

# THE FACE OF THE DEEP

# By **EDMOND HAMILTON**

Carried Far Outside the Solar System, and wrecked on a Volcanic Planetoid in Company with a Shipload of Condemned Criminals, Captain Future Faces the Surpreme Test of His Courage!

#### CHAPTER I

#### Prison Ship

S HE had been a proud ship once, a splendid, shining liner rocketing between the planets with laughter and music and happiness aboard. But that had been years ago. Tonight she lay grim and black in her dock at New York spaceport, somberly waiting to carry damned souls to their place of punishment.

Her name was the *Vulcan* and she was the famous prison-ship of the Planet Patrol. Once a year, she went out through the worlds upon a fateful voyage. At each world, criminals sentenced to life imprisonment came aboard her. The end of the voyage was at the grim, gray Interplanetary Prison on Cerberus, moon of Pluto.

Men in purple-striped convict dress were shuffling now under the krypton lights' blue glare toward the looming black hull. They were a motley crew of vicious, hardened criminals- mostly hard-faced Earthmen, but a few green-skinned Venusians and red Martians.

They were guarded by vigilant, armed officers in the black uniform of the Planet Patrol.

A girl who also wore that black uniform stood under the lights near the ship, shaking her dark head at her tall, redhaired male companion.

"I have to go, Curt," she was protesting. "The Patrol is short-handed because of that trouble on Mercury. And these criminals must be well-guarded, for they're the most dangerous lot in the System."

"But to send a girl as a guard-officer on that hell-ship!" exclaimed the tall, redhaired young man angrily. "Your Commander must be crazy."

Joan Randall, slim and dark and youthful in her black jacket and slacks, was distractingly pretty in her resentful denial.

"You talk as though I were a simpering debutante who had never been off Earth before," she said indignantly. "Haven't I been working for the Patrol for four years?"

Curt Newton objected. "You've been in the Secret Service section of the Patrol. That's different from guarding a lot of hellions on a prison ship."

His lean, space-bronzed face was sober with anxiety, and his clear gray eyes had a worried frown

in them as he expostulated with the girl.

He did not often worry about danger, this brilliant adventurer and scientific wizard whom the whole System knew as Captain Future. To him and his three comrades, the famous Futuremen, danger wore a familiar face. They had met it countless times in their star-roving quests to far worlds, in their ceaseless crusade against the master-criminals of the System.

B UT danger to himself was to Curt a very different thing than a danger that threatened this girl he loved. That was why the tall, redheaded planeteer bent toward her in a final earnest appeal.

"I've got a premonition about this voyage, Joan. A hunch, you can call it. I don't want you to go."

Her brown eyes laughed up at him. "You're getting jumpy as a Saturnian shadow-cat, Curt. There's no danger. Our criminals will be tightly locked up until we reach Cerberus."

There came a startling interruption. It was the sudden shrieking of one of the convicts who were being marched into the ship.

He was a middle-aged Earthman, with a mass of iron-gray hair falling disorderedly about his haggard white face and terror-dilated eyes.

"You're taking me to death!" he was screaming wildly, struggling with the uniformed guards. "There's death on that ship!"

There was something peculiarly disturbing about the wild face and crazy screams. But the alert Planet Patrol officers guarding the line of shuffling convicts quickly hurried the struggling prisoner aboard.

Joan Randall's fine eyes had pity in them. "That's Rollinger -- you remember, Doctor John Rollinger of American University."

Captain Future nodded thoughtfully. "The biophysicist who killed his colleague last month? I thought his attorneys pleaded insanity?"

"They did," the girl answered. "They claimed Rollinger's mind was wrecked by an encephalographic experiment he carried too far. But the prosecution claimed he was shamming. He got life on Cerberus."

"And you're going on a voyage of weeks with scores of others like that homicidal maniac!" Curt Newton said, with deepened dismay. "Some of



The agile android seized the rope of vines and was quickly drawn up out of Chaos Canyon.
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them worse! I've seen the prisoner-list. Kim Ivan, the Martian space-pirate, Moremos, that poisonous Venusian murder-ring leader, Boraboll the Uranian, the wiliest trickster in the System -- and dozens more. Joan, I won't let you do it!"

Joan shook her dark head stubbornly. "It's too late to argue about it now. All the prisoners are aboard. We take off in five minutes."

A voice came from the darkness behind them -- a sightly hissing voice that was oddly alien in timbre.

"What's the matter. Chief? it asked Curt. "Haven't you talked reason into her yet?"

It was Otho, one of the three Futurmen. He and Grag and the Brain were advancing into the circle of light.

The three Futuremen made a spectacle so strange that many people would have recoiled from them in terror. But Joan was too well acpointed with these three loyal comrades of Curt, to see any strangeness about them.

Otho, the android, was perhaps the most human-looking of the three. He looked, indeed, much like an ordinary man except that his lithe body had a curiously rubbery, boneless appearance, and his chalk-white face and slanted green eyes held a superhuman deviltry and mocking humor. Otho was a man -- but a synthetic man. He had been created in a laboratory, long ago.

Grag, the robot, had been created in that same laboratory, in the long-dead past. But Grag had been made of metal. He was a gigantic, manlike metal figure, seven feet high. His metal torso and limbs hinted his colossal strength. But the strange face of his bulbous metal head, with its gleaming photoelectric eyes and mechanical loudspeaker voice-orifice, gave no sign of the intelligence and loyalty of his complex mechanical brain.

The Brain, third of the Futuremen, was by far the strangest. Yet he had been an ordinary human, once. He had been Simon Wright, brilliant, aging Earth scientist. Dying of an incurable ailment, Wright's living brain had been removed from his human body and transferred into a special serum case in which it still lived, thought and acted. The Brain now resembled a square box of transparent metal. Upon one face of it were his protruding lenslike eyes and microphonic ears and speech apparatus. From compact generators inside the case jetted the magnetic tractorbeams that enabled the Brain to glide swiftly through the air and to handle

objects and tools.

THOUGHT," Otho was saying to Captain Future, "that we came on this rush trip to Earth to stop Joan from going on this crazy assignment."

"We did, but we might a well have stayed at home on the Moon," Curt said disgustedly. "She's as mule-headed as -- as -- "

"As a mule," Joan finished for him, with a laugh.

Grag stepped forward. The giant metal robot suddenly picked up Joan in his mighty arms as though she were a doll.

"Do you want me to keep her here, Chief?" he asked Captain Future in his deep, booming voice.

"Grag, you put me down!" stormed the girl. "Curt, if you try to keep me here by force --"

"Put her down, Grag," growled Captain Future.
"You can reason with a Jovian marsh-elephant or a
Uranian cave-bear -- but not with a woman."

An elderly officer in the black uniform of the Patrol was hurrying toward them from the black ship. His grizzled face and bleak old eyes lit with pleasure as he recognized Curt and the Futuremen.

"Come to see us off, Cap'n Future?" he asked. "Where's your *Comet?"* 

Marshal Ezra Gurney, veteran officer of the Planet Patrol, was referring to the famous little ship of he Futuremen. Curt answered by waving his hand toward the distant, lighted pinnacle of Government Tower.

"The *Comet's* up there on the tower landing-deck. And we didn't come to see you off. I came to dissuade Joan from going." A bell rang sharply from the big black ship that loomed into the darkness nearby.

"Nearly take-off time!" warned Ezra Gurney. "Better say your goodbyes, Joan."

Joan's brown eyes danced as she kissed Curt quickly. "For once," she laughed, "it's *I* who am going to space while you stay behind and worry, instead of the other way around."

Curt Newton could not smile. He held her, loath to let her go.

"Joan, won't you listen --"

"Of course I'll listen -- when I get back from Cerberus!" the girl cried gaily, slipping out of his detaining grasp and running after Ezra toward the ship. "See you then, Curt!" She and the white-haired old marshal reached the gangway. A final wave of her hand, and she disappeared into the black vessel. "Why didn't you let me hold her back,

Chief?" demanded Grag. "You've got to treat women rough."

"Listen to Grag -- now he's setting up to give advice to the lovelorn!" exclaimed Otho witheringly.

Curt Newton paid no attention to the argument that instantly developed. Grag and Otho were always arguing, usually about which of them was the most nearly human. He didn't even hear them, now.

His eyes were upon the *Vulcan*. The last officers were going aboard. The bridge-room up at the nose

would go wrong now.

But Curt couldn't expel foreboding from his mind. The *Vulcan* this time was carrying the largest and most desperate cargo of convicts it had ever taken. There were men aboard it who would kill merely for pleasure, let alone to prevent their being taken out to the grim living death of Interplanetary Prison. And Joan Randall was one of the guards of those human tigers!

URT NEWTON reached decision, swiftly as he always did. He wouldn't let Joan take such chances. If she insisted on going, then --



of the long hull had sprung into light. Dock-hands were hastily knocking out the holding-pins.

The vessel, with it freight of scores of dangerous criminals, was about to take off on its long voyage. It would zigzag out through the Solar System for weeks, stopping at each planet to pick up more sentenced men. It would be a long time before it returned from the somber voyage.

There was nothing to worry about, Captain Future told himself earnestly. The ship had made this voyage to Cerberus many times before, and nothing had ever gone wrong. Surely nothing "I'm going, too!" Captain Future said suddenly. He plunged toward the gangway of the ship. Over his shoulder he called to his astonished comrades, "Take the *Comet* back to the Moon and wait for me!"

The gangway was already being drawn in. But the Patrol officers inside halted it as they saw Captain Future racing toward them.

The rangy, red-haired planeteer raced up the metal gangway and stood pantingly inside the airlock. The Patrol men looked at him amazedly.

"It's all right," Curt laughed. "I'm going with

you, this trip. There's no objection, is there?"

"Objection?" The swarthy young Mercurian lieutenant flushed with pleasure. "Objection to *you* coming along? I'll say there isn't!"

His eyes were sparkling with excitement. To this young lieutenant, as to most space-men, Curt Newton was an idolized hero.

"I'll inform Captain Theron that you and the Futuremen are aboard, sir," he told Curt eagerly.

"That I *and* the Futuremen?" Curt repeated, turning swiftly. In the airlock were Otho and big Grag and the calmly poised Brain.

"What the devil!" exploded Captain Future. "I told you to go back to the Moon with the *Comet*."

"The *Comet*," Otho answered coolly, "is safe enough, locked up atop Government Tower. We're going with you. You're not going to leave us sitting on the Moon, twiddling our thumbs and waiting for you."

"This is what women get you into," growled Grag gloomily. "Now we're stuck on this craft for weeks."

"It is certainly annoying that I shall have to spend all that time in a ship that does not even have a decent research laboratory," said the Brain sourly in his rasping, metallic voice.

Captain Future was not deceived by their grumbling. He knew that it was loyalty to himself that had made the Futuremen instantly follow him.

The tie between himself and the three strange comrades was old and deep. It went back to his infancy. For when his own parents had met death in their laboratory-dwelling on the lonely Moon, it was these three strange beings who had become his foster-parents.

The Brain, who had been his dead father's colleague in research; the robot, who had been created as an experiment by the two colleagues; and the android, who had been similarly created -- these three had first been Curt's tutors and guardians, and then his comrades in the crusading adventures which had won him the name of Captain Future. They had followed him faithfully to far stars and worlds. They were following him now.

"Oh, all right," Curt said, dissimulating his feelings. "But you'll find this a pretty dull voyage."

"I wonder?" replied the Brain, his strange lenseyes fixed thoughtfully on Curt's face.

The *Vulcan* suddenly lurched upward with a roar of bursting rocket-tubes. They clung to stanchions as the ship took off. Swiftly, it screamed up through

Earth's atmosphere into the vast and shoreless sea of space.

The young Mercurian lieutenant started with them through the ship toward the bridge-room. As they left the airlock, they met Joan Randall. Her jaw dropped ludicrously at sight of them. Then her eyes grew stormy.

"You came along! As though I were a baby who needed watching over! Curt Newton, I won't stand for it!"

"We're already at least ten thousand miles away from Earth."

She was still protesting indignantly as they went forward through the mid-deck of the ship. This was the prison-cell deck. Along its main corridor were the barred doors of scores of cells. From behind the bars, convicts glared like caged wolves a they passed.

A SQUAT, evil-faced Jovian in one of the cells set up a roar as he saw Curt and his comrades pass.

"It's Captain Future, mates!" he shouted. "He's aboard!" A raging tumult instantly arose. Threats, maledictions, oaths, were hurled at the Futurermen as they passed along the corridor.

Not a criminal in the System but had good reason to hate the name of Captain Future. He had sent many an evil-doer out to the gray inferno of Interplanetary Prison to which these men were destined.

The tumult rose. The senseless shrieks of the madman Rollinger added weirdly to it. Captain Future's bronzed face was coolly imperturbable as he strode along. He seemed unaware of the raging voices. Then as he glimpsed a sudden flash of movement beside him, he yelled a warning.

"Look out -- your pistol!" he cried to the Mercurian lieutenant.

A Venusian convict in one of the cells had hurled out through his barred door a little noose improvised from his belt. The loop had settled around the hilt of the Mercurian lieutenant's beltweapon. The Venusian tugged hard, snatching the atom-pistol toward himself as Future shouted.

Captain Future spun and charged that cell-door with superhuman speed. The Venusian had got the pistol into his hands. His blazing black eyes looked over its sights at Curt, with deadly purpose.

Curt ducked and flung up his hand in an oddly slicing gesture at the convict's arm. The crash of

blasting white fire from the atom-pistol grazed over his head and fused a patch in the metal ceiling.

Next moment, Curt had got hold of the Venusian's arm through the bars and had wrenched hard. The gun clattered to the floor. He picked it up and grimly returned it to the scared young Mercurian lieutenant.

"Next time, keep your holster buttoned when you walk through this for corridor," Curt advised him meaningly.

"Next time I'll get you, Future!" hissed the Venusian convict, nursing his wrenched arm and glaring his hatred through the bars.

"It's that devil, Moremos," volunteered the shaken young Patrol officer. "Only he would have thought of a trick like that."

"Oh, Curt -- I wish you hadn't come," breathed Joan. Her brown eyes were shadowed by dread. "They all hate you so terribly."

Raging threats were following Curt Newton and the others as they went on along the prison-deck. But the bellowing order of a huge Martian in one of the cells put a period to the tumult.

"Silence, you space-scum!" roared the big scarred-face red convict. "You hear? Kim Ivan orders it."

The uproar quieted almost magically. It was as though all the convicts recognized authority in the notorious Martian pirate's command.

But one voice remained unquieted. The uncanny shriek of John Rollinger still reached their ears as they left the prison-deck.

"There's death here!" the mad Earthman was still screaming. "I tell you, there's death on this ship!"

#### CHAPTER II

Attacked



THE *Vulcan* was no more than a billion miles from Neptune when the real trouble came.

For many days, the black ship had droned out through the System on a zig-zag course. At Mars, Jupiter, Saturn and Uranus it had stopped, to pick up more sentenced criminals. Now, with more than two hundred convicts aboard, it headed for Neptune, the

last stop before reaching Pluto and the prison moon.

Nothing untoward had yet occurred to justify Captain Future's premonition. The convicts imprisoned down in the cell-deck had growled and grumbled, but seemed reconciled to their grim fate. Yet Curt Newton had not been entirely reassured. Upon the first day of the voyage, he had voiced his doubts.

"They're *too* quiet," he declared. "They shut up like magic when that fellow Kim Ivan ordered them to."

"Well, that there big Martian swings a lot of weight with them," drawled Ezra Gurney. "He was one of the biggest pirate leaders before the Patrol caught him."

"Even so, that bunch of tough criminals wouldn't obey him now without a reason," Curt insisted.

"You think they've hatched up some scheme of escape?" asked Captain Theron anxiously.

Captain Jhel Theron, who had command of the navigational operation of the *Vulcan*, was a veteran of the Patrol. He was a tall, grave-eyed Uranian, bald like most of the men of that planet, his saffron skin darkened by years of exposure to the unsoftened radiation of space.

He and his next of rank, Lieutenant K'kan of Mars, commanded an operational crew that comprised three pilots, a chief engineer and two assistants, three space-mechanics and four deckhands.

Distinct from these fifteen members of the operational crew were the guards of the convicts.

Marshal Ezra Gurney was guard-commander, with Joan Randall and young Rih Quili of Mercury as his sub-officers. They commanded eight non-coms of the Patrol, who watched over the convicts.

Curt Newton and the Futuremen had gathered with Ezra and Joan and the captain in the chartroom just abaft the bridge.

"I don't say Kim Ivan is plotting anything," Curt answered the captain's question. "But I do say that if he had something in his mind, he'd prevent the convicts from staging any premature outbreak -- as he has."

Ezra Gurney snorted. "Cap'n Future. I got all the respect in the world for your judgment, but this time I think you're chasin' comets. How the devil can Kim Ivan or anybody else pull off anything, when they're locked up tight in cells that they won't leave till we reach Cerberus?"

"Men can get out even a chromaloy cell, if they have the right tools," Curt answered significantly. "And men like Kim Ivan and that snake Moremos had criminal friends who would have been glad to smuggle things to them."

"Not a chance!" Ezra affirmed. "I'll stake my life that not one of those space-scum has any kind of tool or instrument."

"You searched them when they were brought aboard?" Curt asked.

"What kind of amateur outfit do you think the Patrol is?" Ezra demanded injuredly. "O' course we searched them. We used the X-Ray 'scanner' on each convict as he was brought into the ship."

"Did you 'scan' the cells, too, to make certain that nothing had been planted in them?" Captain Future asked keenly.

"No, we didn't do that, but there wasn't any need to," the old marshal declared. "The *Vulcan* was always under guard, and nothin' could have been planted in her."

"Nevertheless, I'd like to use the 'scanner' on the cells now," Curt said. "Any objection?"

"Oh, no, if it'll ease your mind any," growled Ezra. He glanced winkingly at Joan as he added, "You're sure takin' a lot of precautions, Cap'n Future. Must be somebody aboard you're worried about."

RAG and Otho, bored by the discussion, had got into one of their interminable arguments. Curt left them with Joan, and went down with Captain Theron and Ezra and the Brain

to conduct his inspection.

The *Vulcan*, as a former small liner, was built along standard lines. It had three main decks, one above the other. Top-deck held the big bridgeroom, the operational and chart rooms, and officer quarters. The little cabins occupied by the Patrol officers and by the Futuremen were in the rear part of this deck.

The mid-deck, which had formerly contained passenger cabins, had been redesigned into a cell-deck. Entrance to it was only through two massive chromaloy doors, one fore and one aft. Both were locked and had guards posted outside them at all hours.

The cyc-deck, as the lower deck of a liner was usually called, was a noisy, crowded place. It's fore part was crowded with fuel tanks and supplyrooms, and the whole stern of this lowest deck was the big cyc-room in which the huge atomic generators droned away to feed streams of atomic power to the great rocket-tubes.

Captain Future and Simon and the captain followed the old marshal down the zigzag companionway to the fore door of the mid-deck. It was locked, and two armed Patrol officers stood guard outside it.

"Open her up an' bring the X-Ray 'scanner'," Ezra Gurney drawled to the guards. "We're goin' to run a little inspection."

The "scanner" was brought by one guard while the other unlocked the massive door. The instrument looked like a powerful searchlight, beside which was mounted an eyepiece that resembled binocular tubes.

When Curt Newton entered the cell-deck corridor with the others, a low, muttering growl ran along the crowded cells. It quickly sudsided, but the caged criminals glared in silent hate at the tall, redhaired planeteer who was the greatest enemy of their kind.

"You can see that these cell-doors can only be opened by the outside control," Ezra Gurney was saying to Curt. "Furthermore, this whole deck, like the other compartments of the ship, can be exhausted of air by the master-valves up in the bridge-room. If these fellows started anythin', we could kill 'em all in five minutes and they know it."

"You certainly must admit that there is no chance of a break here, Captain Future," said Captain Theron relievedly.

"It's a good, tight set-up," Curt admitted.

"Nevertheless, I'd like to 'scan' the cells. Wheel the machine along, will you, Ezra?"

He began his X-Ray inspection of each cell along the corridor. The, searchlight projector of the scanner flooded each cell in turn with invisible Roentgen rays. Through the fluoroscopic eyepiece, Curt Newton could have seen the tiniest scrap of metal in the cells.

But there was nothing. The gray-clad convicts had not even any metal in their plastic belt-buckles or shoes. Even their dishes, water-jugs and eating utensils were of soft fiber or unbaked clay.

Curt paused as he reached John Rollinger's cell. The mad Earthman had been confined in a cell to himself. He sat muttering in a corner, paying no attention to Captain Future's inspection.

"Hello, Rollinger -- how are you feeling?" Curt asked him.

The ex-scientist stared at him, but made no answer. His haggard face and peculiarly burning eyes gave them all a creepy sensation.

"Hate to see a man with his mind shot like that," muttered Ezra in a low voice. " 'Specially, a man as brilliant as he was."

John Rollinger had been a famous biophysicist, Curt knew. He had specialized in encephalographic research, testing the effect of various form of radiation upon the human brain. Boldly using himself as a subject, he was supposed to have shattered his mind in his experiment.

"I wonder if he's really as mad as he looks," Captain Theron said skeptically. "The prosecution at his trial maintained he killed his colleague in a quarrel, and then used faked insanity to excuse himself."

"Well, if he's fakin', it hasn't done him much good," Ezra shrugged. "They sentenced him to Cerberus just the same, for a homicidal maniac has to be locked up just the same as a deliberate killer."

OREMOS, the slender and wiry Venusian murderer in the next cell, glared at Captain Future in silent hatred as his cell was "scanned."

But Kim Ivan, the big, battered Martian who shared a neighboring cell with Boraboll, fat Uranian swindler, greeted Curt with a calm grin.

"Nice of you to come down and visit us boys, Future," said the big pirate. His froglike grin deepened. "Looking for something special?" Curt scanned that cell twice running before he answered.

But there was no tool, instrument or tiniest scrap of metal anywhere in it, nothing whatever hidden. He looked up at the grinning pirate.

"You've kept things here pretty quiet, Kim," he remarked. "You seem to have the others pretty well under control."

"Sure, I won't let 'em start any trouble," Kim Ivan affirmed. "I'm a peace-loving man, that's why."

Ezra snorted. "A peace-loving man who led the biggest pirate band since Rok Olor was on the loose."

The big pirate laughed. "Aw, that's all over and done with now. I tell the boys, what's the use of beating our brains out against these bars, when all it'll get us is six months' solitary when we reach Cerberus."

Curt Newton finished his close inspection of the cells. When they had gone back of the cell-deck, and its massive door was again locked and under guard, Ezra Gurney challenged him.

"Didn't find anythin', did you?"

"No, not a thing," Curt admitted. "There's no tool or weapon of any kind hidden in those cells, that's sure."

"We Patrol men ain't as sleepy as you seem to think," the old marshal told him. "Those birds are safe till we reach Cerberus, never fear."

His apprehension somewhat dispelled, Curt had felt less worried about Joan's safety during the long days of the voyage that followed. At each world where they stopped, the new prisoners brought, aboard were thoroughly scanned. But no attempt to smuggle tools or weapons was detected.

Now they were drawing near to Neptune. The eighth planet was still more than a billion miles ahead, but that was only a few days of travel at the great speed with which the *Vulcan* was flying through space.

At dinner in the officers' mess that "evening" before the night watch, Ezra commented upon their approaching stop at the Water World.

"Remember last time you Futuremen an' Joan an' I were out here, Cap'n Future? It was when we were after the Wrecker."

Curt nodded grimly. "I'm not likely to forget what happened to me on Neptune that time, up in the Black Isles."

"Can you tell us about it, Captain Future?" eagerly asked Rih Quili, the young Mercurian lieutenant, with hero-worship in his voice.

"Some other time," evaded Curt, unwilling to

recall near-tragic memories.

"We've all finished dinner now."

"I ha-haven't finished my p-p-prunes," hastily stuttered George McClinton, the chief engineer.

There was a burst of laughter. McClinton, a lanky, spectacled, stammering young Earthman, was the butt of constant jokes because of his inordinate fondness for prunes. He always kept his pocket full of dried ones, which he munched ceaselessly as he supervised the cyc-room.

"If we wait till you have enough prunes, we'll be here forever," Ezra said dryly, getting up. "I'm goin' to turn in."

When Curt and Joan and Otho went to the bridge-dack, they found Grag leaning against a section of glassite window and looking disconsolately back toward Earth. The big robot turned to them.

"I wonder how Eek is getting along, back home," Grag said anxiously. "I wish I had brought him with me."

EK was a queer little interplanetary animal that was Grag's mascot. Otho had a somewhat similar pet, which he called Oog. Both pets had been left in the Futuremen's Moonlaboratory when they had flown to Earth on the errand that had unexpectedly resulted in this long voyage.

"Eek will be all right, Grag," reassured Curt.
"The automatic feeding-arrangement in the Moon-laboratory will keep him fat and happy."

"I know, but he'll nearly die of loneliness because I'm not there," Grag affirmed. "He's such a sentimental little fellow."

"Sentimental? That miserable little moon-pup?" cried Otho jeeringly. "Why, all that little pest knows is to eat and sleep. He has about as much sentiment in him as a Venusian fish."

Grag swung wrathfully on the android. "Why, you cockeyed rubber imitation of a man, if you slander little Eek like that again, I'll --"

Captain Future and Joan, chuckling, left them to the inevitable argument which might go on now for an hour. It was the favorite method of passing time for Grag and Otho, to find new insults for each other. Curt and the girl went back to a deckwindow out of earshot.

The silence of the night watch reigned over the ship. Its cycs and rocket-tubes had been cut, for its speed of inertia was now great. In an unnatural stillness the *Vulcan* rushed on and on through the vast. star-decked vault toward the distant green speck of Neptune.

The vista from their window was a magnificent one. The golden eyes of a million million suns steadily watched the soundless rushing ship. Jupiter was a white blob away back to the left, and the sun itself was only a little, fiery disk far astern. Far out in the void, they could glimpse a tiny red light creeping Sunward across the starry background.

"That will be the bi-weekly Pluto-Earth liner," remarked Curt Newton.

Joan's brown eyes watched wistfully. "Don't you wish we were aboard her, Curt? There'll be lights, music, dancing."

Curt looked down at her. "What's the matter, Joan? Is this trip getting on your nerves?"

She smiled ruefully. "A little, I'm afraid. We're so different from any other ship, with our cargo of human misery and hate. I wake up sometimes dreaming that the *Vulcan* will sail on like this forever."

Curt nodded soberly. "Like the dead space-ship in Oliver Owen's poem. Remember?

" 'Darkling she drifts toward the outer dark, Silently falling, into eternity."

"Beautiful, but depressing," Joan said, with a little shudder. She turned away. "I'm going to turn in, too. I have the guard-command in the next watch."

Captain Future went back to his own little cabin. The Brain was there, his square case resting quiescent upon a small table. But Simon did not look up or speak when he entered. His lens-eyes stared unseeingly.

Curt knew that the Brain was deep in one of his unfathomable reveries of speculation. Simon's cold, intellectual mind could lose itself for hours in contemplation of scientific problems. It was his method of relaxation when he had no laboratory for his endless researches.

Curt Newton slept soundly. Yet when he suddenly awakened an hour later, it was with every nerve thrillingly alert. He listened. The big ship was still rushing silently on through the vast deeps of space.

Then to his ears came suddenly the sound of distant yells and the crash of atom-guns. Instantly

Curt was out of his bunk and plunging across the cabin toward the door.

"Something's wrong! If the prisoners --"

The words died on his lips as he burst out into the corridor. A mass of gray-clad convict were pouring into the fore end of the passage, In their front rank was Moremos, the Venusian murderer, grasping an atom-gun.

He aimed instantly at Captain Future. And Joan Randall, who was emerging hastily from her cabin, was plunging directly into the line of his aim.

#### CHAPTER III

Jailbreak



DOWN in the cell-deck, a few hours before, an odd atmosphere of, tension gripped the scores of prisoners as the night-watch began.

The massive doors at the fore and aft ends of the deck had been and locked by the Patrol officers, who were now standing guard, outside them. A few uranite bulbs in the ceiling cast a vague, dim light

upon the shining chromaloy bars and the shadowed, brutal faces behind them.

The hissing whisper of Moremos traveled along the row of barred doors. The Venusian's sibilant voice was silkily vicious as he addressed the big Martian pirate in a neighboring cell.

"We're only three or four days out of Neptune -- I heard a guard say so today. I thought you were going to get us out of here before we reached Neptune, Kim Ivan?"

"Yes, what about it, Kim?" asked a squat Jovian killer's rumbling voice. "You've been telling us all the way to keep quiet and that you'd manage a break, but you haven't done anything yet."

"He's just been stringing us along to keep us quiet," accused the quavering voice of a white-haired, *rial*-chewing Saturnian, a hoary old sinner named Thuhlus Thuun. "I'll lay that the Patrol men put him up to giving us that story."

A fierce, low babble of accusations, threats and demands instantly arose from the prisoners. All

were addressed to the big Martian.

Then Kim Ivan's deep voice cut through the babble, in low, harsh command. "Cut your blasts, you chattering space-monkeys! Do you want the guards coming in here?"

The authority in his voice, the authority that had made this towering Martian one of the great pirate leaders of his time, again silenced them.

"I said I'd stage a break, and I will," Kim Ivan continued harshly. "And what's more, tonight's the night for it."

An electric spark of excitement seemed to leap along the crowded cells at his statement. The voices broke out again, but in eager questions now.

"What's your plan, Kim? How are you going to get us out of these cursed cells"

"You'll soon find out," the big Martian promised. "Now shut off your cycs and keep quiet while I start."

The prisoners instantly became still, though all pressed against the bars of their cells in a surge of sudden hope. The only sound was the low, monotonous muttering from the cell of John Rollinger.

Kim Ivan turned to his cell-mate. His fellow prisoner was Boraboll the swindler, a fat Uranian whose moon-like yellow face was ludicrous as he gaped at the big Martian.

"Kim, can you really do it?" he squeaked. "How are you so much as going to get out of this cell, when you have nothing to work with?"

"I have all I need," Kim Ivan replied. "My old pals on the outside smuggled the stuff to me, before we ever left Earth, It's hidden right here in the cell with us."

"Are you crazy?" gasped Boraboll. "There's nothing hidden in here, not so much as a pin. The X-Ray scanner would have detected it if there was."

