



**The Fifth-Dimension Tube**  
Leinster, Murray

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## About Leinster:

Murray Leinster (June 16, 1896 - June 8, 1975) was the nom de plume of William Fitzgerald Jenkins, an American science fiction and alternate history writer. He was born in Norfolk, Virginia. During World War I, he served with the Committee of Public Information and the United States Army (1917-1918). Following the war, Leinster became a free-lance writer. In 1921, he married Mary Mandola. They had four daughters. During World War II, he served in the Office of War Information. He won the Liberty Award in 1937 for "A Very Nice Family," the 1956 Hugo Award for Best Novelette for "Exploration Team," a retro-Hugo in 1996 for Best Novelette for "First Contact." Leinster was the Guest of Honor at the 21st Worldcon in 1963. In 1995, the Sidewise Award for Alternate History was established, named after Leinster's story "Sidewise in Time." Leinster wrote and published over 1,500 short stories and articles over the course of his career. He wrote 14 movie and hundreds of radio scripts and television plays, inspiring several series including "Land of the Giants" and "The Time Tunnel". Leinster first began appearing in the late 1910s in pulp magazines like *Argosy* and then sold to *Astounding Stories* in the 1930s on a regular basis. After World War II, when both his name and the pulps had achieved a wider acceptance, he would use either "William Fitzgerald" or "Will F. Jenkins" as names on stories when "Leinster" had already sold a piece to a particular issue. He was very prolific and successful in the fields of western, mystery, horror, and especially science fiction. His novel *Miners in the Sky* transfers the lawless atmosphere of the California Gold Rush, a common theme of Westerns, into an asteroid environment. He is credited with the invention of parallel universe stories. Four years before Jack Williamson's *The Legion of Time* came out, Leinster wrote his "Sidewise in Time", which was first published in *Astounding* in June 1934. This was probably the first time that the strange concept of alternate worlds appeared in modern science-fiction. In a sidewise path of time some cities never happened to be built. Leinster's vision of nature's extraordinary oscillations in time ('sidewise in time') had long-term effect on other authors, e.g., Isaac Asimov's "Living Space", "The Red Queen's Race", or his famous *The End of Eternity*. Murray Leinster's 1946 short story "A Logic Named Joe" describes Joe, a "logic", that is to say, a computer. This is one of the first descriptions of a computer in fiction. In this story Leinster was decades ahead of his time in imagining the Internet. He envisioned logics in every home, linked to provide communications, data access, and commerce. In fact, one character said that "logics are civilization." In 2000, Leinster's heirs

sued Paramount Pictures over the film *Star Trek: First Contact*, claiming that as the owners of the rights to Leinster's short story "First Contact", it infringed their trademark in the term. The U.S. District Court for the Eastern District of Virginia granted Paramount's motion for summary judgment and dismissed the suit (see *Estate of William F. Jenkins v. Paramount Pictures Corp.*, 90 F. Supp. 2d 706 (E.D. Va. 2000) for the full text of the court's ruling). The court found that regardless of whether Leinster's story first coined "first contact", it has since become a generic (and therefore unprotectable) term that described the overall genre of science fiction in which humans first encounter alien species. Even if the title was instead "descriptive"—a category of terms higher than "generic" that may be protectable—there was no evidence that the title had the required association in the public's mind (known as "secondary meaning") such that its use would normally be understood as referring to Leinster's story. The Second Circuit Court of Appeals affirmed the lower court's dismissal without comment. William F. Jenkins was also an inventor, best known for the front projection process used for special effects in motion pictures and television in place of the older rear projection process and as an alternative to bluescreen. Source: Wikipedia

**Also available on Feedbooks for Leinster:**

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- *The Aliens* (1959)
- *Space Tug* (1953)
- *The Wailing Asteroid* (1960)
- *Talents, Incorporated* (1962)
- *Operation Terror* (1962)
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# Chapter 1

## The Tube

THE generator rumbled and roared, building up to its maximum speed. The whole laboratory quivered from its vibration. The dynamo hummed and whined and the night silence outside seemed to make the noises within more deafening. Tommy Reames ran his eyes again over the power-leads to the monstrous, misshapen coils. Professor Denham bent over one of them, straightened, and nodded. Tommy Reames nodded to Evelyn, and she threw the heavy multiple-pole switch.

There was a flash of jumping current. The masses of metal on the floor seemed to leap into ungainly life. The whine of the dynamo rose to a scream and its brushes streaked blue flame. The metal things on the floor flicked together and were a tube, three feet and more in diameter. That tube writhed and twisted. It began to form itself into an awkward and seemingly impossible shape, while metal surfaces sliding on each other produced screams that cut through the din of the motor and dynamo. The writhing tube strained and wriggled. Then there was a queer, inaudible *snap* and something gave. A part of the tube quivered into nothingness. Another part hurt the eyes that looked upon it.

And then there was the smell of burned insulation and a wire was arcing somewhere, while thick rubbery smoke arose. A fuse blew out with a thunderous report, and Tommy Reames leaped to the suddenly racing motor-generator. The motor died amid gasps and rumblings. And Tommy Reames looked anxiously at the Fifth-Dimension Tube.

It was important, that Tube. Through it, Tommy Reames and Professor Denham had reason to believe they could travel to another universe, of which other men had only dreamed. And it was important in other ways, too. At the moment Evelyn Denham threw the switch, last-edition newspapers in Chicago were showing headlines about "King" Jacaro's forfeiture of two hundred thousand dollars' bail by failing to appear in court. King Jacaro was a lord of racketeerdome.

While Tommy inspected the Tube anxiously, a certain chief of police in a small town upstate was telling feverishly over the telephone of a posse having killed a monster lizard by torchlight, having discovered it in the act of devouring a cow. The lizard was eight feet high, walked on its hind legs, and had a collar of solid gold about its neck. And jewel importers, in New York, were in anxious conference about a flood of untraced jewels upon the market. Their origin was unknown. The Fifth-Dimension Tube ultimately affected all of those affairs, and the Death Mist as well. And—though it was not considered dangerous then—everybody remembers the Death Mist now.

But at the moment Professor Denham stared at the Tube concernedly, his daughter Evelyn shivered from pure excitement as she looked at it, and a red-headed man named Smithers looked impassively from the Tube to Tommy Reames and back again. He'd done most of the mechanical work on the Tube's parts, and he was as anxious as the rest. But nobody thought of the world outside the laboratory.

Professor Denham moved suddenly. He was nearest to the open end of the Tube. He sniffed curiously and seemed to listen. Within seconds the others became aware of a new smell in the laboratory. It seemed to come from the Tube itself, and it was a warm, damp smell that could only be imagined as coming from a jungle in the tropics. There were the rich odors of feverishly growing things; the heavy fragrance of unknown tropic blossoms, and a background of some curious blend of scents and smells which was alien and luring, and exotic. The whole was like the smell of another planet of the jungles of a strange world which men had never trod. And then, definitely coming out of the Tube, there was a hollow, booming noise.

**I**T had been echoed and re-echoed amid the twistings of the Tube, but only an animal could have made it. It grew louder, a monstrous roar. Then yells sounded suddenly above it—human yells, wild yells, insane, half-gibbering yells of hysterical excitement and blood lust. The beast-thing bellowed and an ululating chorus of joyous screams arose. The laboratory reverberated with the thunderous noise. Then there was the sound of crashing and of paddings, and abruptly the noise was diminishing as if its source were moving farther away. The beast-thing roared and bellowed as if in agony, and the yelling noise seemed to show that men were following close upon its flanks.

Those in the laboratory seemed to awaken as if from a bad dream. Denham was kneeling before the mouth of the Tube, an automatic rifle in his hands. Tommy Reames stood grimly before Evelyn. He'd snatched

up a pair of automatic pistols. Smithers clutched a spanner and watched the mouth of the Tube with a strained attention. Evelyn stood shivering behind Tommy.

Tommy said with a hint of grim humor:

"I don't think there's any doubt about the Tube having gotten through. That's the Fifth Dimension planet, all right."

He smiled at Evelyn. She was deathly pale.

"I—remember—hearing noises like that...."

Denham stood up. He painstakingly slipped on the safety of his rifle and laid it on a bench with the other guns. There was a small arsenal on a bench at one side of the laboratory. The array looked much more like arms for an expedition into dangerous territory than a normal part of apparatus for an experiment in rather abstruse mathematical physics. There were even gas masks on the bench, and some of those converted brass Very pistols now used only for discharging tear- and sternutatory-gas bombs.

"The Tube wasn't seen, anyhow," said Professor Denham briskly. "Who's going through first?"

Tommy slung a cartridge belt about his waist and a gas mask about his neck.

"I am," he said shortly. "We'll want to camouflage the mouth of the Tube. I'll watch a bit before I get out."

He crawled into the mouth of the twisted pipe.

**T**HE Tube was nearly three feet across, each section was five feet long, and there were gigantic solenoids at each end of each section.

It was not an experiment made at random, nor was the world to which it reached an unknown one to Tommy or to Denham. Months before, Denham had built an instrument which would bend a ray of light into the Fifth Dimension and had found that he could fix a telescope to the device and look into a new and wholly strange cosmos.<sup>1</sup> He had seen tree-fern jungles and a monstrous red sun, and all the flora and fauna of a planet in the carboniferous period of development. More, by the accident of its placing he had seen the towers and the pinnacles of a city whose walls and towers seemed plated with gold.

Having gone so far, he had devised a catapult which literally flung objects to the surface of that incredible world. Insects, birds, and at last a cat had made the journey unharmed, and he had built a steel globe in which to attempt the journey in person. His daughter Evelyn had

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1. "The Fifth-Dimension Catapult"—see the January, 1931, issue of *Astounding Stories*.

demanded to accompany him, and he believed it safe. The trip had been made in security, but return was another matter. A laboratory assistant, Von Holtz, had sent them into the Fifth Dimension, only to betray them. One King Jacaro, lord of Chicago racketeers, was convinced by him of the existence of the golden city of that other world, and that it was full of delectable loot. He offered a bribe past envy for the secret of Denham's apparatus. And Von Holtz had removed the apparatus for Denham's return before working the catapult to send him on his strange journey. He wanted to be free to sell full privileges of rapine and murder to Jacaro.

The result was unexpected. Von Holtz could not unravel the secret of the catapult he himself had operated. He could not sell the secret for which he had committed a crime. In desperation he called in Tommy Reames—rather more than an amateur in mathematical physics—showed him Evelyn and her father marooned in a tree-fern jungle, and hypocritically asked for aid.

Tommy's enthusiastic efforts soon became more than merely enthusiastic. The men of the Golden City remained invisible, but there were strange, half-mad outlaws of the jungles who hated the city. Tommy Reames had watched helplessly as they hunted for the occupants of the steel globe. He had worked frenziedly to achieve a rescue. In the course of his labor he discovered the treachery of Von Holtz as well as the secret of the catapult, and with the aid of Smithers—who had helped to build the original catapult—he made a new small device to achieve the original end.

**T**HE whole affair came to an end on one mad afternoon when the Ragged Men captured first an inhabitant of the Golden City, and then Denham and Evelyn in a forlorn attempt at rescue. Tommy Reames went mad. He used a tiny sub-machine gun upon the Ragged Men through the model magnetic catapult he had made, and contrived communication with Denham afterward. Instructed by Denham, he brought about the return of father and daughter to Earth just before Ragged Men and Earthling alike would have perished in a vengeful gas cloud from the Golden City. Even then, though, his triumph was incomplete because Von Holtz had gotten word to Jacaro, and nattily-dressed gunmen raided the laboratory and made off with the model catapult, leaving three bullets in Tommy and one in Smithers as souvenirs.

Now, using the principle developed in the catapult, Tommy and Denham had built a large Tube, and as Tommy climbed along its corrugated interior he knew a good part of what he should expect at the other end. A steady current of air blew past him. It was laden with a myriad

unfamiliar scents. The Tube was a tunnel from one set of dimensions to another, a permanent way from Earth to a strange, carboniferous-period planet on which a monstrous dull-red sun shone hotly. Tommy should come out into a tree-fern forest whose lush vegetation would hide the sky, and which furnished a lurking place not only for strange reptilian monsters akin to those of the long-dead past of Earth, but for the bands of ragged, half-mad human beings who were outlaws from the civilization of which Denham and Evelyn had seen proofs.

OMMY reached the third bend in the Tube. By now he had lost all sense of orientation. An object may be bent through one right angle only in two dimensions, and a second perfect right angle—at ninety degrees to all former paths—only in three dimensions. It follows that a third perfect right angle requires four dimensions for existence, and four perfect right angles five. The Tube bent itself through four perfect right angles, and since no human-being can ever have experience of more than three dimensions, plus time, it followed that Tommy was experiencing other dimensions than those of Earth as soon as he passed the third bend. In short, he was in another cosmos.

There was a moment of awful sickness as he passed the third bend. He was hideously dizzy when he passed the fourth. For a time he felt as if he had no weight at all. But then, quite abruptly, he was climbing vertically upward and the sougning of tree-fern fronds was loud in his ears, and suddenly the end of the Tube was under his fingers and he stared out into the world of the Fifth Dimension.

Now a gentle wind blew in his face. Tree-ferns rose to incredible heights above his head, and now and again by the movements of their fronds he caught stray glimpses of unfamiliar stars. There were red stars, and blue ones, and once he caught sight of a clearly distinguishable double star, of which each component was visible to the naked eye. And very, very far away he heard the beastly yellings he knew must be the outlaws, the Ragged Men, feasting horribly on half-scorched flesh torn from the quivering, yet-living flanks of a monstrous reptile.

Something moved, whimpered—and fled suddenly. It sounded like a human being. And Tommy Reames was struck with the utterly impossible conviction that he had heard just that sound before. It was not dangerous, in any case, and he watched, and listened, and presently he slipped from the mouth of the Tube and by the glow of a flashlight stripped foliage from nearby growths and piled it about the Tube's mouth. And then, because the purpose of the Tube was not adventure but science, he went back down into the laboratory.

**T**HE three men, with Evelyn, worked until dawn at the rest of their preparations for the use of the Tube. All that time the laboratory was filled with the heavy fragrance of a tree-fern jungle upon an unknown planet. The heavy, sickly-sweet scents of closed jungle blossoms filled their nostrils. The reek of feverishly growing green things saturated the air. A steady wind blew down the Tube, and it bore innumerable unfamiliar odors into the laboratory. Once a gigantic moth bumped and blundered into the Tube, and finally crawled heavily out into the light. It was scaled, and terrible because of its monstrous size, but it had broken a wing and could not fly. So it crawled with feverish haste toward a brilliant electric light. Its eyes were especially horrible because they were not compound like the moths of Earth. They were single, like those of a man, and were fixed in an expression of utter, fascinated hypnosis. The thing looked horribly human with those eyes staring from an insect's head, and Smithers killed it in a flash of nerve-racked horror. None of them were able to go on with their work until the thing and its fascinated, staring eyes had been put out of sight. Then they labored on with the smell of the jungles of that unnamed planet thick about them, and noises now and then coming down the Tube. There were roars, and growlings, and once there was a thin high sound which seemed like the far-distant, death-startled scream of a man.

## Chapter 2

### The Death Mist

**T**OMMY REAMES saw the red sun rise while he was on guard at the mouth of the Tube. The tree-ferns above him came into view as vague gray outlines. The many-colored stars grew pale. And presently a bit of crimson light peeped through the jungle somewhere. It moved along the horizon and very slowly grew higher. For a moment, Tommy saw the huge, dull-red ball that was the sun of this alien planet. Queer mosses took form and color in the daylight, displaying colors never seen on Earth. He saw flying things dart among the tree-fern fronds, and some were scaled and some were not, but none of them were feathered.

Then a tiny buzzing noise. The telephone that now rested below the lip of the Tube was being used from the laboratory.

"Smithers will relieve you," said Denham's voice in the receiver. "Come on down. We're not the only people experimenting with the Fifth Dimension. Jacaro's been working, and all hell's loose!"

Tommy slid down the Tube in an instant. The four right-angled turns made him sick and dizzy again, but he came out with his jaw set grimly. There was good reason for Tommy's interest in Jacaro. Besides sides three bullet wounds, Tommy owed Jacaro something for stealing the first model Tube.

He emerged in the laboratory on his hands and knees as the size of the Tube made necessary. Smithers smiled placidly at him and crawled in to take his place.

"What the devil happened?" demanded Tommy.

Denham was bitter. He held a newspaper before him. Evelyn had brought coffee and the morning paper to the laboratory. She seemed rather pale.

"Jacaro's gotten through too!" snapped Denham. "He's gotten in a pack of trouble. And he's loosed the devil on Earth. Here—look!" He jabbed his finger at one headline. "And here—and here!" He thrust at others. "Here's proof."

The first headline read: "KING JACARO FORFEITS BOND." Smaller headings beneath it read: "Racketeer Missing for Income Tax Trial. \$200,000 Bail Forfeited." The second headline was in smaller type: "Monster Lizard Killed! Giant Meat Eater Brought Down by Rifleman. Akin to Ancient Dinosaurs, Say Scientists."

"JACARO'S missing," said Denham harshly. "This article says he's vanished, and with him a dozen of his most prominent gunmen. You know he had a model catapult to duplicate—the one he got from you. Von Holtz could arrange the construction of a big Tube for him. And he knew about the Golden City. Look!"

His finger, trembling, tapped on the flashlight picture of the giant lizard of which the story told. And it was a giant. A rope had upheld a colossal, leering, reptilian head while men with rifles posed self-consciously beside the dead creature. It was as big as a horse, and at first glance its kinship to the extinct dinosaurs of Earth was plain. Huge teeth in sharklike rows. A long, trailing tail. But there was a collar about the beast-thing's neck.

