



THE HORRORS OF ATOMIC
WARFARE UNLEASHED ON MARS

1/6

ATOM-WAR ON MARS



E.C. Tubb

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Extract from "Everybody's Fortune Book," 1931.

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E. C. Tubb

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All characters in this story are imaginary and no reference is intended to any living person.

CHAPTER ONE

Arrest

THEY came for him at dawn, at the time when the tide of life is at its lowest ebb. Four of them, three men and an officer trimly dressed in sombre black, the red piping and shoulder insignia stark against the dull material. Weapons gleamed dully in the indirect lighting.

"Get up!"

John Benson sat up, rubbed the last traces of sleep from his eyes, and squinted at the officer.

"Get up!"

"I heard you the first time," snapped John. He reached for a cigarette, inhaled, let smoke trickle from his nostrils. "What is the meaning of this intrusion?"

"You are to come with me."

"Am I? May I remind you that I am your ranking officer, a major in the rocket service. I notice that you are merely a captain."

The officer shrugged, no trace of emotion disturbing the calm arrogance of his features. "I am of the special branch, and as such your superior rank means less than nothing. Now will you rise and dress, or do I take you as you are?"

For a long moment John stared at him, at the two men beside him, at the third, standing quietly in the half-open doorway. From outside came the murmur of excited voices, as other occupants of the apartment building discussed what was happening. The guard in the doorway made no attempt to hide himself.

John shrugged, crushed out his cigarette, slipped from the rumpled sheets. A hand prevented him from entering the shower. Angrily he knocked it aside, stepped forward, and doubled in sudden agony.

"You will get dressed," the officer ordered. The pistol with which he had struck John rested easily in his hand.

"I insist that I be allowed to make a visi-call," gasped John. "Your superiors shall hear of this. It is fantastic. There has been some stupid mistake, a mistake for which you shall pay."

"Security does not make mistakes," the officer said coldly. "Get dressed."

Sullenly John dressed himself, smoothing the fine grey uniform over wide shoulders, setting the peaked military cap rakishly on his crisp blond hair. On his shoulders the comet insignia of a first class pilot twinkled with metallic thread. Automatically he reached for his weapon belt. The officer caught his arm.

"You won't need that."

"Am I under arrest?"

"You won't need your weapon belt, that's all."

Angrily John shook off the other's hand. "I refuse to be disgraced this way. I am an officer, entitled to bear arms. Either I am under arrest, or I insist on wearing my arms. Well?"

"You will not wear your arms."

"Then I am under arrest?"

"Yes."

For the first time John felt fear.

He sat silent in the car. It slid through the traffic, the turbo-jet whining smoothly, the red headlights flashing a warning to clear the road. Around him, the city stirred, the streets thronged with people. It was shift change, one of the three eight-hour breaks when those coming off shift mingled with those going on. Overhead, the street lights

died as the rising sun threw a stronger light over the city. Ahead, the delicate spires of the military academy soared to the skies, their tops bright with the new day.

He didn't talk. It was a waste of time to question the laconic officer, but within his skull his thoughts raced their busy paths. Why had he been arrested? What would happen to him? Despite his firm knowledge that he was innocent, he felt the stirrings of panic. Security didn't make mistakes!

He had been bred on that creed. It had grown to be part of him. The essential rightness of the military regime. The flawless logic that had proved that men could not rule themselves. The military were the aristocracy. Security were their guardians. And he was under arrest!

The car slid beneath the high portals of the military academy, braked to a smooth halt. Together they marched across the courtyard, entered a lift, shot a hundred storeys into the heart of the giant building. A man, sitting behind a wide desk, looked up at their approach.

"Captain Martin reporting the arrival of Major John Benson, sir," the officer saluted, stood at attention.

"Very well," the man said tiredly. "You may go."

Martin saluted again, spun on his heel, re-entered the lift. His job was done. What happened to his prisoner he neither knew nor cared. He did as he was told, and others did as he told them. He dismissed the episode from his mind.

"Why am I here?" asked John.

"A moment. The Co-ordinator will see you." The man closed a circuit. "Major Benson here, sir."

"Send him in," snapped the speaker.

"Yes, sir." He looked at Benson. "The Co-ordinator will see you now. Go through that door." He bent to study papers littering the wide desk. John hesitated, looked around the deserted room, then pushed open the door.

The room was huge. Full-length windows ran along the entire stretch of one wall, filing cabinets occupied another.

A map, glittering with vari-coloured lights reared almost to the high ceiling. Against this immensity the sole occupant seemed trivial, insignificant. Benson knew better.

He let the door swing softly shut behind him.

"Major Benson at your service, sir." He stood waiting for permission to approach.

The Co-ordinator was an old man. A small, wrinkled, dried up husk of a man. His body was bent, gaunt, twisted, as if from some old crippling injury. He wore a badly-fitting uniform of plain material and his head was an expanse of skin, but Benson didn't laugh.

Men didn't laugh at the Co-ordinator! It may have been because of his eyes, great burning orbs of sheer intelligent power. It may have been because of his age, and no man knew just what that was, or it may have been because he was the most powerful man the world had ever seen, that men didn't laugh at the Co-ordinator.

He sat in a deep chair, staring out of the windows. He turned as Benson spoke.

"Come over here, Benson."

His voice was high, almost piping, yet with a certain quality of command that made even the thought of disobedience impossible. Benson crossed the room with long strides, his feet sinking into the foam rubber flooring.

"Sit down."

For a long moment he stared out of the window, so long that Benson began to think that he had been forgotten, then he sighed. "A lovely day, Benson."

"Yes, sir."

The Co-ordinator chuckled. "You don't have to humour an old man, major. Is it a lovely day?"

"The weather is perfect, sir."

"And man is vile, eh?" the old man chuckled again. "I can understand your feelings. Dragged out of bed at dawn, humiliated, insulted, perhaps even struck, eh? Did they strike you?"

"Nothing to speak of, sir."

"Who's fault was it?"

Benson looked up, surprised at the sudden iron in the old man's voice. "Mine, sir," he admitted.

"Good. Security are powerful. We must take care that their power does not corrupt them." He stared out of the window again.

"You are wondering why you are here. Why you were arrested, stripped of your weapons, told nothing. There is a reason, major. Maybe it is that there is nothing to tell, or maybe too much. I must decide."

"As you wish, sir."

"The habit of obedience. You are obedient, aren't you, Benson?"

"I must obey if I wish to be obeyed," John repeated the credo mechanically.

"Is that your only reason for obedience? Obeying one order so that you can give ten? How about the rank-and-filer? Who does he give orders to?"

"He is to the civilian as we are to him, sir," John said, stiffly.

"And what makes the civilian obey? Who can he order about?"

"Civilians are graded even as the military. They have their ranks from the highest down to the lowest, sir."

"And what about me?" the old man leaned half out of his chair. "I am the Co-ordinator. I order, but am never ordered. How do I fit in?"

"Even you, sir, must obey orders from the Great Soldier."

The old man leaned back in his padded chair. "You have learned well, Benson. I see by your insignia that you are of the rocket service. How old are you?"

"Twenty-five, sir."

"So young? Then you have never seen combat?"

"I regret, sir. No."

"Regret? Regret! What talk is this!" The great eyes burned with sudden energy.

"We are the Guardians of the people, sir. To die in such service is to assure eternal life. To die in battle, sir. Could man want a better end?"

"You forget yourself, Benson," the Co-ordinator said, coldly. "You forget your teachings." The old face softened. "But then you are young, and it is the habit of youth to dream of adventure. Maturity brings a saner outlook."

"Yes, sir."

"You say, 'Yes, sir,' but think that you know better. Well, age alone can prove my words to you. God grant that you may live long enough. There is an even chance that you won't."

"Sir!"

"There is an enemy abroad, Benson. The oldest enemy of all. It is a subtle enemy, an alluring foe. It dwells in the hearts of men, and makes them mad. It is known as liberty."

"Liberty, sir?"

"Yes. Liberty. The desire to be free."

"But we are free, sir."

"Liberty is a different kind of freedom. It is the freedom to live as an animal lives. To do what you want when you want to do it. To consider yourself as good as the next man. To obey none, and expect none to obey. It is chaos."

"But, sir!" John protested. "Men are not equal! How can this liberty ever hope to work?"

"It doesn't," the Co-ordinator said, grimly. "I know. I am an old man, Benson. I have seen what the pursuit of liberty can mean. I have seen cities blasted into flaming ruin. I have seen nations snarling in conflict. Peoples wantonly destroyed, the fruit of the Earth laid waste with atomic fire. I have seen horror!"

His high voice dropped, sweat started from the broad forehead, the great eyes looked sick.

"I was young once, Benson. A soldier, such as you. The nations screamed Freedom! and battled to impose their idea of what the word meant on the others. For ten years the nations slaughtered each other. For ten long years the rolling tide of war swept back and forth, and where it passed no living thing remained. The cities were destroyed, the factories, the very fields. The seas glowed and the rivers. Parodies of humans staggered among the ruins. It was hell!

"It ended at last. Neither side had won. Both were exhausted. It was then that the World State was born. A few men had vision. A few highly placed generals had husbanded their forces. It was a cabal against every nation, and it worked. We had the force, Benson. We had the only functioning organisation. We took over, and saved the Earth."

The old man paused, and wiped his forehead.

"That was more than fifty years ago. We crushed liberty. Instead, we founded the world state as you know it. A caste system. A world in which each knows his place, his duty, his obligations. The civilians are happy. Never before has any nation achieved the high standard of living enjoyed by the meanest of us. Free from the dread of war, the fear that made them turn more than half their productive capacity to the manufacture of arms, the people have come into their own at last."

"I see, sir." John frowned. "But what of us, sir? What of the military?"

"A caste system, Benson. The military are the elite. Remember your credo, 'obey so that you are obeyed,' obedience is essential if our system is to continue, but there is another reason."

"Yes, sir?"

"The military is the strong shield beneath which the civilians enjoy Paradise. We are the Guardians. We must never forget that. We rule, but the people must always be our first concern."

"I understand that, sir, but—?"

"You appear troubled. Why?"

"In a world state, sir, why have military at all?" John blurted the question, half shocked at his own heresy. The Co-ordinator smiled.

"I had wondered how long it would take you to ask that. I am glad you did. I would not like our educational methods to atrophy all intelligence." He leaned forward intently. "We have reached the planets. Mars and Venus have been colonised, were colonised even before the war I spoke of. They are a hard people, Benson. Liberty flourishes on that alien soil. Unfortunately it is a symptom of that old madness that those who suffer from it cannot help but taint others. I have proof that agents from Mars have deliberately tried to arouse dissatisfaction among the lower civilian grades."

"Then surely we should prevent them, sir." John sat upright, his eyes gleaming. "My rocket fleet could blast the colonies to dust, and end the threat forever."

"That is not necessary, and anyway, you couldn't do it." The Co-ordinator lifted a thin, claw-like hand. "Listen to me. Mars and Venus present no problem, yet. But there is danger. This is why I sent for you."

"Yes, sir?"

"Among our research organisation personnel we have a Professor Merrill. For several years now he has been working on a theory which will revolutionise all forms of power and transport. More than this I will not tell you, but I cannot over emphasise the importance of this discovery. Should it fall into the hands of either Venus or Mars, then Earth's golden age will be over. The military will be stripped of power, rendered worse than useless, and Earth will revert to chaos."

"Then kill him, sir."

"No. That line of thought is negative, to progress we must think positively. We must help the professor to finish his invention. He is loyal, as far as we can discover, but liberty is a subtle thing. Who knows the secret thoughts of a man's heart? If Merrill perfects his invention, then he will possess

more power than any man ever before. I do not exaggerate when I say that with it he could conquer Earth."

"What can I do, sir?"

"You are to be placed in the laboratory as Merrill's helper. Officially you will be a dissident, an outcast. It may be unnecessary. Merrill may be intensely loyal, but I dare not take the risk. There will be the usual guards, of course, but just in case, you will be on the inside as it were, a second line of defence."

"I understand, sir."

"Good. Officially you have been arrested. You will be tried, stripped of rank, and relegated to menial labour. Your crime has been subversive thinking. You had better read some selected books before you leave. You will, of course, be confined to the cells—we dare take no chances of the underground suspecting you."

He grinned at John's blank look. "The books will explain my meaning." He held out his hand. "I have not spoken of rewards, major, for it is your duty to obey. But I will say this. Protect Merrill's invention, place it safely in my hand, and I will make you a World Marshal."

