Earth will get the message—"

Earth would get the message. The Varra could not stop the cruiser now, and the radio would continue to send out its signal till the fires of the Sun swallowed the black ship.

Duncan knelt. His legs were weak. The radium, of course. His suit could not protect him from the fatal radiations of a pound of the pure ore. But the stuff had served its purpose. It had kept the Varra at a distance till Duncan could fulfill his vengeance.

And now it would kill him—unless he replaced it in the leaden casket. But even that might not work now.

Duncan shrugged. It was better to die of radium burns than by the power of the Varra.

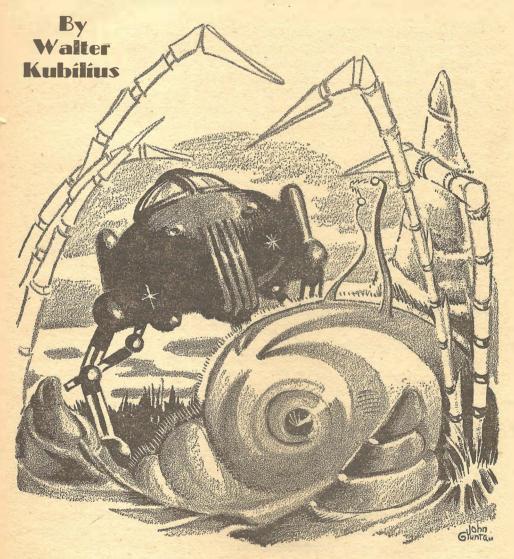
He would be dead long before then. But the Varra would be hunted down, ruthlessly slain, their power broken forever. Earth-science would destroy them, as they themselves had slain so many, as they had killed Andrea.

. The bellow of the rockets died. The ship held true to its course, plunging on faster and faster toward the sunlit worlds where men knew joy and laughter and happiness. It would go on, to the funeral pyre of the Sun.

But it would leave a message in its wake.

# Remember Me, Kama!

"We're Earthmen, Wilson—and we bear the Earthman's burden. These people are weak, uncivilized. I wanted to bring them science—and you brought them death instead. Well—you're getting your investment back. In ten seconds we all die!"



LD Cobber's hand trembled slightly as he turned his tankbox so that his guns would point at the crew working outside.

Wilson, atop the white hill, watching

the men clear away the ammonia snow drifts from the jets of the rocket, was the first to notice the challenging position of Cobber in his tankbox.

"Are you getting in or out of the air-

lock?" he radioed to Cobber. "Make up your mind."

The old man's lips were dry and his voice was hoarse as he spoke into the mouthpiece.

"I am going to blow up the ship," he said.

Instantly the work of clearing the field stopped. Through the haze of poison air that surrounded the planet Cobber could see them wheel into a semi-circle not more than thirty yards away from him and the airlock that he held.

Wilson's tank rumbled a few feet forward from the semi-circle.

"You don't dare shoot, Cobber," he said quietly. "You're outnumbered thirty to one."

"Stand back! All of you!" Cobber shouted into the mike. "I'll blow up the first one that moves!"

"Don't be a fool, Cobber," Wilson said.
"There's enough catalytic rock stored in
the ship for all of us. I can make you a
rich man. Put down those guns and we'll
forget what has happened. Put down those
guns."

"This ship is not going back to Earth," Cobber said.

"Put down those guns, Cobber!" Wilson shouted. "You can't win!"

Cobber turned the knob and shut off Wilson's loud voice. He then opened one of the dinatro bombs that lay beside him, unscrewed the cap and tossed it into the back of the car with the other neatly stacked-up explosives.

"Ten seconds!" he yelled.

The men were stunned for a moment by the suddenness of his decision to blow up the ship. They stood dumfounded, not knowing what to do, until one of them screamed "Dinatro!" Panic-stricken, they dashed their tanks for the meager protection of the nearby cliffs.

Wilson's tank stood still, not moving. "You're bluffing, Cobber," he called out. "You want to scare the men away

so you can seize the ship and get back to Earth. All right, Cobber, you win. Only you and I will share the cargo. I'm coming in."

One second.

Two.

Three.

"There's more than a cargo at stake," Cobber said.

Four seconds.

Five.

Six.

"Remember me, Kama!" Cobber said softly to himself.

Seven.

Eight. . . .

HE silent bulbous mass that was the Great Kama extended an undulating growing finger and pointed. When Cobber saw the charred bodies of the Kamae he knew what it meant to have one's people ravaged and killed. In that moment he forget the rosy glow of ammonia snow on the mountain tops and the purple clouds that battled majestically over the planet.

Here and there the anhydrous bodies of the Kamae lay stone still. The small village, tucked away by the shores of the russet sea, was wiped out. Many of the bodies were ripped apart, torn to shreds as if by some monster from the depths of the methane sea.

He had seen death before and he had seen brother kill brother on a hundred different planets in as many solar systems. Each time its horror and tragedy cut him deep. Cobber felt sick at heart.

"I did not know . . ." he began despairingly.

His words were cut short by the overwhelming emotion of pain and hurt anger that forced itself out of the organ-less body of the Great Kama, through the poison atmosphere of the planet, through the walls of the tank-car and into Cobber's consciousness. It was held back, its power could overwhelm him, but Cobber could sense the enormity of the tragedy that racked the bubbly form of his Kama friend.

He looked through the window of his small car and watched his strange comrade leave him, gliding like a living liquid over the knolls and hills. Other men of Earth could feel only revulsion and disgust when their eyes fell on one of the Kamae. But Cobber was not like other men.

He had seen, in the years of his wanderings, enough of creation's mysteries to realize that the surface manifestations and expression of life were meaningless. Where men like Wilson would reach for a gun to blast it, Cobber would reach out to it with understanding and friendship.

Be it a crystal that grew into pulsating life with every sun ray, or the flesh and blood of Earth, or the singing strings of Orion—it did not matter. Life alone made them brothers. It was this realization that enabled him to be a friend to Kama. It was this knowledge that made him feel the immensity of the tragic despair which engulfed his strange other-world companion.

Gingerly he adjusted the controls of the tank-car so that it would walk carefully through the village. Years ago the crude spacesuits with which planetary explorers were encumbered were found to be too clumsy and dangerous for use. In their place were developed the tank-cars.

They were miniature houses on wheels and legs, faintly reminiscent of ancient battle-tanks, equipped for travel on sand, rock, hill, water and a thousand other fields. Tentacles, mechanical arms and legs were finally developed, making the tank-cars a thousand times superior to clumsy, inefficient spacesuits.

The metallic legs of the car, immune to the gaseous atmosphere, carefully stepped over the bodies. On the hilltop, through the mist that clouded the vision plates of the car, he could see the other villages being destroyed, as this one was.

Cobber shuddered. The planet of Kama was like death itself without the ghastly war that had descended upon it.

Seeing the crimson thunderhead clouds rear high into the stratosphere and knowing the approach of another storm, he hastened the speed of his car towards the huge mother-ship.

N AN hour's time he found it, half buried among the great ammonia snow drifts. He folded the legs of his car, let it descend into a riding position and, metallic treads rumbling, rode into the airlock that opened to meet him. As it rolled in, the wall in back descended, imprisoning the car.

He waited patiently as the poison air was extracted from the lock. When the indicators registered the absence of carbon disulphide vapor he opened the top of his car and crawled out. The door leading into the airlock opened. Jina's face greeted him as Cobber walked through.

"Welcome home, Cobber!" he said. "We were beginning to worry about you."

Cobber tapped his feet experimentally on the floor of the ship. "It feels good to stretch out again after fourteen days in the tank. Air would have run low soon."

As was the ship's rule, Jina replaced the empty food drawers, stored up the fuel tanks, replenished the air supply and turned to the stacks of dinatro bombs in the back of the car.

"Shall I clear these out?" Jina asked.
"No. Let them stay," Cobber said.
Before he could leave the dressing room
the other officers and members of the
crew came into the room.

"What did you hear?" they asked. Anxiety was written over their faces. Evidently they had already seen the effects of war. They waited, intent upon him.

"The peace is ended among the Kamae," he told them.

"Is it nation against nation?"

"No. They have not developed as far as that. Isolated tribes have attacked others, wiping them out. One by one the advanced cities that have schools and teachers are being laid low by wandering bands. I saw some of the ruins—"

He broke off and, as if seeing them again in his mind, said, "Old and young. Burnt out bodies buried in snow drifts. No prisoners. Savage war."

"Barbarians!" Jina said.

"Teachers of barbarians!" Cobber said, looking at the men under his command. "They were shown how they might pillage one another in order to bring catalytic to us for trade. Who else would teach them?

"I left explicit orders," he said angrily, walking back and forth among them, "to give only machinery and gas-proof metals in exchange for their catalytics. I said there was to be no interference with the private life of the Kamae. Why was I disobeyed?" he demanded. "Who told you to change the trade agreements that I had prepared?"

When no answer came he looked at his assistant officer.

"You, Jina. Who handled the trade accounts with the Kamae?"

"Wilson, sir."

Cobber swore, brushed past his men and made his way to the private quarters of Fogarth Wilson. Several of the men moved as if to stop him, but none dared. In the event of a quarrel between the man who ran the ship and the man who owned it, it was best to stay neutral.

ILSON was yawning lazily as Cobber walked in.
"Hello, Cobber," he greeted casually. "I was afraid your Kamae friends might have kept you. What did

you find out?"

Cobber's voice shook. "You broke the trade agreement!"

Wilson looked up at him, and saw the anger in his eyes. He got up from his bed and walked across the narrow room and stood next to the older man.

"Did you see the store room?" he demanded. "It's one third full. One third full after two weeks of trade! We were here six months and got only a quarter ton of catalytic for the power machines of Earth. In one day I purchased more than you could buy in a month!"

"But at what a price, you fool!"

"Price? Yes! I sold oxygen!" Wilson laughed. "What did you offer them, Cobber? Books and machinery! Books for a savage king and machinery for fools! I gave them what they wanted—pure oxygen!"

Cobber prayed for the strength of a man twenty years his junior. But his weak and old hands would prove of little value against the youthful strength of Wilson.

"Oxygen! In an atmosphere of carbon disulphide and methane you sell them tanks of oxygen!"

"Yes."

"You know what you sell the Kamae?" Cobber asked, gripping him by the shoulders. "Death! A single spark—one rock striking another, a simple stroke—and that oxygen becomes a bursting, fuming flame! In this atmosphere it is worse than the most powerful dynamite. Whole villages have been wiped out. Entire cities have been burned to the ground by your oxygen. You showed them how to use it. You made flame-throwers. You showed them how to kill one another to bring you more catalytics for more weapons!"

"Why not?" Wilson demanded. "I sell them what they want—weapons of war. In selling it I've made enough to outfit a new ship and a new captain."

Cobber looked again at the man he hated. Unlike other sons of the rich who hired ships and captains to squire them in their adventurous tours of other plan-

ets, Wilson was not soft. A sensuous line about his lips hid their cruelty. Years of breeding and care, without the knowledge of poverty and the crushing weight of mature responsibility, had given him a smooth powerful body and a quick agile mind that was more callous and hard than the palms of old Cobber's hands.

Wilson owned not only the ship, but Cobber's soul as well. There were debts to be paid back at home. It was so with every man in the crew. Each would suffer if Wilson failed to come back safe and sound. Cobber knew this and Wilson knew it as well. Wilson was the master here—not Cobber.

SPOKE with the Great Kama today," Cobber said, remembering his friend.

"Yes. And what did the Messy One have to say?"

"The learned men of the villages, the educated ones, want revenge for the breaking of our trading treaties. They will attack us. They will break off all relations with Earthmen forever unless—"

"Unless what?"

"Unless I surrender you to them."

There was the beginning of a smile on Wilson's lips. It stayed there grimly as he watched indecision, hesitation and conflicting emotions battle in Cobber's eyes.

"You wouldn't dare!" he whispered softly. "In fact," he added, smiling as the thought gave him reassurance, "in fact, you couldn't!" He tried to smile again, but this time found little weakness in Cobber's eyes.

"The whole future of Kama's contact with the Earth depends upon me now," Cobber told him, stepping back a foot and then drawing his ancient revolver from his hip pocket.

Wilson looked at the gun calmly. "You're a fool, Cobber—a doddering old fool!" he said. "If you had done your work as captain without interfering with

me I could have made you a rich man."

As he talked he gestured with his hand. With a swift, sudden movement he slapped the gun from Cobber's grip, grasped the old man by his neck and turned quickly, flinging Cobber against the wall. There was a dull thud as Cobber collapsed in a crumpled heap.

Wilson switched on the call board. "Attention! All officers please report to my quarters immediately. Wilson speaking. That is all."

Turning it off he came back again to the slowly rising Cobber.

"You're finished," he said. "Finished!"
The men drifted in one by one. When all had assembled, facing Wilson and Cobber, the younger man spoke.

"In view of the critical situation now facing us and the imminence of an attack by the savage Kamae, I have deemed it advisable to make some changes in the commanding personnel of my ship. With due respect for his splendid accomplishments in the past, I now relieve Cobber of his duties as commanding captain of this ship. He will henceforth function as second assistant navigator. Commanding Captain Jina, you will carry on."

Cobber ripped off the single star that emblazoned his sleeve and gave it to Jina. He walked past the stunned officers and men, past them all, into the corridor, down the steps and to the airlock.

At times a lonely star peered through crimson clouds and then, as if frightened at the sight, disappeared from view. White flakes, so reminiscent of snow on Earth, settled softly upon the planet. From time to time he would brush the windows of his tankbox and peer out to watch for the approach of his friend.

He saw him, a white globule-like mass, slithering over the rolling hill and coming towards him. He raised one of the arms of the car in recognition. Instantly a gray finger extended from the bulbous mass in answer.

The strange being was standing beside the tankbox that enclosed Cobber. No message came from its brain as it waited for the thoughts to form in Cobber's mind.

I am ashamed, Cobber thought.

There was no answer, but a wave of pained bewilderment flooded upon him. Then the accusing words, You failed.

Yes, I failed, Cobber said, the bitterness of complete defeat rankling in his heart. The man your people want for revenge is my chief. I cannot deliver him. I cannot!

When Cobber first came to our planet, the Great Kama's thoughts rang in his head, who welcomed him? Who crossed the barriers between our different forms of life? Who told Cobber the tragic history of our people? Who told him the secrets of our learned teachers?

There was a long pause and then the Great Kama answered his own questions.

I did these things, for I thought Cobber

was my friend.

Cobber wanted to shout, "I am your friend, believe me!" but he knew that the Great Kama could not look upon him as one single individual apart from his men. He was a symbol, the embodiment of the best that a different people could offer. If Cobber had failed him—Cobber, the wisest—then friendship between the planets was doomed forever.

I gave friendship—and what has Cobber's answer been? Your people sold weapons to the ignorant and brutal of my people. You taught them to kill and burn. You aroused the greed and lust in us with the offer of power. We reached for knowledge—and you pushed us back into the depths of savagery. Are you my friend, Cobber?

Cobber could not answer. Powerless, impotent, he could not fulfill the demand for just revenge that Kama had asked. A thousands plans pursued their way through his mind. A thousand solutions

leapt up, offering themselves. He could have killed Wilson and shown them the body. But it would have meant death for all them in the courts of Earth.

What was the alternative? In his mind he could see the story. The spaceship would return home with a cargo full of catalytic and the story of ignorant beings willing to mine the metal for tanks of oxygen. Cheap, easy to manufacture oxygen in exchange for power! Other ships would come and other men like Wilson, greedy men, powerful men, men with lust in their hearts.

Kama's people, scarcely on the first rung of civilization's ladder, would be thrust back into the darkness. Tribal warfare, spurred on and encouraged by Earthmen, would deplete the planet. A new culture, just born, would die. Was this a fair price for the greed markets of Earth?

Are you my friend? He heard the thought again.

Slowly he rode back to the spaceship. The storm was over. The crew of the ship were clearing the ammonia drifts away in preparation for the blasting.

The airlock was open. Cobber rode to it and turned around, guns facing his men.

Six seconds.

Seven.

"I am your friend, Kama," Cobber said softly to himself. "Remember me!"

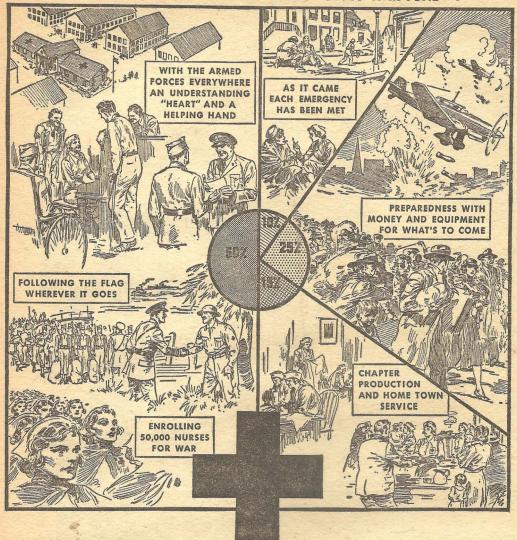
Eight seconds.

Nine.

There was a blinding flash of light as jagged white flames reached into a blood-red sky, tearing apart like a paper box the last ship commanded by Cobber.

From a hilltop in the distance Kama saw the flash and heard the rumble. When it died down the evening silence fell-again he knew what Cobber had done.

Other years would bring other ships from Earth If in them were men like Cobber, the barrier between different peoples might yet be crossed.



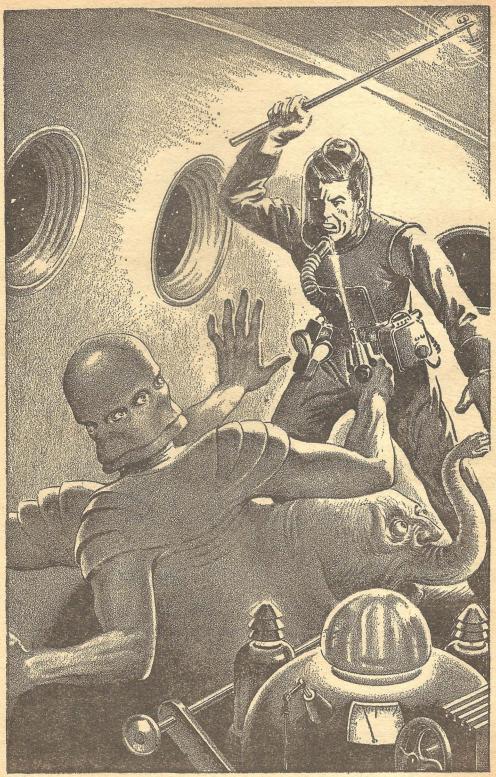
### YOUR RED CROSS DOLLARS

-how they are working

Some are working, some are training, some are standing by. Cushioning war's shocks, aiding our armed forces and civilians alike, adding a "heart" to a tough and hard-boiled fighting force.

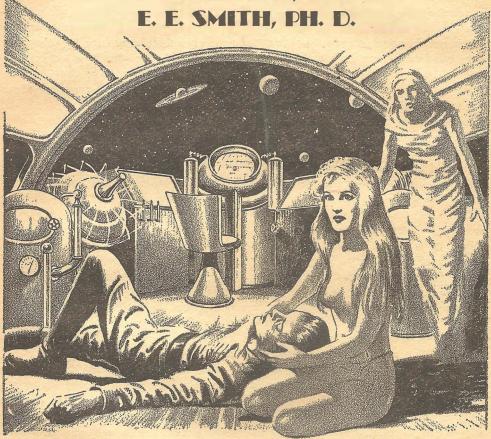
Three million volunteer workers, wise judgment, and War Department auditing squeeze 100 and one cents out of every War Fund dollar.

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# THE VORTEX BLASTER MAKES WAR

A Novelette by





From the end of Time it came, a call for help as brave, as ageless as the very galaxies: "Save us or die, Vortex Blaster—but if you die, two worlds shall perish with you!"







#### CHAPTER ONE

Storm Cloud—the Vortex Blaster!

OCTOR NEAL CLOUD had once been a normal human being, gregarious and neighborly. He had been concerned as little with death as

is the normal human being. Death was an abstraction. It was inevitable, of course, but it could not actually touch him or affect him personally, except at some unspecified, unconsidered and remote future time.

For twenty uneventful years he worked

in the Atomic Research Laboratory of the Galactic Patrol, seeking a way to extinguish the "loose" atomic vortices resulting from the breaking out of control of atomic power plants. At home he had had wife Jo and their three kids—and what Jo had meant to him can be described adequately only in mathematical, not emotional terms. They had formed practically a closed system.

Hence, when a loose atomic vortex crashed to earth through his home, destroying in an instant everything that had made life worthwhile—Doctor Cloud had changed.

He had had something to live for; he had loved life. Then—suddenly—he had not, and he did not.

Cloud had always been a mathematical prodigy. Given the various activity values of a vortex at any instant, he knew exactly the "sigma" (summation) curve. Or, given the curve itself, he knew every individual reading of which it was composed—all without knowing how he did it. Nevertheless, he had never tried to blow out a vortex with duodec. He wanted to live, and it was a mathematical certainty that that very love of life would so impede his perceptions that he would die in the attempt.

Then came disaster. While still numb with the shock of it, he decided to blow out the oldest and worst vortex on Earth; partly in revenge, partly in the cold hope that he would fail and die, as so many hundreds of good men had already died.

But it was the vortex that died, not Cloud. It was a near thing, but when he was released from the hospital he found himself the most famous man alive. He was "Storm" Cloud, the Vortex Blaster—Civilization's only vortex blaster!

He had now extinguished hundreds of the things. The operation, once so thrilling to others, had become a drab routine to him.

But he had not recovered and never

would recover a normal outlook upon life. Something within him had died with his Jo, a vital something had been torn from the innermost depths of his being. That terrible psychic wound was no longer stamped boldly upon him for all to see—it no longer made it impossible for him to work with other men or for other men to work with him—but it was there.

Thus he preferred to be alone. Whenever he decently could, he traveled alone, and worked alone.

E was alone now, hurtling through a barren region of space toward Rift Seventy-one and the vortex which was next upon his list. In the interests of time-saving and safety—minions of the Drug Syndicate had taken him by force from a passenger liner not long since, in order to save from extinction a vortex which they were using in their nefarious business—he was driving a light cruiser converted to one-man control. In one special hold lay his vortex-blasting flitter; in others were his vast assortment of duodec bombs and other stores and supplies.

And as he drove along through those strangely barren, unsurveyed wastes, he thought, as always, of Jo. He had not as yet actually courted death. He had not considered such courting necessary. Everyone had supposed, and he himself hoped, that a vortex would get him in spite of everything he could do. That hope was gone—it was as simple to blow out a vortex as a match.

But it would be so easy to make a slip—and a tiny little bit of a slip would be enough. . . . No, the Vortex Blaster simply couldn't put such a black mark as that on his record. But if something else came along he might lean just a trifle toward it. . . .

A distress call came in, pitifully, woefully weak—the distress call of a warm-blooded oxygen-breather!

It would have to be weak, upon his low-powered apparatus, Cloud reflected, as he sprang to attention and began to manipulate his controls. He was a good eighty-five parsecs—at least an hour at maximum blast—from the nearest charted traffic route.

He could not possibly get there in time. When anything happened in space it usually happened fast—it was almost always a question of seconds, not of hours. Cloud worked fast, but even so he had no time even to acknowledge—he was just barely in time to catch upon his communicator-plate a tiny but brilliant flash of light as the frantic sending ceased.

Whatever had occurred was already history.

Nevertheless, he had to investigate. He had received the call and it was possible, even probable, that no other spaceship had been within range. Law and tradition were alike adamant that every such call must be heeded by any vessel receiving it, of whatever class or upon whatever mission bound. He hurled out a call of his own, with all of his small power. No reply—the ether was empty.

Driving toward the scene of catastrophe at max, Cloud did what little he could do. He had never witnessed a space emergency before, but he knew the routine.

There was no use whatever in investigating the wreck itself. The brilliance of the flare had been evidence enough to the physicist that that vessel and everything too near it had ceased to exist. It was lifeboats he was after. They were supposed to stick around to be rescued, but out here they probably would not—they would head for the nearest planet to be sure of air. Air was far more important than either water or food—and lifeboats, by the very nature of things, could not carry enough air.

Approaching the charted spot, he sent out the universal "survivors?" call and swept all nearby space with his detectors—fruitlessly.

But this was not conclusive. Since his cruiser was intended solely to get him safely from one planet to another, he had only low-power, short-range detectors. Of course, his communicator, weak as it was, could reach two or three times as far as any lifeboat could possibly be—but he had heard more than once of lifeboats, jammed full of women and children, being launched into space without anyone aboard who could operate even a communicator.

It required only a few minutes to pick out the nearest sun. As he shot toward it he kept his detectors fanning out ahead, combing space mile by plotted cubic mile. And when he was halfway to that sun his plate revealed a lifeboat.

It was very close to the solar system toward which Cloud was blasting—entering it—nearing one of the planets. Guided by his plate, he drove home a solid communicator beam.

Still no answer!

Either the lifeboat did not have a communicator—some of the older types didn't—or else it was smashed, or nobody aboard could run it. He'd have to keep his plate on them and follow them down to the ground.

But what was that? Another boat on the plate? Not a lifeboat—too big, but not big enough to be a regular spaceship. It was coming out from the planet, apparently. To rescue? No—what the hell! The lug was beaming the lifeboat!

"Let's go, you sheet-iron lummox!" the Blaster cried aloud, kicking in his every remaining watt of drive. Then, eyes upon his plate, he swore viciously, corrosively.

#### CHAPTER TWO

#### The Boneheads of Dhil

HE planet Dhil and its enormous satellite, called "Lune" in lieu of the utterly unpronounceable name its inhabitants gave it, are almost twin worlds, revolving about their common center of gravity and circling as one about their sun in its second orbit. In the third orbit revolves Uhal, a planet strikingly similar to Dhil in every respect of gravity, atmosphere, and climate. Furthermore, Dhilians and Uhalians are, to all interests and purposes, identical.\*

In spite of these facts, however, the two peoples had been at war with each other, most of the time, for centuries. Practically all of this warfare had been waged upon luckless Lune.

Each race was well advanced in science, and each had atomic power, offensive beams, defensive screens. Neither had even partial inertialessness, neither had ever driven a spaceship to any other solar system, neither had ever heard of Galactic Civilization.