"The cursed scanner wouldn't ever find my equipment," Kim Ivan replied, with a chuckle. He was stripping off his gray convict jacket, and there was a look of triumph on his massive, battered face as he added, "I've got wit enough to outsmart the Patrol, every time."

Boraboll watched him, open-mouthed. The big Martian had filled the biggest of their soft fooddishes with water from the fiber jug. Now Kim Ivan tore a sleeve off his jacket, and bent over the dish of water.

"Cell-crazy!" muttered the fat Uranian to himself with sudden conviction. "He's gone clear cell-crazy.

"He's as delirious as Rollinger."

Kim Ivan wadded up the sleeve of his jacket and thrust it into the dish of water. He turned around, with a sharp command.

"Now hand me that salt." Pityingly, Boraboll handed him the little fiber container of salt. Kim Ivan took it and squatted down, waiting and watching the dish.

Gradually, a curious change came over the water in that dish. It turned blue, as though it had dissolved some dye or chemical in the jacket-sleeve that was immersed in it. Kim Ivan waited until the water was a dark blue color, before taking out the wadded sleeve.

"Now the reagent," muttered the big Martian, and poured a carefully estimated quantity of salt into the dark blue liquid.

The blue liquid began to seethe and boil, and turned dark purple. Kim Ivan's massive face flashed a light of triumph.

"It works!" he muttered exultantly. "Boraboll, we're as good as out of here right now."

"But what is that stuff?" Boraboll stammered, looking bewilderedly at the seething purple liquid.

"It's an acid that eats through the toughest metal as though it were cheese," the big Martian retorted. "The basic elements of the acid were mixed by a smart outside chemist into a gluey mixture that was soaked into a regulation convict jacket, and then dried. The jacket was smuggled in to me by my outside pals, along with plans of this ship."

He chuckled as he added, "The scanner couldn't show the chemicals soaked into my jacket. But they needed only to be dissolved into water, and then to have ordinary sodium chloride added to the solution, to form one of the most powerful metal acids known. Now watch it work!"

Kim Ivan picked up the vessel of seething liquid, and carefully poured a trickle of it upon the crossbars of the cell's barred door.

The purple liquid foamed and hissed, eating swiftly into the tough chromaloy bars. Careful to avoid splashing himself with the acid, the Martian pirate continued the operation. In a few moments, the crossbars were eaten through. He put down the bowl of acid, and lifted out a whole section of the door. Then he squeezed out into the corridor.

"Kim, how did you do it?" came the excited, wondering exclamation of Grabo, the squat Jovian criminal across the corridor.

"Can you get the rest of us out, too?" Moremos

asked swiftly. A chorus of amazement and excited hope was rising from the rest of the convicts. Kim Ivan quieted it with a wave of his big hand.

"Take it easy! I'll soon have you out of those cursed cages."

The cell-doors did not have indidual locks. They were all secured by a master electro-lock whose controls were outside the cell-deck.

But Kim Ivan knew what he was doing. He secured his receptacle of purple acid and stooped over a certain section of the corridor floor.

"The main wiring for the electro-locks runs under here," he muttered. "If the ship plans my pals sent me are right."

He used a trickle of the acid to burn out a twofoot section of the metal floor-plate. This exposed the tangle of wiring inside the floor. Kim Ivan studied it for several minutes, then began working with the wires.

Presently, his work bore results. With a loud clicking, all the locks of the scores of cell-doors drew their bolts. He had actuated the master control of the locks.

The convicts swarmed instantly out into the corridor. Brutal faces of Earthmen, Venusians, Jovians, Saturnians blazed with fierce hope.

"You've done wonders, Kim," Moremos applauded tensely. "But now what?"

"Now," answered the big Martian with a flash in his eyes, "we're going to seize the ship! Then ho for freedom!"

"The Patrol will hunt us down no matter where we go, once they find out we've seized the *Vulcan*," muttered fat Boraboll doubtingly.

"Don't worry, I've got a plan," reassured the Martian. "The Patrol will never catch up to us where *I'm* figuring on going."

Tuhlus Thuun, the hoary old Saturnian pirate, spat *rial* juice on the floor and demanded, "How're we going to grab the ship? We're locked on this deck, with Patrol men on guard outside both doors."

Kim Ivan grinned. "There's another way out of here. The ship-plans showed that when this craft was a liner, it had an emergency escape-hatch leading from this passenger-deck to the top-deck. The hatch was walled shut when they made this a prison ship. But I know where it is."

HE APPROACHED a blank section of metal wall between two cells midway in

the main corridor. Motioning the others peremptorily to stand back, the Martian poured his remaining purple acid upon that wall.

The liquid hissed and burned into the metal panel. In a few moments, it had eaten out a big section. Through the hole they looked into a dark, small escape-hatch whose ladders ran up toward the top-deck.

Kim Ivan faced the swarming, eager convicts grimly. "Now listen to me. I'm running this show, and anyone who doesn't like that can speak up right now."

There was no challenge to the authority of the towering, hard-faced Martian pirate. But a shrill voice back in the throng laughed wildly.

"It's only that crazy Rollinger," muttered Moremos. He viciously shoved the staring, madeyed Earthman back into his cell.

"This hatch will let us out into the forepart of the top-deck," Kim Ivan continued rapidly. "We'll jump first on the ship officers on duty in the bridge and chart-rooms. Once we have their guns, we can overpower the others before they're awake enough to know what's going on. But no massacre -undertand?"

Moremos' green face stiffened. "You mean we're not to blast down that devil Captain Future? He and his cursed Futuremen have sent plenty of our pals to Cerberus!"

A low growl of agreement came from the other convicts.

"You blockheads, they are the most valuable hostages we could have aboard, if we're not fools enough to kill them!" lashed Kim Ivan. "And we may need hostages once the Patrol starts hunting us."

His grim reminder silenced them. "Now come on!" the big Martian exclaimed. "If luck's with us, we'll pull off a feat that'll go down in pirate history!"

The mutineers poured up the escape-hatch after their big leader. Kim Ivan opened the unsealed door at its top, and they emerged with a sudden rush into the top-deck just behind the chart-room.

Two pilots were on duty in the bridge ahead, and Lieutenant K'kan was checking the drift-gauges in the chart-room. The young Martian second officer turned, appalled, and then reached swiftly toward an alarm-button.

Kim Ivan's balled fist knocked him senseless before he could press the button. Old Tuhlus Thuun eagerly snatched up the officer's atom-pistol.

"Get that pilot, Grabo!" yelled the Martian leader furiously.

One of the two pilots had evaded the Jovian criminal and his group who had burst into the bridge. The pilot, with a yell, was darting back through the chart-room to escape.

Crash! The fiery blast from old Tuhlus Thuun's gun cut the man down in mid-stride.

The old Saturnian cackled. "Ain't my aim yet! First man I've led down for two years."

"You old fool, there wasn't any need that!" raged Kim Ivan. I told you to --

Crash! Crash!

"Where the devil's the Moremos?" cried the Martian furiously, striding hastily back toward the main corridor of the top-deck.

Boraboll answered, his moon-like yellow face muddy with fear. "Moremos killed Captain Theron with his own gun! He and the others have gone back for the Futuremen!"

"I might have known that murderous Venusian couldn't hold his trigger!" roared Kim Ivan. "Come

They burst into the top-deck longitudinal corridor, stumbling over the slain bodies of Captain Theron, a Patrol guard and a deck-hand.

## **CHAPTER IV**

**Trapped** 

A TENSE tableau met their eyes. Ahead of them, Moremos and a halfdozen other mutineers were charging the stern corridor. Captain Future's tall figure had just burst out of his cabin, and the Venusian murderer was

raising his gun to fire at the hated planeteer. Curt Newton's draw was the swiftest in the Solar System. His proton-

pistol came out of his holster with the speed of light. Yet he could not fire, for Joan at this moment emerged into the corridor. She was between him and the Venusian.

"Joan, get back!" he yelled to her. She hesitated

dazedly. Curt couldn't fire at the Venusian while she stood between them. But Moremos, who had no interest in the girl's safety, was going to shoot!

Curt's desperate expedient came with such lightning speed that it seemed an instinctive reaction rather than a deliberate decision.

He fired the blazing white bolt of his weapon, aiming at the metal wall of the corridor *beside* Joan. Most of the energy of the oblique blast burned into the wall. But a part of that blazing blast of force was reflected and deflected on along the corridor toward the mutineers.

The deflected blast was not strong enough to be fatal. But it was enough to scorch and daze Moremos and the others. They recoiled.

Captain Future lunged forward, swept Joan behind him, and triggered swiftly.

His blasts cut down two of the men beside Moremos. The Venusian and the others hastily darted back out of the corridor.

"Holy space-imps, what's going on?" It was Otho, his green eyes blazing and his proton-gun in his hand, who had emerged with Grag from the cabin they shared. Ezra Gurney, too, was scrambling startledly out.

"Mutiny!" Curt Newton cried. His voice was bitter with self-reproach. "Just what I feared, and yet I let it happen."

OUNG Rih Quili, the Mercurian lieutenant, and another Patrol officer had wakened and come out to join them.

A stentorian voice echoed back to their little group from the fore part of the top-deck. It reverberated along the corridors.

"Future, will you and the others surrender? You haven't got a chance. We hold the bridge and control the ship."

"That's Kim Ivan," gritted Ezra. His thin hand clenched upon his atom-gun and he started forward. "I'll show that cursed Martian!"

Grag and Otho started forward with him, but Curt Newton held them back. "Don't be foolish! There're scores of convicts up there and they've got all the guns in the arsenal by now. They'd get us no matter how many of them we got first."

He glanced swiftly around, his gray eyes snapping. "We can't stay here. They'll come up the aft companionway, and then they'll have us caught between them. We'd better retreat down the aft stair to the cyc-room. If we can hold the cyc-room against them, we'll get the upper hand over them

vet."

"I get it!" exclaimed Otho. "If we hold the cycroom, we can keep the cycs shut off and prevent them from taking the ship anywhere save Neptune."

Hastily, the little party entered the aft companionway and went down its short, zigzag stair to the lowest deck of the *Vulcan*.

The big cyc-room took up the whole rear half of this deck. It was crowded with machinery -- the huge, massive, cylindrical cyclotrons, the tangle of fuel pipes and power-leads, the squat generators of the auxiliary drive whose vibration-thrust was used only in emergencies.

George McClinton ran bewilderedly toward them. The lanky young chief engineer had apparently just been aroused from his nearby bunk by the Neptunian engineer on duty. He was automatically popping a dried prune into his mouth, as his spectacled eyes blinked at them amazedly.

"Wh-what's going on?" he stammered. "Orluk says that he h-h-heard shooting --"

"The cursed convicts have grabbed the bridgeroom and upper decks!" answered Ezra Gurney, his faded eyes still raging.

C APTAIN FUTURE was snapping orders.

"Grag, you and Rih Quili lock the fore door and watch it. Otho, take the aft door."

"You're not h-hurt, are you, M-m-miss Randall?" the prune-loving engineer was asking anxiously of Joan.

"I'm all right," she said. "But I've failed in my duty. This is the first time there has ever been a break on the *Vulcan*."

"It's more my fault than yours or Ezra's," Curt said bitterly. "I felt all along that that desperate bunch might try something. That's why I came along and took all the precautions I could. But they somehow outsmarted me."

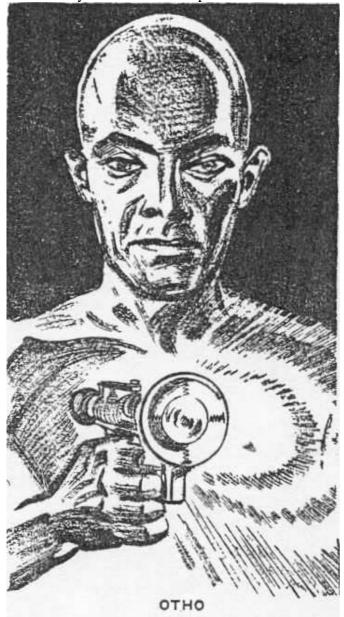
There was a loud hammering at the fore and aft doors of the cyc-room. The mutineers had apparently discovered the whereabouts of the group.

"They can't break in here," Ezra muttered hopefully. "They know if they do, we'll blast 'em down as fast as they come through the door."

Curt was searching the crowded cyc-room with intent gray eyes. "Are there any space-suits down here?" he asked McClinton.

"N-n-no," stuttered the lanky engineer wonderingly. "Suits aren't ever k-kept down here, for there's n-n-no need for them here."

"We'll need them pretty quickly, if my guess is right," Curt exclaimed. He pointed at two big valves inset in niches in the thick wall of the cycroom. "Those are air-exhaust valves, controlled from the bridge-room. They're part of the valve system designed to make possible the exhaustion of air from any section of the ship."



"Good God, I forgot all 'bout those exhausts!" cried Ezra, aghast. "They were intended to enable the ship's commander to quell any convict mutiny in any part of the ship. If the convicts learn about 'em and turn 'em against us --"

"They will, and quickly," Curt snapped. "That Kim Ivan seems to know all about this ship. Can we fix those valves to keep them from being opened?"

"There's n-n-no way!" answered McClinton,

paling. "Operation of the v-v-valves is all by r-r-remote control through w-wires in the w-walls."

"Then we've got to weld metal patches over the valve-niches -- and quickly!" Captain Future cried. "You've got atomic welding-torches here? Get them out, and bring some sheet metal stock."

As they started to work with the sputtering atomic torches to cut metal patches that would seal the exhaust-valve openings, the hammering on the doors ceased.

Grag, Otho, Rih Quili and Ezra remained on guard inside those doors while Curt and McClinton worked hastily.

Before they had even cut out the first metal patch, a loud voice bellowed through the cyc-room. It came from the interphone that connected with the bridge.

"Captain Future!" it bellowed.

"This is Kim Ivan talking. We've taken the whole ship except the cyc-room. You haven't a chance. Unless you open the fore door and toss out your atom-guns, I'm going to open the cyc-room exhaust-valves."

"That Martian devil!" gritted Ezra Gurney furiously. "He knew about the valve-system, all right."

"What about it, Future?" bellowed the Martian's voice. "I'm going to give you two minutes. Unless you agree by then, the valves open!"

Stricken by the threat, the others looked at Curt. His bronzed-face was a taut mask as he assessed their hopeless situation.

THEY could not seal the deadly valves in two minutes. That job would take a half hour, at least. Long before they finished it, the valves would be opened and the air would puff out of the cyc-room, slaying them all.

"They've got the doors locked on the *other* side now, chief!" Otho reported.

"So we can't come out fighting," Curt gritted. His eyes swung to Joan. Then he stepped to the interphone. "Captain Future speaking, Kim Ivan! What assurance have we that if we do surrender you won't blast down every one of us?"

"If I wanted to kill you, I could do it right now by opening the cyc-room exhaust valves," retorted Kim Ivan. "I want to keep you for hostages. If the Patrol catches up to us, you'll be valuable to us. I give you my word that if you surrender, none of you will be harmed."

Curt looked at the others in his silent group. "You all heard. What's your decision?"

"Looks like there ain't any choice," muttered Ezra somberly. "We can either die right now, or accept Kim Ivan's proposition. It's to his interest to keep us alive as hostages, all right. An', black-hearted pirate though he is, he's got the reputation of keepin' his word."

Captain Future and the Futuremen might have taken their chance and refused surrender, by themselves. But to sentence Joan to death?

Curt's mind was decided by the threat to the girl. He turned and spoke slowly into the interphone. "All right, Kim Ivan. We agree."

THE words were bitter in his mouth. It was almost the first time the Futurernen had acknowledged defeat and made quiet surrender.

Otho's eyes were blazing, and Grag's huge metal figure was still rigidly ready for action.

But the Brain's chill, logical mind approved.

"It is all we can do," rasped Simon. "While we live, we have a chance of reversing the situation."

Curt unlocked the fore-door, which had now been unbolted outside also. Silently, he cast their atom-guns out onto the landing.

Instantly, convicts appeared out there and snatched up the weapons. Then the fierce, exultant crowd swarmed into the cyc-room with Kim Ivan's towering figure leading them.

The big Martian's battered red face was jovial with high good humor at his success. But Moremos, the Venusian, glared at the Futuremen with a hatred reflected on the fierce faces of most of the other mutineers.

Curt ignored the threat in their tigerish stare. "What have you done with Captain Theron and the others?" he demanded.

Kim Ivan looked uncomfortable. "They're dead, all except four crewmen. I told the boys there didn't need to be any killing, but they didn't follow my orders. That's your fault, Moremos."

Moremos had a sneer on his emerald-hued face as he answered the Martian. "You're too chickenhearted, Kim. If I had my way, we'd blast down all the rest of them right now. Why should we let Future and his pals live, when we've got a chance to wipe them out?"

The Venusian's venomous words kindled explosive agreement among the majority of the mutineers.

"Moremos is right!" roared Grabo, the squat Jovian. "Future and his bunch have sent lots of good lads to Cerberus. Now we can pay 'em off."

Kim Ivan's bull bellow rose above the fierce tumult. "I'm giving the orders here and I say we don't kill these prisoners."

His voice rang with contempt. "Are you all so thick-headed you can't see our danger? When the *Vulcan* fails to arrive at Neptune a few days from now, the whole Patrol will start out looking for it. If they overtake us, we'll have these prisoners as hostages."

His grim reminder of the Planet Patrol seemed to sober the mutineers somewhat. Every one of them had good reason to know the remorseless efficiency of that great organization.

"The Patrol will hunt us till they find us, all right," muttered fat Boraboll nervously. "They'll comb the whole Solar System."

"They will," Kim Ivan agreed. "But they won't find us if you agree to my proposal. I propose that we leave the System altogether."

APTAIN FUTURE and his fellow-captives were as startled by that proposal as were the mutineers.

"Leave the system?" gasped Grabo, the Jovian. "What do you mean?"

Kim Ivan's eyes flashed. "I've thought it all out. If we stay in the System, no matter what wild moon or asteroid we hide on, the Patrol will finally find us. Our only chance is to leave this Solar System forever."

He swept his hand in a grandiloquent gesture. "Out there beyond Pluto's orbit is a whole universe for our refuge! Out there across the interstellar void are stars and worlds beyond number. You know that exploring expeditions have already visited the worlds of Alpha Centauri, and returned. They found those worlds wild and strange, but habitable."

The Martian's voice deepened. "I propose that we steer for Alpha Centauri. It's billions of miles away, I know. But we can use the auxiliary vibration-drive to pump this ship gradually up to a speed that will take it to that other star in several months. We have enough supplies for that long a voyage. Once there, we'll have whole worlds for our own! We can easily dominate the primitive peoples that were found on those worlds."

The sheer audacity of the proposition held the mutineers in stunned silence.

Then Curt Newton saw their faces kindle with

excitement.

"Kim's right!" exclaimed Grabo. "If we stay here in the System we'll be caught and sent to Cerberus sooner or later."

"I say, let's go," shrilled old Tuhlus Thuun. "The voyage may be long, but at the end of it there'll be whole new worlds to loot."

Boraboll, the fat Uranian, looked scared. "We don't know what we'll run into out in uncharted outer space. It's a terrible risk."

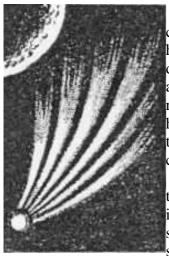
"The risk is no greater than the one we'll run if we stay here in the System," Grabo retorted. "We're with you, Kim. It's starward ho!"

Stunned by dismay at what the daring decision meant to them, the Futuremen and their fellowcaptives heard the mutineers' fierce, excited chorus of agreement.

"Starward ho!"

#### CHAPTER V

Wrecked



SHUDDERING and creaking, the *Vulcan* hurtled out into the great deeps of interstellar space at the highest speed of its rocket-tubes. Days ago it had crossed the Line, as the orbit of Pluto was called.

It was already more than four billion miles out into the vast abyss that stretches between the stars.

As yet the mutineers had not dared make use of the auxiliary vibration-drive. For the powerful propulsion vibrations of that mechanism set up a peculiar excitation of the ether which could be spotted at great distances by the instruments of the Planet Patrol. Not until they were still farther from the System could the high speed drive be safely used.

Down in the cell-deck, in one of whose cells he was confined, old Ezra Gurney gloomily considered their situation.

"We're a couple o'billion miles from the System now. Soon as we get a little farther, there won't be any chance o' the Patrol overtakin' us. Then we won't be any more use to these space-scum as hostages."

"You think they'll murder us then?" asked Joan Randall incredulously from her own cell. "But Kim Ivan gave his word they woudn't."

"I know, an' Kim Ivan would proba'ly keep his word, but the others won't," Ezra predicted pessimistically. "That snake Moremos an' the rest like him are just achin' to put the blast on all of us."

Curt Newton, confined in his own separate cell, looked anxiously across the corridor at the barred door of Joan's cell.

"It's my fault, letting you in for this," he said ruefully. "I was overconfident, and they tricked me neatly."

"You know that isn't so, Curt," Joan denied staunchly. "The Patrol was in charge of this ship, and we fell down in spite of all your warnings."

The shrill, insane laugh of the crazed Earthman scientist came from farther down the corridor.

"I said that there was death on this ship!"

They had been imprisoned here for days, ever since the mutineers' seizure of the ship. The electrolock cables had been repaired by Kim Ivan, and the Futureman and others had been confined in separate cells. Two mutineers armed with atomguns constantly watched in the corridor.

There were fifteen of them imprisoned here. Beside the Futuremen and Ezra and Joan, there were George McClinton, the stuttering chief engineer, and his two assistants; Rih Quili, the young Mercurian lieutenant; three space-hands and one Patrol guardsman; and John Rollinger, whose insane babbling had so exasperated the mutineers that they had reconfined him.

"If ever I get my hands on that Kim Ivan," Grag's rumbling voice threatened, "I'll tear him into little bits -- slowly."

"You'll do nothing of the kind!" promptly, asserted Otho's hissing voice. "You'll simply watch while *I* give him the Venusian water-torture."

George McClinton, the lanky chief engineer, was arguing through his bars with their two guards. "I t-t-tell you, you've got to give me some p-p-prunes with my rations! I'm s-starving for l-lack of them."

"Cut your blasts, all of you!" ordered the guards harshly. "You people are lucky just to be living yet -- you don't know how lucky."

Silence fall upon the dim-lit deck of cells. Captain Future squatted down against the front wall of his own cell, and seemed to doze.

Actually, Curt had never been more awake. His position concealed from the vigilant guards the fact that his left hand was twirling a rude little metal drill which was biting ever deeper into the metal floor.

Curt had not been idle during these days. From the moment of their capture, he had racked his brain for an expedient by means of which he might turn the tables on their captors. He had found one slim chance.

The control-cables of the master electro-locks ran beneath the corridor floor just outside his cell. If he could drill through the floor of his cell, out beneath its wall, he could short-circuit the cables as Kim Ivan had done, and thus unlock all their cell doors.

He had nothing to drill with. They had all been thoroughly searched with the scanner when they were locked in. His cell contained nothing but the fiber and clay dishes for food and water, and a flat metal bunk. But Captain Future had managed to unbolt one of the metal rods that supported his bunk. It was of harder metal than the floor.

PATIENTLY, Curt had shaped the end of this rod into a drill by grinding it against his bunk-edge. For days now, he had been using it to drill surreptitiously through his cell-floor toward the lock cables. He could work only in moments when the guards were not directly watching him. But his hopes were fast rising as he felt himself nearing the vital cables.

Suddenly the rough voice of Grabo, the Jovian, interrupted Curt's tensely hopeful work.

"Fetch Captain Future out of his cell," the Jovian pirate was ordering the two guards in the corridor. "Kim Ivan's orders."

Curt Newton's heart sank. Had they discovered his secret labors?

His cell door was unlocked separately. He had already hastily secreted his drill by restoring it to position as a support of the bunk. Curt stepped obediently into the corridor, the two guards covering him with the guns.

The red-haired planeteer looked at Grabo with cool inquiry. "What does Kim Ivan want with me?"

"You'll find out on the bridge," the Jovian answered harshly. "Get moving. One of you guards come along to cover him."

Grabo himself was not armed. Brawls among the mutineers during the first days had resulted in so many killings that Kim Ivan had decreed that only the guards of the prisoners should henceforth carry atom-guns.

Curt walked calmly ahead of the Jovian and the watchful guard, up to the bridge-room. Old Tuhlus Thuun was in the pilot-chair. The hoary Saturnian criminal looked nervous, and there was a worried expression on big Kim Ivan's massive red face. Moremos was arguing angrily with them.

The broad sheet of the pilot-window, above the complex instrument panel, framed a glittering vista of interstellar space. The firmament was a great drift of stars, amid which the white spark of Alpha Centauri shone like a beacon in a direction dead ahead.

Curt Newton's practised eyes, noticed at once the tiny red lights winking and flashing on the instrument- panel, and the buzzers whirring.

"Future, we need some help," Kim Ivan told Curt bluntly. "We're running into something out here, I don't know what. Tuhlus Thuun can't figure it out, either."

"I never did any piloting outside the System before," angrily defended the old Saturnian pirate. "Everything is cockeyed out here beyond the Line."

"You've been out here in deep space before, Future," Kim Ivan said to Curt. "Can you figure out what's got our instruments acting crazy?"

"Suppose I do, will you turn around and go back to land us on Pluto?" Captain Future demanded.

T WAS Joan's safety he was thinking of. There was a chance that he could bargain them into at least releasing the girl.

Before Kim Ivan could reply, Moremos answered for him. The venomous Venusian murderer thrust his head toward Curt like a striking swamp adder of his native world. as he hissed:

"No! You're not dictating to anybody now, Future! You'll either help us out or we'll blast you down here and now."

"Go ahead and blast." Curt retorted. "It won't get you out of your troubles. And you'll have plenty of trouble, piloting deep space."

He was bluffing, trying to high-pressure them into agreeing to the bargain he had proposed. And Kim Ivan called his bluff.

"You're not fooling anybody, Captain Future," said the big Martian. "You won't let this ship be wrecked for lack of your help. Because if it's wrecked, the Randall girl dies -- and you think plenty of her."

Curt winced. It was true. They held a trump card in the fact that Joan's safety was tied up with that of the ship.

"Let me see those instruments," Curt said



shortly, admitting defeat. He still had his secret plan of escape, he was thinking.

Old Tuhlus Thuun began a voluble explanation. "I never saw instruments act so crazy! They indicate a meteor-swarm or some other celestial body near us, but the readings of its position they give are impossible!"

"That's because you're not allowing for etherdrift and relativity space-warp," Captain Future told him. "Out here in deep space, you have to correct for those factors."

His keen gray eyes swung along the deep bank of complicated dials. The red tell-tale lights under four of the meteorometers were blinking.

The readings of those meteorometers showed the presence of a body of planetoidal dimensions, several hundred thousand miles away. That was a far greater distance than the instruments could actually function. The reading was being distorted by ether-drift and space-warp and must be

corrected.

Curt Newton hastily made nimble mental calculations. Trained in the routine of correction by his own former interstellar voyages, he rapidly reached a mental approximation of the true readings of the instruments.

"The body indicated by those readings is really dead ahead of us!" he exclaimed. "Shift your course three arcs to port!"

"God!" screeched Tuhlus Thuun, stiffening in the pilot-chair and staring through the broad window with dilated, bulging eyes.

For a heartbeat, they were all frozen by what they saw as they followed the old Saturnian's gaze.

They were looking into the awful face of death.

In the starry darkness full ahead of the hurtling ship, there had suddenly loomed up a spinning world. It was no more than a hundred miles in diameter. But it bulked gigantic as they raced headlong toward it.

"Don't try to brake!" yelled Curt frantically to the old Saturnian. "At this speed you'll pile us up."

His warning went unheeded. Terror-stricken by the awful apparition ahead, Tuhlus Thunn madly jammed the brake-blast pedal to the floor.

Next moment, the *Vulcan* seemed to explode around them. The roaring shock sent the men in the crowded bridge caroming into the walls.

Captain Future clutched a stanchion. He heard the scream of tortured metal coincident with the reverberations of the explosion.

He dragged himself erect. A dead silence reigned, then was broken by oaths and cries of pain from the other parts of the ship.

Kim Ivan, bleeding from a gash on his forehead, dragged himself indomitably to his feet. "What's happened?" he husked dazedly.

"The bow rocket-tubes have back-blasted!" Curt cried. "You can't use full brake-blasts at the speed we had -- inertia forces the blast back up the tubes. I think the laterals let go, too."

"Look at that!" shouted Boraboll. The Uranian's fat moon-face was a muddy yellow as he pointed shakily ahead. "We're going to crash!"

A cold hand seemed to close around Curt Newton's heart as he caught a glimpse through the broad window. The tremendous force of the disastrous brake-blast had sharply checked the *Vulcan's* headlong rush toward the planetoid ahead. But the crippled ship was still falling onward.

The uncharted little world already filled half the

starry heavens before them. The thin, feeble light from the distant Sun vaguely illumined it. Dark, dense forests were visible upon it. And at one point on its surface, a great bed of smouldering volcanoes flung a lurid red glow.

"This is your fault!" roared Kim Ivan to the terrified old Saturnian.

"I lost my head!" shrilled Tuhlus Thuun. " jammed the brake-blast pedal before I realized."

Captain Future jumped to the interphone. He called the cyc-room: "What happened down there? Did the tail-tubes go, too?"

The scared, hoarse voice of the mutineer in charge of the cyc-room answered him. "We got a dozen dead men down here-half the cycs blew up when the bow and lateral tubes back-blasted! The tail-tubes didn't give way, though they seem to be badly strained."

"Switch the power of the remaining cycs into the tail rocket-tubes!" ordered Curt. "Then get out of the cyc-room!"

He turned and hauled the stunned old Saturnian out of the pilot-chair. "Give me those controls."

OREMOS leaped forward, deadly suspicion on his face. "Wait a minute. Future! You're not pulling any of your tricks!"

"Tricks, the devil!" flamed Curt. "We're falling toward that planetoid, and in ten minutes we'll crash. We can't get away, for the bow and lateral tubes are blown, and the tail-tubes are strained and can't be used for more than a few minutes of firing."

He was seating himself in the pilotchair and grabbing the space-stick as he talked. "If we crash on that planetoid, everybody in the ship dies. I don't care a curse about you pirates. But I've got friends aboard. There's a chance I can make a safe landing."

"Go ahead and try, then!" exclaimed Kim Ivan.
"Get back and give him room, the rest of you!"