"Thank you, sir." John gently shook the claw-like hand. "I shall do my best to be worthy of the honour."

He stood upright, saluted, marched to the door. The black uniformed men were waiting. They took him, stripped off his insignia of rank, led him deep beneath the building.

The cell was deathly quiet.

CHAPTER TWO

Trial

THE trial went smoothly, as such things always did. A black-uniformed officer of Security told the military court of finding certain proscribed books in Benson's apartment. The books were produced, old tattered volumes most of them, stained, heavily annotated. John glanced at them with interest. He had read them while awaiting trial, and had found them ludicrously illogical.

Brother officers told of conversations held at various times, conversations in which he had mentioned several heretic ideas. The threads of evidence were skilfully woven. Benson was made to appear as a recalcitrant. Not too dangerous, not connected with any organised group, but no longer reliable. The verdict was inevitable.

The panel of high ranking officers conferred a moment, their close-cropped heads almost touching, then the President rapped for silence.

"John Benson, hear the verdict of the court. You have been found guilty of unorthodox behaviour, namely, that you have read proscribed literature, and have held opinions unworthy of the rank you hold. The sentence of the court is that you be stripped of all rank and privileges, and that you be taken from this place and put to menial labour. Have you anything to say?"

John stared around the crowded room, at the ranks of uniformed spectators. He swallowed, remembering his instructions.

"One thing only."

"Speak."

"Give me liberty, or give me death!" He shouted the words, sending them echoing around the silent courtroom, forcing defiance and contempt into his tones.

Someone sniggered, someone laughed; even the grim President covered his suddenly twitching mouth.

"Remove him," he ordered. "Be gentle, the man is obviously insane."

John felt a fool. Face burning, he allowed the guards to conduct him from the courtroom. He hated himself for his utter loss of dignity. He even hated the Co-ordinator for instructing him to shout that meaningless phrase. He had an intense longing for the dignified peace of the normal military routine, of the barracks, the mess, the close warm intimacy of his rocket fleet.

Sunk in misery, he dumbly obeyed his guards.

The journey from the courtroom was a short one. He felt the closed waggon brake to a halt, a thrust sent him staggering from the vehicle, blinking in the strong light. A guard yelled at him.

"You, there! Over to the cage. Double!"

"What?"

"You heard me. Get over to the cage. Quick now."

Anger flooded John. He still smarted in self-contempt from his recent exhibition; to be spoken to in such a fashion by a common rank-and-filer was too much!

"Watch your speech, my man," he snapped curtly. "Be civil."

"What?" The man glared at him, his eyes flitting over the torn uniform. "An ex-officer, eh?" He smiled evilly. "Now isn't that nice." He slipped a short club from beneath his arm. "Now get over to the cage. Move!"

He punctuated each sentence with a savage prod of the club, grinning as he did so. John stepped back, stepped to one side, and let his combat training take over.

His left hand swept down, knocked the club aside. His right jabbed forward, the fingers stiffened, sinking into the soft flesh of the belly. The guard retched, screamed as John drove his knee into him, slumped unconscious from a savage blow to the temple.

It happened within seconds. Barely had John time to realise what he was doing, than an alarm began to wail. Men poured from a guard house, fanned out, came at him in a body. He looked arrogantly at them, hands at his sides.

"He attacked me," he explained. "He—"

Something smashed at his head. A booted foot swung at him, a fist drove into his mouth. Desperately he tried to defend himself, cowering from the savage rain of blows. He struck out, felt something yield beneath his fist, struck again. A man yelled an oath, cursed, swung his club.

John never felt himself strike the ground.

He moaned, raised a hand to his temple, felt something wet and sticky. Groggily he opened his eyes, forced himself to sit upright. A man stared down at him.

"How do you feel?"

"Bad," muttered John. He licked parched lips.

"Want a drink? Here." The man held a metal cup to his lips. "I saw you," he said, conversationally. "It did me good to see you beat up that guard, but what made you think the others wouldn't serve you the same?"

"The guard attacked me. I was merely defending myself. He had no right to do what he did."

"Innocent, aren't you?" The man squatted beside him, eyes widening as he recognised the uniform. "Ex-officer, eh? No wonder they beat you up. What else did you expect from rank-and-filers?"

"Respect," snapped John. "Even though I may have lost my rank, yet the fact that I was an officer proves to them that I am the better man."

"That theory is one with which quite a few people dis-

agree," the man said, dryly. "What happened?"

"How do you mean?"

"I mean what happened? How did you lose your rank? What are you doing in the cage?"

"The cage?" John looked about him. They were in a large square compound, walls and roof fashioned of close mesh wire. A water faucet stood in one corner, a trough in another. A dozen or so men lounged in various attitudes on the concrete floor. From the roof proper of the underground cell block, brilliant lights shone, their harsh glare hurt his eyes.

"Not nice, is it?" The man chuckled softly. "Never mind, it's only a transit camp. No one is ever here for long."

"What happens to them?"

"Some go to the execution chamber. Some to the mines. Some just vanish." He looked curiously at John. "You should know all about this place. You were of the military weren't you?"

"Rocket Fleet," John said, dully. "Punishment comes under Security. I didn't know."

A guard strode past the cage, glanced at them suspiciously, marched on.

"What brought you here?"

"I read a few old books, got a few new ideas."

"Such as?"

"Freedom. Liberty. All the rest of it."

"An idealist!" The man laughed derisively. "You must be crazy. Wasn't what you had good enough?"

"For me, yes, but I thought that it would be nice to help others."

The man grunted. "What's your name, friend?"

"Benson. Major John Benson. Why?"

"I like to know my Saints," he said, dryly. "You'd better

forget the title; it won't help you any. My name's Wharton, my friends call me Ben." He put out his hand.

John shook it gingerly. It was a new experience for him to allow familiarity from a civilian. "I take it that you don't agree with helping others?"

"No."

"Why? Don't you think that we owe a duty to the rest?"

"To hell with the rest," snarled Ben. "I believe in helping myself, first, last and all the time."

"An interesting philosophy. It doesn't appear to have done you much good, though."

"Maybe not, but I'll stick to it all the same." He gestured to one of the others, a small dried-up man sitting dejectedly against the wire. "See that man? He lived by the credo all his life, then he got into an argument with an officer about an unpaid bill. See that one? The youngster? He didn't like a soldier taking a fancy to his wife. Those two over there? They tried to publish a book banned by the censor. That one over there—he tried to impersonate an officer. What will happen to him?"

"Death," John said, mechanically. "And well deserved."

"So you say, but I say that the whole system's rotten."

"Then you must agree with liberty."

"No. It depends on the point of view. The underdog hates it, why not? The elite love it, and so they should. I want to become one of the elite."

A commotion from outside the fence broke off John's reply. A squad of guards marched towards the cage, unlocked the door. Two entered, glanced about, then grabbed hold of the man who had impersonated an officer. He raised his head at their touch, stared wildly about him, and made a sudden lunge at the open door.

A guard tripped him, another took careful aim, swung his foot. The sound of the leather striking made a soggy thud. The sergeant laughed coarsely.

"Drag him out of here. When he recovers, give him the

treatment. Make sure that he knows what's going on, though. We don't want him to miss his last show on Earth, do we?"

The guards sniggered as they dragged the unconscious man away.

"You there. Benson, Wharton, Fenton, Connors, Hunter, Denshaw and Leman. Fall in. You're taking a trip."

Silently the men formed a little group.

"Right. Quick march!"

Sullenly they shuffled out of the cage, across the brightly-lit floor, into a waiting truck. Doors swung behind them, locked with a metallic click; with a jerk the vehicle moved, climbed a ramp, settled to a steady motion.

"Where are they taking us?" A man muttered the question, fear heavy on his voice.

Pressed together in the warm darkness, John could imagine the wild thoughts racing through their minds. All but his. He knew where he was going, and he assumed that they would be going with him. A simple form of camouflage; hard on them, perhaps, but necessary.

"I hope they don't send us to the mines," growled a voice.

"They wouldn't be so bad," said another. John thought he recognised Wharton's voice. "I don't want to wind up in the plantations."

"I'd take either of them rather than what I'm thinking."

"What's that?" John asked, interestedly.

"I reckon we're due for a spell of radio-active decontamination." John couldn't place who was speaking. "I knew a man who was sent there once. He lasted six months."

Despite himself, John shuddered. He knew of the festering spots of lethal radiation studding the continents. Relics of the terrible atomic war which had given birth to the world state. They still defied decontamination. Fitful attempts were made at regular intervals to nullify the radioactivity of the poisoned soil. It had been calculated that for every foot of ground recovered, a man had died.

The wagon swung sharply, throwing them hard against the side. Gears whined as they bumped across uneven ground. They slewed, backed, stopped. The doors swung open.

"Outside!" snapped a guard. "Quick now!"

John had time for only one glance before he was thrust into the waiting ship. It was an obsolete cargo transport with the crude fuel jets of the pre-war era. A dim light burned within the windowless interior. Roughly they were thrust into seats.

"Quick now, fasten your belts!" The guard sat facing them, his machine pistol resting on his knee. Other guards shut the door. John heard the click of the locks.

"Fasten down," snapped a voice from a hidden speaker. "Take off in five seconds."

With a snarl the jets burst into flaming life. The ship quivered, shook a little, then jerked forward. It bumped, seemed to slew, then steadied. They were airborne.

"You know," whispered a voice at John's ear. "It wouldn't be impossible to overpower that guard, get his pistol, and shoot our way into the pilot's compartment."

"Impossible," breathed John quietly. He grinned at Wharton. "Before you could get to him, he would have cut you down. Then if you did overpower him, the pilot would hear the commotion."

"What if he did? He couldn't do anything about it?"

"Except flood the hold with sleep gas, or if he had none, he could bale out and let us all crash. In any case, can you pilot a ship?"

"No, but I know who could."

"Who?"

"You, my friend," grinned Wharton. "You."

"Silence!" called the guard. "No talking!"

The flight seemed to last for hours. To John, used to swift rocket planes and space ships, it was intolerable. Restlessly he shifted in the hard seat.

"What's the matter? Sit still, can't you?" The guard glared at him, hand tense on the butt of his weapon.

"How much longer?" John complained. "I'm getting cold.

He was. There was a bite in the air, their breath pluming from their chattering teeth. He hugged the thin material of his uniform more closely about him, and stared coldly at the ill-tempered guard.

The ship tilted, the jets deepening their high-pitched roar. It banked, bumped a little, stopped. The silence as the jets cut off made his ears ring. A clang came from the door. It opened, letting in a blast of icy air.

A guard, fur clad, thrust a grinning head into the plane.

"All out," he called, cheerfully.

Half numb with cold, the prisoners stumbled from the plane. Around them stretched a sheet of glistening ice. A bitter wind lashed them with frozen sleet. Desperately John stamped his feet, swung his arms; the protection of his uniform seemed worse than useless.

A roar signalled the starting of the jets. For a moment the welcome blast of super-heated air from the gaping orifices warmed the little group, then it had gone, vanishing into the leaden sky. The guard, almost shapeless in his thick furs, waved an arm at them.

"Quick," he yelled, above the whine of the wind. "At the double, or you'll be frozen."

At a rapid dog trot, slipping on the ice, cursing through chattering teeth, they followed the bulky form. John wondered wildly where he was taking them. The ice stretched as far as he could see in an unbroken sheet. No buildings broke the smooth perfection.

He halted, jerked at a small hummock, stood aside to reveal a lighted hold. "Get in," he ordered. "Quick now."

Gratefully they stumbled down the lighted passage. Warm air thawed their half frozen cheeks. Shivering, they halted by a metal portal. The guard pressed a button.

"New arrivals," he said into a tiny grill.

A panel slid aside. Cold eyes surveyed them, then the door swung silently open.

It was an underground city.

John looked about him with interest as he was led to a shower room, then to the stores. Freshly clad in dark blue denims, he sat with the others to a rough but wholesome meal. Wharton chuckled.

"At least they don't intend starving us."

"They want us fit to work, so obviously they must feed us," John said.

Wharton's reply was lost in the interest aroused by the arrival of several guards. An officer, trim in his black and scarlet, surveyed them coldly, his eyes flitting from one to the other. For a moment his glance rested on John, then dropped to a paper in his hand.