"It had killed and was devouring a cow when they shot it," said Denham bitterly. "There've been reports of these creatures for days—so the news story says. They weren't printed because nobody believed them. But there are a couple of people missing. A searching party was hunting for them. They found this!"

Tommy Reames stared at the picture. His face went grimmer still. He thought of sounds he had heard beyond the Tube, not long since.

"There's no question where they came from. The Fifth Dimension. But if Jacaro brought them back, he's a fool."

"Jacaro's missing," said Denham savagely. "Don't you understand? He could get through to the Golden City. These beast-things are proof somebody did. And these things came down the Tube that somebody travelled through. Jacaro wouldn't send them, but somebody did. They've got collars around their necks! Who sent them? And why?"

TOMMY'S eyes narrowed.

"If civilized men found the mouth of a Tube, it would seem like the mouth of an artificial tunnel or a cave—"

"And if annoying vermin, like Jacaro's gunmen"—Denham's voice was brittle—"had come out of it, why, intelligent men might send something living and deadly down it, as men on Earth will send ferrets down a rat-hole! To wipe out the breed! That's what's happened! Jacaro's gone through and attacked the Golden City. They've found his Tube. And they've sent these things down...."

"If *we* found rats coming from a rat-hole," said Tommy very quietly, "and ferrets went down and didn't come up, we'd gas them."

"And so," Denham told him, "so would the Golden City."

He pointed to a boxed double paragraph news story under leaded twenty-point headline: "Poisonous Fog Kills Wild Life."

The story was not alarming. It said merely that state game wardens had found numerous dead game animals in a thinly-settled district near Coltsville, N.Y., and on investigation had found a bank of mist, all of half a mile across, which seemed to have caused the trouble. State chemists and biologists were investigating the phenomenon. Curiously, the bank of mist seemed not to dissipate in a normal fashion. Samples of the fog were being analyzed. It was probably akin to the Belgian fogs which on several occasions had caused much loss of life. The mist was especially interesting because in sunlight it displayed prismatic colorings. State troopers were warning the inhabitants of the neighborhood.

"The gassing's started," said Denham savagely. "I know a gas that shows rainbow colors. The Golden City uses it. So we've got to find Jacaro's Tube and seal it, or only God knows what will come out of it next. I'm going off, Tommy. You and Smithers guard our Tube. Blow it up, if necessary. It's dangerous. I'll get some authority in Albany, and we'll find Jacaro's Tube and blast it shut."

Tommy nodded, his eyes keen and thoughtful. Denham hurried out.

**M**INUTES later, only, they heard the roar of a car motor going down the long lane away from the laboratory. Evelyn tried to smile at Tommy.

"It seems terrible, dangerous."

Tommy considered and shrugged.

"This news is old," he observed. "This paper was printed last night. I think I'll make a couple of long-distance calls. If the Golden City's had trouble with Jacaro, it's going to make things bad for us."

He swept his eyes about and frowningly loaded a light rifle. He put it convenient to Evelyn's hand and made for the dwelling-house and the telephone. It was odd that as he emerged into the open air, the familiar smells of Earth struck his nostrils as strange and unaccustomed. The laboratory was redolent of the tree-fern forest into which the Tube extended. And Smithers was watching amid those dank, incredible carboniferous-period growths now.

Tommy put through calls, seeing all his and Denham's plans for a peaceful exploration party and amicable contact with the civilization of that other planet, utterly shattered by presumed outrages by Jacaro. He

made call after call, and his demands for information grew more urgent as he got closer to the source of trouble. His cause for worry was verified long before he had finished. Even as he made the first call, New York newspapers had crowded a second-grade murder off their front pages to make room for the white mist upstate.

**T**HE early-morning editions had termed it a “poisonous fog.” The breakfast editions spoke of it as a “poison fog.” But it grew and moved and by the time Tommy had a clear line to get actual information about it, a tabloid had christened it the “Death Mist” and there were three chartered planes circling about it for the benefit of their newspapers. State troopers were being reinforced. At ten o’clock it was necessary to post extra traffic police to take care of the cars headed upstate to look at the mystery. At eleven it began to move! Sluggishly, to be sure, and rather raggedly, but it undoubtedly moved, and as undoubtedly it moved independently of the wind.

It was at twelve-thirty that the first casualty occurred. Before that time, the police had frantically demanded that the flood of sightseers be stopped. The Death Mist covered a square mile or more. It clung to the ground, nowhere more than fifty or sixty feet high, and glittered with all the colors of the rainbow. It moved with a velocity of anywhere from ten to twenty miles an hour. In its path were a myriad small tragedies—nesting birds stiff and still, and rabbits and other small furry bodies contorted in queer agonized postures. But until twelve-thirty no human beings were known to be its victims.

Then, though, it was moving blindly across the wind with a thin trailing edge behind it and a rolling billow of descending mist as its forefront. It rolled up to and across a concrete highway, watched by perspiring motor cops who had performed miracles in clearing a path for it among the horde of sightseeing cars. It swept on into a spindling pine wood. Behind it lay a thinning sheet of vapor—thick white mist which seemed to rise and move more swiftly to overtake the main body. It lay across the highway in a sheet which was ten feet deep, then thinned to six, to three....

**T**HE mist was no more than a foot thick, when a party of motorists essayed to drive through it as through a sheet of water. They dodged a swearing motorcycle cop and, yelling hilariously, plunged forward. It happened that they had not more than a hundred yards to go, so the whole thing was plainly seen.

The car was ten yards across the sheet of mist before the effect of its motion was apparent. Then the mist, torn by the car-eddy, swirled

madly in their wake. The motorists yelled delightedly. There is a picture extant, taken at just this moment. It shows the driver with a foolish grin on his face, clutching the wheel and very obviously stepping on the accelerator. A pandemonium of triumphant, hilarious shouting—and then a very sudden silence.

The car roared on. The road curved slightly. The car did not. It went off the road, turned over, and its engine shrieked itself into silence. The Death Mist went on, draining from the roadway to follow the tall, prismatically-colored cloud. It moved swiftly and blindly. To the circling planes above it, it seemed like a blind thing imagining itself confined, and searching for the edges of its prison. It gave an uncanny impression of being directed by intelligence. But the Death Mist, itself, was not alive.

Neither were the occupants of the motor car.

When Tommy got back to the laboratory after his last call for news, he found Evelyn in the act of starting to fetch him.

"Smithers called," she said uneasily. "He says something's moving about—" The buzzer of the telephone was humming stridently. Tommy answered quickly.

"Just want you handy," said Smithers' calm voice. "I might have to duck. Some Ragged Men are chasin' something. Get set, will ya?"

"Ready for anything," Tommy assured him.

Then he made it true: rifles handy, a sub-machine gun, grenades, gas masks. He handed one to Evelyn. Smithers had one already. Then Tommy waited, grimly ready by the Tube-mouth.

**T**HE warm, scent-laden breeze blew upon him. Straining his ears, he could hear the sound of tree-fern fronds clashing in the wind. He heard the louder sounds made by Smithers, stirring ever so slightly in the Tube. And then he caught a vague, distant uproar. It would have been faint and confused at best but the Tube was partly blocked by Smithers' body, and there were the multiple bends further to complicate the echoes. It was no more than a formless tumult through which faint yells came occasionally. It drew nearer and nearer. Tommy heard Smithers stir suddenly, almost as if he had jumped. Then there were scrapings which could only mean one thing: Smithers was climbing out of the Tube into the jungle of the Fifth-Dimension world.

The noise rose abruptly to a roar as the muffling effect of Smithers' body was removed. The yells were sharp and savage and half mad. There was a sudden crackling sound and a voice screamed:

*"Gott!"*

The hair rose at the back of Tommy's neck. Then there came the deafening report of an automatic pistol roaring itself empty above the end of the Tube. Smithers' voice, vastly calm:

"It's a'right, Mr. Reames. Don't worry."

A second pistol took up the fusillade. Yells and howls and screams arose. Men fled. Something came crashing to the mouth of the Tube. Smithers' voice again, with purring note in it: "Get down there. I'll hold 'em off." Then single deliberately spaced shots, while something came stumbling, fumbling, squirming down through the Tube, so filling it that Smithers' shooting was muted.

**T**HEN came the subtly different explosions of the Very pistols, discharging gas bombs. And Tommy drew back, his jaw set, and he stood with his weapons very ready indeed, and a scratched, bleeding, exhausted, panting, terror-stricken human being in the tattered costume of Earth crawled from the Tube and groveled on the floor before him.

Evelyn gave a little exclamation, partly of disgust and partly of horror. Because this man, who had had come from the world of the Fifth Dimension, was wholly familiar. He was tall, and he was lean, emaciated now; he wept sobbingly behind thick-lensed spectacles, and his lips were far too full and red. His name was Von Holtz; he had once been laboratory assistant to Professor Denham, and he had betrayed Evelyn and her father to the most ghastly of possible fates for a bribe offered him by Jacaro. Now he groveled. He was horrible to look at. Where he was not scratched and torn his flesh was reddened as if by fire. He was exhausted, and trembling with an awful terror, and he gasped out abject, placatory ejaculations and suddenly collapsed into a sobbing mass on the floor.

Smithers emerged from the Tube with a look of unpleasant satisfaction on his face.

"I chased off the Ragged Men with sneeze gas," he observed with a vast calmness. "They ain't comin' back for a while. An' I always wanted to break this guy's neck. I think I'll do it now."

"Not till I've questioned him," said Tommy savagely. "He and Jacaro have started hell to popping, with that Tube design they stole from me. He's got to stay alive and tell us how to stop it. Von Holtz, talk! And talk quick, or back you go through the Tube for the Ragged Men to work on!"

# Chapter 3

## The Tree-Fern Jungle

**T**OMMY watched Smithers drive away. The sun was sinking low toward the west, and the car stirred up a cloud of light-encarmined dust as it sped down the long, narrow lane to the main road. The laboratory had intentionally been built in an isolated spot, but at the moment Tommy would have given a good deal for a few men nearby. Smithers was taking Von Holtz to Albany to add his information to Denham's pleas. Denham had ordered it, when they reached him by phone after hours of effort. Smithers had to go, to guard against Von Holtz's escape, even sick and ill as he was. And Evelyn had refused to go with him.

"If I stay in the laboratory," she insisted fiercely, "you can slip down and I can blow up the Tube after you, if the Ragged Men don't stay away. But by yourself...."

Tommy did not consent, but he was helpless. There was danger from the Tube. Not only from ghastly animals which might come through, but from men. Smithers had fought the Ragged Men above it. He had chased them off, but they would come back. Perhaps they would come very soon, perhaps not until Denham and Smithers had returned. If they could be held off, the as yet unknown dangers from the other Tube—of which only the lizards and the Death Mist were certainties—might be counteracted. In any case, the Tube must not be destroyed until its defense was hopeless.

Tommy made up a grim bundle to go through the Tube with him: the sub-machine gun, extra drums of shells, more gas bombs and half a dozen grenades. He hung the various objects about himself. Evelyn watched him miserably.

"You—you'll be careful, Tommy?"

"Nothing else but," said Tommy. He grinned reassuringly. "There's nothing to it, really. Just sitting still, listening. If I pop off some fireworks I'll just have to sit down and watch them run."

**H**E settled his gas mask about his neck and started to enter the Tube. Evelyn touched his arm.

"I'm—frightened, Tommy."

"Shucks!" said Tommy. "Also a couple of tut-tuts." He stood up, put his arms about her, and kissed her until she smiled. "Feel better now?" he asked interestedly.

"Y-yes...."

"Fine!" said Tommy, and grinned again. "When you feel scared again, ring me on the phone and I'll give you another treatment."

But her smile faded as, beaming at her, he crawled into the first section of the Tube. And his own expression grew serious enough when she could see him no longer. The situation was not comfortable. Evelyn intended to marry him and he had to keep her cheerful, but he wished she were well away from here.

He tried to move cautiously through the Tube, but his bundles bumped and rattled. It seemed hours before he was climbing up the last section into the tree-fern jungle. He was caution itself as he peered over the edge. It was already night upon Earth, but here the monstrous, dull-red sun was barely sinking. It moved slowly along the horizon as it dipped, but presently a gray cast came over the colorings in the forest. Flying things came clattering homeward through the masses of fern-fronds overhead. He saw a projectile-like thing with a lizard's head and jaws go darting through an incredibly small opening. It seemed to have no wings at all. But then, in one instant, a vast wing-surface flashed out, made a single gigantic flap—and the thing was a projectile again, darting through a *cheraux-de-frise* of interlaced fronds without a sign of wings to support it.

**T**OMMY inspected his surroundings with an infinite care. As the darkness deepened he meditatively taped a flashlight below the barrel of the sub-machine gun. Turned on, it would cast a pitiless light upon his target, and the sights would be silhouetted against the thing to be killed. He hung his grenades in a handy row just inside the mouth of the Tube and set his gas bombs conveniently in place, then settled down to watch.

It was assuredly necessary. Von Holtz's story confirmed his own and Denham's guesses and made their worst fears seem optimistic. Von Holtz had made a Tube for Jacaro, working from the model of Tommy's own construction. It had been completed nearly a month before. But no jungle odors had seeped through that other Tube on its completion. It opened in a sub-cellar of a structure in the Golden City itself, the city of

towers and soaring spires Denham had glimpsed long months before. By sheer fortune it opened upon a rarely used storeroom where improbable small animals—the equivalent of rats—played obscenely in the light of ever-glowing panels in the wall.

For two days of the Fifth-Dimension world Jacaro and his gunmen lay quiet. During two nights they made infinitely cautious reconnaissance. The second night it was necessary to kill two men who sighted the tiny exploring party. But the killing was done with silenced automatics, and there was no alarm. The third night they lay still, fearing an ambush. The fourth night Jacaro struck.

**H**E and his men fled back to their Tube with plunder and precious gems. Their loot was vast even beyond their hopes, though they had killed other men in gathering it. The Golden City was rich beyond belief. The very crust of the Fifth-Dimension world seemed to be composed of other substances than those of Earth. The common metals of Earth were rare or even unknown. The rarer metals of Earth were the commonplace ones in the Golden City. Even the roofs seemed plated with gold, but Jacaro's gunmen saw not one particle of iron save in a ring they took from a dead man's finger. There, an acid-etched plate of steel was set as if to be used for a signet.

Von Holtz had accompanied the raiders perforce on every journey. Jeweled bearings for motors; objects of commonest use, made of gold beat thin for lightness; huge ingots of silver for industry; once a queer-shaped spool of platinum wire that it took two men to carry—these things made up the loot they scurried back to their rathole with. Five raids they made, and twenty men they shot down before they came upon disaster. On the sixth raid an outcry rose and an ambush fell upon them.

Flashes of incredibly vivid actinic flame leaped from queer engines that opened upon them. Curious small truncheonlike weapons spat paralyzing electric shocks upon them. The twelve gangsters fought with the desperation of cornered rats, with notched and explosive bullets and with streams of lead from tommy-guns.

**A** CHANCE bullet blew something up. One of the flame weapons flew to bits, spouting what seemed to be liquid thermit upon friend and foe alike. The way of the gangsters back to their Tube was barred. The route they knew was a chaos of scorched bodies and melting metal. The thermit flowed in all directions, seeming to grow in volume as it flamed. Jacaro and his gangsters fled. They broke through the shaken remnants of the ambush. The six of them who survived the fighting found a man somnolently driving a ground vehicle with two wheels.

They burst upon him and, with their scared faces constituting threats in themselves, forced him to drive them out of the Golden City. They fled along aluminum roads into the tree-fern forests, while the sky behind them seemed to flame as the city woke to the tumult in its ways.

They killed the driver of their vehicle when he refused to take them farther, and it was that murder which saved their lives. It was seen by Ragged Men, the outlaws of the jungle, and it proved their enmity to the Golden City. The Ragged Men greeted them joyously and fed them, and enlisted their aid in a savage attack on a land-convoy on the way to the city. Their weapons carried the convoy, and they watched wounded prisoners killed with excruciating tortures....

They were with the Ragged Men now, Von Holtz believed. He had fled a week or more before, when Jacaro—already learning the language of his half-mad allies—began to plan a grandiose attack upon the Golden City. Von Holtz was born a coward, and he knew where Tommy Reames and Denham would shortly thrust a Tube through. It would come out just where the catapult had flung Evelyn and Denham, months before, the same spot where he had marooned them. He searched desperately for that Tube, and failed to find it. He was chased by carnivores, scratched by thorns, and at last pursued by a yelling horde of human devils who were fired into by Smithers from the mouth of the just-finished Tube.

**T**OMMY debated the story grimly as he stood guard in the Tube in the humid jungle night. Many-colored stars winked fitfully through the thatch of giant ferns overhead. The wind soughed unsteadily above the jungle. There were queer creakings, and once or twice there were distant cries, and when the wind died down there was a deep-toned croaking audible somewhere which sounded rather like the croaking of unthinkable, monstrous frogs. But it could not be that, of course. And once there was the sound of dainty movement and something passed nearby. Tommy Reames saw the shadowy outline of a bulk so vast that it turned him cold to think about it, and it did not seem fair for any creature as huge as that to move so quietly.

Then there was a little scuffling noise beneath him. A hand touched his foot.

"It's—it's me, Tommy." Evelyn crowded up beside him and whispered shakenly: "It—it was so lonesome down there, so quiet."

Tommy frowned unhappily in the darkness. If he sent her back, she would know it was because he knew danger lurked here. Then she would worry. If he did not send her back....

"I'll go back the minute you tell me," she insisted forlornly. "Honestly. But—I was lonesome."

Tommy slipped his arm about her.

"Woman," he said sternly. "I'm going to let you stay ten minutes, so you can brag to our grandchildren that you were the first Earth-girl ever to be kissed in the Fifth Dimension. But I want you down in the laboratory so you won't be in my way if I start running!"