At this particular time peace of a sort existed. More precisely, it was a truce of exhaustion and preparation for further strife. It was a fragile thing indeed, and existed only upon the surface. Beneath, the conflict raged as bitterly as ever. The discovery by the scientists, inventors or secret service of either world of any superior artifice of destruction would kindle the conflagration anew, without warning.

Such was the condition obtaining when Darjeeb of Uhal blasted his little space-ship upward away from Lune. He was glowing with pride of accomplishment, suffused with self-esteem. Not only had he touched off an inextinguishable atomic flame exactly where it would do the most

\*For the explanation of these somewhat peculiar facts, which is too long to go into here, the reader is referred to Transactions of the Plan-

etographical Society; Vol. 283, No. 11, p. 2745.

good, but as a crowning achievement he had taken and was now making off with no less a personage than Luda of Dhil herself—the coldest, hardest, most efficient Minister of War that the planet Dhil had ever had!

Now, as soon as they could extract certain facts from Luda's mind, they could take Lune in short order. Then, with Lune definitely theirs to use as a permanent base, Dhil could not possibly hold out for more than a couple of years or so. The goal of generations would have been reached—he, Darjeeb, would have wealth, fame and—best of all—power!

Gazing gloatingly at his furiously radiating captive with every eye he could bring to bear, Darjeeb strolled over to inspect again her chains and manacles. Let her radiate!

She could not touch his mind; no mentality in existence could break down his barriers.

But physically, she had to be watched. Those irons were strong, but so was Luda. If she could succeed in breaking free he would very probably have to shoot her, which would be a very bad thing indeed. She had not caved in yet, but she would. When he got her to Uhal, where the proper measures could be taken, she would give up every scrap of knowledge she had ever had!

The chains were holding, all eight of them, and Darjeeb kept on gloating as he backed toward his control station. To him Duda's shape was normal enough, since his own was the same, but in the sight of a Tellurian she would have appeared more than a little queer.

The lower part of her resembled more or less closely a small elephant, one weighing perhaps three hundred and fifty pounds. There were, however, differences. The skin was clear and fine, delicately tanned; there were no ears or tusks; the neck was longer. The trunk was shorter, divided at the tip to form a highly capable

hand; and between the somewhat protuberant eyes of this "feeding" head there thrust out a boldly Roman, startlingly human nose. The brain in this head was very small, being concerned only in the matter of food.

Above this not-too-unbelievable body, however, all resemblance to anything Terrestrial ceased. Instead of a back there were two mighty shoulders, fore and aft, from each of which sprang two tremendous arms, like the trunk except longer and stronger. Between those massive shoulders there was an armored, slightly retractile neck which carried the heavily armored "thinking" head. In this head there were no mouths, no nostrils. The four equally-spaced pairs of eyes were protected and shielded by heavy ridges and plates. The entire head, except for its juncture with the neck, was solidly sheathed with bare, hard, thick, tough

Darjeeb's amazing head shone a clean-scrubbed white. But Luda's—the eternal feminine!—was really something to look at. It had been sanded, buffed, and polished. It had been inlaid with bars and strips and scrolls of variously colored noble metals and alloys; then decorated tastefully in red and green and blue and black enamel—then, to cap the climax, lacquered!

But that was old stuff to Darjeeb. All that he cared about was the tightness of the chains immobilizing Luda's every hand and foot. Seeing that they were all tight, he returned his attention to his plates. For he was not yet in the clear. Any number of enemies might be blasting off after him at any minute....

A LIGHT flashed upon his panel—something was in the ether. Behind him everything was clear. Nothing was coming from Dhil. Ah, there it was—coming in from open space. Nothing could move that fast, but this thing, what-

ever it might be, certainly was. It was a space-craft of some kind. And, gods of the ancients, how it was coming!

As a matter of fact the lifeobat was coming in at less than one light, the merest crawl, as space-speeds go. Otherwise Darjeeb could not have seen it at all. Even that velocity, however, was so utterly beyond anything known to his solar system that the usually phlegmatic Uhalian sat spellbound—appalled—for a fraction of a second. Then every organ leaping convulsively in the realization that that incredible thing was actually happening, he drove one hand toward a control.

Too late—before the hand had covered half the distance, the incomprehensibly fast ship had struck his own in direct central impact. In fact, before he even realized what was happening it was all over! The strange vessel had struck and had stopped dead-still—without a jar or shock, without even a vibration!

Both ships should have been blasted to atoms—but there the stranger was, poised motionless beside him. Then, under the urge of a ridiculously tiny jet of flame, she leaped away, covering a distance of miles in the twinkling of an eye. Then something else happened. She moved aside, drifting heavily backward against the stupendous force of her full driving blast!

As soon as he recovered from his shock, Darjeeb's cold, keen brain began to function in its wonted fashion.

Only one explanation was possible inertialessness!

What a weapon! With that and Luda—even without Luda—the solar system was his. No longer was it a question of Uhal overcoming Dhil. With inertialessness, he himself would become the dictator, not only of Uhal and Dhil and Lune, but also of all the worlds within reach.

That vessel and its secrets *must* be his! He blasted, then, to match the inert velocity of the smaller craft. As his ship crept toward the other he reached out both telepathically—he could neither speak nor hear—and with a spy-ray, to determine the most feasible method of taking over this godsend.

Bipeds! Peculiar little beasts—repulsive. Only two arms and two eyes—only one head. Weak, soft, fragile, but they might have weapons. No, no weapons—good! Couldn't any of them communicate? Ah yes, there was one—an unusually thin, reed-like specimen, bundled up in layer after layer of fabric. . . .

I perceive that you are the survivors of some catastrophe in outer space. Tell your pilot to open up, so that I may come aboard and guide you to safety, Darjeeb began. He correlated instantly, if unsympathetically, the smashed panel and the pilot's bleeding head. If the creature had had a real head it could have wrecked a dozen such things with it without getting a scratch. Hurry! Those may come at any moment who will destroy all of us without palaver.

I am trying, sir, but I cannot get through to him direct. It will take a few moments, the strange telepathist replied. She began to wave rhythmically her peculiar arms, hands, and fingers. Others of the outlanders brandished their members and made repulsive motions with their ridiculous mouths. Finally—

He says that he would rather not, the interpreter reported. He asks you to go ahead. He will follow you down.

Impossible—we cannot land upon this world or upon its primary, Dhil, Darjeeb argued, reasonably. These people are enemies—savages—I have just escaped from them. It is death to attempt to land anywhere in this system except upon my home planet Uhal—that bluish one.

Very well, then, we'll see you over there. We are just about out of air, but it will take only a minute or so to reach Uhal.

But that would not do either, of course.

Argument took too much time. He would have to use force, and he had better call up reenforcements. Darjeeb hurled mental orders to a henchman far below, threw out his magnetic grapples, and turned on a broad, low-powered beam.

Open up or die! he ordered. I do not want to blast you open—but time presses, and I will do so if I must!

That treatment was effective, as the Uhalian had been pretty certain that it would be. Pure heat is hard to take. The outer portal opened and Darjeeb, after donning his armor and checking his raygun, picked Luda up and swung non-chalantly out into space. Luda was tough enough so that a little vacuum wouldn't hurt her—much. Inside the lifeboat he tossed his trussed-up captive into an unoccupied corner and strode purposefully toward the control board.

I want to know—right now—what it is that makes this ship to be without inertia, he radiated harshly.

The Chickladorian at the board—the only male aboard the lifeboat—was very plainly in bad shape. He had been fighting off unconsciousness for hours. The beaming had not done him a bit of good. Nevertheless he paid no attention to the invading monstrosity's relayed demand, but concentrated what was left of his intelligence upon his visibeam communicator.

"You'll have to hurry it up," he said quietly, in "spaceal", the lingua franca of deep space. "The ape's aboard and means business. I'm blacking out, I'm afraid, but I've left the lock open for you. Take over, pal!"

Darjeeb had been probing vainly at the pink biped's mind. Most peculiar a natural mind-block of tremendous power!

Tell him to give me what I want to know or I will squeeze it out of his very brain, he directed the Manarkan girl.

As the order was being translated he slipped an arm out of his suit and clamped one huge hand around the pilot's head. But just as he made contact, before he had applied any pressure at all, the weakling fainted—went limp and useless.

Simultaneously, he saw in the visiplate that another ship, neither Uhalian nor Dhilian, had arrived and had locked on.

He tautened as two of his senses registered disquieting tidings. He received, as plainly as though it were intended for him, a welcome which the swaddled-up biped was radiating in delight at an unexpected visitor. He saw that that visitor, now entering the compartment, while a biped, was in no sense on a par with the frightened, helpless, wholly innocuous creatures already cluttering up the room. Instead, it was armed and armored—in complete readiness for strife even with Darjeeb of Uhal!

The Bonehead swung his ready weapon—with his build, he had no need, ever, to turn or whirl to face danger—and pressed a stud. A searing lance of flame stabbed out at the over-bold intruder. Passengers screamed and fled into whatever places of safety were available.

#### CHAPTER THREE

#### DeLameters and Space-Axe!

LOUD wasted no time in swearing; he could swear and act simultaneously. He flashed his cruiser up near the lifeboat, went inert, and began to match velocities even before the Uhalian's heat-beam expired. Since his intrinsic was not very far off, as such things go, it wouldn't take him very long, and he'd need all the time to get ready for what he had to do. He conferred briefly with the boat's Chickladorian pilot upon his visual, then thought intensely.

He would have to board the lifeboat —he didn't see any other way out of it.

Even if he had anything to blast it with, he couldn't without killing innocent people. And he didn't have much offensive stuff; his cruiser was not a warship. She carried plenty of defense, but no heavy offensive beams at all.

He had two suits of armor, a G-P regulation and his vortex special, which was even stronger. He had his DeLameters. He had four semi-portables and two needle-beams, for excavating. He had thousands of duodec bombs, not one of which could be detonated by anything less violent than the furious heart of a loose atomic vortex.

What else? Nothing—or yes, there was his sampler. He grinned as he looked at it. About the size of a tack-hammer, with a needle point on one side and a razor blade on the other. It had a handle three feet long. A deceptive little thing, truly, for it weighed fifteen pounds and that tiny blade could shear through neocarballoy as cleanly as a steel knife slices through cheese. It was made of dureum, that peculiar synthetic which, designed primarily for use in hyper-spatial tubes, had become of wide utility. Considering what terrific damage a Valerian could do with a space-axe, he should be able to do quite a bit with this. It ought to qualify at least as a space-hatchet!

He put on his special armor, set his De-Lameters to maximum intensity at minimum aperture, and hung the hatchet upon a hook at his belt. He eased off his blasts —there, the velocities matched. A minute's work with needle-beam, tractors and pressors sufficed to cut the two smaller ships apart and to dispose of the Uhalian's magnets and cables. Another minute of careful manipulation and the cruiser had taken the Uhalian's place. He swung out, locked the cruiser's outer portal behind him, and entered the lifeboat.

As Cloud stepped into the boat's saloon he was met by a lethal, high-intensity beam. He had not really expected such an instantaneous, undeclared war, but he was ready for it.

Every screen he had was full out, his left hand held poised and ready at his hip on a screened DeLameter. His return blast was practically a reflection of Darjeeb's bolt, and it did vastly more damage, for the Uhalian had made an error!

The hand which held the ray-gun was the one which had been manhandling the pilot, and the monster had not had time, quite, to get it back inside his screens. In the fury of Cloud's riposte, gun and hand disappeared, as did a square foot of panel behind them. But Darjeeb had other hands and other guns, and for seconds blinding rays raved out against unyielding defensive screens.

Neither screen went down. The Tellurian holstered his DeLameter. It would not take much of this stuff, he reflected, to kill some of the passengers remaining in the saloon. He'd go in with his hatchet!

E lugged it up and leaped, driving straight forward at the flaming projectors, with all of his mass and strength going into the swing of his weapon. The enemy did not dodge, merely threw up a hand to flick aside with his gun-barrel the descending toy.

Cloud grinned fleetingly as he realized what the other must be thinking—that the man must be puny indeed to be making such ado in wielding such a tiny, trifling thing. For, to anyone not familiar with dureum, it is sheerly unbelievable that so much mass and momentum can possibly reside in so small a bulk.

Thus, when fiercely-driven cutting edge met opposing ray-gun, it did not waver or deflect. It scarcely even slowed. Through the metal of the gun that vicious blade sliced resistlessly, shearing off fingers as it sped. And on down, urged by everything Cloud's powerful frame could deliver. Through armor it punched, through the bony plating covering that

tremendous double shoulder, deep into the flesh and bone of the shoulder itself. So deep that its penetration was stopped only by the impact of the hatchet's haft against the armor.

Under the impetus of the man's furious attack both battlers went down. The unwounded Tellurian, however, was the first to recover control. Cloud's mailed hands were still clamped to the sampler's grips, and, using his weapon as a staff, he scrambled to his feet. He planted one steel boot upon the helmet's dome, got a momentary stance with the other thrust into the angle between barrel body and flailing leg, bent his burly back and heaved. The deeply-embedded blade tore out through bone and flesh and metal—and as it did so the two rear cabled arms dropped limp, useless!

That mighty rear shoulder and its appurtenances were thoroughly hors du combat. The monster still had one good hand, however—and he was still in the fight!

That hand flashed out, to seize the hatchet and to wield it against its owner. It was fast, too—but not quite fast enough. The man, strongly braced, yanked backward, the weapon's needle point and keen blade tearing through flesh and snicking off clutching fingers as it was hauled away. Then Cloud swung his axe aloft and poised, making it abundantly clear that the next stroke would be straight down into the top of the Uhalian's head.

That was enough. The monster backed away, every eye aglare, and Cloud stepped warily over to the captive, Luda. A couple of strokes of his trenchant sampler gave him a length of chain. Then, working carefully to keep his wounded foe threatened at every instant, he worked the chain into a tight loop around Darjeeb's neck, pulled it unmercifully taut around a stanchion, and welded it there with his DeLameter.

Nor did he trust the other monster un-

reservedly, bound though she was. In fact, he did not trust her at all. In spite of family rows, like has a tendency to fight with like against a common foe! But since she was not wearing armor, she didn't stand a chance against a De-Lameter. Hence, he could now take time to look around the saloon.

The pilot, lying flat upon the floor, was beginning to come to. Not quite flat, either, for a shapely Chickladorian girl, wearing the forty-one square inches of covering which was de rigeur in her eyes, had his head cushioned upon one bare leg, and was sobbing gibberish over him. That wouldn't help. Cloud started toward the first-aid cabinet, but stopped. A whitewrapped figure was already bending over the injured man, administering something out of a black bottle. He knew what it was-kedeselin. That was what he had been going after himself, but he would not have dared to give even a hippopotamus such a terrific jolt as she was pouring into him. She must be a nurse and a topranker—but Cloud shivered in sympathy.

The pilot stiffened convulsively, then relaxed. His eyes rolled; he gasped and shuddered; but he came to life and sat up groggily.

HAT goes on here?" Cloud demanded ungently, in spaceal. The Chickladorian's wounds had already been bandaged. Noth-

ing more could be done for him until they could get him to a hospital, and he *had* to report before he blacked out entirely.

"I don't know," the pink man made answer, recovering by the minute. "All the ape said, as near as I could get it, was that I had to show him all about inertialessness."

He then spoke rapidly to the girl—his wife, Cloud guessed—who was still holding him fervently.

The pink girl nodded. Then, catching Cloud's eye, she pointed at the two monstrosities, then at the Manarkan nurse standing calmly near by. Startlingly slim, swathed to the eyes in billows of glamorette, she looked as fragile as a reed-but Cloud knew that appearances were highly deceptive in that case. She, too, nodded at the Tellurian, then talked rapidly in sign language to a short, thick-muscled woman of some race entirely strange to the Blaster. She was used to going naked; that was very evident. She had been wearing a light robe of convention, but it had been pretty well demolished in the melee and she did not realize that what was left of it was hanging in tatters down her broad back. The "squatty" eyed the gesticulating Manarkan and spoke in a beautifully modulated, deep bass voice to the Chickladorian eyeful, who in turn passed the message along to her husband.

"The bonehead you had the argument with says to hell with you," the pilot,



translated finally into spaceal. "Says his mob will be out here after him directly, and if you don't cut him loose and give him all the dope on our Bergs he'll give us all the beam—plenty."

Luda was, meanwhile, trying to attract attention. She was bouncing up and down, rattling her chains, rolling her eyes, and in general demanding notice of all.

More communication ensued, culminating in, "The one with the fancy-worked skull—she's a frail, but not the other bonehead's frail, I guess—says pay no attention to the ape. He's a murderer, a pirate, a bum, a louse, and so forth, she says. Says to take your axe and cut his damn head clean off, chuck his carcass out the port, and get to hell out of here as fast as you can blast."

Cloud figured that that might be sound advice, at that, but he didn't want to take such drastic steps without more comprehensive data.

"Why?" he asked.

But this was too much for the communications relays to handle. Cloud realized that he did not know spaceal at all well, since he had not been out in deep space very long. He knew that spaceal was a simple language, not well adapted to the accurate expression of subtle nuances of meaning. And all those intermediate translations were garbling things terrifically. He was not surprised that nothing much was coming through, even though the prettied-up monster was by this time practically throwing a fit.

"She's quit trying to spin her yarn," the Chickladorian said finally. "She says she's been trying to talk to you direct, but she can't get through. Says to unseal your ports—cut your screens—let down your barrier—something like that. Don't know what she does mean, exactly. None of us does except maybe the Manarkan, and she can't get it across on her fingers."

"Oh, my thought-screen!" Cloud exclaimed, and cut it forthwith.

"More yet," the pilot went on, after a time. "She says there's another one, just as bad or worse. On your head, she says—no, on your head-bone—what the hell! Skull? No, inside your skull, she says now. Hell's bells, I don't know what she wants!"

"Maybe I do—keep still a minute." A telepath, undoubtedly, like the Manarkans—that was why she had to talk to her first. He'd never been around telepaths much—never tried it. He walked a few steps and stared directly into one pair of Luda's eyes. Large, expressive eyes, soft now, and gentle.

"That's it, Chief! Now blast easy—baffle your jets. Relax, she means. Open your locks and let her in!"

LOUD did relax, but gingerly. He did not like this mind-to-mind stuff at all, particularly when the other mind belonged to such a monster. He lowered his mental barriers skittishly, ready to revolt at any instant. But as soon as he began to understand the meaning of her thoughts he forgot utterly that he was not talking man to man. The interchange was not as specific nor as facile as is here to be indicated, of course, but every detail was eventually made perfectly clear.

"I demand Darjeeb's life!" was her first intelligible thought. "Not because he is my enemy and the enemy of all my race—that would not weigh with you—but because he has done what no one else, however base, has ever been so lost to shame as to do. In the very capital of our city upon Lune he kindled an atomic flame which is killing us in multitudes. In case you do not know about atomic flames, they can never be—"

"I know—we call them loose atomic vortices. But they can be extinguished. That is my business, putting them out."

"Oh—incredible but glorious news!" Luda's thoughts seethed, became incom-

prehensible. Then, after a space, "To win your help for my race I perceive that I must be completely frank with you," she went on. "Observe my mind closely, please, so that you may see for yourself that I am withholding nothing. Darjeeb wants at any cost the secret of your vessels' speed. With it his race will destroy mine utterly. I want it too, of course—if I could obtain it we would wipe out the Uhalians. However, since you are so much more powerful than could be believed possible, I realize that I am helpless. I tell you, therefore, that both Darjeeb and I have long since summoned help. Warships of both sides are approaching to capture one or both of these vessels. Darjeeb's are nearest, and these secrets must not, under any conditions, go to Uhal. Dash out into space with both of these vessels, so that we can plan at leisure. First, however, kill that unspeakable murderer. You have scarcely injured him the way it is. Or, free me, give me that so-deceptive little axe, and I will be · only too glad-"

A chain snapped ringingly, and metal clanged against metal. Only two of Darjeeb's major arms had been incapacitated; his two others had lost only a few fingers apiece from their respective hands. His immense bodily strength was almost tinimpaired; his feeding hand was untouched. He could have broken free at any time, but he had waited, hoping that he could take Cloud by surprise or that some opportunity would arise for him to regain control of this lifeboat. But now, deeming it certain that the armored biped would follow Luda's eminently sensible advice, he decided to let inertialessness go for the time being, in the interest of saving his own life.

"Kill him!"

Luda shrieked the thought and Cloud swung his weapon aloft. But Darjeeb was not attacking. Instead, he was rushing into the airlock—escaping! "Go free, pilot!" Cloud commanded, and leaped; but the heavy valve swung shut before he could reach it.

As soon as the lock could be operated the Tellurian went through it. He knew that Darjeeb could not have boarded the cruiser, since every port was locked. He hurried to his control room and scanned space. There the Uhalian was, falling like a plummet under the combined forces of his own drive and the gravitations of two worlds. There also were a dozen or so spaceships, too close for comfort, blasting upward.

Cloud cut in his Bergenholm, kicked on his driving blasts, cut off, and went back into the lifeboat.

"Safe enough now," he announced.
"They'll never get out here inert. I'm surprised that he jumped—didn't think he was the type to kill himself."

"He isn't. He didn't," Luda said, dryly.

"Huh? He must have! That was a mighty long flit he took and his suit wouldn't hold air."

"He would stuff something into the holes—if necessary he could make it the whole distance without either air or armor. He is tough. He still lives—curse him! But it is of no use for me to bewail that fact now. Let us make plans. You must extinguish that flame and the leaders of our people will have to convince you that—"

"Just a sec—quite a few things we've got to do first." He fell silent.

First of all, he had to report to the Patrol, so that they could get Lensmen and a battle fleet out here to straighten up this mess. With his short-range communicators, that would take some doing—but wait, he had a double-ended tight beam to the Laboratory. He could get through on that, probably, even from here. He'd have to mark the lifeboat as a derelict and get these folks aboard his cruiser. No space-tube. He had an extra suit,

so he could transfer the women easily enough, but this Luda. . . .

"Don't worry about me!" that entity cut in, sharply. "You saw how I came aboard here, didn't you? I do not particularly enjoy breathing a vacuum, but I can stand it—I am as tough as Darjeeb is. So hurry, please hurry. During every moment we delay, more of my people are dying!"

#### CHAPTER FOUR

#### Two Worlds for Conquest!

HEN LUDA had given him the entire picture, Cloud saw that it was far from bright. Darjeeb's coup had been planned with surpassing care and been executed brilliantly; his spies and fifth columnists had known exactly what to do and had done it in perfect synchronization with the armed forces striking from without. Drugged, betrayed by her own officers, Luda had been carried off without a struggle. She did not know just how far-reaching the stroke had been, but she feared that most of the fortresses were now held by the enemy.

Uhal probably had the advantage in numbers and in power of soldiers and warships then upon Lune—Darjeeb would not have made his bid unless he had been able in some way to get around the treaty of strict equality in armament. Dhil was, however, much the nearer of the two worlds. Therefore, if this initial advantage could be overcome. Dhil's main forces could be brought into action much sooner than could the enemy's. And if, in addition, the vortex could be extinguished before it had done too much irreparable damage, neither side would have any real tactical advantage and the conflict would subside instead of flaring up into another world-girdling holocaust.

Cloud would have to do something, but what? That vortex had to be snuffed

out—but defended as it was by Uhalians in the air and upon the ground, how could he make the approach?

His vortex-bombing flitter was screened only against the frequencies of atomic disintegration; she could not ward off for a minute the beams of even the feeblest ship of war. His cruiser was clothed to stop anything short of a mauler's primary blasts, but there was no possible way of using her as a vehicle from which to bomb the vortex out of existence. He had to analyze the thing first, preferably from a fixed ground-station. Then, too, his special instruments were all in the flitter, and the cruiser had no bomb-tubes.

How could he use what he had to clear a station? The cruiser had no offensive beams, no ordinary bombs, no negabombs.

"Draw me a map, will you please, Luda?" he asked.

She did so. The cratered vortex, where an immense building had once been; the ring of fortresses, two of which were unusally far apart, separated by a parkway and a shallow lagoon.

"Shallow? How deep?" Cloud interrupted. She indicated a depth of a couple of feet.

"That's enough map then—thanks." The physicist ruminated. "You seem to be quite an engineer. Can you give me details on your power-plants, screen-generators, and so on?" She could. Complex mathematical equations flashed through his mind, each leaving a residue of fact.

"Can be done, maybe—depends." He turned to the Chickladorian.

"Are you a pilot, or just an emergency assignment?"

"Pilot—master pilot. Rating unlimited, tonnage or space."

"Good! Think you're in shape to take three thousand centimeters of acceleration?"

"Pretty sure of it. If I was right I could take it standing on my head without a harness, and I'm feeling better all the

time. Let's hot her up and find out."
"Not until after we've unloaded the passengers somewhere." Cloud went on, with the aid of Luda's map, to explain exactly what he had in mind.

FRAID it can't be done." The pilot shook his head glumly. "Your timing has got to be too ungodly fine. I can do the piloting—determine power-to-mass ratio, measure the blast, and so on. I'm not afraid of balancing her down on her tail. I can hold her steady to a centimeter, but piloting's only half the job you want. Pilots don't ever land on a constant blast, and the leeway you allow here is damn near zero. To hit it as close as you want, your timing has got to be accurate pretty near to a tenth of a second. You don't know it, friend, but it'd take a master computer an hour to—"

"I know all about that. I'm a master computer and I'll have everything figured. I'll give you your zero in plenty of time."

"QX, then—what are we waiting for?"
"To unload the passengers. Luda, do you know of a place where they will be safe? And maybe you had better send a message to Dhil, to call out your army and navy. We can't blow out that vortex until we control the city, both in the air and on the ground."

"That message was sent long since. They are even now in space. We will land your women there." She pointed to a spot upon the plate,

They landed, but three of the women would not leave the vessel. The Manarkan declared that she had to stay aboard to take care of the patient. What would happen if he passed out again, with nobody except laymen around? She was right, Cloud conceded. And she could take it. She was a Manarkan, built of whalebone and rubber. She would bend under 3+G's, but she wouldn't break.

The squatty insisted upon staying.

Since when had a woman of Tominga hidden from danger or run away from a good fight? She could help the pilot hold his head up through an acceleration that would put Cloud into a pack—or give her that dureum axe and she'd show him how it ought to be swung!

The Chickladorian girl, too, remained aboard. Her eyes—not pink, but a deep, cool green, brimming with unshed tears—flashed at the idea of leaving her man to die alone. She just knew that they were all going to die. Even if she couldn't be of any use, even if she did have to be in a hammock, what of it? If her Thlaskin died she was going to die too, and that was all there was to it. If they made her go ashore she'd cut her own throat right then, so there!