"Men," he said, emotionlessly. "You are here to work. You will be relegated to menial labour, and by the sweat of your brow earn redemption from your crimes against the State. Wharton, Benson, you will assist in the laboratories. Fenton, Connors, you will report to the kitchen. The rest of you will work as directed. That is all."

Then stiffly he spun on his heel, strode away. Wharton breathed a sigh of relief.

"At least we've drawn it lucky. I'd hate to work outside."

"It wouldn't be so bad," protested John. "At least you'd get plenty of fresh air."

"Who wants frozen air," snapped Wharton. "Not me. Not at the North Pole, anyway."

With a start, John realised that Wharton knew more than he should have done.

CHAPTER THREE

Merrill's Invention

THE laboratories were huge, sprawling their hidden vastness deep beneath the shielding ice. Secrecy had first determined the location of the underground city, then, when the need for secrecy no longer existed, the nature of the research had made isolation essential.

Here were conducted the delicate experiments of mutated biology, botany and bacteriology. Here, too, dangerous experiments with atomic power were conducted. New weapons developed, improved means of communication. All the scientific arts that had been encouraged by the military of a bygone age.

John felt proud as he followed the guard, leading him to his new duties. He was a part of all this. He was one of those to whom this city was dedicated. He would share in the benefits developed, be protected by them, use them to weld even more firmly the military credo.

"Obey, to be obeyed!" he whispered the words reverently.

"What's that?" Wharton snapped. "What did you say?"

"I said it must have taken a long time to build this."

"No so long," Wharton shrugged. "All they had to do was to melt caverns out of the ice, insulate them, supply heat and store food. Most of it could have been flown in."

"It was still a great achievement," insisted John. "Only many men, working together, could have done it."

"Prisoners are cheap," sneered Wharton. "I thought that you were against all this?"

"No. Why should I be? It is living proof of the workings of democracy. Only men united in a common cause could have done this. Think what they could do if free!"

"You are crazy," Wharton said, disgustedly. "You of all people should know that this place was built with forced labour working beneath the threat of death. Why man! What else are we doing here?"

John swallowed the protest on his lips. For a moment he had been in danger of letting his natural enthusiasm for all things military betray him. He looked sheepish.

"You could be right, Ben. Sometimes I forget."

The guard stamped to a halt before a metal door.

"This is where you work," he snapped, curtly. He pressed a button.

"What is it?"

"Your fresh labour, sir. May they enter?"

"A moment." Something made a metallic sound behind the door. It swung open, and a man stood blinking at them.

"Benson and Wharton, sir." The guard saluted. "This is General Merrill. You will work as he directs. Enter."

They walked past the guard; behind them the door thudded into its sockets with a dull clang.

"So, my new helpers, eh?" Merrill had a peculiar high-pitched voice. John had thought it due to the poor transmission of a faulty speaker, but it matched the man's appearance perfectly.

Merrill was old, almost as old as the Co-ordinator. Like him his skin was dry and wrinkled, his eyes glowed with intelligence, and his body seemed twisted, but there the resemblance ended. There was another light in the deep-set eyes beside that of intelligence—a flickering glimmer of animal-like cunning. The head sprouted a wild mop of white hair, ruffled and sparse. The facial muscles twitched, the head jerking erratically. With a sick feeling, John realised that the man was half insane.

"So you think I'm mad, do you?" Merrill chuckled thinly.

"I can read your eyes, young man. You think that I'm not right in the head. Well, maybe you're right."

"What shall we do, sir?" Wharton asked.

"Do? Anything you think needs doing, of course. Do I have to tell you everything?" Merrill squinted slyly. "I won't let anyone enter my laboratory, you know. They are all thieves. They want to steal my invention. They have stolen so many as it is. So many." He began to weep, the tears trickling down his withered cheeks. "I invented the atomo-jet, you know. I developed the hand blaster. The head radio was one of the things they stole from me, and the Merrill sociological equations. Did you know that?"

John recoiled at the thrust of the lined old face.

"No, sir. I didn't know that."

"There's a lot that you don't know, young man. Are you an officer?"

"No, sir."

"You look like an officer. Are you a spy?"

"No, sir." John hung his head. "I was an officer, but I fell into disgrace. I'm not a spy. I'm here to do the work about the laboratory."

"I thought you looked like an officer. Disgraced, eh? Why?"

"I believe in liberty, sir. I believe that all men should be free!"

"I see. And you, what do you believe in?"

"I believe in helping myself," growled Wharton. "I don't understand all this liberty talk. Why help the weak? If you can take it, then take it, and to the wall with those who can't."

"Well, get over to that bench and clean up the mess. That'll give you something to help yourself to, but I shouldn't keep it—it might be too hot for you," Merrill laughed insanely. "Radioactives can burn. Did you know? They can scar, and maim, and sear. My last helpers didn't remember that. They died."

Wharton grunted, and moved to the heap of soiled laboratory equipment. Merrill peered at John, narrowing his rheumy old eyes.

"So you believe in liberty, do you? The right of all men to be free. I used to believe in that once." The insane light died a little, and something hurt and helpless peered forth. "I was young then, as young as you are now. They took me and put me to work in a great laboratory. I had to work as they told me, and I had to work on instruments of death. Atomic bombs, bacteria, viruses, new and subtle ways of killing my fellow men. I couldn't stand it."

"What happened?" John asked, gently.

"They hurt me. They hurt those I loved. They made me work, made me develop and invent, and all the time they stole what I discovered. They stole and stole and stole, but they won't steal any more."

The thin high-pitched voice had risen to a scream. Flecks of spittle hung about the slack mouth, the eyes glared wildly. Merrill stared about him, quivering, his spindly limbs shaking, his hands waving like claws before his face, then with a sobbing moan he fell senseless.

Wharton looked down at him and spat disgustedly.

"Crazy old coot, and him a general. I suppose we'd better ring for the guards."

John fought down a desire to smash his fist into the sneering mouth. Gently he lifted the thin old body, laved the brow with water. Finally, Merrill stirred.

"What happened?"

"You had an attack, sir. You are all right now."

"An attack?" Merrill frowned. "I hardly remember." His eyes were clear, the animal-like cunning gone, leaving the burning intelligence unmarred. "We must get to work. You are my new helpers, aren't you? The others fell ill, I think; I heard that they they died."

"What shall I do, sir?"

"Help me, the other one can do what tidying is necessary."

Merrill struggled to his feet. "Now pass me that container. Do you know anything of electronics? Never mind if you don't. Perhaps it is as well. I have a habit of talking to myself."

He began to work with surprising energy. John, obeying his snapped orders, could make nothing of the welter of intricate wiring, delicate welding and fusing of glass to metal. Strange compounds seethed in retorts, and several heavy leaden containers stood about the floor. Something which he thought could be a small cyclotron took up a large part of the available floor space, and the hulking mass of an electron microscope rested against a narrow cot.

Merrill noticed his bewildered expression. "I sleep here," he explained. "You will, too, and eat here as well. I do not want any outsiders to enter my laboratory—you must remember that."

"Yes, sir."

"Good. It's a pity that you know nothing of electronics. I would have liked an intelligent helper, one who could understand the problem."

"You could tell me, sir," John asked, trying to appear casual. "I used to be a major in the rocket fleet. A fair degree of intelligence was necessary for that position."

"Rocket fleet, eh?" Merrill mused, thinking deeply. "Do you know how to navigate?"

"Certainly, sir."

"Could you plot a course, say, from here to the Moon?"

"I passed out of the academy as a first class pilot, sir. I have astrogation experience. Three flights to Luna."

"Good. Very good. Tell me, how would you get to Mars?"

"Mars, sir?" John frowned. "I should need an electronic calculator and all revelant data. Positions of the planets, position of take-off and speed of vessel. It is not too easy an orbit."

"Couldn't you just steer by sight?"

"No, sir," John smiled a little superiorly. "If you did that you would never reach Mars. You forget, sir, that the planet is constantly moving, even as you would be. If you aimed by sight, you would have constantly to change your flight path, you would be chasing the planet, and you would never catch it up."

"What would you do, then?"

"Determine your exact location, determine the speed of your vessel, the time needed to reach the orbit of Mars, and then aim for where the planet will be by the time you reach that orbit."

"I see, rather like shooting at a moving object. Aim several degrees before it, so that your bullet will arrive at the same place at the same time the target does."

"Yes, sir."

"I see. Tell me, how long would such a journey take?"

John frowned. "It depends, sir. The position of the planets is vitally important, whether or not Mars is in conjunction or opposition. Speed also is a factor."

"If the speed were constant?"

"How do you mean, sir?"

"I have heard talk of something called one grav, I think that is what they called it, a constant speed equal to the pull of Earth's gravitational field."

"That isn't a constant speed, sir. It is a measure of a constant acceleration, a theoretical equation."

"Why theoretical?"

"No engine yet known, sir, could give a constant acceleration of more than thirty feet per second per second."

"Why not?"

"Consider, sir. The first second you reach a speed of thirty-two feet per second, the next, you double it, the third you are moving at ninety-six feet per second, carried to its logical conclusion, you would reach the speed of light in one year."

"And that is impossible?"

"Certainly, sir."

"Why?"

John looked sharply at the old professor. He had an uncomfortable feeling that he was being laughed at. "The equations formulated by Einstein prove that to be an impossibility, sir," he said, stiffly. "As speed increases, so does mass. At light speed the ship would reach infinite mass. Obviously, no rocket could carry sufficient fuel to reach such a speed, but even if it did, the mass of the ship would prohibit further increase of velocity. It's rather a simple graph curve, sir. Shall I show you?"

"Never mind. But a thought occurs to me. You say the mass of the ship will increase, but then so would whatever fuel it happened to be carrying. Wouldn't the two balance out? Increased mass of fuel to compensate the increased mass of the ship? But never mind. Assuming that an engine had been developed capable of attaining a one grav acceleration, how long would it take to reach Mars?"

"Allowing for favourable positioning, assuming that you would accelerate for half the distance, then decelerate the other half, it would take about . . ." John did rapid mental calculations. "Between forty-five and fifty hours. I am allowing time for manœuvring, and atmosphere resistance."

"So soon?" breathed Merrill. "Fifty hours, say sixty, three days!" He breathed deeply. "Thank you. Thank you very much."

"Why, sir?" John asked, curiously.

"Never mind. You may know one day." Merrill stared closely at him. "Strange! I have only just noticed it. You remind me of someone I knew. Someone very dear to me. The same blond hair, the wide shoulders, the clear blue eyes. He was as tall as you. Over six feet, aren't you? And he used to be a pilot."

Tears suddenly brimmed in the old faded eyes. "He is dead now. He died for freedom. He was my son." Abruptly he turned away, began working at a bench.

Wharton looked up with a cynical grin from where he was working. Deliberately he winked, his grin widening at John's scowl.

"You are well informed on some matters," continued Merrill. "It is a pity that you know so little of atomics."

"I have been trained in the use of atomic weapons, sir," John said proudly. He recoiled in sudden alarm. Merrill snarled, strode towards him, one thin arm lifted as if to strike.

"Weapons! Murdering swine. Is that all you can think about?" He dropped his arm, smiled pityingly. "I shouldn't blame you; you had no choice. But I was not referring to those inventions of the devil. God help me, I did my part in their development, but I can never condone their use."

He touched the bench caressingly. "No. There is a greater mystery than that. Look at this piece of metal. A mass composed of atoms. Protons, electrons, all whirling in a complex atomic dance. Positrons, neutrons, and the broken shards of atoms, the mesons. A fascinating world. A complex orderly world of the infinitely small. The atomic world."

He sighed. "I have given my life to its exploration. One thing has always intrigued me. An electric current is a flow of electrons. Something caused by the cutting of a magnetic field causes them to flow in orderly fashion. Now why should they do this? I do not know; no man knows. Yet the clues are there, the fact is there. Why can't we discover it?"

John shrugged helplessly.

"I began to think more deeply of the matter. Now something makes electrons flow, and that something is the cutting of a magnetic field. I thought of it, and I thought of something else," Merrill smiled. "Gases are composed of molecules, all of which are in a constant state of turmoil. Heat the gas, and the turmoil is increased. Why shouldn't atoms behave the same? I found that they do. I went a single step further. Imagine if you can a gas, rather a delicate balance of gases. Imagine the molecules of these gases in

turmoil, each hitting the other, rebounding, striking the walls of their container, hitting each other again. Energy, man! Colossal energy, and all going to waste!”