His tone was the right one. She even laughed a little, softly, as he pressed her to him. Then she clung to his hand and tried eagerly to pierce the darkness all about them.

"You'll be able to see something presently," he assured her in a low tone. "Just keep quiet, now."

**S**HE gazed up at the stars, then around in the so-nearly complete obscurity. Tommy answered her comments abstractedly, after a little. He was not quite sure that certain irregular sounds, yet far distant, were not actually quite regular ones. The Ragged Men Smithers had shot into had run away. But they would come back and they might come with Jacaro and his gunmen as allies. If those distant sounds were men....

She withdrew her hand from his. Her back was toward him then, as she tried to pierce the darkness with her eyes. Tommy listened uneasily to the distant sound. Suddenly he felt Evelyn bump against his shoulder. He turned sharply—and she was out of the Tube! She was walking steadily off into the darkness!

"Evelyn! Evelyn!"

She did not falter or turn. He switched on the flashlight beneath his gun barrel and leaped out of the Tube himself. The light swept about. Evelyn's lithe figure kept moving away from him. Then his heart stood still. There were eyes beyond her in the darkness, huge, monstrous, steady eyes, half a yard apart in a head like something out of hell. And he could not fire because Evelyn was between the Thing and himself. Its eyes glowed unholily—fascinating, hypnotic, insane....

**E**VELYN swayed ... and the Thing moved! Tommy leaped like a madman shouting. As his feet struck the ground a mass of sold-seeming fungus gave way beneath him. He fell sprawling, but clutching the gun fast. The spreading beam of the flashlight showed him Evelyn turning, her face filled with a wakening horror—the horror of one released from the fascination of a snake. She screamed his name.

Then a huge lizard paw swept forward and seized her body. A second gripped her as she screamed again. And Tommy Reames was deathly, terribly cool. The whole thing had happened in seconds only. He was

submerged in slimy, sticky ooze which was the crushed fungus that had tripped him. But he cleared the gun. The flashlight limned a ghastly, obscenely fat body and a long tapering tail. Tommy aimed at the base of that tail and pulled the trigger, praying frenziedly.

A stream of flame leaped from the gun-muzzle. Explosive bullets uttered their queer cracking noise. The thing screamed horribly. Its cry was hoarsely shrill. The flashlight showed it swinging ponderously about, with Evelyn held fast against its body in a fashion horribly reminiscent of a child holding a doll.

Tommy was scrambling upright. Jaws clamped, cold horror filling him, he aimed again, at the sharp-toothed head above Evelyn's body. He could not try a heart shot with her in the way. Again the gun spat out a burst of explosive lead. And Tommy should have been sickened by the effect of detonating missiles. The thing's lower jaw was shattered, half severed, made useless. It should have been killed a dozen times over.

But it screamed again until the jungle rang with the uproar, and then it fled, still screaming and still holding Evelyn clutched fast against its scaly breast.

# Chapter 4

## The Fifth-Dimension World

**T**OMMY flung himself in pursuit, despairing. Evelyn cried out once more as the lumbering thing fled with her, giving utterance to shrieking outcries at which the tree-fern jungle shook. It leaped once, upon monstrous hind legs, but came crashing heavily to the ground. Tommy's explosive bullets had shattered the bones which supported the balancing tail. Now that huge fleshy member dragged uselessly. The thing could not progress in its normal fashion of leaps covering many yards. It began to waddle clumsily, shrieking, with Evelyn clasped close. Its jaw was a shattered horror. It went marching insanely through the blackness of the jungle, and with it went the unholy din of its anguish, and behind it Tommy Reames came flinging himself frenziedly in pursuit.

Normally, the thing should have distanced him in seconds. Even crippled as it was, it moved swiftly. The scaly, duck-shaped head reared a good twenty feet above the fallen tree-fern fronds which carpeted the jungle. The monstrous splayed feet stretched a good yard and a half from front to rear upon the ground. Even its waddling footprints were yards apart, and it moved in terror.

Tommy tripped, fell, and got to his feet again, and the shrieking tumult was farther away. He raced madly toward the sound, the flashlight beam cutting swordlike through the blackness. He caught sight of the warty, scaly bulk of the monster at the extreme limit of the rays. It was moving faster than he could travel. He sobbed helpless curses at the thing and put forth superhuman exertions. He leaped fallen tree-fern trunks, he splashed through shallow ponds—later, when he knew something of the inhabitants of such pools, Tommy would turn cold at that memory—and raced on, gasping for breath while the shrieking of the thing that bore Evelyn grew more and more distant.

**I**N five minutes he was almost strangling and the thing was half a mile ahead of him. In ten, he was exhausted, and the shrieking noise

it made as it waddled away was distinctly fainter. In fifteen minutes he only heard its hooting scream between the harsh laboring rasps of his own breath as he drew it into tortured lungs. But he ran on. He leaped and climbed and ran in a terrible obliviousness to all dangers the jungle might hold.

He leaped down from one toppled tree-trunk upon what seemed be another. But the thing he landed upon gave beneath his boots in the unmistakable fashion of yielding flesh. Something vast and angry stirred and hissed furiously. Something—a head, perhaps—whipped toward him among the fallen fern-fronds. But he was racing on, sobbing, cursing, praying all at once.

Then suddenly he broke out into a profuse sweat. His breathing became easier, and then he was running lightly. His second wind had come to him. He was no longer exhausted. He felt as if he could run forever, and ran on more swiftly still. Suddenly the flashlight beam showed him a deep furrow in the rotting vegetation underfoot, and something glistened. A musky reek filled his nostrils. The thing's trail—the furrow left by its dragging tail! That musky reek was the thing's blood. It was bleeding from the wounds the explosive bullets had made. It was spouting whatever filthy fluid ran in its veins even as it waddled onward, screaming.

Five minutes more, and he felt that he was gaining on it. Then, and he was sure of it. But it was half an hour before he actually overtook the injured monster marching like a mad machine. Its mutilated ducklike head held high, its colossal feet lifting one after the other in a heavy, slowing waddle, and its hoarse screams re-echoing in a senseless uproar of agony.

**T**OMMY'S hands were shaking, but his brain was cool with a vast coolness. He raced past the shrieking monster, and halted in its path. He saw Evelyn, a huddled bundle, clasped still to the creature's scaly breast. And Tommy sent a burst of explosive bullets into a gigantic, foot thick ankle-joint.

The monster toppled, and flung out its prehensile lizard claws in an instinctive effort to catch itself. Evelyn was thrown clear. And Tommy, standing alone in the blackness of a carboniferous jungle upon an alien planet, sent bullet after bullet into the shaking, obscenely flabby body of the thing. The bullets penetrated, and exploded. Great masses of flesh upheaved and fell away. Great gouts of awful smelling fluid were flung out and blown to mist by the explosions. The thing did not so much die as disintegrate under the storm of detonating missiles.

Then Tommy went to Evelyn. He was wild with grief. He had no faintest hope that she could still be living. But as he picked her up she moaned softly, and when he cried her name she clung to him, pressing close in an agony of thankfulness almost as devastating as her fear had been.

It was minutes before either of them could think of anything other than her safety and the fact that they were together again. But then Tommy said, in a shaken effort to be himself again:

"I—I'd have done better if—if I'd had roller skates, maybe." His grin was wholly unconvincing. "Why'd you get out of the Tube?"

"Its eyes!" Evelyn shuddered, her own eyes hidden against Tommy's shoulder. "I saw them suddenly, looking at me. And I—hadn't any will. I felt myself getting out of the Tube and walking toward it. It was like the way a snake fascinates—hypnotizes—a bird...."

A vagrant wind-eddy submerged them in the foul reek of the dead thing's flesh. Tommy stirred.

"Ugh! Let's get out of this. There'll be things coming to feed on that carcass. They'll smell it."

Evelyn tried to stand, and succeeded. She clung to his hand.

"Do you think you can find the Tube again?"

Tommy was already thinking of that. He grimaced.

"Probably. Back-trail the damned thing. If the flashlight battery holds out. Its tail left plenty of sign for us to follow."

**T**HEY started. And Evelyn had literally been forgotten in its agony by the monster which had carried her. Its body, though scaled and warty, was flabby and soft. Pressed against its breast she had been half strangled, but had no injuries beyond huge, purple bruises which had not yet reached the point of stiffness. She followed Tommy gamely, and the need for action kept her from yielding to the reaction from her terror.

For a long, long time they back-trailed. Less than fifteen minutes after leaving the carcass of the thing Tommy had killed, they heard beast-roarings and the sound of fighting. But that noise died away as they traveled. Presently they reached the spot where Tommy had leaped upon a huge living thing. It was gone now, but the impress of a body the thickness of a barrel remained upon the rotted vegetation of the jungle floor. Evelyn shivered when Tommy pointed it out.

"It was large," said Tommy ruefully. "I didn't even get a good look at the thing. Probably just as well, though. I might have been—er—delayed. Good Lord! What's that?"

A light had sprung into being somewhere. It was bright. It was blinding in its brilliance. Coming through the tangled jungle growth, it seemed as if spears of flame shot through the air, irradiating stray patches of scabrous tree-trunk with unbearable light. For an instant the illumination held. Then there was a distant, cracking detonation. The unmistakable explosion of gun-cotton split the air, and its echoes rolled and reverberated through the jungle. The light went out. Then came a thin, high yelling sound which, faint as it was, had something of the quality of hysterical glee. That crazy ululation kept up for several minutes. Evelyn shivered.

"The Ragged Men," said Tommy very quietly. "They sneaked up on the Tube. They flung blazing thermit, or something like it, with a weapon captured from the Golden City. That explosion was the grenades going off. I'm afraid the Tube's blown up, Evelyn."

She caught her breath, looking mutely up at him.

"Here's a pistol," he said briefly, "and shells. There's no use our going to the Tube to-night. It would be dangerous. We'll do our investigating at dawn."

**H**E found a crevice where tree-fern trunks grew close together and closed in three sides of a sort of roofless cave. He seated himself grimly at the opening to wait for daybreak. He was not easy in his mind. There had been two Tubes to the Fifth-Dimension world. One had been made by Jacaro for his gunmen. That was now held by the men of the Golden City, as was proved by carnivorous lizards and the Death Mist that had come down it. The other was now blown up or, worse, in the hands of the Ragged Men. In any case Tommy and Evelyn were isolated upon a strange planet in a strange universe. To fall into the hands of the Ragged Men was to die horribly, and the Golden City would not now welcome inhabitants of the world Jacaro and his men had come from. To the civilized men of this world, Jacaro's raids would seem invasion. They would seem acts of war on the part of the people of Earth. And the people of Earth, all of them, would seem enemies. Jacaro would never be identified as an unauthorized invader. He would seem to be a scout, an advance guard, a spy, for hordes of other invaders yet to come.

As the long night wore away, Tommy's grim hopelessness intensified. The Ragged Men would hunt them for sport and out of hatred for all sane human beings. The men of the Golden City would be merciless to compatriots of Jacaro's gunmen. And Tommy had Evelyn to look out for.

**W**HEN dawn came, his face was drawn and lined. Evelyn woke with a little gasp, staring affrightedly about her. Then she tried gamely to smile.

"Morning, Tommy," she said shakily. She added in a brave attempt at levity: "Where do we go from here?"

"We look at the Tube," said Tommy heavily. "There's a bare chance...."

He led the way as on the night before, with his gun held ready. They traveled for half an hour through the awakening jungle. Then for long, long minutes Tommy searched for a sign of living men before he ventured forth to look at the wreckage of the Tube. He found no live men, and only two dead ones. But a glimpse of their bestial, vice-ridden faces was enough to remove any regret for their deaths.

The Tube was shattered. Its mouth was belled out and broken by the explosion of the grenades hung within it. A part of the metal was molten—from the thermit, past question. There was a veritable crater fifteen feet across where the Tube had come through, and there were only shattered shreds of metal where the first bend had been. Tommy regarded the wreckage grimly. A pair of oxidized copper wires, their insulation burnt off, stung his eyes as he traced them to where they vanished in torn-up earth. He took them in his bare hands. The tingling sting of a low-voltage current made his heart leap. Then he smiled grimly. He touched them to each other. Dot-dot-dot—dash-dash-dash—dot-dot-dot. S O S! If there was anybody in the laboratory, that would tell them.

His hands stung sharply. Someone was there, ringing the phone! Evelyn came toward him, her face resolutely cheerful.

"No hope, Tommy?" she asked. "I just saw the telephone, all battered up. I guess we're pretty badly off."

"Get it!" said Tommy feverishly. "For Heaven's sake, get it! The phone wires weren't broken. If we can make it work...."

**T**HE instrument was a wreck. It was crumpled and torn and apparently useless. The diaphragm of the receiver was punctured. The transmitter seemed to have been crushed. But Tommy worked desperately over them, and twisted the earth-wires into place.

"Hello, hello, hello!"

The voice that answered was Smithers', strained and fearful:

"Mr. Reames! Thank Gawd! What's happened? Is Miss Evelyn all right?"

"So far," said Tommy. "Listen!" He told curtly just what had happened. "Now, what's happened on Earth?"

"Hell!" panted Smithers bitterly. "Hell's been poppin'! The Death Mist's two miles across an' still growin an' movin'. Four townships under martial law an' movin' out the people. It got thirty of 'em this mornin'. An' they think the professor's crazy an' nobody'll listen to him!"

"Damn!" said Tommy. He considered, grimly. "Look here, Von Holtz ought to convince them."

"He caved in, outa his head, before I got to Albany. He's in hospital now, ravin'. He's got some kinda fever the doctors don't know nothin' about. Sick as hell!"

Tommy compressed his lips. Matters were more desperate even than he had believed. He informed his helper measuredly:

"Evelyn and I can't stay around here, Smithers. The Ragged Men may come back, and it'll be weeks before you and the professor can get another Tube through. I'm going to make for the Golden City and work on them there to cut off the Death Mist."

There was an inarticulate sound from Smithers.

"Tell the professor. If he can find Jacaro's Tube, he'll work out some way to communicate through it. We've got to stop that Death Mist somehow. And we don't know what else they may try."

Smithers tried to speak, and could not. He merely made grief-stricken noises. He worshiped Evelyn and she was isolated in a hostile world which was vastly more unreachable than could be measured by millions or trillions of miles. But at last he said unsteadily:

"We'll be comin', Mr. Reames. We'll come, if we have t' blow half the world apart!"

Tommy said grimly: "Then hunt up the Golden City and bring extra ammunition. Mostly explosive bullets. Good-by."

**H**E untwisted the wires from the shattered phone units and thrust them in his pocket. Evelyn was picking up stray small objects from the ground.

"I've found some cartridges, Tommy," she said constrainedly, "and a pistol I think will work."

"Then listen for visitors," commanded Tommy, "while I look for more."

For half an hour he scoured the area around the shattered Tube. He found where some clumsy-wheeled thing had been pushed to a spot near the Tube—undoubtedly the machine which had sprayed the flaming stuff upon it. He found two pockets full of shells. He found an extra magazine, for the sub-machine gun. It was nearly full and only a little bent. That was all.

"Now," he said briskly, "we'll start. I've got a hunch the jungle thins out over that way. We'll find a clearing, try to locate the Golden City either by seeing it or by watching for aircraft flying to it, and then make for it. They're making war on Earth there. They don't understand. We've got to make them understand. O. K.?"

Evelyn nodded. She put out her hand suddenly, a brave slender figure amid the incredible growths about her.

"I'm glad, Tommy," she said slowly, "that if—if anything happens, it will be the—the two of us. Funny, isn't it?"

Tommy kissed the twisted little smile from her face.

"And now that that's over," he observed, ashamed of his own emotion, "let's go!"

**T**HEY went. Tommy watched the sun and kept approximately a straight line. They traveled three miles, and the jungle broke abruptly. Before them was a spongy surface neither solid earth or marsh. It shelved gently down to a vast and steaming morass upon which the dull-red sun shone hotly. It was vast, that marsh, and a steaming haze hung over it, and it seemed to reach to the world's end. But vaguely, through the attenuating upper layers of the steamy haze, they saw the outlines of a city beyond: tall towers and soaring spires, buildings of a grace and perfection of outline unknown upon the Earth. And faint golden flashes came from the walls and pinnacles of that city. They were reflections of this planet's monster sun, upon walls and roofs of plated gold.

"The Golden City," said Tommy heavily. He looked at the horrible marsh between. His heart sank.

And then there was a sudden screaming ululation nearby. A half-naked man was running out of sight. Two others danced and capered and yelled in insane glee, pointing at Tommy and at Evelyn. The running man's outcry was echoed from far away. Then it was taken up and repeated here and there in the jungle.

"They saw our tracks near the Tube," snapped Tommy bitterly. "Oh, what a fool I am! Now they'll ring us in."

He seized Evelyn's hand and began to run. There was a little rise in the ground a hundred yards away, with a clump of leafy ferns to shade it. They reached it as other half-naked, wholly mad human forms burst out of the jungle to yell and caper and make derisive and horrible gestures at the fugitives.

"Here we fight," said Tommy grimly. "The ground's open, anyhow. We fight here, and very probably we die here. But first...."

He knelt down and drew the finest of fine beads upon a bearded man who carried a glittering truncheonlike club which, by the way it was carried, was more than merely a bludgeon. He pulled the trigger for a single shot.

The bullet struck the capering Ragged Man fairly in the chest. And it exploded.

# Chapter 5

## The Fight in the Marsh

**T**WICE, within the next two hours, the Ragged Men mustered the courage to charge. They came racing across the semi-solid ooze like the madmen they were. Their yells and shouts were maniacal howls of blood-lust or worse. And twice Tommy broke their rush with a savage ruthlessness. The sub-machine-gun's first magazine was nearly empty. It was an unhandy weapon for single-shot work but it was loaded with explosive shells. The second rush he stopped with an automatic pistol. There were half-naked bodies partly buried in the ooze all the way from the jungle's edge to within ten yards of the hillock on which he and Evelyn had taken refuge.