The *Vulcan* was turning slowly over and over in space as it fell at appallingly increasing speed toward the mystery planetoid. Captain Future's eyes tensely estimated the distance of the little world, by the graduated scale etched in the glassite window. The hundred-mile sphere now filled most of the firmament. The edges of its dark green mass were rimmed by a haze that told of a thin atmosphere.

Superhuman tension gripped the watching criminals as the ship fell on toward doom. Curt's

brown face was like rock, his hands holding the space-stick in the rigidly upright position that would fire the tail rocket-tubes when he depressed the cyc-pedal.

"We're going to hit in a minute!" quavered fat Boraboll.

rified old Saturnian. A wild scream came to their ears from the lower "I lost my head!" shrilled Tuhlus Thuun. "I part of the ship. The mad shriek of John Rollinger.

"Are you going to let us crash without even trying?" roared Grabo to Captain Future.

The falling *Vulcan* was only miles above the surface of the uncharted planetoid. They were rushing down toward a convexity of green jungle in the center of which glowed the evil red volcanoes and lava-beds.

Air whistled outside the plunging ship, in a rising roar. It was still turning over, as it fell. Captain Future waited for one more turn.

"Do something, you fool!" yelled Boraboll in terror.

"We're falling toward those volcanoes!" shouted another of the mutineers. The iron-nerved Kim Ivan silenced them. "Shut up and let him alone!"

The volcanic region of the mystery planetoid stretched only a few miles beneath the plummeting ship. The center of the infernal activity was a double row of huge black craters separated by a stupendous chasm. From the craters flowed lurid crimson cataracts of molten rock that crept sluggishly down toward vast black beds of solid-crusted lava.

Curt Newton was estimating their speed of fall by split-seconds. He knew that the tail-tubes upon which all depended would stand but a few moments of firing before their strained walls exploded. It required all the superb spaceman's nerve to wait for the *Vulcan* to turn once more. Yet he waited, till the instruments showed its tail pointed straight down.

Curt's foot instantly jammed the cyc-pedal to the floor. The roar of raving power that lanced downward from the tubes flung him deep in the pilot-chair and jammed the others against the wall. The hull of the crippled ship grated and screamed from the shock of deceleration.

"We're going to land in that lava!" cried Grabo.

APTAIN FUTURE saw the glowing red river that flowed from two volcanoes rushing up toward them. It was straight beneath the slowing ship.

His hands flashed desperately to the bank of

individual rocket-tube throttles. He cut the tubes on the starboard side of the tail.

The off-balance thrust of the remaining tubes sent the falling *Vulcan* lurching to port. It sagged down toward the black lava beds beyond the fiery river. Instantly, Curt cut in all the tail-tubes again.

*Crash!* Crash! The flaming tail of the ship came to rest upon the solid crust of lava. In a flash, he cut all tubes. The ship toppled over on its side and lay still.

"Good God, what a landing!" choked old Tuhlus Thuun, hoarsely.

Curt Newton, his face haggard and dripping with perspiration from superhuman strain, suddenly raised his hand. "Listen!"

The momentary silence that had followed the landing of the *Vulcan* was broken by ominous cracking sounds beneath the ship. The prostrate vessel shuddered violently as the cracking sounds became louder

"We're sinking into the lava!" yelled a mutineer's wild voice. "The ship's weight is cracking the solid crust -- it's going to sink into the molten rock beneath!"

With the cry came a louder cracking, and a sharp lurching of the ship There was a screech of rending metal plates. Scorching, superheated air laden with choking sulphurous fumes flooded up through the ship.

"She's going through the crust now!" bellowed Kim Ivan. "Out of the ship, everybody!"

The mutineers scrambled madly down toward the space-door of the cyc-deck. All else was forgotten in the wild instinct to escape.

Curt Newton fought his way down the companionway with the scrambling convicts. But it was toward the mid-deck he was struggling.

He paused briefly outside its door to fling the switch of the master electro-control. Then he plunged into the cell-deck corridor. The guard in it had aready fled.

"Joan! Ezra!" Curt cried chokingly through the swirling smoke. "We've got to get out of here!"

Figures were stumbling out of the unlocked cells, slipping upon the tilted floor, gasping as they breathed the scorching sulphurous air.

Curt found the staggering figure of Joan and steadied her with his arm. Ezra Gurney's grizzled face appeared through the smoke, a big bruise upon his cheek and his faded eyes wild.

"Name o' the Sun, what happened?" he was

crying.

The Brain's weird form flashed like a flying cube through the swirling fumes to Curt's side, hastily followed by Curt and Otho.

"Young Rih Quili was stunned by the shock -- he's lying in his cell!" cried Simon.

"I'll get him!" Captain Future yelled. "Ezra, get Joan to the space-door! Otho, see to McClinton and the crew-men!"

He plunged back to Rih Quili's cell and picked up the unconscious young Mercurian. A sharper lurch of the settling ship staggered him as he did so.

The sulphurous air was choking him. As the fought up the tilted floor toward the door, he glimpsed the dazed McClinton and other crewmen being rushed by Otho toward the exit. Grag was coolly waiting for Curt. Through the mad uproar, a shrieking of mad laughter smote their ears.

"Rollinger's back there!" Curt gasped. "Grag!"

THE great robot, who did not breathe and was not affected by the overpowering fumes and heat, was already clanking back to the madman's cell. He returned quickly, clutching the insanely struggling scientist.

They tumbled down to the space-door. As they reached it, a violent downward movement of the sinking *Vulcan* threw them out.

Curt hit a surface of rough lava that was so searingly hot that he cried out. He staggered up with Rih Quili. Blinded by swirling smoke, scorched by almost unendurable heat, he glimpsed crevices cracking open in the solid crust around the ship. Fiery red lava gushed from beneath.

"This way, Chief!" boomed Grag's tremendous voice.

Captain Future struggled forward. The vague figures of his friends and of the fleeing mutineers were dimly visible in the smoke ahead.

*Crack!* The crust of lava shook violently under their feet. Curt turned and through the smoke he glimpsed the *Vlucan's* black hull sinking swiftly into the hissing molten rock beneath the solid crust.

He stumbled on, choking, scorched, halfblinded. Presently the air seemed a little purer. And then it was no longer hot, jagged lava under his feet, but black soil. He had reached the edge of the lava-bed and was standing upon ground that sloped gently in the dusky light toward a distant wall of weird jungle.

Kim Ivan and the mutineers who had escaped were standing here, but they paid no attention in

this moment to Captain Future and his group. The convicts were staring strickenly out across the smoking lava-field.

Curt Newton turned and looked. Out there in the smoke, he saw the curved black hull of the *Vulcan* finally disappearing beneath the cracked crust. A pool of molten lava glowed redly where it had been.

"She's gone," muttered the big Martian pirate.

A heavy silence followed, unbroken for long minutes. The appalling enormity of the disaster was coming home to them all.

Captain Future felt an iciness in his heart that he had never before experienced, as he realized their situation.

They were marooned here on an uncharted island of space, more than four billion miles outside the Solar System. A mere unknown speck in the void, to which no other ship would ever come.

They were utterly without tools or weapons. And, worst of all, he and his friends and the girl he loved had as fellow castaways more than a hundred of the most dangerous criminals of the nine worlds, every one of whom cherished a bitter enmity toward him.

## **CHAPTER VI**

Mystery Planetoid

NIGHT was creeping across the little world, the dusky day deepening into complete darkness as the bright star of the distant Sun sank beneath the horizon. From the brooding black jungle in the distance, an uncanny babble of weird animal or bird calls came to the ears of the stricken castaways.

Their faces were drawn and haggard in the lurid red light from the volcanoes. From those towering black craters in the east, evil-glowing rivers of molten lava crept constantly downward like crawling snakes of fire. Showers of burning ashes shot up ever and again

from the seething craters, and there was a low, continuous growling and quivering of the ground beneath them.

Curt Newton felt a cold chill, despite the sulphurous warmth of the air. It was so terribly isolated from the universe of man, this drifting speck of land in the vast, shoreless sea of outer space. And they were so utterly unequipped to deal with whatever alien perils it might hold.

He felt Joan shiver inside the protecting cicle of his arm, and looked down anxiously at her.

"You're all right, Joan? That shock jar you when we crashed?"

"It didn't hurt me." Her face was very pale, her eyes dark and wide as she looked up at him. "I'm just scared, I guess. This weird, forbidding place -- that we'll never get away from."

"Never is a long time," Curt said quickly. "Don't worry about it now, Joan."

"Oh, Curt, you *know* we're marooned here permanently!" Her voice broke in a sob. "We've no ship, no weapons, no tools."

Captain Future could not answer that. His arm tightened almost fiercely around her, as though in protection against what was to come. The Futuremen and their allies, like the mass of Kim Ivan's mutineers, were still staring frozenly at the lava-beds in which the ship had perished.

"Did anyone manage to salvage anything from the ship?" Curt asked them.

George McClinton, the lanky young engineer, was the only one to answer. He pointed hesitantly down at a fiber case at his feet.

"I g-g-grabbed that up as I r-r-ran out of the ship," he stammered.

"What is it? A tool-kit?" Curt Newton demanded quickly.

McClinton's spectacled face looked abashed in the red light. "N-no, it's only a c-c-case of p-prunes. I j-just happened to see it in the s-s-supply-room door as I went past."

"Blast me down!" swore old Ezra Gurney furiously. "Of all the crazy, useless things to snatch up, that's the limit!"

A burst of laughter rose from the others at McClinton's shame-faced admission. It came from the mutineers as well as the Futuremen's party, and it was hysterically loud. It was a reaction on the part of all from their own terrifying thoughts, their realization of the appalling situation in which they stood.

It eased that frozen tension a little. Men relaxed enough from their stunned rigidity of mind and body to inspect their burns and bruises. And Kim Ivan strode out and turned to face the mutineers.

"Did any of you bring atom-guns out of the ship with you?" the big Martian pirate demanded.

Curt stiffened. He realized instantly what was in Kim Ivan's mind.

B UT none of the mutineers answered in the affirmative to the question. Grabo, the Jovian, growled the explanation of the lack of guns.

"You wouldn't let any of us wear atom-pistols in the ship," he snarled, "for fear we'd kill each other in brawls. And there wasn't any time to go digging them out of the arsenal-room when the ship crashed."

Kim Ivan's voice rose to a roar. "Don't take that sulky tone with me. I'm still boss here! There may not be an atom-gun on this world, but I can beat the ears off any pair of you with my bare fists!"

None of the mutineers took up the redoubtable Martian's challenge. But Grag's big metal figure moved clankingly forward.

"Do you think you can beat the ears off *me?*" rumbled the great robot.

Kim Ivan faced the robot with an unflinching scowl. "I know you're stronger than any four of us," he admitted belligerenly to Grag. "But there's more than a hundred of us, remember that. We can pull you down, big and tough as you are."

New tension sprang into being, as the mutineer's hatred and antagonism toward the Futuremen's party came again to the fore. Curt Newton realized that it would not take much to precipitate a struggle.

"It seems to me," his cool voice cut in, "that we've had enough for one day without trying to kill each other right now."

Kim Ivan roughly agreed. "We're groggy and tired, and some of us are hurt. And there's nothing to be gained by a scrap now. We'll get some rest, and see how things stand in the morning."

The tension diminished. With little further talk, the castaways dropped to the warm ground and stretched out exhaustedly.

Curt and his friends kept at a little distance from the mutineers. He noticed that Kim Ivan himself was not sleeping, but was keeping vigilant watch from where he sat.

Captain Future pillowed Joan's head on his knee.

"Try to get some sleep, Joan."

"M-m-maybe I could g-g-get some moss or leaves from that jungle, to m-m-make a bed for her," suggested George McClinton anxiously.

"No, it's bad business to go blundering into an alien interplanetary forest by night," Curt answered. "You never know what queer kind of creature is waiting for you."

Silence and darkness held the makeshift camp of survivors. No one felt like talking, and most were already exhaustedly sleeping. The only sounds were the medley of uncanny calls from the starlit jungle, and the low rumbling of the distant volcanoes. Now and then, the ground quivered slightly under them, with a low, muted growling.

Captain Future looked down at Joan's dark head, upon his knee. She was sleeping, her face white in the starlight. He perceived that Grag, who never slept, was standing watch nearby like an immobile metal statue.

John Rollinger was not sleeping. The crazed biophysicist was looking toward the distant jungle in an attitude of intent listening.

"Rollinger, what's the matter?" Curt asked in low tones.

The Earthman turned dazed eyes toward him. "I hear voices talking, inside my head. I'm afraid. *There's somebody on this world.*"

"There's no one here," Curt soothed. "Go to sleep. You haven't anything to be afraid of."

The Brain had been brooding silently nearby. Like Grag, Simon never slept. Now he glided to Captain Future's side, and whispered.

"Lad, I've been thinking about this planetoid," he said. "There's something puzzling about it. I mean, all this volcanic and seismologic activity. There shouldn't be volcanism on a world this small."

Curt was grimly amused. "Same old Simon! All our predicament means to you is just an intriguing scientific problem."

THE BRAIN'S metallic whisper was cold and annoyed. "If my reasoning is right, this particular scientific problem has an important bearing on our present predicament. Lad, you saw the meteorometer readings on this planetoid before we crashed on it. Can you remember its approximate mass, direction and speed of drift, and distance from the System?"

Captain Future was puzzled. "I think I can, thought I don't see why it's so important. The mass

of it is two-thousands-Earth, position is slightly over four billion miles from the edge of the System, and its drift is almost straight toward the System at ten miles a second velocity --"

Curt stopped suddenly, as his keen scientific mind abruptly realized the significance of the data he was quoting.

"Good Lord, Simon, I didn't see it before! This planetoid is approaching the Limit!"

"Yes, lad," rasped the Brain. "And that accounts for its volcanic activity."

Curt Newton was appalled. The ominous fact to which the Brain had called his attention made their predicament vastly more menacing.

In taut whispers, he and Simon Wright discussed it with feverish intensity as the night hours passed. Between these two master-scientists sped whispered formulae, equations and corrections, as they sought to solve mentally a problem which was of direst import.

The sky in the 'east' began to lighten at last. A growing pallor crept across the starry heavens. And with it came a sharper, more violent tremor of the ground beneath them. The shock and the grinding roar brought the sleeping castaways into alarmed wakefulness.

"Curt, what's happening?" Joan's small hand clutched his sleeve as she awakened.

"It's only a stronger seismic tremor," he reassured her. "But it's sun-rise now, Joan."

The Sun came up as a bright, tiny disk hardly larger than a very brilliant star. It cast a feeble daylight across the alien landscape of smoking volcanoes, black lava-beds, and distant green jungles.

Kim Ivan stood, looking grimly around the unfriendly vista. The other mutineers were getting to their feet, staring about in dismal silence.

"This is a devil of a place to be marooned in," muttered Grabo, the squat Jovian.

Kim Ivan shrugged. "It's better than Interplanetary Prison, anyway. There'll be fruits and meat-animals in that jungle. We can live here indefinitely."

Captain Future grimly contradicted the big pirate. "We can't live here indefinitely. This little world isn't going to *exist* indefinitely."

The big Martian frowned at him. "What do you mean?"

"I mean that in a little more than two months, this planetoid will be shattered and destroyed," retorted Curt.

"Bah, what are you trying to do, scare us?" scoffed Kim Ivan, incredulously.

Moremos, eyeing Curt Newton hatefully, hissed: "We ought to settle these cursed Futuremen right here and now. I say, let's rid ourselves of them for good. All except the girl."

Captain Future rarely lost his temper. But at the evil implication in the Venusian's last words, and at the sudden pallor that came into Joan Randall's face, Curt's bronzed face went a dull red.

His voice was low and steady, but his gray eyes were fiery as he promised the Venusian murderer:

"Moremos, when the time comes you are going to pay for that suggestion with your life."

The mutineers started threateningly forward, and Grag and Otho sprang instantly to Curt's side. But Kim Ivan intervened roughly.

"Cut your blasts!" he bellowed to his glaring followers. Then, with eyes narrowed suspiciously, he snapped to Curt: "What's this story of yours about this planetoid exploding in two months?"

APTAIN FUTURE slowly withdrew his flaming gaze from the Venusian. He explained in short, grim sentences.

"This planetoid is becoming internally unstable. That is because it is drifting toward our Solar System. The gravitational influence of our System is setting up seismic strains inside its mass. The quakes and volcanic activity here are due to those interior strains. They'll become worse as it draws nearer the System.

"Two months from now, this planetoid will be so near the System that its tidal strains will burst it asunder. Roche's Limit, which determines the critical distance at which a celestial body nearing a larger body will burst into fragments, operates in the case of this worldlet as though the whole System were one great body it was approaching."

Kim Ivan seemed baffled by Captain Future's scientific reference, and there was still strong skepticism on his battered red face.

He turned toward Boraboll, the Uranian. "What about that, Boraboll? You had a scientific education. Does Future's claim make sense?"

The fat Uranian's moonlike yellow face twitched with fear, and his voice was husky. "It's true that Roche's Limit will operate for the whole System as though for one body, in affecting an unstable planetoid like this. If this planetoid gets much

nearer than four billion miles, it will burst."

Old Tuhlus Thuun added a shrill word. "This planetoid isn't a lot more than that from the System now, according to what our instruments read before we crashed. And it's heading toward the System, all right."

"Then Future's right," gasped Boraboll, terrified. "My God, this little world is going to burst under us in two months!"

The panic of the fat Uranian convinced the other mutineers as nothing else would have done. They looked at each other in fear.

"Name o' the Sun!" exclaimed Ezra Gurney. "I didn't think last night that we *could* be in a worse jam, but this makes it plenty worse."

Even big Kim Ivan looked a little appalled. He muttered, "That's luck for you -- cast away on a planetoid that'll explode beneath us in a few weeks."

Curt Newton spoke incisively. "We've got just one chance. That is to get away from here before the catastrophe occurs."

"Get away?" echoed the big Martian blankly. "How the devil can we get away? We've got no ship now."

"Which means," retorted Captain Future, "that our only chance of life is to *build* a ship."

Kim Ivan stared. "Build a ship, when we don't have a single tool or piece of equipment? Build a spaceship, with our bare hands?"

"He's raving," growled Grabo. "A spaceship takes tons of metal plates and girders, glassite for instruments and ports, copper for cables and coils, refractory alloy for rocket-tubes, and about forty other elements for the cyclotrons, fuel and other parts. And we've just got our fingers!"

"We've got our fingers, and our *brains*." Curt corrected. "We've got the accumulated knowledge of centuries of experimenters, from the first caveman who made a stone hammer on up to yesterday."

His eyes flashed. "Why shouldn't we be able to start from scratch? The primitive peoples of the remote past did. All the raw elements we need should be present on this world. And if we have courage and skill enough to wrench them free and build with them, we can save ourselves."

His intensity seemed to make an impression upon the others. The mutineers listened as though clutching at a precarious straw of hope.

But old Tuhlus Thuun shook his head. He

muttered, "Nobody has ever built anything as complicated as a spaceship from scratch, in the whole history of the System."

"It's never been done," Curt admitted, "but that doesn't say it *can't* be done."

#### **CHAPTER VII**

The Tangle-Tree



SOMETHING of Curt Newton's driving purpose seemed to communicate itself to the doubting mutineers. They might hate this red-haired planeteer, but they were nevertheless impressed by him.

It was at such moments that Captain Future's genius for leadership asserted itself. The Brain was more deeply versed in

scientific lore than he. Grag was stronger than he was, and Otho swifter. But he was leader of the Futuremen because of his indomitable will and courage.

"If anybody could build a ship out of nothing, which I still doubt, you Futuremen maybe could," muttered Kim Ivan.

"It's worth trying!" Boraboll exclaimed nervously. "Anything's better than just sitting here waiting to die."

A general murmur *of* agreement came from the mutineers. Appalled as they were by the vista of approaching doom, they grasped at any straw.

"There's just one thing," Curt said incisively. "If we Futuremen are to try building a ship, we must have absolute freedom of action and must have authority to command the assistance of all of you."

Moremos flared at that. "Me take orders from you, Future? Not in a million years!"

"By God, you'll take orders from *me!*" roared Kim Ivan to the green-faced Venusian. "And I'm agreeing to Future's conditions. We can't reasonaby expect him to achieve this feat without the help of us all."

"It's all a lot of nonsense," shrilled old Tuhlus

Thuun skeptically. "Nobody can build a spaceship out o' nothing. It just can't be done."

"Suppose we do manage to build a ship and get away? What then?" Grabo demanded suspiciously.

Curt was ready for that. "Then you'll agree to set myself and my friends down on some inhabited world of the System."

He knew better than to demand more. If he could once assure Joan's safety, the pursuit of the mutineers could be taken up later.

"I agree to that, Future," said Kim Ivan promptly. "Now how do we start?"

For a moment, even Captain Future was daunted by that question. It made him realize to the full the appall magnitude of the thing they were about to attempt.

How *did* you start building a big, complicated space ship when you had literally nothing but your bare hands? He groaned mentally as he envisioned the complexity of thousands of massive and delicate parts which must be correctly fabricated and assembled to form a navigable vessel.

It wouldn't do to show doubt. He quickly looked around the hostile, alien vista of the mystery planetoid.

"Our first step necessarily must be to establish safe living-quarters for ourselves and investigate for food," he declared. "Then we'll make preliminary survey for sources of the raw materials we'll need."

Kim Ivan assented to that with a nod. "I'm hungry already, and getting more so by the minute."

George McClinton had opened his fiber case of prunes. The lanky, spectacled engineer stopped munching the dried fruit to inquire:

"Anybody w-w-want some prunes? They're very n-n-nourishing."

"Not until I'm hungrier than I am now, will I eat those danged things," growled Ezra Gurney. "When you was snatchin' up somethin', why didn't you snatch up a case of beef or somethin' like that?"

Captain Future and Kim Ivan, after a brief colloquy, had decided that they must find a suitable spot for a base nearer to the jungle. From the jungle must come whatever food they could glean. And the sulphurous air that clung over these lava-beds made proximity to them unpleasant.

THE whole party started toward the jungle. Its green wall was less than a half-mile away. They could see birds or winged creatures

flitting above the roof of the forest, and deduced the presence of a varied animal life from the calls and noises they had heard during the night.

Joan asked Curt an earnest question as they tramped forward. "Curt, is it really possible to build a ship? I know you could do it if anybody could, but *can* anybody do that?"

"Joan, I don't know," he admitted. "But our lives hang on the answer, and it's up to us to find out."

"If we had unlimited time and materials, it might be done," remarked the Brain pessimistically. "But to do it in two months, with no tools to begin with and criminals for workers --"

Grag's deep voice shouted from behind them, interrupting. "Hey, Chief, this crazy Rollinger won't come along."

The crazed scientist, whom Curt had deputed Grag to keep an eye on, was refusing to accompany the party toward the jungle. Rollinger's haggard face was distorted by overpowering fear, and his eyes were wild as he babbled objection.

"I won't go there!" he cried, peering terrifiedly toward the distant jungle. "They are there -- the mighty ones. I heard Them speaking last night, in my mind. They know we are here, and They don't like it."

"Who's he talking about?" Grag asked puzzledly, as Curt and Otho and Joan came back.

"He's just raving again." Otho commented.

Rollinger's voice rose to a shrill pitch. "They warned last night that we must not stay here, that They will kill us if we do!"

"Pick him up and bring him along, Grag," ordered Curt. "We can't delay now to soothe him."

Rollinger struggled frantically, but was like a child in the grip of the great robot.

"Do you suppose there really could be intelligent, malign life on this world?" Joan asked Curt.

"I doubt it. We've seen no signs of intelligent life here so far," Captain Future replied. "Of course, we're likely to find some very queer plant and animal life here. For this planetoid doesn't belong to our own System. It's a wanderer of the interstellar void, a tiny planet that must long ago have been torn away somehow from its parent sun."

He continued thoughtfully. "Perhaps it has drifted through space for ages. Undoubtedly it has a radioactive core that has furnished sufficient warmth to support life on its surface. Evolution might take some weird paths upon a little, isolated

worldlet like this."

The green wall of the jungle loomed before them in the feeble daylight.

The castaways halted and stood silently looking at the alien, grotesque forest.

It was composed chiefly of towering tree-ferns, whose colossal fronds were interlaced by lianas and vines. Thorny underbrush decked with brilliant scarlet and yellow flowers, and big pale-green mosses choked much of the space between the trunks of the mighty ferns.

"There's some kind of a natural clearing in there," Kim Ivan reported to Curt. "Want to go in and look it over?"

Captain Future nodded, and he and the big Martian pushed their way beneath the shadow of the towering ferns. The air was hot and steamy inside the jungle, and many transparent-winged insects flashed about them.

"Makes you think of the Jovian forests, and yet everything is different," Kim Ivan said soberly. "Ah, here we are."

They emerged into the natural clearing that lay a little within the jungle. It was actually a low knoll, a few yards high and several hundred yards in diameter.

OTHING grew within this clearing except a few dozen gigantic cacti. They were dark, barrel-shaped growths twelve feet high, spineless and with fluted sides.

"Lucky, finding a natural clearing like this," Kim Ivan remarked. "It's just what we're looking for, isn't it?"

Curt nodded. "We can build a stockade of ferntrunks around it for protection against possible beasts of prey. And it looks as though we could dig a spring at that moist patch of ground."

He turned to go back and bring the others, but Kim Ivan delayed him with a hand on his arm. The big Martian pirate had an oddly earnest expression on his massive, battered red face.

"Future, wait a minute. I got something to tell you."

Curt looked at him keenly. "What is it?"

Kim Ivan scratched his ear. "Well, it's like this. I know you got it in for me because I led the mutiny. Not that I'm excusing that -- I still say anything's better than Interplanetary Prison. Though if the boys had obeyed my orders, there wouldn't have been any killing."



Curt Newton wondered what this rambling introduction was leading toward. "So what?"

"Well, I gave you my word we'd work with you all the way, trying to build this ship, and I'm a chap who keeps his word," Kim Ivan went on. "But I can't always control the boys. So -- watch out for Moremos!"

Captain Future stiffened. "Is that Venusian already planing to make trouble?"

"He hates you like poison," Kim Ivan said. "He was saying a little bit ago that he'd figured out how to get you and your pals, when the time came. And I'm afraid some of the boys would side with him. I'd keep an eye open for death-traps, if I was you."

Curt said thoughtfully, "I doubt if he'd try anything right away, for building this space ship is his only hope's well as ours. But I'll watch out for his clever little traps. And thanks for the warning, Kim."

"Don't thank me," disclaimed the big pirate bluffly. "I'm not worried about you for any reason except that you're our only chance of getting off this cursed little world. I know that we can't build a space ship out of nothing, but maybe you can."

They went back and brought the rest of the castaways to the clearing which they had selected for an encampment. Then Captain Future issued orders which were backed up by Kim Ivan's authority over the mutineers.

"The first essential is to build a stockade for protection and to find food," he declared. "Then we can build huts for living-quarters, and start work assembling materials and tools for the ship."

He formed them into work and foraging parties. The former were to bring saplings and vines with which to build a rough wall around the clearing. The foraging groups were to look for fruits, nuts or other possible edibles, and bring them back to the Brain for inspection.

"Ezra, you stay here with Joan," Curt told the old marshal. "How are you, Rih Quili?"

"The injured young Mercurian lieutenant gingerly touched his bandaged head. "It still aches a little, but I'm fit for work now."

"Better take it easy," Curt advised. " And, Ezra, keep an eye on Rollinger all the time."

JOHN ROLLINGER had exhibited an almost pitiful terror of the jungle, and had had to be dragged by Grag to this clearing. The crazed Earthman now crouched, looking about the place with wild, scared eyes.

Curt, Grag, Otho and George McClinton formed one of the work parties. They plunged into the shadowy green jungle of giant tree-ferns and choking underbrush, in search of suitable material for the stockade.

"If we had just a b-b-bush-knife, it would be a llot easier," mumbled the lanky McClinton, who was munching dried prunes as he marched.

"Why not wish for an atomic blaster, while you're at it?" suggested Otho. "Besides, this is where Grag comes in handy. He can tear up trees by the roots. You never saw anybody so strong."

"Meaning that you're trying to flatter me into doing all the work," growled Grag. "Well, it won't go, my slippery rubberoid friend."

They were already deep in the green jungle. Big tree-ferns reared their glossy trunks for fifty to sixty feet, bearing masses of flat fronds and spore-pods. Yet these were not true pteridophytes at all, but the result of a wholly different line of plant evolution, which appeared not to rely on photosynthesis as a source of life.

There were other and even stranger trees. Huge ones like banyans reached out many leafless limbs from a massive central trunk. Others looked like big horse-tails. Club mosses flourished in the spaces between the crowding trunks, and creeping vines were everywhere. Many of the vines and the

thorny smaller shrubs bore unfamiliar fruits.

Insect life was abundant. But most of the winged arthropods possessed perfectly transparent wings and were hard to see. There were no true feathered birds, but white, bat-winged creatures were numerous and noisy in the tree-tops. And Curt Newton found tracks and other traces of animals that were apparently several species of small rodents.

"There doesn't seem to be any sign of large animals," Captain Future declared. "Though all the life here is so alien it's hard to tell."

George McClinton's spectacled face was discouraged as he looked about the green gloom of the jungle.

"It's certainly w-w-wild enough." Grag was already at work, uprooting saplings and ripping off big branches from the tree-ferns to be stripped into stockade-poles. The other three pitched in, but the huge robot had the advantage here. His steel arms could break tough limbs that the others could not tackle.

Leaving a trail of trimmed poles behind him, Grag advanced toward one of the big banyan-like trees. He seized one of its leafless, drooping branches. Instantly, the branch retaliated by seizing *him*. It and others of the scores of branches coiled around him like tough plant-tentacles and dragged him toward the central trunk.

"Hey, Chief, this tree's fighting back!" yelled Grag alarmedly.

"It's some kind of carnivorous form of plant-life that can devour animals!" Captain Future cried. "Tear those branches away, Grag."

"I can't!" shouted the robot. "The cursed things are strong as steel! It's a regular tangle-tree."

## CHAPTER VIII

The Cubics



AT least twenty of the tentaclelike limbs had now coiled around Grag. They were lifting his massive figure toward the central trunk. This was a cylindrical mass of fiber twelve feet in diameter. The tangle of branches grew from its sides, and its top was a huge, hollow calyx.

Curt and the other two sprang forward to aid the robot. But they were themselves gripped by other branches. As they sought to free themselves, Grag's struggling form was being hoisted up into the air and held above the hollow calyx of the tangle-tree.