“But what can we do about it, sir? That property is inherent in all gases.”

“Agreed, but I did something about it. I harnessed that energy.”

“What!”

“You are startled,” Merrill chuckled. “I created something—call it a gas for want of a better name. I found an impulse by which I could at will direct the energy of all those teeming molecules. Imagine what the results must be. A container filled with the gas. An electrical connection. I press a button, and immediately the turmoil of the gas is stilled. Each single molecule is directed, instead of rebounding aimlessly, they expend their energy in one direction. The result is a thrust. A thrust of immense power. I release the button, and the gas is once again in turmoil. I press, and again a thrust. So you have your engine, and its power is sufficient to take you to Mars within three days.”

Something exploded into violent chemical flame. A wave of choking gases rolled around them. John, his eyes streaming, saw Wharton throw something onto the blaze. Merrill screamed, raced towards one end of the bench, snatched up a battered notebook. From the ceiling, streams of water and chemical foam covered the entire contents of the laboratory. The flame died. Blowers whined, sucking out the polluted air.

It was over within seconds.

CHAPTER FOUR

Escape

IT was dark and silent—a time for sleep. John stretched on his narrow cot, nose wrinkling at the sharp taint of the chemical foam, which was still lingering in the cleaned laboratory. From where Merrill lay in uneasy slumber, a gasping snore echoed, broked by an indistinct muttering and groaning as the old man tossed and turned. A whisper cut through the darkness.

“Benson. You awake, Benson?”

“What is it?” John peered to where Wharton lay, a shapeless blur.

“The old man’s taken a fancy to you. I heard him talking. Do you think that there is anything in what he said?”

“About what?” John said, cautiously.

“About the engine, of course, his invention, the one he said could get you to Mars within three days. Is it possible?”

“No.”

“Why not? It sounded reasonable to me.”

“Maybe it would, but you haven’t had officer training. You wouldn’t understand.”

“So I’m too ignorant to understand, am I?” Wharton whispered, savagely. “Well, let me tell you something. I set that fire off deliberately, you know why?”

"I knew you set it off." John remembered to keep his voice low. "I saw you. Why?"

"Easy. Did you see what the old man did? He grabbed his notebook. He thought that he was in danger and grabbed the thing most precious to him. I bet the secret of his invention is in that book."

John sighed patiently. "Listen, Wharton. You've seen the old man. You know that he is more than half mad. I tell you that his tale of a directable gas is sheer fantasy; it just wouldn't work."

"Why not?" insisted Wharton.

"Look. Granted that he has found some way to direct the movements of the molecules. Right, what happens? Such movement is in direct ratio to the temperature of the gas; a hot gas will have more violent motion than a cold. Now he directs the potential energy in a single thrust. As far as I can make out, all the molecules will fly away from the electrical connection to the head of the container. Then what? They reach stasis, the energy has been used. He releases the button and the molecules drift again, but much slower than before—a certain amount of energy has been used. You can see what would happen."

"What?"

"You would get one thrust, maybe two, perhaps even three, but each would be weaker than the one before, eventually the molecules would have no more energy, the container would become cold, the gas liquify and your engine would be powerless."

"I see," breathed Wharton. He lay silent for so long a time that John thought he had fallen asleep, then he began to chuckle.

"What is it now?"

"Nothing. Nothing at all. I'm too stupid to understand what you said, but I know one thing. I can see the hole in your argument."

"And that is?"

“Radioactives. Make the gas radioactive. The energy emitted by the atoms themselves will keep the gas at a high temperature.”

John sat up in sudden alarm. “You’re right! Such a gas would do as Merrill claimed. Wharton! We’ve got to do something!”

“Sure we have. The only question is what?” He fell silent, listening to the gasping breath of the old man. “Listen, Benson, this is our chance. With what he says the engine will do, nothing can stop us. We watch him, wait until he builds the thing, then grab it and away. With your knowledge we could reach Mars, once there we can build a ship, recruit an army and kick the Co-ordinator from his perch. We can be the rulers, Benson. You and I. You in charge of the military, and I in full control of the civilians. We’d be the most powerful men in history. What about it?”

John was horrified at the man’s rank heresy. Even to think of such disloyalty! To talk so casually of usurping the Co-ordinator, of snatching the reins of power!

“You must be mad,” he said. “How could we ever get away with it? The guards would shoot us down before we ever reached the entrance. Then we’d need food, warm clothing, a thousand things. It’s impossible!”

“Leave all that to me,” Wharton whispered, urgently. “Are you with me or not?”

“Yes,” John agreed. At all costs he must protect the invention, and if pretending to agree with Wharton’s wild scheme would do that, then he would pretend, but he didn’t trust the man.

“Tell me,” he said casually, “how did you know that we are at the North Pole?”

“What? Oh, I see what you mean. When we left the plane I took a look at the stars. I recognised the constellations, Ursa Major and Minor, and the pole star were directly overhead.” Wharton laughed quietly. “Simple when you know how, isn’t it?”

“Yes,” agreed John, but he still wasn’t convinced. There

had been no stars visible when they had left the plane.

Merrill seemed more normal when he awoke. The excitement of the fire and the emotional relaxation caused by his outburst, had cleared his mind. He worked for a while over a mass of equipment, welding struts, connecting cables, wiring meters. Watching him, John had a sudden suspicion. He let his eyes stray over the apparently haphazard arrangement of the laboratory, and slowly the suspicion grew into a certainty.

Merrill had completed his invention!

Incredible as it seemed it was nothing but the truth. Only the isolation Merrill had demanded and received had made it possible. How long he had been working, covering his true object by an intricate system of false experiments, jumbled apparatus, and discarded equipment, John could only guess, but he had reached his aim.

A cowed object in one corner, apparently the dust cover for a complex array of glassware, obviously fitted a flared scoop-shaped bin used for scrap. A protective shield, fitted with plastic windows, and used for the study of explosive reaction, could be joined to the boat-shaped object on the bench. As John studied the scattered mass of odd looking equipment, his admiration for the old professor grew.

Alone, working with unskilled labour under adverse conditions and with the greatest secrecy, Merrill had built a prefabricated vessel that had all the appearance of a rocket ship! He must have built the pieces part by part, assembled them, stood them about the laboratory, and worked on something else. John marvelled at the sheer genius of the man, the painstaking skill necessary to align the parts, to correlate the measurements. He felt sorry that he had to betray the old man.

Merrill put down his pin-point welding tool, clutched at his chest, leaned heavily on the bench. Weakly he gestured towards a cabinet.

"The green tablets, three of them and water. Hurry!"

John held the cup to the livid lips as Merrill swallowed the

tablets. Gradually colour returned to the withered cheeks.

"Thanks, son. It's my heart. I'm wearing out, and I know it." He looked at the scattered apparatus of the laboratory. "All the tools I need to tear apart the secrets of the atomic world, and yet I can't gain a little more time."

"Time for what, sir?"

"Time to undo a little of the wrong that I have done. Time to make a few people happy, to put into the hands of men that which will make them free. To end slavery forever." He leaned on John's arm, breathing heavily. "No, son, I'm not mad. I have been, but not for a long time now. I used madness to get what I wanted, but I've got it too late."

"Could I help, sir?"

"Help?" Merrill looked at him, the old eyes full of a sudden watchfulness. "I wonder? You believe in freedom, don't you, son? The right for all men to be equal, to enjoy the fruits of the earth, and to think as they please?"

"I do," John said, quietly. "My beliefs stripped me of rank and privilege, sent me to labour here for the rest of my life; yet I still believe in liberty."

"Good. The other one I don't trust, but you are young enough to handle him should it become necessary." Merrill paused, rubbing a hand across his eyes. "It was such a good plan," he whimpered peevishly. "Such a clever plan, only I forgot. I forgot that I would grow old and weak. Now I haven't the strength left to assemble the ship."

"What ship?" Wharton stepped forward, eyes blazing. John gestured for him to be silent.

"The ship I built here. It's all in pieces. Can you put it together for me?"

"We can," promised John. He led the old man to his cot. "Now you just sit down and tell us what to do."

Merrill sank gratefully on the cot, smiling weakly up at John. "I feel that I can trust you, son," he whispered. "No man who looks like my boy could be bad. Now listen—" His old voice took on a desperate urgency. "We must work

fast. Everything you need is in this room, welding plant, thermite, even explosives. Heap some of the thermite along the jamb of the door, then seal the ventilators, and cut the cable leading to the thermocouples." He watched as the two men rapidly did as he directed.

"Good. Now they can't gas us, or drench us. When they start to smash the door, we'll weld it with the thermite," he chuckled.

"What next?" snapped Wharton.

"Take hold of the bench and move it to one side. Good. Now the thing that looks like a protective screen—it fits the boat-shaped piece on the bench—weld them together. After that take the scrap bin, and fasten it to the dust cover over the glassware." His voice droned steadily on as the two men set to work.

They worked until the sweat poured from them, until the very room spun in their vision, aching as it was from watching the dancing flame of the welding plant. Their bodies smarted from the impact of flying fragments of molten metal, as they moved still hot pieces of the growing vessel. It was not long before they were disturbed.

A voice snapped through one of the hidden speakers.

"General Merrill. Unseal your ventilators!"

"I am working on a delicate gas," called the old professor. "There is danger."

"The temperature of your laboratory has risen twelve degrees above maximum tolerance. Electrical pressure denotes that the thermocouples have been rendered inoperative. Why?"

Merrill grimaced, and made no reply.

"I must ask you to permit guards to enter your laboratory," the cold voice said relentlessly. "You will open your door."

Merrill gestured towards the panel, pointing at the heaped thermite. Wharton nodded, stooped, applied the stabbing flame of the welding tool. The thermite reached critical temperature, ignited, burned with a terrible heat. Metal ran

molten, puddled on the floor, cooled to a solid mass. The door, welded to an unsightly mass, could never again be opened.

A blow landed against the panel, another, then silence.

"Quick!" gasped John. "They will return with burning equipment, cut through the panel. If they make even a small hole they could gas us." He glared at the pointed, torpedo-shaped object resting on the cleared floor of the laboratory. "How much more to do?"

Merrill hunched himself off the cot, examined the ship with calculating eyes. "Have you made sure that the seams are airtight?"

Wharton wiped sweat from his brow. "It will hold air."

"Good. Now fix the drive."

John stared at Merrill blankly. "Drive? Where is it?"

Merrill chuckled. He pointed towards a heap of what appeared to be oxygen cylinders. "There. There's your drive—now fix the cylinders as I direct. Careful! Whatever you do don't heat them, but be very careful that they are firmly fastened to the stanchions. Place most of them pointing towards the bow, some pointing towards either side, and the others pointing both up and down. "I'll wire them up when you have finished."

Grimly John helped place the heavy cylinders in position. Much as he admired Merrill's genius, he couldn't bring himself to believe that this unwieldy object would ever leave the ground. The drive was ridiculous! A handful of oxygen cylinders welded to a frame that would hardly stand the slightest strain. This surely was the time to arrest Merrill. Yet, somehow, the enthusiasm of the moment had gripped him, and he felt an urge to see it through.

"Finished!" gasped Wharton. He stared at the door. "Look at it. Red hot already. They'll be through in a minute."

"I'll wire it up now," soothed Merrill. "It won't take long. I've done it a thousand times in my dreams." His thin fingers moved with a swift confidence among the tangle of wiring."

Wharton glared about the laboratory. "Hey! How are we going to get out of here?"

Merrill cackled, and John felt a sudden sinking of his excitement. The old fool was insane! They had all been insane! To build a space ship in an underground cavern, and after it was built to worry about how to get it into the air! Angrily he turned on the professor.

"Now don't get excited, son," Merrill said, calmly twisting a pair of wires together. "I thought of that. We are very near the surface, not more than ten feet beneath the ice," he chuckled. "They didn't want to take any chances of wrecking the station, so they built all these laboratories well away from the main installations, and hoped that any explosions would expend their strength upwards."

"What's the good of that?" John said, bitterly. "Ten feet is the same as ten miles, we'd never break through ten inches with that ship, it would fall apart."

"We're not going to break through anything," Merrill said, gently. "See that funnel shaped thing? I've loaded it with a special mixture of thermite, and lined it with a refractory alloy of high reflection index. We'll fire the thermite when we are in the ship. The alloy will focus the heat, and it will melt through the roof."

"And if it doesn't?"

Merrill shrugged. "It had better."

