

## CALLISTAN TOMB

RAWSON stirred his huge bulk and snapped on the audio set at his elbow. "—bringing to you," it said abruptly, "flashes from the news fronts of the solar system.

"We have received from Earth a steady flow of bulletins on the plague. Our last report announces the death of Commissioner Wheelock, statesman and scholar of New Britain. The Commissioner, said the report, was eased of his pain by an injection of carbon monoxide in solution. His life had been surrendered by his attendant physicians a week ago when drawings were made for distribution of the radium ship's cargo and his group's number did not come up.

"Flashed from Calcutta: Dr. Mohan Shar, member of the Eurasian Presidium, is under treatment made possible by the arrival of Thursday's ore consignment from Callisto. Despite the advanced stage of the disease into which he had passed, it is confidently predicted that Dr. Shar will shortly reach complete recovery. That is all."

The audio fell silent, and Rawson cut off the current. "Hear that, Foley?" he asked.

His bunk-mate, a thin, bald Irishman, sat up. "Sure," he said. "Shar's a fine man. I'm glad he's pulling through the Sickness all right. Have you ever seen a case?"

"Two of them. Haven't you?"

"No—not yet. I'm part of the regular staff on here—I was working on the old five-hour day when the Sickness came to Earth and you extras shoved us out of bed with your three eight-hour shifts. Tell me about the Sickness. What does it do to them?"

Rawson scanned the ceiling evasively. "One of the cases I saw broke out on the Earth-Jupiter ship. The man knew he had it; his number was passed a few times; so he set off to come to the radium as long it wouldn't come to him. I don't know how he came through the cordon—I guess it was bribery."

Rawson hesitated. "They say it's a kind of cancer, but this man . . . Well, he didn't look like any cancer patient. It came through his skin, over in tight lumps like apples. He got red and shiny in the face, too. Skipper had to get the surgeon to give him the monoxide and chuck him out . . ."

"Go on, man," urged Foley, noting the big American's pause. "What was the other one?"

"The other one? He was my brother."

"Oh. . . . Sorry," said Foley "Then there's no one who knows better than you what we're doing. I thought it was the pay that brought you—but Lord knows you earn it every second. It's a job for real men down in the mines where we go . . ." He trailed off into silence as Rawson stared at him with something indescribable in his eyes.

"Don't talk about it then, Foley," said the American. "Do you think I don't know what the risk is down bottom? Do you think I don't know why the replacements and extras keep coining in and never going out? Don't talk about it at all, and maybe you and I will get along better while we last."

A bell rang clearly through the cramped quarters. "First notice," said the Irishman. "Get your kit."

The two snapped on respirators—Callista, of course, has an atmosphere, unbreathable but inert; you don't need a space suit, but you do need oxygen—took up their lamps and tools and stepped through their narrow bulkhead.

They walked in the open around the huge bulk of the ore-ship that was waiting to take a full load of crude pitchblende from the little mining settlement to Broadstream, six hundred miles away on the curve of the tiny moon's horizon. There it would be refined into pure radium that was packed into needle-like interplanetary cruisers, flashed to the stricken Earth.

AT the mouth of the mine by the elevator opening twenty men assembled. Shift B was ready to hop into the cage on the split second that shift A was out of it. Some laughed at this at first—but one second meant a cubic yard of ore that would not be wasted on Earth.

Men staggered from the elevator, grimy and fagged with their killing pace of the past eight hours. "Get in!" yelled Foley to his crew—he was the foreman—and they snapped onto the unsteady platform. There was a sickening drop that wrenched their stomachs; they snapped on their radium-exciter lamps

and clipped them onto their hats. The greenish glare showed the slick, wet, wooden-shored walls of the vein, dripping with water condensed by the pressure that obtains a mile beneath the surface of a planet. The men did not risk "bends," the terrible disease of most high-pressure workers, for their atmosphere was insoluble in their blood. Krypton and neon replaced the nitrogen of Earth that dissolved under pressure and reappeared in great bubbles when the pressure was released.