And that was that.

A dozen armed Dhilians came aboard, as pre-arranged, and the cruiser blasted off. Then, while Thlaskin was maneuvering inert, to familiarize himself with the controls and to calibrate the blast, Cloud brought out the four semi-portable projectors. They were frightful weapons, so heavy that it took a strong man to lift one upon Earth. So heavy that they were designed to be mounted upon a massive tripod while in use. They carried no batteries or accumulators, but were powered by tight beams from the mother ship.

Luda was right; such weapons were unknown in that solar system. They had no beam transmission of power. The Dhilian warriors radiated glee as they studied the things. They had more powerful stuff, of course, but it was all fixed-mount, wired solid and far too heavy to move. This was wonderful—these were magnificent weapons indeed!

IGH above the stratosphere, inert, the pilot found his exact location and flipped the cruiser around, so that her stern pointed directly toward his objective upon the planet beneath. Then,

using his forward, braking jets as drivers, he blasted her straight downward. She struck atmosphere almost with a thud. Only her fiercely-driven meteorite-screens and wall-shields kept her intact.

"I hope you know what you're doing, chum," the pilot remarked conversationally as the scene enlarged upon his plate with appalling rapidity. "I've made hot landings before, but I always figured on having a hair or two of leeway. If you don't hit this to a hundredth we're going to splash when we strike—we won't bounce!"

"I can compute zero time to a thousandth and I can set the clicker to within a hundredth, but it's you that'll have to do the real hitting." Cloud grinned back at the iron-nerved pilot. "Sure a four-second call is enough for you to get your rhythm, allow for reaction-time and lag, and blast exactly on the click?"

"Absolutely. If I can't get it in four I can't get it at all. Pretty close now, ain't it?"

"Uh-huh." Cloud, staring at the electro-magnetic reflection-altimeter which indicated continuously their exact distance above objective, began to sway his shoulders. He was more than a master computer. He knew, without being able to explain how he knew, every mathematical fact and factor of the problem. Its solution was complete. He knew the exact point in space and the exact instant in time at which the calculated deceleration must begin; by the aid of the sweep second-hand of the chronometer-one full revolution of the dial every second—he was now setting the clicking mechanism so that it would announce that instant. His hand swayed back and forth-a finger snapped down-and the sharp-toned instrument began to give out its crisp, precisely-spaced clicks.

"Got it on the hair!" Cloud snapped. "Get ready, Thlaskin. Seconds! Four! Three! Two! One! Click!"

Exactly upon the click the cruiser's driving blasts smashed on. There was a cruelly wrenching shock as everything aboard acquired suddenly a more-than-three-times-Earthly weight.

The Dhilians merely twitched. The Tomigan, standing behind the pilot's seat, supporting and steadying his wounded head in its rest, settled almost imperceptibly, but her firmly gentle hands did not yield a millimeter. The nurse sank deeply into the cushioned bench upon which she was lying, her quick, bright eyes remaining fixed upon her patient. The Chickladorian girl, in her hammock, fainted quietly.

And downward the big ship hurtled, tail first, directly toward the now glowing screens of a fortress. Driving jets are not orthodox weapons. But properly applied, they can become efficient ones indeed, and these were being applied with micrometric exactitude.

Down—down down! The frantic Uhalians thought that it was crashing—thought it a suicide ship. Nevertheless, they fought it. The threatened fortress and its neighbors hurled out their every beam; the Uhalian ships dived frantically at the invader and tried their best to blast her down.

In vain. The cruiser's screens carried the load effortlessly.

Down she drove. The fortress' screens flamed ever brighter, radiating ever higher under the terrific bombardment. Closer—hotter! Nor did the frightful blast waver appreciably; the Chickladorian was a master pilot. Down!

"Set up a plus ten, Thlaskin," Cloud ordered quietly. "I missed it a bit—air density and the beams. Give it to her on the third click from . . . this!"

"Plus ten it is, sir-on!"

A bare hundred yards now, and the ship of space was still plunging earthward at terrific speed. The screens were furiously incandescent, but were still holding.

A hundred feet. Velocity appallingly

high, the enemy's screens still up. Something would have to give now. If that screen stood up, the ship must surely strike it, and vanish as she did so. But Thlaskin the Chickladorian made no move nor spoke no word to hike his blast. If the skipper was willing to bet his own life on his computations, who was he to squawk? But . . . was it possible that Cloud had miscalculated?

No! While the mighty vessel's driving projectors were still a few yards away the defending screens exploded into blackness. The full awful streams of energy raved directly into the structures beneath. Metal and stone glared white, then flowed—sluggishly at first, but ever faster and more mobile—then boiled coruscantly into vapor.

THE cruiser slowed—stopped—seemed to hang poised. Then slow-ly, reluctantly, she moved upward, her dreadful exhausts continuing the devastation.

"That's computin', mister," the pilot breathed. "To figure a dive like that right on the nose an' then to have the guts to hold her cold—skipper, that's computation!"

"All yours, pilot," Cloud demurred. "All I did was give you the dope—you're the guy that made it good."

High in the stratosphere the Chickladorian cut the acceleration to a thousand and Cloud took stock,

"Hurt, anybody?" Nobody was. "QX. We'll repeat, then, on the other side of the lagoon."

And as the cruiser began to descend upon the new course the vengeful Dhilian fleet arrived upon the scene. Looping, diving, beaming, often crashing in suicidal collision, the two factions went maniacally to war. Friend and foe alike, however, avoided the plunging Tellurian ship. That monster, they had learned, was a thing about which they could do nothing.

The second fortress fell exactly as the first had fallen, and as the pilot brought the cruiser gently to ground in the middle of the shallow lake, Cloud saw that the Dhilians, overwhelmingly superior in numbers now, had cleared the air of the ships of Uhal.

"Can you fellows and your ships keep them off of my flitter while I take my readings?" he demanded.

"We can," the natives radiated, happily. Four of the armored bone-heads were wearing the semi-portables. They had them perched lightly atop their feeding heads, held immovably in place by two huge arms apiece. One hand sufficed to operate the controls, leaving two hands free to whatever else might prove in order.

"Let us out!"

The lock opened, the Dhilian warriors sprang out and splashed away to meet the foot-soldiers who were already advancing into the lagoon.

Cloud watched pure carnage for a few minutes. He hoped—yes, there they were! The loyalists, seeing that their cause was not lost after all, had hastily armed themselves and were coming into the fray. There would be no tanks—the navy would see to that.

The Blaster broke out his flitter then, set it down near the vortex, and made his observations. Everything was normal. The sigma curve was the spectacularly unpredictable thing which he had come to expect. He selected three bombs from the cruiser's vast store, loaded them into the tubes, and lofted. He set his screens, adjusted his goggles, and waited, while far above him and wide around him his guardian Dhilian war-vessels toured watchfully, their drumming blasts a reassuring thunder.

He waited, eyeing the sigma curve as it flowed backward from the tracing pen, until finally he could get a satisfactory ten-second prediction. That is, he knew that ten seconds thence, the activity of the vortex would match, closely enough, one of his bombs. He shot his flitter forward, solving instantaneously the problems of velocity and trajectory. At exactly the correct instant he released the bomb. He swung his little bomber aside, went inertialess. . . .

HE bomb sped truly. Into that awful crater, through that fantastic hell of heat and of lethal radiation and of noxious gas. It struck the vortex itself, dead center. It penetrated just deeply enough. The extremely refractory casing of neocarballoy, so carefully computed as to thickness, held just long enough. The carefully-weighed charge of duodec exploded, its energy and that of the vortex combining in a detonation whose like no inhabitant of that solar system had even dimly imagined.

The gases and the pall of smoke and pulverized tufa blew aside; the frightful waves of fluid lava quieted down. The vortex was out and would remain out. The Vortex Blaster went back to his cruiser and stored his flitter away.

"Oh, you did it—thanks! I didn't believe, really, that you—that anybody—could do it!" Luda was almost hysterical in her joyous relief.

"Nothing to it," Cloud deprecated.
"How are your folks coming along with the mopping up?"

"Practically clean," Luda answered, grimly. "We now know who is who, I think. Those who fought against us or who did not fight for us very soon will be dead. But the Uhalian fleet comes. Does yours? Ours goes to meet it in moments."

"Wait a minute!" Cloud sat down at his plate, made observations and measurements, calculated mentally. He energized his longest-range communicator and conferred briefly.

"The Uhalian fleet will be here in seven hours and eighteen minutes. If your people go out to meet them it will mean a war that not even the Patrol can stop without destroying practically all of the ships and men you have in space. The Patrol flotilla will arrive in seven hours, thirty-one minutes. Therefore I suggest that you hold your fleet here, in formation but quiescent, under instructions not to move until you yourself signal them to do so, while you and I go out and see if we can't stop the Uhalians."

"Stop them?" Luda's thought was a distinctly unladylike one. "What with, pray?"

"I don't know," Cloud confessed, "but it wouldn't do any harm to try, would it?"

"No—probably not." And so it was done.

All the way out Cloud pondered ways and means. As the cruiser neared the onrushing fleet he sent a quick thought to Luda:

"Darjeeb is undoubtedly with that fleet. He knows that this is the only inertialess ship in this part of space. He wants it worse than he wants anything else in the universe. Now, if we could only make him listen to reason—if we could make him see—"

He broke off. No soap. You couldn't explain "green" to the blind. These folks didn't know and wouldn't believe what real power was. Any one of those oncoming Patrol super-dreadnoughts could blast both of these combined fleets clear out of space. Those primary beams were starkly incredible to anyone who had never seen them in action. The Uhalians didn't stand the chance of a fly under a mallet, but they would have to be killed before they'd believe it. A damned shame, too. The joy, the satisfaction, the real advancement possible only through cooperation with each other and with the millions of races of Galactic Civilization—if there were only some means of making them believeE—and they—do believe!"
Luda broke in upon his somber musings.

"Huh? What? You do? You were listening?" Cloud exclaimed.

"Certainly. At your first thought I put myself en rapport with Darjeeb, and he and his people—all of us—listened to your thoughts."

"But-you really believe me?"

"We believe, all of us, but some will cooperate only as far as it seems to serve their own ends to do so. Your Lensmen, if they are able to, will undoubtedly have to kill that insect Darjeeb and—"

The insulted Uhalian drove in a protesting thought, but Luda went calmly on, "You think, then, Tellurian, that your Lensmen can cope with even such as Darjeeb of Uhal?"

"I'll say they can!"

"It is well, then. Come aboard, Darjeeb—unarmed and unarmored, as I am. We will together go to confer with these visiting Lensmen of Galactic Civilization. It is understood that there is to be no warfare until our return."

"Holy Klono!" Cloud gasped. "He wouldn't do that, would he?"

"Certainly." Luda was surprised at the question. "Although he is an insect, and is morally and ethically beneath contempt, he is, after all, a reasoning being."

"QX." Cloud was dumbfounded, but tried manfully not to show it. "In that case everything can be settled without another blow being struck."

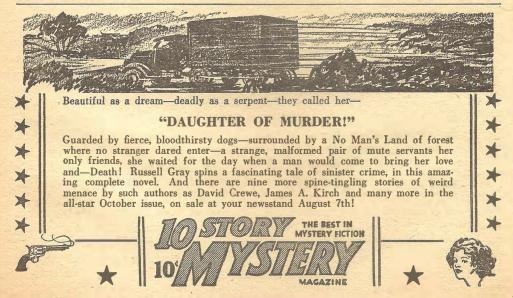
Darjeeb came aboard the cruiser. He was heavily bandaged and most of his hands were useless, but he apparently bore no ill-will whatever. Cloud gave orders; the ship flashed away to meet the oncoming Patrolmen.

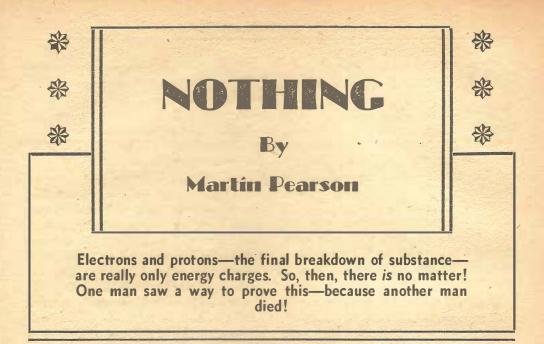
The conference was held, coming out precisely as Luda had foreseen. The fleets returned, each to its home world, and plenipotentiaries of Dhil and of Uhal held long meetings with the Lensmen.

"You won't need me any more, will you, Admiral?" Cloud asked, a few days later.

"No. Nice job, Cloud."

"Thanks. I think I'll be on my way, then—clear ether!" And the Vortex Blaster, after taking leave of his other new friends, resumed his interrupted voyage—having added another solar system to the fellowship of Galactic Civilization!





HE little man with the gray beard stared at me and I stared back at him. "This is getting us nowhere," I remarked, "nowhere at all."

He nodded and sat down on the hard stone. We were trapped under the building. The house had come down over us when the bomb landed in the street. The rest of the tenants were probably away or dead. Apparently only the little old man who lived on the second floor rear and I had gotten down to the bomb-proof cellar in time. And now we were trapped.

"We'll have to wait until they dig us out," I said. We couldn't possibly dig our own way out. Too much blocked us in. We were buried beneath tons of brick, rubbish and beams. They were probably busy in the street outside, trying to rescue the people in other, less-damaged buildings. Then again there might be fire, and the noise effectively blocked any chance of their hearing us.

I saw him only by the light of my little pocket flash. That wouldn't last very long. Our space was remarkably limited. This shelter had been a part of the cellar. It had been blocked off and roofed over, but even so, part of it fell in—the part with the supplies and stuff—the part opening on the exit.

"Well," I said, just to say something, "what do we do now? Sit around and wait to die?"

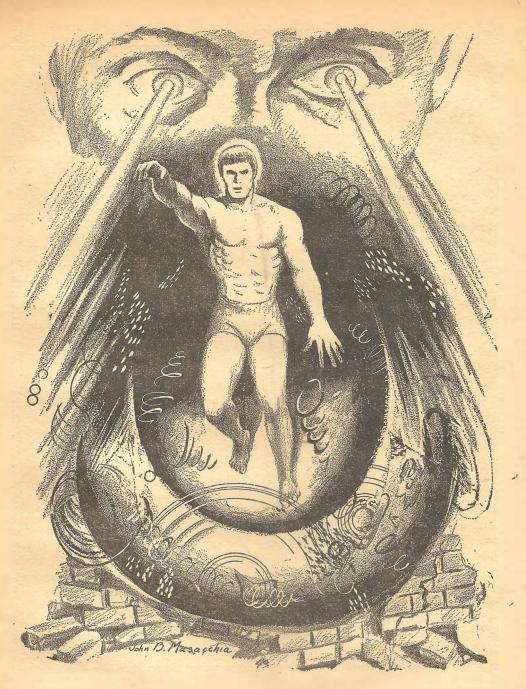
The little old man wrinkled his brow in thought. He didn't seem too worried about dying. I guess when you're his age and have a long gray beard you get reconciled to the prospect. But I was young, and frankly I didn't like the idea at all.

"I think I know a way," the little old man said finally, "but it will seem like madness. Probably it is. It's never been tried. It may never work."

I seized him by the lapels. "Any way is better than none. I'd rather die trying than sitting down moping my life away. Tell it to me."

"You won't laugh? You will take whatever I say seriously?" the little old man asked anxiously.

I saw he didn't want to die the object of scorn, and I saw also that he must have something pretty odd up his sleeve. "No," I answered, "you won't hear a peep out of me."



"Then," said the old man, "if you can prepare yourself, you could walk out through the rocks."

N SPITE of my promise, I gasped. But then I squelched myself and thought that if I was with a lunatic, I might as well make the most of it. He was now the other half of my universe and so standards had changed. Facing death, any straw will do.

"Proceed," I said. "Explain further."
"Rocks," said the little old man—I guess he must have been a scientist of

some sort—"and all other matter are composed of nothing mainly, with a little vibration thrown in."

I kept my mouth shut. I wasn't going to say anything to the contrary even if he claimed black was white.

"Matter," he went on, "is composed entirely of atom. Atoms are broken down to electrons and protons and their kin. They, in turn, appear to be nothing but charges of electricity, charges of energy, not matter. So that all matter is really just a manifestation of energy in a peculiar state of stress."

I waited. This made sense. I began to recognize some of the things I had learned years ago in high school physics.

"Between the vortices of energy which make up the building-blocks of matter, there are comparatively vast stretches of just plain empty space. Within the atom, almost all is vacuum. Between molecules, more vacuum. In a so-called solid mass, it could be demonstrated that less than a quadrillionth part of its mass has any reality and that only in the form of disturbances of energy. And that figure is grossly exaggerated."

I waited. This was still making sense. And anyway, when you are hopelessly trapped there is no sense in being impatient.

"If," went on the professor, "you understand this and project the picture of it in your mind, you can mentally resolve all things into swirls of nothingness, into less than air. If you can do so, you can attain complete control over your own body—for we alone are able to control our own masses by means of will.

"And if you can picture these masses of rock as pools of nothing and yourself as the same, you can pass yourself through these rocks as a whiff of smoke in air. You can revisualize yourself as solid outside this trapping pile."

I thought about it. Wild it was and yet based on real reasoning.

"If you will give your mind to me, let me hypnotize you with your cooperation, I think I can cause that to happen. You will then pass through the rocks and appear outside. Then you will send for me," he said.

I thought that over. "Why don't you do it yourself?" I asked.

"I am old and it is better done with an outside subject. Do not forget that this has never been done."

"Okay. Start," I said, suddenly making up my mind. I didn't want to die and I would do anything, however wild, to avoid it. When one sits alone in darkness beneath a ruined house and knows that there is no hope, a decision like this comes normally.

All is logical according to the conditions given.

I gave him my flashlight and he shone it in my eyes. Then he started weaving it and repeating what he had said about atoms and electrons and masses of nothing.

I watched him fascinated, and I thought of little whirlpools in empty black space. I saw flashing ripples on a void. I saw lone lights untended in nothingness and reflected from nothing. And I saw that they were glowing from nothing. Light, just light.

I saw a solitary mote pursuing an endless track across a vast area that was utter abyss.

Gradually the flashlight seemed to flicker and die. I felt wavy and mistlike. I understood the meaning of matter and I saw indeed that matter has very little real existence.

I felt that I was upon my feet, and they were long columns of imagination having no reality save for endless electric foam.

I felt myself moving forward and I felt other disturbances passing between me and around me and through me.

Then I saw that scenes were passing before my vision and the globules of vacua

that were my eyes seemed to register as they passed through other globules of vacua.

I saw what seemed like a tiny planet spinning on its axis, while a strange blue sun shone down and a dozen other planets swirled.

I saw a figure indescribable, mounted upon a thing incredible, pursuing the unknowable across a vast and meaningless place.

I saw dozens of things like this—none of which can be described. Once I saw a large machine with churning arms and it was all bubbly and yet hard and mechanical.

All about me moved a great current and a wave of feelingless substance.

Then I felt a beating of forces upon me. I felt a hammering at me and I felt a pressure pushing upon the whirling, imaginary pools of my being and a curious coldness setting in.

SHIVERED' and looked around. I was naked in the middle of the street; the stars were out and the drone of airplanes audible. People were running up and down and a hose was playing upon the front of a burning building. The wardens were digging in some ruins with crowbars and shovels.

A man came running up to me and threw a blanket over my trembling shoulders.

"Where'd you come from? Bomb blow your clothes off? It happens."

I pointed to the pile of bricks and junk that marked my house.

"There's a man buried in those ruins, but he's alive," I said. "Just trapped. You'll have to dig him out."

The warden blew his whistle and out of the turmoil three other men came with picks and equipment and began to dig.

But it was two days before they finally got to him—and by that time he was dead.



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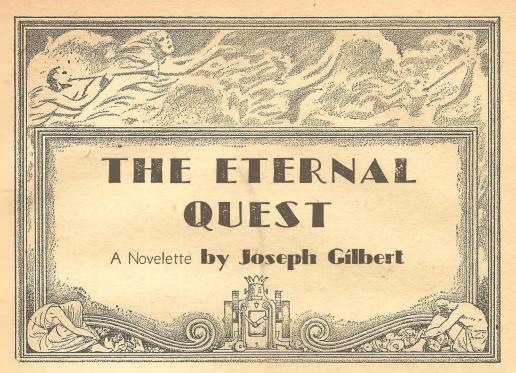
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HAVE come," said the little man, "a new Moses, to lead my people to the Promised Land." He said it slowly, with dramatic restraint. "Fate has led me to a star, and I have returned to show mankind the way to a thing it has not known for over a hundred years—hope!"

He was not quite five feet tall, with a chubby face and a beet-red nose, straw-colored hair, and mild gray eyes. He was nondescript. And it seemed very strange, somehow, that this ridiculous little man could stand there on that platform, with the gleaming majesty of that five-hundred-foot spaceship in the background dwarfing him—and facing that battery of telecasters, talk to two billion people and awaken in them a thing that had been dormant for a century or more.

He said, "We have died spiritually, and

the eternal quest of man for contentment has almost ceased—for he knows, in his barren, bitter heart that there is no contentment to find." He paused, and the tremendous crowd that filled the rocket-ground were weirdly silent, waiting. "No longer shall only the Space Patrol know the thrills of adventure and discovery. We, too . . . ."

R OBERT LAWRENCE smiled whimsically and cut off the televisor. It was almost impossible to hear the speaker, anyway, for no matter how well sound-proofed a Space Patrol ship is, the noise is still deafening to one not long accustomed to it. You can't stop the vibrations of an atomic engine.

Besides, the reference of the little man to the adventure and discovery of the Space Patrol was rather amusing to one

"This is my warning, mankind. Seek, if you will, a perfect world—but the day you find it will seal your own doom!"

who held that job, and was tired of it.

You took up a tight orbit around Mars and were bored to death for some four weeks, and then there was an order to intercept a gang of wild youngsters who had run past the Interplanetary Way Station without signaling, for the thrill of it.

Occasionally you sent out a call for a battle cruiser when you spotted a private ship that wouldn't answer your demand for call letters, and if part of the crew tried to run for it in the life rocket, you would chase them out as far as Venus before you got a magnetic grapple on them.

Then you risked your life, but it still wasn't much fun, because the crew was probably made up of a bunch of scatter-brained kids, with a hysterical finger on the trigger of their blasters, ready to kill instantly when you got them in the corner.

The rest of the time you dropped in on settlers who were sick and tried to bring them around; answered any call for help on the planet or in your sector of space; acted as a sort of watchdog; and wondered what the hell to do with yourself.

Still, it was the only life left for a strong, active man, and he had been following it for four years now and would certainly continue it until the little man's plans were carried out. And carried out they would be—of that he was confident. Proud, too. Proud that his quiet faith in the future of mankind had proven itself in spite of the contempt and cynical ridicule of some of the best minds in the decadent, dying Science Hall, where he had received his training for this job.

Not, he thought wryly, that they didn't have excellent reason for their cynicism. Few people had quite as much opportunity as he to see what was happening to the world, how effeminate its inhabitants were becoming. The patrol had been recently cut in half, not for any lack of material resources, but due rather to the fact that there weren't enough men to fill the ranks.

A man with sufficient stamina to be in

the Patrol, plus the necessary mental and emotional stability, was practically unobtainable. Perhaps, he mused, that was why men in the Patrol married so well; they were the very cream of mankind, the finest group of its kind on earth. But the thought of women and marriage brought the old hurt and the old memory, and he turned his attention to checking his unquestionably accurate course in an equally old and equally futile attempt to forget the past.

Finding it correct, as he had known it would be, he leaned back in his chair against the centrifugal push of the ship as it banked slightly and headed in for Mars. Then a buzzer made frantic bees' noise, and he released the automatic pilot, taking the controls himself. The buzzer had been a warning that atmosphere was close, and it takes a human hand to handle a rocket in an atmosphere.

It was possible, of course, that this trip of his was purely a waste of energy, but it wasn't his job to guess; he was the type who made sure first—if he had not been, the Patrol would never have accepted him.

With one hand he reached over and flicked on the televisor.

He wouldn't be able to hear much, and already knew the general trend of the little man's plan, but to have that belief around which his entire philosophy of life had been built borne out by the man who was himself to restore mankind to the glory that was its heritage, to the ultimate fulfilment of its age-old quest—that, indeed, was worth the hearing.

The image of the little man snapped on the screen with an abruptness that was startling after the long minutes required for the televisor to warm up.

The colors were blurred from the distortion of millions of miles of travel in space, but the ruddy nose of the little man was still prominent.

Above the crashing pound of the rockets, Lawrence heard faintly, "... the

psychologists have long known the reason for this soul-decay in man . . . ."

HE small room was so Grecian in its simplicity, with its shining marblelike walls, the bench of the same sea-foam white in the corner, and the three tunic-clad men, that the televisor screen set in the wall appeared incongruous and out of place.

"Hear him talk about 'the psychologists'," said Herbert Vaine, with a wave of his slender, beautiful hand toward the little unimpressive man on the screen, "when he knows more about applied psychology than any of us in this room. More than you or I, Stanton, or even Parker there."

He smiled cynically, and his eyebrows climbed an astonishing distance up his dome of a forehead.

Stanton grunted. He was a sour, disillusioned little monkey of a man, and prone, at times, to communicate largely by grunts. But now he spoke. "Be grateful. If it wasn't for that little runt we'd be fighting off a howling mob of neurotics and incipient schizophrenics right now. And not only is he giving us a holiday, he's practically saving the entire race.

"After that speech of his, there's going to be a wave of hysteria that will make the panic over that comet-striking-the-earth hoax way back in 2037, ninety-six years ago, look as innocuous as a Sunday school picnic. And it'll be healthy, it'll be the best that could possibly happen to this jaded civilization of ours, a safety valve for the pent-up emotions of over a hundred years! Lord, I hope he can go through with it—if they're disappointed after this renewal of hope, I dread to think of the reaction."

He paused, took a deep breath. "Listen."

"—were wise, those ancient ancestors of ours," came the voice of the little man, "but they did not have the background of experience that would have enabled them to predict what has happened. They realized that if machines became so perfect that they could do the work of man, without the guidance of man, then the hedonistic existence this would leave as man's only alternative, would quickly lead him back to the jungles.