From inside the huge calyx spurted up streams of sticky green liquid that smeared the helpless robot from head to foot. Grag yelled with fury at this, but the sticky juices continued to spurt over him.

"The thing is covering Grag with its digestive juices before it *eats* him!" exclaimed Curt. "Try to reach him."

But they couldn't reach him. Each of them had a coiling branch around him. Only the fact that most of the tangle-tree's branches were occupied with Grag made it possible for them to avoid being drawn in also.

Grag, bellowing in rage and completely covered by sticky plant-juice, was now being drawn remorselessly down into the hollow calyx of the trunk. He disappeared inside it, though his muffled roaring still sounded.

"Good Lord, he's g-g-gone!" stammered McClinton. "The thing has d-d-devoured him."

But after a few moments, during which they fought to free themselves, Grag was suddenly drawn up again from the calyx of the tree.

The robot was held as before, while the sticky digestive juices of the carnivorous tree spurted again over his raging figure.

Otho uttered a mirthful shout as he tore himself free from the branch holding him. "The tree couldn't digest Grag's iron carcass that time, so it's going to try again."

In fact, Grag was now being drawn back down into the calyx of the massive trunk. Again came his muffled bellowing. Curt and McClinton had by now managed to release themselves also.

But there was no need for the three to spring forward to Grag's aid. For now the robot was being hoisted up again out of the calyx. And with an almost human gesture of disappointment and disgust, the tangle-tree's gripping branches hurled the robot away. He flew through the air and lit upon the soft ground some distance away, with a resounding thud.

Otho collapsed in a fit of laughter when they reached Grag's side. "The thing couldn't digest Grag, nohow! I'll never forget how he looked squirming up there with the tangle-tree hopefully

squirting sap over him!"

"Laugh, you misbegotten son of a test-tube!" roared Grag furiously.

The big robot was a ludicrous figure, smeared from head to foot with thick green plant-juice.

Curt, too, was shaking with mirth. "It's lucky the tree did happen to grab you instead of one of us," he consoled the angry robot. "Any one of us would have found it no joke."

Grag ruefully tried to clean himself off. "Of an the screwy forms of life that I ever --"

Captain Future suddenly interrupted, holding up his hand sharply. "Listen! I heard a cry!"

A distant yell came to them through the green gloom of the weird forest.

"One of the other parties has run into trouble!" Curt exclaimed. "Come on!"

They plunged through the jungle in the direction from which the cry had come. Now they could hear a chorus of alarmed voices.

It was one of the work-parties headed by Grabo, the Jovian, that was doing the shouting. The squat Jovian pirate turned as Curt and his companions appeared.

"Look at those things!" he exclaimed. "We don't know what to make of 'em."

URT NEWTON stared. He too, in all his extensive experience with the strange life of far worlds, had seen no creatures such as these.

There were six of the creatures, and they were busily working in a little open glade of the forest. Each of the things looked like a giant centipede, with an oddly geometrical body eight feet long and many square legs set along it. They were carrying slabs of stone along.

A closer look revealed the amazing details of their appearance. Each of these big creatures appeared to be composed of scores of small, living fleshy pink cubes. Each cube was four inches square, and had two twinkling, bright little eyes and a small mouth-opening.

"Why, I never saw anything like these before," Captain Future muttered, stepping forward.

"You haven't seen the half of it yet!" exclaimed Grabo. "They can split themselves up when we start toward 'em. Look at 'em! They're doing it again!"

The weird, geometrical creatures had until now ignored Curt Newton and the others, diligently resuming their work of carrying away the stone slabs.

But now, as Captain Future approached, the centipede creatures suddenly dropped the slabs and then underwent an incredible transformation.

Their big, geometrical bodies disintegrated. They broke up into the scores of living cubes of which they were composed. Each cube was revealed to be a separate, living creature. Each had eight tiny claws or legs, one at each corner of its cubical body, as well as its own eyes and mouth and ears.

These hundreds of cube-creatures scurried swiftly together, and joined into a single big figure. The living cubes joined tightly, each to the next, by instantly hooking their tiny claws together.

Silently and quickly as though by magic, the cubical creatures had combined to form a towering, semi-human figure ten feet high. It advanced on square, stocky legs with its massive arms raised menacingly toward the Futuremen.

"Get back!" Curt Newton cried warning. "The creatures think we're hostile."

They hastily recoiled. Grabo and the mutineers already had fallen back, and George McClinton was gaping incredously.

The geometrical monster halted its advance. As though satisfied they had nothing more to fear, the cube-creatures that composed it broke up into separate units. Quickly, they recombined into the six centipede-figures. Then, carrying the stone slabs, they calmly disappeared into the jungle.

"Did I dream that or have I been drinking radium highballs?" gasped Otho. "What the devil *are* those freakish little cubics?"

"That's a good name for them -- the Cubics," Captain Future commented. "As to their nature, it seems pretty obvious that they're small animals who have developed to a great degree the faculty of living in a cooperative community. Just like a hive of bees or a colony of beavers, only more so."

"But how can the little devils go through those quick formations of theirs without any hesitation or discussion?" marvelled Grabo.

Curt thought he could guess. "They must be constantly in telepathic rapport with each other. Something like the "hive mind" of the bees, even further developed. Maybe the individual intelligence of each Cubic pools into a group-intelligence, just as their bodies combine. They're at least semi-intelligent, judging from the way they were working."

THE discovery of the Cubics made all of them more cautious in the hours of work that followed. It was increasingly evident that their former surmise was correct, and that evolution in plant and animal life had indeed followed strange paths upon this age-long isolated planetoid.

What other uncanny forms of life might haunt the dense fern-jungles, they wondered? And what if the Cubics themselves should prove definitely hostile? They could be, Curt Newton realized, formidable enemies. And the tangle-trees, which seemed numerous, were a constant danger.

By sunset of that day, they bad gathered in the clearing a mass of strong poles sufficient to build a stockade. The foraging parties had also brought back a mass of fruits, berries and nuts. These were of every shape and color, and most of them were utterly unfamiliar in appearance.

The Brain, whose knowledge of planetary botany was encyclopedic, had inspected the fruits and had ruled out a few which he considered likely to be poisonous. The castaways ate hungrily of the others, finding a big, spherical, meaty nut the most nourishing.

"We'll need meat, too," Captain Future declared.
"There are small animals in the jungle. Any of you know anything about trapping?"

Grabo, the squat green Jovian, nodded. "I used to trap 'diggers' in the jungle north of Jovopolis, when I was a kid on Jupiter. All I needed was a cord to make into a snare for their runways."

"Take a couple of men and get some snares set tomorrow," Curt suggested. "You can make the cords from strips of clothing."

George McClinton distastefully put down a very ripe, squashy yellow fruit of egg shape which he had been eating.

"Too m-m-messy," he said. "And it doesn't have the f-f-flavor of a p-p-prune."

The tiny disk of the Sun was sinking again toward the horizon. The shadows of the grotesque, towering cacti in the center of the clearing grew longer.

Night was falling. The stars were already pricking forth in the dusking sky, and the heavens eastward showed a quivering red glare from the volcanoes and lava-beds there.

"I think," Curt decided. "that we'd better keep a fire going nights until we have our stockade up. We've already learned that there are formidable forms of life on this worldlet."

A fire of dry fern-logs soon blazed up near the center of the clearing. Curt had kindled it by striking sparks from his steelite belt-buckle against a hard stone. The castaways gathered around it as though taking comfort from it as the night deepened.

Captain Future musingly looked around the circle of many firelit faces. What an oddly assorted company they were, he thought. Joan's lovely face, and McClinton's spectacled, serious countenance. Otho lolling indolently with slant eyes watching the blaze, and young Rih Quili's bandaged head. Kim Ivan's massive, jovial red face, and Grabo and old Tuhlus Thuun and fat Boraboll, and Moremos' sulking features and secretive eyes. And the Brain poised outside the circle a little, while big Grag stood in the shadows keeping watch upon the raving John Rollinger.

"We've got a fire and some food," Kim Ivan was saying, "and tomorrow we'll put up a stockade and some huts. Then what?"

"Yes, what then?" Moremos asked Captain Future with an open sneer. "Just how do we start building a space ship with our bare hands?"

Curt answered tersely. "Our first need will be tools -- durable metal tools. Let's see how much metal we have among us."

The result of the inventory of their possessions was discouraging. They had a few metal trinkets and buckles. One of McClinton's engineers had a small chromaloy wrench.

F course, they all had their gravity-belts. Every interplanetary traveler constantly wore his belt, whose compact gravitation-equalizer made his weight the same on any world. But they couldn't sacrifice their belts, without suffering dangerous effects from the low gravitation of the little planetoid.

"I also got a big package of chewin' *rial*, if that's any good," shrilled old Tuhlus Thuun.

" And I have this c-c-case of p-prunes," stuttered McClinton.

"There isn't enough metal here to do us any good," Curt Newton declared. "We'll have to make our own steelite tools, from scratch."

"Say, what about Grag?" Otho asked. "There's a ton of metal in his carcass. If we melted him down --"

"I heard that!" bellowed Grag from out in the shadows where he was watching Rollinger.

Kim Ivan asked gloomily, "How're we going to get steelite for tools?"

Captain Future shrugged. "We'll have to locate iron deposits, and smelt the metal out, and make our own alloys. It won't be easy, but it's the first essential step toward building a ship."

"And then what will be the next?" Boraboll squeaked skeptically.

"Then we'll try building an atomic smelter for large-scale operations," Curt answered. "Some of us can be reconnoitering this worldlet in the meantime for the raw materials we're going to need. Chromium, beryllium, manganese, copper, calcium, and about forty or fifty others."

They all seemed dashed by the magnitude of the task proposed. To many of them, the difficulties looked insuperable.

"How do we know we'll find any of those elements here?" Ezra objected. "Those are elements of our own Solar System, but this planetoid ain't a part of our System. It's from way off in the Galaxy, you said."

The Brain woke from his brooding reverie to answer that. "The matter of the whole Galaxy is largely homogenous in nature, for all its stars had a common cosmic origin. The remotest suns show the spectra of much the same elements as our own Sun. We should find most of the needed elements here, though on this small body a few of them may not be present."

"Is this planetoid really a wanderer from some distant star-system?" Joan asked Curt with eager interest.

He nodded. "It must be. Probably it was torn away from its parent-star by some gravitational disturbance, and has been drifting through the void ever since."

"A little star, falling alone through space for ages," Joan murmured. "Let us call it by that name -- Astarfall!"

The fire died down, and they split into separate groups to prepare for sleep. George McClinton had prepared a mattress of soft fern-fronds for Joan, which the lanky engineer shyly showed her.

"It's not m-m-much, but it's b-better than the ground," he stuttered, and retreated awkwardly from her thanks.

She looked at Captain Future with pretended indignation. "Why didn't you think of that?"

Curt grinned. "I don 't believe in pampering my women."

"Your women!" she echoed scornfully. "There's no other girl beside myself who'd waste time on a crazy, foot-loose planeteer like you."

He chuckled as he turned away. The others were already stretched out, asleep. The fire had died to glowing embers, but the red glare of the smoking volcanoes eastward cast weird, flickering shadows in the camp.

Curt went to where Grag was standing guard beside John Rollinger. He bad bound the crazed scientist's feet to prevent him from fleeing. For Rollinger was still muttering and babbling in unabated terror.

"I hear," Rollinger was muttering, his mad, brilliant eyes staring into nothingness. "I hear, but I cannot obey --"

Grag asked uneasily, "What do you suppose he's raving about? He gets on my nerves."

"He's just delirious," Curt said. "It's a pity -- a fine mind like that, irretrievably wrecked."

Captain Future stretched out tiredly on the ground nearby. The night air was growing chill, and he wrapped his zipper-jacket more tightly around him.

As he dropped off to sleep, the low, babbling mutter of the crazed Earthman scientist was the last sound in his ears.

#### CHAPTER IX

The Work Begins

CURT awakened suddenly. It was still dark, and everything was drenched with a cold dew. But by the shifting of the starry sky, he perceived that he had slept for several hours.

He soon discovered what had awakened him. Rollinger's ravings had become louder and shriller, were ascending to a

frenzied pitch. Curt quickly rose and went over to the spot where Grag was standing watch over the madman.

"No, do not make me!" Rollinger was gasping.

"I can't do it -- I can't!"

The man's face was frantic in the starlight, and his body was writhing and shuddering.

"Chief, he's been getting worse by the minute!" Grag reported. "He keeps talking to somebody he calls the Dwellers."

Curt knelt by the bound madman, and spoke earnestly in an effort to reach that dimmed, distorted mind.

"Rollinger, what are you afraid of?"

The man's wild eyes looked up at him, as though dimly recognizing him.

"The Dwellers!" gasped the madman. "The hidden lords of this world, whose powers are strange and mighty! They have been speaking to me in my mind, have been commanding me to do that which I cannot do."

Captain Future frowned. There was something uncanny about the raw, shuddering terror of the crazed scientist.

"Chief, do you suppose there could be malign creatures on this world that he can sense but we can't?" Grag asked in a low voice. "There's scientific proof that an unhinged mind is more sensitive to outside telepathic influences than a sound mind," muttered Grag.

Curt felt definitely uneasy. He straightened and looked around the starlit, sleeping camp.

"There don't seem to be any intruders here. You didn't see anything strange, did you?"

Grag shook his head. "No, nothing at all. And everyone else has been sleeping, except for that Neptunian mutineer, Luuq, I saw moving around a little bit ago."

"Maybe Luuq saw something," Captain Future murmured. "I'll see if he did."

He went through the camp, searching the sleepers for Luuq. To his surprise, he could not find the Neptunian anywhere in the camp. The ex-bandit had disappeared.

Kim Ivan awoke with catlike alertness as Curt renewed his search for the missing man. The big Martian. instantly got to his feet.

"What's the matter? Something wrong?" he demanded.

"I'm afraid so," answered Captain Future. "Your friend Luuq is missing. Grag saw him moving about, but now he's gone."

Others were awakening, aroused by the Martian's loud voice. They looked at each other uneasily.

Ivan, frowning.

They soon discovered that one other of the mutineers had also disappeared, a little Mercurian ex-thief.

"Maybe the two of them just went out into the jungle and will come back," suggested Boraboll, the fat Uranian, hopefully.

"They wouldn't go prowling around in that jungle by night," Kim Ivan said emphatically. "If they left the camp, it was because they were dragged out of it."

"Future seems to know more about it than anyone else," said Moremos insinuatingly.

gathered mutineers understood Venusian's veiled accusation. They turned hard eyes upon Curt Newton.

"I know no more than you do,". Curt said quietly.

"Future couldn't have made away with Luuq and the other," Kim Ivan said loudly. "Not without some sound that would've roused us all."

"I don't know," muttered old Tuhlus Thuun.

OHN ROLLINGER interrupted. The crazed J scientist, still lying bound under Grag's guard nearby, was sobbing hysterically.

"We must leave this world!" he screamed. "Unless we leave, the Dwellers will kill us all!"

"What's he talking about -- the Dwellers?" Kim Ivan asked puzzledly.

"The hidden ones -- the mighty lords -- they watch us now and they wait!" raved Rollinger.

Grabo, the Jovian, stirred uneasily, his dark face nervous in expression. "I don't like this place. It's as spooky as the Place of the Dead, on Jupiter."

"Do you s'pose there could be critters of some kind on this planetoid cunning enough to steal into the camp and carry away them two men?" asked Ezra Gurney.

Surely we'd have seen any creatures as intelligent as that," objected Joan, eyes bright with concentration.

"I don't know," Curt muttered. "Everyhing about this planetoid is alien, different from the life of our own System. It comes from remote regions of the galaxy, and during its ages of isolation, its evolution has taken different paths."

There was an uneasy silence. The night suddenly seemed pregnant with mysterious menace. The low calls of small animals and the squeak of birds from

"See if anyone else is missing," ordered Kim the dark surrounding jungle fell upon tensely listening ears.

> Had some formidable beast of prey actually entered the camp and slain the Neptunian and Mercurian, it would not have have been so terrifying as this baffling disappearance of the two men. It was the unearthly mystery of it that chilled them. Their minds conjured pictures of malign and alien creatures lurking out there in the dark, watching and waiting.

> "The most intelligent-lookin' creatures we've seen on this planetoid are the Cubics," drawled Ezra. "Do you s'pose they're the Dwellers?"

> "They didn't look of high intelligence," Curt said doubtfully. "Besides, how could they enter the camp and make off silently with two men?"

> "Luuq and the Mercurian must have went sleepwalking into the jungle and got grabbed by some beast," Kim Ivan growled.

> "Just the same, I propose we post our own guards at night to prevent any more 'sleepwalking'," said Moremos, glancing toward Curt Newton.

> For the remaining few hours of that night they sat around the fire, talking in low voices. All realized more completely than ever before the alien nature of this wandering worldlet from outer space. What dark riddle was it hiding?

> The coming of day was a relief to strained nerves. Almost cheerfully, they breakfasted on fruit and berries. Then Captain Future got to his feet and incisively addressed them.

> "We've got to organize our operations, if we're to get anywhere with the task ahead of us," he declared.

> He was a confidence-inspiring figure as he stood, his tall, rangy figure and red head silhouetted against the pale sunrise, his keen gray eyes sweeping their faces. But he was not nearly so confident as he looked. He was a little overwhelmed by the audacity of what they were about to attempt.

> "First, we've got to complete the stockade around this knoll and build some huts," he stated. "Others of us have to form regular foraging parties to supply fruit, roots, and small meat-animals if possible."

> IM IVAN spoke up. "I'll superintend the building of the stockade and huts. And Grabo can take care of the food-supply. He says he knows how to set traps for the animals whose traces

we saw in the jungle."

Curt nodded. "I'll leave all that to you, then," he told Kim Ivan. "The Futuremen and I will begin an exploratory survey for the metallic ores and other materials we'll require. That's our first step toward a ship."

The big clear knoll soon was buzzing with activity. Kim Ivan's stentorian voice bellowed orders, supervising a large party of the mutineers in hauling fern-poles from the jungle and setting them up in a stockade and in framework for huts.

Grabo had chosen a dozen of the men and had gone into the fern-forest to set the animal-snares he had improvised from strips of clothing. Other of the men were already bringing in fruits and roots.

Curt asked Ezra Gurney, "Will you stay here and keep an eye on Moremos? I don't think he'll try to make any real trouble until we have built a ship. But I don't want to take any chances."

"I understand," nodded the veteran marshal. "I'll watch that varmint."

Captain Future and Grag and Otho and the Brain set forth eastward upon their quest for ores, accompanied by George McClinton and Joan. The girl had insisted upon going.

Curt headed toward the nearby region of volcanic activity. All around that region were chasms and crevasses that had been split by the recent seismic disturbances.

"Our best chance of finding surface deposits of iron, beryllium and the other ores we need, is in those chasms," he pointed out. "We have to find the stuff in easily worked surface deposits at first, for as yet we have no tools for mining."

"When I think of all the work ahead of us, I wish I was back home on the Moon," Otho said gloomily.

They approached the black fields of solidified lava. Beyond that crusted expanse lay the smoking valleys through which came the sluggish red rivers of molten rock that flowed down from the towering volcanoes. The sulphurous fumes half-veiled the forbidding vista.

Curt Newton turned to the Brain. "Simon, will you reconnoiter as many of the chasms and gorges as you can? See what deposits of ores you can spot. We'll be working northward, from here."

The Brain glided off upon his mission, looking like a glittering flying cube as he shot away through the pale sunlight upon his traction-beams. He was quickly out of sight.

George McClinton, to whom Simon was not as familiar as to the others, looked after the Brain with marveling wonder.

"If the Brain can f-f-fly like that so easily, w-w-why couldn't he f-f-fly back to the System for help?" he asked.

Curt shook his head. "Simon derives the power for his beams from a tiny atomic generator inside his case. It holds a charge of fuel sufficient for many hours' activity, but not enough for a long flight in space."

"That reminds me," Grag said dismayedly, "I'll be needing copper and other elements for fuel for my own generators pretty soon. Otherwise, my power will run down."

Otho told the robot, "That's all right -- when your power runs out, we can make some swell tools out of you. Yes, sir, you're going to come in mighty handy, Grag."

"Chief, will you make Otho quit threatening me!" demanded Grag angrily. "He's getting on my nerves by his talk of using me for metal."

"He can use up some of his wind climbing down into this crevice and prospecting for iron, " Captain Future said acidly as they started forward.

They had been moving northward and had come to a deep crevasse driven in the rock of the planetoid by quakes. It was quite narrow and its jagged walls were almost vertical.

THO'S rubbery figure went down the walls as though he were a fly. Presently his voice echoed hollowly up to them.

"Yes, there's nickel-iron down here. Looks like the core of Astarfall."

"That's what I was hoping for ," Curt declared. "I figured from its mass that Astarfall would have a nickel-iron core like most planetoids and planets, and that its rock crust could not be a thick one."

They went back to the jungle and secured a quantity of tough vines from which they fashioned a strong, flexible ladder. Curt and Grag went down this into the gloomy depths of the crevasse.

Glittering outcrops of nickel-iron ores were plentiful in the bottom of the chasm. But digging out the ore without tools was another matter. Here Grag's great strength came into play. With a few chunks of hard rock for hammers, the big robot loosened small masses of ore.

Joan and McClinton had woven wicker baskets which they let down by a vine rope. Thus the

masses of ore were hauled to the surface. It was slow, toilsome work. The day was waning when they finally had enough of the ore for Captain Future's immediate purposes.

The Brain had returned and made his report. "I investigated a good many of the chasms. And I found indications of copper, manganese, chromium and several other of the ores we need."

He listed them all, and Curt Newton listened intently. He asked then, "What about the beryllium, calcium and lead? They're vital."

"I've not found any of them yet," admitted the Brain. "There are signs of possible beryllium: and lead deposits in that huge gorge between the double range of volcanoes. But I didn't risk going far down into it, for, that abyss is highly dangerous. The terrific air-currents, heat and fumes from the lava at its bottom make it a veritable canyon of chaos."

"The Canyon of Chaos sounds like a good name for that place, at that," remarked Otho.

"It's hardly worth while naming places on a world that's going to blow up two months from now," grumbled Grag.

The Sun was sinking when they returned to the camp. The transformation there proved that Kim Ivan and his men had been at work.

The stockade around the knoll was roughly complete. A spring had been dug. The framework of a dozen huts was up, and several had already been thatched with flat fronds. The huge, barrel-shaped cacti in the clearing had been left untouched, since to attempt to cut down those giant growths would have entailed immense labor for no particular reason.

"Not bad," Kim Ivan admitted when Curt complimented him on the day's work. "It won't take us long to finish up the huts now."

RABO and his trappers soon returned from the jungle. "We eat tonight, and not just fruit," proclaimed the Jovian complacently.

They had snared four plump, rodent-like animals as big as small pigs. And they had brought several new varieties of edible fruits.

"But that jungle is a devilish place." swore the Jovian. "Beside those cursed tangle-trees, there's smaller plants that eat insects and birds in the same way. I never saw such evil plant-life as this world has."

Nevertheless, the animals made a palatable sort or stew. Although he didn't eat. the Brain passed upon the flesh as being harmless and containing nutriment. He waved his eye-stalks questioningly when Captain Future thoughtfully fished a couple of bones out of the stew and offered them for his inspection.

"What is it, lad?" he asked.

"Note the glazed appearance of these bones," said Curt. "Just an interesting side problem, but do you make the same thing I do of the skeletal structure of mammals here?"

"Siliciferous compounds!" ex-claimed the Brain at once. "The bony structure of creatures on Astarfall are built up from silicon. Altogether different from Earthly specimens. It's unmistakable."

"Exactly," said Captain Future, nodding. He turned to speak to one of the cooks.

"Save the skins of those animals for me," he requested. "I'll need them tomorrow.

"To build the space ship?" sneered Moremos, who had returned with the Jovian.

"Yes, to build the ship," Curt nodded, with a calm smile.

He and Grabo scraped and cleaned the hides that night, and he used strong fiber threads and a thorn needle to sew two of them together into a rude but effective bellows. This he mounted in a rough wooden frame.

It was late when he finished this work by the firelight. Joan had retired to the smallest hut, which had been assigned for her use. Most of the mutineers and others were also already asleep.

Grag had taken up his tireless and sleepless watch. And old Tuhlus Thuun and Boraboll were remaining awake and watchful tonight, too.

"I'm going to turn in," Curt yawned, straightening. "How's Rollinger?"

"Muttering a little, but not as noisy as he was last night," Grag replied. "I think he's quieting down."

The crazed scientist was now confined in one of the other small huts. He had been subdued and silent all during the day.

## CHAPTER X

**Dread Warning** 

CURT slept heavily. When he awakened and

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went out into the sunrise, he found Kim Ivan swearing.

"There *is* something cursed spooky about this place," declared the big Martian. "I had queer dreams all night -- as though somebody was talking inside my mind."

Boraboll spoke nervously. "Nothing happened all night. And

nothing came near the camp that we could see or hear."

That day, while most of the mutineers resumed the work of building the huts and replenishing the food-supply, Captain Future and his party began the next step of their task.

"We've got iron ore, and now we've got to smelt it out for steel," Curt stated. "Since we don't have any atomic smelter, we'll have to go back to ancient ways."

He supervised the bringing of massive stones, and the building of them into a small furnace. They had no coal with which to fire this, but the Brain had located a deposit of combustible peat in one of the swampy sections of the jungle.

Curt Newton attached his rude bellows to the stone furnace. He used its draft to fan the peat fire he kindled inside. Then he arranged a mass of the nickel-iron ore inside the furnace. When the ore became molten, he forced air through it by hard pumping on the bellows.

"This arrangement goes back to primitive times," he commented. "It's crude, but we'll have to use crude ways until we have some tools."

When the forced air had reduced the ore to a mass of molten iron, Captain Future added a small quantity of carbon.

"Hey, that isn't the way you make steelite," objected Otho.

"We can't make a modern steelite alloy without beryllium and other elements which we haven't got yet," Curt retorted. "We'll have to be satisfied at first with this old-fashioned steel."

The product of his labors for the day were two chunks of solid steel. One, which was much larger than the other, was roughly shaped to serve as an anvil. The other Curt attached to a limber wooden handle, converting it into a crude but heavy

forging-hammer.

Joan looked a little disappointedly at these two unlovely products of their day's toil.

"It's wonderful that you've been able to make them, but they seem a long way off from a big, complex space ship," she murmured.

"You have to crawl before you can walk. Remember that we're starting here completely empty-handed. That means that we're forced to retrace a lot of the steps by which thousands of generations of men ascended from the discovery of fire to the building of space ships."

All during the next two days, he kept their improvised furnace and forge at work. McClinton was his chief helper, while Otho untiringly pumped the bellows and Grag utilized his huge strength in bringing fresh masses of ore from the surface working they had discovered.

Kim Ivan had detailed a party of the mutineers to dig that ore and help transport it to the camp. The Brain was away from dawn till dark each day, searching the face of Astarfall for the other needed elements. He had already managed to locate deposits of several of them.

The first thing which Captain Future beat out upon their forge was the steel framework for a larger and more efficient smelter. When that was going, a larger amount of better quality steel began to result.

"We're still only in the first stages of tooling up," Curt declared. "We can't really make any start on ship-building until we have atomic power and an atomic smelter for turning out high-grade light alloys."

"Why don't you start on that right away, then?" Joan wanted to know. "Be reasonable, woman," pleaded Captain Future. " An atomic power set-up requires certain chemicals which we can't dig out until we have strong steel tools for mining."

THEY were concentrating now upon making tough steel picks, bars and other tools for mining operations. Each tool had to be beaten into shape upon their forge. The camp rang with the clangorous hammering.

By now, the huts had been completed and a routine system of gathering and preparing food set up. These last few nights had brought no recurrence of the mysterious disappearances, although several others beside Kim Ivan had complained of

uncannily oppressive dreams. The stockade gate was guarded each night by a couple of the mutineers.

"Now," said Captain Future on the fourth morning, "we can start mining copper and the other elements we need for the next step."

"I told you of the copper-ore deposit I found," said the Brain. "But I've still not located any calcium, beryllium or lead."

"Let me scout for those and the other elements we still lack," begged Otho. "I can maybe find them where Simon would miss them."

"All right, you can prospect the chasms northwest of the volcanic area," Curt acceded. "The rest of us will start copper-mining today."

Otho departed upon his prospecting mission. Captain Future, Grag, McClinton and Rih Quili gathered their new tools and started out for preliminary work upon the copper deposit the Brain had located. Joan was ready to accompany them, but Curt firmly overruled her this time, leaving her standing rebelliously outside the stockade. But before they had gone far through the jungle, he stopped.

"I thought I heard Joan calling," he said. "Listen!"

They heard Joan's voice raised sharply again, in an exclamation that had more of anger than fear in

Instantly Curt plunged back through the jungle the way they had come. When he came into sight of the stockade, a sudden tide of red fury pulsed through his brain.

Joan was struggling angrily in the arms of Moremos. The green-skinned Venusian was laughing as he drew her toward him.

"You are a little wildcat," he chuckled.

In all the years, Captain Future had killed more than one man. But always he had slain as the personification of stern, icy justice. He had almost never before felt the hot, raging desire to slay that now flung him forward.

Moremos thrust the girl away and recoiled startledly. Next moment Curt had him by the throat. The Venusian fought furiously, a savage hate flaming in his eyes as he sought a deadly swampman's grip.

"Curt, wait!" Joan pleaded appalled by the terrible expression upon his face, one she had never seen there before.

desire to kill bad momentarily made him forget all his own skill in super ju-jitsu. He broke Moremos' deadly grip by sheer strength, and slammed the Venusian down to the ground like a doll. His fingers tightened on the man's throat.

Then big hands gripped Curt's collar and pulled him back off the Venusian. Grabo and a score of the other mutineers had come running from the camp.

Moremos staggered up, his face livid. his voice a choking gasp. "Future. I'll pay you for this, too. It adds to an old debt."

"Let go of the Chief!" roared a new voice. Grag had followed Curt back and now charged on the scene, ready for battle.

"What the devil's going on here?" bellowed Kim Ivan. The big Martian was pushing his way through the crowd.

"Future was trying to kill Moremos!" squeaked fat Boraboll.

Curt made no explanations. But his voice was a throbbing whisper as he spoke to the Venusian.

"If ever you so much as touch Joan again, nothing will stop me from killing you."