It was hot there, terribly hot. The air was stifling. It fairly reeked of moisture and the smells from the swamp behind them were sickening. Tommy began to transfer the shells from the spare bent magazine to the one he had carried with the gun.

"We've a couple of reasons to be thankful," he observed. "One is that there's a bit of shade overhead. The other is that we had the big magazines for this gun. We still have nearly ninety shells, besides the ones for the pistols."

Evelyn said soberly:

"We're going to be killed, don't you think, Tommy?"

Tommy frowned.

"I'm rather afraid we are," he said irritably. "Confound it, and I'd thought of such excellent arguments to use in the City back yonder! Smithers said the Death Mist was two miles across, to-day, and still growing. The people in the city are still pouring the stuff down through Jacaro's Tube."

Evelyn smiled faintly. She touched his hand.

"Trying to keep me from worrying? Tommy...." She hesitated until he growled a question. "Please—remember that when Daddy and I were in the jungle before, we saw what these Ragged Men do to prisoners they

take. I just want you to promise that—well, you won't wait too long, in hopes of somehow saving me."

Tommy stared at her. Then he decisively reached forward and put his hand over her mouth.

"Keep quiet," he said gently. "They shan't capture you. I promise that. Now keep quiet."

**T**HERE was only silence for a long time. Now and again a hidden figure screamed in rage at them. Now and again some flapping thing sped toward the jungle's edge. Once a naked arm thrust one of the golden truncheons from behind its cover, pointing at a flying thing a few yards overhead. The flying thing suddenly toppled, turning over and over before it crashed to the ground. There were howls of glee.

"They seem mad," said Tommy meditatively, "and they act like lunatics, but I've got a hunch of some sort about them. But what?"

Sunlight gleamed on something golden beyond the jungle's edge. Naked figures went running to the spot. An exultant tumult arose.

"Now they try another trick," Tommy observed dispassionately. "I remember that at the Tube they had pushed something on wheels...."

The sub-machine gun was unhandy for accurate single shots, and no pistol can be used to effect at long ranges. To conserve ammunition, Tommy had been shooting only at relatively close targets, allowing the Ragged Men immunity at over two hundred yards. But now he flung over the continuous-fire stud. He watched grimly.

The foliage at the edge of the jungle parted. A crude wagon appeared. Its axles were lesser tree-trunks. Its wheels were clumsy and crude beyond belief. But mounted upon it there was a queer mass of golden metal which looked strangely beautiful and strangely deadly.

"That's the thing," said Tommy dispassionately, "which made the flare of light last night. It blew up the Tube. And Von Holtz told me—hm—his friends, in the City...."

He sighted carefully. The wagon and its contents were surrounded by a leaping, capering mob. They shook their fists in an insane hatred.

A storm of bullets burst upon them. Tommy was traversing the little gun with the trigger pressed down. His lips were set tightly. And suddenly it seemed as if the solid earth burst asunder! There had been an instant in which the bullet-bursts were visible. They tore and shattered the howling mob of Ragged Men. But then they struck the golden weapon. A sheet of blue-white flame leaped skyward and round about. A blast of blistering, horrible heat smote upon the beleaguered pair. The moisture

of the ooze between them and the jungle flashed into steam. A section of the jungle itself, a hundred yards across, shriveled and died.

**S**TEAM shot upward in a monstrous cloud—miles high, it seemed. Then, almost instantly, there was nothing left of the Ragged Men about the golden weapon, or of the weapon itself, but an unbearable blue-white light which poured away and trickled here and there and seemed to grow in volume as it flamed.

From the rest of the jungle a howl arose. It was a howl of such loss, and of such unspeakable rage, that the hair at the back of Tommy's neck lifted, as a dog's hackles lift at sight of an enemy.

"Keep your head down, Evelyn," said Tommy composedly. "I have an idea that the burning stuff gives off a lot of ultra-violet. Von Holtz was badly burned, you remember."

Naked figures flashed forward from the jungle beyond the burned area. Tommy shot them down grimly. He discarded the sub-machine gun with its explosive shells for the automatics. Some of his targets were only wounded. Those wounded men dragged themselves forward, screaming their rage. Tommy felt sickened, as if he were shooting down madmen. A voice roared a rage-thickened order from the jungle. The assault slackened.

Five minutes later it began again, and this time the attackers waded out into the softer ooze and flung themselves down, and then began a half-swimming, half-crawling progress behind bits of tree-fern stump, or merely pushing walls of the jellylike mud before them. The white light expanded and grew huge—but it dulled as it expanded, and presently seemed no hotter than molten steel, and later still it was no more than a dull-red heat, and later yet....

Tommy shot savagely. Some of the Ragged Men died. More did not.

"I'm afraid," he said coolly, "they're going to get us. It seems rather purposeless, but I'm afraid they're going to win."

Evelyn thrust a shaking hand skyward. "There, Tommy!"

**A** STRANGE, angular flying thing was moving steadily across the marsh, barely above the steamlike haze that hung in thinning layers about its foulness. The flying thing moved with a machinelike steadiness, and the sun twinkled upon something bright and shining before it.

"A flying machine," said Tommy shortly. His mind leaped ahead and his lips parted in a mirthless smile. "Get your gas mask ready, Evelyn. The explosion of that thermit-thrower made them curious in the City. They sent a ship to see."

The flying thing grew closer, grew distinct. A wail arose from the Ragged Men. Some of them leaped to their feet and fled. A man came out into the open and shook his fists at the angular thing in the air. He screamed at it, and such ghastly hatred was in the sound that Evelyn shuddered.

Tommy could see it plainly, now. Its single wing was thick and queerly unlike the air-foils of Earth. A framework hung below it, but it had no balancing tail. And there was a glittering something before it that obviously was its propelling mechanism, but as obviously was not a screw propeller. It swept overhead, with a man in it looking downward. Tommy watched coolly. It was past him, sweeping toward the jungle. It swung sharply to the right, banking steeply. Smoking things dropped from it, which expanded into columns of swiftly-descending vapor. They reached the jungle and blotted it out. The flying machine swung again and swept back to the left. More smoking things dropped. Ragged Men erupted from the jungle's edge in screaming groups, only to writhe and fall and lie still. But a group of five of them sped toward Tommy, shrieking their rage upon him as the cause of disaster. Tommy held his fire, looking upward. A hundred yards, fifty yards, twenty-five....

**T**HE flying machine soared in easy, effortless circles. The man in it was watching, making no effort to interfere.

Tommy shot down the five men, one after the other, with a curiously detached feeling that their vice-brutalized faces would haunt him forever. Then he stood up.

The flying machine banked, turned, and swept toward him, and a smoking thing dropped toward the earth. It was a gas bomb like those that had wiped out the Ragged Men. It would strike not ten yards away.

"Your mask!" snapped Tommy.

He helped Evelyn adjust it. The billowing white cloud rolled around him. He held his breath, clapped on his mask, exhaled until his lungs ached, and was breathing comfortably. The mask was effective protection. And then he held Evelyn comfortably close.

For what seemed a long, long while they were surrounded by the white mist. The cloud was so dense, indeed, that the light about them faded to a gray twilight. But gradually, bit by bit, the mist grew thinner. Then it moved aside. It drifted before the wind toward the tree-fern forest and was lost to sight.

The flying machine was circling and soaring silently overhead. As the mist drew aside, the pilot dived down and down. And Tommy emptied his automatic at the glittering thing which drew it. There was a crashing

bolt of blue light. The machine canted, spun about with one wing almost vertical, that wing-tip struck the marsh, and it settled with a monstrous splashing of mud. All was still.

Tommy reloaded, watching it keenly.

"The framework isn't smashed up, anyhow," he observed grimly. "The pilot thinks we're some of Jacaro's gang. My guns were proof, to him. So, since the Ragged Men didn't get us, he gassed us." He watched again, his eyes narrow. The pilot was utterly still. "He may be knocked out. I hope so! I'm going to see."

**A**UTOMATIC held ready, Tommy moved toward the crashed machine. It had splashed into the ooze less than a hundred yards away. Tommy moved cautiously. Twenty yards away, the pilot moved feebly. He had knocked his head against some part of his machine. A moment later he opened his eyes and stared about. The next instant he had seen Tommy and moved convulsively. A glittering thing appeared in his hand—and Tommy fired. The glittering thing flew to one side and the pilot clapped his hand to a punctured forearm. He went white, but his jaw set. He stared at Tommy, waiting for death.

"For the love of Pete," said Tommy irritably, "I'm not going to kill you! You tried to kill me, and it was very annoying, but I have some things I want to tell you."

He stopped and felt foolish because his words were, of course, unintelligible. The pilot was staring amazedly at him. Tommy's tone had been irritated, certainly, but there was neither hatred nor triumph in it. He waved his hand.

"Come on and I'll bandage you up and see if we can make you understand a few things."

Evelyn came running through the muck.

"He didn't hurt you, Tommy?" she gasped. "I saw you shoot—"

The pilot fairly jumped. At first glance he had recognized her as a woman. Tommy growled that he'd had to "shoot the damn fool through the arm." The pilot spoke, curiously. Evelyn looked at his arm and exclaimed. He was holding it above the wound to stop the bleeding. Evelyn looked about helplessly for something with which to bandage it.

"Make pads with your handkerchief," grunted Tommy. "Take my tie to hold them in place."

The prisoner looked curiously from one to the other. His color was returning. As Evelyn worked on his arm he seemed to grow excited at some inner thought. He spoke again, and looked at once puzzled and confirmed in some conviction when they were unable to comprehend.

When Evelyn finished her first-aid task he smiled suddenly, flashing white teeth at them. He even made a little speech which was humorously apologetic, to judge by its tone. When they turned to go back to their fortress he went with them without a trace of hesitation.

"Now what?" asked Evelyn.

"They'll be looking for him in a little while," said Tommy curtly. "If we can convince him we're not enemies, he'll keep them from giving us more gas."

**T**HE pilot was fumbling at a belt about the curious tunic he wore. Tommy watched him warily. But a pad of what seemed to be black metal came out, with a silvery-white stylus attached to it. The pilot sat down the instant they stopped and began to draw in white lines on the black surface. He drew a picture of a man and an angular flying machine, and then a sketchy, impressionistic outline of a city's towers. He drew a circle to enclose all three drawings and indicated himself, the machine, and the distant city. Tommy nodded comprehension as the pilot looked up. Then came a picture of a half-naked man shaking his fists at the three encircled sketches. The half-naked man stood beneath a roughly indicated tree-fern.

"Clever," said Tommy, as a larger circle enclosed that with the city and the machine. "He's identifying himself, and saying the Ragged Men are enemies of himself and his Golden City, too. That much is not hard to get."

He nodded vigorously as the pilot looked up again. And then he watched as a lively, tiny sketch grew on the black slab, showing half a dozen men, garbed almost as Tommy was, using weapons which could only be sub-machine guns and automatic pistols. They were obviously Jacaro's gangsters. The pilot handed over the plate and watched absorbedly as Tommy fumbled with the stylus. He drew, not well but well enough, an outline of the towers of New York. The difference in architecture was striking. There followed tiny figures of himself and Evelyn—with a drily murmured, "This isn't a flattering portrait of you, Evelyn!"—and a circle enclosing them with the towers of New York.

The pilot nodded in his turn. And then Tommy encircled the previously drawn figures of the gangsters with New York, just as the Ragged Men had been linked with the other city. And a second circle linked gangsters and Ragged Men together.

**"I**'M saying," observed Tommy, "that Jacaro and his mob are the Ragged Men of our world, which may not be wrong, at that."

There was no question but that the pilot took his meaning. He grinned in a friendly fashion, and winced as his wounded arm hurt him. Ruefully, he looked down at his bandage. Then he pressed a tiny stud at the top of the black-metal pad and all the white lines vanished instantly. He drew a new circle, with tree-ferns scattered about its upper third—a tiny sketch of a city's towers. He pointed to that and to the city visible through the mist—a second city, and a third, in other places. He waved his hand vaguely about, then impatiently scribbled over the middle third of the circle and handed it back to Tommy.

Tommy grinned ruefully.

"A map," he said amusedly. "He's pointed out his own city and a couple of others, and he wants us to tell him where we come from. Evelyn—er—how are we going to explain a trip through five dimensions in a sketch?"

Evelyn shook her head. But a shadow passed over their heads. The pilot leaped to his feet and shouted. There were three planes soaring above them, and the pilot in the first was in the act of releasing a smoking object over the side. At the grounded pilot's shout, he flung his ship into a frantic dive, while behind him the smoking thing billowed out a thicker and thicker cloud. His plane was nearly hidden by the vapor when he released it. It fell two hundred yards and more away, and the white mist spread and spread. But it fell short of the little hillock.

"**Q**UICK thinking," said Tommy coolly. "He thought we had this man a prisoner, and he'd be better off dead. But—"

Their captive was shouting again. His head thrown back, he called sentence after sentence aloft while the three ships soared back and forth above their heads, soundless as bats. One of the three rose steeply and soared away toward the city. Their captive, grinning, turned and nodded his head satisfiedly. Then he sat down to wait.

Twenty minutes later a monstrous machine with ungainly flapping wings came heavily over the swamp. It checked and settled with a terrific flapping and an even more terrific din. Half a dozen armed men waited warily for the three to approach. The golden weapons lifted alertly as they drew near. The wounded man explained at some length. His explanation was dismissed brusquely. A man advanced and held out his hands for Tommy's weapons.

"I don't like it," growled Tommy, "but we've got to think of Earth. If you get a chance hide your gun, Evelyn."

He pushed on the safety catches and passed over his guns. The pilot he had shot down led them onto the fenced-in deck of the monstrous

ornithopter. Machinery roared. The wings began to beat. They were nearly invisible from the speed of their flapping when the ship lifted vertically from the ground. It rose straight up for fifty feet, the motion of the wings changed subtly, and it swept forward.

It swung in a vast half circle and headed back across the marsh for the Golden City. Five minutes of noisy flight during which the machine flapped its way higher and higher above the marsh—which seemed more noisome and horrible still from above—and then the golden towers of the city were below. Strange and tapering and beautiful, they were. No single line was perfectly straight, nor was any form ungraceful. These towers sprang upward in clean-soaring curves toward the sky. Bridges between them were gossamerlike things that seemed lace spun out in metal. And as Tommy looked keenly and saw the jungle crowding close against the city's metal walls, the flapping of the ornithopter's wings changed again and it seemed to plunge downward like a stone toward a narrow landing place amid the great city's towering buildings.

# Chapter 6

## The Golden City

**T**HE thing that struck Tommy first of all was the scarcity of men in the city, compared to its size. The next thing was the entire absence of women. The roar of machines smote upon his consciousness as a bad third, though they made din enough. Perhaps he ignored the machine noises because the ornithopter on which they had arrived made such a racket itself.

They landed on a paved space perhaps a hundred yards by two hundred, three sides of which were walled off by soaring towers. The fourth gave off on empty space, and he realized that he was still at least a hundred feet above the ground. The ornithopter landed with a certain skilful precision and its wings ceased to beat. Behind it, the two fixed-wing machines soared down, leveled, hovered, and settled upon amazingly inadequate wheels. Their pilots got out and began to push them toward one side of the landing area. Tommy noticed it, of course. He was noticing everything, just now. He said amazedly:

"Evelyn! They launch these planes with catapults like those our battle-ships use! They don't take off under their own power!"

The six men on the ornithopter put their shoulders to their machine and trundled it out of the way. Tommy blinked at the sight.

"No field attendants!" He gazed out across the open portion of the land area and saw an elevated thoroughfare below. Some sort of vehicle, gleaming like gold, moved swiftly on two wheels. There was a walkway in the center of the street with room for a multitude. But only two men were in sight upon it. "Lord!" said Tommy. "Where are the people?"

There was brief talk among the crew of the ornithopter. Two of them picked up Tommy's weapons, and the pilot he had wounded made a gesture indicating that he should follow. He led the way to an arched door in the nearest tower. A little two-wheeled car was waiting. They got into it and the pilot fumbled with the controls. As he worked at it—rather clumsily on account of his arm—the rest of the ornithopter's

crew came in. They wheeled out another vehicle, climbed into it, and shot away down a sloping passage.

**T**HEIR own vehicle followed and emerged upon the paved and nearly empty thoroughfare. Tall buildings rose all about them, with curved walls soaring dizzily skyward. There was every sign of a populous city, including the dull drumming roar of many machines, but the streets were empty. The little machine moved swiftly for minutes. Twice it swung aside and entered a sloping incline. Once it went up. The other time it dived down seventy feet on a four-hundred-foot ramp. Then it swung sharply to the right, meandered into a street-level way leading into the heart of a monster building, and stopped. And in all its travel it had not passed fifty people.

The pilot-turned-chauffeur turned and grinned amiably, and led the way again. Steps—twenty or thirty of them. Then they emerged suddenly into a vast room. It must have been a hundred and fifty feet long, fifty wide, and nearly as high. It was floored with alternate blocks of what seemed to be an iron-hard black wood and the omnipresent golden metal. Columns and pilasters about the place gave forth the same subdued deep golden glow. Light streamed from panels inset in the wall and ceiling—a curious saffron-red light. There was a massive table of the hard black wood. Chairs with curiously designed backs were ranged about it. They were benches, really, but they served the purpose of chairs. Each was too narrow to hold more than one person. The room was empty.

They waited. After a long time a man in a blue tunic came into the room and sat down on one of the benches. A long time later, another man came in, in red; and another and another, until there were a dozen in all. They regarded Tommy and Evelyn with a weary suspicion. One of them—an old man with a white beard—asked questions. The pilot answered them. At a word, the two men with Tommy's weapons placed them on the table. They were inspected casually, as familiar things. They probably were, since some of Jacaro's gunmen had been killed in a fight in this city. Another question.