"So they arranged a social pattern that would give every man something to do; you know what that pattern was as well as I. You might have an interest in constructing televisors, and you would strive to make your televisors so excellent that there would be a worldwide demand for them; others who had different hobbies would exchange the product of their hobbies for that of yours, or give them to you if the difference in value was too great.

"The world became one giant hobby field, a paradise apparently.

"They were wise; it was a good plan. But it didn't work.

"The machines were to blame. They could do things better, infinitely better, than human hands. You built televisors and put them together carefully with the proud hands of a creator. With your care and skill you were able to turn out, say, some ten televisors a month, but they were the best of their kind, and you were happy in that knowledge. Then you discovered that the machines could produce those televisors of yours at the rate of some five hundred a month, and could make a better one than you could, with all your patient toil and trouble. You were a rocket builder, a constructor of homes, a monocar designer? It was the same.

"Or perhaps you were an inventor? Why? That, too, was what the inventors wondered—and ceased to invent. There

had been too many wonders, the world was satiated with wonderful things, and those who create more, found for them merely a bored acceptance. The acceptance was of the machine, not himself, for the majority of the population did not even know who had built the marvels that made their life so monotonously comfortable.

"The incentive to do good in this world died—there was no good to do. There were no physicians, because the machines could diagnose an ailment better than they; there were no diseases to eliminate because they had long been eliminated; there were no surgeons to operate, because the machines did it quicker, safer, better. There were no abuses to correct, no social conditions to improve, because there were no abuses, and the social conditions were Utopian.

"There was no longer any desire to achieve in writing, in art, in music-for achievement was no longer recognized. If your writing was packed with significance, with powerful, thought-provoking originality, then it probably would not even see publication. Those who wrote and were recognized were those who could thrill with screaming action, with the forgotten danger of the old, primitive days back in the twentieth century; cheap stuff produced by men who were more mechanical than the machines. The only art that any man recognized was illustrating posters and those stories. Beauty had become too tame. The swing, the jazz, of an earlier age had evolved into a nerveracking bedlam of discordant sounds not even needing a composer-mechanically timed, mechanically produced, mechanically precise.

"Mankind lost its most precious possession—the sense of achievement, of being valuable, and with it lost its initiative. They suffered from a mass inferiority complex that was only too well justified by the superiority of the metal monstrosi-

ties they, the Frankensteins, had made.

"Something died inside the mind of man—his self-confidence, his superiority. And with it died achievement and progress. Mankind no longer lived. It existed."

IS rather ridiculously high-pitched voice died quietly away as he paused and gazed into, it seemed, the room, as he had gazed into the empty temple of man's intellect but moment before. And in that instant, standing there with his stubby hands on the railing of the platform, he had the surpassing dignity of one who sees conquest near and rejoices in the knowledge that his achievement has been something more than worthy.

"The result," he continued, "was inevitable. The hobby system, as it has been flippantly termed, dissolved in a chaotic attack on the machines. Fortunately, the mobs were too disorganized to destroy much before they felt the effects of their attacks. For men, subject to a cold they had never known before-due to their damaging the weather towers—died from exposure, untended by smashed machines that could have saved them. Everywhere hundreds of people, deprived of the comfort of machines they hade come to regard as essential, died swiftly from unaccustomed hardships to which their delicate constitutions had been too long unconditioned.

"That, as you know, was the first and only attack on the machines. It had become apparent that they had not only degenerated man, but so degenerated him that he could not live without them.

"And so the present system of credits for the amount of work done by each person in his own line has come into being. It has not changed the situation. Man still has no excuse for living, only for existing.

"The frenzied, maddened search for some purpose, some reason for being, that has taken place since—I need not go

into. It is a rather horrible thing to think about. And in the last twenty-five years it has resulted in a revolt against convention and the accepted decencies in life. That has led, in turn, to orgies, to abandoned pleasure-seeking that has no parallel in our written history. The frustrated creative genius of our time has found outlet shocking to more ordinary people—if any person can be called ordinary in this time and age. I do not believe there is such a person. I believe that we have all gone mad in our despair and in our lack of any intelligent goal."

HE voice of Parker cut across the spell in the room like the explosion of a shell in a country graveyard. "He's just made the world's biggest understatement. By the God of the ancients, he should see some of the human wrecks that come to us, that pack our offices, and practically hang from the fluorescent. Day after day, hundreds and hundreds of them. And we can only tell them what is wrong with them-not what to do about it. A noble profession ours, gentlemen. Hah! It's hollow. Hollow and futile. Like the mobs that visit us here at Science Hall and go away uncomforted, to wait until they go completely mad and are taken away to a mechanical madhouse presided over by the same magnificently futile psychologists. A noble profession indeed."

"We can't claim immunity from it, either, you know," said Vaine. "We're all too old to join the orgies, but we try to compensate for our helplessness, our uselessness, in other ways. You, Parker," he smiled at the chubby psychologist, "are a faddist who follows every single mad-eyed craze that crops up. You have no idea how strange you look right now without any hair at all on your face; no eyebrows, no eyelashes, a bald dome. You're a remarkable sight."

Parker colored. This turned him odd-

ly red from his smooth chin to his bald pate, so that he rather resembled a beet carved into the form of a face.

"It's not a fad. It's a hygienic movement that I highly approve of."

Vaine's laugh left little echoes repeating themselves in the corners of that acoustically perfect room.

"What term would you use to explain away the time that you brought to your office some quack's mystic device which would supposedly soothe the patient by a mysterious mixture of vibrations and music made by the movement of the operator's hands in an eddy field? Remember how the frightful noises you hauled up sent three patients into hysteria, and so accentuated another's delusion of persecution that he focused his attentions on you as the cause of his troubles? Then he chased you all around the office with a metal chair, earnestly imploring you to stand still long enough to get your head hashed in

"And how about the time you claimed it was the duty of every citizen to learn the intricacy of a certain machine—and blew out the side of the wall with the 'harmless' little projector you rigged up? Eh?"

He chuckled and a smile flickered for an instant on the face of the sour Stanton

"You aren't too normal yourself." retorted Parker. "Spending all your time dashing around with other people's wives."

"Granted," said Vaine. "I'm an old fool and I know it."

He smiled somberly.

"Queer. We psychologists know exactly what makes us tick mentally, but we can't do anything more about our twisted emotions and impulses than we can do for those poor people who come to us for assistance we can't give them. Stanton collects old books. Never psychology, religion, or anything serious. What our

ancestors called blood and thunder. Bangbang adventure stuff. He calls it a hobby. It isn't. It's wish fulfilment."

He went on: "Look at that laughable little idiot on the televisor screen. He's the least imposing person I know of—and the happiest man on earth. He may be the greatest man who ever lived, for all I know. Listen to him."

"—man was useless. I knew that man must again find a motive for progress if he was to exist. The number of births had diminished almost to nothing. Both sexes felt that it was useless to bring children into such a world. So they did not, and the population has dropped frighteningly.

"After some time and thought I came to the conclusion that what was needed was another civilization with which our own could fuse its intellectual achievements and progress. For, it would be a new inspiration to find a race with a culture radically different from our own, and to adapt ourselves to that culture, to build shelters and new cities without the machines, and to bring back the old striving, ever-searching spirit of bygone days. And —I found it."

He stood there flushed with triumph. And the light in his face lit a similar light in the eyes and hearts of two billion people. Thus this modern Prometheus brought to earth a far more precious flame than did his predecessor of old.

"For the last fifty years," he said, "there have been no human trips made in a rocket—other than were absolutely necessary. As for exploring trips, there have been none beyond Pluto, and those by robots telecasting their impressions to earth; for we have lost the spirit of exploration, the spirit of discovery above all personal discomfort.

"At my request, the Central Consul built a spaceship suitable for a voyage to Alpha Centauri, which the electronic telescope revealed as the only star within its range having a civilization stationed on

one of its planets. We used a device in the ship invented nearly forty years previous and completely ignored, which enabled us to make very nearly the speed of light."

Stanton interrupted the voice of the little man there. "Wonder how he managed to get permission to build the ship from that gang of ghouls. There was nothing they could get out of it, and it took a lot of credits."

Vaine said: "We're underestimating that little genius, I think. He grew up with an inferiority complex not brought on by the machines, but merely accentuated by it. He was one of those people virtually born that way; without any special ability except for bungling things in general.

"He's a type that every psychologist knows, the born failure. Only he had something in him that none of the others had. Something almost forgotten nowadays, and exceedingly rare in a person of his personality makeup: guts. There's a rumor that he spent years accumulating enough blackmail on the members of the Consul, after they refused him the first time, to force them to build that ship. I believe it.

"If he's right he'll go down in history, if he isn't right—then there won't be any history."

"Throttle down and listen," suggested Parker.

LPHA Centauri has four planets," said the little man, "and the second innermost was our destination. We found that it had every conceivable advantage. The people were advanced scientifically, and evolved from a protoplasm basis that was, not unnaturally considering the similar conditions, along our own lines. They were rather ludicrously like certain twentieth century writers' conception of Martians and other extra-terrestrial creatures, particularly considering that no intelligent life

has been found on Mars or the other planets in our system.

"They were small, with strangely faceted eyes, and two long slim cords for arms, these terminating in three thin fingers." He paused and repeated that, to emphasize such a familiar human characteristic. "Three fingers."

He continued: "They had no facial features outside of their eyes. They apparently perceived sounds by vibrations through their glossy black 'skin', if I may use such an inappropriate phrase, and their body was a cylinder and nothing more. They transported themselves in swift little cars, and how they got around before they progressed so far, I don't know. Probably they had some other method of physical motivation that has disappeared in long centuries of disuse. It does not matter. What does is the fact that they are an intelligent, sensitive people, and they have a great civilization, being able to communicate by means of telepathy, as many of our own people are able to do quite well.

"We hastened back before we had an opportunity to learn much about them, but were assured that we were welcome to their planet by their governing group.

"And the best news of all, is that it will not be necessary to build expensive ships to make the long trip! They have long had teleportation devices that enable them to transport the disassembled atoms of an individual or material to any distant place on which it is focused, no matter how far, there to be reassembled. The process is an extremely complicated and cumbersome one, requiring much mathematical calculation, but it can be done with absolutely no danger to the person using it. We have the plans for those machines."

The sound of cheering from the televisor became so earsplitting that Vaine cut the volume, and then stood there, numbly cracking the fingers on his beautiful hands.

The picture on the screen whirled dizzily as the frantic operator panned too swiftly to pick up the image of the crowd, which was going mad with an enthusiasm that hurt them inside until they had to get it out, release it, let off their emotional energy. Women fainted, men wept, and the platform swayed dangerously as the amok crowd climbed over it to shake the hands of a new Messiah.

"I'll be damned," whispered Vaine, trying to comprehend hope, "I'll be completely damned." He cracked his long fingers slowly.

Stanton looked at his sandals as if he had never seen them before, and scowled. Parker ran his hand through his hair absently, forgetting that he no longer had any.

There was a buzzing in the next room. Parker cursed all visaphones and vanished into the other room. They heard a bellowed, "Pleasure to you, too, and what the hell do you want?" Pause. "Oh." Another pause. Then: "Glad to hear it, Martin. Yes, it's a great thing all right. Huh? . . . sure; thanks. Same to you. Glad you changed your mind. Pleasure, Martin."

Parker came back into the room. He tugged absently at his ear lobe. There was a strange look on his face. He noticed the stares of his fellow psychologists, and answered the question in their eyes.

"Remember that old duck, Martin Winter, the one with the registry full of credits he don't know what to do with—who came in here last week?"

He went on without waiting for an acknowledgement of acquaintance from the other two. "The old fool positively refused when he was here last time to have a transference to a robot body because he said he didn't have anything worth living for. But now he's determined to have the transference made, and to get transported to this other system. Wished me a happy trip over."

"Oh," said Vaine softly.

The voice of the little man came again into the room.

"Adventure," he said. "Adventure for all of us, and hope, and happiness." His voice trembled a little with the immensity of his own vision. "A new heaven and a new Earth, and a new dream for all mankind—everlasting, eternal, enduring for all time!"

His voice was drowned by a crowd roar that filled the room, then died away.

HE jets under the ship came to life with an ear-splitting whoo-o-om! and the ship leveled off and hurtled west.

Electrical impulses touched the desert outside and rebounded to register on a dial the information that his distance from the ground was two thousand feet. He consulted another dial and found that the rocket was traveling a little more than eighteen hundred feet a second. Too fast. He cut it down to a thousand feet. Instruments were checked.

The energy waves he had received in space had come from the most desolate part of Mars. Lawrence was unable to understand why anyone chose this part of the planet to live on.

It was barren of the Martian planets collected by the settlers for their medicinal and museum value on earth, and it was far from the closely-clustered settler's towns. Which was strange. The settlers, he thought with a smile, made a lot of their being pioneers and all that sort of thing, but they loved their mechanical comforts and the warm, close companionship of their fellows.

He reached over and flicked the switch of the visor set in the nose of the ship for observation purposes. The scene revealed was as disappointingly prosaic to him now, as it had been when he had first seen it. It looked just as the mid-western deserts used to look before the Consul had turned them into fertile agricultural grounds, with one exception: the ground was as red as blood, even in the feeble light of the Martian moons.

There was a wind blowing, carrying the sand and the half-vegetable, half-animal "tumblies" along with it. But the wind always blew on Mars at this time of year, despite the thin air, when one was this near to the pole.

The shack he had been watching for, loomed dark and dismal in the black of the Martian night. Lawrence cut his rear jets and throttled down, aiding the ineffectual gliding surfaces of the rocket with occasional blasts from the hull. He landed with a very slight jar and cut the engines.

The racket of the engines in a rocket is so violent that it is always something of a shock to a rocket man when he cuts them off. The effect is as though something very vital had died.

Lawrence stood there trying to accustom his ears to the silence that claimed the ship, saving only the weep of the wind outside. And the wind became, in that moment, as all-pervading, as much a part of things as the rockets had been. The difference was that the rocket noise existed for only a brief while, and the wind had moaned out on those somber plains for—how many millions of years had it been?

He shook off the mood, drew on a light, electrically-heated suit with an oxygen container on the back. It completely covered every part of his body, and was especially designed for Mars, having two metaglass openings for his eyes and a voice amplifier just below it.

After that, he stepped out into the airlock, the sound detectors catching the whoosh of exhausted air, and the faint crunch of his weighted boots in the Martian sand.

The shack was of metal, neat and compact. One side of it bulged like a tin can in which a firecracker has exploded. He

stumbled over something in the sand—but he did not look down. The ground was covered in spots with strange relics of a Martian civilization here in this desert.

In the early twenty-first century, during the rush of excitement over interplanetary travel, there had been many expeditions to this part of the planet. In fact, the shack in front of him was probably one of the Smithsonian's archaeological stations. It had been supposedly long-deserted, though he had evidence that it wasn't now.

The expeditions had accumulated enough evidence from the desert to prove conclusively that the Martians had been a highly civilized and advanced people; more advanced, probably, than Earth. There were ruins of great cities in the south of the planet that must have been there for over two million years. The Martians had built well. As to what had happened to them—that was a mystery that remained unsolved. There had been no evidence of warfare of any sort, and a few rare translations of even rarer books, indicated that the Martians had eliminated diseases and had, in their time, colonized the entire solar system with their people. But now there was only the weeping wind and the barren sand—nothing more.

He reached the door, twisted the handle on it. Having suspected that someone was inside, Lawrence was not surprised when it came open easily with a sharp creaking sound. It had been recently used, of course, since otherwise the years would have rusted it to the extent that the first man to open it again would have had to exert a great deal of strength. It was monometal, but everything except lead and a few beryllium alloys rusted in the Martian air.

He took a torch from his utility bag, and the soft but brilliant green of the portable Howard - Brazier fluorescent stabbed into the darkness and tore away the shadows. There was nothing in the path of the beam that he could see. Only the red dust on the wings of the restless wind.

He went in.

The door creaked shut behind him. A tiny air purifier made sighings somewhere like a big dog with asthma. There was a bare metal table. And that was all. A door led into another room. He walked into it. Silence, save for the moan of the deathless wind, crying outside.

It was dark in the room, with only the the light of Deimos and Phobos shining into the glassite windows. He could just make out the darkness-shrouded bulks of shattered machinery in the corner. He pressed the button on his torch and the darkness fled in panic from the brightness of the light.

The whisper in his brain came then. "Don't..."

IS flashlight clattered to the metal floor, and his hand was on his blaster. Then he cursed himself for a fool and retrieved his torch. He did not, however, turn it on again.

To be startled like that by mental telepathy was childish. It was something that every member of the Space Patrol had to master, and was an ability fairly common among intelligent people—many of whom practiced the art as something of a hobby. The only element of surprise was the fact that it was a strain on any ordinary man to project his thoughts that way, and speech was preferable when practicable. Still, there was no reason why anyone should not use telepathy if he wished.

"Who—" he began aloud, then shrugged and concentrated on thinking: "Who are you?"

"Speak aloud," came the thought. "It is easier for you, and makes your mental impulses clearer."

There is an individuality in thoughts, as well as in voices and faces. It occurred to Lawrence that the thought waves of

this person were the clearest, the gentlest and the saddest of any he had ever encountered.

There was a clarity about them that was superhuman, that is associated with genius. And they were filled with a sorrow that transcended all human understanding. The sorrow of a dying race, of the shattered dreams of a billion years, the sorrow of the Wandering Jew alone on another planet and watching his own dissolve into cosmic dust—a sorrow beyond expression.

He found it dominating his soul, drowning him in a bitterness such as he had never dreamed possible.

Lawrence explained, "My instruments detected a steady stream of free gamma rays out in space, such as could only come from a ruptured atomic power source of some sort, and I flew down to ascertain if there had been an accident." He raised his voice a trifle over the wail of the desert wind. "Who are you?"

The brooding thought crept slowly into his mind, infinitely sad, infinitely weary.

"I am one who saw too far. It is no good for any being to go ahead of his fellows; to dream a greater dream and to find no reality in it. I had a machine, and it should have carried me outside, should have taken me above our lost visions to finer things. It did not. I thought I would climb to heaven. I descended to hell. How they have reversed our ancestors' prophecies, these metal masters of ours. His thoughts washed away in a tide of ultimate despair.

Lawrence's eyes were becoming accustomed to the darkness, and he could make out the hammock in the corner of the room with the small form upon it. "You're hurt!"

He came forward, his bewilderment becoming concern "Here, I'm one of the few men who still know something of medicine. Space Patrol men have to know in case the machines break down. Which," he grimaced, "happens about once in every four hundred years."

"No!"

The thought stopped Lawrence on the verge of tearing the threadbare cover off the figure on the cot and turning on his flash to examine it.

"Please," it came again, more gently, "I am dying. Believe me, there is nothing you or any other man or machine could do. And I do not care to live any more now; there is nothing to live for—now or for the rest of time."

Pieces of what seemed to be a pattern exploded in Lawrence's brain, and he turned white. Had this man used the disassembler, obtaining it by bribing some minor member of the little man's crew, and had he visited that far-off star and found that which doomed mankind's new hopes? The thought stunned him beyond thinking. That couldn't be true; it couldn't. This was man's last hope, his last stand, it was unthinkable that—

He felt within his brain, currents that were at first puzzled and then cleared.

"No—" and there was a smile in Lawrence's mind, a heartbroken, whimsical thing. "No, I have not been to that system you are thinking of; my journey has been elsewhere. And what I have seen has led me to destroy both my machine and myself." He was silent a moment, overwhelmed by disappointment.

Then, "Let me explain, please.

"In our world we know not happiness, have not known it for such a long, long time. The machines have taken over and there is no longer anything left—only the bare drabness of day after futile, empty day for all our lives. Some feel these things more than others, and the idealist, the dreamer, have suffered in this age more than any other person can conceive. We feel so much, so very, very much, and we long so hard for the little, insignificant things that make up beauty—for beauty is our life."

HE wind outside sang a song of other days, of laughter and beauty, and the glorious fortress of mental and physical perfection that had been here. It spoke of the shining towers, and glistening ships that thundered above them.

Then it remembered and died slowly away, taking with it the red dust that drifted across the barren plains.

"Yes," said Lawrence, very softly.
"Yes, I understand."

"Not quite," came the whisper in his brain. "You do not, cannot, quite understand. There are things you do not know."

Silence then. Except for the eternal wind and its companion, the dust.

"I disassembled my atoms," the explanation echoed unexpectedly in Lawrence's mind, "and selected a lonely place on another world where they were reassembled. I watched from afar, and there, too, it was the same. The machines. The uncertain, hurt look in people's eyes, and—their lack of purpose.

"I destroyed my machine and myself with it. That was best. There was nothing left for me, you see."

Lawrence stood up by the dusty televisor against the wall. There was infinite compassion and understanding in his voice. He said, "If only you had waited! If only you had known that another planet in another system had a place for us, instead of going elsewhere as you did—without thought or direction."

"There was thought and direction," said the mental voice. "It availed me nothing. Bury me, please, out there on the desert with the wind and sand. I would be with seekers like myself, knowing that their search is impotent, as was mine. Thank you for your good intentions and your kindness. Good-by, my friend."

The sense of rapport faded from Lawrence's brain, and he knew he was in the presence of death. The requiem of the wind sang for another lost thing now, and that was queerly fitting, somehow.

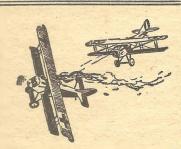
Then he knew! Knew that the being had indeed traveled to other than the little man's star system, and his heart cried out within him unbearably, though he stood still and numb. Knew it when he had picked up the other's hand to place it beneath the covering and had felt—three slender fingers.

The quest was ended.

#### "YOU CAN'T FIGHT A GHOST!"

That is the strange message that the Master American Flying Spy received—and it proved to be a gilt-edged invitation to sudden death, a bid to a mad party of flaming Fokkers and darting Spads dancing a weird rigadoon of murder in the skies over No Man's Land. For the scientists of the Kaiser's legions had developed a new weapon—a crazy gas that hid the Hun armies behind a cloak of invisibility, allowing them to wreak destruction on the American forces, unseen! And G-8 takes up the challenge of these unseen warriors of Germany—and enters into the fiercest combat of his spectacular career!

Don't miss—



"WINGS OF THE GRAY PHANTOM"

a great new novel of G-8 and his Battle Aces, as told to Robert J. Hogan!



#### SMOKE WADE RETURNS—

in a brand-new story in this issue, along with the Red Falcon and many other of your favorite characters, whose dramatic adventures will hold you spellbound! The all-star October number is the ONE HUNDREDTH BIG ISSUE of this leading air-action magazine—don't fail to get your copy early!

## FAN MAGS

(In every issue we will review as many of the current crop of science fiction fan magazines as space allows. All magazines for review should be addressed to ASTONISHING STORIES, Fictioneers, Inc. 210 E. 43rd St., N. Y., N. Y.)

CENSORED: Published by Fred Hurter, Jr., St. Andrew's College, Aurora, Canada. 10¢ a copy. Censored, which claims to be "Canada's foremost fanmag", is, by a peculiar coincidence, Canada's only fanmag. But it is a good effort. The latest issue has many humorous articles to recommend it, but nothing at all on the serious side. One noteworthy thing about it is that its authors, editors and artists are 100% Canadian—a pleasant change from the American fan magazines, where half a dozen fan writers appear in practically every periodical, and local talent is usually ignored by the fan editors.

ECLIPSE: Published by Dick Kuhn, 13598 Cheyenne, Detroit, Michigan. 10¢ a copy. Bob Tucker contributes a bit of humor to this issue entitled, "The Fan Takes a Wife"—typical Tucker humor of the kind most fans like. Donn Burtom's "Musings on the Pros" is as good as always, containing carefully-thoughtout criticisms of the professional magazines. And Joe Gilbert's regular column, "Bright Stuff by Children", contains selected reprints of the cream of fan humor from other magazines. Art work in this issue is very good and is mimeographed in several colors.

THE FANTASITE: Published by Phil Bronson, 224 West 6th Street, Hastings, Minnesota.  $15\phi$  a copy (this issue special; regular price  $10\phi$ .) This is one of the most impressive fan mags of the year, both in appearance and in content. If the editors could keep the quality up, they'd be more than justified in charging that extra nickel for every copy. . . . Lewis B. Martin turns out an excellent

column on Edward E. Smith, Ph. D. "MFS Notes" by John Chapman is a more-than-usually entertaining essay on fan organizations tribulations; and the several pages of photographs are more than welcome.

FANTASY FICTION FIELD NEWSWEEK: Published by Julie Unguer, 1702 Dahill Road, Brooklyn, New York. 5¢ a copy. This fan weekly, which is unique in appearing practically every week, continues to bring the latest in science fiction news to its readers. Among its recent scoops have been the news that Donald A. Wollheim was to edit a science fiction anthology book; that this magazine was taking over the "Vortex Blaster" series by Smith; that Bok had quit illustrating.

FANTASY NEWS: Published by Will Sykora, P. O. Box 84, Elmont, New York. 3 1/3¢ a copy. This is the oldest surviving science fiction newsweekly, and its reportage of professional magazine and fan club news is very good, as always. The addition of Charles Hidley, an old-time fan but a new fan-mag reporter, to the staff has had a definite effect in improving the quality of the dispatches.

LEPRECHAUN: Published by Larry Shaw, 1301 State Street, Schenectady, New York. 5¢ per copy. Only one issue of this newcomer has appeared as yet, and it is obvious that there is a good deal of room for improvement. That's only to be expected, though, and the first issue shows real promise. "The Greatest Radio Hoax", an article by Gereaux de la Ree,

Jr., is outstanding in the contents, being a well-researched report on the Orson Welles War-of-the-Worlds program of some years back and its effect on the public who heard it.

LE ZOMBIE: Published by Bob Tucker, P. O. Box 260, Bloomington, Illinois. 5¢ a copy. The third anniversary issue of fandom's leading humor sheet has as supplement a positively frightening science-fiction calendar and a compilation of all the fan magazines published in 1941, which reveals the astounding total of eighty-one separate magazines, exclusive of those published through the Fantasy Amateur Press Association! (And there were at least thirty more in the FAPA.) Le Zombie itself is as cryptically humorous as ever, with a bit of imaginative fiction by the editor himself—"The Fantasy Fan Brigade"-pulling down top honors for humor.

NEBULA: Published by Rusty Barron, 333 East Belgrade Street, Philadelphia, Pennsylvania. 5¢ a copy. This newest of the weeklies contains many items of interest, though not too much real news. Give it a few more issues to practice, though, and it may turn out to be one of the leaders.