A growl came from the mutineers. Their deep and ancient feud against Futuremen and the Patrol flamed quickly to the surface.

At that moment came a low, grinding roar from far beneath their feet. The ground quivered slightly under them, and then shook wildly.

The powerful and unexpected shock threw them from their feet. They heard the crash of some of the huts collapsing, and a section of the stockade near them fell inward.

The fat Uranian mutineer uttered a screech and there were cries of alarm from others. Curt Newton, scrambling to Joan's side, felt the ground rolling and heaving sickeningly under them. Then the shocks subsided, and the grinding roar of diastrophism died away.

"Gods of space, that was the worst tremor yet!" gasped Grabo.

They looked at each other in a tense silence. All realized that the quakes were now growing stronger as Astarfall approached near the critical distance from the System at which it would be shattered and desroyed.

THO had set out in high spirits upon his prospecting expedition that morning. The Captain Future did not even hear her. The raging restless android, always impatient of monotony had

been chafing during the lasst few days of steelmaking.

He swung eastward through the jungle and then started around the rim of the great region of earthquake-riven chasms and smoking black lavabeds whose center was the towering double range of active volcanoes. As he moved along, he mentally listed the raw materials they still lacked.

"Cobalt, beryllium, lead, calcium, and about a dozen others," Otho thought ruefully. "We might do without a few of those in a pinch. But there just can't be any space ship without beryllium and calcium."

Beryllium was important, for it was the chief ingredient of the metallic alloy whose strength and lightness were necessary for the construction of a space ship hull.

Calcium was even more vital. A small anount of it was an absolute necessity before a ship's cyclotrons could operate to produce atomic power. For calcium was the only inhibitory catalyst that could control the production of atomic power from copper, and prevent a disastrous explosion.

"So it's up to me to find the stuff," the android told himself determinedly.

The Brain had sketched for Otho a rough diagram of the chasms around the volcanic region.

Many of these Simon had not closely explored.

Otho began a systematic exploration of them. The rubbery android could climb like no other being in the System.

He went down into the first chasm by imperceptible holds on the jagged wall.

His keen, scientifically trained eyes strained in the dusk to inspect the rock formations.

With the small steel hammer he had brought, he tapped loose samples here and there. A streak of bluish ore he uncovered at one spot proved to be cobalt, one of the necessary materials. But he found none of their other requirements in that chasm.

He clambered back up out of it and stood panting upon its rim, looking a little dashedly across the wilderness of lava and crevasses.

"No wonder Simon couldn't explore all these cracks," he thought. "I've picked myself a job."

He resolutely went on to explore the next chasm. But in it, he found nothing at all. Otho felt increasingly worried about the lack of beryllium and calcium as he climbed back to the surface.

The beryllium would soon be needed for hull-construction, and a few pounds of the calcium

catalyst *must* be found before their projected ship could leave this world.

As he reached the surface, he suddenly recoiled. A half-dozen weird creatures had emerged from the jungle and were silently marching across the lavabeds nearby. They looked like gigantic centipedes.

Then Otho recognized them as a band of the Cubics, the weird little cooperative cubical creatures they had already seen. The things had grouped together into the centipedal formations.

They were solemnly crossing the lava-beds toward the towering double range of volcanoes.

"Now what the devil are they going out there for?" Otho wondered. "They must know it's dangerous around the volcanoes."

The Cubics were heading toward the gigantic canyon between the volcano-ranges, that which the castaways had named the Canyon of Chaos.

The weird creatures approached a point some distance along the rim of that terrifying abyss, and then disappeared down into it.

"Holy space-imps, what reason can they have for entering that devilish place?" muttered the android.

YSTIFIED and intrigued, Otho started out across the lava-beds after the Cubics. He picked his way as they had done, across the hot expanses of solidified lava.

Swirling smoke made him cough and gasp for breath. But he pressed on until he reached the rim of the Canyon of Chaos at the point where the Cubics had entered it. He peered down into the abyss.

The Canyon was a fearsome spectacle. Many miles long, a mile in width, and almost that in depth, its gloomy rock walls sank downward almost vertically everywhere. Far below, a glowing, narrow river of crimson lava crawled along the floor of the titan gorge.

Sulphurous smoke and blasts of superheated air screamed up from its depths. The lava river at its floor, Otho perceived, bubbled up from fiery springs at the north end of the canyon and flowed down its length and away through an underground chasm at the southern end.

"But where did the Cubics go?" he muttered, trying to peer down through the rushing smokes.

Then Otho perceived that a precarious pathway led downward from where he crouched, along the steep wall below him. The creatures he had followed had obviously descended by that path.

He was on the point of starting down after them, when he glimpsed them returning up the pathway. At once Otho ducked behind a mass of rocks for concealment

The Cubics, still joined in groups to form the centipede-like figures, emerged laboriously from the abyss. But now each of these cooperative figures carried with it a chunk of rock shot with gray metal.

"That rock is lead-bearing," Otho thought swiftly. "That's good-we need lead. But what are *they* going to do with it?"

There was no apparent answer to that riddle.

The Cubics started marching back across the lava-beds toward the jungle with their burdens.

Otho remembered now that when they had first encountered the Cubics the little cooperative creatures had been carrying similar chunks of rock with them.

"Why, they come to this canyon for lead-bearing rock!" he thought astonishedly. "They must be more intelligent even than we figured. Wonder what they do with it?"

He decided at once to enter the abyss and locate the source of the lead ores.

Lead was one of the needed materials they had not yet located. And there might well be other required substances down there.

Yet even the hardy Otho hesitated a few moments before entering that fearsome abyss. The smoke and scorching air threatened to asphyxiate even his tough lungs. His own respiratory system was much more resistant to fumes and gases than the ordinary human's. Still, he took care to make himself a rude respirator from strips of cloth which he tore from his jacket and bound across his nose and mouth.

HEN Otho started down the pathway. It was so. precarious, and had so many sections torn out of it by recent seismic convulsions, that only the agile android or creatures like the Cubics could possibly descend.

Smoke-laden winds shrieked and howled upward around him, as he made his way slowly down. Hot ashes rained constantly upon him, from the showers cast up constantly by the towering volcanoes that flanked the canyon. The evil glow of the lava river far below seemed to yawn for him.

Otho kept on. Presently he descried a big ledge or shelf in the vertical wall close beneath him. In a few minutes, he was standing upon this ledge. He looked wonderingly around.

"Imps of the Sun, the Cubics never did all *this!*" he exclaimed.

There were ancient mine-workings upon this ledge. Tunnels had been driven back into the rock wall for a dozen yards, and marks of the tools which had dug them were still evident.

It was obvious that the purpose of the tunnels had been to tap several rich veins of metallic ores here. Otho's trained eyes at once recognized the glittering streaks in the rock.

"Not only lead deposits, but also beryllium -- and plenty of it!" he exulted. "Now if we can only find the calcium and a few others, we're all set as far as materials are concerned."

Then wonder returned to conquer his exultation. Who had dug these shafts? Who had mined here for lead and other metals?

It could not have been the Cubics, he thought. These cooperative little creatures appeared not to make use of tools. They apparently came down here and secured chunks of the lead-bearing rock which had already been loosened by the ancient mining operations.

# **CHAPTER XI**

Cosmic Mystery

OTHO advanced into one of the, shafts. Something upon its wall caught his eye. It was a smooth plate of pure lead, affixed to the rock. He discovered that it was engraved closely with unfamiliar symbols.

"Why, that's writing!" he exclaimed. "Then whoever did the mining here long ago were intelligent creatures -- maybe humans."

He pried the soft lead plate out of the rock and excitedly examined its engraved characters. They were not, of course, in any language of the Solar System. Here was a cosmic mystery, indeed!

"The chief and Simon will be plenty excited by this thing," Otho thought. "And by the beryllium

and lead I've found."

At that moment, there came a slight quivering of the rock walls around him. It put him instantly on the alert.

"Better get out of here, and tell the others about this!"

At the moment the words left his lips, he was thrown from his feet by a terrifc shock. Flattened upon the floor of the ledge, he heard an awful grinding roar as the whole Canyon of Chaos rocked wildly.

It was the same unprecendentedly strong quake which at this very moment was so startling to the other Futuremen and the mutineers, back at the camp. But it had disastrous effects here.

Otho heard a cracking, crashing reverberation from above as he struggled to his feet on the swaying ledge. He looked up. A whole vast mass of the canyon, wall above him had been split loose by the shock and was falling toward him.

With a smothered yell, Otho plunged into the nearest of the ancient mine-tunnels. He was not a moment too soon. A shower of boulders crashed down upon the ledge, as a huge mass of the rock above split loose and fell.

The shock gradually died away. Otho picked his way out onto the rock-strewn ledge, and then uttered a cry of consternation.

"Now how am I going to get out of here?"

The violent quake had split off. a great section of the rock wall just above the ledge, destroying the precarious path upward. There was a great cleft in the wall there, which even Otho could not hope to climb. He was trapped upon the ledge.

Otho, as he looked around in dismay, became aware of a louder roaring and hissing beneath him. He peered down into the canyon.

His dismay became acute. The molten lava river down there at the floor of the abyss was rapidly *rising*. The shock had opened new rifts by which the liquid lava was pouring into the bottom of the canyon faster than the single narrow outlet could carry it away.

"Holy sun-imps, this is a real jam!" muttered the android. "That lava will be washing over this ledge in an hour."

He peered intently through the swirling smoke, endeavoring to discover some way of escape from the ledge. There was none. And the lava continued to rise relentlessly.

How to get help? Captain Future and the others

didn't even know he was down here in the Canyon of Chaos. He had to signal them somehow. How?

"I'd give my right arm for a rocket signal-pistol right now," he thought.

That thought brought a vague possible expedient into his fertile mind. There *might* be a way of signaling the others.

Hopefully Otho began searching through the mass of broken rock that now littered the ledge. He finally found some chunks of a rock that he thought might be suitable for his purpose. It was a tawny stone streaked with rich veins of orange mineral.

Otho experimentally tossed a small piece of it down into the rising lava. As the rock melted and vaporized in the molten river, a small puff of orange-colored smoke shot up from it.

"Yes, that might do it," Otho told himself. "Here goes, anyway."

H E assembled a number of chunks of that orange rock. Then be began tossing them down into the fiery lava.

He dropped them in a certain order first a small chunk, then a large one, then two small ones, and so on.

From each chunk of rock, as it melted and vaporized, a brilliant puff of orange smoke shot up through the swirling fumes to the surface above the canyon. The succession of short and long puffs of orange smoke were spelling out Otho's message in the Futuremen's code.

"I-n C-h-a-o-s C-a-n-y-o-n-c-o-m-e k q-u-i-c-k-l-y --"

He came to the end of bis message. Hopefully, be peered up through the drifting smoke. Those distinctive orange puffs should have been visible from a distance. If the others bad only seen them.

But no one came to answer bis signals. His hopes declined. And the molten lava was still rising. The beat was becoming terrific. He assembled more chunks of orange rock and repeated his smoke-puff message.

Again be waited. There was still no answer. And the crimson tide of rising lava was now only a few hundred feet below the ledge.

"This," muttered the undaunted android calmly, "begins to look serious. I won't have time for many more signals."

Then be discovered that he had not enough of the chemical-laden rock for even one more signal. There were only a few chunks of it left.

Otho used them to spellout a last, incomplete smoke-signal. "I-n C-h-a-o-s C-a-n-y-o-n --"

"If none of them see that, this cursed place is liable to be the end of Otho's rocket-trail," he muttered.

A few minutes passed. Then a thrill of hope shot through the android as he glimpsed a small, cubical object flying down toward him through the swirling fumes.

It was the Brain. And Simon Wright was having a difficult time to beat against the wild currents of up-steaming hot air. Otho yelled and waved his arms, and his old comrade saw and came toward him.

The Brain was quickly beside the ledge the. His square, transparent "body" hovered in the air, his lens-like eyes estimating the desperate situation as Otho explained his predicament.

"Humph, it's lucky for you that I saw your last smoke-signal," said Simon. "I've been reconnoitering some of the chasms northeast of here. I found some rich veins of magnesium and cadmium in one of them."

"You can talk about that later," Otho said hastily. "Right now, how am I to get out of here? That rising lava will be over the ledge soon."

"Well, I can't possibly lift you out of here," rasped the Brain. "I'll have to find Curtis and Grag."

Simon's gaze fell upon the inscribed lead plate which Otho had wrenched from the wall of the ancient shafts. "What's that?"

Otho explained hurriedly how he had found that mysterious relic of the past.

"Why, that's amazing," Simon exclaimed with deep interest. "I believe those characters have a resemblance to the Antarian language. Let me see it."

"For space's sake, Simon, forget your scientific curiosity for now and go get the others!" howled Otho.

"All right, but take care of that plate," cautioned Simon. "I don't want to see it destroyed."

"You're worrying a lot more about the cursed plate than you are about me," Otho declared, outraged.

The Brain shot up through the streaming smoke and disappeared. The lava was still rising menacingly, and the heat and fumes from it had become almost overpowering.

**B** UT Otho felt reassured. He had unlimited confidence in his fellow Futuremen. He crouched as far back on the ledge as he could get. gasping for breath against the choking fumes.

It seemed a long time to him before he heard a yell from above. Then a long rope made of tough vines knotted together was let down to him. The agile android instantly grabbed it and was drawn up.

Captain Future, Grag and the Brain greeted him diversely when he thankfully emerged onto the rim of the Canyon of Chaos.

"So we had to pull you out of another crazy jam!" said Grag loudly. "What the devil were you doing poking around in this place?"

"Did you find any beryllium or calcium, Otho?" Curt asked.

"I found beryllium, lead and some other metals in plenty, but it won't do us any good now," Otho answered ruefully. "Look, the lava down there is covering the whole ledge."

"That doesn't matter -- we can trace the beryllium vein and mine it from up here," Captain Future assured. "What about calcium?"

Otho shook his head. "No sign of that."

Curt frowned. "That's not so good. We've now found almost every element we'll need, except calcium. And we haven't found a grain of it."

"You saved the lead plate?" the Brain asked Otho anxiously. "Cur-tis, look at this."

Curt was as astounded as Simon had been when he learned of Otho's discovery of the ancient mineworkings, and inspected the plate.

"You say the Cubics were taking chunks of leadbearing rock out of the place?" he repeated puzzledly.

"Yes, but the Cubics never sank those shafts," Otho replied. "It was done ages ago, by the look of them."

"This *is* a mystery," Captain Future said thoughtfully. "It seems that Astarfall once had an intelligent human or semi-human race. Who could they have been? How long ago did they exist on this planetoid?"

"Don't the symbols on that plate look something like the characters of the Antarian language, that we learned on our quest for the Birthplace?" the Brain keenly asked the red-haired planeteer.

Simon was referring to a previous adventure of the Futuremen, an epic quest amid the more remote stars of the galaxy for the Birthplace of Matter.

During that quest, they had had contact with natives of the star Antares' worlds and had learned something of the Antarian language.

"It does look a little like Antarian," Curt admitted.

"Maybe there are Antarians hidden on Astarfall yet?" Grag proposed. "Maybe they're the mysterious Dwellers that Rollinger keeps raving about?"

"That doesn't seem possible," Curt muttered. "Yet there is some great riddle about this planetoid which we haven't guessed."

"I think that with sufficient study I could partially translate this inscription," saud the Brain quickly. "It might tell us something."

"Later on, Simon," Captain Future agreed. "We've got too much work on hand right now, starting construction of a ship. You all know what that shock meant. It meant that Astarfall is sweeping toward doom!"

The day was already far advanced, but before they returned to the encampment, they had used their geological knowledge to trace the beryllium vein to one of the chasms some, distance from the volcanic area.

HEN they entered camp, Curt stiffened. Moremos was coming toward them. The Venusian spoke earnestly.

"Captain Future, I want to apologize for molesting the girl this morning. I was clear out of orbit."

The Futuremen and the other mutineers who heard were equally astonished. But Curt Newton eyed the Venusian unforgivingly.

"Then I'm to understand that you've had a change of heart?" Curt asked dryly.

Moremos shrugged. "There's no love lost between us, you know that as well as I do. But we're all in the same boat, and Kim Ivan gave his promise to you that there'd be no trouble. I'll stick by that."

When the Venusian had gone, Otho, looked after him surprisedly. "I never thought that *he* would knuckle down."

"He's only nursing us along until we have built a ship and got away from here," Curt predicted. "We're his only chance of escape, and he's smart enough to realize that. But once away from Astarfall, look out! That Venusian hates me worse than anyone else here. Anyway, there shouldn't be

any more trouble to interfere with our work."

URT was wrong. That very night, three more men disappeared inexplicably from the camp.

The disappearances were not discovered until after breakfast the next morning. Then Grabo, who was assembling his foraging party for the day's work in the jungle, discovered that one of his men was missing. A quick check disclosed that two others of the mutineers were gone also.

The disappearances were utterly baffling this time. For the stockade of high, pointed poles now formed a complete enclosure around the camp. The only gate through it had been guarded all night by old Tuhlus Thuun and George McClinton. And both the old pirate and the prune-loving engineer insisted that the three missing men had not gone out the gate.

"We sat with our backs to that gate all night!" Tuhlus declared.

"That's r-right," stuttered McClinton. "I was ttrying to convince Tuhlus Thuun of the f-food value of p-prunes. We were awake all the t-time."

"Those three men *must* have gone out the gate. It's the only way out of the camp, and they're not here now!" swore Kim Ivan.

Boraboll's teeth were chattering with fear as the fat Uranian suggested, "Those Dwellers Rollinger raves about took them for sure."

"How could your supposed Dwellers enter the camp if they didn't come through the gate?" Captain Future asked incredulously.

"They might be queer creatures of the ground, who could tunnel up through the soil." advanced the terrified Uranian.

They made a thorough search of the whole surface of the knoll. But though they inspected every foot of the ground, and even stirred. the soil around the sills of the huts and the roots of the giant cacti, they found no traces of such mole-like monsters as Boraboll suggested.

"That settles it," muttered Grabo. "The Dwellers must be invisible mon-sters of some kind."

"Even invisible monsters couldn't come through a closed gate," sourly reminded Kim Ivan.

"If you ask *me*." drawled Ezra Gurney earnestly. "I still say that the Dwellers are none other than them Cubics. They could get in where nothin' else could, by breakin' up and slippin' in one by one."

Some of the castaways were struck by this idea.

Grabo said, thoughtfully, "The Cubics' community must be near here in the jungle. We've glimpsed the creatures several times when we were out foraging."

Curt shook his head. "Even if the Cubics could get in, they couldn't take three men out through the stockade like that."

He turned to the Brain. "Simon, you never sleep. Did you hear or see anything during the night?"

"No, lad," was the reply. "I spent the whole night attempting to translate that Antarian lead tablet Otho found in the Canyon of Chaos. I was too engrossed to notice anything."

Neither had Grag, it developed, heard anything. All their attempts at solution of the menacing mystery seemed to end in a blank wall.

"Well, I don't see that we can do anything but double the watch from now on at the gate of the stockade," Curt said. "We've got too terrific a job on our hands to lose time investigating now."

In fact, the task ahead was beginning to look impossible even to the indomitable planeteer. They had spent nearly a week with little more to show for it than an array of steel tools. And within seven more weeks, Astarfall would be shattered as it approached the dreaded Limit.

FUTURE drove the work that day with a fierceness of purpose born of dreadful apprehension. He pressed into service all of Kim Ivan's followers except those engaged in the task of maintaining the food supply.

He divided them into two parties. One engaged in mining copper ore from the chasm in which the Brain had located a deposit. The other party began excavating lead-bearing minerals from the vein which Captain Future had traced from the Canyon of Chaos.

"Future, I'm not kicking, but it seems to me we're not *getting* anywhere on a ship," said Kim Ivan, wiping sweat from his brow. "What are we digging all this lead for? You can't build a space ship of lead."

"You can't build a ship," Curt countered, "without an atomic smelter and forge to turn out your beams and plates. It would be hopeless to try doing it by hand. Therefore, our first need is an atomic smelter."

He added, "That's what the lead is for. To make a cyclotron for production of atomic energy, you have to have inertron. Nothing else will withstand the explosion of disintegrating atoms. And inertron is a compound of lead and other elements."

"But why have you got the other lads digging copper?" the big Martian wanted to know.

"Because a cyclotron's heart is the electric apparatus that explodes its unstable atomic fuel by a powerful charge," Captain Future answered. "Electrical apparatus means coil-wire and condensers, and they mean copper."

He concluded grimly. "And that's only the half of it. We'll also have to have calcium and a half-dozen other substances before we can get going. And we haven't even found some of them yet."

"You make the thing sound impossible," groaned Kim Ivan discouragedly.

Curt smiled grimly as he stooped again with his pick at the toilsome work of loosening masses of the lead-bearing rock.

"Cheer up, Kim. Once we manage to get a cyc built, things will go a little faser."

Yet Curt Newton himself felt dark apprehension all through the long day of back-breaking toil. An icy premonition of possible failure oppressed his mind.

Had he, for once, set himself and the Futuremen too gigantic a task? To build a space ship out of *nothing!* And to do it within a terribly short timelimit, with dangerous criminals who hated him for workers, and with a malign mystery of this alien world menacing them?

He let none of the others see his doubts. He kept his mein confident in spite of his bone-crushing weariness, as they dragged their masses of lead and copper ore back to the camp at the end of the day.

#### CHAPTER XII

Who Are the Dwellers?

KIM IVAN came to Curt as darkness fell.

"I've put a couple of men on guard at each side of the stockade tonight," he announced.

Curt nodded. "I'm going to keep watch myself tonight also, Kim."

"I'll watch with you, then,"

the big Martian declared. "Though space knows I'm just what happened. Who or what are 'they'?" tired enough to sleep a week."

The Brain had a discouraging report for Captain Future that night. Simon had spent the day exploring the more distant chasms in search of the few elements they still lacked.

"I still can 't find any traces of calcium, lad. There just doesn't seem to be any of it on this world."

"That's bad," Curt admitted. "We simply have to find a little of it, or no space ship we build will ever take off."

His thoughts were somber as he sat with Kim Ivan outside one of the huts later and kept watch upon the sleeping camp. Except for an occasional shuffle of movement by the guards around the stockade-gate, and the low medley of bird and animal noises from the jungle, it was silent.

The great drift of stars that belted the night sky shed a vague light upon the camp. The gigantic, barrel-shaped cacti nearby threw grotesque shadows. Near the fire poised the strange, cubical shape of the Brain, intently studying by the firelight the inscribed lead tablet of mystery.

Kim Ivan woke from a growing drowsiness at a low, wailing sound. "What's that?"

"Only Rollinger starting again," Curt answered in a low voice.

The raving mutter came from the hut in which Grag kept patient watch over the bound madman. It raoe slowly in pitch, grew mare frantic.

Captain Future suddenly stiffened. Joan Randall had just emerged from her hut into the starlight. She started to walk in an oddly rigid, mechanical stride. Her face was white and expressionless.

"Joan, what's the matter?" he called anxiously.

There was no answer from the girl. In sudden alarm, Curt sprang to her side and grasped her arm.

Joan struggled to free herself of his grasp, for a moment. Then she suddenly shuddered violently, and looked wildly around.

"Curt!" she gasped. Quivering, she clung to him. "Curt, they had me! They were drawing me out to them."

He soothed her. "Relax, Joan. You've just had a nightmare, and started sleep-walking."

Her fine face was pallid with horror. "No, Curt -it was more than a nightmare! In my sleep, they hypnotized me somehow, drew me!"

Captin Future's brows knitted together. "Tell me

It was some moments before the shuddering girl could speak calmly. The stamp of a terrible experience still in her dark eyes.

"I don't know what or where they are," she said breathlessly. "All I know is that soon after I fell asleep, I began to feel cold, powerful minds that somehow were reaching out to grip my mind."

"Say, that's what I felt a little of in the bad dreams I had the other night," Kim Ivan interrupted hastily. "It was so bad, I woke up. Some of the other chaps had the same kind of dreams."

"But I didn't wake up. I couldn't, though I wanted horribly to," Joan gasped. "The icy grip of those mental attackers held me just as a rabbit is held by a snake's eyes. And just like a hypnotized rabbit, I felt myself getting up and walking out of my hut. I knew that I was walking toward something awful, but I couldn't stop until you awoke me. Curt."

APTAIN FUTURE was thoughtful as he held her protectingly in his arms. He looked over her dark head at Kim Ivan.

"I begin to see now," he muttered. "The Dwellers, as Rollinger called them, are creatures who somehow use tremendous telepathic power to draw victims toward themselves. There's no other explanation."

Kim Ivan looked scared. "You mean that something or things out there in the jungle reached in here with hypnotic telepathy and dragged out all our men that disappeared?"

"But whoever heard of a creature of prey that drew its victims to it by hypnotism?" exclaimed Otho.

Curt shrugged helplessly. "The life of this planetoid has followed freakish paths of evolution, for some reason."

"I'm still bettin' that them Cubics are what's doin' it," muttered Ezra Gurney darkly.

The commotion had aroused many in the camp. They seemed stricken by a chill horror as they speculated upon the mysterious Dwellers who somehow could reach into the camp by telepathic power to seize their prey.

"You'll notice," Curt Newton commented. "that none of us are ever mentally attacked when we're awake. It's only in sleep. when the conscious mind is no longer on guard. that the Dwellers make their telepathic attack."

"M-m-maybe that. explains why R-rollinger is more sensitive to the th-things than we are," stuttered George McClinton. "His c-conscious mind is so shattered that he has n-n-no guard against the Dwellers."

The Brain had joined them. And Simon Wright now imparted news to them.

"I've been trying to translate that Antarian tablet which Otho found. It's extremely difficult, and I've only translated a few phrases here and there. But what I've deciphered seems to refer to predatory creatures who use mental attack to seize victims. Undoubtedly, the Dwellers."

"If you can translate all of that, it might tel us more about the Dwellers and identify them for us!" Captain Future exclaimed. "There's some tremendous riddle about this planetoid and its strange forms of life. The lead tablet may prove the key to the riddle. Keep working on it, Simon."

There seemed nothing more they could do to protect themselves until they should have found some clue to the identity of their attackers. And the work that engaged them was too vital to halt for any reason.

During the next days, the Futuremen kept their improvised smelter running full blast. With painful slowness, they managed to refine a considerable quantity of copper, lead and other necessary metals.

Curt kept Kim Ivan's men at work mining and bringing in more of the ores. The mutineers swore at the labor of the task, but were too conscious of the life-or-death necessity of it to refuse. Twice, strong tremors shook the surface of the planetoid in those few days. And the activity of the volcanoes nearby seemed becoming ominously greater .

During these few nights, they had no more attacks from the mysterious enemy and no more disappearances. They were nearly all on the watch the first nights. But nothing happened. It was as though the Dwellers were aware of their watchfulness, and would not make their telepathic attack when the humans were on guard.

Grabo and his foragers found no clue to the identity of the Dwellers in the jungle. "We've kept our eyes open, but we haven't seen any creatures who might be them," reported the Jovian. "Except for the Cubics and those big rodents and birds, there isn't much animal life here -- just a wild mass of those tangle-trees and other devilish queer plants."

"If we could spare the time to beat thoroughly

through the jungle we might find the Dwellers." Curt said.

"But we can't. The days are going by and we still have'.t even started real construction of a ship."

The work of preparation for construction seemed, indeed, agonizingly slow. The terrific necessity of building every tool. mechanism and instrument they needed was making big inroads into their limited time.

Captain Future and Grag and Otho and George McClinton had begun building the first cyclotron, or atomic power generator.

FIRST, they had had to go back to steel-making and forge big crucibles of heat-resistant steel. With these, they could handle the softer metals of lead and copper and others, when in a molten condition.

Curt built up a clay mold, with infinite care. Into this they poured molten inertron, the alloy composed of lead and tempering elements. When the metal had cooled, they broke open the mold and had a small but massive cylindrical shell of inertron. This was to be the main power-chamber of the cyclotron. The only openings in the cylinder were the small ones at the top for the fuel-feed and injector, and the bigger one for the power-take-off.

"Now to cast the fittings," Curt said. "The fuel feed-lines and the power take-off lines all have to be inertron, too, as well as the valves. And our only way to get 'em is to cast 'em. We've not the elaborate equipment that you need for machining inertron."

"Oh, L-L-Lord," groaned George McClinton.
"I've worked with cycs for years, b-b-but never realized what it was to b-b-build one."

While they toiled to finish the fuel-feed, injector and power-leads, the Brain was ranging out every day to explore the chasms and gorges.

Calcium was what Simon was looking for, most of all. The vital catalyst was imperative If they were to utilize the tremendous atomic energies locked up in copper. But the Brain reported no success.

"I am beginning to fear," said Simon, "that there is no accessible calcium on Astarfall."

Curt bit his lip. "We've got our makeshift cyc almost finished. But we can't use copper fuel in it until we have a little calcium."

Copper was the fuel most ordinarily used in cyclotrons. That metal released more atomic energy when disintegrated than did any other ordinary

substance. It released so much energy, indeed, that it would blow any cyclotron apart unless its disintegration was slowed down by calcium.

"We c-c-could use iron for fuel, instead of c-c-copper," McClinton suggested. "It won't p-produce half as much power as c-copper would, but it c-could be used w-without the c-calcium catalyst."

"It's what we'll have to do, to get going," Captain Future agreed. "But we still must have calcium! Only copper will release enough energy to power a space-ship! Unless we get a little calcium, any ship we build will never take off."

He put McClinton to work upon casting the inertron valves and fittings. The lanky engineer labored diligently, stopping only to munch a few of his dried prunes now and then.

"They g-g-give me energy," he defended when Joan chaffed him about his addiction. "P-people don't realize the value of p-prunes."

"What'll you do when they're all gone?" Joan laughed. "Your case is almost empty ."

He looked dismal. "I know. That's why I'm wworking so hard to g-get the ship started. To get back to c-civilization and p-prunes."

Captain Future himself was engaged upon the harder job of building the electric firing-mechanism for their cyclotron.

A cyclotron is operated by disintegrating powdered metal fuel atoms into their constituent electrons. This exploding cloud of free electrons was in reality what people called atomic energy.

NCE the disintegration process was started, It was self-continuing as long as the injector fed powdered fuel. But to start it, it was necessary to have a trigger-apparatus consisting of an electrostatic generator that would release a bolt violent enough to start the disintegration within a small trigger-tube attached to the main power-chamber.