They picked up the tools abandoned by the last shift and trotted in formation down the long dim corridor, past the mouths of the peristaltic tubes and the heaps of slag, coming to a halt at the jagged tunnel wall of pitch-blende.

"Back up," said Foley, removing a slim metal tube from his kit. "We're going to try a shot."

With a gleaming drill he bit into the wall some dozen feet and rammed home the blasting charge. The men braced themselves against the walls and tensed their muscles as he swung a hammer against the ramrod.

There was the dull, coughing roar characteristic of trinitite as the bomb exploded, and a spider's web of cracks and seams spread slowly over the raw face of the rock. As the foreman sprang back the surface collapsed into a pile of rubble. Smoothly the crew shoved wooden shoring into the loose heap and swung heavy beam braces against the roof. A second crew plunged oversized shovels into the ore and dashed their loads into the mouth of the peristaltic tube that led a mile up to the surface. The tube buzzed a warning signal as it went into operation. Its massive bands of metal contracted and expanded rhythmically and the ore flung into its cavity slowly started for the surface; a lift of over a mile.

"Eighteen cubic yards," announced Foley sonorously as he checked the estimate off on his tally-board. He turned on a man savagely. "Batten than timber down," he yelled. "We can't take chances with anything down here." The worker touched his cap ironically, swung a sledge against a plank.

The last of the rubble had vanished into the tube and the tunnel was safe—or as safe as it ever was—for another blast, shored walls already slick with water.

"We're blasting," cried Foley. He picked up the electric drill and cut it into the surface, bearing down as the bit sank into the rock. Another gleaming capsule vanished into the drill-hole, was thrust home by the ramrod. The little Irishman raised a maul and slammed it against the mushroomed end of the rod.

With appalling suddenness the charge exploded and a geyser of rock sprayed out from the mine-face. Rawson spun about as a chunk of ore shot by him. He saw it smash into a great beam that should have held, but didn't.

"*Cave-in!*" he screamed, and in the greenish glare of his headlamp he saw the beam slowly topple over and a great collapse of the rock ceiling down the whole length of the corridor. Chunks of ore fell about his head and he felt a sickening shock at the base of his skull as he dropped. Screams rang in the air, but he was falling asleep; unconscious.

SOMEONE was shaking his shoulder, and little shocks of pain ran down his arm. "If you're dead," a voice shouted in his ear, "stay dead, but if you're not get up and make yourself useful!"

"Hello, Foley," he said dizzily as he sat up. "Who's left?"

The little foreman helped him to his feet. "You, me, Pyle, and Vogel," he said. "All the others are gone for good." Rawson didn't know Pyle, but Vogel and he had exchanged greetings now and then. The four men cast their lamps about them and surveyed their position.

"More than a mile underground," said Vogel flatly. "And our power's off, so we can't use the drills and scoops. We're in a little pocket at the very end of what used to be the tunnel. So I guess we're going to . . . I guess we're going to die. . . ."

Foley stared at him for a moment, then suddenly smashed his palm across the man's face. Evenly, then, he said: "Remember that my commission as foreman doesn't expire at the option of the crew. So long as you're alive you take my orders. And you obey them."

Pyle, a thin young man, seemed overcome with a fit of ague. He was trembling in every limb and his eyes rolled wildly, returning again and again to the fading patch on Vogel's cheek where the foreman had struck him.

"We're going to dig with our bare hands," said Foley. "We have hours of life left to us, and it's a sin

to waste them. Something may happen.”

"Yes," said Pyle shrilly, "something may happen." He flung himself on a wall and clawed at the chinks of rock, tearing them from their bed. On Foley's nod the two others silently fell in beside the boy and picked at surface. The foreman watched for a moment and picked up a long drill that trailed a useless length of wire. Hefting it, he unscrewed its bit and handed it to Pyle. "You can use this crow-bar, he said. "I'll look for more."