NOVA: Published by Al Ashley, 86 Upton Avenue, Battle Creek, Michigan. 10¢ a copy. The splendid cover on the first issue of this magazine lifts it right out of the fan magazine class. Interior art is also excellent, but the contents don't quite measure up to standard. Two articles—"Constructive Criticism" by Edward E. Smith, Ph. D., and "Reputation" by Forrest J. Ackerman—are outstanding and should be well received anywhere. The rest of the articles and fiction are unexceptional, though far from bad.

SPACEWAYS: Published by Harry Warner, Jr., 303 Bryan Place, Hagers-

town, Maryland. 10¢ a copy. Warner's own column, "From the Control Room", continues to be the most consistently entertaining feature of this leading fan mag, with "The Readers Always Write", the letter column, coming a good second. The fiction has been reduced almost to the vanishing point, making way for more columns and factual articles-a good thing, too, for the fiction in this magazine has been in the past its least attractive feature. Art Widner, Jr., contributes a two-part travelogue, "The Log of the FooFoo Special", the account of his auto trip to last year's Denver Convention with four other fans. "Beacon Light" by one who styles himself "S F Cynic" is just what you'd expect—cynical commentaries of science-fiction events.

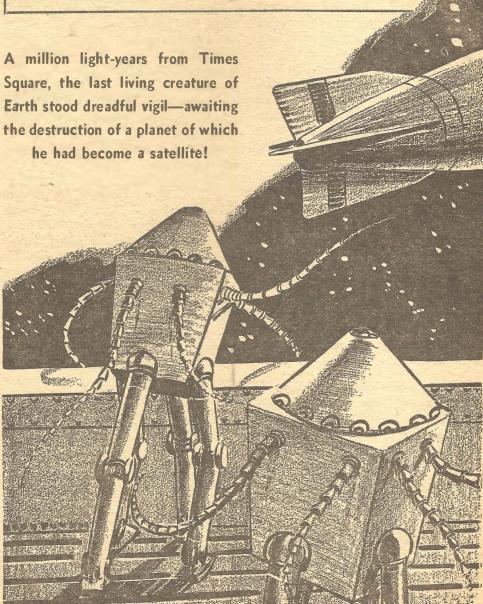
SUN SPOTS: Published by Gereaux de la Ree, Jr., 31 Bogert Place, Westwood, New Jersey. 10¢ a copy. This is the only printed magazine in this month's crop, and a very good-looking job. Its principal lack is in illustrations, which are a bit too expensive to reproduce in printed form for most fan magazines to afford. The latest issue contains thought-provoking articles by Louis R. Chauvenet, Jack Williamson, Malcolm Jameson and others, plus an editorial history of Sun Spots itself, detailing its progress since its first typewritten issue, through successive stages as a hektographed, mimeographed, and finally printed magazine.

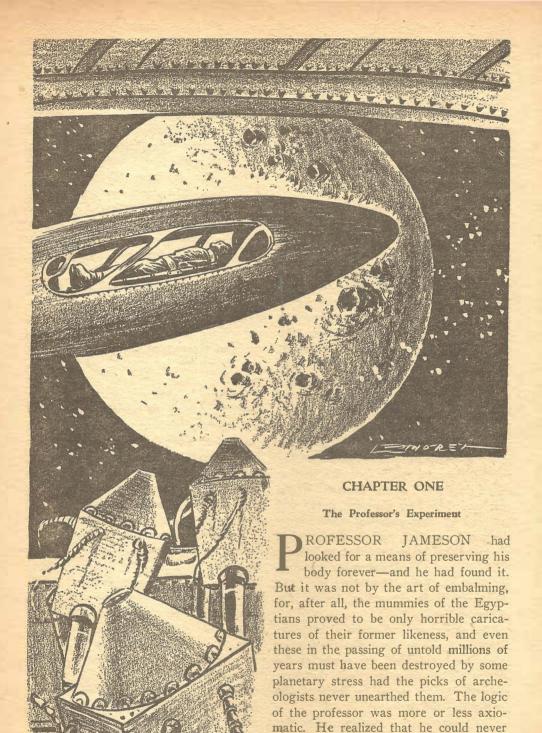
VOICE OF THE IMAGI-NATION: Published by Forrest J. Ackerman, P. O. Box 6475, Met Station, Los Angeles, California. 10¢ a copy. VOM, as it is styled by its long-time readers, was once one of the most fascinating fan magazines available. But a steady diet of nothing but letters has become just a little monotonous. And its recent addition of fan photographs and rather questionable art do not seem to be the answer to its problems.

## DOOMSDAY ON AJIAT

A Professor Jameson Novelette







employ one system of atomic structure, like embalming fluid, to preserve another system of atomic structure, such as the human body, when all atomic structure is universally subject to change, whether it be amazingly swift or infinitely protracted.

The problem absorbed much of his attention, and he considered various ways and means until one day the answer flashed upon him—leaving his mind a chaotic mealstrom of plans and possibilities. He would cast his body into the depths of space where it would remain unaffected and unchanged! Material of organic origin might exist indefinitely between worlds.

He built gradually from this theory, conceiving a space rocket for his cosmic coffin, a rocket propelled from the Earth by powerful thrusts of radium repulsion. Next came his plan to make the rocket another satellite of the Earth somewhere between the Earth and the Moon. The professor decided on sixty-five thousand miles from the earth, or a little more than a quarter of the distance to the moon.

He set about his plans at once, and having experimented with radium all his life, it did not take him long to construct a rocket capable of carrying his dead body into the depths of space. The rocket lay pointed skyward at the foot of a leaning tower on the hill of the Jameson estate, surrounded by four gleaming tracks and balanced by four stabilizer fins. Everything was complete, and the aged professor knew that he had not long to live.

He died on a bleak December morning, swirling snowflakes blanketing the earth which was to be cheated so dramatically of his dead body.

The professor had retained no confidant, and no one knew why the leaning tower projected from the center of the professor's laboratory, nor could they have guessed that the rocket lay inside, ready for its celestial journey.

The professor's nephew, Douglas Jameson, found himself sworn to secrecy in the instructions left him by his dead uncle. An immediate funeral service, according to those instructions, must follow his death. Relatives believed him to be in his dotage. Only nephew Douglas re-

alized the significance of this quick funeral and removal to the vault.

Through the blanket of snow which had fallen that morning, Douglas Jameson stole quietly to the cemetery, unlocked the vault and removed the body of the professor. For a venture so colossal and unprecedented, the professor's corpse was given but small consideration. His nephew carried him from the cemetery to the rocket in a canvas sack—yet such had been the professor's instructions, obeyed to the letter by an astonished and dutiful nephew.

Douglas Jameson entered the leaning tower and found the rocket set firmly on its supports, its bullet nose pointing up the circular center of the shaft. Cylindrical, and tapering at its base, the rocket was fifteen feet long and five feet in diameter.

Opening a doorway in the hull, he peered inside at the luxurious upholstering, his hand sinking to the wrist in the deep, plush lining. The interior was just large enough to accommodate a human body, and he carefully placed his uncle's body inside, fastening a strap beneath his chin and more straps to his wrists and ankles. He closed the door firmly.

His eyes wandered to the lever at the base of the rocket near one of the stabilizer fins. He must pull the lever and leave quickly. A five-minute interval would elapse before the rocket took off. It was dangerous to remain. He hesitated a moment—then pulled the lever. He did not stay to watch its effect but ran up the stairs into the laboratory and out into the winter night.

The laboratory was isolated from the rest of the buildings. Clouds scudded across the face of the moon which lay well away from that quarter of the sky at which the rocket tower was aimed. This had been a part of the professor's instructions. He wanted the moon's attraction left out of his plans.

Five minutes never seemed so long

before. Douglas watched the lazy second hand crawl its slow journey around the tiny dial four times, and after that his eyes never left the tower looming darkly against the night sky.

With a low, crackling hiss, the rocket finally made its appearance, breaking forth from the leaning tower, gaining rapid acceleration and leaving in its wake a blue, phosphorescent glow tinged with violet.

For a long time that night, Douglas Jameson stood and watched the starlit heavens turning imperceptibly upon the axis of Polaris. It was near dawn before he went to his bed in the silent and gloomy Jameson mansion.

Late the next day, the village fire volunteers of Grenville were called to the Jameson estate where they found the laboratory a seething mass of flames. The destruction of the tower and laboratory had been a part of the instructions left Douglas Jameson by his eccentric uncle.

As long as he lived, Douglas Jameson kept the secret. It was only after his death that the facts became known, and for a long time, until the discovery by the astronomer, Clement, in 1968, the story was doubted. True, the grave vault was found empty, but even at this late date it was reported as part of the hoax. It was Clement who established the existence of the Jameson satellite. It circled the earth every nine days.

HE years passed. Changes moved slowly on the earth, while generation after generation vanished into forgotten obscurity.

Still the rocket satellite pursued its lonely way, a cosmic coffin. Fiery, scintillating stars formed Professor Jameson's funeral cortege. Millions of years went by. Mankind was replaced by other forms of life which in turn knew their day only to disappear. Earth's atmosphere became rare.

Forty million years after the day when his rocket had been hurled off the face of the earth, Professor Jameson's body still lay perfectly preserved.

Passing meteors were the only companions of the rocket satellite, and these the professor had recognized as dangerous. For that reason he had installed radium repulsion rays which were excited into automatic action by the proximity of approaching meteors.

Earth lay closer to the sun—which had cooled. Its rotation had ceased, and one side, like the moon, forever faced the sun. The professor's dream had been realized. He had remained unchanged for millions of years.

His ambitions, however, fell far short of the adventures which fate held in store for him. A strange spaceship, from the planet of a distant star, came exploring among the dead worlds of the solar system. They passed the aging Earth and found the professor's rocket satellite. Strange creatures of metal guided by organic brains, they stopped and examined the professor's rocket.

They were machine men from Zor. Once they had been organic creatures, but they had transposed their brains to the coned, metal heads which surmounted their cubed, mechanical bodies. The bodies were upheld by four metal legs and were equipped with six metal tentacles. They communicated by thought projection.

What the professor had accomplished in death, they had accomplished in life. They were undying just so long as no injury occurred to their metal heads housing the all-important brain. Any metal parts, such as legs, tentacles or body parts, were replaced when worn out. A complete circle of mechanical eyes were fitted into the coned heads, and one eye peered virtually from the apex. These were shuttered and could also be replaced.

The machine men took the professor's body from his rocket satellite and recalled

his brain to life in order to learn his story. They placed the brain in one of the mechanical bodies.

The professor's astonishment on his revival can be imagined better than described. When he came to a full realization of what had actually happened, he told them his story and of the past glories of the earth up to the point when he had died.

He found that his revival made him the last, living creature of the earth. With the machine men he visited the strangely changed surface of his home planet.

The Zoromes told him of their eternal adventures from world to world and asked him to join them. There was nothing on the now-lifeless Earth to keep him there—so he joined the machine men in their cosmic flight from system to system, exploring new planets and strange creatures of varying degrees of intelligence.

He came to be known among the Zoromes as 21MM392, and after their return to Zor he was given joint command with 744U-21 of a new expedition into space.

Since last leaving Zor, they had explored many curious worlds, and their adventures had been strange ones, often perilous.

They were now entering another system of worlds. Already, they had passed several of the outer planets on their side of the sun. They were barren and cold, too far from the sun to support life.

#### CHAPTER TWO

#### Heralds of Doom

PLANET or planetoid just off our course, 41C-98 reports," said 744U-21 to the professor. "We are now heading that way to discover what it may be. 41C-98 reports several peculiarities. For one thing,

the sunshine strikes very dull against it, and for its apparent bulk our proximity detectors show a surprising lack of density."

As they moved nearer the mysterious body, they discovered that it was neither planet nor asteroid, nor did it move on an orbit. On the contrary, it pursued a course directly at right angles to an orbit. It was heading sunward.

The character of the celestial wanderer and its strange lack of density became understood when the spaceship of Zor approached close enough to reveal it as a meteoric swarm consisting of dust and cosmic debris. Many of the chunks were several miles in diameter. The professor's quick estimate placed the diameter of the swarm at seven thousand miles.

Rapid observations and computations were made. Growing suspicions of the machine men were verified. The mass was heading into the sun at a speed of several miles per second.

"You know what that means," said the professor, turning to those about him. "Yes—a nova—an exploding star!"

"I never saw but one at close range during my entire existence as a machine man," said 6W-438.

"They are not unusual," 744U-21 observed. "Most every star some time or other, goes through this phase. We see them often from afar, but they happen so quickly and without any warning that this is a rare coincidence that we should enter a system and find conditions preparatory to a nova. This meteoric mass will surely cause one when it strikes the sun."

"But I have understood that novas are not always caused by large bodies or meteor swarms colliding with a star," said the professor. "Popular theory supports a belief that often an internal solar disruption causes a star to explode."

"Such a cause as you mention generally promotes a greater disturbance, especially

if it originates deep within the solar body. Contact with a meteoric swarm, as this case promises to be, rarely affects little more than the surface gases of a sun."

"Even so," observed 6W-438, "the cataclysm will be large enough to wipe out life on every world of this system and change the planetary surfaces.

"A terrific wave of heat will spread outward from the sun with the speed of the light which carries it. For the nearer planets, it will mean but a matter of a few minutes. Possibly a day or so later, tremendous waves of gases will sweep in the wake of the blinding, searing heat. They will be sufficiently tangible to slow the speed of the planets perceptibly upon their orbits. Terrific planetary disruptions will follow in the form of earthquakes and volcanic eruptions, and entire oceans will turn to steam and bury each world in a dense cloud blanket. Temporarily, the nova will outshine every star in its neighborhood and will loom visible countless light years distant.

"It will mean doomsday for all life in this system even though the sun returns once more to its normal condition within the next ten or twenty years."

"It will be well to check our figures," cautioned 6W-438. "We must plan not to be such close observers that the nova will reach us."

At the rate the meteoric mass was traveling sunward, Professor Jameson, as was his usual habit, figured that nearly twenty-three of his earthly days must elapse before the swarm of cosmic debris reached the sun.

Their first step was to examine all the planets and find what, if any, life they supported. They had already passed a few of the outer worlds and had found them apparently lifeless. The spaceship now approached another world, a planet so large that their proximity detectors remained oblivious to all else even while they were still far off.

"It is one of the larger worlds which we must avoid," Professor Jameson stated. "The gravity there is so strong we could move around only with difficulty and a superexpenditure of energy, and even if we landed safely, our spaceship would find it hard to leave."

"We shall make our observations entirely by telescope, then," answered 6W-438.

Glasses were trained upon the colossal world as the spaceship sped close to the giant world in a gradual curve to the sunward side. From afar, they had recognized the fact that the planet possessed an atmosphere. Observations confirmed the strange coloring of the planet as vegetation. Where the machine men found vegetation, they invariably found animal life as well. The topography of the huge world loomed nearer, so much nearer that 744U-21 cautioned 20R-654 not to navigate closer.

"I am not," came the startling announcement. "I am trying to get clear of the planet's grip. There is a slight drift of the spaceship, which I am having trouble counteracting."

The looming orb grew larger, swelling in diameter and obscuring a greater portion of the sky beyond. The difficulties of 20R-654 were becoming increased. Alarm spread among the machine men. The intense gravitation held their ship and was threatening to draw it down with a smashing blow.

"We are starting to fall! The ship is accelerating its descent!"

"Turn!" cried the professor. "Turn away and give it all the power we have!"

The course of the spaceship had been parallel to the planet's orbit. 20R-654 now turned the ship directly away from the looming world and unleashed a tremendous burst of power. Instruments showed a slackening of their descent, yet their fall continued.

"Something is wrong with the resis-

ters!" 20R-654 explained. "That is why the ship came so much closer to the planet than I had intended!"

"We are still falling but not so fast as before!"

"At full repulsion, too!"

"Yes—we are too close, and the gravity is so great! Without the strength of the resisters we can only hope to come down as lightly as possible!"

The professor knew this latter statement to be nothing but hope. Their fall was rapid enough to smash them all to bits of wreckage when the spaceship crashed. And their precious brains would be scattered among the ruins.

HE great world swelled on their vision, its proportions so vast that it filled the sky before them. Mountainous country reached giant fingers to receive them. On the horizon, the topography was obscured by cloud masses drifting in the great, dense sea of atmosphere. Already, they were able to feel the mighty attraction of the planet's gravity upon their metal bodies.

"Keep the reverse charges going until the last minute—until we strike!"

"The unusual density of the atmosphere may help slow our descent!"

This, they knew, was a long chance. The density of the atmospheric lower levels was commensurate with the planet's strong gravity.

A sobbing wail arose from outside the ship, swelling into a roar of many waterfalls. The spaceship throbbed and trembled, and every machine man realized that they had penetrated into the atmosphere at a tremendous speed. Anxiously, they consulted their instruments. Their mad fall was checked but slightly, and they realized their doom, for in the hundred miles or more left them, there was no possible chance of braking their speed to a safe maximum even with the increasing density of the atmosphere to help them.

It was in the professor's mind that a few of them might survive the crash—but to what purpose? What would there be left for a few machine men on a giant world with an irreparably wrecked spaceship and dead companions? Mechanically crippled, they would await the coming of the nova with the end it would bring. Such an outlook was even more dismal than direct annihilation.

A few of the machine men stared down from the falling ship at the fast approaching destruction, yet they were comparatively calm. Here was none of the terrified hysteria characteristic of organic creatures. Most of them had lived many lifetimes compared to their original existence.

Down they swept to inevitable doom, their reverse charges beating helplessly against the awful drag of the planet's bulk. Professor Jameson, engrossed in gloomy introspection, was suddenly swept off his feet and crashed against 744U-21 and 6W-438, who fell with him against the wall and into a corner. For a moment, they believed that the crash had come, but those who had been looking down at the giant world knew better.

There remained but a few miles between the ship and the surface. Machine men were sent tumbling in every direction. The gravity had changed suddenly from the floor of the ship to one side. The ship had turned over. Evidently 20R-654 had lost control. Their last hope, the continued expulsion charges from the ship, was gone!

Slowly, the gravity again changed to still another side of the ship, rolling them along into tangled piles. Expecting it at any moment, to the machine men it seemed that the crash was infinitely delayed. When it came, Professor Jameson felt himself hurled with terrific force against the opposite wall, and his consciousness left him in a bright glare of inner light as his head struck the wall.

IS first thought on regaining consciousness was surprise that he had done so. Was he the only one left? There must have been others, a few at least. Active thought waves probed his brain, and he knew that he was not alone in having survived.

A clattering and scraping of metal reached him as a machine man came limping and stumbling over several quiet companions. It was 41C-98. Above him, the professor could see a side wall of the spaceship.

"Come, 21MM392, you do not seem badly damaged other than having bent a leg. Arise."

"How bad are things? How many of us are alive?"

"More than we ever expected. I suffered only a few mechanical injuries. There are many lying about still unconscious. I received calls from others in different parts of the ship, who are helpless to move. Even with a well-functioning body, it is hard to move against the strong gravity of this world."

The professor rose slowly to his feet and realized the truth of the statement. With difficulty, he stepped from the tangle of metal bodies surrounding him. It required several times more generated energy from his mechanical body than he had ever been forced to use to walk on a planet.

He wondered how 744U-21, 6W-438 and others with him when the crash came had fared. He probed their mental faculties and found them not dead but only quiescent. Mental radiations reached him from other parts of the ship, and with 41C-98 he went to investigate, proceeding with an effort.

"We should be equipped with superpowered bodies for this world," the professor told 41C-98.

In other chambers of the ship, their surprise was succeeded by wonder. Instead of twisted walls and warped wreckage, they found only signs of a severe fall. As fast as they could move, the machine men, joined by other bewildered Zoromes, went outside the ship and examined the hull.

They had crashed through a deep tangle of vegetation. Several seams in the hull gaped open and appeared to be the greatest damage done the ship in its fall. At first, they were inclined to believe that the fall through the vast tangle of vegetation had saved them, yet somehow this explanation did not seem adequate.

Not until 20R-654 came to his senses did they learn the truth.

"I saw that we were going to crash and destroy both the spaceship and ourselves in spite of the full reverse charges. So at the last moment, while we were still several miles above the surface, I shut off the reverse charges and let loose a side charge which turned us sideways to the surface.

"Then I released charges on our side facing the surface and once more loosed our reverse charges, so that we fell on a long slant which used up much of the speed of our fall. We were lucky to strike this great mass of vegetation where so many giant creepers intertangle. Otherwise, fewer of us would be left."

More of the machine men returned to their senses. The others were examined and found to be suffering from mental shock from which they would eventually recover. The casualties were the first ones to occur in a long time—and there were two. In a compartment next to the ruptured hull were found 250Z-42 and 4F-686, their heads battered.

"We are saved but temporarily from a fate such as theirs," said the professor gravely, "for unless we can get the ship repaired within the time left us before the meteoric mass strikes the sun, we shall be annihilated with everything else on the face of this world when the sun explodes and the nova spreads swiftly

throughout this system of planets."

"How can we ever leave here—even if the necessary repairs are made in time?" asked 119M-5. "We are unable to escape the power of this world's gravitation from a distance, so how are we to get free now that we are upon its surface?"

"Our gravitational resisters were faulty and were overcome and broken down by the mighty strain of this planet's pull," 20R-654 explained. "They must be reconditioned, and, besides repairing the hull, new parts must be made which will give us a greater lifting power when he take off. Starting from a dead stop on this giant world will require tremendous forces we have never previously required because we have never visited planets of this size."

#### CHAPTER THREE

#### Caught By the Giants

HE machine men lost no time in exploring the region where they had come down. Moving at great expense of energy, they radiated in a circle from the great tangle of vegetation until one of them found a break in the forest.

A level expanse stretched away to mountains that loomed in the background. Tiny specks flew high in the sky. These puzzled the machine men until they saw one of them drop low above the forest and veer toward the fallen spaceship in curiosity.

It was an enormous bird with an animallike snout. Four legs and the wing tips ended in talons.

"What monsters!" exclaimed 744U-21. "The bird is fully half as long as our spaceship from one wing tip to the other!"

"Forms of life would have a tendency to run to size here," Professor Jameson remarked. "Creatures on this planet must of necessity be uncommonly strong, too."

They came to refer to the giant world as

Ajiat, expressing the mental thought of the spoken word they had known in their organic lifetimes back on Zor. The word referred to anything huge or colossal.

With specially designed apparatus they carried for just such emergencies, the machine men quickly located and commenced mining the various ores and minerals they required in repairing the ship. When helium was discovered in large quantities, the professor was seized with an inspiration.

"Let us discover more about this world now that we are on it. From on high, we can look over a great deal of the surrounding country."

"But how shall we get up there?"

"The helium." Professor Jameson voiced his hidden thought. "We can make a balloon and rise on its lifting power."

For observation purposes, a metal globe was quickly fashioned, the basket of the balloon made of light metal framework and covered with wood from the surrounding forest. Firmly anchored to the ground with metal hawsers, the globe was filled with helium. The basket carried four machine men with their equipment. With him, Professor Jameson took 6W-438, 12W-62 and 29G-75.

"From what we know of the atmosphere, the amount of helium in the globe should carry us four miles or higher."

"The birds will probably attack you," warned 119M-5.

"We expect as much. It is why we have three power guns installed."

Once the hawsers were loosed, they shot off the ground like an arrow. Not until their ascent became slowed did the professor and his companions cast out the large stones they carried for ballast.

One of the great birds dropped down to meet them and was blasted from the sky. Another flew croaking from their path in alarm. They were nearly six miles above the ground before the balloon stopped rising. With powerful glasses, they examined the terrain for several hundred miles in every direction except towards the mountains. A pall of cloudy mist hung among the peaks. In the opposite direction, their horizon was far-flung due to the enormous size of the planet.

With their scientific apparatus, they gathered data which they were unable to obtain from the ground and had been too involved and disinterested to notice during their perilous descent.

A bevy of the huge birds came to investigate, interrupting their observations to circle, growl and chatter at them. One of the winged monstrosities made a purposeful lunge at the metal ball above their heads, and they blew him to fragments with rapid and well-directed fire. Another met the fate of the first, before the others winged away in screaming anger and alarm in the direction of the mountains.

"Do you think we could deal with them if they attacked us in large numbers?" 12W-62 queried.

"Not if they attacked us in a mass," the professor replied. "But we can descend by freeing some of the helium if they become too numerous or troublesome."

A sudden gust of air swayed the basket. The breeze had freshened, and they found that they had been drifting towards the mountains.

Like stately spires, the mountain peaks loomed before and above them. Those in the background were lost in a gray fog which had crept among them since the machine men had risen in their balloon.

Hundreds of the great birds could be seen darting and wheeling above the mountainside. As the balloon was carried nearer by the rising wind, they spread on the wing and flapped about the strange invader, voicing their weird cries and veering menacingly about the metal globe and basket. Several of them attacked and were destroyed.

The others became a bit cautious, yet they never abandoned their gliding vigil. They, too, finally swept down upon the balloon. More of the birds came swarming to take their place, and the machine men soon found themselves busy protecting their skycraft.

"They probably have their nests in the mountains close by," said the professor, "and they suspect us. That is why they have grown more ferocious and daring since we neared the mountains."

The wind was quickening. More of the great birds came to replace each one killed. One came so close that a wing brushed the basket, knocking the machine men off their feet. They were finding it difficult to defend the balloon against so many of them. They were in danger of being wrecked!

Dark clouds had settled over the mountains—which were now so near that the machine men could distinctly see objects such as trees and rocks. The wind had risen to a gale, and they were being carried on it.

"We are rising!" 6W-438 exclaimed. "The wind is carrying us above the mountains and into that approaching storm area!"

"Let out part of the helium!"

"We cannot do that now," the professor told them. "The force of the wind would dash us against the mountainside!"

A DULL flush of pink lit the drifting depths of the cloud masses momentarily, and the terrific roar which followed shook the balloon and made the metal globe hum with strange music.

With the advent of the storm, the birds gave up the attack and winged off to their lofty retreats in screeching alarm.

The wind continued to carry the balloon at a great speed, and soon they were over the mountains and into the dense, angry masses of clouds. Then they were buffeted by cross winds and freak air currents, falling, to be lifted up once again and tossed around like a leaf.

Roaring crashes of thunder threatened to split the sky apart, and great blades of lightning stabbed through the clouds. The storm grew worse, and the machine men entangled themselves in the hawsers holding the metal ball to the basket, to keep from being tossed out by the storm's fury. The basket was threatening to part from the metal globe that supported it.