The pilot explained briefly and offered Tommy the black-metal pad again. It still contained the incomplete map of a hemisphere, and was obviously a repetition of the question of where he came from.

**T**OMMY took it, frowning thoughtfully. Then an idea struck him. He found the little stud which, pressed by the pad's owner, had erased the previous drawings. He pressed it and the lines disappeared. And Tommy drew, crudely enough, that complicated diagram which is

supposed to represent a cube which is a cube in four dimensions: a tesseract. Upon one surface of the cube he indicated the curving towers of the Golden City. Upon a surface representing a plane beyond the three dimensions of normal experience, he repeated the angular tower structures of New York. He shrugged rather hopelessly as he passed it over, but to his amazement it was understood at once.

The little black pad passed from hand to hand and an animated discussion took place. One rather hard-faced man was the most animated of all. The bearded old man demurred. The hard-faced man insisted. Tommy could see that his pilot's expression was becoming uneasy. But then a compromise seemed to be arrived at. The bearded man spoke a single, ceremonial phrase and the twelve men rose. They moved toward various doors and one by one left, until the room was empty.

But the pilot looked relieved. He grinned cheerfully at Tommy and led the way back to the two-wheeled vehicle. The two men with Tommy's weapons vanished. And again there was a swift, cyclonelike passage along empty ways with the throbbing of machinery audible everywhere. Into the base of a second building, up endless stairs, past innumerable doors. It seemed to Tommy that he heard voices behind some of them, and they were women's voices.

At a private, triple knock a door opened wide, and the pilot led the way into a room, closed and locked the door behind him, and called. A woman's voice cried out in astonishment. Through an inner arch a woman came running eagerly. Her face went blank at sight of Tommy and Evelyn, and her hand flew to a tiny golden object at her waist. Then, at the pilot's chuckle, she flushed vividly.

**H**OURS later, Tommy and Evelyn were able to talk it over. They were alone then, and could look out an oval window upon the Golden City all about them. It was dark, but saffron-red panels glowed in building walls all along the thoroughfares, and tiny glowing dots in the soaring spires of gold told of people within other dwellings like this.

"As I see it," said Tommy restlessly, "the Council—and it must have been that in the big room to-day—put us in our friend's hands to learn the language. He's been working with me four hours, drawing pictures, and I've been writing down words I've learned. I must have several hundred of them. But we do our best talking with pictures. And Evelyn, this city's in a bad fix."

Evelyn said irrelevantly: "Her name is Ahnya, Tommy, and she's a dear. We got along beautifully. I'll bet I found out things you don't even guess at."

"You probably have," admitted Tommy, frowning. "Check up on this: our friend's name is Aten, and he's an air-pilot and also has something to do with growing foodstuffs in some special towers where they grow crops by artificial light only. Some of the plants he sketched look amazingly like wheat, by the way. The name of the town is"—he looked at his notes—"Yugna. There are some other towns, ten or twelve of them. Rahn is the nearest, and it's worse off than this one."

"Of course," said Evelyn, smiling. "They use *cuyal* openly, there!"

"How'd you learn all that?" demanded Tommy.

"Ahnya told me. We made gestures and smiled at each other. We understood perfectly. She's crazy about her husband, and I—well she knows I'm going to marry you, so...."

Tommy grunted.

"I suppose she explained with a smile and gestures just how much of a strain it is, simply keeping the city going?"

"Of course," said Evelyn calmly. "The city's fighting against the jungle, which grows worse all the time. They used to grow their foodstuffs in the open fields. Then within the city. Now they use empty towers and artificial light. I don't know why."

**T**OMMY grunted again.

"This planet's just had, or is having, a change of geologic period," he explained, frowning. "The plants people need to live on aren't adapted to the new climate and new plants fit for food are scarce. They have to grow food under shelter, now, and their machines take an abnormal amount of supervision—I don't know why. The air-conditions for the food plants; the machines that fight back the jungle creepers which thrive in the new climate and try to crawl into the city to smother it; the power machines; the clothing machines—a million machines have to be kept going to keep back the jungle and fight off starvation and just hold on doggedly to the bare fact of civilization. And they're short-handed. The law of diminishing returns seems to operate. They're trying to maintain a civilization higher than their environment will support. They work until they're ready to drop, just to stay in the same place. And the monotony and the strain makes some of them take to *cuyal* for relief."

He surveyed the city from the oval window, frowning in thought.

"It's a drug which grows wild," he added slowly. "It peps them up. It makes the monotony and the weariness bearable. And then, suddenly, they break. They hate the machines and the city and everything they ever knew or did. It's a sort of delayed-action psychosis which goes off with a bang. Some of them go amuck in the city, using their belt-

weapons until they're killed. More of them bolt for the jungle. The city loses better than one per cent of its population a year to the jungle. And then they're Ragged Men, half mad at all times and wholly mad as far as the city and its machines are concerned."

Evelyn linked her arm in his.

"Somehow," she told him, smiling, "I think one Thomas Reames is working out ways and means to help a city named Yugna."

"Not yet," said Tommy grimly. "We have to think of Earth. Not everybody in the Council approved of us. Aten told me one chap argued that we ought to be shoved out into the jungle again as compatriots of Jacaro. And the machines were especially short-handed to-day because of a diversion of labor to get ready something monstrous and really deadly to send down the Tube to Earth. We've got to find out what that is, and stop it."

**B**UT on the second day afterward, when he and Evelyn were summoned before the Council again, he still had not found out. During those two days he learned many other things, to be sure: that Aten for instance, was relieved from duty at the machines only because he was wounded; that the power of the main machines came from a deep bore which brought up superheated steam from the source of boiling springs long since built over; that iron was a rare metal, and consequently there was no dynamo in the city and magnetism was practically an unknown force; that electrokinetics was a laboratory puzzle—or had been, when there was leisure for research—while the science of electrostatics had progressed far past its state on Earth. The little truncheon-like weapons carried a stored-up static charge measurable only in hundreds of thousands of volts, which could be released in flashes which were effective up to a hundred feet or more.

And he learned that the thermit-throwers actually spat out in normal operation tiny droplets of matter Aten could not describe clearly, but which seemed to be radioactive with a period of five minutes or less; that in Rahn, the nearest other city, *cuyal* was taken openly, and the jungle was growing into the town with no one to hold it back; that two generations since there had been twenty cities like this one, but that a bare dozen still survived; that there was a tradition that human beings had come upon this planet from another world where other human beings had harried them, and that in that other world there were divers races of humanity, of different colors, whereas in the world of the Golden City all mankind was one race; that Tommy's declaration that he came from another group of dimensions had been debated and, on re-

examination of Jacaro's Tube, accepted, and that there was keen argument going on as to the measures to be taken concerning it.

**T**HESE things Tommy had learned, and he and Evelyn went to their second interrogation by the city's Council armed with written vocabularies of nearly a thousand words, which they had sorted out and made ready for use. But they were still ignorant of the weapons the Golden City might use against Earth.

The Council meeting took place in the same hall, with its alternating black-and-gold flooring and the saffron-red lighting panels casting a soft light everywhere. This was a scheduled meeting, foreseen and arranged for. The twelve chairs above the heavy table were all occupied from the first. But Tommy realized that the table had been intended to seat a large number of councilors. There were guards stationed formally behind the chairs. There were spectators, auditors of the deliberations of the Council. They were dressed in a myriad colors, and they talked quietly among themselves; but it seemed to Tommy that nowhere had he seen weariness, as an ingrained expression, upon so many faces.

Tommy and Evelyn were led to the foot of the Council table. The bearded old man in blue began the questioning. As Keeper of Foodstuffs—according to Aten—he was a sort of presiding officer.

Tommy answered the questions crisply. He had known what they would be, and he had developed a vocabulary to answer them. He told them of Earth, of Professor Denham, of his and the professor's experiments. He outlined the first experiment with the Fifth-Dimension catapult and the result of it—when the Golden City had sent the Death Mist to wipe out a band of Ragged Men who had captured a citizen, and after him Evelyn and her father.

**T**HIS they remembered. Nods went around the table. Tommy told them of Jacaro, stressing the fact that Jacaro was an outlaw, a criminal upon Earth. He explained the theft of the model Tube, and how it was that their first contact with Earth had been with the dregs of Earth humanity. On behalf of his countrymen he offered reparation for all the damage Jacaro and his men had done. He proposed a peaceful commerce between worlds, to the infinite benefit of both.

There was silence until he finished. The faces before him were immobile. But a hawk-faced man in brown asked dry questions. Were there more races than one upon Earth? Were they of diverse colors? Did they ever war among themselves? At Tommy's answers the atmosphere seemed to change. And the hawk-faced man rose to speak.

Tommy and Evelyn, he conceded caustically, had certainly come from another world. Their own most ancient legends described just such a world as his: a world of many races of many colors, who fought many wars among themselves. Their ancestors had fled from such a world, according to legend through a twisting cavern which they had sealed behind them. The conditions Tommy described had been the cause of their ancestors' flight. They, the people of Yugna, would do well to follow the example of their forebears: strip these Earth folk of their weapons, exile them to the jungles, destroy the Tube through which the Mist of Many Colors had been sent. All should be as in past ages.

**T**OMMY opened his mouth to answer, but another man sprang to his feet. His face alone was not weary and worn. As he stood up, Aten murmured "*Cuyal!*" and Tommy understood that this man used the drug which was destroying the city's citizens, but gave a transient energy to its victims. He spoke in fiery phrases, urging action which would be drastic and certain. He spoke confidently, persuasively. There was a rustling among those who watched and listened to the debate. He had caught at their imagination.

Evelyn, exerting every faculty to understand, saw Tommy's lips set grimly.

"What—what is it?" she whispered. "I—I don't understand...."

Tommy spoke in a savage growl.

"He says," he told her bitterly, "that in one blow they can defeat both the jungle and the invaders from Earth. In past ages their ancestors were faced by enemies they could not defeat. They fled to this world. Now they are faced by jungles they cannot defeat. He proposes that they flee to our world. The Death Mist is a toy, he reminds them, compared with gases they know. There is a gas of which one part in ten hundred million is fatal! In a hundred of their days they can make and send through the Tube enough of it to kill every living thing on Earth. They've figures on the Earth's size and atmosphere from me, damn 'em! And he reminds them that that deadly gas changes of itself into a harmless substance. He urges them to gas Earth humanity out of existence, call upon the other cities of this world, and presently move through the Tube to Earth. They'll carry their food-plants, rebuild their cities, and abandon this planet to the jungles and the Ragged Men. And the hell of it is, they can do it!"

A sudden approving buzz went through the Council hall.

## The Fleet from Rahn

**T**HE approval of the citizens of Yugna was not enthusiastic. It was desperate. Their faces were weary. Their lives were warped. They had been fighting since birth against the encroachment of the jungle, which until the days of their grandparents had been no menace at all. But for two generations these people had been foredoomed, and they knew it. Nearly half the cities of their race were overwhelmed and their inhabitants reduced to savage hunters in the victorious jungles. Now the people of Yugna saw a chance to escape from the jungle. They were offered rest. Peace. Relaxation from the desperate need to serve insatiable machines. Sheer desperation impelled them. In their situation, the people of Earth would annihilate a solar system for relief, let alone the inhabitants of a single planet.

Shouts began to be heard above the uproar in the Council hall—approving shouts, demands that one be appointed to conduct the operation which was to give them a new planet on which to live, where their food-plants would thrive in the open, where jungles would no longer press on them.

Tommy's face went savage and desperate, itself. He clenched and unclenched his hands, struggling among his meagre supply of words for promises of help from Earth, which promises would tip the scales for peace again. He raised his voice in a shout for attention. He was unheard. The Council hall was in an uproar of desperate approval. The orator stood flushed and triumphant. The Council members looked from eye to eye, and slowly the old, white-bearded Keeper of Foodstuffs placed a golden box upon the table. He touched it in a certain fashion, and handed it to the next man. That second man touched it, and passed it to a third. And that man....

**A** HUSH fell instantly. Tommy understood. The measure was being decided by solemn vote. The voting device had reached the fifth man when there was a frantic clatter of footsteps, a door burst in, and

babbling men stood in the opening, white-faced and stammering and overwhelmed, but trying to make a report.

Consternation reigned, incredulous, amazed consternation. The bearded old man rose dazedly and strode from the hall with the rest of the Council following him. A pause of stunned stupefaction, and the spectators in the hall rushed for other doors.

"Stick to Aten," snapped Tommy. "Something's broken, and it has to be our way. Let's see what it is."

He clung alike to Evelyn and to Aten as the air-pilot fought to clear a way. The doors were jammed. It was minutes before they could make their way through and plunge up the interminable steps Aten mounted, only to fling himself out to the open air. Then they were upon a flying bridge between two of the towers of the city. All about the city human figures were massing, staring upward.

And above the city swirled a swarm of aircraft. Tommy counted three of the clumsy ornithopters, high and motelike. There were twenty or thirty of the small, one-man craft. There were a dozen or more two-man planes. And there were at least forty giant single-wing ships which looked as if they had been made for carrying freight. They soared and circled above the city in soundless confusion. Before each of them glittered something silvery, like glass, which was not a screw propeller but somehow drew them on.

The Council was massed two hundred yards away. A single-seater dived downward, soared and circled noiselessly fifty yards overhead, and its pilot shouted a message. Then he climbed swiftly and rejoined his fellows. The men about Tommy looked stunned, as if they could not believe their ears. Aten seemed stricken beyond the passability of reaction.

"**I** GOT part of it," snapped Tommy, to Evelyn's whispered question. "I think I know the rest. Aten!" He snapped question after question in his inadequate phrasing of the city's tongue. Evelyn saw Aten answer dully, then bitterly, and then, as Tommy caught his arm and whispered savagely to him, Aten's eyes caught fire. He nodded violently and turned on his heel.

"Come on!" And Tommy seized Evelyn's arm again.

They followed closely as Aten wormed his way through the crowd. They raced behind him downstairs and through a door into a dusty and unvisited room. It was a museum. Aten pointed grimly.

Here were the automatic pistols taken from those of Jacaro's men who had been killed, a nasty sub-machine gun which had been Tommy's, and

grenades—Jacaro's. Tommy checked shell calibres and carried off a ninety-shot magazine full of explosive bullets, and a repeating rifle.

"I can do more accurate work with this than the machine gun," he said cryptically. "Let's go!"

It was not until they were racing away from the Council building in one of the two-wheeled vehicles that Evelyn spoke again.

"I—understand part," she said unsteadily. "Those planes overhead are from Rahn. And they're threatening—"

"Blackmail," said Tommy between clenched teeth. "It sounds like a perfectly normal Earth racket. A fleet from Rahn is over Yugna, loaded with the Death Mist. Yugna pays food and goods and women or it's wiped out by gas. Further, it surrenders its aircraft to make further collections easier. Rahn refuses to die, though it's let in the jungle. It's turned pirate stronghold. Fed and clothed by a few other cities like this one, it should be able to hold out. It's a racket, Evelyn. A stick-up. A hijacking of a civilised city. Sounds like Jacaro."

**T**HE little vehicle darted madly through empty highways, passing groups of men staring dazedly upward at the soaring motes overhead. It darted down this inclined way, up that one. It shot into a building and around a winding ramp. It stopped with a jerk and Aten was climbing out. He ran through a doorway, Tommy and Evelyn following. Planes of all sizes, still and lifeless, filled a vast hall. And Aten struggled with a door mechanism and a monster valve swung wide. Then Tommy threw his weight with Aten's to roll out the plane he had selected. It was a small, triangular ship, with seats for three, but it was heavy. The two men moved it with desperate exertion. Aten pointed, panting, to slide-rail and it took them five minutes to get the plane about that rail and engage a curious contrivance in a slot in the ship's fuselage.

"Tommy," said Evelyn, "you're not going to—"

"Run away? Hardly!" said Tommy. "We're going up. I'm going to fight the fleet with bullets. They don't have missile-weapons here, and Aten will know the range of their electric-charge outfits."

"I'm coming too," said Evelyn desperately.

Tommy hesitated, then agreed.

"If we fail they'll gas the city anyway. One way or the other...."

There was a sudden rumble as Evelyn took her place. The plane shot forward with a swift smooth acceleration. There was no sound of any motor. There was no movement of the glittering thing at the forepart of the plane. But the ship reached the end of the slide and lifted, and then

was in mid-air, fifty feet above the vehicular way, a hundred feet above the ground.

**T**OMMY spoke urgently. Aten nodded. The ship had started to climb. He leveled it out and darted straight forward. He swung madly to dodge a soaring tower. He swept upward a little to avoid a flying bridge. The ship was travelling with an enormous speed, and the golden walls of the city flashed past below them and they sped away across feathery jungle.

"If we climbed at once," observed Tommy shortly, "they'd think we meant to fight. They might start their gassing. As it is, we look like we're running away."

Evelyn said nothing. For five miles the plane fled as if in panic. Evelyn clung to the filigree side of the cockpit. The city dwindled behind them. Then Aten climbed steeply. Tommy was looking keenly at the glittering thing which propelled the ship. It seemed like a crystal gridwork, like angular lace contrived of glass. But a cold blue flame burned in it and Tommy was obscurely reminded of a neon tube, though the color was wholly unlike. A blast of air poured back through the grid. Somehow, by some development of electro-statics, the "static jet" which is merely a toy in Earth laboratories had become usable as a means of propelling aircraft.

Back they swept toward the Golden City, five thousand feet or more aloft. The ground was partly obscured by the hazy, humid atmosphere, but glinting sun-reflections from the city guided them. Soaring things took shape before them and grew swiftly nearer. Tommy spoke again, busily loading the automatic rifle with explosive shells.