All together they tore into the wall, and slowly a new tunnel, at a forty; five degree angle with the old, was formed.

"SIX THOUSAND feet or more on the vertical to go," said Vogel pantingly as he bore down on his improvised wedge. "And we've dug about fifty feet in two hours... My guess is that we've got just about ten hours more to live."

Rawson, a huge chunk of ore in his arms, paused. "I thought that we weren't going to talk about it," he said evenly.

Pyle had been tearing at the rock frantically; without stopping he panted, "Something might happen. Don't fight now. Something might happen." It was his constant liturgy. Rawson wondered if he were going mad. At best they were keeping themselves occupied; no one really believed, he was sure, that help would come in time. He hefted the rock and walked back to the mouth of their ragged tunnel.

"Drop it here," said Foley, who was stacking the excavated ore. The little space they had was nearly filled with it.

The big American let the rock fall at the mouth of the peristaltic tube, now silent and still. "How long does the respirator work?" he asked abruptly.

"It depends. Twenty hours, sometimes. In any case, not long enough for us . . . Let's get back to the diggings."

Foley flashed his head-lamp over the ceiling of their new tunnel. "I don't like that flow-bulge," he said. "Get a stick of timber if you can find one long enough."

Rawson rummaged through the piles of wreckage and wrenched out a slender beam. "Will this do?" he asked.

Foley eyed it. "It's long enough, at least," he said. "Jam it in—there." The prop was shoved against the ceiling, and they swung their bodies against it to batten it into place. Then they waited to see. Slowly the beam arced under a pressure greater than the soft Callistan timber was cut to resist; as the men stood aside it snapped with the noise of a gunshot.

"Even at this, light gravity rock flows when there's a mile of more rock in over it. Our ceiling's descending faster than I thought; it's pretty hard to estimate when you've been used to working with shoring."

Rawson was staring in fascination at the roof of their tunnel, his headlamp making a glaring spot of green radiance on the dead-black ore. Foley clapped him on the shoulder. "Get back to the face," he said.

Again they were scratching at the yielding wall of rock, tearing fragments from it bodily and prying others loose with cunning leverage.

Rawson felt a shortness of breath, and wondered about the respirators. Twenty hours, maybe, he thought. Suddenly he had to speak.

"Foley," he cried, "why don't we try a blast?"

The foreman looked at him blankly; then his face seamed into a grim smile. "If the others are willing," he said. "Only you have to realize that would be pretty close to suicide for us, without shoring. If it comes clear we'll have gained fifteen feet or so in a hundredth of the time it'd take us this way. If it doesn't ... All in favor?"

"Why not?" said Vogel. And, flatly, "I hope it fails!"

Pyle coughed nervously. "If you think there's a chance. . . ."

"That settles it, I think," said Foley. "Hold your crowbar while I tap." They bit slowly into the wall, making a ragged drill-hole. Silently Foley produced a gleaming capsule of trinitite and rammed it in.

"Stand back to the mouth of the tunnel," he said. They retreated; Foley was left alone in the triple glare of their headlamps. He raised his improvised sledge—the grip of an electric drill—and slammed it down against the protruding stump of the crowbar.

In one awful moment, as Rawson saw it, there was the clashing jump of the bar, the reticulated explosion across the face of the rock, and the roaring collapse of their tunnel as Foley sprang clear of danger.

THEY surveyed the wreck blankly. A long silence was broken by a sobbing wail from Pyle. "Trapped," he choked. "More than a mile under the surface of this damned moon!"

"Last chance gone," said Vogel grimly. "Now we sit down and die."

"So nobody was fooled?" asked Foley quietly. "Well, keep your heads now, at any rate. If we're going to die let's do it like little gentlemen."

"A pair of dice or a deck of cards would help," said Rawson. "Or we can play word-games like 'Ghosts' if you know how to spell. I don't. I never could win at that game."

Foley sat down placidly, his back propped upon the pile of ore that choked the silent peristaltic tube. "I don't know the game," he said. "Do you think we ought to pray?"