The winds wrenched and tore at them, hurling gusts of rain like spray—fine and hard. Lightning flashed dangerously near, and the farther they were swept into the storm area, the blacker it grew. Had it not been for the lightning which played almost constantly, it would have seemed like night.

The four machine men lost all sense of direction as they were whirled and thrown viciously about. The basket finally broke away from the ball of helium, leaving them clinging to the strong wire hawsers hanging from the globe.

Here they swung and clashed against each other and against the metal ball, slowly gathering the slack in the hawsers about their metal bodies and creeping closer to the globe which was whirled and tossed more freely since it had lost its restraining basket.

To the machine men, it seemed that the storm raged for hours. The first intimation of its cessation came with a lessening of the gloom and fewer shafts of lightning.

"I am near a valve," 29G-75 reported. "Shall we release some of our helium and come down?"

"As soon as we see where we are."

"We shall soon come down whether we choose or not," said 12W-62. "There is a slow leak in the globe not far from me."

When the clouds lifted, the machine men found themselves on the other side of the mountain. More mountains loomed in the distance. Below them stretched a level plain. They were descending slowly. As more helium escaped, their descent became faster, yet they landed safely.

"We must not get too far from the mountain," the professor said. "If we cannot find some way of getting back over it, we must wait until 744U-21 sends us help."

"We may stay and see the nova," said 6W-438 grimly. "It will be a wonderful sight."

"A better way to die than those who were killed when our spaceship crashed. Doomsday on Ajiat will usher in a beautiful morning of flaming brilliance."

"Followed by a gloomy night of desolation and death."

The machine men walked slowly back in the direction of the mountain. Night fell. Still they kept on their way.

Their progress was forced. They knew that their mechanical parts would never stand the strain of climbing up the mountain. Their energies would soon be exhausted by the strain, parts would wear out, and they could neither be refueled nor repaired in the absence of the space-ship. They could only remain in a conspicuous and advantageous position near the mountain, waiting for the help they knew 744U-21 would send if they could be found.

Through the night, fire suddenly lit the sky ahead of them. There was first a dull, soft glow. This grew to towering proportions in a single, leaping flame. The fire was no farther than half a mile ahead of them, and soon they were able to distinguish black, shadowy forms which passed between them and the fire.

The professor called a halt. Several times they saw large fire brands carried. From the size of these, and the height at which they were carried, and from what they were able to see of the black shadows, the machine men knew the creatures to be veritable giants.

"Quite in keeping with this world," Professor Jameson observed. "It goes without saying that they are unusually strong. We shall do well to remain undiscovered."

With the coming of morning, the fears of the professor were justified. From afar, the machine men could see more distinctly the lofty, bulking figures which had been etched in silhouette against the campfires of the night before.

The creatures moved with large, easy bounds at several times the best speed the machine men had been able to attain on worlds much smaller than Ajiat. They covered the ground with such amazing swiftness that the machine men were scarcely aware of their danger before several colossal forms grew upon their vision and suddenly they found themselves surrounded.

The things towered fully fifty feet in the air. That was the professor's first impression. His second one conveyed the fact that they were of little intelligence. They stood on legs which resembled a small forest of tree trunks suddenly grown up about the four Zoromes. Two in number, these legs terminated in three long claws spread equidistant on tough, layered pads.

Jaws armed with long fangs featured the physiognomy of the things, while most curious were the eyes which projected on short, thick pedicles and were overarched and protected by a rough, bony protuberance.

The professor was suddenly seized and lifted close to one of the terrifying faces for an inquisitive inspection!

The creature sniffed at him with flat, distended nostrils. Huge fingers, seven in number, clutched him tightly. He saw that the thing had two arms and that their hairless bodies were roughly criss-crossed with deep lines.

Another interesting feature next claimed his attention. A web of elastic membrane

extended halfway down each arm to the body. A muttering gabble issued from these gargantuans of Ajiat as they examined the machine men.

"Do not act alive," the professor radiated, "and they may become disinterested in us."

Although subtracting from the interest of the great brutes, this plan did not prevent their seizure. One of the things emitted a bellowing roar, which the machine men found themselves at a loss to properly interpret. The creature turned and dashed away in the direction from which the machine men had come.

Far off, the huge beast had seen the gleaming, metal ball which had contained the helium. The others waited patiently, gently pulling at the legs and tentacles of the strange, metal contraptions they had found, until he returned with it.

Then they all set out at whirlwind speed to join the main body, setting up a cloud of dust behind them and passing by the black, smoking embers of last night's fire.

With the rest, they made their way to the mountain, climbing up to a plateau. Cliffs loomed on two sides, and in tunnels and rocky defiles splitting into the side of the mountain, these creatures made their homes.

#### **CHAPTER FOUR**

#### A Race With the Nova

HE machine men were given over for inspection by hundreds of the great creatures which they had automatically designated as Ajirs. Tiring of the inspection, the brutes handed them back to their original owners.

Professor Jameson was carried into a cavern and unceremoniously thrown on a rocky ledge with a strange collection of objects which had evidently caught the fancy of the Ajir.

There were bright bits of fused metal, evidently of volcanic origin, and odd-shaped bones littered the ledge. Most curious of all was an entire skeleton about twice the professor's size. As soon as the cavern's owner went out and left him alone, he fell to examining it. The skeleton was entire, each bone loosely interlocking with another so that it was impossible to remove one of them, except by force. The skeleton had been that of a four-legged animal.

The professor found that his companions had met with fates similar to his own. They communicated with one another and decided that for the present it was best to bide their time—never letting the Ajirs know that they were living creatures—and watch for the first good chance to escape.

In the several days that followed, the machine men learned many things about their captors and the world on which they lived.

The Ajirs were partly vegetarians. They sometimes set traps for the great birds which came down from the mountain heights. The Ajirs voiced a syllable in reference to the birds which the machine men interpreted as Quar, and from that time on they referred to the birds collectively as Quari.

The Ajirs possessed hardly any language at all, and their minds were so simple and elementary that the machine men rarely took the trouble to trace their thoughts.

When they were left alone, the machine men looked out upon many things scurrying back to their proper places when their owners approached the caves.

Once, the professor was not quick enough, and he lay still on the floor. The Ajir picked him up and placed him on the ledge, thinking, as the professor had expected he would, that the machine man had fallen off the ledge.

6W-438 was caught out on the plateau

once. One of the Ajirs accused another of theft, and a terrific battle ensued between the two.

Meanwhile, the anxiety of the machine men grew. The days before the nova was expected were becoming fewer, and still they found no means of escape. 12W-62 argued that escape meant little unless they were found and taken back to the space-ship.

The Ajirs continued the routine of their simple yet turbulent lives, blissfully ignorant of the impending doom to all life on Ajiat and the sister worlds of the system. They had little time to live, but they were living it ignorantly and happily.

It was the hope of all four Zoromes that another helium ship would be sent out by their companions and that the mental detectors would find them. Unless they escaped in time, there would be a battle with the Ajirs, but the machine men doubted the ability of the fearsome monsters to survive a barrage of the power guns.

More days passed, and still no help reached them as they remained prisoners of the Ajirs. The machine men were now rarely handled by their captors—the novelty having worn off. They watched everything that went on, and they saw parties of the monsters come and go. Once there was a battle with a raiding party from another village.

At another time, the monotony was relieved by an unusually large bevy of Quari that flew down from their mountain aeries, drawn by the meat of the baited snares laid by the Ajirs. The monsters rushed out to beat them to death with great clubs as several of them were trapped and fought viciously to escape.

The large numbers of the Quari stayed and fought loyally with their snared brethren until the latter broke free or else fell exhausted by their efforts and by the blows from the Ajirs. Several of the great brutes were severely injured by the Quari, and bled deeply from gashes inflicted by teeth and talons. One of them died as the price for the four Quari which were taken.

Out of this exciting episode, which all four machine men watched from their various coverts, Professor Jameson conceived not only a plan of escape but a possibility, as well, of returning near the neighborhood of the spaceship. The machine men heard his plan and waited for night to fall.

"We must hide among the snares and attach ourselves to one of the Quari when they come for the bait. We shall be carried up into the mountains and perhaps part way down the other slope. As soon as darkness falls, let us creep out and meet by the traps."

"But suppose the bird is trapped?"

"Then I shall free it with the heat ray in my fore tentacle," Professor Jameson replied. "We can use the lines from the snares to fasten ourselves to the bird's legs."

"We may be shaken off or torn away."
"Possibly, but we must run the risks involved. Time grows too short. We must get back to the spaceship!"

URING the night, after all was quiet, the machine men crept from their caves and met on the plateau. There was a tendency for their metal feet to create noise against the rock, and they found it necessary to move slowly as well as cautiously. Their situation would be a precarious one if the Ajirs awakened to find their metal possessions suddenly come to life!

On one side of the plateau, large hunks of meat loomed about the machine men like boulders. The birds would come at dawn.

The machine men waited as the stars swung across the sky and satellites of Ajiat came and went. Dawn came. With the first, faint flush of light upon the tallest peaks, the Quari commenced to circle and fly down from their heights.

Sounds of stirring and awakening Ajirs reached the machine men. They were glad that the snares were away from the caves and near the precipice. The bait was so large as to afford them easy concealment.

With the coming of dawn and activity among the Ajirs, the professor burnt several lines from the snares to be used in fastening their metal bodies to one of the Quari. Previously, he had not dared risk the glare of light produced in the darkness for fear a waking Ajir might see it.

With mingled excitement and relief, the four machine men saw several black specks from on high swoop lower. The birds circled above the tempting morsels. The machine men remained quiet so as not to excite their suspicions. They settled, and the voices of the Ajirs who had also watched their coming were hushed.

One great bird settled to rest by a chunk of bait which sheltered three of the Zoromes. They were instantly joined by 12W-62, and all four fastened themselves about the legs of the Quar.

The bird jumped a bit in alarm but did not abandon the chunk of bait. The machine men had freed this particular piece of bait, among others, from the snares, and as the bird seized it, and was not caught, a subdued cry of disappointment arose from the watching Ajirs.

Other birds were caught and battled to get free. The one to which the machine men clung, pecked at them ineffectually a few times, and seized upon the bait once more as onrushing Ajirs came with clubs lifted.

The bird flapped its wings, and with cries of surprise the Ajirs saw and recognized the four metal things they had found. They stared at them, entangled about the legs of the slowly rising bird.

A swishing blow of the foremost brute just grazed a talon of the bird and left the wind of its passage upon 29G-75. Up they rose, swifter, as the broad wings of the Quar belabored the air.

They soared higher, the plateau with its fighting Ajirs and Quari dwindling away into obscurity. They were soon among the peaks and flying above them. The machine men wondered when the bird would light. It was like riding upon the landing gear of a mighty airplane.

The bird was carrying the chunk of meat to its nest, and they were glad for every mile that the bird was covering in the direction of the opposite mountainside. Yet, they hoped that its nest was not on the face of an inaccessible cliff.

Soon, the other slope of the mountain loomed into view, and they enthused at the familiar panorama beyond. Professor Jameson could see, far off, the territory of forest into which the spaceship had crashed.

Would the bird take them closer to that spot? It was too much to hope for, he knew. Chance on choosing this particular Quar had taken them far already in the right direction. Even as the professor turned these thoughts over in his mind, the bird headed for a rocky crag.

There was no single nest here, but a continuous series of pits and hollows formed of branches lined with grasses and other materials. There were young birds in many of these—while others were empty. A few adults had already come back with food in the way of small animals and smaller birds.

The Quar headed for one of the empty hollows and swooped gently to rest. That the bird had felt harassed in its flight over the mountain, by the four machine men, was plainly evident as the bird set down its piece of meat and bit viciously at them, sharp teeth grating and sliding against their metal bodies.

A tentacle of 12W-62 became wedged between two teeth, and the machine man disentangled himself with difficulty. The professor and 6W-438 were wrenched from their self-made bonds as the Quar screeched, in rage. Talons freed the two more encumbrances from the bird's legs.

Meanwhile, as the Quar continued in its efforts to bite the professor and 12W-62, 29G-75 freed himself and made a discovery.

"There are openings in the bottom of the nest where we can climb through!"

He was soon down out of reach of the Quar, and he waited for his companions to get free. 6W-438 was first to join him. An application of the professor's heat ray caused the screeching Quar to loose him and 12W-62 long enough for them to slide down through the tangle of tree branches.

The four machine men found themselves in a maze of dead branches through which they threaded their way with difficulty, often finding the way before them too impenetrable and closely woven for passage.

The professor now and then had to use his heat ray.

They struck the rock foundation of the continuous nest thirty feet down, and they followed a devious route to the edge of the crag. They found a long, steep descent, dangerous and treacherous.

Luckily, none of the Quari returned to attack them until they were safely at the bottom of the looming crag.

"It is a long way down the mountain and then to the spaceship," said the professor, "but we must try and make it in what little time we have left."

"If nothing detains us, it will be enough, I believe."

From what they knew of Ajiat's rotation—they had all made separate computations while prisoners of the Ajirs—they had come to the same conclusion regarding the time left before the sun exploded.

Now, there were only three of Ajiat's rotations left before the meteoric mass struck the sun!

A LL that day, they kept moving down the mountain, and though they were going downhill, they nevertheless felt the effects of the strong gravity. They occasionally reached ledges or precipices which had to be avoided.

Once, 29G-75 fell over one of these ledges, and although the fall was a relatively short one for a machine man to sustain—the mighty attraction of Ajiat drew him down so forcefully that he bent a leg in under him in his fall.

All day long, at intervals, the Quari came to bother them, generally desisting when they found that they were not edible. At night, although they used their body lights, their progress slowed somewhat.

Dawn came, and they increased their pace once more. Untiring, they knew no cessation until a vital part wore out. This, the professor and his companions constantly feared.

Again, the sharp eyes of the Quari saw them from on high and came to harass them again. Sometimes the professor managed to drive them off with his heat ray. The machine men also struck them with lashing tentacles, but they were so large that this had little effect on them.

Shortly after noon, disaster stalked them. Earlier fears were realized. The leg which 29G-75 had bent in his fall finally wore so bad at the joint with his metal body that it became useless. This slowed their descent of the mountain. Up to this point, the professor had figured themselves well ahead of the impending, solar catastrophe.

Night fell again. They kept on, assisting the slightly unbalanced 29G-75 over difficult stretches.

Then, without warning, something went wrong with the inner workings of 12W-62's metal cube so that he suffered lapses of control. He kept on going when he

should have stopped, and sometimes he stopped entirely and seemed to have no ability to move again. These periods of inactivity, brief at first, became prolonged. The machine men knew the symptoms and were not surprised when the inevitable happened.

The mechanism of 12W-62 went entirely dead! The excessive requirements of Ajiat had exhausted his energy supply which could only be recharged at the spaceship. There was only one thing to do, which they accomplished with as little loss of time as possible.

They removed the head of 12W-62 from his useless body and carried it with them. 29G-75 was quickly outfitted with one of the metal legs, and they carried the other three with them in case of emergency.

The race against time tightened. Their slight advantage had been lost. Professor Jameson kept the doubts in his mind hidden from his companions.

They were nearly to the foot of the mountain, and the distance from there to the spaceship was well within a day's walk. They gained level ground shortly before dawn.

They had covered less than a mile of distance when 6W-438 fell over suddenly and could not rise. More time was lost in removing his head.

As dawn broke, Professor Jameson collapsed, and even as 29G-75 stooped to help him and ascertain the extent of his trouble, he, too, lost his ability to move!

He stood quiet and useless on his four metal legs above the fallen body of the professor. Each of the two machine men carried the head of a companion.

"This looks to be the end," said 6W-438. "We still have today. Shortly after dark, if our calculations are not wrong, the nova will take place."

The sky above them grew brighter,

Idle and impassive, they watched the birds commencing to fly far up the side of the nearby mountain. The sun, that dangerous furnace which was destined to explode before another full rotation of Ajiat, crept over the horizon. Doom shone upon the machine men.

Somewhere not far from that flaming, incandescent mass, the vast conglomeration of meteoric fragments sped like a racing powder train on a grim errand to purge all the worlds of that system of life, spreading an all-destroying heat wave to the outermost realms of the farthest orbit with the speed of light.

A small swarm of birds caught their attention. The Quari had evidently sighted them and were descending to investigate.

"This time they will find no resistance," said the professor.

"Do you think they will carry us away?"

"It is doubtful—when they find that we are not good to eat."

The birds were acting strangely, as if they were fighting over something among themselves. Their manner of descent was strange, too. The machine men had never seen them come down so directly before. Generally, they flew down in long, swinging loops. This time, their turns were shorter and took less distance:

Not until they were within a few hundred feet from the ground did the machine men find the reason for their strange maneuvers. They saw a gleaming ovoid of metal which had previously been hidden by the Quari who were attacking it.

The machine men now saw birds disappearing from time to time, and burned fragments of them came floating down. The help for which they had despaired had come at last!

With a sudden barrage, which caused great havoc among the Quari and sent the survivors winging away, the metal skycraft descended the remaining distance.

There was no attached basket, but a gondola of metal was built into the bottom of the globe. Propellers and steering gear were also visible. Out of the gondola raced 47X-09 and 22K-501.

"You are found, finally!" cried 47X-09. "And none too soon, either!"

"Shortly before dawn came, we saw your body lights shining near the foot of the mountain," 22K-501 told them as they were gathered up and taken aboard the gondola. "We were far off and high in the sky. We lost track of you for a while when it grew light, and then we had to fight off the birds. It was during their attack that we again located you with the mind detectors."

"Tell me about the spaceship," the professor implored. "Is it all right and ready for flight?"

"That we hope. It will call for a tremendous repulsion to free it of Ajiat's powerful grip. 20R-654 and 744U-21 are not entirely satisfied with the super-resisters which have been built, and so they have enlisted another strong ally to help the ship on its start."

"The helium!"

"Yes, 21MM392," 47X-09 vindicated the professor's inspiration. "The space-ship is not only filled to capacity with it, but several tanks have been built around the ship and are filled, ready for our flight. Of course, it will be useless after we once pass the atmosphere, but it is only for initial momentum."

#### CHAPTER FIVE

#### Thirteen Minutes

THEY were soon back to the spaceship, and the search was at an end. For many days, two airships had searched both sides of the mountain and beyond. Vegetation had been cleared all around the ship for a distance of a hundred yards. The spaceship was entirely surrounded with a network of metal hawsers which secured it to the ground against the mighty pull of the helium.

Entrance was gained to the ship by means of a helium lock.

With the return of the four machine men, no further time was lost. They were to make one supreme effort. Success or failure hung in the balance. Failure meant a flaming death when the nova struck Ajiat in its swelling glare.

"Every one of us must be securely fastened to a part of the ship," 744U-21 told them. "Our rise will be very sudden."

The fateful moment arrived. Several machine men made a last minute inspection of the hawsers holding the ship. By a specially arranged device, they were to be cast off simultaneously. When all was ready, the hawsers were loosed.

Like a shot out of a gun, the spaceship darted skyward, accelerating rapidly as the helium sought a natural level aided by the power releases of the spaceship. The climb was so rapid as to leave the machine men dizzy.

Eight Zoromes sat securely fastened near the ship's controls, and the first one who recovered his mental balance forced the super-resisters into action.

Night, with its flaming stars, replaced daylight, yet the noonday sun still shone upon them. They had cleared the atmosphere and were in space—but were far from being free of Ajiat. Their battle with the planet's mighty attraction had just begun.

They were forced to accept one discouraging fact with fatalism. They were heading off Ajiat straight for the sun which was shortly to explode! To have waited for Ajiat to rotate would have lost for them more precious time.

In space, they still maintained the speed of their initial rise, yet they realized that their speed must be increased if they were to win free of the giant world. In suspense, they watched the speed gauges and waited. 20R-654 gave the ship every advantage he had learned in his long career of space navigation.

Their speed gradually increased, yet dangerously slow in acceleration even though they were winning free. The nova would spread with the speed of light and catch them in their battle against the strong gravity of Ajiat! In free space, the flight of the spaceship exceeded that of light several times over, but within the grip of Ajiat their speed was appallingly small. They were gaining more speed and were now sure of escaping Ajiat, but if the computations were correct they knew they would not escape the nova.

They were heading straight for the sun and dared not wheel in another direction until they were free of Ajiat's attraction.

The remaining hours fled. Minutes were left.

The machine men knew that a respite of thirteen minutes would be granted them from the time the explosion took place on the sun until the bright, hot flare of light reached them. The flaming gases to follow would reach Ajiat about a day and a half later.

They kept onward until it was agreed that with the little time left them they might turn at an angle of forty-five degrees from their course, then gradually turn this angle into a curve away from both the sun and the orbital course of Ajiat. They were speeding upon this curve when Professor Jameson announced that the meteoric mass they had passed in space before coming to Ajiat was probably, at that moment, hurling its provocative bulk into the sun.

"We shall not see the nova until it is upon us," he said, "for it travels with the speed of light. That is what adds to the uncertainty of our calculations, for there is just a possibility that a smaller body in this system, of which we know so little, might have bent the course or slowed the speed of the meteoric mass. Unless such a long chance has occurred, we have only thirteen minutes before the nova reaches us."

In the estimated time left, they reached the end of their curve and straightened out on a tangent from the sun and Ajiat. They were rapidly approaching the speed of light and safety when the ship was suddenly enveloped by a blinding glare.

"The nova!"

"It has overtaken us!"

Nothing could be seen outside but that awful brilliance. The sides of the ship grew hot. A terrific explosion rocked the ship in its flight and threw the machine men staggering against each other. One of the attached helium tanks had overheated and burst. Another report jarred the ship and was followed by several more concussions.

"Eject the helium from the ship!" 744U-21 directed. "We must have a vacuum!"

The order was quickly executed, and the helium spurted from the vents opened for its release. The hull of the spaceship grew hotter. That side facing the sun turned a lurid crimson.

The speed of the ship picked up rapidly as the malign power of Ajiat grew less. Soon, they were in free space, yet the hull of the ship grew hotter, and the terrible light which had swallowed them, remained intense.

The speed of the ship crept up to the speed of light, then passed and exceeded it. At that rate, the machine men hoped to outrace the dazzling hell which had closed upon them.

The sunward side of the ship waxed white hot, and metal plates were rapidly fastened over this danger zone, the plates becoming red hot in turn.

There also existed a vague fear among many that they were not heading directly out of the nova. The shock of the exploding helium tanks had made the proximity detectors perform queer antics. Meanwhile, their speed increased.

The spaceship suddenly shot out of the nova and into the darkness of space.

"We have outsped the nova!" Professor Jameson exclaimed. "Its light has not yet reached this far. We are looking at the sun and at Ajiat as they were just before the nova took place."

Nor did the machine men again see the nova until they were far beyond the doomed system of planets and the estimated limits of the nova's spread.

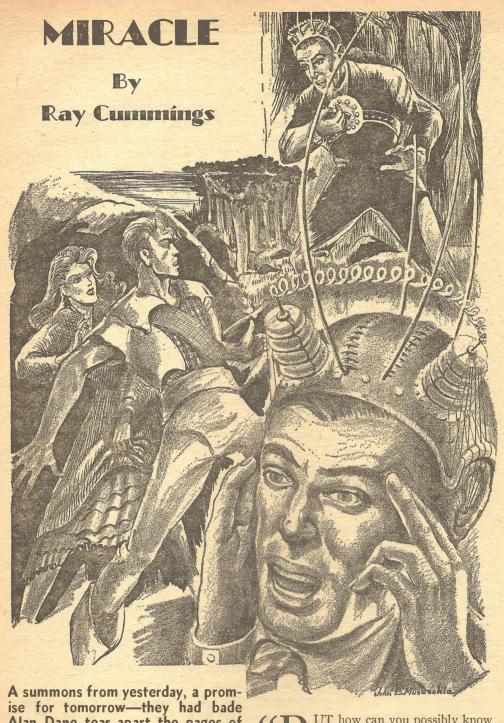
Each planet, when overtaken, glowed brilliantly. The sun swelled and grew so large that at that far distance they could not bear to look upon it except with veiled lenses.

"The nova is now reaching a point where it overtook us in the spaceship," said the professor.

They watched until they saw the nova reach its maximum proportions. A hotter and more compact globe of gases was spreading gradually from the sun, and the machine men lingered in the vicinity and closely approached the outermost limits of the mammoth spectacle until they saw the inner planets reached by the spreading gases. These, they knew, were in the state of volcanic eruption, their oceans turning to dense, vaporous envelopes.

The light had ended all life in the system, and now the slower moving gases were completing the destruction. They saw smaller satellites of the planets explode into myriad fragments, their lesser bulk lacking the resistance of larger companions. The spectacle was grand—yet terrible.

"Millions of light years away, this astronomic catastrophe will be visible," Professor Jameson philosophized, "and millions of years from now peoples on the planets which will witness it shall look upon a new star swelling into sudden brilliance for a brief period, and they will wonder."



A summons from yesterday, a promise for tomorrow—they had bade Alan Dane tear apart the pages of history to save a girl's life—that somewhere among her children's children might be the girl he would marry!

Thow can you possibly know that time traveling has never been done?" the chemist protested. "Someone from our future may have gone into the past many times."

"I should think they'd have created quite a commotion," the lawyer observed. "Wouldn't we have heard of it from our historical records?"

"Of course." The chemist was smiling now. "We probably have. History tells of many important occasions on which a 'vision' appeared. A miraculous presence, such as Joan of Arc, for instance, or the Angel of Mons."

"Or the appearance of the Sun God to the Aztecs. I get your point," one of the other men interjected. "You think that there might have been a time traveler who materialized just long enough to take a look—and the superstitious natives took him for a god. Why not? That's probably just what would happen."

Young Alan Dane sat in a corner of his grandfather's laboratory, listening to the argument of the group of men. He was well over six feet in height, a sunbronzed, crisply blond young Viking. Beside him sat Ruth Vincent, his fiancée, a slim girl of twenty. Alan's heart was pounding. Somehow it seemed as though this bantering talk of time traveling were something momentous to him, something requiring a great and irrevocable decision.

Then abruptly old Professor Dane held up his hand and, quite casually, said. "What you do not know, gentlemen, is that for half my life I have been working to discover the secret of time travel."

His audience was suddenly tense. Professor Dane was loved and respected by each of them, and his word in his chosen field of physics was final. If he said a thing could be done there was no mistake.