A cry from Wharton made John spin towards the door. The red patch was now glowing white. Soon they would have burned through the metal panel. Desperately he turned to Merrill.

"How much longer?"

"Nearly finished." Merrill gently lifted a flat metallic drum studded with contacts. "I've only to connect this, and we are ready."

John bit his lip. "Wharton, fire the thermite. I don't trust it. No alloy I've ever heard of will stand the heat without melting."

Wharton nodded, thrust the glowing tip of his welding

torch deep into the mixture. It spluttered, caught, and with a yell of warning he leapt for the safety of the ship.

Heat flooded from the cone. Caught by the alloy, reflected by it, it sprayed upwards in a blast of terrible energy. The thin insulation of the roof vanished like paper. Ice exploded into sudden super-heated steam. The laboratory filled with it, boiling, scalding, blinding. The heat was almost more than they could bear.

"It's going," said Wharton, grimly.

It did! The cone slumped into molten ruin, and a gush of flaming thermite flooded over the floor towards the ship.

"Hurry!" screamed Wharton. "If it touches us we're finished!" A clang from the door jerked his head towards it.

"The door," he yelled. "They've burned down the door."

Behind them, springing through the open panel, leapt the guards. Before them the thermite surged on its destroying path.

Merrill still worked over his wires.

CHAPTER FIVE

Abandoned

WHARTON lunged for the open door of the ship. "Merrill," he yelled. "The guards! Get this thing moving!"

John grabbed at him, his fingers slipping off sweat-covered skin. "Wait!" he snapped. "Give him room to work."

Despairingly he glanced towards the guards, now approaching cautiously through the blinding steam, guns held before them, then at the searing mass of thermite, now almost lapping around the base of the ship. Unless he could do something fast, either the invention would be destroyed, or Merrill would be killed.

Abruptly the room became clear. A wind whistled from the opened door, whined about the squat bulk of the ship, and swept up the vent melted in the ice roof of the laboratory. The sergeant leading the guards blinked his eyes, swung up his weapon.

"Halt, or I fire!"

A drone sounded from within the ship. A deep humming note of immense power, rising until it hovered on the very limit of audibility.

The ship rocked, jerked, lifted from the floor. Below it, the thermite spread in a molten pool.

"Hurry," shrieked Merrill. "Get aboard."

Wharton made a frantic leap, fell within the narrow port, the ship sagged, almost touched the floor, then slowly rose.

"Stop!" yelled the sergeant. "Move and I fire!"

Desperately John sprang after the rising vessel. His fingers slipped on the outer skin. For one heart-stopping moment he thought he would fall into the spreading pool of thermite below, then a hand grabbed at his wrist, pulled him to safety.

"Shut the door," gasped Wharton. "Right, Merrill. Get us out of this."

"Stand on the stanchions," ordered the old man, breathlessly. "Whatever you do, don't break the wires; give me room to operate the controls."

The ship rose, slewed sideways, tilted gently. From outside came a hoarse cry of rage, followed by the sharp spang of the high velocity pistols.

Light streamed through a tiny round hole in the skin of the ship. Another, several more. Something stabbed deep into John; it burned like frozen hydrogen, and he felt sick.

"Quick!" he gasped. "I'm hit!"

Merrill, crouched high in the bow, grimaced, touched his controls with surprisingly delicate fingers. A grating sound came from the hull, a rubbing, and a forceful change of direction. The sound of the shots lessened, grew muffled. Something took hold of the ship. Suddenly John could feel the rough stanchion pressing against the soles of his feet. He gasped beneath the familiar symptoms of high acceleration. He bit his lip, fighting against black-out. The pain in his side now felt like a dull numbness, with the fingers of his left hand he could feel the warm wetness of his own blood.

"Made it," chuckled Wharton. "By all that's holy, we've made it!"

"They punctured the hull" Merrill said fretfully. "We can't go to Mars now."

"Make for a quiet spot," ordered Wharton. "We'll have to patch the ship, get food and water. We couldn't travel far like this, anyway."

John muttered his agreement, resting his head against the icy side of the ship.

"What's that?" asked Wharton.

John swallowed, forced himself to speak. "We can't go far like this. No room to move, no protection against cold. We'd starve or freeze. Need oxygen, spare parts, flight instruments. Land somewhere, somewhere warm."

"Good idea. I'm freezing myself. Can you do anything about it, Pop?"

Merrill grunted, swung a rheostat. Outside, the air began to whine against the hull in a shrill scream.

"Warm us up by friction," Merrill explained. "I'll head south, land in the tropic zone. John needs attention, and we could all do with a rest."

"Yes," muttered John. "Land quick, I'm bleeding to death." The wound in his side was throbbing. He could feel his life pouring from him with every beat of his heart. Unless he could stop the hæmorrhage he would never live through the trip. Fumblingly, forcing Wharton from him to gain a little room in the cramped interior of the ship, he lifted his arm. From the pocket of his denim trousers, he managed to pull a piece of rag. Carefully he worked it into a ball. Then with the heel of his hand, ground it into the oozing mouth of his wound.

Pain flooded him, sending his senses reeling on the very verge of unconsciousness. Desperately he tried to keep his senses. At all costs he must remain awake. Deliberately he pressed the wound again, almost welcoming the pain that helped him to remain conscious.

He must secure the invention. Despite all his convictions, the amazing fact was that it worked. He must secure it for the Co-ordinator. He would wait until they landed, then he would kill Wharton, and make Merrill prisoner. The old man would present no trouble, but Wharton was a man in his full strength, therefore he must be killed. Once he was dead, John could contact the military, turn over Merrill's invention to the Co-ordinator, and be restored to power.

World Marshal! It was a great honour. A World Marshal had power equal to an old-time king, responsible to none but the Co-ordinator himself. He would be the youngest man ever to be honoured with such high rank. It was worth the disgrace, the spell of menial labour, the hardships he was now undergoing. It was worth betrayal, broken promises, worth even murder.

He nodded, jerked himself awake. It had grown warm, too warm; the heat made it hard to stay awake. His wound didn't hurt any more; the hull of the ship didn't scrape his tender flesh as it had done. He felt very comfortable.

He had a dim memory of brilliant light streaming through the plastic windows of the ship, of a sudden whine of power, a gentle dropping. Someone moved him, cursing with the effort of shifting his dead weight, then soft darkness closed about him, and he knew no more.

A bird trilled its high clear note, to be answered by another further away. A brook gurgled as it splashed over a miniature waterfall. Wood smoke from a camp fire tingled his nostrils. John opened his eyes, stared in wonder at a cloudless sky; sat upright in sudden fear.

Wharton grinned at him from where he crouched over a fire. He was roasting some small animal spitted on a slender twig. The smell was delicious.

"Hungry?"

John smiled, nodded, tried to rise and fell back with a grimace of pain.

"Steady," warned Wharton. "If that wound breaks open, you'll be in bad trouble."

"What happened?"

"You passed out, and I can't say that I blame you with that hole in your side. Lucky you plugged it. Luckier still that it didn't become infected," he twisted his spit.

"Where are we? Where's Merrill?"

"Working on the ship. We landed somewhere in South America, on a mountain of sorts. I don't know its name.

That was three days ago; you were delirious, in a fever. I'm certainly glad that you've snapped out of it."

"Delirious," repeated John, slowly. "Did I rave at all."

"A little. Why?"

"Nothing." John propped himself on one arm. "Where's the ship?"

"Behind you, behind those trees. We thought it best to get under cover." He cursed mildly as he burnt his fingers on the roast. "Come and get it!" he yelled, and winked at John. "I've had to practically feed him since we landed. He's thought of nothing but his invention—and you, of course. You've made quite an impression on the old man."

"He said that I looked like his son."

"I know. I heard him. That lucky accident should prove very handy to us." Wharton looked steadily at him.

"I don't understand."

"Don't you? Remember our little conversation of a few nights ago. With what we have here we could become masters of the world. Are you getting cold feet?"

A crashing from the bushes saved John the necessity of answering. Merrill came bounding towards the fire.

"Dinner ready? Good. I'm famished." He smiled at John. "I heard your voice; glad to see you better, son."

"Thanks." John looked curiously at the old man. He had changed almost beyond recognition. The shock of white hair was the same, the dry wrinkled skin, the thin limbs and oddly twisted figure, but the rest had altered.

Gone was the half insane drooling, mad-eyed wretch. Gone were the wild looks, the dribbling mouth, the waving claw-like hands. Merrill was still old, but he was no longer senile. His head was steady, his eyes clear, his step firm. He noticed John's look, and smiled.

"A good act, wasn't it, John? A harmless old fool playing with his toys? You thought that. They thought it. Almost it became true, but you came just in time," He sighed,

breathing deeply of the sun-warmed air.

"I perfected my invention more than two years ago. For two years the impeller tube has been hidden among a heap of junk. All I needed was a pair of strong arms to help me, and the Co-ordinator supplied that."

"The impeller tube"

"Yes. My little toy, or should I call it Merrill's Controlled Molecular Impulse Tube? I prefer impeller tube, it's more simple, just like the tube itself." He sighed happily, busy with his meat. "A simple thing. I told you about it, I remember. A radioactive gas, the movements of the molecules of which can be directed by an electrical impulse. A rheostat controls the power of the thrust. Simple."

"How long does the power last?" Wharton leaned forward, intently.

"Power? Oh, I see what you mean. The power is simple electrical current. I built a generator powered by the tube itself. The gas is radioactive and unfortunately has rather a short life. Still, that can be rectified when we reach Mars."

"If we reach Mars." Wharton began to stride about the fire. "That ship won't hold us all. One yes, two maybe. Three, no. There just isn't enough room. Why, on the short hop from the Pole, I was almost crippled with cramp. We'd never last three days."

"There is room for us all," Merrill said quietly. "All or none. I've altered the ship; thrown out a lot of the tubes—we had far too many. There will be enough room."

"Thrown out the tubes!" Wharton snorted disgustedly. "Why don't you just give the secret to the Co-ordinator?"

"He won't find them. I threw them down a gully. Even if he does, what good will they do him? Any attempt to open them will result in a violent explosion. The gas is very unstable when not under pressure; anyway, remember that the half life of the gas is very short." He stretched. "We are in no danger and certainly my invention isn't."

He rose, threw the remains of the meat into the fire. "I

must finish the last touches. I want to leave for Mars as soon as possible. We'll leave as soon as John is fit to travel."

Wharton scowled as he watched the old man walk away.

"That alters things," he grunted.

"Does it?"

"Of course it does. Now we've got to take the old man with us, and no matter what he says, I know that the ship won't hold three."

"Are you certain?"

"Yes."

"I see. John leaned easily on one arm. "Where do we go from here?"

"I don't know," Wharton shook his head, irritably. "I've got to think about it, but in the meantime I'll gather some firewood and food. We'll talk after I eat."

John watched the stocky figure disappear through the bushes, then began to examine himself with desperate speed. Aside from his wound he was in perfect condition, and either Merrill or Wharton had tightly bound his side. He touched the dressings, wincing slightly. With care he thought he would be able to do what was necessary without too much danger.

He had to kill Wharton!

He had delayed too long. At any time while he had lain unconscious they could have abandoned him, and Merrill's invention would have been lost to the Co-ordinator for ever. The very thought of it made him sweat in sudden fear. He had to act, and act now.

He had no weapons. It would have to be done by hand, and he knew that despite his training, he was in no condition to battle a fit man. Despairingly he glanced about him, then smiled grimly. Gently he heaved himself over to the fire, selected a rock almost as large as his clenched fist, and crawled back to his couch. The rock was still hot from the fire, and he blew on it to cool it while he considered what would be his best line of action.

Get Wharton close to him, get him to bend his head, then one quick blow, and if he still lived his scientific skill in the art of killing would serve against a half-stunned man. John smiled, nursing the still warm rock.

Little metallic sounds came from the direction of the ship. A crashing came from some distance away, then slowly approached. Wharton was coming back. John called to him as soon as he was sure the man was within earshot.

"Wharton, help! Ben, come quick!" He forced a note of urgency into his voice.

The crashing stopped. John could imagine the man standing still, listening.

"Ben!" he called, weakly. "Ben, quick!"

The crashing started again, as Wharton thrust his body through the thick undergrowth. John smiled, turned on his side away from the sound, and lay quietly waiting, the rock in his right hand.