"How the devil do we build an electrostatic generator when we don't even have a foot of wire?" Otho demanded.

"We make the wire first," Curt retorted.

"This thing gets more complicated the further we go with it," groaned the android.

But he fell to with Grag and Curt in the tremendously difficult task of drawing out the necessary wire from their supply of smelted copper.

Joan's deft fingers wove fine fiber threads from certain plants into the necessary insulation for the wire. Curt wound the complex coils, upon wooden frames. Gradually the electrostatic generator took shape.

The inertron trigger-tube was fitted into one of the small openings of their cyclotron, with its electrodes in place inside it and with heavy copper cables running from it to the generator itself.

The generator contained the condensers for storing the charge, the transformer coils, and the copper spheres, belts and brushes of an electrostatic machine which was to be turned by a geared crank.

"We're about r-r-ready," said McClinton hopefully, at last. "I p-p-put the refined iron powder into the f-f-fuel-hopper."

Everyone of the castaways was gathered that morning to witness the test of the vital cyclotron upon which all of them had labored in some way or other. An atmosphere of tension held them.

Grag had already for some time been turning the crank of the electrostatic generator, building up the charge in its condensers. Lacking instruments, Curt had to calculate mentally the amount of charge available.

"It should be enough to fire the trigger-tube," he said tautly. "Shove in the injector, George."

The prune-chewing engineer eagerly obeyed, pushing down the knob atop the massive little cyclotron, injecting a charge of powdered iron into it.

Captain Future instantly closed the heavy switch that broke the copper cable connecting the generator to the cyc. The stored electric charge flashed into the trigger-tube of the cyclotron.

There was a sharp detonation as the terrific electic bolt started the bit of fuel in the trigger-tube disintegrating. Almost instantly, it was followed by a bursting, vibrating roar as the process of atomic disintegration spread to the main charge of powdered iron in the power-chamber.

Curt depressed the valve-lever atop the power take-off. From that take-off tube, a jet of pale white fire lanced out. It was a sword of atomic energy that cut deep into the side of the knoll behind the cyclotron.

"She works!" yelled Otho, his face aflame with excitement.

"By space, you've done it!" bellowed Kim Ivan. "We've got atomic power now!"

Weary as he was, Curt Newton felt a thrill of inextinguishable pride in what they had done. In two short weeks, they had retraced the whole

history of human invention from fire to atomic power.

They had started from nothing, as the first primitive savages of Earth had done. The only difference was that they had had the *knowledge* slowly gathered by hundreds of generations, and had been able to apply it.

"N-n-now do we start laying the f-frame of the ship?" McClinton asked eagerly, but Captain Future shook his head.

"Not yet. We've got to build more cyclotrons first. We'll need them for the immense labor of actual construction. Then when we've built the ship, our cyclotrons can be installed in it as its propulsion machinery."

URT drove the work relentlessly on in the next days, spending every possible minute on the construction of more cyclotrons. Progress was much faster now, for they could use the cyc they had already built to power an atomic smelter that reduced the time of operations greatly.

But on that first night after com-pleting the original cyclotron, two more men had mysteriously disappeared! Old Tuhlus Thuun and one of McClinton's engineers vanished as inexplicably as though they had been swallowed by thin air. And the stockade wall had been guarded all night!

Next night, another mutineer vanished. Few slept on the following nights, so great was the alarm and fear. Nothing happened those nights. Than the vanishings started again.

Panic halted the operations of the mutineers. Their terror was so great that they refused longer to assist the Futuremen's labors.

"There's no use of working to build a ship!" cried Boraboll when Curt tried to get them to resume work. "Long before we get a ship built, the, Dwellers will have murdered all of us!"

Curt felt baffled desperation. He had depended on the mutineers to mine the great amount of metalores necessary for construction. Their panicky stoppage of work imperiled, all his hopes of building a ship in time to escape from this doomed world.

"We demand that the cursed Dwellers be found and destroyed before we'll go on working!" shouted one of the rebels.

"We can't stop work now to search for the Dwellers," Captain Future pleaded desperately. "We're behind schedule as it is. In a little more than

four weeks, Astarfall is going to.be destroyed.",

Kim Ivan added his authority to Curt Newton's plea. "Don't be idiots!" the big Martian stormed his followers. "The Dwellers may get *same* us, hut unless we build a ship in till we're *all* finished."

Moremos nodded agreement. The Venusian murderer not to have seen the force of arguments. Its logic was undeniable.

"You know I have no love for Future, but he's right in this," snapped Moremos. "We still haven't the faintest clue as to what or where the Dwellers are. We might spend weeks hunting for them without success."

But the superstitious terror of most of the mutineers was not to be allayed by cold reason. The nearer danger loomed bigger to them.

"We're not going to work in those diggings all day and then be afraid to sleep at night, lest we vanish, too!" Boraboll squeaked.

Curt Newton felt a sense of frustration. He could understand the terror of these men. But their panicky strike was the last straw.

Unexpectedly, the Brain came to his help. Simon Wright glided to his side and spoke coolly.

"Tell them to quit acting like scared children -that I now have at least a clue to the Dwellers," said the Brain. "I've managed partially to decipher that inscribed tablet from the Canyon of Chaos."

"Simon, then you've found out something about the mystery of this place?" demanded Curt.

"Yes, lad," answered the Brain. "I have at least begun to solve the riddle of this planetoid's strange history."

#### CHAPTER XIII

Tragedy of the Void

FUTURE was more than a little excied by this information.

"Does that inscription identify the Dwellers?" he asked quickly.

"No," admitted Simon Wright. "But it does give a possible clue to them, if we

could decipher all the writing. You see, the inscription was the Antarian language, as we surmised. But none of us have more than sketchy acquaintance with that tongue from our brief experience with it. And this writing seems to be in a quite ancient form of it. Many terms I could not translate."

"What became of the men who left that tablet?" asked Joan wonderingly.

"I'm coming to that," said the Brain. "It appears that this little world we call Astarfall has a strange and terrible history. But I shall read you my partial translation itself."

Everyone listened with deep interest as the Brain's chill, metallic voice recited his translation of the old tablet.

"We men of Antares colonized this small world many generations ago. This world was then the moon of a planet in the system of \*\*\*\* near our own star. It possessed mineral resources, and to exploit those resources a band of our people settled here and established mines. Each \*\*\*\* came ships from Antares which brought us supplies and took away the ores we had mined.

"But then came unforeseen catastrophe. A dark star was approaching the system \*\*\*\* of which this moon was a member. The passing dark star came so close that its huge gravitational pull dragged this moon from its orbit and flung it off into space. The moon left that system and drifted steadily out into the vast interstellar void.

"Our colonists had but a few ships of their own. These could contain only a small number of people. So only that small number were able to escape the torn-away moon. There was no escape for the others, for by the time ships could have been assembled and come from Antares, this drifting world was too far out in the trackless void.

"So some thousands of Antarian colonists were marooned upon this moon as it traveled steadily out into the face of the deep. They knew that they were cut off forever from their parent system, but they did not despair of life. For the radioactive core of the moon \*\*\*\* sufficient heat to maintain life upon it even in the sunless depths of the outer void.

"Farther and farther into the vast abyss traveled the drifting moon, on into the remote \*\*\*\* a sector of the galaxy which no ship had ever traversed. The older generation of colonists passed away and a new generation was born who had never known anything but this little world. It seemed that generation would follow generation without change, and that some day the drifting moon would reach the distant starsystem of \*\*\* and perhaps attach itself to a planet there.

"But out in the face of the deep a terrible thing began to happen. The drifting moon had entered a region of terrific cosmic radiation. It was an area of space in which cosmic radiation swept in a concentrated current, due to \*\*\*\* and other obscure factors of space-warp. The result was that all life upon this little world was drenched by constant penetrating radiation which soon caused a subtle and fearful change.

"Evolution began to speed up terrifically upon our drifting world. The unprecedented radiation produced \*\*\*\* and other changes in the genes of every living species, which caused a tremendous flowering of new mutations. Each species of animal and plant life on the world began a rapid new evolution. And our human species, too, began to evolve.

"We humans became less and less human! New mutations rising among us, such as \*\*\*\* radically altered the nature of our species. By now it seems evident that we \*\*\*\* destined to evolve hideously onward into species entirely unhuman.

"But all the other forms of life on this world have also been evolving at terrific speed. Plant life here has developed weird new carnivorous forms of trees and shrubs, animal life has evolved into equally uncanny and alien forms, and one species of \*\*\*\* has evolved into such great intelligence and mental power that it has been able to menace us by means of hypnotic mental attack.

"We found a way to protect ourselves from that dreadful hypnotic attack of the \*\*\*\* We still cling to life, by means of that protection. But our world is still traversing the region \*\*\*\* cosmic radiation, and evolution still continues to alter our human species with nightmare speed. We fear that by the time this world has finally drifted out of the region of \*\*\*\* radiation and the burst of evolution stops, we shall have been conquered by our evermore powerful enemies, and shall have disappeared forever. And so we leave this table as record of our fate should ever men of Antares manage to reach this world."

HEY were all silent for a little when the Brain finished reading his translation of the tablet. All were gripped by an overpowing sense of the cosmic tragedy that was the history of this little world.

An inhabited moon, torn away from its native system and drifting fatally out into the vast night of the interstellar void, never to return! They seemed with their own eyes to look back and see that Antarian, a man whom hideous evolutionary changes had perhaps already made inhuman, writing upon the lead tablet his tragic record of the awful fate of his people.

Captain Future broke the silence. "So *that* is the reason for the unprecedentedly weird animal and plant life of this planetoid! Out there in the abyss, it passed through a region of radiation that caused nightmare evolutionary change in every species."

"What do you suppose became of the people who had been human?" Joan whispered.

"They must have perished entirely," said the Brain. "No doubt despite their attempts to protect themselves, they finally succumbed to the hypnotic attacks of the new species, whom we call the Dwellers."

Otho voiced an urgent question. "That's what I'm

most interested in the Dwellers. Doesn't the inscription, tell just *what* they are?"

"Yes, if we knew that, we could hunt the devils out and destroy them," put in Kim Ivan.

"The inscription does not help us much there," denied the Brain. "It names the species who evolved into the Dwellers. But their scientific name for that and other species is meaningless to us. There's no way I can translate their scientific terms or: proper names."

"Try it anyway, Simon," urged Curt Newton.
"Our safety depends on it. Until we have some idea what and where the Dwellers are, we're helpless, to do anything against them."

Ezra Gurney made an emphatic assertion. "That inscription just proves what I said before -- that the Dwellers are none other than the Cubics. It's clear as daylight. One o' the animal species here evolved into them little cubic monsters, whose group-minds are strong enough to carry out those telepathic attacks."

"I still can't believe that the Cubics, are the Dwellers," Curt demurred "They just don't appear to be of high enough intelligence. But if Simon can translate the gaps in the inscription, it will give us a clear clue to the Dwellers. Then we can act."

"I will try, but I am not too optimistic of success," rasped the Brain "I know almost nothing of the scientific terminology of the Antarian language."

"What are we going to do in th meantime?" demanded Boraboll.

Captain Future reassured him. "We'll fix up an alarm-signal around the whole stockade. Then if the Dwellers get a mental grip on any of us and try to draw us out, there'll be an alarm that will rouse the others."

That promise placated the uneasy castaways a little. Curt Newton worked hastily to arrange the alarm, grudging the time spent upon it.

He devised a strong cord of vegetable fibers, which was so looped around the inside of the stockade that anyone touching it would sound a clamorous copper gong to which the cord was attached.

"That will keep anyone from being drawn out over the wall," he pointed out. "And the gate is guarded at night. Now, back to work!"

A LL that day, Captain Future kept .the others so busy that they had no time to

think of the Dwellers. They finished their battery of six cyclotrons, and started the rigging of several atomic smelters.

The smelters were big inertron crucibles into which large amounts of ore could be shoveled. A stream of atomic energy brought through inertron pipes to each smelter would burn out the mineral impurities and permit the molten refined metal which remained to be suitably alloyed and run off into casting-molds.

"Twenty-two days -- we're behind schedule," sweated Curt Newton that evening. "We should be casting beams and plates by now. We've got to speed up somehow."

Weary as the mutineers were that night from their toil in the ore-diggings, few of them slept. Their fear of the Dwellers was too great. They sat in close groups around the fire, listening nervously for the alarm that would signify that the mysterious enemy had hypnotically seized one of them and was drawing him out of the camp.

But the alarm did not come. And morning found none of them missing. It reassured the men a little, though some contended that the Dwellers had not struck simply because they had been wakeful. The hypnotic attacks had always been made upon sleeping men.

The atomic smelters were finished this day. During his work upon the smelters, Captain Future had detailed McClinton and Grag to a special job. This was the construction of several very small cyclotrons which could be used to power such portable tools as atomic welders. They would be neces-ary for the fabrication of the ship.

"We've g-g-got the welders about ready," McClinton reported to Curt that afternoon. "How are you c-c-coming?"

Captain Future straightened and mopped his brow. He was grimy, sweating, haggard-looking from the driving toil.

"We're ready to cast the keel-beam now," he said. "Otho and I have been preparing the mold."

The mutineers, returning in troops from their day's mining and dragging with them their rough sledges laden with beryllium and chromium ores, came flocking through the sunset to witness the operation.

Curt and the Brain had already sketched detailed plans for their projected space ship, working at night by firelight to draw their designs on thin sheets of lead. They had designed the simplest and

smallest ship that would serve their need. And they had carefully planned so that it would require but few different sizes of beams, plates and struts.

The molds for the beams had been accurately fabricated from a perdurable cement made of certain rocks ground to powder. To the biggest of these molds was now connected the inertron spout of the big atomic smelter, which at this moment throb- bed with power.

"The alloy should be thoroughly compounded by now," Curt Newton declared. "Start her pouring, Otho."

Otho opened the spout-valve. From the spout, a dazzling stream of molten beryllium alloy poured into the long cement mold.

A cheer went up from ragged band who had gathered to watch.

"Now we're getting somewhere!" Kim Ivan exclaimed. "We'll soon have a ship to take us off this cursed world, now we've cast the keel."

"In h-honor of this occasion, t-tonight I'll eat the last of my p-prunes," George McClinton declared. "I've been s-saving them."

Captain Future himself was perhaps the least excited of them all. He knew only too well the vast amount of work still to be done in short time.

He turned, looking for Joan. And he was surprised not to find her. Everyone else was present, and the stockade gate had been closed for the night.

"Where's Joan?" he asked McClinton sharply.

The spectacled engineer looked startled. "Why, I d-don't know. Come to t-think of it, I haven't seen her for s-several hours."

Without a word, Captain Future started a rapid search of the encampment. By the time he had finished, night was falling.

"She's not anywhere in the camp!" he exclaimed worriedly. "And Ezra Gurney is missing, too!"

#### **CHAPTER XIV**

Riddle of the Jungle



EZRA GURNEY had sat all morning brooding over a plan which had taken shape in his mind. Finally in midafternoon, the old marshal had risen decisively to his feet.

"I'll do it!" he muttered resolutely. "No matter what Cap'n Future says, I'm sure I'm right."

The old Planet Patrol veteran was used to action.

Ezra had spent more than forty years out in the great spaces and wild worlds. He had fought space-pirates in the old lawless days, had brought order to raw boom-towns on the interplanetary frontier, and was now the oldest and most experienced officer in the Patrol.

But Ezra was a fighter, not a scientist, and thus could be of no aid to the Futuremen in planning and building the new ship. And Curt had tactfully suggested that the work of mining ore or foraging in the jungle would be too arduous for him, and had requested that he spend his days in seeing to it that there were no dissensions or fights in the camp.

"Too old, that's what he thinks of me!" snorted Ezra disgustedly. "Me, that could still show these young kiwis somethin' in a scrap."

His iron-gray hair almost bristled with. indignation, and his keen, faded blue eyes snapped.

"Maybe he thinks I'm so old I got softenin' of the brain, too," growled Ezra. "Maybe that's why he won't listen when I tell him that them Cubics are the Dwellers. I guess at that, he don't want to spare time now to reconnoiter the Cubics. Time is all *I* have. I'm goin' out there and scout the critters myself!"

His decision made, the old marshal proceeded to put it into effect.

Grabo and the other foragers had reported that each time they had glimpsed any Cubics, the little creaures were going to or coming from the northwest. It was logical to assume that their community lay somewhere in that direction.

Armed with a steel bush-knife forged for

Grabo's gang, he entered the green gloom of the weird forest and made his way in a northwestward direction. The great tree-ferns looming around him, and the other grotesque trees and shrubs, made an unearthly vista. He wondered, fleetingly, why the jungle contained no huge cacti like those at the camp.

After a few moments of travel, he suddenly stopped. There had reached his ears a clear call from behind him.

"Ezra! Wait!"

He recognized Joan Randall's voice. And the old marshal's wrinkled face expressed dismay.

"That danged girl! She saw me leavin' the camp and she's run after me to stop me. Treatin' me like I was a ru'away child!"

Indignantly, he decided that he would not argue with Joan. He would simply slip out of sight until she had given up hunting him.

With that idea in mind, Ezra hastily melted back into the jungle and sought concealment inside the thick foliage of a grotesque, towering shrub whose green limbs drooped limply like those of a weeping-willow.

Those drooping limbs suddenly came to life! They wrapped themselves around Ezra and began drawing the old veteran into the shrub.

"What the devil!" swore Ezra startledly.

He slashed hastily with his bush-knife. Swearing and sputtering with rage, he hacked through one after another of the clutching tendrils.

It took him several minutes to free himself. He finally was able to tear loose from the grip of the thing, and stood puffing some distance away.

Y OU SEE what happens to you when you come slipping out here by yourself!" accused a clear, stern voice.

Joan Randall had been attracted by the sound of struggle. She stood, her hands on her hips, eyeing him severely.

"You were starting out to find the Cubics," she went on. "You've been wanting to for days. It's a good thing I saw you slipping out of camp."

"You wouldn't have caught up to me if that danged snaky bush hadn't .grabbed me," Ezra sputtered. "Blast me if I ever saw such queer, evil plant-life as this world has! From the big tangle-trees down to them nasty shrubs, most of the plants here seem to prey on animals."

"It's what you get for sneaking out this way,"

Joan retorted unsympathetically. "I'm not going to let you go any farther."

"Now, Joan, listen," wheedled the old veteran.
"I'm doin' this for Cap'n Future's sake. It's to help him that I want to investigate the Cubics."

Joan's pretty face was serious as she considered this. Her brown eyes looked thoughtfully at him.

"You're right, Ezra. We'll go out together and see what we can learn about the Cubics."

Ezra's brief feeling of triumph turned to dismay. "But you can't come along with me, Joan! Curt would never forgive me if I took you."

"Either I go with you, or you don't go at all," the girl said firmly. "Try to go on without me, and I'll shout."

"Oh, dang all mule-headed women!" muttered the old marshal. "They haven't got any business out in space. When I was a youngster, women stayed on Earth and didn't go gallivantin' all over creation. All right, come on."

They started together through the jungle, threading their way through the more open glades in a northwest- ward direction.

"Grabo an' the others said every time they saw the Cubics, the critters were comin' from or goin' in this direction," Ezra explained. "They didn't think the things could live very far from here."

"I hope not," said Joan a little anxiously. "We haven't many hours of daylight left."

Ezra used his bush-knife to hack a way through thickets of vegetation around which they could not detour. But they were careful to avoid all tangle-trees and other similar carnivorous forms of plant-life with which the old marshal had so lately had his upsetting experience.

"Blast me if I don't think the plants on this world have more strength and intelligence than the animals," declared Ezra. "The way some of them growths try to grab a person is uncanny."

"The Brain says that all this unprecedented evolution of plant-life is due to the burst of accelerated evolution when Astarfall passed through that realm of cosmic radiation," Joan told him.

"Maybe so, but it still seems creepy and unnatural to me," grunted the old veteran.

They went on for mile after mile, while the shafts of pale sunlights that struck through the weird forest slanted more and more toward the horizon. They were by now penetrating into completely unexplored jungle. For Grabo and his

foraging parties had been too engrossed by the difficult task of gathering sufficient food to do any unnecessary exploring.

THEY had kept an alert eye out for the Cubics, but had so far seen none of the strange creatures. The only animal life they had encountered were a few of the rodent-like animals darting away in the thickets and a number of the bat-winged, featherless birds flying overhead.

Suddenly they struck a hard-packed, beaten trail that led due westward through the jungle. Ezra and Joan stopped, amazed.

"Why, the Cubics must have made this path!" the girl exclaimed. "You remember that Otho said the creatures seemed to be in the habit of mining 'nd taking away ore from the volcanic area east of here? This must be the path they use."

"If that's so this path would lead us right to the home or community of the Cubics!" Ezra said excitedly. "Now we're gettin' somewhere."

Joan hesitated. The Sun was now sinking toward the horizon and the feeble daylight of the jungle was darkening into a somber dusk.

"Perhaps we ought to turn back, and return tomorrow," she suggested. "It'll soon be night."

"Turn back when we're this close?" Ezra scoffed. "Besides, night is when we want to watch the Cubics. If they're the Dwellers, it's at night that they somehow make those telepathic attacks on our camp."

The reminder of those dreaded hypnotic attacks was one not calculated to reassure the girl. But Joan had courage, and she saw the logic in Ezra's argument. Without further objection, she accompanied him onward.

Their progress was now much more rapid, for they were now following the beaten path. It ran due west except at places where it swerved aside to avoid a clump of tangle-trees or other dangerous vegetation. Those alien growths loomed dark and for-bidding in the gathering dusk.

Stars were peeping forth in the darkening sky. Far behind them, the heavens were lighted by the quivering red glow of the smoking volcanoes. Presently Ezra and Joan heard a low, persistent sound from ahead. It sounded like the clash and clatter of many hammers beating upon rock.

"Must be the Cubics," Ezra said in a low voice. "But what're they doin' to make that sound?"

"I don't know," answered the girl bewilderedly.

"We're very near."

They went with much more care, following the path but ready to dart off it into the thickets at any alarm. The din ahead came louder to their ears. Then they came abruptly into full view of an amazing spectacle.

The path debouched ahead of them into a broad, flat clearing. This open plain contained the little city of the Cubics.

It was one of the strangest communities upon which human eye had ever looked. There were several scores of small buildings, built and arranged with mathematical precision. They looked like stone beehives, each having only a single opening. They were ranged in concentric circles.

Hundreds upon hundreds of the Cubics were visible in this weird little city. The little cubeshaped creatures were engaged in bewildering, activity. With their queer faculty of combination, they were gathered into many different figures that engaged upon several inexplicable tasks.

There was a row of grotesque, four-armed figures twice the height of a man. They were engaged in hammering and splitting chunks of rock, using harder masses of rock for hammers. There were other figures like huge centipedes, who carried the shattered rock away and sorted its pieces.

And each of those big, grotesque figures was composed of scores of the little Cubics! An arm of one of the hammers might be made up of ten separate Cubics, hooked together. Joan and Ezra could plainly see the tiny, twinkling eyes and mouths in the faces of those constituent cubes.

"Why, this is crazy!" muttered Ezra. "Why in the name o' the Sun are they workin' so hard, crushin' that rock?"

"They're crushing the metallic ores out of it," Joan said quickly. "Look -- the centipede-ones take the metal back to those big heaps."

E ZRA'S eyes traveled in the direction she indicated. Behind the little Cubic city there loomed colossal heaps of small fragments, heaps big as small hills. The fragments were of metal ingots or rich ore.

"Why they must have been laborin' like this for centuries to amass all that metal ore!" gasped the old marshal. "There's millions of pounds of it, and it looks like it had been gatherin' there for ages."

He was stunned by the riddle of the Cubics'

tremendous toil. Then a thought occurred to him.

"Maybe this is the answer, Joan. If these Cubics *are* the Dwellers, maybe they've been attackin' us telepathically because we've been minin' metal. It seems like these critters are crazy on minin' ore themselves."

"That might be the answer," Joan admitted in a whisper. "Let's take a closer look at those big ore-heaps. We can circle around nearer."

She and the old marshal started skirting around the clearing to approach nearer that side of it on which the vast heaps of ore towered. They moved with extreme care in the dark jungle, to make no sound.

Joan was in the lead. Ezra suddenly descried a snaky movement as of tentacles in the thick foliage just ahead of her.

"Look out, Joan -- you're walking into a tangle-tree!" he shouted warning.

The girl recoiled in time. But next moment they both realized with dismay that the clatter of the Cubics' activity had suddenly halted.

"They heard me!" Ezra groaned. "We got to beat it out of here on full-rockets!"

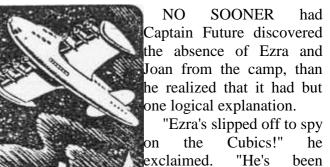
They scrambled back toward the path and started a hasty retreat away from the Cubic City. But it was too late.

Cubics who formed big centipedal figures were already racing along the path after them. In an instant they had overtaken and surrounded the old veteran and the girl.

Before the horrified eyes of Joan and Ezra, the Cubics who formed those figures abruptly shifted into new, towering formations. They became giant, semi-human shapes who advanced on the two humans with clutching arms.

#### CHAPTER XV

Secret of the Cubics



"B-b-but M-m-miss Randall?" asked George McClinton anxiously.

thinks

Dwellers."

wanting to for days. He

they're

McClinton's deep solicitude for Joan's safety was obvious -- as obvious as the shy, whole-souled admiration which the stuttering engineer had shown for the girl agent since the beginning of the *Vulcan's* voyage.

"Joan would go after him if she saw him leaving camp." Curt guessed. "But I would have thought she'd have brought him back by now."

"Ezra can be plenty mule-headed when he gets an idea into his head," reminded Otho. "He probably insisted on going on. and she went along!"

Curt was thoroughly alarmed. Night was already falling upon the jungle. He knew from experience what uncanny dangers it contained.

"Otho, Grag -- get picks for weapon and come on!" he said swiftly. "We're going after them. and quickly."

He was himself grabbing up one of the steel bars. They hastened toward the gate of the stockade, and found that others had come with them.

Grabo, the Jovian mutineer, was one of them. "I know a path in there that I think leads toward the Cubics." he said. "I'll go along and show you."

"And I'm g-g-going, too." George McClinton insisted.

Kim Ivan was already opening the gate of the stockade, and the big Martian pirate swung along with them as they rapidly entered the jungle.

Grabo led the way through the dark fern-forest, avoiding tangle-trees and other dangers whose location he knew. They soon reached the path.

"We never followed it very far, but we've seen the Cubics using it," the Jovian informed.

"Here's a fresh slash by a bush- knife," called Otho, bending over a hacked vine that had until recently lain across the path. "Ezra and Joan must have gone this way, all right."

Curt's anxiety mounted by the minute as they hurried westward along that beaten trail.

"Barging off into this jungle by night, as though she was strolling around in a Venusian park!" he exclaimed.

"Listen!" said Grag suddenly, after they had traveled some miles.

The super-sensitive microphonic ears of the robot could pick up sounds no one else could hear. Grag stood, a towering, gleaming silhouette in the starlight, motionless and listening.

"I can hear a lot of activity from somewhere far ahead," finally reported the robot. "It sounds like rock being shattered."

"You're crazy!" Otho jeered. "Who the devil would be pounding up rock here in the jungle?"

"The Cubics wouldn't be -- or would they?" Kim Ivan wondered. "Come to think of it, they're always carrying rock when you see them."

Captain Future imperatively enjoined silence, and led the way on along the path toward the west. Presently he and the others could also hear the distant sound of clashing rock that had reached Grag's ears.

FEW minutes later found them crouching at the edge of the jungle and looking out at the starlit little city of the Cubics, with incredulous astonishment. The stone beehive structures, the hordes of Cubics engaged in crushing rock ores, the towering heaps of crushed ore behind the village, all stunned them as they had so recently dumfounded Ezra and Joan.

"Why, those Cubics are grinding out ore!" Otho gasped. "And look, when they get it crushed out, they simply carry it over to those big heaps and dump, and then go get more. They're balmy as Martian fool-monkeys!"

"I'll be blasted!" Kim Ivan was swearing in a whisper. "Why would the little creatures crush out all that ore when they haven't any use for it?"

"I see Joan and Ezra!" Grag announced. "Look, Chief!"

With sharp relief, Curt Newton perceived that Joan and Ezra were sitting on the ground in front of one of the little stone beehive buildings. A ring of Cubics surrounded them, guarding them. Obviously, the Cubics had taken the girl and the old marshal prisoner but had not harmed them.

"They've not been hurt," exclaimed Otho in a low voice. "Now all we've got to do is to crash in there and bring them out."

The android raised his steel weapon, as he and Grag and the others prepared to follow Captain Future in a sortie into the community. "Wait a minute," ordered Curt Newton. There was a strange, frozen look on his face.

Curt's eyes had been traveling over that bustling, inexplicable scene. And a possible explanation of it had entered his mind, one whose implications were paralyzing.

The possibility that had occurred to him sent through him an icy horror such as he had almost never before experienced. He seemed to see behind this half-comic, purposeless activity of the Cubics, a ghastly story.

"Good God!" he choked. "If I'm right, we're looking at the most awful scene our eyes have ever rested on."

"Chief, what are you talking about?" whispered Otho. "I can't see anything awful about those Cubics breaking up ore for metal they don't know how to use. It seems funny, to me."

"Yes, and look at the big heaps of it they've piled up," chuckled Kim Ivan. "They must have been doing this for hundreds of years."

"Yes, for hundreds of years," muttered Captain Future. His face was pale in the starlight. "For hundreds of years."

They stared at him, completely perplexed by the emotion of horror that seemed to have overwhelmed him.

"Listen," he said after a moment. "If my guess is right, we won't have to fight these Cubics to get Ezra and Joan away. I want you to refrain from making a single hostile move toward them when we go out there. Let me talk to them."

"Talk to them?" echoed Otho incredulously. "But they won't understand you. They're only queer, clever little animals."

"Maybe they will understand me," Captain Future muttered. "Though I almost hope they don't."

Completely without understanding, the four followed him out of the jungle as he stepped straight into the starlight of the open clearing.

Instantly they were glimpsed by the Cubics. At once the noisy crushing and carrying of ore was broken off, and the creatures came gliding toward the five newcomers.

They approached menacingly, in the form of huge, semi-manlike figures with upraised, threatening arms. Curt Newton waited until they were quite near, and then he spoke loudly to them. He used a queer language.

The Cubics stopped short! They froze where they were, every eye of the grotesque little cubical creatures staring at Captain Future.