Pyle was aimlessly turning-over his head-lamp, which he had taken from his sweaty hat, and the solid flare of green from the lens swung over the men and their cramped quarters. His hands were twitching.

"Put that damned thing down!" Vogel was irritated.

"No" said Pyle stubbornly. Then he cried out; turned to Foley suddenly. "Listen!" he yelled. "This lamp is a radium-exciter!"

"Sure it is." said Foley.

"Yeah, but listen! The tunnels are crawling with radium. Can't we open lamp and take out the element? And turn it on the walls and blast our way to the surface?"

Vogel and Rawson looked up. Foley glanced at them, and slowly shook his head.

"No go," he said. "You could start the action, but how could you control it? The whole mine'd burn up, and it wouldn't stop then—it would go on to all the other ores around that are rich in radium."

"And there are a lot of those." said Rawson, suddenly seeing the impossibility of the scheme. "The whole planet's radioactive. It would be another sun, and we don't need one. Shelve the idea for reference,"

Pyle nodded slowly, staring at them. There was a shattered look on his face, and his eyes gleamed in the light of their lamps, "I see," he whispered. "You don't want to be saved. You won't take a chance for your own lives."

"There's no chance in it," said Rawson harshly. "You open that lamp and the planet goes up in flames before you can say scat. That means that everybody on the planet dies, and a lot of people on the other moons of Jupiter die too. And then there's no radium at all to cure the Sickness except what they can get on Mercury and Deimos. Forget it!"

Pyle stood up, still turning the lamp over in his trembling hands. Slowly he said, "If you won't, I will." He took a tool from his pocket and pried at the lens of his light.

Vogel sprang to his feet and snatched the device from Pyle's hands. "Sit down," he ordered angrily, "or I'll knock you down." The younger man looked at his empty hands for a moment, and with the swiftness of a madman snatched Vogel's lamp, cap and all, from his head, and darted to the other end of the tunnel. He scabbled madly at the rock, and hit a weak spot, a spot they hadn't tried because it led down to the lower galleries of the mine. He quickly enlarged it, and rolled through,

The three started in pursuit, following the bobbing green light that Pyle was carrying, and came to a confused halt when it winked out.

"We'd better go back," said Foley wearily, "The tunnels branch out down there—we'd never find him." Draggingly they returned to the place of the second cave-in, to stare blankly at the tumbled rocks.

"AND now we wait for the whole world to explode," said Vogel wearily. "Is there any reason why he can't do it?"

Foley rubbed his brow. "It'll take quite a while to open the lamp without smashing it up," he said. "Maybe he will smash it. He'll have to turn it off and work in the dark, and once you get the case off it's a delicate little machine,"

Rawson was listening with half an ear. He thought he heard a vague clanging sound—untraceable. "Listen to that," he said. "Where does it come from?"

The little foreman looked about sharply, then pressed his ear to the metal casing of the peristaltic tube. "Wait a minute," he said. Then he opened his mouth wide and rested his teeth on the tube. "Bone transmission," he explained absently, the words distorted by the configuration of his lips and mouth.

The others followed suit. Rawson almost cried aloud when he heard the regular scrapes and taps from a mile above. Taking up a bit of rock he smashed it against the casing three times. A moment, and the noises ceased; there sounded three regular clinks from the surface.

"They know we're alive now," Foley said tensely. "What will they do?" With disconcerting suddenness the answer came. The warning signal of the peristaltic tube buzzed loudly, and the device went into rumbling squeaking, clanging action. The three men stared as great chunks of rock vanished up the shaft.

They looked at each other. "It was never done before," said Foley, "but—Vogel, you go in first."

Silently the man wedged his shoulders in the mouth of the tube. Systolic and diastolic bands collapsed and swelled, and he was smoothly carried up out of sight. Hastily the two others crammed themselves into the mouth of the device.