He forced himself to lie still. Eyes open, he imagined from the sounds what progress Wharton was making. The crashing stopped. That meant that he had left the undergrowth. The pad of running footsteps; the harsh breath of a man who had hurried. It grew louder; the footsteps ceased.

"John. What's the matter, man?"

A hand touching his shoulder, turning him around. With a sudden violent explosion of energy, he twisted, grabbed with his left hand, brought the weighted right swinging around in a savage blow. It would have smashed in the skull had it landed. It didn't land.

Wharton stood several feet away, a long branch in his hands, a cold smile wreathing the corners of his mouth.

"I thought as much," he said quietly. "Tried to kill me, didn't you?"

John didn't bother to answer. Waves of pain shot from his wrenched side, bringing sweat to his face, sending stabs of agony through his head. He felt sick with the utter sense of failure.

"This makes things very easy," Wharton continued in even tones. "I was worried about leaving you; you guessed that, didn't you? I don't blame you for trying to kill me. I would have done the same, but Merrill's invention means more to me than you will ever guess. I'm leaving you here. Leaving you here to rot."

John watched him with blurred eyes. Wharton carefully covered the fire, extinguishing every spark. Deliberately he dropped the fruits and the container of water he carried, then, without a second glance at the helpless man, strode away.

From behind the bushes, from where the space ship lay hidden, came the sound of arguing voices. Wharton's deep and gruff, Merrill's high and excited. John tried to catch what they were saying, but the distance was too great.

The voices stopped abruptly. A metallic clang, then the sound of a deep purring note, rising rapidly to a high-pitched whine. Something moved. Something battered, patched, with welded seams and scratched plastic windows. Something that rose silently in the air, glided sideways, manœuvred as no ship of the air had ever been able to manœuvre since the history of flight.

It hovered, dipped a little, the sun painting it with splashes of lurid colour. It steadied, then, as if seized by a giant's hand and tossed into the air, it rose.

A streak of sun tinted metal, a shriek of torn air, and it was gone.

CHAPTER SIX

Rescue

JOHN felt sick. Sick in body and sick in mind. He had failed, and for failure there was no excuse. He should have killed Wharton sooner. He should never have permitted the ship to have been built. He should have done any one of a dozen things, but he hadn't, and Merrill and his invention were somewhere on the way to Mars.

He gritted his teeth as he fought both physical pain and self-pity—there was time for neither. If he hoped to survive, there were things that must be done.

Painfully he hitched himself over to the fire. As he had feared it was dead, not even a smouldering ember left to fan into fresh life. Morosely he knawed at one of the fruits Wharton had dropped, and drank from the canteen. His eye fell on the branch Wharton had used to trick him, and for the first time he felt hope. He couldn't stand unaided, the bullet seemed to have torn the muscles of his side—but with a crutch . . .

It worked! His vision blurred, his senses swam and his side throbbed in almost unbearable agony, but he could stand. Painfully he hobbled across the little clearing, towards the clump of bushes beneath which the ship had been hidden.

Merrill had been working there. It was logical to suppose that he had discarded everything not essential for the proposed trip. He had.

Scraps of metal, wire, sundry instruments hastily loaded in the laboratory and thrown out as not wanted. Wire, metal, plastic, a portable welding plant, and a power pack. John's eyes gleamed as he leaned heavily on the branch looking down at the heap of assorted scrap. Carefully, so as not to lose his balance, he bent, tugged aside a sheet of metal plate, and picked up the power pack.

It was one of the usual type, a fuel battery, capable of five hundred volts for a hundred amp hours. Merrill had obviously used it for the welding plant, instead of his own more powerful genreator. Wharton could never have guessed it was there, or perhaps he had done. Perhaps he had ignored it, knowing that John could never do him more harm. He would soon find his mistake.

It was a simple matter to start a fire, to build it up and blanket it with green vegetation. A long column of smoke climbed from the crest of the mountain. Perhaps it would be seen by some passing flyer, but the region was remote and the chances were small. John had a better plan.

Sparks snapped across rude terminals, flashing in an irregular pattern. John worked the strip of metal serving as a key, and prayed that the unusual static he would be causing would be noticed by some alert operator.

For an hour he tapped the key, sending in the compact military code derived from morse. Then, arm aching, he struggled to his feet, and set out on a journey of investigation. Merrill had dumped several tubes in a gully. He was an old man and the tubes were heavy; they could not be very far away. They weren't. John stood at the edge of a shallow gully looking down at them. Their number surprised him. Merrill had thrown out almost half the total amount used in the ship; they must be fantastically powerful.

It would be so easy, John thought, to climb down with the power pack, to connect it to the terminals set in the tubes, to activate them and bring them up under their own power. It would be easy, for a fit man, but he was far from fit. Regretfully he turned away, slumped down beside the fire,

began his monotonous tapping at the crudely assembled spark-gap radio.

The day died. The stars blossomed, a spangle of brilliant points scattered across the heavens. The new day dawned, the sun climbing to the zenth, and the power pack died.

Wearily John stretched on his side, his arm ached with the constant effort of tapping the key, his side throbbed from his exertions, he felt a little light-headed. He fell into an uneasy slumber. The drone of ato-jets jerked him awake.

A patrol ship, one of the latest models, fitted with both ato-jets and helicopter blades, circled the crest of the mountain. John waved, then with desperate speed began building the fire. Twigs crackled, burst into flame. Small branches, then green leaves. Smoke coiled skyward.

With a smooth drone from the engines, the patrol ship banked sharply, came closer in a tight turn. The helicopter blades snapped from their locked position, spun in a glimmering whirr of motion too fast for the eye to see. It hovered, then began to slowly settle.

John dragged himself to his feet, waved an arm, then hobbled towards the descending craft. The wheels touched the soft loam, the blades whirred slower, became a flickering pattern of broken light. The door snapped open.

A patrol officer looked out, his green and black uniform fitting his broad figure with a snug efficiency. He held a pistol in his hand, the slender barrel menacing John.

"Who are you?"

"Major John Benson. Did you pick up my radio call?"

"So you made all that interference?" The officer looked at him coldly. "You have some explaining to do, fellow."

"I am Major Benson of the Rocket Fleet," John said coldly. "I radioed for help; you are here. I assume that you are here to help me?"

"You assume wrong, fellow. We are here to investigate unauthorised radio interference. If you caused it, you're in trouble." He narrowed his eyes as he noticed the crutch. "What's wrong?"

"I was shot in the execution of my duty. Abandoned here. "You must contact the Co-ordinator immediately. I have information of vital importance."

The officer laughed. "Did you hear that?" he asked the pilot. "We must contact the Co-ordinator immediately. Just like that!" He turned to John. "Who do you think you are, fellow?"

"I told you," insisted John. "Listen. I am Major Benson, late of the Rocket Fleet. Use your head a moment. I radioed, using the military code. I am shot, alone, stranded on a mountain top. How do you think I got here? Now radio your base H.Q. Get them to contact the military academy. My name will be known there." He paused. "I would hardly like to guess what will happen to you if you ignore this order. Remember, I am a major; insubordination is a serious offence."

The patrol officer hesitated. John had used the terse tones of one used to being obeyed. Despite his injuries he still had the military bearing, and he had used the military code.

"Very well," surrendered the officer. "I will radio as you suggest. I warn you now though, if you are not what you claim, then you will suffer for this."

"Radio," snapped John. "Time is more important than you guess." He waited impatiently as the officer made the connections. Minutes passed as John waited in a fever of impatience. Then the officer stepped from the cabin. He was closely followed by the pilot.

"I must apologise, sir," he stammered, looking curiously at John. "I did as you directed. The Co-ordinator wishes to speak to you personally, and alone. We will wait outside, sir."

John nodded, stepped within the cabin. The effort needed to climb the low step brought the sweat starting to his brow. From the tiny telescreen attached to the ship radio, the seamed old face of the Co-ordinator stared at him.

"Well, Benson?"

"Major Benson reporting, sir." Rapidly John related all

that had occurred since his trial. "Wharton took advantage of my weakness and abandoned me alone on this peak. He and Merrill are heading for Mars. Your orders, sir?"

Rage suffused the twisted features. "You have failed, Benson. You have allowed Merrill to escape with his invention, and worse, you have allowed him to escape accompanied by a notorious trouble-maker."

"I did my best, sir."

"No. You did not do your best. I chose you for the assignment merely because of the remarkable resemblance between you and Merrill's dead son. It should have created an affinity between you. It did, but you failed to take advantage of it."

"All is not lost, sir," cried John, desperately. "As I told you, Merrill left several of his impeller tubes behind. With them, I can follow him to Mars. I promise you, sir, I shall not fail a second time."

A frown creased the old forehead. "Follow? How do you mean?"

"Instruct the patrol officers to assist me, sir. Let them weld the tubes into the ship at my direction. The ship is pressurised for high altitude flight. I am certain that I could make the journey safely in it."

"To Mars? But it would take you weeks."

"No, sir. Within two days. Merrill trusted a ship of even poorer construction to make the flight. You must let me do the same."

"What?"

"Yes, sir. You must. The tubes will be useless when their half life is over. Merrill said that was short. If I am to reach Mars in time to recover the invention, I dare not waste time. Please, sir. Let me go."

The old features smoothed in sudden thought. "You say that we cannot analyse the essential gas?"

"Impossible, sir. Merrill was most emphatic on that point."

"Very well. On one condition. You will leave three of the tubes behind. I will speak to the patrol officers privately. They will assist you. And Benson—"

"Yes, sir?"

"Do not fail me, Benson. Do not fail."

John shuddered inwardly at the sheer menace in the quiet tones. He kept his face immobile, saluted, and left the cabin. The two officers took his place before the radio. When they came out, they glanced at John curiously.

"We have orders to help you, sir, in anything that you may direct," the pilot said, politely. "What are your orders?"

"You will find several tubes in a shallow gully just behind those bushes. Bring them here. Also the welding plant and other material you will find there. Hurry!"

They saluted, vanished behind the bushes. John leaned against the fuselage of the plane, trying to control the swimming of his senses. Biting his lip, he forced himself to re-enter the cabin. The first aid kit was in the usual place. With shaking hands he snapped the top off an ampoule, loaded a hypodermic. The sting of the needle was followed by a spreading numbness, and he sighed gratefully at the release from pain.

Rapidly he injected himself several times around the wound with nervocain, the drug which, by blocking the nerves, prevented the sensation of pain from reaching the brain. He followed with a generous dose of neocillin, and to make quite sure, swallowed several tablets of oral prophylactic drugs.

A sound from outside the ship made him glance outside. The officers had returned laden with the impeller tubes and other equipment. Rapidly John supervised the welding of the tubes to the struts of the fuselage. One each at the tip of each wing and tail plane, the other two within the plane itself. Rapidly he connected them to the power source of the ship. An interrupter switch, a rheostat, and cut-outs for each tube. The ones on the wings would enable him to steer, the rest would give the maximum of forward power.

Satisfied, he glanced at the improvised controls on the

pilot's board. "You have high pressure grav suits?" he asked.

"Yes, sir."

"Good. Get me into one."

Carefully he climbed into the stiff fabric of the suit. Inflated, it would support his body against sudden changes of gravity, enable him to manœuvre at high speed with less danger of black out. He left the helmet. It was unlikely that he would need it; meteors were rare in space; and the chances of the pressurised cabin being punctured were remote.

"Will that be all, sir?" the pilot asked.

"Yes. Stand well back—I assume that you will be picked up later."

John returned their salute, climbed into the cabin, sealed the door, and sat in the padded seat before the controls. Delicately he moved a switch, spun the rheostat—the ship moved!

Slowly at first, then as he grew more confident, with increased speed, the tiny ship darted about the heavens. John took a deep breath, glance down once to where the two officers looked like little dolls standing on the crest of the mountain, and applied full power.

Air screamed around the ship, weight pressed against his chest, driving him deep into the thick padding. It grew warm, too warm, then it was over. Below him, looking like a swollen ball, the earth turned on its majestic way. He had a quick glimpse of one of the satellite stations, a rocket spouting streamers of flame manœuvring for a landing, then it had gone.

Luna swam past, the bubble of Tycho station clearly visible, then it, too, had vanished behind. A cluster of brilliant flame appeared before him, widening as he approached. He looked with interest at the massed ships of the Rocket Fleet, and for a moment nostalgia gripped him. He should have been aboard his command, striding the narrow decks, snapping terse orders, riding on wings of atomic flame.