The chemist broke the silence. "You've succeeded?" he asked. "You've made experiments that show—"

The old man shook his head. "No, not yet. But I'm close to it. I know I am." He was staring at some infinitely distant thing beyond the room in which they were sitting. Staring as though he were try-

ing to penetrate the grim curtain of the future, or the past.

Almost as though to himself, he went on, "I've often wondered what made me work on this thing all these years. It's been like an inner urge driving me, a preordained destiny that is making me accomplish something."

"Metaphysics!" the lawyer interrupted. "Do you believe in predestination?"

"I believe there is a plan," Professor Dane said simply. "But what it is, and what my part in it may be . . . I don't know. That's the queer part. I know instinctively that I must do something, something connected with traveling through time. Some task I must accomplish. But what it is, and how I am to do it . . . I don't know. Yet I feel that if the moment came, I would know what to do." He was gently smiling now at Alan and his fiancée. "But perhaps I am too old-I have thought that is true," he continued. "So I sent for my grandson. And, as you see, he brought his fiancée here with him."

The old professor was staring at the startled Ruth now. "And, gentlemen," he added earnestly, "meeting her has somehow seemed to intensify that feeling. There is something to be accomplished, in the past or the future, and it concerns Ruth Vincent!"

Alan's hands were gripping the arms of his chair. These things which his grandfather had been feeling—he was feeling them now. This urge, this apprehension that something was left undone. . . .

"I'm going to ask Alan now to carry on for me," his grandfather finished abruptly. "He is young and strong, educated and able. I want him to feel the things I've been feeling—"

"Oh, I do!" Alan exclaimed. "I'll do what I can, grandfather. I'd have to do it, even if I didn't want to! Don't you see—I feel that same urge!"

HE gray moving shadows all around Alan Dane were blurred, formless. He was seated hunched on what had been the ground. It was the ground no longer, but now an undulant gray surface that was under him, supporting his weight, but imperceptible to his touch. He couldn't feel it; he couldn't feel anything but the racking strain of his headlong drive through the vast infinities of time.

He alone, of all things in this great gray monochrome of scene, seemed substantail. Everything else flowed invisibly away into emptiness. The thin skeleton of the metal headgear clamped on his forehead so that his temples throbbed; the wires to his wrists and ankles were luminous glowing strands. The electroidal current from the batteries lashed across his back was throbbing and pulsing into every fiber of his tingling body.

Alan shifted restlessly and glanced at the little time-dial on his wrist. The needle was creeping slowly back, showing a hurtling progression through time to the past. He closed his strained eyes, glad of the relief from the impossible attempt to focus his gaze on the weirdly distorted scene before him.

Where should he stop? And what would he find?

Alan's imagination went back to the scene when his grandfather had first told others of his fantastic creation that would permit voyaging through the years. What had the old man said then? Something about a purpose—

Alan was almost on fire with the consciousness of that set purpose now. Something within him, something that could not be denied, was guiding his hand on the control switch of the time traveler.

He was voyaging backward into time! So strange a thing—and so simple in fundamental conception. He recalled how his grandfather had explained it, back in the laboratory. Everything had been created at once. On the scroll of time everything is permanent. We live our infinitesimal lifetime progressing forward through ordained, predetermined events. All the past and all the future exist—but we can only be aware of that forward-moving instant which we call the present.

And old Professor Dane's fundamental conception—certainly it could now be considered finally proven, with his grandson actually applying it to really travel through time. He had thought that all material things, strewn in sequence on the scroll of time, were of different physical characteristics.

Different states of matter; a different vibration-rate, so that to change the vibratory frequency of any object would be to change its position on the time-scroll!

LAN had started from his grandfather's laboratory, near Riverside Drive in mid-town New York. The date had been May of 1942. His watch, set above the other time-recording instrument on his wrist, told him that his start had been made only a scant half hour before, by his personal consciousness of time. How long ago-how far away that seemed now! There had been a reeling of his senses, the soundless clapping of swiftly alternating light and darkness at the shadowy laboratory windows. Then as his rate of change accelerated, the days and nights had merged into this flat, dead emptiness of gray.

Then the house had abruptly dwindled, thinned out, and disappeared from around him! He had reached a time-era before its construction. Still with greater speed, the shadowy shifting outlines of the great city were in motion, shrinking into smaller

and smaller buildings, narrower, shorter roads.

More shadowy open spaces appeared, then were replaced by towering giants of trees. 1850 he reached and passed—then 1800, and 1750. The city had been long gone by then—the little village of British New York was a shrunken settlement of a few thousand persons clustered down about the Battery, four miles from where Alan Dane was. He could see that he was poised now on what seemed a little wooded hill, sloping down to the broad Hudson River a few hundred feet away.

It was a strange transition indeed. And yet to Alan Dane, the strangeness of his own emotions seemed not the least of it. Three years of his life had passed since that night when he had promised his grandfather he would carry on the experiments—three years in which he had lost his grandfather, but gained a wife and son. Ruth Vincent had married him and together they had worked on the fragile thing that he bore now on his back—fragile, but more potent in a strange, incredible way than any other device.

Alone Alan would have failed. Even with Ruth helping him he could not have hoped to succeed so soon. But his grandfather had left researches only a hair's-breadth from completion... and the young couple had finished them.

Even so, the thing had come almost by accident. Alan was far from sure that he could again compound the strange, unstable mixture of rare chemicals from which his nameless alloys were made—alloys which formed the plates in the timebatteries. But at least he had enough for this one brief trip.

Alan was curiously sure that this one trip was all he needed to make—that, after it was done, the curious driving compulsion that had seized him three years before would leave him, his task completed.

Alan glanced again at the time-dial. The transition was slowing now; he had

hardly been aware that a moment ago he had decreased the current. 1699-98-97.... The retardation was progressive. It was almost as though the apparatus itself were dictating his stopping point.

And then the date 1650 flashed into his mind. That was when he had to stop. It was as though he'd always known it. . . .

Was this a cave, here at his back? He was aware that he was sitting at its entrance, facing the shadowy declivity and the deep woods through which he could see the broad, gray river.

An instant later he shoved the lever to shut off the current. The shock of the halt made his senses swoop. Then, as he steadied, with the ground solid under him, he was aware that it was night. The hum of the throbbing electroidal current was gone. But there was still a pulsing note in the air—the throbbing voice of the deep forest through which the river was shimmering, pallid in the moonlight.

A LAN staggered to his feet, steadied himself. A shaft of moonlight was on him; and abruptly in the dimness of the cave he heard a sound. A man's muttered, astonished exclamation blended with the startled high gasp of a girl.

As he turned, he saw them. The man was hardly more than a boy—twenty, perhaps, and garbed curiously in gray blouse and brown, baggy pantaloons, knitted brown stockings and thick, clumsy shoes. The girl was even younger, a slim little thing in a quaint bodiced dress with her braided flaxen hair tumbling forward over her shoulders in double strands.

Terrified, wide-eyed with utter astonishment, they mutely gaped at Alan.

"Well," he said at last. "Do you speak English? I'm sorry I don't speak Dutch—that's your language, isn't it? This is Dutch New Amsterdam?" He checked himself and sighed. The Dutch boy and girl were gulping, numbly staring at him.

MIRACLE

They didn't speak English, of course. It would have been too much of a coincidence . . . but so welcome, if they had. "I'm sorry," Alan went on, not hopefully. "Look here, I don't want to frighten you. I only want to know—"

He took a step forward. For a second the two looked utterly incredulous, as though disbelieving the evidence of their eyes. And then they shrank away with terror on their white faces. The youth whirled the girl behind him, confronted Alan.

"What—what do you want?" he faltered. It was English, curiously and quaintly intoned. "Are you real? Where do you come from?" The lad was recovering rapidly. "You speak English, but not like the traders or my teacher. What are you?"

Alan tried to smile. "I won't hurt you," he repeated. "I'm a friend. A visitor, from—from a far-off place," he floundered. It would never do to say that he came from 1942. Already they were staring at him as though he were mad, huddled back against the wall of the cave.

Abruptly behind Alan there was a whiz; a thud; and the cave was lighted by a flickering, yellow-red glare. It made the youth momentarily overlook his astonishment, his terror at Alan, so that he gasped to the girl:

"Oh, Greta—a fire-arrow! They are out there just as we feared."

Alan turned. An Indian fire-arrow had whizzed into the cave-mouth from the forest outside. It quivered, sticking upright in the guano floor of the cave—a little torch of flame with thick, resinous smoke surging up from it. With a sidewise kick Alan's foot knocked it loose and he trampled on it. He swung around with a leap so that he was close to his cowering companions.

"Indians are out there?" he demanded. "Is that what you were afraid of, before you saw me?"

The girl was coughing with the drifting smoke already choking her a little in the fetid air of the cave.

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"Yes," the lad muttered. "That is it. They saw us in the woods as we came up from the Bouwerij. So we ran in here."

Another arrow came flaming. It barely missed Alan, struck against the rockwall and fell nearby, still flaming. He and the lad rushed at it; they stamped it out together.

"You have no guns?" Alan demanded. "Guns?"

"To shoot with. To fight our way out of here."

"Oh, not guns on a ship—you mean fowling pieces? No, we have none." Despite his terror at the flaming arrows of the Indians outside the cave, the frightened Dutch boy was forcing himself to answer Alan's questions, but still both he and the girl were incredulously staring at their miraculously appearing companion.

"Greta was showing me the way up from the town," the Dutch boy was murmuring. "She has a boat at the river bank. Then I was going up with the tide. In the fog last night, an English frigate got past our forts at the Bowling Green. It is up the river now, and Stuyvesant has sent me—"

NDER Alan's urging questions, the boy and girl swiftly explained. This was a Dutch boy, born here in Nieuw Amsterdam, but he had lived most of his life in London. His name was Peter Van Saant. She was Greta Dykeman; her father was one of Governor Stuyvesant's burghers of the Town Council. The English fleet was here off the Hook, and yesterday, Nichols, emissary of the Duke of York, had come ashore to demand that the Dutch surrender the city. Henceforth, according to the demands of the Duke, this would not

be Nieuw Amsterdam, but New York a British settlement with a destiny of greatness, here in the New World.

As he mutely listened, Alan's mind again swept to his own time-world of 1942. This same space! And he envisioned the huge city of 1942, when this cave and forested glade were mid-Manhattan, where giant buildings towered and the great ramp of the automobile highway bordered the river.

Another flaming arrow came whizzing into the mouth of the cave. Peter rushed for it, stamped it out. The woods beyond the cave mouth now were lighted with torch glare, and echoing with the war-whoops of the Indians, emboldened because no fowling pieces of the trapped palefaces were exploding to hurl lead at them. Outside the cave, arrows were continuously striking; the brush was on fire, with a red-yellow glare that came in here and painted Alan and his two confused, terrified companions with its lurid sheen.

"I've got to get up the river to that frigate," the lad was muttering. "If I got killed here—or even Greta got killed —what matter? But I've got to reach the frigate."

He was a secret emissary of Stuyve-sant, this momentous night—sent to the English commander of the frigate—sent because he spoke English so well and they would trust him.

"Stuyvesant will yield to the Duke of York in a day or two," Peter was swiftly saying. "But he is afraid the frigate's men will land and attack the city from the north. If they do that, Stuyvesant's prestige before his own people will make him fight. Without it, he will try to drive a bargain for his own self-respect, and then yield. I am to tell the frigate's commander that if only he will but have patience and wait—Stuyvesant will surrender."

Upon that mission, tonight, might depend the whole course of history in the New World! "There's no back way out of here?" Alan demanded.

"No. Just this one entrance. And if we should try to run, out there into that glare—"

"We'd get arrows in us," Alan finished wryly. "Those Indians are pretty close now."

THE shouts of the savages were audible, where they crouched in the brush just beyond the line of fire. They were whooping with anticipatory triumph and showering the cave-mouth with their flaming missiles. Acrid yellow smoke was welling into the cave in clouds. Peter had shoved Greta to the floor where the air, so far, was a little purer. He too was coughing; and Alan felt the clutch of the resin-smoke in his own throat. To stay here another five or ten minutes would be death.

If only his time-traveling mechanism would take more than one person! But it would not. He himself was safe, of course. . . . He had taken a step toward the cave-mouth, and abruptly he recoiled as an arrow whizzed narrowly past his shoulder.

Nothing safe about this!

And then he knew what he must try to do. "You two stay here, just a few minutes," he said swiftly. "Keep down by the floor, both of you—air's still much better down there. I'm going away, but I'll be back."

He gazed down at them from his stalwart, six foot height as they crouched terrified at his feet. He was smiling a little as his fingers shoved the lever of the time-mechanism on his chest to the first stop.

He could see the astonished horror and awe on their faces as slowly he faded, vanished before them.

A little movement forward in time. Just about twenty-four hours. The blurred and shadowy cave briefly was filled with MIRACLE 99

daylight, and then with the darkness of night again.

Alan switched off the current. Night was here, deep and silent, enshrouding the forest. No warwhoops; no glare of flaming arrows and burning brush. That had been last night. From the empty cave Alan walked slowly out into the woods. A northward vista of the broad river for a moment was visible. A little blob was out there in the river—an English frigate awaiting the outcome of the parley of Nichols, emissary of the Duke of York, with Governor Stuyyesant.

Alan selected a flat-topped rock which stood about a hundred feet off to one side of the cave-mouth—a rock whose top was some twenty feet above the surrounding rocks and thickets. He climbed it; stood on its summit.

If only this would work! Despite his efforts at calmness, he was shuddering inside. Not for his own safety—was it for his wife and their little son, out there in 1942? Absurd thought; but somehow it was turning him cold with apprehension.

He set his tiny time-dial for the moment of his departure from the smoke-filled cave, last night, and turned the current on again. Twenty-four hours backward into time. A retrogression of that same swift daylight again. Then the previous dawn, swiftly fading into night....

Again his time-movement stopped; and the forest sprang into ringing warwhoops and crackling yellow-red glare of torchlight and burning brush. On the top of the little butte Alan stood poised. An amazing figure, he came out of nothingness, solidifying before the astounded eyes of the stricken savages. The warwhoops died into a tense, terrified silence. To Alan it was a breathless moment of apprehension. His fingers went to the time-lever; alert to shove it if necessary. And then in the wave of silence which flooded the pallid forest glade he flung out his

arms. Drawn to his full height, with arms outstretched as though in benediction he stood gazing down upon the silent savages. A pale cathedral shaft of moonlight was filtering through the overhead branches and it struck upon him, illumined him with its eerie glow.

HE tense moment passed. The Indians, their war-painted bodies glistening in the glare of the burning brush, were all silently staring. There seemed a hundred or more of them. Then one of them, with a faint awed cry, flung himself prostrate with forehead to the ground in terrified homage to this shining god of the rock who had appeared so suddenly.

And then they were all prostrate in groveling worship until one of them, who might have been their leader, abruptly leaped to his feet and dashed away through the thickets. The others in another second were up after him. It was a frightened scramble, a terrified rush to escape the wrath of this stalwart god who so silently was poised above them in the forest.

For a moment the woods resounded with the cries and the tramp of the escaping savages; distant cries until at last there was only silence. . . .

Alan leaped from the rock and dashed for the burning brush outside the cavemouth. If only he had calculated his time correctly! Then at the cave entrance Greta and Peter appeared. His arm held her as she sagged against him, with the yellow-red glare painting them and the turgid smoke swirling around them.

"Here—I'll carry her," Alan exclaimed.

He caught the girl up in his arms—
slim, frail little thing, fighting in terror
with him for an instant, and then relaxing.
Peter staggered after them as Alan led
the way down into the silent forest where
the night air was pure and all the fire and
smoke were above them with the silent

shimmering river gleaming there ahead. "You're better now?" he murmured to the girl.

"Yes. Oh yes—I'm all right. Oh, who—what are you?"

He did not answer. Holding her in his arms suddenly made him think of Ruth, out there waiting for him in 1942. And a new apprehension struck at.him—would his time-current last to get him back home? He was not using it now, but still, he knew, the volatile chemicals in the batteries were subject to evaporation.

He set little Greta on her feet. "Your boat is near here?" he demanded.

"Oh, yes, right here at the bank."

"Well, you find it for Peter. Start him up for the frigate, and then you get back home."

"Yes, I will. It is not far to the north stockade."

They were both staring at him, confused, numbed with awe. "I—we must thank you," Peter muttered. "We saw the Indians as they fled."

"Oh, that's all right. Glad to do it. But I've got to get—away now. I've got to get back where—where I came from—"

Then Greta took a step toward him. "Oh, please, who—what are you? This thing you have done for us—"

Alan was gently smiling. "Hard to explain. You'd better just call it a miracle," he said. His finger pressed the time-lever. He could see Peter grip the girl as they shrank away with terror, staring at him while slowly he faded into nothingness....

AY, 1942. In a dim, quiet room of the New York Historical Society Alan sat poring over an old Dutch chronicle of Nieuw Amsterdam. And then he found what he was after—an account of Stuyvesant's surrender to the Duke of York. It was a modern English translation of an account by someone who had lived in the little Dutch city.

Alan read it, awed. Here was mention

of young Peter Van Saant, who had gone up the river to the *Queen Catherine*—the English frigate which had slipped past the forts in the fog that night. And it told of Greta Dykeman who had shown him the way to where her rowboat was hidden. And then—the miracle!

Greta Dykeman and Peter Van Saant—so the chronicle stated—had been attacked by Indians that night. They had taken refuge in a cave, where a great shining presence in the guise of a strange man had come and frightened away the Indians. He had led Peter and Greta to safety—and then had vanished.

Silently Alan left the Historical Society. Why had it seemingly been his destiny to rescue that Dutch boy and girl? That strange urge which both he and his grandfather before him had felt so strongly—why was that? Van Saant—why, that suggested the name Vincent! The one, Dutch—and the other just its English, modernized equivalent?

Alan hurried to the Genealogical Room at the Public Library; and there he found it. Ruth's family—the Vincents—and before that, the Van Saants.

Then he came to 1656. The marriage of Peter Van Saant, to Mistress Greta Dykeman. . . .

Alan sat numbly, staring in awe.

If they had died in that smoke-filled cave, this son of theirs, recorded here as Hans Van Saant, born 1657, would never have been born, nor any of his descendants. No Ruth Vincent, now in 1942; no little son of hers and Alan's....

Alan was smiling to himself, a whimsical, awed smile. He certainly had had no cause to be apprehensive that his mission back into time would fail. It was ordained—predestined—a million events down from Peter and Greta to Ruth were recorded, with his own action fitting into them. Nothing else was possible!

Miracle . . . there is so much that none of us will ever understand!



HAT science fiction readers go in heavily for collecting is no secret. Even though they usually start by collecting just their favorite magazines, eventually there are many who turn to collecting everything of a science fictional nature that they can get their hands on. The collection of science fiction books can be a fascinating pastime, as "Ye Olde Booke Collector" asserted in his column in *The Science Fiction Fan* for January, 1938:

"There is no better fun to be had out of science fiction collecting than the pleasure of haunting old book stores in quest of volumes of fantasy. To make a regular routine of going over all the book stores you know of at least once a week, to search the stalls in front with a practiced and piercing eye, skimming lightly in search of a familiar name or suggestive Then, every once in a while, to thrust forth a hawk-like hand to pluck from the dusty tables or shelves a volume, usually old and ravaged by time; to swiftly run through its pages in search of some hint as to whether its contents are science fictional or merely prosaic.

"Many and often are the disappointments, the false titles, the futile quests. Often long moments of indecision when it is necessary to actually read through several pages from some strategic appearing chapter in order to determine the true nature of the volume. And then those thrilling moments when you realize that you

have made a strike and that the nondescript volume is actually fantasy, and in your line.

"One grows immune to false titles after a while. One even begins to develop a sort of second sight by which one knows instinctively whether a title is of real promise or is merely figurative. Such thrilling titles as Phases of an Inferior Planet, The Red Planet, The End of the World, Tomorrow's Children, The Valley of the Moon, The City of Fire, The Vanishing Point, all serve to hide perfectly ordinary tales of life. Not a fantasy in the lot. Sometimes there are perfectly ordinary titles that hide good science fiction books. One must learn not to overlook such ordinary or unpromising titles such as We, Man's Mortality, Number 87, The Jingo, Drowsy, and Parabellum's Banzai! which latter is not to be confused with the book by the same name by John Paris.

"A jolt that comes once in every book hunter's career is when his eye first lights on *The Blind Spot*. What a thrill! And what a let-down! It's only a religious treatise with the same name as the famous fantasy classic. The real *Blind Spot* has never appeared in book form. Then there is *Darkness and Dawn*. All too often one runs across this title, but it isn't George Allen England's exceedingly rare masterpiece. It's just some tediously long volume by an author whose name escapes my memory.

"After years of experience, the hunter arrives at a point where he can glance at a case of books in a new store and say at once, 'I am sure there is science fiction here.' A sudden feeling of being on the scene overcomes me and I go carefully through it and almost invariably make a strike. There are times when I can glance at what might seem to be a promising set of shelves and know at once that I shall find nothing.

"Book collecting is a grand hobby and a constantly interesting one. Stores are continually changing their stock and the hunt goes on steadily. And always there is a subconscious realization that others, unknown to you, are also on the search, and that adds a certain zest to the hobby. Collecting science fiction books is a real game!"

GREAT comet is going to strike the Earth! Perhaps you may recall seeing such a headline once in a while in some Sunday supplement or equally wild journalistic report? Mention was made of such a report in the first issue of the fan magazine, Spaceways, which promptly inspired humorist Hoy Ping Pong to write an article for the January 1939 issue of Spaceways entitled, "What To Do When The Comet Comes."

"Oh, yes, there is a comet coming. Spaceways said so in its first issue, remember? Those pessimistic editors, Avery and Warner, said the comet was coming—a giant comet to bring about the end of the world!

"The Pong Observatory cannot give information on how to escape death from the comet. Guess you'll just have to die. But we can give details on What to Do When the Comet Comes. Just about a month before the destruction, start building a spaceship or two like mad. Remember somebody has to build one to save a few hundred people—it may as well be you. Otherwise you'll croak too.

"But to the meat of the matter. High up in the midnight sky will hang the fiery doom-bringer! You will even see it in the daytime. Pong's Mutuel Machines are laying odds of nine to one that the Comet strikes Earth in the daytime. First off the bat, flee New York City and vicinity. That is where the Giant Comet will strike. They always do, you know. Pong's Mutuel Machines pay off five to one if the Comet strikes anywhere else.

"But come, let's get to business: First, stop paying on your insurance right now. You are going to kick the bucket and nobody will get nothing for it, so stop paying those monthly premiums and have a good time, before the Comet comes! For that matter, stop paying all debts. Why pay 'em up? It ain't gonna do your creditors any good, for the Comet will get them too!

"If you live in a city, see the manager of some tall building immediately about renting his roof space. Build long rows of bleachers there and sell them to the populace at fabulous prices. Spend this money as quickly as possibly, for, remember, the Comet is coming! Of course, reserve for yourself the most advantageous seat on the roof. You will not want to miss the thrilling spectacle. Just imagine!

"There you sit, neck craned, colored glasses on, staring at a huge, rushing, exploding gaseous ball as it hurtles down on you. Bigger and bigger it gets. More and more of the sky it fills! The crowd roars with excitement! Where will it strike? It is coming at a rushing speed now! It is almost in your face! Other spectators flee inside, but not you.

"Wham! It hits! Yes, Pong's Mutuel Machines were right. It did strike New York. Wiped the entire state off the map! But that's all right, whichever way you bet, for remember, you won't be around to collect.

"The Comet Is Coming!"

Possibly the very first fan magazine ever published was The Planet, a little mimeographed journal which was the organ of the Scienceers, the first science fiction club in New York. Even then, in pioneer days, fans were not averse to spoofing and sometimes got unexpected results. In the September, 1930 issue of The Planet, Allen Glasser contributed the following account:

"The regular Saturday night meeting of the *Scienceers*, world famous organization of super-scientists, was in session in the elaborate quarters provided for its use by Col. Mortimer Weisinger.

"Prof. Herbert Smith, noted astronomer, was discoursing on the nature of the newly discovered planet Pluto when an insistent ringing of the doorbell interrupted his lecture.

"They heard the door being opened by the footman. Then a hatless, disheveled man burst into the room.

"'It works!' he shouted loudly. 'It works! The first successful space machine ever built. I've just tested it and now I want you, the world's greatest scientists, to accompany me on my initial trip into interplanetary space—a voyage to Mars. Will you go?'

"'The man's mad!' cried Dr. Charles Weiner, the famous nerve specialist. 'Throw him out!'

"'Wait!' It was Philip Rosenblatt, the electrical wizard, who spoke. 'Give him a chance. He may have something worth while.'

"'Quite so,' agreed Captain Allen Glasser, noted author and explorer. Turning to the intruder he asked, 'Can you prove your claims?'

"'Of course!' the stranger replied. 'The machine is in my laboratory not far from here. Come with me and I'll show you.'

"'One moment,' spoke up the Hon. Nathan Greenfield, president of the association. 'Who are you, may I ask?'

"The stranger drew himself up proudly. 'I am Sir Edgar Ray Merritt of London,' he declared. 'I came to New York recently to perfect my space-flyer. But come, there is no time to waste!'

"He strode to the door. Convinced by his evident sincerity, the eminent clubmen followed him to the street.

"'Sorry I didn't bring my car,' apologized Sir Edgar.

"'That's quite all right,' said Col. Weisinger. 'We'll use mine.'

"In less than ten minutes the car came to a stop before a one-story brick building, unlighted and seemingly deserted.

"'Here we are!' exclaimed Sir Edgar, as the men alighted from the car. 'Now to see the greatest invention of the age!'

"They were about to enter the building when the sound of running footsteps behind them was heard. As they turned, two men in gray uniforms dashed up to the surprised group. Singling out Sir Edgar from the rest they grasped him firmly by the arms and started to lead him away.

"'Say, what's the idea?' someone called after them.

"'Nothing much,' answered one of the uniformed men over his shoulder. 'We're just taking Goofy Gus back to the bughouse. He went nuts reading science fiction and he's hopped on going to Mars. He pulls the same stuff every time he gets loose. You guys fell for it!"

Now, the most interesting thing about the story is that the newspaper, *The Bronx Home News*, somehow got hold of this account, swallowed it hook, line and sinker and published it as factual news!