Aten swung to follow a vast dark shape in its circular soaring, a hundred feet above it and a hundred yards behind. Wind whistled, rising to a shriek. Tommy fired painstakingly.

**T**HE other plane zoomed suddenly as a flash of blue flame spouted before it. It dived, then, fluttering and swooping, began to drift helplessly toward the spires of the city below it.

"Good!" snapped Tommy. "Another one, Aten."

Aten made no reply. He flung his ship sidewise and dived steeply before a monstrous freight carrier. Tommy fired deliberately as they swept past. The propelling grid flashed blue flame in a vast, crashing flame. It, too, began to flutter down.

Tommy did not miss until the fifth time, and Aten turned with a grimace of disappointment. Tommy's second shot burst in a freight compartment and a man screamed. His voice carried horribly in the silence of

these heights. But Tommy shot again, and, again, and there was a satisfying blue flash as a fifth big ship went fluttering helplessly down.

Aten began to circle for height Tommy refilled the magazine.

"I'm bringing 'em down," he explained unnecessarily to Evelyn, "by smashing their propellers. They have to land, and when they land they're hostages—I hope!"

Confusion became apparent among the hostile planes. The one Yugna ship was identified as the source of disaster. Tommy worked his rifle in cold fury. He aimed at no man, but the propelling grids were large. For a one-man ship they were five feet in diameter, and for the big freight ships, they were circles fifteen feet across. They were perfect targets, and Aten seemed to grasp the necessary tactics almost instantly. Dead ahead or from straight astern, Tommy could not miss a shot. The fleet of Rahn went fluttering downward. Fifteen of the biggest were down, and six of the two-man planes. A sixteenth and seventeenth flashed at their bows and drifted helplessly....

**T**HEN the one-man ships attacked. Six of them at once. Aten grinned and dived for all of them. One by one, Tommy smashed their crystal grids and watched them sinking unsteadily toward the towers of the city. As his own ship drove over them, little golden flashes licked out. Electric-charge weapons. One flash struck the wingtip of their plane, and flame burst out, but Aten flung the ship into a mad whirl in which the blaze was blown out.

Another freight ship helpless—and another. Then the air fleet of Rahn turned and fled. The ornithopters winged away in heavy, creaking terror. The others dived for speed and flattened out hardly above the tree-fern jungle. They streaked away in ignominious panic. Aten darted and circled above them and, as Tommy failed to fire, turned and went racing back toward the city.

"After the first ones went down," observed Tommy, "they knew that if they gassed the city we'd shoot them down into their own gas cloud. So they ran away. I hope this gives us a pull."

The city's towers loomed before them. The lacy bridges swarmed with human figures. Somewhere a fight was in progress about a grounded plane from Rahn. Others seemed to have surrendered sullenly on alighting. For the first time Tommy saw the city as a thronging mass of humanity, and for the first time he realized how terrible must be the strain upon the city if with so large a population so few could be free for leisure in normal times.

The little plane settled down and landed lightly. There were a dozen men on the landing platform now, and they were herding disarmed men from Rahn away from a big ship Tommy had brought down. Tommy looked curiously at the prisoners. They seemed freer than the inhabitants of Yugna. Their faces showed no such signs of strain. But they did not seem well-fed, nor did they appear as capable or as resolute.

"*Cuyal*," said Aten in an explanatory tone, seeing Tommy's expression. He put his shoulder to the big ship, to wheel it back into its shed.

"You son of a gun," grunted Tommy, "it's all in the day's work to you, fighting an invading fleet!"

A messenger came panting through the doorway. Tommy grinned.

"The Council wants us, Evelyn. Now maybe they'll listen."

**T**HE atmosphere of the resumed Council meeting was, as a matter of fact, considerably changed. The white-bearded Keeper of Food-stuffs thanked them with dignity. He invited Tommy to offer advice, since his services had proved so useful.

"Advice?" said Tommy, in the halting, fumbling phrases he had slaved to acquire. "I would put the prisoners from Rahn to work at the machines, releasing citizens." There was a buzz of approval, and he added drily in English: "I'm playing politics, Evelyn." Again in the speech of Yugna he added: "And I would have the fleet of Yugna soar above Rahn, not to demand tribute as that city did, but to disable all its aircraft, so that such piracy as to-day may not be tried again!" There was a second buzz of approval. "And third," said Tommy earnestly, "I would communicate with Earth, rather than assassinate it. I would require the science of Earth for the benefit of this world, rather than use the science of this world to annihilate that! I—"

For the second time the Council meeting was interrupted. An armed messenger came pounding into the room. He reported swiftly. Tommy grasped Evelyn's wrist in what was almost a painful grip.

"Noises in the Tube!" he told her sharply. "Earth-folk doing something in the Tube Jacaro came through. Your father...."

There was an alert silence in the Council hall. The white-bearded old man had listened to the messenger. Now he asked a grim question of Tommy.

"They may be my friends, or your enemies," said Tommy briefly. "Mass thermit-throwers and let me find out!"

**I**T was the only possible thing to do. Tommy and Evelyn went with the Council, in a body, in a huge wheeled vehicle that raced across the city. Lingered groups still searched the sky above them, now

blessedly empty again. But the Council's vehicle dived down and down to ground level, where the rumble of machines was loud indeed, and then turned into a tunnel which went down still farther. There was feverish activity ahead, where it stopped, and a golden thermit-thrower came into sight upon a dull-colored truck.

Questions. Feverish replies. The white-bearded man touched Tommy on the shoulder, regarding him with a peculiarly noncommittal gaze, and pointed to a doorway that someone was just opening. The door swung wide. There was a confusion of prismatically-colored mist within it, and Tommy noticed that tanks upon tanks were massed outside the metal wall of that compartment, and seemingly had been pouring something into the room.

The mist drew back from the door. Saffron-red lighting panels appeared dimly, then grew distinct. There were small, collapsed bundles of fur upon the floor of the storeroom being exposed to view. They were, probably, the equivalent of rats. And then the last remnant of mist vanished with a curiously wraithlike abruptness, and the end of Jacaro's Tube came into view.

Tommy advanced, Evelyn clinging to his sleeve. There were clanking noises audible in this room even above the dull rumble of the city's machines. The noises came from the Tube's mouth. It was four feet and more across, and it projected at a crazy angle out of a previously solid wall.

"Hello!" shouted Tommy. "Down the Tube!"

**T**HE clattering noise stopped, then continued at a faster rate.

"The gas is cut off!" shouted Tommy again. "Who's there?"

A voice gasped from the Tube's depths:

"It's him!" The tone was made metallic by echoing and reechoing in the bends of the Tube, but it was Smithers. "We're comin', Mr. Reames."

"Is—is Daddy there?" called Evelyn eagerly. "Daddy!"

"Coming," said a grim voice.

The clattering grew nearer. A goggled, gas-masked head appeared, and a body followed it out of the Tube, laden with a multitude of burdens. A second climbed still more heavily after the first. The brightly-colored citizens of the Golden City reached quietly to the weapons at their waists. A third voice came up the Tube, distant and nearly unintelligible. It roared a question.

Smithers ripped off his gas mask and said distinctly:

"Sure we're through. Go ahead. An' go to hell!"

Then there was a thunderous detonation somewhere down in the Tube's depths. The visible part of it jerked spasmodically and cracked across. A wisp of brownish smoke puffed out of it, and the stinging reek of high explosive tainted the air. Then Evelyn was clinging close to her father, and he was patting her comfortingly, and Smithers was pumping both of Tommy's hands, his normal calmness torn from him for once. But after a bare moment he had gripped himself again. He unloaded an impressive number of parcels from about his person. Then he regarded the citizens of the Golden City with an impersonal, estimating gaze, ignoring twenty weapons trained upon him.

"Those damn fools back on Earth," he observed impassively, "decided the professor an' me was better off of it. So they let us come through the Tube before they blew it up. We brought the explosive bullets, Mr. Reames. I hope we brought enough."

And Tommy grinned elatedly as Denham turned to crush his hands in his own.

## Chapter 8

### “Those Devils Have Got Evelyn!”

**T**HAT night the three of them talked, on a high terrace with most of the Golden City spread out below them. Over their heads, lights of many colors moved and shifted slowly in the sky. There were a myriad glowing specks of saffron-red about the ways of the city, and the air was full of fragrant odors. The breath of the jungle reached them even a thousand feet above ground. And the dull, persistent roar of the machines reached them too. There were five people on the terrace: Tommy, Denham, Smithers, Aten and the white-bearded old Keeper of Foodstuffs. He looked on as the Earthmen talked.

“We’re marooned,” Tommy was saying crisply, “and for the time being we’ve got to throw in with these people. I believe they came from Earth originally. Four, five thousand years ago, perhaps. Their tale is of a cave they sealed up behind them. It might have been a primitive Tube, if such a thing can be imagined.”

Denham filled his pipe and lighted it meditatively.

“Half the American Indian tribes,” he observed drily, “had legends of coming originally from an underworld. I wonder if Tubes are less your own invention than we thought?”

Tommy shrugged.

“In any case, Earth is safe.”

“Is it?” insisted Denham. “You say they understood at once when you talked of dimension-travel. Ask the old chap there.”

**T**OMMY frowned, then labored with the question. The bearded old man spoke gravely. At his answer, Tommy grimaced.

“Datl’s gone looking for the cave their legends tell of,” he said reluctantly. “He’s the lad who wanted the city to gas Earth with some ghastly stuff they know of, and move over when the gas was harmless again. But the cave has been lost for centuries, and it’s in the torrid zone—which *is* torrid! We’re near the North Pole of this planet, and it’s tropic here. It must be mighty hot at the equator. Datl took a ship and

supplies and sailed off. He may be killed. In any case it'll be some time before he's dangerous. Meanwhile, as I said, we're marooned."

"And more," said Denham deliberately. "By the time the authorities halfway believed me, and Von Holtz could talk, there were more deaths from the Death Mist. It wiped out a village, clean. So when it was realized that I'd caused it—or that was their interpretation—and was the only man who could cause it again, why, the authorities thought it a splendid idea for me to come through the Tube. They invited me to commit suicide. My knowledge was too dangerous for a man to have. So," he added grimly, "I have committed suicide. We will not be welcomed back on Earth, Tommy."

Tommy made an impatient gesture.

"Worry about that later," he said impatiently. "Right now there's a war on. Rahn's desperate, and the prisoners we took this morning say Jacaro and his gunmen are there, advising them. Ragged Men have joined in to help kill civilized humans. And they've still got aircraft."

"Which can still bombard this city," observed Denham. "Can't they?"

Tommy pointed to the many-colored beams of light playing through the sky overhead.

"No. Those lights were invented to guide night-flying planes back home. They're static lights—cold lights, by the way—and they register powerfully when a static-discharge propeller comes within range of them. If Rahn tries a night attack, Aten and I take off and shoot them down again. That's that. But we've got to design gas masks for these people, and I think I can persuade the Council to send over and take all Rahn's aircraft away to-morrow. But the real emergency is the jungle."

**H**E expounded the situation of the city as he understood it. He labored painstakingly to make his meaning clear while Denham blew meditative smoke rings and Smithers listened quietly. But when Tommy had finished, Smithers said in a vast calm:

"Say, Mr. Reames, y'know I asked you to get somebody to take me through some o' these engine rooms. That's kinda my specialty. An' these folks are good, no question! There's engines—even steam engines—we couldn't build on Earth. But, my Gawd, they're dumb! There ain't a piece of automatic machinery on the place. There's one man to every motor, handlin' the controls or the throttle. They got stuff we couldn't come near, but they never thought of a steam governor."

Tommy turned kindling eyes upon him. "Go on!"

"Hell," said Smithers, "gimme some tools an' I'll go through one shop an' cut the workin' force in half, just slammin' governors, reducin' valves, an' automatic cut-offs on the machines I understand!"

Tommy jumped to his feet. He paced up and down, then halted and began to spout at Aten and the Keeper of Foodstuffs. He gesticulated, fumbling for words, and hunted absurdly for the ones he wanted among his written lists, and finally was drawing excitedly on Aten's black-metal tablet. Smithers got up and looked over his shoulder.

"That ain't it, Mr. Reames," he said slowly. "Maybe I...."

**T**OMMY pressed the stud that erased the page. Smithers took the tablet and began to draw painstakingly. Aten, watching, exclaimed suddenly. Smithers was drawing an actual machine, actually used in the Golden City, and he was making a working sketch of a governor so that it would operate without supervision while the steam pressure continued. Aten began to talk excitedly. The Keeper of Foodstuffs took the tablet and examined it. He looked blank, then amazed, and as the utterly foreign idea of a machine which controlled itself struck home, his hands shook and color deepened in his cheeks.

He gave an order to Aten, who dashed away. In ten minutes other men began to arrive. They bent over the drawing. Excited comments, discussions and disputes began. A dawning enthusiasm manifested itself. Two of them approached Smithers respectfully, with shining eyes. They drew their tablets from their belts, rather skilfully drew the governor he had indicated in larger scale, and by gestures asked for more detailed plans. Smithers stood up to go with them.

"You're a hero, now, Smithers," Tommy informed him exultantly. "They'll work you to death and call you blessed!"

"Yes, sir," said Smithers. "These fellas are right good mechanics. They just happened to miss this trick." He paused. "Uh—where's Miss Evelyn?"

"With Aten's—wife," said Tommy. This was no time to discuss the marital system of Yugna. "We were prisoners until this morning. Now we're guests of honor. Evelyn's talking to a lot of women and trying to boost our prestige."

**S**MITHERS went over to the gesticulating group of draftsmen. He settled down to explain by drawings, since he had not a word of their language. In a few minutes a group went rushing away with the sketch tablets held jealously to their breasts, bound for workshops. Other men appeared to present new problems. A wave of sheer enthusiasm

was in being. A new idea which would lessen the demands of the machines was a godsend to these folk.

Then Denham blew a smoke ring and said meditatively:

"I think I've got something too, Tommy. Ultra-sonic vibrations. Sound waves at two to three hundred thousand per second. Air won't carry them. Liquids will. They use 'em to sterilize milk, killing the germs by sound waves carried through the fluid. I think we can start some ultra-sonic generators out there that will go through the wet soil and kill all vegetation within a given range. We might clear away the jungle for half a mile or so and then use ultra-sonic beams to help it clear while new food-plants are tried out."

Tommy's eyes glowed.

"You've given yourself a job! We'll turn this planet upside down."

"We'll have to," said Denham drily. "This city may believe in you, but there are others, and these folk are a little too clever. There's no reason why some other city shouldn't attack Earth, if they seriously attack the problem of building a Tube."

Tommy ground his teeth, frowning. Then he started up. There was a new noise down in the city. A sudden flare of intolerable illumination broke out. There was an explosion, many screams, then the yelling tumult of men in deadly battle.

**E**VERY man on the tower terrace was facing toward the noise, staring. The white-bearded man gave an order, deliberately. Men rushed. But as they swarmed toward an exit, a green beam of light appeared near the uproar. It streaked upward, wavering from side to side and making the golden walls visible in a ghostly fashion. It shivered in a hasty rhythm.

Aten groaned, almost sobbed. There was another flash of that unbearable actinic flame. A thermit-thrower was in action. Then a third flash. This was farther away. The tumult died suddenly, but the green light-beam continued its motion.

Tommy was snapping questions. Aten spoke, and choked upon his words. Tommy swore in a sudden raging passion and then turned a chalky face toward the other two men from Earth.

"The prisoners!" he said in a hoarse voice. "The men from Rahn! They broke loose. They rushed an arsenal. With hand weapons and a thermit-thrower they fought their way to a place where the big vehicles are kept. They raided a dwelling-tower on the way and seized women. They've gone off on the metal roads through the jungle!" He tried to ease his collar. Aten, still watching the green beam, croaked another sentence.

"Those devils have got Evelyn!" cried Tommy hoarsely. "My God! Aten's wife, and his...." He jerked a hand toward the Councilor. "Fifty women—gone through the jungle with them, toward Rahn! Those devils have got Evelyn!"

He whirled upon Aten, seizing his shoulder, shaking the man as he roared questions.

"No chance of catching them." Far away, in the jungle, the infinitely vivid actinic flame blazed for several seconds. "They've sprayed thermit on the road. It's melted and ruined. It'd take hours to haul the ground vehicles past the gap. They're got arms and lights. They can fight off the beasts and Ragged Men. They'll make Rahn. And then"—he shook with the rage that possessed him—"Jacaro's there with those gunmen of his and his friends the Ragged Men!"

**H**E seemed to control himself with a terrific effort. He turned to the white-bearded Councilor, whose bearing was that of a man stunned by disaster. Tommy spoke measuredly, choosing words with a painstaking care, clipping the words crisply as he spoke.

The Councilor stiffened. Old as he was, an undeniable fighting light came into his eyes. He barked orders right and left. Men woke from the paralysis of shock and fled upon errands of his command. And Tommy turned to Denham and Smithers.

"The women will be safe until dawn," he said evenly. "Our late prisoners can't lose the way—aluminum roads that are no longer much used lead between all the cities—but they won't dare stop in the jungles. They'll go straight on through. They should reach Rahn at dawn or a little before. And at dawn our air fleet will be over the city and they'll give back the women, unharmed, or we'll turn their own trick on them, by God! It'd be better for Evelyn to die of gas than as—as the Ragged Men would kill her!"

His hands were clenched and he breathed noisily for an instant. Then he swallowed, and went on in the same unnatural calm:

"Smithers, you're going to stay behind, with part of the air fleet. You'll get aloft before dawn and shoot down any strange aircraft. They might try to stalemate us by repeating their threat, with our guns over Rahn. I'll give orders."

He turned again to the Councilor, who nodded, glanced at Smithers, and repeated the command.