The fleet opened out as he neared, and he frowned as he counted them. Almost the entire space fleet of Earth, and heading into outer space. Heading for Mars!

They dropped behind, and before him stretched the vast immensity of deep space. He peered through the ports with anxious eyes. The stars, blinding in their unshielded brilliance, confused him. He missed the instruments normal to a space ship. The telescopes, the magnitude determinator, the star charts, and almanacs. He had to find a mote, barely visible among all the blazing glory of the stars, a tiny reddish spec. Mars!

He found it, and grunted with relief. Delicately he swung the nose of his ship to point a few degrees to one side of the tiny speck, noted the time, and swung the rheostat right over. The ship surged with unrestricted power. Free of the restraint of atmosphere, driven by the mighty thrust of directed molecules, the little craft plunged across the void at ever increasing speed.

Time passed, hours of time. John, gasping in the deep chair, his body supported by the inflated altitude suit, watched the slowly moved hands of the chronometer, and made desperate mental calculations. At an acceleration of one grav turnover would come in about twenty-two hours, but he was doing more than that. From the pressure against his body he assumed that the little ship had reached an acceleration of almost two gravs, and he had to decelerate an equal length of time to bring his speed to a manageable one. If he didn't, he would overshoot Mars, go plunging into deep space, and he didn't know how long the tubes would be effective.

Mars loomed in the vision port. Tiredly, John rubbed his burning eyes, spun the ship with impulses of unequal power to the wing tubes, levelled off for landing. The planet seemed to leap at him. Frantically he threw the ship into an orbit. A shrill whine began to penetrate the cabin. At this high speed, the atmosphere, thin as it was, acted almost like a solid wall. The ship jerked, shuddered. For one wild moment he thought that the wings would be stripped from the fuselage; then he regained control.

Something seemed wrong. Desperately he threw the rheostat to its final point, but still the ship felt sluggish. Despairingly he knew that the impeller tubes had passed their half life. They were no longer of any use.

Quickly he threw the ato-jets into action. The tiny atomic piles in each engine flamed to violent life, heated the thin air, compressed it, threw it behind with almost rocket-like power. It helped, but not enough. The air was too thin. The jets, designed for use on earth, could do little more than brake the fall. The wings were too small; their area could not support the ship.

A cluster of buildings jerked into view, a long runway, and behind it the swelling expanse of undulating sand comprising the Martian topography.

John circled, trying to bring the ship in on a long flat glide. The elevators bit at the air, lifted the nose a little, then suddenly he was crashing!

Desert rushed at him. He caught a half glimpse of a tiny figure running from the buildings, then something scraped the undercarriage, the ship slewed, the control panel jerked towards him. He knew no more.

CHAPTER SEVEN

Mars

PAIN, and the click of metal against glass. Pain, and the dull ache of broken bones, the restriction of bandages, the sweet smell of anæsthetic, the sharp sting of hypodermics. John groaned, tried to lift a hand to his throbbing head, and opened his eyes in sudden awareness as his arm refused to move.

"What's wrong?" he muttered. "What? . . ."

"Steady," a cool young voice said quietly. "You are in pretty bad shape. Just lie quietly."

"Yes but—?" John tried to turn his head, failed, jerked his eyes desperately from side to side. A figure moved into his limits of vision. Tall, dressed in crisp white linen—a girl. She smiled down at him, her large dark eyes compassionate as she saw the bewilderment in his eyes.

"You crashed," she explained. "And you had been shot. The wound had become infected. I'm afraid that you have broken several bones. The impact threw you against the control panel. You almost died." Her voice was rather deep, with a peculiar accent he found hard to define.

John licked dry lips, swallowed, tried to speak.

"Thirsty?" she smiled, moved away from his line of vision. He felt something touch his lips, and greedily he drank.

"How long have I been here?"

"Two weeks, you were unconscious for most of the time. The doctor will be here to examine you soon. With luck you should be able to get up in a little while."

"Where am I?"

"Argonville. You were moved here from where you crashed. We haven't too many hospitals on Mars yet, you know."

"Mars?" John struggled to sit up as memory came flooding back. "Tell me, has Merrill arrived?"

A veil dropped across her large dark eyes. "Merrill?"

"Yes. Merrill and a man named Wharton. I followed them. Have they landed yet?"

"I don't know about that. Now lie quietly; you want to get up as soon as possible, don't you?" She smiled again, and left his side. John stared at the white painted ceiling, thinking. After a while he slept.

The doctor was an elderly man, dressed in the universal white of the medical profession. He smelt a little of the sickly sweetness of anæsthetics, but his broad hands had a strange gentleness.

"Time to remove the casts," he said, cheerfully. "The Stader's should have set by now. If it was only the broken bones we had to worry about, you'd have been on your feet days ago. Let's look at that side of yours."

As he spoke his broad hands cut away the restricting plaster, and John found himself able to move. He watched curiously as the doctor examined the surface scars left from the insertion of the Stader splints. Metal plates, riveted direct to the broken bones, they enabled a man to use a broken limb within hours of their insertion. The doctor nodded, satisfied.

"Good. That's the best of you young fellows. You heal quick and clean. Now for the side." He probed gently with skilful fingers. "Those high velocity slugs make a mess," he said conversationally. "I can't understand why it didn't kill you with the shock."

"It had to penetrate metal first," John said absently.

"That accounts for it." The doctor straightened. "Well, as far as I'm concerned you can get up now. Take things

easy for a while. No athletics, and report back for a check up after three weeks." He washed his hands at a sink.

"There are some men to see you," he said, casually.

"Yes?"

"They'll be here soon, but don't worry about them too much. Just tell the truth." He nodded, left the room. Two men entered.

Sitting on the edge of the bed, John watched them warily. He had to be careful. If they suspected for one moment his true purpose, he knew that they would kill him. He had heard of the ruthlessness of those whose lives were devoted to liberty. The teachers at the academy had often spoken of the barbarousness, the utter savagery of the exponents of freedom. In a society where every man believed himself to be the equal of others, there could be no restraining influences. Where none believed in the sacredness of rank, what chance did any man have?

The men seated themselves. One of them produced a notebook, rested it on one knee, a stylo in his other hand.

"You realise that we are rather curious about you," commenced the second visitor. He smiled, and suddenly John felt at ease. "You crashed in a ship obviously not of Martian origin. Our radar screens show that you came from space. Would you like to tell us about it?" He had a soft, pleasant voice, tinged with the same slight accent as the nurse.

"I came from Earth," admitted John. "I escaped from the secret laboratories of the military. With me were a Professor Merrill, and a man named Wharton. Have they arrived yet?"

"How did you acquire the ship?" The man ignored John's question.

"After I had been abandoned on a mountain crest, I used my knowledge of the military code to call for aid. The patrol ship landed. I killed the crew, welded the impeller tubes left by Merrill onto the fuselage, and came here after him."

"I see. How did you kill the crew?"

"With a trick. I separated them, killed the first man with a club, used his pistol to shoot the second."

"So you are a murderer."

"I do not consider killing an enemy, murder," said John, stiffly.

"You mention a military code. Are you an officer?"

"I was. Major John Benson of the Rocket Fleet. I had been disgraced, my titles stripped from me, and sentenced to menial labour."

"Why?"

"I believe in liberty." John sagged in sudden weakness. "If you will excuse me, I have been ill."

"Of course, we understand. One more question, Mr. Benson. Why did you come to Mars?"

"I wanted to follow Merrill, to be sure that he was safe."

"Was that your only reason?"

"No. On Mars men are free. I also want to be free."

"Very good." The men arose. The one who had questioned John smiled, held out his hand. "There will be further investigations, but for the moment we will leave you. Rest quietly; you are in no danger here. There is someone who would like to see you. Do you think that you are strong enough to receive a visitor?"

"Yes. Who is it?"

The men smiled, left the room. For a long moment John sat trembling from the reaction of their visit. It had been easy, too easy. He knew that Security would never have been satisfied with such answers. They would have questioned, and counter-questioned. Used truth serums, hypnotic probes, even physical pain. Surely liberty could not be so careless? The very fact of its continued existence proved that somewhere there must be a close knit web of espionage. He looked up at the sound of the opening door.

Wharton stepped within the room. He wore a uniform of red and silver, the insignia of an officer of high rank gleaming from his shoulders. He wore a weapon at his belt, and moved with an easy assurance. He smiled at John's startled look.

"Surprised? You needn't be. Not all of us are what we seem."

"I don't understand? You, an officer—I don't believe it."

"A man is what he is, not what others say he shall be. For my part in liberating Merrill, I have been made an officer of the newly formed space fleet. I am glad to see you, John. Our last meeting was not too friendly a one."

"Where is Merrill?"

"Safe enough," Wharton looked at him curiously. "Why?"

"I don't trust you, Wharton. I remember a pact we made. Have you forgotten it? You are a self-seeker, a man who wants nothing but personal power. How can you work for liberty?"

"You know what I told you, and no more. Listen, John. I believe more firmly in liberty than other men, because I am a self-seeker. What chance would I have had back on Earth? Would I ever have become an officer? You know I wouldn't—the caste system is too strong. Here, I am limited only by my own weaknesses. I can climb high. I even have a chance of becoming President of Mars." He laughed. "What you haven't yet realised, John, is that liberty isn't a credo. It is the way a man thinks. Strong men don't need strong governments, only the weak desire the stultifying safety of a rigorous caste system."

He sat on the edge of the bed beside John.

"I am glad that you are here, believe me I mean that. How did you do it?"

Dully John repeated the tale he had told the other two men. He knew now why they had accepted him so easily. With both Wharton and Merrill to vouch for him, there was no reason for them to do otherwise. A thought kept nagging at the back of his mind.

"You say that you are in the space fleet. Has Merrill begun to mass produce his invention?"

Wharton grinned. "Almost. We do things fast here, John. I am in charge of training crews to man the new ships when they are built. I want you to help me."

"Help you?"

"Of course. You were an officer of the Rocket Fleet, weren't you? You know all the necessary space drill. You are just the man we need. I'll arrange for you to be commissioned as a general. I shouldn't be surprised if you weren't placed in full command. I'm more interested in the production of the ships."

"But will the tubes work? Those on my ship failed just as I entered atmosphere. It was that which caused me to crash."

A shadow passed across Wharton's broad features. "I know. That's what is holding us up. Merrill can't extend the half life of the essential radioactive gas more than a little. It isn't enough. Theoretically there need be no time factor; in practice there is." He began to stride across the room. "We are so short of materials here, John. Mars is an old world, even the atmosphere barely supports life. We have to reclaim metal from the oxides in the sand. Radioactives are unobtainable in the natural state. Every little thing has to be made full use of."

"But Mars has some ships?"

"A few. Those used to bring the colonists here. Some stolen from Earth, two or three, reclaimed as salvage. We have built a few ships, of course, but only a few. Earth could wipe us out in a few days by sheer weight of numbers. If the Co-ordinator ever decided to do it, we'd be wiped out."

A chill hand gripped John's heart. He remembered the massed ships of the rocket fleet he had passed on his way to Mars. The Co-ordinator was terrified of Merrill's invention falling into other hands. Had he decided to destroy Mars?

The nurse, entering the room with a tray, made a welcome distraction. She smiled at John, frowned at Wharton, and shook her pretty head.

"Really marshal, you are not doing my patient any good with all your talk of war. Time to eat now."

Wharton grinned at her. "Look after him, nurse—he's going to be very important to us." He winked at John. "I'll expect you to get better quickly. If not, I'll change the nurse. You can meet her as often as you like—after you start work."

John watched him stride from the room.

"Why did you call him marshal?" he asked.

"Because that's what he is. First Space Marshal. The Senate created the rank only two weeks ago."

"He's a very powerful man, then?"

"Powerful?" She frowned. "Not exactly; I'd say that he had a terribly responsible position."

"I mean that he is entitled to implicit obedience from all

beneath him in rank," explained John. "Naturally that includes all civilians."

"You are mixed up, aren't you?" She smiled, put down the tray, and stood studying him. "I've often wondered what it must be like to live on Earth. Fancy having to jump whenever anyone wearing a uniform tells you to. I'd hate that."

John spooned up some of the savoury food. "You don't understand," he protested. "A man must obey so that he will be obeyed. It is the only way to obtain order."

"Is it? I don't think so. We seem to do pretty well here without that stupid credo."

"But have you no credo of your own?"