"What's he saying?" murmured Kim Ivan wonderingly.

"He's talking to them in the Antarian tongue!" Otho said dumbfoundedly. "I don't get it."

B UT Captain Future's speech seemed to be having a paralyzing effect upon the Cubics. Curt was saying to them, in the Antarian language:

"We come from the home world, from Antares."
He waited. Had his appalling guess been right?
It seemed that it had, for the Cubics were now betraying the wildest excitement.

The creatures had not the intelligence or memory to understand the meaning of his *words*, Curt divined. But the *language* in which he spoke was striking some deep, buried chord of memory in their queer minds.

For the creatures had broken up their menacing formations and were rushing forward and swarming around Curt in a swarm of swirling cubical bodies. Their little eyes were fixed upon his face, and from their tiny mouths came little, piping sounds indicative of immense excitement.

Captain Future advanced toward the little city, with Otho and the others amazedly following. The Cubics continued to swarm around Curt eagerly. All work had ceased, and every Cubic was gathering.

Joan and Ezra saw them coming. Relief and astonishment were both in the girl's face as she greeted Captain Future.

"Curt, how did you win over the Cubics? They took us prisoner and they've been holding us here."

"Joan, you and Ezra speak to the Cubics," he ordered. "Say a few words to them in Antarian. You know I taught you a few phrases of it."

Wonderingly, the old marshal and the girl agent obeyed. No sooner had the words left their lips,

than the attitude of their captors changed. The Cubics who had been guarding them now clamored pipingly around them as well as around Captain Future.

"What in the name o' the Sun does it mean?" Ezra Gurney exclaimed. "How come just hearin' Antarian spoken has such an effect on these critters?"

Curt answered solemnly. "Because these Cubics are Antarians. At least, they're the remote descendants of human Antarians."

It was too staggering a statement for the others to take in immediately. They looked uncomprehendingly at the weird little creatures swarming by the hundreds around them -- the tiny cubical bodies, the queer, clawlike little limbs, the twinkling eyes and piping mouths.

"These critters human once?" gasped Ezra. "you must be jokin'."

Joan paled. That horror which had so shaken Curt Newton was invading her mind as she began to realize what he meant.

"Oh, Curt, *no!* You can't mean that the human Antarians who once colonized Astarfall, who left that inscribed tablet, changed into --"

"Into these Cubics, yes," Curt finished somberly.
"We wondered what had become of those human colonists. Well, here they are."

A stunned silence held his companions, while the unearthly little creatures continued their mad dance of excitement about them.

"Every species of life upon this worldlet suffered tremendous evolutionary development when Astarfall passed long ago through that region of cosmic radiation," Curt continued. "But evolution can work in a *downward* direction as well as an *upward* one. Some of the species on this world evolved upward, notably its plant-life. But others, like its human species, were subjected to a progressive degeneration by the mutational changes.

"The Antarians here mutated gradually into unhuman form. We know from that inscription that it was so. They mutated into a form in which they had lost the intelligence and memory that had been theirs. Their former telepathic method of prodigiously, communication developed compensate for the diminishing of their size and strength. By necessity, they developed an uncanny ability for physical and mental cooperation. That ability is all that has even kept them surviving,

when intelligence and size and strength were gradually lost."

HORROR was on the face of every one of Captain Future's companions, now. The little Cubics were no longer comic, but tragic.

These tiny, semi-intelligent creatures -- the descendants of men! The ghastliness of it shook them all.

"But why have they kept mining metals, all these centuries?" cried Kim I van. "They no longer have the intelligence to use it."

"Racial memory," Curt answered somberly, "persists in a species long after intelligence is lost. In these Cubics has persisted the tradition of their human ancestors who upon this world mined metal which the ships of Antares came to get."

"Good God!" whispered George McClinton horrifiedly. " All these c-c-centuries, the c-creatures have been faithfully m-massing ores because of that tradition."

Captain Future nodded. "That's why I spoke to them in the Antarian tongue. I hoped it would strike a chord of racial memory. And it has. They have a dim idea that we are those who have come for their gathered metal."

Tears glistened in Joan's eyes. There was something terribly poignant about the excited happiness of the simple little creatures swarming around them.

The Cubics eagerly led Curt and his companions toward the giant ore-heaps behind their community. There was a quality of pride in their excited, meaningless piping.

"There's almost all the metal here that we'll need for our shp," Curt said aftr a quick examination of the great heaps. "Everything except calcium."

"Blast it, why is it we can find everything on this world except the few pounds of calcium that are the most vital of all?" Otho muttered.

"Say, this will save us the work of mining ores, if the Cubics will let us have what we need of these metal piles." Grag declared.

Captain Future nodded. "And we need to save all the time we can, for we're far behind schedule on the ship. I'm sure they'll let us have it."

He stepped forward, and gathered up an armful of sample chunks from the great pile of beryllium ores. Instantly, as though comprehending his purpose, the Cubics rushed forward toward that pile.

The creatures swiftly formed themselved into several dozen of the big centipedal figures whose formation they took for carrying purposes. Other Cubics became octopoid figures who rapidly loaded the centipedal ones with masses of the beryllium ore. They they stood, eyeing Curt expectantly.

"They're going to carry the stuff wherever we want it," Captain Future guessed. "Poor devils -- they have some dim traditional notion that we've come in ships to this world to get it."

He and Joan and the others started back through the jungle, in the direction of the camp. Quickly the Cubics carrying the masses of ore swung into the jungle behind them and followed them along the path.

T WAS a weird procession through the dark fern-forest, the eager piping of the Cubics sounding incessantly as they followed the humans.

But when they were still a few miles from the camp, the attitude of the Cubics changed. They began to move more slowly, to show an extreme reluctance toward going farther in this direction. Finally they stopped altogether, putting down their loads and clustering with dismayed pipings around Captain Future.

"They won't go any farther!" said Otho surprisedly. "I wonder what they're afraid of?"

"I believe," Curt said thoughtfully, "that they know of something dangerous in the area in which our camp is located. That would explain why the Cubics have never come close to the camp."

"The Dwellers!" cried Kim Ivan. "Future, they're scared of the Dwelers!"

"Say, that's right," Grag rumbled. "We thought the Cubics might be the Dwellers, but we know now they're not. Who are the Dwellers, then?"

"They're somewhere in the area around our camp, whoever they are," Curt Newton murmured. "If the Cubics could only tell us."

He tried to get into intelligent communication with the little creatures. But it was impossible. Their only method of communication was the weird sixth-sense of cooperation by which they interlocked their own minds and bodies. Their piping sounds were utterly without meaning.

The only definite thing that could be gathered from the actions of the Cubics was that the area around the castaways' camp held danger, and that the creatures would not enter it. And the creatures set up a distressed piping when Curt and his

comrades finally strode on and left them.

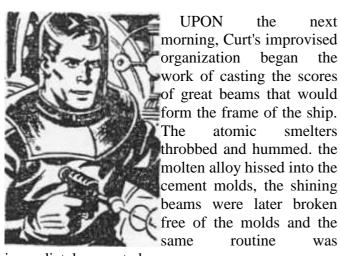
"We can have our own men come this far and sledge that metal ore to camp," Curt planned as they went on. "And the Cubics will let us have all the other ores we need from those great heaps. It'll save precious time!"

Joan looked at him soberly. "When Astarfall is destroyed, those little creatures will all perish?"

"Yes," said Captain Future heavily. "There's no possible way in which they could be saved. And would you *want* to keep alive those pitiful descendants of a once-human race?"

### **CHAPTER XVI**

Dire Awakening



immediately repeated.

During the next days, a mass of numbered beams and struts rapidly accumulated near the towering, giant cacti at the center of the camp. Grag and McClinton operated the smelters under Curt Newton's direction, while Otho, Kim Ivan and most of the mutineers hauled the loads of ore to camp.

The Brain still ranged out over the surface of Astarfall in vain search of calcium. So far, they had not found a grain of the vital catalyst. And so far, the Brain had not been able to translate the gaps in the ancient inscription, which might have given them a clue to the identity of the Dwellers.

"The Dwellers are somewhere within a few miles of our camp," Curt reasoned. "We know that from the actions of the Cubics. But what and where are they? We've seen no creatures of high intelligence in all this area."

"It's possible, I suppose," murmured the Brain,

"that that fellow Boraboll's suggestion had truth in it, and that the Dwellers are subterranean or invisible creatures. Rollinger's ravings indicate they're somewhere near."

Captain Future shook his head wearily. "It's a hideous riddle. And two more men disappeared last night, despite our new system of guards."

Curt had instituted a regime of guards designed to halt the disappearances. It was evident that the Dwellers only made their hypnotic attacks upon sleeping men.

So Captain Future had posted guards over all the sleepers, each night. He had instructed them: "If you see any man get up and start sleep-walking, it means he's in the hypnotic grip of the Dwellers. But don't awaken him. *Follow* him."

"Follow him?" the others had said startledly. "But the Dwellers will draw him right to them!"

Curt nodded. "Which means that by following their victim, you'll be led right to the Dwellers themselves. At last we'll find out what they are and where they lurk, and can take measures against them."

But here, again, the unearthly cunning of the mystery Dwellers showed itself. So long as Curt's guards remained wakeful and watching the sleeping men, not one hypnotic attack was made upon them.

It was obvious that the Dwellers were *aware* of the watchers, and were too crafty to give themselves away by drawing victims to themselves while anyone was watching.

"Anyway, it seems to have stopped the attacks and that's something," Captain Future said. "We need every man, now!"

For as these short days passed, the stark necessity of accelerating construction of the ship was terribly evident. Time was flying -- and each day meant Astarfall was nearer to the System and to destruction.

Curt Newton soon began fitting the growing pile of beams into the framework of the ship. The stout metal girders, the curved ribs, were attached solidly to the massive keel by means of their atomic welders. The torpedo-shaped framework of the vessel took definite form.

"Let's call it the *Phoenix*," Joan suggested. "In a way, it's rising out of the ashes of the old *Vulcan*."

"We'll start tomorrow casting plates, and making the refractory alloy for the rocket-tubes," Captain Future said haggardly. "We've got to go faster than we have."

THAT night two men disappeared from camp. The Dwellers had struck again. Curt's alarm-signal around the stockade had failed. And his guards had failed, for they admitted they had slept.

Curt had not the heart to blame them, for the men were all now nearing exhaustion. Yet their sleep had cost two lives, and had increased the terror of the Dwellers. Rollinger's shrieking was now incessant.

"I'll watch tonight myself," Captain Future declared.

All that day he sweated at the labor of producing the plates which would be welded onto the torpedolike framework of the *Phoenix*. But he insisted on keeping his watch that night.

"You're too exhausted yourself," Joan pleaded.
"Grag or Simon --"

"Grag is at the Cubics' city with the party transporting ore, and Simon is searching night and day for calcium," he answered. "I'll be all right."

But for once, Captain Future had overestimated his iron strength. Fagged by the superhuman strain under which he had been laboring, he fell asleep before midnight as he sat listening to John Rollinger's babbling.

In his sleep, he dreamed. He dreamed that out of depths of swirling darkness, a cold, vast, unseeable intelligence was approaching him.

He felt the icy grip of it upon his dazed mind. And deep within Curt's subconscious, an instinct shouted frantic warning.

"The Dwellers -- they're seizing you!"

He *knew* in his subconscious that that was what was happening. But he could not wake, he could not struggle. The tremendous power of the hypnotic grip upon his slumbering mind and body was now complete.

Curt dimly felt himself rising and moving forward. That helpless, unconquered corner of his mind told him that he was being drawn as a hypnotized victim toward the Dwellers. But still he could not wake nor do anything to break the hold of those vast, icy intelligences upon him.

There came a sudden violent shock! Curt suddenly found himself lying on the ground, awake.

He staggered to his feet. He had fallen to the ground near the pile of metal struts beyond which towered the giant cacti. And the ground was

rocking and rolling violently under him like the waves of a sea.

"My God!" choked Curt Newton. "The Dwellers. had me, but a sudden ground-quake knocked me awake and saved me."

The quake was not subsiding. It was growing every minute more violent, and everyone in the camp was awakening in wild terror.

They were all flung off their feet, onto the ground that rolled sickeningly under them with a dull, tremendous roar of diastrophism. The pile of metal struts collapsed with a clatter. Cries of terror arose.

"Keep your heads!" Captain Future shouted. "It's another quake."

"Look!" screamed Boraboll, pointing wildly to the east.

The sky there was blazing with fire. Up from the distant volcanoes were shooting huge geysers of flaming lava that painted the heavens crimson.

Vast clouds of steam and smoke and ashes whirled up to veil that titanic eruption. The air was thick with sulphurous fumes, and hot ashes rattled down upon them as the ground quivered ever more wildly beneath them.

"The end of this world has come already!" hoarsely yelled a terror-stricken mutineer.

THE darkness became Stygian as vast clouds of smoke from the erupting volcanoes filled the air. Winds were shrieking like fiends, and the sickening heave and fall of the solid ground beneath them continued.

Choking and gasping as he breathed the superheated, sulphurous fumes, Curt Newton struggled to the side of Joan.

"Lie down!" he yelled to her over the tumult. "This will soon pass."

Grag's tremendous voice shouted through the infernal uproar. "Chief, the ship's framework is going to break loose!"

A new and appalling sound had entered the symphony of destruction. It was the heavy rumbling and thumping of a great mass rocking on the ground.

The heavy metal framewrk of the *Phoenix* was rocking wildly in its rough cradle as the quakes continued. It threatened to roll free entirely, to roll down the knoll and crush out their camp and themselves.

"Get away!" shrieked a scared mutineer. "She'll

come loose on us any minute!"

"No!" blared Captain Future's voice. "We've got to pin her dow! Grag, get the sledges and some of the smaller beams for stakes! Otho, grab those sledge-cables and bring them!"

Not even the terrifying nature of their situation could temper the instant loyalty and obedience of the Futuremen. They sprang to obey.

And Curt found big Kim Ivan beside him as he ran to help Otho unfasten the tough, strong cables by which they had drawn the ore-sledges.

"If she goes when we're beside her, we'll never see the Moon again!" gasped Otho as they ran toward the ship with the cables.

Clang! Clang! Grag towered like an incredible metal giant in the storm, using the heaviest of the sledges to drive small, straight metal beams deep into the ground beside the *Phoenix*.

The torpedo-shape:d framework, upon which they had expended such tremendous toil and thought, was leaning toward them threateningly with each new heave of the quake. If it broke loose, it would smash itself and them, too.

Curt and Otho fumbled furiously in the darkness to tie their cables to the stakes and then to the lower beams of the frame. Kim Ivan had found a sledge and was helping Grag drive more stakes, while George McClinton had groped his way to them to help.

"Tighten those cables! Put two more on each side!" Curt shouted.

The framework was securely lashed down to the stakes. Now the tremors seemed subsiding a little. But now the buffeting winds were rising to a gale of hurricane force.

For two hours, they all lay flat upon the ground while the raging gale swept over them. By the end of that time, the quakes had ceased except for an occasional quiver. The disastrophic roar of shifting rock beneath had stopped, and the eruption of the volcanoes seemed lessening.

AWN came as the gale died down. The feeble, murky light disclosed a scene of destruction in their camp. The grimed, haggard castaways surveyed it in mute dismay.

The framework of the *Phoenix* was undamaged, except for a bent beam which could soon be straightened. The huge barrel-like cacti still towered unharmed at the high central point of the clearing. But nearly everything else was wrecked.

Most of the stockade was down, all the huts but one had collapsed, and their cyclotrons, tools and supplies were covered with debris.

Captain Future discovered that none of them had been seriously injured, though there were many bruises and minor hurts.

"By the Sun, I never thought *I'd* see another day," declared Kim Ivan feelingly. "I sure thought the cursed planetoid was cracking up."

"This is a warning," Curt told them urgently. "We can expect more and heavier cataclysms as Astarfall draws nearer the System. This unstable little world is starting to respond to the gravitational perturbations that in a couple of weeks will shatter it completely."

"Can we finish the *Phoenix* in time?" Joan asked breathlessly.

"We've got to," Curt said tightly. "And we've got to find the calcium which will enable us to operate it."

He detailed a small number of the men to clear up the battered camp. The rest he drove throughout the day with unremitting energy.

Grag and George McClinton straightened the few bent beams of the ship-frame, by softening the metal with atomic welders and exerting pressure upon it with improvised jacks. Meanwhile, Captain Future and Otho supervised the ceaseless operation of the big smelters.

They toiled all through that day casting the big beryllium alloy plates for the hull. The work parties of the mutineers brought constant new loads of ore upon their makeshift sledges. There was a quality of scared desperation in the way the convicts worked this day. They had been thoroughly impressed by the catastrophic outbreak of the night.

The Brain, returning that evening from his ceaseless search for calcium, reported that the whole volcanic area was in violent activity.

"New craters have broken out in the eastern section, and the Canyon of Chaos has partly collapsed on itself and is now a large lake of lava," he stated.

Curt nodded grimly. "The increasing shocks are allowing the radioactive hellfire at Astarfall's core to gush to the surface. It'll get rapidly worse. But what about the calcium?"

"Curtis, I haven't seen a sign of the element," Simon Wright confessed. "It and certain related elements like potassium and scandium just do not seem to exist upon this world."

"If we can only find a few pounds of the stuff, it'll be enough," Captain Future sweated. "Even a pound or so would at least allow us to use the cycs long enough to take off."

That night Grag stood watch over the camp. But since the tireless robot could not alone keep watch over all the sleepers, young Rih Quili shared his guard.

But the next morning Rih Quili himself was missing. It was tragically obvious that the Mercurian officer had fallen asleep and had been seized hypnotically by the Dwellers.

Ezra Gurney raged. "I liked that, boy a lot! If ever I find out who the cursed Dwellers are, I'll -- Cap'n Future, maybe them devilish tangle-trees are the Dwellers? Maybe they're intelligent."

URT shook his head haggardly. "No, they can't be the Dwellers. I admit that plant-life on this world seems to have evolved further than on any planet I've ever visited. But the Cubics, who know more than we do, show no fear of tangle-trees. It is this region that they dread and refuse to approach."

The other castaways were less stricken by the new disappearance than Curt had expected. Their fear of the Dwellers was still great, but even greater now was their terror of the coming cataclysm.

Through the next days, Captain Future drove the work around the clock. Their last two weeks were slipping rapidly away. And the ominously increasing volcanic activity and recurrent tremors showed that the final catastrophe was near.

They welded the big plates onto the framework of the *Phoenix*, joining each plate to the next with the atomic welder to form an airtight joint. Presently, the inner hull of the torpedo-like ship was all on. But they still must build on the outer hull.

Captain Future put that work into the hands of Grag and Otho, who trained the mutineers and divided them into gangs that worked in successive shifts. Curt himself, with McClinton and Kim Ivan, toiled to melt sand and minerals into glassite for the portholes and bridge-windows, to cast the inertron rocket-tubes, and to fashion tight tanks for water and oxygen.

Kim Ivan, mopping sweat from his brow and staggering from sixteen hours of unresting labor, found one consolation.

"The only good thing about it is that now we're

working day and night both, the cursed Dwellers have let us alone," panted the Martian.

Curt nodded exhaustedly. "Tomorrow we'll install the cyclotrons in the ship, and fit the rocket-tubes."

"And then we'll be able to leave this cursed planetoid!" exclaimed Moremos forcibly.

"Not until we find calcium," warned Captain Future.

The venomous Venusian's dark eyes narrowed. "What do you mean -- till we find calcium? I'm no engineer, but I've rocketed enough to know that a ship's cycs run' on copper fuel, and we've plenty of copper. In this emergency, we can take off without that catalyst you talk about, surely."

"You're a f-f-fool, Moremos," said George McClinton emphatically. "Without the calcium catalyst, the released energy of c-copper would b-blow us sky-high."

#### **CHAPTER XVII**

Disaster

THAT night came a frightening series of sharp shocks, like tremendous gunnings underground. The *Phoenix* rocked in its cradle, and great jets of fire shot far into the heavens from the neighboring volcanoes filling them with brilliance.

Joan Randall had

Joan Randall had incredible news for Curt when he awakened after that

night of fear.

"John Rollinger has recovered his sanity!" she exclaimed. "I think the shocks last night somehow did it. He's asking for you."

Curt went with her to the physicist, who all these days had been confined a babbling madman in one of the huts. Rollinger's spare face looked dazed but sane as he stared up at Curt.

"Captain Future, they've told me what's happened," the physicist said hoarsely. "I can't seem to remember anything. Yet I'm clear enough in my mind now."

"Take it easy, Rollinger," Curt advised. "You've

had a wonderful recovery, but you'll relapse if you undergo any strain now. I'll talk to you later ."

At regular intervals throughout that day came the ominous thunder-gunnings from beneath round. There was something terrifying about their regularity. Yet the volcanoes seemed unusually quiet, not even smoke rising from them.

Thoroughly frightened by these new developments, the castaways worked furiously all through the day under Captain Future's direction. They hauled the six massive cyclotrons into the *Phoenix*, and bolted them fast. The fuel-feed and power-lead pipes were installed, the heavy rocket-tubes were screwed into place, the hermetically tight space-door was hung.

By sunset the men were dropping in their tracks. The periodic sharp shocks had completely ceased two hours before. A dead, heavy hush reigned, and the air seemed thick and oppressive. Curt Newton's worn brown face was dripping with perspiration as he and McClinton and Otho staggered almost drunkenly out of the ship.

"Now -- the calcium," Curt panted. "We've less than five days in which to find it, or perish."

McClinton's face was hopeless. "The Brain has h-h-hunted all these weeks without finding a g-grain."

A wild yell interrupted them. It came from back inside the *Phoenix*. and was in Boraboll's voice.

"Rollinger is wrecking the ship!"

Curt lunged back into the vessel. John Rollinger towered in its cyc-room, his face flaming as he battered with a heavy bar at the cycs.

"Get him!" Curt yelled, plunging forward himself.

The whirling bar sliced toward him in a blow meant to shatter his skull. He ducked under it and tackled Rollinger.

The crazed scientist seemed to have the strength of ten men, and Curt's weary muscles could not hold him. But Grag and the others were rushing forward. In a few moments, Rollinger was bound.

Joan came running in to them, her face deathly white and a big bruise on her forehead.

"It's my fault!" she sobbed. "He seemed so sane all day, that finally I untied his bonds as he asked. Then he struck me down and ran toward the ship."

Rollinger was looking up at them with an expression of hatred and contempt upon his face. Then, abruptly, his face changed before their gaze.

It distorted into what it had been before, the face

of a madman. A stream of insane babblings fell from his lips.

"They took my body!" whimpered the madman. "They guessed that you mean to escape from here-" He trailed off in unintelligible mouthing.

"The Dwellers!" swore Otho. "They've always had a grip on Rollinger's shattered mind. And because they don't want their victims to leave here, they used him today to try to wreck the ship."

"Good God, what kind of creatures *are* they that can use such diabolical methods of attack?" cried Boraboll, shaking wildly.

"Take Rollinger back to his hut," Curt ordered.
"He didn't have time to do any real damage.
Though, in a few minutes more--"

The words were swept from his lips by a tremendous, booming sound that broke the heavy hush. The ship quivered suddenly in its cradle.

A SHRILL yell from Ezra brought them tumbling out into the open. The ground was shuddering like a harp-string. The booming was increasing in volume and rapidity by the second.

"The volcanoes are going to blow!" Curt shouted. "Everybody get --"

For a second time he was interrupted. And this time the interruption was an explosive detonation of such titanic magnitude as to stun them.

They glimpsed the crests of the distant volcanic range hurtling into the sky in great masses of rock and lava. The whole top of the range had blown off Fiery lava raved up in spouting geysers, then was hidden by a tremendous wave of dark, smoky gases that puffed outward gigantically.

"Into the ship!" Curt cried. "That burst of fumes will asphyxiate us all if it catches us!"

They tumbled back into the ship, Grag dragging the raving Rollinger in with them. Otho slammed shut the heavy door.

It was not a moment too soon. The wave of poisonous fumes rolled over the camp a minute later. Everything outside was blotted from sight by the swirling gases.

Then the fumes began to thin. The *Phoenix* was still shuddering in its cradle. When the titanic burst of gases had been swept away, they staggered out of the vessel.

They stood, appalled by what they saw. Innumerable colossal fountains of lava were pouring up from the shattered craters and chasms of

the neighboring volcanic area. And already a tenfoot crest of the flaming molten rock was rolling toward the jungle and their camp.

"That lava will wipe out everything here!" Moremos shouted. "Our only chance is to take off in the ship at once."

"No!" Captain Future cried. "I tell you, we can't take off without calcium."

"I don't believe you!" flamed the Venusian. "You're only stalling so that you and your friends can slip away in the ship and leave the rest of us here."

"It's better to risk starting without the calcium than to stay here and be killed by the lava!" howled Boraboll.

"Listen to me!" Curt Newton's voice rang out. "That lava may rollover the jungle but it won't touch us yet, for our camp is built on this knoll. The lava may surround the knoll, but won't be high enough to cover it. There's still a chance to find the calcium. The Brain can still come and go even though the lava surrounds us. You've got to trust in me."

"I'm with you, Future," said Kim Ivan promptly. "I think we're sunk, but we gave you a promise and we'll play it out to the end."

"Then get your men to work hauling everything up here to the highest part of the knoll!" Cut exclaimed. "Put the ores, tools, food supplies, everything up here between the ship and those cacti. Otho, you and Ezra come with me and we'll see whether the lava can be deflected in any way."

Ezra Gurney and the android, as well as McClinton, raced beside Captain Future through the jungle toward the oncoming flaming tide.

Curt's eyes desperately studied the topography of the ground as they advanced. He was hoping that some freak of the surface might enable them to build a temporary dam or wall to shunt the lava away from the knoll.

His hope died within him as they came closer to the advancing tide. The crimson-glowing wave was higher than a man, rolling forward with majestic slowness, hissing and crackling as it ate the jungle before it.

"Holy sun-imps, nothing can deflect that!" cried Otho.

RASH! The hollow sound of the explosion came from the camp behind them.

McClinton.

Curt whirled. "Good God, if those fools --"

He didn't finish. He was already racing back toward the knoll. As he ran up its low slope, Kim Ivan and Joan and others came stumbling frantically to meet him.

"The ship?" cried Captain Future. "Did Moremos --"

"Yes, he did!" raged Kim Ivan. The big Martian was mad with wild anger. "When we others were hauling the stuff up out of danger, Moremos and Boraboll and a dozen other fools like them tried to take off in the *Phoenix*."

Curt and the others came into sight of the ship. An icy feeling of utter despair clutched at his heart

The cyclotrons had exploded when copper fuel was released into atomic power without the inhibitory calcium catalyst to control the violent energy. The explosion had rent a great hole in the stern of the ship.

The battered bodies of Moremos and Boraboll and others who had been with them in the cyc-room had been blown out of the gaping hole in the hull. Other stunned mutineers were staggering dazedly beside it.

Ezra Gurney's voice was calm in despair. "So this is the end. Well, we made a good try, didn't

Through murky veils of smoke and steam. the rising Sun looked down upon a world in dreadful travail. The whole surface of Astarfall was shuddering uneasily as the little planetoid felt the increasing gravitational grip of the planetary system toward which it was rushing. The volcanic area was now a hell's-caldron of geysering lava, from which an angry red tide had crept out like an ominous blot over the jungle for miles.

Only the rounded knoll still, rose above the hissing lava flood which completely surrounded it. Upon this clear knoll towered the stark, barrelshaped forms of a score of grotesque, gigantic cacti. And near those monstrous growth bulked the metallic torpedo shape of the space ship around which less than fifty men were frantically laboring.

"We've got the first two cycs repaired," Crag reported to Captain Future as the red-headed planeteer came out of the ship. "How about the hull?"

"The inner hull is patched. We're still working "That s-sounded like cycs exploding!" cried on the outer one," Curt Newton panted.

He swayed a little from exhaustion as he stood, passing his hand wearily across his bloodshot eyes.

For two days and nights of terror, Captain Future had driven the survivors in this last burst of seemingly hopeless activity. It was he who had fought against the utter despair which had possessed them after the ill-starred attempt of Moremos and the others had crippled the *Phoenix*.

"Are you going to stand here and fold your hands and wait to die?" Curt had lashed them. "Or are you going to keep fighting?"

"What's the use, Future," said Kim Ivan hollowly. "The cycs are wrecked, and the hull torn open. And we've got only a few days left."

"We can repair those cycs and the hull if we hurry," Curt had insisted. "The lava won't come up over this knoll for awhile."

"Even if we do," Ezra muttered fatalistically, "we still can't get away without calcium. Look what happened when Moremos and the rest of them tried it."

"There's still a chance that Simon will find calcium" Curt said. "A chance for life. Are you going to take it?"

THEY looked at him, most of them, with faces sick with hopeless discouragement."

The Brain has been looking for calcium all these weeks without finding it," said one mutineer. "He can't find it now in a couple of days."

"He may," Curt stated, his face tightening. "And if he doesn't, we'll still get away. For I promise you that in that case, *I* will get the calcium."

They stared.

"Curt, you can't be serious," protested Joan. "If the Brain can't find calcium on this world, where would you get it?"

"I'll get it," Captain Future replied firmly. "I give you my solemn word that I will. And I never broke a promise in my life."

A faint gleam of hope stirred upon the faces of the stricken castaways. There was no ground for hope except their belief in Curt's promise. Yet they clutched at this straw.

"We'll have to bring the cycs out of the ship and repair their cracked jackets, "Captain Future was continuing rapidly. "Also, there'll be the job of repairing that hole in the hull, and the wrecked power and fuel-pipes. Every minute counts, from now on! To work!"

His indomitable resolution sparked the whole

frenzied effort that followed. Every pair of hands was needed now. Joan helped with the others, dragging masses of ore toward the smelters to be used in repairing the cycs.

The fearful disturbances were not dying down. Instead, they were becoming worse. Tremendous thunder of deep diastrophism continually shook the ground under their feet. Strangling fumes drifted over them, and then were torn away by the howling winds.

The hissing lava flood was crawling toward them from the east. They could hear the ominous crackling and snapping as it rolled over the jungle and lapped around the slopes of their knoll. It soon completely surrounded the knoll. They were now trapped here. The space ship was their only possible way of escape!

That did not apply to the Brain. Simon Wright could still fly out over the lava floor, and he did so again and again in his quest.

"Lad, I've been almost everywhere on this world," he reported to Curt that evening. "It's always the same. No calcium!"