Rawson felt the walls of the tube with his hands. They seemed at once slimy and rugged as they weirdly sucked him with irreal force to the surface. He tilted his head back and let his lamp lay on the feet of Foley, a few yards above him.

"Any trouble down there?" called back the foreman.

"No," said Rawson grimly, "I was just wondering if we'll reach the surface before Pyle opens his lamp." He gave a sudden cry as an abnormally tight systolic band closed on him. "Are there any more narrow ones up there?" he asked. "I nearly got fractured hip just now."

"That was defective, I think," called down Foley. "I noticed it myself. Keep calm, man. We aren't through yet."

The clanging action of the bands became noisier, and Rawson, though he couldn't be sure, thought that their speed had been increased.

For many long minutes he tried to coordinate his breathing with the rhythmical pulsings of the tube, and again looked up when Foley shouted for his attention. "Vogel says he sees light ahead," called the little roan. "They must have put a lamp in the shaft for us."

"That's good," Rawson tried to say, but he had a little picture brought to mind of the crazed Pyle tinkering at his murderous device far down below in the dark. And the picture included also a boy who looked like his brother, except for the blotched red swellings of the Sickness, and a tiny, furious star that shot swiftly around a calcined and blackened planet.

And then he was out of the tube and in the light of the distant sun.

"CUT IT out!" snapped Foley at the men swarming around with inane congratulations. "There's a maniac loose down there. He's trying to open his lamp and excite the radium in the mine. He'll blow up the planet! Have you got anything to stop him?"

Camp Supervisor Teck stiffened. "Finney," he ordered, "Run for the Chief Engineer. Tell him to rig a blanket wave between frequencies three and three point two." He turned again to Foley. "If he doesn't get it open in the next two minutes we're safe. And if he does . . . we'll never know it. How was it going through the tube?"

"No trouble, except a couple of tight bands. Are you going to send a rescue crew down that way?"

"I think we'd better. If they don't get the blanket wave set up in a hurry we'll have to." Swiftly he detailed a group of eight to the tube. With a great metallic groan the mechanism was reversed, and the men were swallowed down into the crust of the moon.

Teck touched a stethoscope to the struts of the device. "No trouble yet," he announced to the circle

of men. "They're telling each other dirty stories." There was a crackle of laughter from the group.

"Now they're coming out at the bottom. Wait—yes, their exciter lamps have gone out." He looked up smiling. "That means the blanket wave is working." Again Teck applied the stethoscope. "I can't hear them now. They had electrics, so I suppose they've gone to look for Pyle." He reversed the tube again, to its normal upward flow, and sat down to wait. A few minutes passed, then—

The tube coughed suddenly. "Something coming up," said Teck. He speeded up the systole and diastole; it seemed as though the mechanism would tear itself apart with the violence of its drive. Chunks of rock dribbled over the lip of the tube, and then the limp figure of a man was disgorged. "Is this Pyle?" asked the supervisor.

Rawson scanned the lax figures. "Yes. Did they kill him?"

"Just a needle of paralyte, I think. It'll wear off in a moment." Swiftly Teck strapped down the arms and legs of the unconscious man. The eyes opened and in them was the stare of madness.

"Pretty hopeless," said the supervisor, turning away.

"Oh well... One man crazy and seventeen dead. No wonder they cancelled my insurance," said Rawson.

"What about it?" Foley asked. "They didn't mean much. Their work did; it meant the chance of living to millions of people."

"Sure, I know it; I work here, don't I? And I'm not quitting ... But—But let's get to sleep, I mean. We need it." They trudged away, were halted in their tracks by a yell from the men around the peristaltic tube. They spun around.

Rocks were pouring from the mouth of the tube. The supervisor picked one up, held it to the distant sun and scanned it. "Ore!" he cried, his words carrying to Rawson and Foley. "And the highest grade stuff I've seen in a long time!"

Rawson looked at Foley and smiled; received Foley's smile in exchange. Then they started off once more for their bunks. It had been a hard shift.