"You, sir," he spoke to Denham, "you'll come with me. It's your right, I suppose. And we'll go down and get ready."

He led the way steadily toward a door. But he reached up to his collar, once, as if he were choking, and ripped away collar and coat and all, unconscious of the resistance of the cloth.

**T**HAT night the Golden City made savage preparation for war. Ships were loaded and ranged in order. Crews armed themselves, and helped in the loading and arming of other ships. Oddly enough, it was to Tommy that men came to ask if the directing apparatus for the Death Mist should be carried. The Death Mist could, of course, be used as a gas alone, drifting with the wind, or it could be directed from a distance. This had been done on Earth, with the directional impulses sent blindly down the Tube merely to keep the Mist moving always. The controlling apparatus could be carried in a monster freight plane. Tommy ordered it done. Also he had the captured planes from Rahn refitted for flight by replacing their smashed propelling grids. Fresh crews of men for these ships organized themselves.

When the fleet took off there was only darkness in all the world. The unfamiliar stars above shone bright and very near as Tommy's ship, leading, winged noiselessly up and down and straight away from the play of prismatic lights above the city. Behind him, silhouetted against that many-colored glow, were the angular shapes of many other noiseless shadows. The ornithopters with their racket would start later, so the planes would be soaring above Rahn before their presence was even suspected. The rest of the fleet flew in darkness.

**T**HE flight above the jungle would have been awe-inspiring at another time. There were the stars above, nearer and brighter than those of Earth. There was no Milky Way in the firmament of this universe. The stars were separate and fewer in number. There was no moon. And below there was only utter, unrelieved darkness, from which now and again beast-sounds arose. They were clearly audible on board the silent air fleet. Roarings, bellowings, and hoarse screamings. Once the ships passed above a tumult as of unthinkable monsters in deadly battle, when for an instant the very clashing of monstrous jaws was audible and a hissing sound which seemed filled with deadly hate.

Then lights—few of them, and dim ones. Then blazing fires—Ragged Men, camped without the walls of Rahn or in some gold-walled courtyard where the jungle thrust greedy, invading green tentacles. The air fleet circled noiselessly in a huge batlike cloud. Then things came racing from the darkness, down below, and there was a tumult and a shouting, and presently the hilarious, insanely gleeful uproar of the Ragged Men. Tommy's face went gray. These were the escaped prisoners, arrived

actually after the air fleet which was to demand the return of their captives.

Tommy wet his lips and spoke grimly to his pilot. There were six men and many Death-Mist bombs in his ship. He was asking if communication could be had with the other ships. It was wise to let Rahn know at once that avengers lurked overhead for the captives just delivered there.

For answer, a green signal-beam shot out. It wavered here and there. Tommy commanded again. And as the signal-beam flickered, he somehow sensed the obedience of the invisible ships about him. They were sweeping off to right and left. Bombs of the Death Mist were dropping in the darkness. Even in the starlight, Tommy could see great walls of pale vapor building themselves up above the jungle. And a sudden confused noise of yapping defiance and raging hatred came up from the city of Rahn. But before dawn came there was no other sign that their presence was known.

**T**HE ornithopters came squeaking and rattling in their heavy flight just as the dull-red sun of this world peered above the horizon. The tree-fern fronds waved languidly in the morning breeze. The walls and towers of Rahn gleamed bright gold, in parts, and in parts they seemed dull and scabrous with some creeping fungus stuff, and on one side of the city the wall was overwhelmed by a triumphant tide of green. There the jungle had crawled over the ramparts and surged into the city. Three of the towers had their bases in the welter of growing things, and creepers had climbed incredibly and were still climbing to enter and then destroy the man-made structures.

But about the city there now reared a new rampart, rising above the tree-fern tops: there was a wall of the Death Mist encompassing the city. No living thing could enter or leave the city without passing through that cloud. And at Tommy's order it moved forward to the very encampments of the Ragged Men.

He spoke, beginning his ultimatum. But a movement below checked him. On a landing stage that was spotted with molds and lichens, women were being herded into clear view. They were the women of the Golden City. Tommy saw a tiny figure in khaki—Evelyn! Then there was a sudden uproar from an encampment of the Ragged Men. His eyes flicked there, and he saw the Ragged Men running into and out of the tall wall of Death Mist. And they laughed uproariously and ran into and out of the Mist again.

His pilot dived down. The Ragged Men yelled and capered and howled derisively at him. He saw that they removed masklike things

from their faces in order to shout, and donned them again before running again into the Mist. At once he understood. The Ragged Men had gas masks!

Then, a sudden cracking noise. Three men had opened fire with rifles from below. Their garments were drab-colored, in contrast to the vivid tints of the clothing of the inhabitants of Rahn. They were Jacaro's gunmen. And a great freight carrier from Yugna veered suddenly, and a bluish flash burst out before it, and it began to flutter helplessly down into the city beneath.

The weapons of Tommy's fleet were useless, since the citizens of Rahn were protected by gas masks. And Tommy's fighting ships were subject to the same rifle fire against their propelling grids that had defeated the fleet from Rahn. The only thing the avenging fleet could now accomplish was the death of the women it could not save.

## Chapter 9

### War!

A HUGE ornithopter came heavily out on the landing stage in the city of Rahn. Its crew took their places. With a creaking and rattling noise it rose toward the invading fleet. From its filigree cockpit sides, men waved green branches. A green light wavered from the big plane that carried the bearded Council man and Denham. That plane swept forward and hovered above the ornithopter. The two flying things seemed almost fastened together, so closely did their pilots maintain that same speed and course. A snaky rope went coiling down into the lower ship's cockpit. A burly figure began to climb it hand over hand. A second figure followed. A third figure, in the drab clothing that distinguished Jacaro's men from all others, wrapped the rope about himself and was hauled up bodily. And Tommy had seen Jacaro but once, yet he was suddenly grimly convinced that this was Jacaro himself.

The two planes swept apart. The ornithopter descended toward the landing stage of Rahn. The freight plane swept toward the ship that carried Tommy. Again the snaky rope coiled down. And Tommy swung up the fifteen feet that alone separated the two soaring planes, and looked into the hard, amused eyes of Jacaro where he sat between two other emissaries of Rahn. One of them was half naked and savage, with the light of madness in his eyes. A Ragged Man. The other was lean and desperate, despite the colored tunic of a civilized man that he wore.

"HELLO," said Jacaro blandly. "We come up to talk things over." Tommy gave him the briefest of nods. He looked at Denham—who was deathly white and grim—and the bearded Councilor.

"I' been givin' 'em the dope," said Jacaro easily. "We got the whip hand now. We got gas masks, we got guns just the same as you have, an' we got the women."

"You haven't ammunition," said Tommy evenly, "or damned little. Your men brought down one ship, and stopped. If you had enough shells would you have stopped there?"

Jacaro grinned.

"You got arithmetic, Reames," he conceded. "That's so. But—I'm sayin' it again—we got the women. Your girl, for one! Now, how about throwin' in with me, you an' the professor?"

"No," said Tommy.

"In a coupla months, Rahn'll be runnin' this planet," said Jacaro blandly, "and I'm runnin' Rahn! I didn't know how easy the racket'd be, or I'd 've let Yugna alone. I'd 've come here first. Now get it! Rahn runnin' the planet, with a couple guys runnin' Rahn an' passin' down through a Tube any little thing we want, like a few million bucks in solid gold. An' Rahn an' the other cities for kinda country homes for us an' our friends. All the women we want, good liquor, an' a swell time!"

"Talk sense," said Tommy, without even contempt in his tone.

**J**ACARO snarled.

"No sense actin' too big!" But the snarl encouraged Tommy, because it proved Jacaro less confident than he tried to seem. His next change of tone proved it. "Aw, hell!" he said placatingly. "This is what I'm figurin' on. These guys ain't used to fighting, but they got the stuff. They got gases that are hell-roarin'. They got ships can beat any we got back home. Figure out the racket. A couple big Tubes, that'll let a ship—maybe folded—go through. A fleet of 'em floatin' over N'York, loaded with gas—that white stuff y' can steer wherever y' want it. Figure the shake-down. We could pull a hundred million from Chicago! We c'd take over the whole United States! Try that on y' piano! Me, King Jacaro, King of America!" His dark eyes flashed. "I'll give y' Canada or Mexico, whichever y' want. Name y' price, guy. A coupla months organizin' here, buildin' a big Tube, then...."

Tommy's expression did not change.

"If it were that easy," he said drily, "you wouldn't be bargaining. I'm not altogether a fool, Jacaro. We want those women back. You want something we've got, and you want it badly. Cut out the oratory and tell me the real price for the return of the women, unharmed."

Jacaro burst into a flood of profanity.

"I'd rather Evelyn died from gas," said Tommy, "than as your filthy Ragged Men would kill her. And you know I mean it." He switched to the language of the cities to go on coldly: "If one woman is harmed, Rahn dies. We will shoot down every ship that rises from her stages. We will spray burning thermit through her streets. We will cover her towers with gas until her people starve in the gas masks they've made!"

The lean man in the tunic of Rahn snarled bitterly: "What matter? We starve now!"

Tommy turned upon him as Jacaro whirled and cursed him bitterly for the revealing outburst.

"We will ransom the women with food," said Tommy coldly—and then his eyes flamed, "and thrash you afterwards for fools!"

**H**E made a gesture to the Keeper of Foodstuffs. It was unconsciously an authoritative gesture, though the Keeper of Foodstuffs was in the state of affairs in Yugna the head of the Council. But that old man spoke deliberately. The man from Rahn snarled his reply. And Tommy turned aside as the bargaining went on. He could see Evelyn down below, a tiny speck of khaki amid the rainbow-colored robes of the other women. This had been a savage expedition, to rescue or to avenge. It had deteriorated into a bargain. Tommy heard, dully, amounts of unfamiliar weights and measures of foodstuffs he did not recognize. He heard the time and place of payment named: the gate of Yugna, the third dawn hence. He hardly looked up as at some signal one of their own ornithopters slid below and the three ambassadors of Rahn prepared to go over the side. But Jacaro snarled out of one corner of his mouth.

"These guys are takin' each other's words. Maybe that's all right, but I'm warnin' you, if there's any double-crossin'...."

He was gone. The Keeper of Foodstuffs touched Tommy's shoulder.

"Our flier," he said slowly, "will make sure our women are as yet unharmed. We are to deliver the foods at our own city gate, and after the women have been returned. Rahn dares not keep them or harm them. We of Yugna keep our word. Even in Rahn they know it."

"But they won't keep theirs," said Tommy heavily. "Not with a man of Earth to lead them."

**H**E watched with his heart in his mouth as the ornithopter alighted near the assembled women of Yugna. As the three ambassadors climbed out, he could hear the faint murmur of voices. The men of Yugna, under truce, called across the landing stage to the women of their own city, and the women replied to them. Then the crew of the one grounded freighter arrived on the landing stage and the flapping flier rose slowly and rejoined the fleet. Its crew shouted a shamefaced reassurance to the flagship.

"I suppose," said Tommy bitterly, "we'd better go back—if you're sure the women are safe."

"I am sure," said the old man unhappily, "or I had not agreed to pay half the foodstuffs in Yugna for their return."

He withdrew into a troubled silence as the fleet swept far from triumphantly for him. Denham had not spoken at all, though his eyes had blazed savagely upon the men of Rahn. Now he spoke, dry-throatedly:

"Tommy—Evelyn—"

"She is all right so far," said Tommy bitterly. "She's to be ransomed by foodstuffs, paid at the gates of Yugna. And Jacaro bragged he's running Rahn—and they've got gas masks. We'd better be ready for trouble after the women are returned."

Denham nodded grimly. Tommy reached out and took one of the black tablets from the man beside him. He began to draw carefully, his eyes savage.

"What's that?"

"There's high-pressure steam in Yugna," said Tommy coldly. "I'm designing steam guns. Gravity feed of spherical projectiles. A jet of steam instead of gunpowder. They'll be low-velocity, but we can use big-calibre balls for shock effect, and with long barrels they ought to serve for a hundred yards or better. Smooth bore, of course."

Denham stirred. His lips were pinched.

"I'll design a gas mask," he said restlessly, "and Smithers and I, between us, will do what we can."

**T**HE air fleet went on over the waving tree-fern jungle in an unvarying monotony of bitterness. Presently Tommy wearily explained his design to the bearded Councilor who, with the quick comprehension of mechanical design apparently instinctive in these folk, grasped it immediately. He selected three of the six-man crew and passed Tommy's drawings to them. While the jungle flowed beneath the fleet they studied the sketches, made other drawings, and showed them eagerly to Tommy. When the fleet soared down to the scattered landing stages, not only was the design understood but apparently plans for production had been made. It did not take the men of the Golden City long to respond.

Tommy flung himself savagely into the work he had taken upon himself. It did not occur to him to ask for authority. He knew what had to be done and he set to work to do it, commanding men and materials as if there could be no question of disobedience. As a matter of fact, he yielded impatiently to an order of the Council that he should present himself in the Council hall, and, since no questions were asked him, continued his organizing in the very presence of the Council, sending for information and giving orders in a low tone while the Council deliberated. A vote was taken by the voting machine. At its end, he was solemnly informed that, though not a native of Yugna, he was entrusted with the

command of the defense forces of the city. His skill in arms—as evidenced by his defeat of the fleet of Rahn—and his ability in command—when he met the gas-mask defense of Rahn with a threat of starvation—moved the Council to that action. He accepted the command almost abstractedly, and hurried away to pick gun emplacements.

**W**ITHIN four hours after the return of the fleet, the first steam gun was ready for trial. Smithers appeared, sweat-streaked and vastly calm, to announce that others could be turned out in quantity.

“These guys have got the stuff,” he said steadily. “Instead o’ castin’ their stuff, they shoot it on a core in a melted spray. They ain’t got steel, an’ copper’s scarce, but they got some alloys that are good an’ tough. One’s part tungsten or I’m crazy.”

Tommy nodded.

“Turn out all the guns you can,” he said. “I look for fighting.”

“Yeah,” said Smithers. “Miss Evelyn’s still all right?”

“Up to three hours ago,” said Tommy grimly. “Every three hours one of our ships lands in Rahn and reports. We give the Rahnians their stuff at our own city gates. I’ve warned Jacaro that we’ve mounted thermitthrowers on our food stores. If he manages to gas us by surprise, nevertheless our foodstuffs can’t be captured. They’ve got to turn over Evelyn and cart off their food before they dare to fight, else they’ll starve.”

“But—uh—there’re other cities they could stick up, ain’t there?”

“We’ve warned them,” said Tommy curtly. “They’ve got thermitthrowers mounted on their food supplies, too. And they’re desperate enough to keep Rahn off. They’re willing enough to let Yugna do the fighting, but they know what Rahn’s winning will mean.”

Smithers turned away, then turned back.

“Uh—Mr. Reames,” he said heavily, “these fellas’ve gone near crazy about governors an’ reducing valves an’ such. They’re inventin’ ways to use ‘em on machines I don’t make head or tail of. We got three-four hundred men loose from machines already, an’ they’re turnin’ out these steam guns as soon as you check up. There’ll be more loose by night. I had ‘em spray some castin’s for another Tube, too. Workin’ like they do, an’ with the tools they got, they make speed.”

Tommy responded impatiently: “There’s no steel, no iron for magnets.”

“I know,” admitted Smithers. “I’m tryin’ steam cylinders to—uh—energize the castin’s, instead o’ coils. It’ll be ready by mornin’. I wish you’d look it over, Mr. Reames. If Miss Evelyn gets safe into the city, we could send her down the Tube to Earth until the fightin’s over.”

"I'll try to see it," said Tommy impatiently. "I'll try!"

**H**E turned back to the set-up steam gun. A flexible pipe from a heavily insulated cylinder ran to it. A hopper dropped metallic balls down into a bored-out barrel, where they were sucked into the blast of superheated steam from the storage cylinder. At a touch of the trigger a monstrous cloud of steam poured out. It was six feet from the gun muzzle before it condensed enough to be visible. Then a huge white cloud developed; but the metal pellets went on with deadly force. Half an inch in diameter, they carried seven hundred yards at extreme elevation. Point-blank range was seventy-five yards. They would kill at three hundred, and stun or disable beyond that. At a hundred yards they would tear through a man's body.

Tommy was promised a hundred of the weapons, with their boilers, in two days. He selected their emplacements. He directed that a disabling device be inserted, so if rushed they could not be turned against their owners. He inspected the gas masks being turned out by the women, who in this emergency worked like the men. Though helpless before machinery, it seemed, they could contrive a fabric device like a gas mask.

The second day the work went on more desperately still. But Smithers' work in releasing men was telling. There were fifteen hundred governors, or reducing valves, or autocratic cut-outs in operation now. And fifteen hundred men were released from the machines, which had to be kept going to keep the city alive. With that many men, intelligent mechanics all, Tommy and Smithers worked wonders. Smithers drove them mercilessly, using profanity and mechanical drawings instead of speech. Denham withdrew twenty men and labored on top of one of the towers. Toward sunset of the second day, vast clouds of steam bellied out from it at odd, irregular intervals. Nothing else manifested itself. Those irregular belchings of steam continued until dark, but Tommy paid no attention to them. He was driving the gunners of the machine guns to practice. He was planning patrols, devising a reserve, mounting thermit-throwers, and arranging for the delivery of the promised ransom at the specified city gate. So far, there was no sign of anything unusual in Rahn. Messengers from Yugna saw the captive women regularly, once every three hours. The last to leave had reported them being loaded into great ground vehicles under a defending escort, to travel through the dark jungle roads to Yugna. A vast concourse of empty vehicles was trailing into the jungle after them, to bring back the food which would keep Rahn from starving, for a while. It all seemed wholly regular.