G. WELLS' The Time Machine is everywhere esteemed as an outstanding example of fantastic romancing, and indeed as the first example of time travel. Practically everybody who has ever been interested in fantasy will be familiar with this story, but few are aware that the story is not the complete version.

That version was never published in book form at all and appeared only in the original magazine serialization in 1895. P. Schuyler Miller first encountered one of the missing excerpts in *The Ridpath Library of Universal Literature*.

Therein, in the section devoted to Wells, appeared an excerpt from *The Time Machine* which could not be found in the book.

Miller was unable to obtain more data and wrote an article for *The Science Fiction Digest* of January, 1933 giving the excerpt. Many years passed and no fan had solved the problem, until Donald A. Wollheim relentlesslý tracked the original magazine story down among the ancient files of the New York Library.

The sequence that is missing covers a stop of the Time Traveller's machine after leaving the age of the Eloi and the Morlocks, and before arriving at the age of the dying sun and the giant crabs.

"I stopped. I was in a black moorland, covered with a sparse vegetation and gray with a thin hoarfrost. The time was midday. The orange sun, shorn of its effulgence, brooded near the meridian in a sky of drabby gray. Only a few black bushes broke the monotony of the scene. The great buildings of the decadent men, among whom, it seemed to me, I had been so recently, had vanished and left no trace. Not even a mound marked their position. Hill and valley, sea and river, all under the wear and work of the rain and frost had melted into new forms. No doubt, too, the rain and snow had long since washed out the Morlock tunnels. A

nipping breeze stung my hands and face. So far as I could see, there were neither hills nor trees nor rivers, only an uneven stretch of cheerless plateau.

"Then suddenly a dark bulk rose out of the moor, something that gleamed like a serrated row of iron plates and vanished almost immediately in a depression. And then I became aware of a number of faint gray things, colored to almost the exact tint of the frost-bitten soil, which were browsing here and there upon its scanty grass and running to and fro. I saw one jump with a sudden start and then my eye detected perhaps a score of them. At first I thought they were rabbits, or some small breed of kangaroo. Then, as one came hopping near me, I perceived that it belonged to neither of these groups. It was plantigrade, its hind legs rather the longer. It was tailless and covered with a straight, gravish hair that thickened about the head into a Skye terrier's mane. As I had understood that in the Golden Age man had killed off almost all the other animals, sparing only a few of the more ornamental, I was naturally curious about the creatures. They did not seem afraid of me, but browsed on, much as rabbits would do in a place unfrequented by man.

"It occurred to me that I might, perhaps, secure a specimen.

"I got off the machine and picked up a big stone. I had scarcely done so when one of the little creatures came within easy range. I was so lucky as to hit it on the head and it rolled over at once and lay motionless. I ran over to it at once. It remained still, almost as if killed. I was surprised to see that the thing had five feeble digits to both its fore and hind feet-the forefeet, indeed, were almost as human as the forefeet of a frog. It had, moreover, a roundish head, with a projecting forehead and forward-looking eyes, obscured by its lank hair. A disagreeable apprehension flashed across my mind. As I knelt down and seized my capture, in-

tending to examine its teeth and other anatomical points which might show human characteristics, the metallic-looking object to which I have already alluded reappeared above a ridge on the moor, coming toward me and making a strange, clattering sound as it came. Forthwith, the gray animals about me began to answer with a short, weak yelping—as if of terror -and bolted off in a direction opposite to that from which the new creature approached. They must have hidden in burrows or behind bushes and tussocks, for in a moment not one of them was visible.

"I rose to my feet and stared at this grotesque monster. I can only describe it by comparing it to a centipede. It stood about three feet high and had a long, segmented body perhaps thirty feet long with curiously overlapping greenish black plates. It seemed to crawl upon a multitude of feet, looping its body as it advanced. Its blunt, round head, with a polygonal arrangement of black spots, carried two flexible, writhing, horn-like antennae. It was coming along, I should judge, at a pace of about eight to ten miles an hour and it left me little time for thinking. Leaving my gray animal, or gray man, whichever it was, on the ground, I set off for the machine.

"I traversed one day and stopped again, hoping to find some trace of my victim, but, I should judge, the giant centipede did not trouble itself about bones. The faintly human touch of these little creatures perplexed me greatly. If you come to think, there is no reason why a degenerate humanity should not come at last to differentiate into as many species as the descendants of the mud fish who fathered all the land vertebrates. I saw no more of my insect colossus as, to my thinking, the segmented creature must have been. Evidently the physiological difficulty that at present keeps all the insects small had been surrounded at last and this division of the animal kingdom had arrived at the long-awaited supremacy which its enormous energy and vitality deserves. I made several attempts to kill or capture another of the gravish vermin, but none of my missiles were as successful as the first. I felt a gust of irritation in coming so far into futurity without weapons or equipment. I resolved to run on for one glimpse of the still remoter future—one peep into the deeper abysses of time-and then to return to you and my own epoch. Once more I remounted the machine, and once more the world grew hazy and gray."

# Says Everybody

A strange method of mind and body control, that leads to immense powers never before experienced, is announced by Edwin J. Dingle, well-known explorer and geographer. It is said to bring shout almost unbeltevable improvement in nower of mind. Many report relief of long standing illness. Others acquire superb bodily strength and vitality, secure better positions, turn failure into success. Often with surprising speed, talents, ability and a more magnetic personality are developed.

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## THE MAIL BAG

#### What-no BEM'S?

Dear Editor:

This issue's stories cannot be adequately rated. All rating, or at least all of mine, is relative, and when something like The Crystal Circe appears, everything else is dwarfed into mediocrity by its magnitude. Therefore, I will merely give my impressions of the stories, with a few relevant-or irrelevant, if you willcomments, listing them in descending order so

far as quality is concerned.

The Crystal Circe is truly one of the greats of imaginative fiction. It is one of the few literary works that have appeared in this fictional realm. It has everything: excellent description, perfect wordage, exquisite expression. I am sure that it is destined to take its place among the so-called classics, for it is truly a

masterpiece.

Slap a contract on Kuttner, and tell him to take his time writing. What a pity it would be if he were to degenerate into cummingsdom, after such an exhibition of his literary capabil-

The Impossible Invention was very good. Any other author would have made a mess of it. Williams has a knack of taking an old plot, adding a novel twist, and garnishing it with enough humor to build up a good story. I liked his definition of "ether"-he's not so far off at

Storm Cloud on Deka also was very good. Strictly Smith style with super-super hero, but continuity was good, and it all contributed to

an acceptable yarn.

The Unseen Blushers—Madre de Dios! What a title!—is an interesting bit; not exceptional, but very interesting. It has to be thoroughly digested to enable the reader to realize its full,

potentialities.

Out of the Sea. I once had an English teacher who continually drilled into me the fact that men wrote stories, and women read them. Adding that that was as it should be, said teacher made some rather caustic remarks about the puerile sort of tripe ground out by the femmes. Incidentally, that teacher was a woman.

The Band Played On: Hmmmmmmm.

The cover: Virgil Finlay! It can best be described by a prolonged, monosyllabic interjection—ahhhhhh. The illustration does the story justice. It is unqualifiedly the best Finlay I have ever seen, which implies that it is the best illustration I have seen.

Interior pix: Nothing exceptional.

I look askance at Previews. Has cummings unearthed some long-forgotten mental-compulsion method by which he inveigles editors into publishing his hack? Incidentally, the spelling of the Grand Hack's name does not incur a typographical error; I prefer to think of him thus.

Your departments are excellent. Keep them

up by all means.

Oh yeah, a little addenda on my cover comments: It would seem that editors are beginning

to realize that muscle-bound heroes in bulky spacesuits rescuing incongruously undraped wimmin from bee-ootiful green-eyed BEM's are not absolutely essential to an stf mag's success. Give us more artistic paintings on the covers and less of gore-and-horror type.

Very truly yours, Victor King

P. S. I can imagine myself being roundly panned for the inconsistency of that statement dealing with muscle-bound heroes and spacesuits, but somehow, the artists manage to convey the idea.

#### The good old days?

Dear Editor:

Upon first glance at the March cover, I thought: Hmmm-that's rather too smooth work for Astonishing's regular artists. On secwork for Assomania's regular artists. On second glance: "Say, that bug-eyed monster looks like the Good Old Days." On third glance: "So! overstuffed spacesuit, huh? Reminds me of Wesso—SAY!!!" whereupon I glanced at the contents page. And, lo! And, behold! It was Wesso!!!

Now that my first shock of surprise is over, I would like to thank you, Mr. Editor, for the best cover job on Astonishing since Volume One, Number One. And let's have more Wesso,

please—lots more!

Departments: Viewpoints is shaping up very nicely. Fan Mags as usual, which is good. The Mail Bag: better than last time. Three cheers for Asimov (not spelled with a "z")! As for Morley: you want the heroes to breathe space, eh? Such ideas. You ought to know better. Or do you want your characters to explode, fry, suffocate, dissolve, squash, et cetera??? How about the damsel in distress-must she too suffer, as does the one on this issue's cover? These women must be able to stand more than the heroes, as it's always the girl that gets carried off by apes, dinosaurs, green-faced Things, B. E. M.'s, ghouls, or what-have-you. This time there is not only a B.E.M.—and a most unusually horrid one, at that-but the sun is close enough to roast even the monster, to say nothing of the poor gal in its clutches.

The Fantasy Circle: Swell! Here is the place where the fans can discover all the little oddities which could never be seen elsewhere.

Keep it up.

Morey is good in the first illustration, not so good from there on. Bok is excellent, as usual; the issue's best pic is by him, and is on page 66. How about Wesso inside? There are only two "old-timers" in this issue

-which is, in some ways, as it should be with a magazine of Astonishing's type. Of these two, one-Neil R. Jones-proves very ably that he can still write. "Slaves of the Unknown" takes first place. And let's hope that this won't be the last Professor Jameson story from Jones's pen.

Second comes "Daughters of Eternity," by one of your best newcomers: James MacCreigh.

For some reason, I liked this one immensely. The Bok pic added a great deal to the story's appeal. Would a sequel be impossible?

Third on the parade is another new one—Walter Kubilius with "Voice in the Void." Kubilius can practically haunt his readers at times-which is all to the good. More!

Fourth, "The Man Who Knew Roger Stanley," by the newest author in the field.

Fifth, "The Message," by yet another new one. I liked this mostly because it gave me a rather screwy paradox to chew over: when the time came for the reporter to visit the future and he didn't, what happened to the phonograph record? He couldn't be two people, so the record had to vanish. But matter cannot be created or destroyed, so-?

Sixth, "Tracks Across the Darkness," by a semi-newcomer, Robert Arthur. Here he poses a question which, to my mind, hasn't been used before. Swell idea, anyway.

Then comes "Pied Piper." And, really, with standards as high as they are this issue, seventh place is still quite creditable.

Last comes the other old-timer, Cummings. One thing about him is that, although his stories are apt to bog down into hack stuff, his beginnings are almost always excellent. This is one of those cases. Besides, in the past couple of months, his style has been improving, so that this story does not plumb the depths that some of his have. I do believe he is improving! Have him try another satire like "Machines of

Destiny" some time. It ought to be good.

Astonishing is getting better and better.

Keep up the good work.

Sincerely, Paul Carter

#### The gamut—from 0 to 10

Here's my report on the latest (June) issue. -(Scale of 0 to 10).

First-Storm Cloud On Deka-9.8. Of course, Smith is Smith—period. Yet I am disappointed. Greatly disappointed. This is the first Smith story that has appeared—and I've read them all—that was not worth a 10 (with the possible exception of one short that was obviously editorially doctored). That title is a good one with its duality of meaning. However, the story does not have that smooth flow of polysyllabic adjectives so characteristic of Smith.

Second—Out of the Sea—8.9. A most surprisingly high rating for Miss Brackett. A good plot with a new twist, a novel idea, and fair writing combine to make one of the best stories I've seen from her pen. It could have been better, though. That twist to the plot where the hero finds his work unnecessary could have been expanded further so that he could actually see the earthquake close the rift instead of being told of it by a superman.

Third-The Crystal Circe-8.7. Well written, an old plot with a new twist. That just about sums up the comment.



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#### **ASTONISHING STORIES**

Fourth (almost tied for third)—The Band Played On-8.7. Very good writing. At last, a fellow who can handle slangy style well! Thank God! Plot and idea not too good. The writing saves the whole from being just another hack. I suppose it's useless to ask for the author's real name?

Fifth-The Unseen Blushers-8.6. Where on God's earth did it get that name? Otherwise it's a pretty good story. A couple of good twists on the plot and good writing-nothing particularly classic, but good enough.

Sixth and Last—The Impossible Invention— 8.4. This story has no particular reason for being last. It's not hack; it's not by Cummings (although the two terms are almost synonym-

ous); it's not badly written-it's just that all the other stories are better than it. The plot is rather old—I should say very old—maybe

that's why.

Cover—8.5. At last you've got Finlay. Certainly not Finlay at his best, but at least Finlay. But then again your covers are not very often examples of artists at their best. Last month Wesso did the worst job of his career. This month Finlay drew something not half as good as he usually does. Oh, well, we can't have everything.

Departments-Now each department is developing a personality of its own. Formerly you could have combined all except *The Mail Bag* and gotten a good result. Now that's impossible. That reminds me—can't you give full answers to the letters in the Mail Bag? And who is the

fellow who handles Viewpoints?

Last thing in the mag, I glanced through Previews and threw up. Cummings again! And a time travel story! It's not enough that you should give us a Cummings story or a timetravel story—no, you have to commit both crimes in one issue, and to make it still worse (if possible) you have Cummings be the author of said time-travel story! And when in Heaven's name are you going to get rid of time-travel stories that you can poke a hundred holes in the logic of—if you get my somewhat mixed up meaning. Look! Say that Phineas Q. Beezlebub is residing in these United States today in 1942. Say that he lives till 1944, when he builds a time machine. Say that he goes back to 1942 and kills the Phineas Q. Beezlebub who was living then. Now-take a deep breath-he was killed in 1942, so he did not live until 1944, so he did not build a time machine, so he did not go back to 1942, so he was not killed in 1942, so he did build a time machine, so he did go back to 1942, so he was killed in 1942, so he did not live till 1944, so he did not build a time machine—do you begin to get what I mean? In its simplest terms, the above means that he was both existing and non-existent in, say, 1943. That is impossible by definition. So the common, garden variety of time travel is impossible by definition. There are many other ways of proving that statement, most of them absurdly simple, to say the absolute least.

After that outburst, all I can do is close. Sincerely,

Victor Mayper, Jr. Manlius, N. Y.

P. S.—Not that I haven't seen some very good ways of getting around most of those proofs. One story appeared in a magazine a few months ago that still defies flaw-finders. Also, this is not to be taken as a grudge against stories like "Unseen Blushers". There, in the first place, the time-travel element is not stressed, and secondly it's a very short story. It's only these longer stories, particularly with the Cummings type of presentation—he must have written at least 50 time travel stories, and they're all exactly the same except for names and place-names—that gripe me so much with their illogic.

#### His typewriter is smoking

Dear Editor:

There is a lot I have to say in this letter, so I'll begin with the dull side of things. You fell down in your March issue, yet regardless of this you are in fourth place, by my latest rating. I'm not going to comment on your cover; I'll let the art critics tell you it was "a h— of a cover," for your mag.

I will tell you, though, how your stories made out. The top rung goes to Neil R. Jones. It's not his best, for remember this is a short ladder for this issue. The next rung is occupied by the "Pied Piper" and "The Man Who Knew Roger Stanley." I can't find what attracts me to the latter story. It was not the surprise element at the end; I guessed that all along. Oh well.

This brings me to the "Daughters of Eternity." (The pic is cute, Bok, What is it?) Where does the title fit into this story? Don't bother answering, it's over my head. The next to the last rung goes to Kubilius's story, with "The Message" trying to get a good grip on the same step. This gives the last rung to Cummings's "Into The Fourth—"—Oh, I'm sorry. He called it the "Shadow People" this time—The last rung is ready to fall off. Watch out, Cummings.

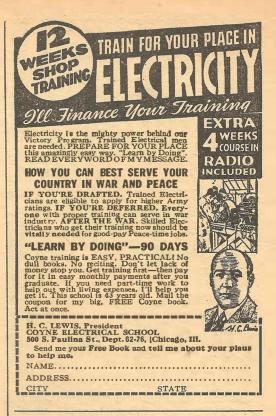
The art work is improving. Morey seems to be taking more time with his pics. They're good now. Bok's pic for the "Voice in the Void" is best

To Mr. Asimov-

I am sorry Mr. Asimov, that I caused you several sleepless nights, but you see, I had not read your story a second time, an error I shall never commit again. Will you ever forgive me? You made me read your story twice. Will that soften your heart?

Enough of this. I'm no fool. A fool is only one who makes the same mistake twice. I shall not. Instead of saying I had found your error, I will but state my opinions, or beliefs and ask your comment. Is that fair?

In my opinion you did not explain the lack of gravity. You merely said it was a Neutron because it had no gravity. Second, in my belief, your neutron could not have been formed at all. Please let me explain, before you fly through the roof.





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#### **ASTONISHING STORIES**

No matter what theory of the Solar System's formation you adhere to you will agree that at first the Earth was a gaseous, shapeless cloud. Wherever a larger congregation of atoms were, there was a greater gravitational field. Gradually, due to the near absolute zero temperature of space, the gases cooled or slowed their hectic pace and were attracted to the stronger gravitational centers, until one common center of gravity was formed. The earth became round due to the even attraction in all directions. The outer gases became liquids, then solids, and we have a round planet, not square or any other shape. We can see what happens when a gaseous cloud develops two strong centers of gravity, we have either double or multiple stars, or an egg-shaped affair like Mira.

Using that logical thesis, how could your planet have been formed without gravity? Unless, you, being the author of the story, say it was just there in your outer universe.

Of course your planet dare not rotate. That would scatter it. Yet the atoms in your planet must be moving. If so the outer edge is always dissolving and escaping. On a gravitationless planet, the process is even swifter. Did inertia save Mars's once-heavy atmosphere? Inertia is hardly accountable when the atoms are traveling many times faster than the planet. Oh, I nearly forgot that little phrase you placed in your story—"—some other binding force peculiar to the planet." Mr. Asimov, my dear Mr. Asimov, this planet is a product of your imagination, therefore, any peculiarity it may have cannot be passed off as an unknown force. If you can't build this planet by your logic and knowledge of science, then don't try. Science fiction is science fiction, because authors are supposed to base their stories on either logic or science. And science fiction is slowly degrading into ordinary fiction, because authors are beginning to forget that, or even ignore it. Cummings's "Golden Atom" stories are good examples. He disregards the fact that the man's body, though it shrinks, still has the same mass. Imagine such a ponderous mass landing on an atom. Or can you picture a man landing on an atom that is the same size as the atoms in his body.

My typewriter is smoking already, so that's

all for this time.

Cordially yours, Frederic G. Kammler, Kingston, Pa.

And Mr. Asimov hastens to reply: Brooklyn, New York

Dear Mr. Kammler,

I'll take you on in order. OK?

Of course, I didn't explain the lack of gravity. In most science-fiction stories, the scientist explains everything, usually by using long words and pseudo-scientific concepts which mean nothing, and which the author knows means nothing, and which the reader knows means nothing. I try not to do such things, because it may be very good science-fiction but it's awfully punk science. There are lots of things scientists don't

know-even including some very simple things. Consequently, I didn't explain the lack of gravity, because Hayes, the astrophysicist, didn't know. He was a scientist who had studied that super-neutron fifteen years, but he still didn't know why it lacked gravity. Scientists are like that. I'm one-at least I'm a research chemist of pretty fair capabilities-and I know.

However, I'll make a bargain with you. If you can tell me why an ordinary neutron lacks an electric charge, then I'll tell you why a super-neutron lacks a gravitational field. I explained as much about that super-neutron as Millikan would about an ordinary neutron and I don't see why more should be expected of me than is expected of a Nobel Prize winner.

As to how the super-neutron was formed, I don't know either-any more than you know how the earth was formed. From your letter, I see that you think you know, but if you can present proof of what you say, you should by all means present it to the world. We can dig up another Nobel Prize for you. Unfortunately, all theories of cosmogony to date are purely theories, and pretty shaky ones. So why should I commit myself any more than Einstein would?

You say my planet dare not rotate. That's evident. I never said it did, did I? Why should it? Do you know of any reason why a planet must rotate?

Now I said that the super-neutron might be held together by "some other binding force peculiar to the planet," and you dislike that. For God's sake, why? You'll find indefinite statements like that in almost every scientific paper put out. Scientists are never sure, and I was trying to be scientific. Would it have made you any happier if I had said: "The superneutron was held together by a cosmic extension of the hypoplanar force-field generated by the continual collisions of myotrons and cerotrons. If it does, pretend I said it.

But again I'll make a bargain. If you can tell me what holds an ordinary neutron together (gravitational forces are insignificant in the atomic world), I'll tell you what holds a superneutron together. Fair enough? Again, I refuse to be better than Compton.

Cordially yours, Isaac Asimov



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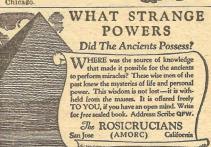
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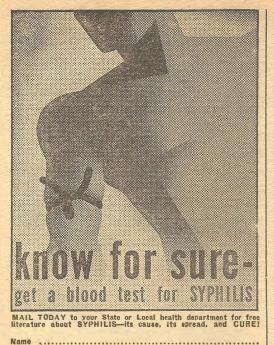
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More Wesso, more Smith, etc. Minneapolis, Minn.

Editor: Astonishing Stories
Been reading ASTONISHING for quite some time now; since its inception, I believe, but somehow have never cared to write before. It has been only a short time since I began to read the readers' letters, and other departments. I think the cover on the June issue is quite

good-one of the best, in fact, that I've seen on Astonishing in many months. May I suggest that you use Finlay's artwork a bit more frequently? On the inside, I like Wesso, Giunta, and Musacchia, but not Bok; his figures are much, much too unnatural to suit me.

My nominations for best stories in the num-ber: "The Crystal Circe" and "Storm Cloud on Deka." More Smith would certainly be welcome, and the rest of the readers wouldn't

object, I'm sure.

I've recently become interested in fans, and activities other than the mere reading of the s-f magazines. Could you tell me of any other fans in St. Paul or Minneapolis? If there are enough of them in this vicinity to warrant it, I should like to organize an s-f club. I guess Minneapolis has been conspicuously inactive, for so large a city, to judge by the reports of other active clubs in large cities. If any Minneapolis readers of science fiction read this, please get in touch with me, won't you fans? I'm anxious for a progressive club in these parts, and feel that we could go to town.

I've heard pretty much about these fan magazines, too, and have purchased several through the medium of your fan mag column. Been mulling the idea of starting my own fanmag around in my mind for a while. Would appreciate hearing from anyone who would care to

help edit a new fanzine.

Sincerely, Sheldon Araas

#### A for "The Band Plays On" Cambridge, Massachusetts

Dear Editor Norton:

This latest issue of Astonishing is one for the

books. Congrats!

Don't faint but No. 1 this issue was none other than "The Band Played On." That's right. I gave it an A. Possibly it rated only an A, but I gave it the benefit of the doubt. When I first started it I thought: Oh Ghod! When I finished it, I thought: Oh boy! Wonderful!

No. 2 goes to . . . well, if it isn't a tie (thanx to Kyser for that) . . . a tie between "Storm Cloud on Deka" and "The Crystal Circe." The former would have rated higher if Smith had described the rescue of Storm, and the boy and girl by the G.P. more clearly. The latter would have rated higher if Kuttner had explained the why of Arnsen's last actions. As it is they both rated B+.

Again, No. 3 is also a tie: "Out of the Sea" "The Impossible Invention" both rating a B. The first should have been expanded and

(Continued on page 114)

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#### ASTONISHING STORIES

THE MAIL BAG

(Continued from page 112) developed; the latter was just plain good. Giunta's first illustration for "Out of the Sea"

Place number 4 goes, of course, to "The Unseen Blushers." And a poor fourth it was. Bester disappointed. Give it C+ to B-. Features are as they are and don't need improve-ment. Finlay superb. Both on this cover of Ast and the one for the current Super Science.

All in all this was a surprisingly good issue. Keep this good work up. Frankly, I was skeptical when you took over, but I'm not any more!

Yours sincerely, Sylvester Brown, Jr.

#### Deadlier sizzle gats, this fan wants Oakland, California

Dear Editor:

Just finished the March issue of Astonishing, and I'm sure you'd simply curdle with delight if I offered some suggestions. In fact—you might even read 'em. Sudden thought of the month: Do editors know how to read? There's a moot question! Might even start a society for distribution of first readers to editors-

Which calls to mind a weakness that Astonishing shares with most of the new stf promags. The short stories are usually of high quality, but the type of author who can whip up an interest-holding novel has already been snared by one of the Big Three.

F'rinstance, I found four of the five shorts thoroughly acceptable. The other, Kubilius's offering, would have ranked up with the others except for a deplorable vagueness.

The novelettes, on the other hand, were just the opposite. "Tracks Across the Darkness" was 99.9% hack. Something I was sure that Arthur was not capable of. "Slaves of the Unknown was just barely readable and two in a row of this kind would be little short of nauseating. As for "The Shadow People" . . . wel-1-1 the first part was a duplicate of a story

which appeared in a weird mag not so long ago, and the second part began to resemble in embarrassing detail one of Cumming's earlier novels recently reprinted in another sf promag.

Mailbag's swell. Glad you enlarged it. I agree with W. Morley on

1. Deadlier sizzle gats. (O for the days when an atom gun looked like an atom

gun. Not a be-jiggered flash light.

2. My Lady of the Emerald (neat handling there.)

A great light breaks. The narrator of Wings of the Lightning Land was a female! Mr. Mac-

That's about all, except I might express appreciation for the fan mag reviews. They reveal an expert touch. Who writes them?

And by the way how about editorial answers to some of the letters? That would sort of round out the mag and make it truly complete.

I'm waiting, George Ebey

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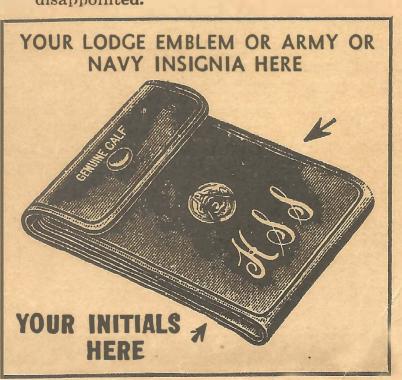
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