Curt's face was dripping, his red hair disordered, his zipper-suit torn and soiled. He had been working on getting out the cyclotrons.

"Keep at it, Simon," he urged tautly. "We don't need much calcium, remember. A few pounds would be enough. Even a pound to use as catalyst in one cyclotron would be at least enough to get the ship off Astarfall."

The Brain looked at him closely. "If I don't find any, have you really a plan for getting calcium or was that promise of yours just a story to encourage the others?"

"I have a way of getting a little calcium, enough to allow a take-off," Captain Future replied. "But I only want to use that way if everything else fails."

The Brain seemed startled, but Curt did not elucidate. He had already strode back to the work with the cycs.

That night was a fearsome one. They had plenty of light by which to work, for the surrounding, glowing lava cast a lurid red glare. By that terrible illumination they toiled at the task of repairing the wrecked cycs.

Before midnight a terrific electric storm raged across the doomed planetoid. Blue lightning danced and flashed incessantly, and the bawling hubbub of thunder drowned the more ominous sound of seismic tremblings. Hot, hissing rain slashed down,

battering the half-blinded men.

Throughout the next day, the seething lava crept slowly up the sides of the knoll. Curt and his toiling men scarcely glanced at that inching, threatening tide. They were becoming numb to danger.

Late that afternoon, came two violent quakes. The *Phoenix* shifted dangerously in its cradle. And the big atomic smelters were overturned, spilling molten metal that almost engulfed Curt and Grag standing nearby.

"Get those smelters back up!" Captain Future shouted. "Move them into that little hollow near the cacti. They'll be better braced there."

"This is a n-n-nightmare," George McClinton stammered as he strained at the job with them. "We'll w-w- wake up back in the V-Vulcan."

Over the din came the incessant, crazy shrieking of John Rollinger . "Masters, spare us! Do not slay us!"

"He seems to think the Dwellers are causin' all this," Ezra Gurney said. "He's been prayin' to them all day."

They got the smelters upright in the little hollow near the towering cacti and soon had them in operation again. But their molds had been cracked by the quakes and had to be repaired before they could go on with the work of casting new jackets for the wrecked cyclotrons.

Men dropped and lay unconscious, during the fearful hours of that night of labor. Joan, staggering herself from weakness and strain, worked to revive them.

#### CHAPTER XVIII

Supreme Sacrifice



KIM IVAN was a tower of strength. The big Martian pirate, his battered face grimed and terrible, his eyes a little wild, drove the faltering mutineers on whenever they showed signs of halting work.

"We may be outlaws and pirates, but we're fighters, aren't we?" roared the Martian, to them. "This is

the biggest fight we ever had. Nobody is going to quit. There'll be no more traitors like Moremos. We shall work and survive together -- or we shall die together!"

They got the new jackets onto the cycs with fumbling hands. By morning they had moved the cycs back into the *Phoenix* and re-installed them.

While McClinton superintended this, Curt and others wielded atomic welders to repair the rent in the hull. Curt had not slept for forty-eight hours. He was staggering when Joan came to him with food.

"The job's almost done," he said thickly. "McClinton's hooking up the fuel-pipes now. Has Simon come back?"

The Brain had been gone all through the previous day and the night.

"Not yet," Joan answered. "Oh, Curt, maybe he's been caught by one of the quakes when he was exploring for calcium."

"He'll be back," Captain Future husked with unquenchable confidence. "Maybe his staying so long means that he has found calcium."

There was suddenly a low moaning sound in the air. Winds and streamers of smoke whirled frightenedly from a dozen different directions. They felt a curious lightness on their feet, as though they were sinking.

"Another quake!" Curt yelled warning. "Down, everybody!"

They flattened themselves upon the ground just as the shock hit. The ground seemed to rise and sink beneath them with inconceivable rapidity, like an elevator alternately ascending and descending.

A bursting, prolonged roar hit their ears. The *Phoenix* bounced up and down in its cradle, threatening to smash its keel by its own weight.

"Gods of Mars, look at that " yelled Kim Ivan.

Out there in the haze, miles away, whole new fiery *mountains* were rising majestically into being. The tortured throes of doomed Astarfall were buckling up its crust.

Tremendous explosions of steam veiled the distant spectacle of planetary chaos. A new, higher wave of lava came hissing across the smouldering crimson sea that surrounded the knoll. It splashed higher against the sides of their elevation, breaking in fiery spray.

Choking from the fumes as he stumbled to his feet, Curt Newton saw vaguely that John Rollinger had escaped from his hut. The madman, his bonds apparently snapped by that last shock, was praying

frenziedly upon his knees.

"Masters, do not slay us! Spare us!" he was praying insanely to the Dwellers.

APTAIN FUTURE, his brain rocking in this hour of planetary doom, disregarded the madman. "He had glimpsed a wavering shape flying down through the smoke and steam.

"It's Simon!" he shouted. "He's come back!"

Buffeted about by the howling currents of hot air, the Brain's glittering, transparent cube struggled down toward them.

"The calcium?" cried Ezra Gurney to him.

"I could not find any," said the Brain. He spoke as though with a great effort, his metallic voice hesitating and jerky. "There is no calcium."

"Masters! Masters!" came Rollinger's wild, insane shriek of imploration in the stunned silence that followed Simon's fateful news.

And Curt Newton suddenly noticed that, as he prayed, Rollinger was kneeling in front of the big clump of gigantic, barrel-shaped cacti.

Blinding revelation crashed into Captain Future's brain. The veil was abruptly torn from the sinister mystery of the planetoid.

"Good God!" he choked. "The Dwellers! I've found them out, at last!" The others looked at him, obviously believing that the superhuman strain had unseated his reason.

Curt ran forward to the nearest of the giant cacti in front of which the madman was kneeling. He laid his hand shakingly upon the fluted, spineless side of that mighty growth which towered high above him.

"We've been blind," he choked. "We knew that plant life had been tremendously developed by the burst of evolution through which Astarfall passed. We knew that the tangle-trees and other plants had developed the power to prey upon and ingest living creatures. We should have known that plant intelligence would have been developed too by that evolutionary spurt!"

A look of awe came on their faces.

"What do you mean?" Kim Ivan asked huskily.

"I mean that one species of the mutating plants of this world developed intelligence to the point where it could use hypnotic mental power to draw its victims to it!" Captain Future cried. "I mean that these giant cacti are the Dwellers!"

"Curt, look out!" screamed Joan.

side of the gigantic cactus-creature beside Curt Newton. It was like a perpendicular, slitted mouth that suddenly yawned in the elastic fiber body of the thing.

Curt, off balance, was falling in toward the hideous, yawning maw. By a superb effort, the Brain flashed through the air and thrust Captain Future aside. He fell sprawling a little beyond the plant-monster.

The gaping slit-maw in the side of the great growth instantly closed.

"Name o' the Sun!" Ezra Gurney cried wildly. "All our men that disappeared -- those things drew them to themselves and swallowed them!"

"And all this time we've been hunting the Dwellers, they've been right here in our own camp!" Kim Ivan was saying dazedly.

Curt snatched up one of the heavy bush-knives. "Come on and help me!" he panted. "We're going to cut that creature open."

"Curt, there's no time for mere revenge on the Dwellers," pleaded the Brain.

"This is not just revenge," Captain Future flashed. "These plant-creatures are intelligent. If there's any calcium on this planetoid, they'll know of it. And we'll make this one tell where it is."

HEY snatched up the heavy bush-knives and attacked the cactus-monster's mighty base. As they started slashing into the tough fiber, the hideous maw of the thing opened and closed in vain effort to snatch them.

"Don't!" screamed Rollinger. "You are hurting the Master. They will destroy us all!"

Captain Future suddenly reeled as into his brain came the impact of a raging telepathic attack. A furious thought-order to desist.

The others felt that mental resistance of the Dweller, too. Kim Ivan cried out.

"The thing's fighting back telepathically! This is like a crazy dream."

"Keep at it!" pressed Curt. "We know the Dwellers can't dominate us hypnotically when our conscious minds are awake. It can't stop us!"

The ground under them was shuddering violently from new quakes, as they fiercely slashed deeper into the base of the monstrous growth.

Ten feet in diameter was the massive thing, its outer skin of elastic plant-fiber shielding softer plant-tissues of pale white. Severed capillaries bled An opening had suddenly appeared in the fluted sticky sap in horrible imitation of a wounded

animal as they cut deeper.

The hypnotic resistance of the Dweller was frantic, and their minds seemed clouded and chaotic. Yet it could not overcome them. They slashed ever deeper -- and the whole towering, barrel-like mass of the creature was finally cut through and toppled aside.

Curt Newton slashed carefully down through the white fibrous tissues of the creature's base, until he uncovered that which he sought.

"God, it's the thing's *brain!*" choked Ezra Gurney.

Deep within the base of the giant plant-creature nestled a pink, convoluted mass of fiber. It pulsated and quivered with uncanny life. From it branched strange fibrous nerve-tendrils.

Brain of the Dweller! Brain of the great plant whose species had been evolved toward high intelligence by that same burst of mutations which had caused the degeneration of "the humans upon this planetoid!

Curt Newton poised his heavy knife over that helpless, quivering plant-brain. And he *thought* to it, in a concentrated mental message.

"I can kill you," Curt telepathed. "I will *kill* you. unless you give me information I require."

Back into his mind came the quick telepathic reply of the Dweller. "What do you wish to know?"

"I must know at once where upon this world we can procure a small quantity of calcium," Captain Future thought. "It is necessary to us if we are to escape from this doomed planetoid."

The answering thought of the Dweller was sharply startled. "What? Is it true that this world is doomed?"

"It's starting to crack open now!" Curt answered.
"The end is close at hand. Didn't you suspect that?"

"No, for we Masters have not visual or tactile senses with which to observe," was the reply. "We have noticed increasing tremblings of the ground, but had not thought that they implied a catastrophe to the whole world."

The cold, uncannily alien thought of the Dweller continued broodingly. "So this is the end of our glorious, brief history! For centuries, we have been evolving to greater intelligence and mental power, since the first mutations chanced to change us in that direction. We have dreamed of making ourselves the mental masters of all this world, of growing to such power that we could send our thoughts far out into the universe to explore and

learn. And now that dream is ended."

There was an overtone of weird tragedy in the thing's brooding thoughts. But Curt Newton desperately seized upon one possibility.

OU COULD still live if you tell, us where there is calcium," he thought, to the thing. "We could take your plant-body or roots and brain with us in our ship. You could grow again upon another world."

"It is impossible. Our bodies are so adapted to the chemical conditions of this planetoid that we could not live in a different habitat," answered the Dweller. "However, I would tell you where there was calcium if I could. I bear you no ill will. It is true that we were forced to catch and devour a number of your party, but you forced us to it by camping here. The small animals on which we formerly preyed would no longer approach this place with you here. And our bodies had to have the animal food upon which we subsist."

The Dweller continued his calm mental message. "But though I would help you if I could, I cannot. It is my belief that there is not, and has never been, a single atom of calcium on this world."

Curt felt the blood drain from his heart. "No calcium here at all? How can you know that, when you can neither see nor hear nor move?"

The Dweller replied. "We long ago investigated the history of this planetoid by probing the minds and knowledge of the degenerating human colonists here. We learned thus that this world was a moon in a planetary system whose sun was completely without calcium, potassium and several other elements. An atomic disintegration process similar to the carbon-nitrogen cycle had burned out all those elements before that sun ever gave birth to worlds."

Captain Future turned toward the others. He told them what he had just heard from the Dweller.

"The Dweller is speaking the truth," said the Brain gravely. "That explanation of why Astarfall is with- out calcium is scientifically probable. It explains the silicon structure of the bones of the jungle pigs."

"Then -- then it's all over for us?" Joan Randall whispered, her face very pale but her eyes fixed steadily on Curt.

At that moment a violent new quake rocked them. They saw through the swirling haze that

immense new bulks of rock were rising with a prolonged, grating roar from the lava nearby. The knoll rose and fell beneath them like a chip upon the sea. A new, higher wave of lava rolled its fiery crest toward them.

"That new wave o' lava will cover the knoll!" yelled Ezra Gurney.

One of the mutineers clutched wildly at Captain Future's arm. "You promised that if everything else failed, you had a way to at least get the ship off this world!"

Curt Newton's haggard face set, his lips tightening. The dreadful last expedient that he had kept in mind all these terrible days now stared him full in the face.

He met it unflinchingly. He knew what he had to do -- and there was small time left in which to do it.

His voice rang like a trumpet through the din. "Into the *Phoenix*, everybody. We're going to take off."

"But, Chief!" expostulated Otho wildly. "You know that as soon as we start the cycs without the calcium catalyst, they'll blow again."

"I have enough calcium to act as catalyst for *one* cyclotron," Curt answered swiftly. "I didn't tell any of you, because I was hoping to get more. But one cyc will be enough to get the ship off Astarfall."

"It's raining fire!" screeched one of the mutineers in terror.

A fiery sleet was indeed falling upon them from the smoke-darkened heavens as the burning ashes of the latest continuing eruptions descended.

THEY fought their way toward the ship. Curt steadied Joan's staggering steps, and yelled for Grag to bring the shrieking Rollinger.

Inside the *Phoenix*, he slammed shut the door to keep out the wave of scorching, superheated air that was rolling up from the lava which now was advancing to wash over the knoll.

"Up to the bridge-deck, all of you!" he shouted. "There'll be less danger there if anything happens to the cycs."

They slipped and tripped, for now the *Phoenix* was rocking wildly in its cradle. Curt thrust Otho into the pilot-chair, in front of which were the space-stick, throttles and few simple instruments they had devised.

"Otho, I want you to pilot the take- off," Captain Future ordered. "Now listen closely. I've only enough calcium cataylst for one cyclotron. I'll put it in the Number One cyc. You must only use that one cyc to power the take-off. And you must not let it run for more than a minute, for by the end of that time the cataylst will be used up.

"In that minute," he told the android tensely, "you must get the ship off and start it in the direction of the System. Then cut the cyc at once. But do *not* start to take off, until ten minutes after I have gone down to the cyc-room to put in the catalyst."

Otho nodded his head understandingly. "I get it, Chief. Ten minutes after you go down, I cut in the Number One cyc, use its full power for one minute to get the ship off, and then cut it off again."

Curt Newton paused. His gray eyes bad a queer brilliance in them as he met the gaze of his three old comrades.

"Simon – Grag – Otho -- just in case anything should go wrong, I want to say that no man ever bad finer pals. I'm thinking of the old days on the Moon, of all we four went through together."

It was a moment of tense emotion, and that emotion gripped Joan Randal as she clung to Captain Future.

"Curt, do you think we're not going to make it? Is that why you're saying goodbye?"

"We'll make it -- I'm sure we will," he told her earnestly. His eyes searched her face with strange wistfulness. He held her fiercely close, kissed her, then turned abruptly away. "Remember, Otho -- in ten minutes!"

Curt's heart was bursting with overpowering emotion as he flung himself down the companionway and back to the cyc-room.

George McClinton was there. McClinton had, just unscrewed the heavy inertron top of the massive Number One cyclotron. He clambered hastily down off the towering cylinder as Curt burst in

"McClinton, get up with the others!" Curt cried. "We're going to start, and I want everybody else up there out of harm's way."

The lanky engineer showed no sign of obeying. He came toward Curt, a strange smile on his homely, spe tacled face.

"No, Captain Future." It was odd that in this moment of superhuman strain his stammer finally left him. "I *know* what you're planning to do. I guessed it when you made that promise to the others. And I'm not going to let you do it."

His voice was deep as he told Curt, "You mean

too much to the System's future, to do this. And you mean too much to *her*."

There was a faraway tenderness that transfigured the engineer's homely face, as he spoke of Joan.

"But *I* don't mean much to the System or anyone," George McClinton continued. "That's why I'm doing -- *this!*"

The engineer's right hand flashed out as he spoke. He had a heavy wrench in that hand, and he aimed the unexpected blow at Curt Newton's head.

Curt had no chance to dodge, so utterly unforeseen was the attack. His skull rang, and he sank unconscious.

#### **CHAPTER XIX**

#### The Call



CAPTAIN FUTURE struggled back to consciousness a few minutes later to hear a bursting roar and feel a violent shock. He was pressed against the floor by brief, terrific acceleration.

The sensation passed swiftly. His head began to clear and he was able to stagger to his feet. He looked dazedly around.

The *Phoenix* was out in space. Its cyclotron had operated for the brief, prearranged moment, and the short blast of power from its rocket-tubes had flung it out in the take-off. It was rushing now toward the gleaming flecks of the Solar System. Astarfall was a smoky, fire-shot ball receding rapidly astern.

Curt looked wildly around the cyc-room. "McClinton!"

There was no answer. The lanky chief engineer was gone. And Curt knew where he had gone.

The Number One cyclotron was still hot from that moment of operation that had enabled them to take off. Curt Newton bowed his head against the side of the cyc, his face working.

The others found him thus when they came down into the cyc-room. Their voices were ringing with excitement and hope, but they were startled into silence when Curt raised his head.

Few men had ever seen tears in Captain Future's eyes. But they saw them now.

"Chief, what is it?" Grag cried anxiously. "What's wrong?"

Joan was looking puzzledly around. "Where's George McClinton? I thought he was down here."

Curt pointed back toward space. His voice was choked. "McClinton is back there."

They read tragedy in his face. "Curt, what do you mean?"

"I mean that McClinton gave up his life to allow us to escape from Astarfall," Captain Future husked. "He supplied calcium to the Number One cyc from the only possible source, the calcium of his own body's skeleton.

"He knew the only possible source of calcium, since there was none on Astarfall, was in our own bodies. The average human body contains more than a pound of calcium. Enough to act as catalyst in a cyclotron for at least a minute! McClinton knew that, and gave himself so that we could escape!"

"My God!" cried Ezra Gurney. "Do you mean that he --"

Curt Newton nodded heavily. "Yes. McClinton got inside Number One cyc. When it was turned on, the blast of atomic energy reduced his body to ashes. But in those ashes was enough calciumcatalyst to control the flow of energy and keep it from wrecking the cyc during that minute."

He added, "He knew I'd have stopped him. He knocked me out; when I came down into the cycroom."

Curt did not tell them, would never tell them, that he had himself had made desperate decision to sacrifice his own life in the same way rather than that they should all perish. But they all understood that now. And every surviving outlaw was humbled.

"When you said good-by to us up in the bridgeroom --" Joan began. Then, as her stricken eyes traveled from the silent cyclotron back to the vault of space behind the stern window, she began to sob wildly.

"Oh, Curt, that shy, stammering boy we all teased!"

He held her, soothing her. He heard the calm voice of the Brain.

"It was a fine thing McClinton did. It is too bad that his sacrifice was probably all for nothing."

"What do you mean?" cried Kim Ivan. "We're

clear of Astarfall."

"Yes, and we are rushing toward the System," answered the Brain. "But we *still* have no calcium. We can 't operate the cyclotrons again. That means we can't change course to land on any planet. Unless we somehow get help, we'll fall helplessly through the System toward the Sun."

HEY looked at each other, stunned. In all their minds, the same terrible fact had become obvious. If they were to operate the cyclotrons again, another of them must die!

Ezra Gurney yelled suddenly. "Look back there at Astarfall! She's goin'!"

They crowded to the windows. A we that made them forget their own deadly peril fell upon them at the spectacle of cosmic catastrophe they beheld.

The little planetoid had entered its final convulsions. The veils of smoke and steam were momentarily torn from its surface, and they looked upon its appalling surface.

Great rifts were opening in the crust of the worldlet, radiating outward like spreading cracks. Up from these rifts boiled the infernal core of the planetoid. Whole sections of the surface sank beneath this bursting lava like ice-floes submerging beneath the sea.

Wild streams of fire and steam shot for hundreds of miles out from the surface. For several minutes, the geography of the flaming sphere was fluid and formless. Blue lightning wreathed the dying world.

Astarfall exploded! As the cloven crust let the hydrosphere into its interior fiery core, the resulting blast of expanding steam tore the crumbling planetoid into fragments that hurtled out in every direction.

"She's gone!" cried Ezra hoarsely. "That was the end of her!"

They heard the Brain's brooding voice. "The end of the pitiful history of the Cubics, and the strange dreams of the Dwellers."

"Some of those fragments are coming after us!" Kim Ivan exclaimed. " And we can't dodge 'em!"

"We'll have to take our chance," Captain Future said tensely.

The fragments of the exploded planetoid were rushing after them with a speed that would soon overtake the *Phoenix*. They waited tautly.

They soon glimpsed jagged masses of rock whirling past nearby. Smaller debris struck against the *Phoenix'* sides and stern with a rattling clatter

that shook the ship in every beam. Then it was soon over.

"The inner hull wasn't holed by any of that debris," Grag soon reported.

"Then that danger is past," said the Brain. "But we'll soon be rushing into the System. Our speed will accelerate by the hour as we fall toward the Sun. What are we going to do?"

Again their terrible dilemma faced them. Without calcium, they could not operate the cycs to reach any planet. And they had but one source of the element, and that was their own bodies.

Kim Ivan spoke up. "Captain Future, I've been thinking. It was your work and McClinton's sacrifice that saved me and my boys from that world's end. We owe you something for that. I propose that we boys draw lots among ourselves."

"Agreed!" roared the voices of all the mutineers in chorus.

"Oh, no!" Joan sobbed. "No more of us must die in that terrible way! Please, Curt!"

"We'll find another way," Captain Future promised. "We've got to -- now."

He went up with them to the bridge-room. The *Phoenix'* was rushing silently on. The Line, the edge of the System, was not so far ahead. For the planetoid had been steadily approaching it during all these past weeks.

The bright little disc of Pluto gleamed, ahead of them and far to the left. Beyond lay the shining specks of the inner planets and the brilliant, small sphere of the Sun.

"If we could only call for help to the Patrol somehow," Curt muttered. " A cruiser could easily contact us before we fell in through the whole System to death."

Ezra shrugged hopelessly. "We ain't got no way to call -- no audiophone."

T HAD been impossible, of course, for them to undertake the construction of a complex audiophone transmitter when they had built the ship. They had barely completed the ship itself in time. But now their lack of a transmitter seemed to spell their doom.

"Could we build a small transmitter?" Joan asked hopefully:

Curt shook his head. "By the time we got it finished, we'd be crashing in through the inner planets to the Sun. And even then, if we had a transmitter, we'd have no power to operate it. We

still couldn't use the cyclotrons."

The Brain, hovering beside them, spoke thoughtfully. "There is a possible solution. You know that my serum-case embodies a small atomic motor which furnishes power to the generator of my traction-beams and the pumps which repurify the serum. You could take out that motor and generator from my 'body' and soon convert them into a small improvised audiophone transmitter."

Captain Future protested. "No, Simon! You would die when the pumps and purifiers stopped working and your vital serum became toxic!"

"I would not die at once," the Brain said coolly. "I would live for twenty-four to forty-eight hours, though I would lapse into unconsciousness during that time as my serum became toxic. In that time, you might be able to receive help in answer to your call. You could then revive me."

"But if help didn't come soon enough, it would be too late ever to revive you!" Curt exclaimed. "The power of your motor would be exhausted."

The Brain's metallic voice was annoyed. "You are being illogical, Curtis. It is certainly preferable that I should take that risk than that we should all perish. Remember what you had intended doing."

The logic was unassailable, yet Captain Future still hesitated. His haggard face was deeply moved as he looked into the lens-like eyes of his old companion.

"Simon, if this should cost your life --"

"Come. come, you know how I abhor sentimentality," interrupted the Brain annoyedly. Yet his metallic voice seemed oddly softer as he added, "Get on with it and stop wasting time."

The Brain glided to the shelf-like table beside the instrument panel -- the navigation-desk. His transparent cube rested there, waiting.

Sweat stood out on Curt Newton's brow as he and Otho got their meager supply of tools and began work. Deftly, quickly, they unbolted the bottom section of the Brain's strange body which contained its motive mechanisms.

They removed it, disconnecting and clamping the tiny pipes and cables which connected with the serum-case proper. Now the Brain was merely an isolated living brain in a transparent box of serum. His powers of speech, hearing, movement, had been stripped from him.

Captain Future worked with utmost speed now. Every minute counted, for the Brain's hours of life were now numbered. Rapidly, he and Otho and Grag took apart the mechanisms that had enabled Simon to live.

The small, powerful atomic motor, with its own compact charge of calcium catalyzed fuel, they set aside. They dissembled the motors from the serumpumps and hooked them to the generators that had produced the Brain's magnetic traction-beams. They thus set up a complete new circuit which would emit electro-magnetic waves in the frequency-range of audiophone usage. The little atomic motor was connected to furnish the power .

Curt Newton connected this little improvised transmitter to the makeshift antenna-sphere which Grag had prepared and attached outside the spacedoor.

He used the microphonic "ears" of the Brain for microphones.

"It's finished," Curt announced finally. "Turn it on, Otho."

The atomic motor throbbed with power. The generators began to hum, casting their roughly-tuned wave out into space.

Curt spoke into the microphones. "Ship Phoenix, Captain Future commanding, calling all Patrol vessels or other ships! We need help in the form of calcium supplies/ We are approaching the Line from outer space, in the following approximate position."

He gave the figures of their position as they had calculated it. Then he again repeated the call.

For the next few hours, Curt repeated the message at regular intervals. The last time, the little atomic motor went dead on the last words.

"She's played out!" Otho reported. "Fuel's clear gone. No wonder, when we've been running it full load all this time."

"Do you suppose our message was heard?" Joan asked Curt tensely.

"There's no way of telling," he muttered. "We've no receiver. All we can do is wait."

The *Phoenix* rushed silently on and on toward the Line. In torturing suspense, Captain Future peered haggardly out into the star-flecked void.

The superhuman strain under which he had been laboring for many days took its toll. He slept. his head against the window.

It was many hours later that he was awakened by Otho shaking his shoulder.

"Chief, come look at Simon!" begged the android fearfully.

Curt rubbed red-rimmed eyes dazedly. That his

exhausted slumber had been long, he knew from a glance at the planets far ahead. They were brighter, nearer.

Joan and the others were sleeping druggedly. Curt hastened with Otho to the shelf on which rested the now lifeless cubical case of the Brain.

He looked into the transparent cube. Its colorless serum had now assumed a dark tinge.

"What's happening, Chief?" Grag asked anxiously.

Curt's answer was a dry whisper. "The serum, no longer repurified, is becoming toxic. Simon is dying."

"But Simon can't die!" burst out the great robot.
"Why, we've been together, he and Otho and I, all
my life! Even before you were born!"

Curt Newton felt an icy, utter despair. He looked at them numbly. And then came a hoarse cry from Ezra Gurney, watching at the window.

"Cap'n Future, I saw a rocket-flash in space ahead of us!"

Curt and the others feverishly plunged to the window, and scanned the vault. But there was nothing save the cold, mocking eyes of the stars.

"I -- I guess I'm gettin' delirious," faltered Ezra.

"No!" Grag bellowed suddenly. "Look there!"

They still could see nothing. But the robot's super-keen photoelectric eyes had seen. And presently they caught it, too.

A long, slim cruiser with the familiar emblem of the Planet Patrol upon its bows was driving toward them through the void.

By the time that cruiser came into magnetic contact with the *Phoenix*. and space-suited men from it entered their ship, Curt Newton and the two Futuremen were waiting in the airlock.

The young Venusian captain of the Patrol cruiser, when he took off his helmet, stared at Curt and the others unbelievingly.

"Captain Future! It's really you and Agent Randall and Marshal Gurney, too! But tell us, what happened to the *Vulcan?* We've been searching for weeks, and then we heard your faint call yesterday."

"No time to explain now!" cried Curt. "The calcium, man! Where is it!"

The astonished Venusian thrust a heavy sack toward him. "I brought this much along. We have as much more as you need in the cruiser."

URT raced back up to the bridge. His bands were shaking as he tore open the

sack and placed a little of the precious calcium in the catalyst-chamber of the atomic generator from the Brain's body.

The copper fuel was already in the mechanism. They worked with frantic speed, reassembling the apparatus back into the case of the Brain. They could hear it start humming at once, operating pumps and purifiers.

They waited for minutes that to Curt seemed eternities. The dark tinge of the serum in the Brain's case slowly faded away. But that was all.

"We were too late," Otho whispered strickenly. "Too late to revive Simon."

Then the Brain spoke. Simon. Wright abhorred show of emotion. He would have died rather than to have displayed his feelings now.

He said metallically, "Well, what are you all staring at? The experiment was a success, wasn't it?"

The *Phoenix landed* on the spaceport of Tartarus City, on frigid Pluto, two days later. With it landed the Patrol cruiser that had brought them salvation. Its officers came to take charge of the mutineers and transport them out to the prison moon.

Kim Ivan and his men trooped out into the chilly dusk and stood quietly while the Patrol guards gathered around them.

"You won't have any trouble with us, boys," the big Martian said tersely. "We've been so close to death that we're not going to find Interplanetary Prison such a bad place for a while."

Curt Newton went toward the towering Martian. He held out his hand quietly. "Kim, will you shake hands?"

The big pirate's battered face grinned at him as he extended his fist. "I'm glad there's no hard feelings, Future. We went through quite a lot together."

"We did," Curt nodded. " And I've an idea we'll meet up again."

"Oh, sure, when you come out to Cerberus prison visiting," said the Martian ruefully.

"Kim, Moremos and the other men who actually killed the *Vulcan's* officers are dead, and they did it against your orders," Curt said. ."That won't be held against you and your chaps. And there's such a thing as commutation of sentences for men who have had enough of outlawry and would like to blast a straight rocket-trail."

Kim Ivan's massive face flamed. "Future, me and my boys won't mind Interplanetary Prison one

little bit, if we have that to hope for!"

Curt Newton grinned in turn. "I'm not promising anything, you big ruffian. But I've an idea we'll meet up on the space-trails some day."

When the convicts were gone, Curt turned. Grag and Otho had resumed their interminable argument. The Brain had gone with Ezra Gurney.

But Joan was standing in the frigid dusk, looking up at the dark vault of the heavens. She did not turn when he reached her side.

"Curt, I was thinking," she said softly. "It's

where he would have wanted to be buried -- in space."

He did not need to ask of whom she spoke.

He put his arm around her shoulders as he answered slowly.

"Yes, Joan. Any spaceman would want such burial, to have his ashes scattered out there on the face of the deep."

And they stood silent, gazing out into the vast vault of that shoreless sea in which a world and a hero had perished.