**A**T dawn, the remaining ships of the air fleet of Rahn were soaring silently above the jungle about the Golden City. They made no threat. They offered no affront. But they soared, and soared....

A little after dawn, glitterings in the jungle announced the arrival of the convoy. Messengers, in advance, shouted the news. Men from Yugna went out to inspect. The atmosphere grew tense. The air fleet of Rahn drew closer.

Slowly, a great golden gateway yawned. Four ground vehicles rolled forward, and under escort of the Rahnians entered the city. Half the captive women from Yugna were within them. They alighted, weeping for joy, and were promptly whisked away. Evelyn was not among them. Tommy ground his teeth. An explanation came. When one half the promised ransom was paid, the others would be forthcoming.

Tommy gave grim orders. Half the foodstuffs were taken to the city gate—half, no more. At his direction, it was explained gently to the Rahnians that the rest of the ransom remained under guard of the thermit-throwers. It would not be exposed to capture until the last of the captives were released. There was argument, expostulation. The rest of the women appeared. Aten, at Tommy's express command, piled Evelyn and his own wife into a ground vehicle and came racing madly to the tower from which Tommy could see all the circuit of the city.

"You're all right?" asked Tommy. At Evelyn's speechless nod, he put his hand heavily on her shoulder. "I'm glad," he managed to say. "Put on that gas mask. Hell's going to pop in a minute."

He watched, every muscle tense. There was confusion about the city gate. Ground vehicles, loaded with foodstuffs, poured out of the gate and back toward the jungle. Other vehicles with improvised enlargements to their carrying platforms—making them into huge closed boxes—rolled up to the gate. The loaded vehicles rolled back and back and back, and ever more apparently empty ones crowded about the city gate waiting for admission.

Then there was a sudden flare of intolerable light. A wild yell arose. Clouds of steam shot up from the ready steam guns. But the circling air fleet turned as one ship and plunged for the city. The leaders began to drop smoking things that turned into monstrous pillars of prismatic-colored mist. A wave of deadly vapor rolled over the ramparts of the city. And then there was a long-continued ululation and the noise of battle. Ragged Men, hidden in the jungle, had swarmed upon the walls with ladders made of jungle reeds. They came over the parapet in a wave

of howling madness. And they surged into the city, flinging gas bombs as they came.

# Chapter 10

## The Fight

**T**HE city was pandemonium. Tommy, looking down from his post of command, swore softly under his breath. The Death Mist was harmless to the defenders of Yugna as a gas, because of their gas masks. But it served as a screen. It blotted out the waves of attackers so the steam guns could not be aimed save at the shortest of short ranges. His precautions were taking effect, to be sure. Two thirds of the attackers were Ragged Men drawn from about half the surviving cities, and against such a horde Yugna could not have held out at all but for his preparations. Now the defenders took a heavy toll. Swarms of men came racing toward the open gate, their truncheons aglow in the sunlight. The ring of Death Mist was contracting as if to strangle the city, and it left the ramparts bare again. And from more than one point upon the battlements the roaring clouds of steam burst out again. A dozen guns concentrated on the racing men of Rahn, plunging from the jungle to enter by the gate. They were racing forward, without order but at top speed, to share in the fighting and loot. Then streams of metal balls tore into them. The front of the irregular column was wiped out utterly. Wide swathes were cut in the rest. The survivors ran wildly forward over a litter of dead and dying men. Electric-charge weapons sent crackling discharges among them. Their contorted figures reeled and fell or leaped convulsively to lie forever still where they struck. And then the steam guns turned about to fire into the rear of the men who had charged past them.

The steam guns had literally blasted away the line of Ragged Men where they stood. But the line went on, with great ragged gaps in it, to be sure, but still vastly outnumbering the defenders of the city. Here and there a steam gun was silent, its gun crew dead. And presently those that were left were useless, immobile upon the ramparts in the rear of the attack.

**D**OWN in the ways of the city the fight rose to a riotous clamor. At Tommy's order the women of the city had been concentrated into

a few strong towers. The machines of the city were left undefended for a time. A few strong patrols of fighting men, strategically placed, flung themselves with irresistible force upon certain bands of maddened Ragged Men. But where a combat raged, there the Ragged Men swarmed howling. Their hatred impelled them to suicidal courage and to unspeakable atrocities. From his tower, Tommy saw a man of Yugna, evidently a prisoner. Four Ragged Men surrounded him, literally tearing him to pieces like the maniacs they were. Then he saw dust spurting up in a swift-advancing line, and all four Ragged Men twitched and collapsed on top of their victim. A steam gun had done that. A fighting patrol of the men of Yugna swept fiercely down a paved way in one of the Golden City's vehicles. There was the glint of gold from it. A solid, choked mass of invaders rushed upon it. Without slackening speed, without a pause, the vehicle raced ahead. Intolerable flashes of light appeared. A thermit-thrower was mounted on the machine. It drove forward like a flaming meteor, and as electric-charge weapons flashed upon it men screamed and died. It tore into a vast cloud of the Death Mist and the unbearable flames of its weapon could only be seen as illuminations of that deadly vapor.

A part of the city was free of defenders, save the isolated steam gunners left behind upon the walls. Ragged Men, drunk with success, ran through its ways, slashing at the walls, battering at the light-panels, pounding upon the doorways of the towers. Tommy saw them hacking at the great doorway of a tower. It gave. They rushed within. Almost instantly thereafter the opening spouted them forth again and after them, leaping upon them, snapping and biting and striking out with monstrous paws and teeth, were green lizard-things like the one that had been killed—years back, it seemed—on Earth. A deadly combat began instantly. But when the last of the fighting creatures was down, no more than a dozen were left of the three score who had begun the fight.

**B**UT this was not the main battle. The main battle was hidden under the Death-Mist cloud, concentrated in a vast thick mass in the very center of the city. Tommy watched that grimly. Perhaps eight thousand men had assailed the city. Certainly two thousand of them were represented by the still or twitching forms in queer attitudes here and there, in single dots or groups. There were seven hundred corpses before the city gate alone, where the steam guns had mowed down a reinforcing column. And there were others scattered all about. The defenders had lost heavily enough, but Tommy's defense behind the line of the ramparts was soundly concentrated in strong points, equipped with steam

guns and mostly armed with thermit-throwers as well. From the center of the city there came only a vast, unorganized tumult of battle and death.

Then a huge winged thing came soaring down past Tommy's tower. It landed with a crash on the roofs below, spilling its men like ants. Tommy strained his eyes. There was a billowing outburst of steam from the tower where Denham had been working the night before. A big flier burst into the weird bright flame of the thermit fluid. It fell, splitting apart as it dropped. Again the billowing steam. No result—but beyond the city walls showed a flash of thermit flame.

"Denham!" muttered Tommy. "He's got a steam cannon; he's shooting shells loaded with thermit! They smash when they hit. Good!"

He dispatched a man with orders, but a messenger was panting his way up as the runner left. He thrust a scribbled bit of paper into Tommy's hand.

"I'm trying to bring down the ship that's controlling the Death Mist. I'll shell those devils in the middle of town as soon as our controls can handle the Mist. Denham."

Tommy began to snap out his commands. He raced downward toward the street. Men seemed to spring up like magic about him. A ship with one wing aflame was tottering in mid-air, and another was dropping like a plummet.

Then Tommy uttered a roar of pure joy. The huge globe of beautiful, deadly vapor was lifting! Its control-ship was shattered, and men of the Golden City had found its setting. The Mist rose swiftly in a single vast globule of varicolored reflections. And the situation in the center of the city was clear. Two towers were besieged. Dense masses of the invaders crowded about them, battering at them. Steam guns opened from their windows. Thermit-throwers shot out flashes of deadly fire.

Tommy led five hundred men in savage assault, cleaving the mass of invaders like a wedge. He cut off a hundred men and wiped them out, while a rear guard poured electric charges into the main body of the enemy. More men of Yugna came leaping from a dozen doorways and joined them. Tommy found Smithers by his side, powder-stained and sweat-streaked.

"**M**ISS Evelyn's all right?" Smithers asked in a great calm.

"She is," growled Tommy. "On the top floor of a tower, with a hundred men to guard her."

"You didn't look at the Tube I made," said Smithers impassively; "but I turned on the steam. Looks like it worked. It's ready to go through, anyways. It's the same place the other one was, down in that cellar. I'm tellin' you in case anything happens."

He opened fire with a magazine rifle into the thick of the mob that assailed the two towers. Tommy left him with fifty men to block a highway and led his men again into the mass of mingled Ragged Men and Rahni-ans. His followers saw his tactics now. They split off a section of the mob and fell upon it ferociously. There were sudden awful screams. Thermit flame was rising from two places in the very thick of the mob. It burst up from a third, and fourth, and fifth.... Denham, atop his tower, had the range with his steam cannon, and was flinging heavy shells into the attackers of the two central buildings. And then there was a roaring of steam and a ground vehicle came to a stop not fifty feet away. A gun crew of Yugnans had shifted their unwieldy weapon and its insulated steam boiler to a freight-carrying vehicle. Now the gunner pulled trigger and traversed his weapon into the thick of the massed invaders, while his companions worked desperately to keep the hopper full of projectiles.

The invaders melted away. Steam guns in the towers, thermit projectiles from the cannon far away: now this.... And the concealing cloud of Death Mist was rising still, headed straight up toward the zenith. It looked like a tiny, dwindling pearl.

**T**HE assault upon Yugna had been a mad one, a frantic one. But the flight from Yugna was the flight of men trying to escape from hell. Wild panic characterized the fleeing men. They threw aside their weapons and ran with screams of terror no whit less horrible than their howls of triumph had been. And Tommy would have stopped the slaughter, but there was no way to send orders to the rampart gunners in time. As the fugitives swarmed toward the walls again, the storms of steam-propelled missiles mowed them down. Even those who scrambled down to the ground outside and fled sobbing for the jungle were pursued by hails of bullets. Of the eight thousand men who assailed Yugna, less than one in five escaped.

Pursuit was still in progress. Here and there, through the city, the sound of isolated combats still went on. Denham came down from his tower, looking rather sick as he saw the carnage about him. A strong escort brought Evelyn. Aten was grinning proudly, as though he had in

person defeated the enemy. And as Evelyn shakingly put out her hand to touch Tommy's arm—it was only later that he realized he had been wounded in half a dozen minor ways—a shadow roared over their heads. The crackle of firearms came from it.

"Jacaro!" snarled Tommy. He leaped instinctively to pursue. But the flying thing was bound for a landing in an open square, the same one which not long since had seen the heaviest fighting. It alighted there and toppled askew on contact. Figures tumbled out of it, in torn and ragged garments fashioned in the style of the very best tailors of the Earth's underworld.

Men of Yugna raced to intercept them. Firearms spat and bellowed luridly. In a close-knit, flame-spitting group, the knot of men raced over fallen bodies and hurtled areas where the pavement had cooled to no more than a dull-red heat where a thermit shell had struck. One man, two, three men fell under the small-arms fire. The gangsters went racing on, firing desperately. They dived into a tunnel and disappeared.

**"THE Tube!"** roared Smithers. "They' goin' for the Tube!"

He plunged forward, and Tommy seized his arm.

"They'll go through your Tube," he said curtly. "It looks like the one they came through. They'll think it is. Let 'em!"

Smithers tried to tear free.

"But they'll get back to Earth!" he raged. "They'll get off clear!"

The sharp, cracking sound of a gun-cotton explosion came out of the doorway into which Jacaro and his men had dived. Tommy smiled very grimly indeed.

"They've gone through," he said drily, "and they've blown up the Tube behind them. But—I didn't tell you—I took a look at your castings. Your pupils were putting them together, ready for the steam to go in, in place of the coils I used. But—er—Smithers! You'd discarded one pair of castings. They didn't satisfy you. Your pupils forgot that. They hooked them all together."

Smithers gulped.

"Instead of four right-angled bends," said Tommy grimly, "you have six connected together. You turned on the steam in a hurry, not noticing. And I don't know how many series of dimensions there are in this universe of ours. We know of two. There may be any number. But Jacaro and his men didn't go back to Earth. God only knows where they landed, or what it's like. Maybe somewhere a million miles in space. Nobody knows. The main thing is that Earth is safe now. The Death Mist has faded out of the picture."

He turned and smiled warmly at Evelyn. He was a rather horrible sight just then, though he did not know it. He was bloody and burned and wounded. He ignored all matters but success, however.

"I think," he said drily, "we have won the confidence of the Golden City, Evelyn, and that there'll be no more talk of gassing Earth. As soon as the Council meets again, we'll make sure. And then—well, I think we can devote a certain amount of time to our personal affairs. You are the first Earth-girl to be kissed in the Fifth Dimension. We'll have to see if you can't distinguish yourself further."

**A** GAIN the Council hall in the tower of government in the Golden City of Yugna. Again the queer benches about the black wood table—though two of the seats that had been occupied were now empty. Again the guards behind the chairs, and the crowd of watchers—visitors, citizens of Yugna attending the deliberations of the Council. The audience was a queer one, this time. There were bandages here and there. There were men who were wounded, broken, bent and crippled in the fighting. But a warmly welcoming murmur spread through the hall as Tommy came in, himself rather extensively patched. He was wearing the tunic and breeches of the Golden City, because his own clothes were hopelessly beyond repair. The bearded old Councilor gathered the eyes of his fellows. They rose. This Council seated itself as one man.

Quiet, placid formalities. The Keeper of Foodstuffs murmured that the ransom paid to Rahn had been recaptured after the fight. The Keeper of Rolls reported with savage satisfaction the number of enemies who had been slain in battle. He added that the loss to Yugna was less than one man to ten of the enemy. And he added with still greater emphasis that the shops being fitted with automatic controls had released now—it had grown so much—two thousand men from the necessary day-and-night working force, and further releases were to be expected. The demands of the machines were lessened already beyond the memory of man. Eyes turned to Tommy. There was an expectant pause for his reply.

**"I** HAVE been Commander of Defense Forces," he told them slowly, "in this fighting. I have given you weapons. My two friends have done more. The machines will need fewer and fewer attendants as the hints they have given you are developed by yourselves. And there is some hope that one of my friends may show you, in ultra-sonic vibrations, a weapon against the jungle itself. My own work is finished. But I ask again for friendship for my planet Earth. I ask that no war be made on my own people. I ask that what benefits you receive from us be passed to the other surviving cities on the same terms. And since there

can be no further fighting on this scale, I give back my commission as Commander of Defense."

There was a little murmur among the men of Yugna, looking on. It rose to a protesting babble, to a shout of denial. The bearded old Keeper of Foodstuffs smiled.

"It is proposed that the appointment as Commander of Defense Forces be permanent," he said mildly.

He produced the queer black box and touched it in a certain fashion. He passed it to the next man, and the next and next. It went around the table. It passed a second time, but this time each man merely looked at the top.

"You command the defense forces of Yugna for always," said the bearded old man, gently. "Now give orders that your requests become laws."

**T**OMMY stared blankly. He was suddenly aware of Aten in the background, smiling triumphantly and very happily at him. There was something like a roar of approval from the men of Yugna, assembled.

"Just what," demanded Tommy, "does this mean?"

"For many years," said a hawk-faced man ungraciously, "we have had no Commander of Defense. We have had no wars. But we see it is needful. We have chosen you, with all agreeing. The Commander of Defense"—he sniffed a little, pugnaciously—"has the authority the ancient kings once owned."

Tommy leaned back in the curious benchlike chair, his eyes narrow and thoughtful. This would simplify matters. No danger of trouble to Earth. A free hand for Denham and Smithers to help these folk, and for Denham to learn scientific facts—in the sciences they had developed—which would be of inestimable value to Earth. And it could be possible to open a peaceful trade with the nations of Earth without any danger of war. And maybe....

He smiled suddenly. It widened almost into a grin.

"All right. I'll settle down here for a while. But—er—just how does one set about getting married here?"

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*The Pirates of Ersatz*

Sometimes it seems nobody loves a benefactor ... particularly nobody on a well-heeled, self-satisfied planet. Grandpa always said Pirates were really benefactors, though....

Murray Leinster

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*This World Is Taboo*

Land on Dara? One might as well commit suicide! Untouchable, like the Darans -- that's what they'd call Calhoun if he broke the quarantine. And they'd wipe him out on sight. But Dara needed him and that was the kind of challenge this Interstellar Med Serviceman would never dodge.

Murray Leinster

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*Sand Doom*

The problem was as neat a circle as one could ask for; without repair parts, they couldn't bring in the ship that carried the repair parts!

Murray Leinster

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*Attention Saint Patrick*

Legends do, of course, get somewhat distorted in the passage of time. In the future, the passage across space to other planets may cause a slight modification here and there ...

Murray Leinster

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*Long Ago, Far Away*

The strange visitors had landed. Why had they come, and what unknown terror would they bring upon our world?

Murray Leinster

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*Talents, Incorporated*

The remorseless aggressors had everything in the galaxy on their side--except the little idiosyncrasies of the human mind!

Murray Leinster

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*Space Platform*

Space Platform tells of man's first step into outer space ... of the difficulties and dangers of reaching for the stars. It is also an exciting adventure. When young Joe Kenmore came to Bootstrap to install pilot gyros in the Platform he hadn't bargained for sabotage or murder or love. But Joe learned that ruthless agents were

determined to wreck the project. He found that the beautiful girl he loved, and men like The Chief, a rugged Indian steelworker, and Mike, a midget who made up for his size by brains, would have to fight with their bare hands to make man's age old dream of space travel come true!

Murray Leinster

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*The Leader*

The trouble with being a Superman, with Super powers, and knowing it, is it's so easy to overlook the unpleasant possibility of a super-superman!

Murray Leinster

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*The Ambulance Made Two Trips*

If you should set a thief to catch a thief, what does it take to stop a racketeer...?

Murray Leinster

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*The Runaway Skyscraper*



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