"Don't you know it?" She looked at him strangely. "It is really very simple. We just don't make a habit of worshipping it, but it forms the basis of our constitution."

"Forgive me," John apologised. "You must remember that I have had very little opportunity for study. The way I feel is that it is wrong to deny anyone the chance of advancement. It was saying that which cost me my title."

"There you are, you have discovered it for yourself," the nurse said triumphantly. "Isn't that just the same as saying that all men shall have life, liberty, and the pursuit of happiness? Of course it is."

John nodded, finishing the rest of his meal. For the first time he really saw her, saw the crisp black hair clustering below her ears in tight curls. As she turned, the light cast a soft sheen over it, reflecting in the dark pools of her eyes. Though tall, he knew that she would still not come much higher than his shoulder. Suddenly he wanted to know quite a bit more about her.

"What is your name?" he asked.

"My name? Why, didn't you know? It's Merrill, Jean Merrill."

"Merrill! Then you are related to Professor Merrill?"

"Of course. He is my father's elder brother. Father came to Mars years ago, just before the War."

"But that was fifty years ago," protested John. "You are quite young."

"Father didn't marry until late in life," explained Jean. "Mother died when I was born."

"And your father?"

"He died on Earth. He wanted to rescue uncle. They caught him, and he didn't have a chance."

"I'm sorry," John said, awkwardly. He knew such things happened. He had read the few brief lines in the newsheets. Another recalcitrant discovered and summarily shot. Security never made mistakes. The fact that they shot a man was proof of his danger to the world state.

He shrugged. Such thoughts were not for him. His task was simple. He had to find Merrill, destroy the invention, and somehow get both Merrill and plans of his impeller tube back to Earth.

Impatiently, he stood upright, fighting the momentary weakness that threatened to turn his legs to rubber.

"Where are my clothes?"

"You can't leave yet. The Marshal said that he would send for you when needed. Besides, you have no clothes; yours were destroyed in the crash."

"Please," he begged. "I must get out of here. There is so much to do, and so little time left to do it."

She laughed softly. "They all say that."

"Who?"

"All those we rescue from Earth. They arrive smuggled in the holds of stolen rocket ships. We nurse them back to health, and then have to restrain them from undoing all our good work."

"How?"

"They want to do too much. Free of the repressions of Earth, free to do as they like, go where they please, they plunge into a frenzy of creative work. We have to restrain them a little, they soon quieten down, get things in the proper perspective."

John shook his head in silent wonder. He remembered the stone-faced guards standing over labourers at the mines, and factories. Men worked on Earth, but they needed the

spur of poverty and the promise of luxury to make them do it. A society where men worked for the sheer love of work was something new in his experience.

He stepped to the door, pushed it open. Outside a short corridor led to an open gallery. Dressed as he was in shorts only, the chill night air bit at his flesh, sending tingles rushing through his veins.

It was dark outside, none of the lights of normal cities broke the soft clinging blackness. Above, the stars gleamed in their pure splendour. He stood staring at them, at the stars, and at the nearing fleet of rocket ships.

CHAPTER EIGHT

Discovered

IT felt good to wear uniform again, to feel the weight of a weapon dragging at his belt, to be called "sir," and to have men saluting. John breathed deeply, his chest swelling against the red and silver of a general of the Martian space fleet.

He surveyed the bustle of activity with a professional eye, noting the smooth response to snapped commands, the easy co-ordination of teams of men working as a unit. Before him the red sand of Mars stretched to the horizon. Behind him, the hangars where the new fleet was building, sprawled their ungainly length.

A ground car came racing across the sand, its tracks throwing up plumes of the fine red dust. Wharton, haggard looking, red eyed, worn from sleepless nights, climbed wearily from the vehicle.

"What do you think of it, John?"

"Good enough. I could wish for tighter discipline, though."

Wharton smiled tiredly. "Don't confuse implicit obedience with good discipline. You'll find that these boys will stand up to things that your over-regimented soldiers would crack under. Better than that, they are able to fight on their own volition. Shoot the commander of one of Earth's regiments, and the men are like an animal without a head. They are too used to obeying orders. They never stop to think for themselves."

"Maybe," John said dubiously. He looked at Wharton. "How are my ships coming?"

"They're not," Wharton said grimly. "I've rebuilt the hulls, altered the gun turrets, simplified the controls. All we need is to fit the impeller tubes, but we haven't yet got the tubes."

"I see." John dug the toe of one boot into the ground. "Why can't I see Merrill? Maybe I could help him, suggest something. After all, I've had officer training and I should supervise the drive units for the ships."

"No."

"Why not?"

Wharton took a deep breath, glanced around to make sure that they were alone. "Look, John, I like you. I think that what you did in following us proved that you've got the kind of spirit that we need on Mars, but I don't trust you."

"You don't trust me?" John kept all emotion from his features. "I hardly understand. If you don't trust me, then why make me an officer?"

"Because we can use you," Wharton said bluntly. "I'm not a fool. I never believed for a moment that you were what you made out to be. You were useful, but you can be dangerous. I prefer to take no chances. Incidentally, Merrill doesn't know that I abandoned you; he thinks that you volunteered to stay behind."

"Were you ashamed to tell him?"

"Are you ashamed for trying to kill me?"

"No. I did what I had to do."

"You betrayed yourself in a dozen little ways. The mannerisms of the officer class. Your ignorance of the fundamental principles of liberty. A lot of other things. I knew that you were no ordinary prisoner, and when you babbled in your delirium I was sure of it. Do you think for a moment that I would have left a comrade as I left you? No. I knew that you would be safe, and I was right."

John sucked in his breath; he knew that he could no longer delude this man. Once again he felt the driving urgency of fear. Kill him. Kill him before he could shout his suspicions abroad. Kill him now!

The butt of the pistol seemed to leap into his hand. Automatically, letting reflex action take command of his body, he slid it from its holster, swung the slender barrel upwards in line with the stomach of his enemy, began to press the trigger. He couldn't do it!

Startled, he forced himself to re-aim the weapon, tried again to send a stream of high velocity death smashing into Wharton's body, silencing him forever.

Nothing happened!

Wharton stood silently watching him, a faint smile curving the corners of his mouth. "What's the matter, John? Would it be that you can't bring yourself to murder a friend?"

He stepped forward, took the pistol from an unresisting hand. "There is hope for you yet, John. Don't you realise the change that has come over you? Jean has told me of your long talks together, of your trips of inspection. You have been here seven weeks now; surely you must know that you feel differently about certain things?"

He threw his arm over the younger man's shoulders. "What have you to gain by betraying us, John? I have made you a general, soon you could be a space marshal. What has the Co-ordinator offered you?"

"I was to be a world marshal," John said dully.

"A high rank," agreed Wharton. "If you live to enjoy it." He laughed at the shocked expression on John's face. "Surely you don't think that he would ever permit you to live, knowing what you know about the impeller tube? Did you know that those two patrol men you left on the mountain peak were executed? He knows that he daren't let the secret of Merrill's invention become public property. It would mean the end of his tight little military empire. The impeller tube spells freedom, John. Freedom for every man and woman in the Solar System, and the Co-ordinator is no lover of freedom."

"Freedom is a snare," John protested weakly. "It leads to chaos."

"What if it does?" Wharton gestured across the wide expanse of the desert. "Free men gave us this, and you have seen it and found it good. What if freedom does lead to

chaos? Freedom means that each man has the right to go to hell in his own particular way, and we'll defend that right to our last drop of blood, and our last breath."

He paused, breathing heavily. John was surprised to see so normally calm a man betray such emotion. Wharton noticed his glance and laughed tersely.

"I had a sister, a brother, and a father. One night Security came and took them away. I never heard from any of them since. Does that explain my emotion?" He looked at the pistol in his hand. "Look, John. Did you wonder why I let you try to shoot at me? I knew that you didn't mean it, not deep within you. Your sub-conscious betrayed you. You didn't throw off the safety." He thumbed a lever, pointed the weapon at the dirt, pressed the trigger. A stream of high velocity slugs tore into the ground, the shock of their impact throwing up a plume of dust. Wharton handed back the weapon.

"Want to try again?"

"No." John holstered the pistol. He felt strange, as if by some magic all his doubts had been washed away. Wharton was right! He had nothing to go back for, and too much to lose if he did. Momentarily he thought of Jean, then of something else.

"Ben!" he gasped. "The Earth fleet. I remember passing them on my way here. Headed for Mars."

"What?" Wharton gripped his arm. "Are you sure? I have heard nothing from our underground on Earth."

"Positive. I remember counting them as I passed. Almost the entire fleet, thirty vessels at least, more than enough to blast Mars to an atomic cinder."

"Damn!" Wharton clenched his hands. "You should have told us of this before. When are they due to arrive?"

John did rapid mental calculations. "I landed seven weeks ago, they should arrive in another three, five at the most. They will probably coast at low speed to conserve fuel."

"What weapons do they carry? You were an officer on one, weren't you? What harm can they do us?"

John regretfully shook his head. "They have atomics, bombs, radi-dusts. You wouldn't have a chance. They will

swing into a high orbit, and reduce the planet at their leisure. As things are now, we haven't a chance. *I'm sorry, Ben!*"

"We must tell this to Merrill at once." He waved urgently to an approaching ground car. "You had better come with me; it is imperative that we get those ships ready for flight."

The ride was a wild one. John hung grimly to the side of the swaying car, blinking dust from his streaming eyes. Sand plumed about them, rising in twisting coils, hovering in the thin air. With a stomach-turning slewing motion, the driver swung to a halt.

John leapt from the car, raced after Wharton. He had time to notice that they were far from any habitated spot, then a door gaped before them, and he had time to catch his breath.

It was a laboratory, and he was reminded of the one where he had first met Merrill and Wharton. Several assistants looked up from their work as they entered, and a sprightly old man came bounding across the concrete to welcome them.

"Ben," cried Merrill, in his strangely high-pitched voice. "What brings you here in such a hurry?" His eyes fell on John, and he stepped forward, wonder large on the wrinkled features.

"John! My boy, it's good to see you. Ben told me what you did. A heroic deed, a brave gesture, worthy of one who believes in what we do. I never thought I'd see you again. How did you get here?"

"Later, professor," snapped Wharton. "John has brought grave news. The Co-ordinator has dispatched the entire Earth space fleet against us. They will be here within a few weeks. You don't need me to tell you what that means. We must have the impeller tubes, even the imperfect ones. We must have a drive of some sort to fit into the new ships. How soon can you let me have them?"

"I can let you have some of the old tubes almost immediately; but, Ben, they are dangerous! You know that their half-life is too short. You will sacrifice the ships and crews, leave them drifting helpless in space. In spacial war-

fare, long periods of manœuvring are inescapable. I can't rely on them."

"That doesn't matter," snapped Wharton, urgently. "You can still work on the new ones, but if we don't get some ships spaceworthy soon, there will be no time for tubes of any sort. I'll find the crews for the ships. You find the impeller tubes."

"Wait!" interrupted John. "I have an idea. Fit a few ships with the tubes. Let me take them into space. I know conditions there. I can harry the approaching fleet; maybe even take some prize vessels. In any case, what have we to lose?"

"Do you realise the danger?" Wharton snapped, tensely. "The tubes are unreliable; they vary. Some will last ten days, some ten weeks, others less. The gas has a variable half-life."

"How can that be?" frowned John. "I understood that the half-life of a radio-active element was unalterable by anything but an atomic explosion. If the gas has a known half-life, then how can the tubes vary?"

"The boy has brains, Ben. That was a good question." Merrill sat on a stool, gestured for the others to join him. Wharton hesitated.

"We've hardly time to waste, Merrill," he reminded.

"Sit down, man, a few minutes can't make all that difference, and sometimes a fresh viewpoint may throw light on what we have been too close to see." He smiled at John.

"You see, son. I didn't know that the tubes varied; didn't even guess that they could. I knew that the half-life was short, of course, but I assumed that it was stable. It wasn't until I had a chance to examine them after we arrived, that I learned differently." He shuddered a little. "You know, I still get nightmares dreaming of what could have happened if they hadn't lasted for the duration of the trip. You were very lucky, son."

"I know it," John said. Wharton grinned.

"The problem is this. When we manufacture the impeller tubes, we place together certain volatile elements, some radioactive gas, and other things. The tubes are sealed, and

subjected to heat and atomic bombardment by means of a cyclotron. The result is a gas, which as you know, is subject to direction. Now, the sole purpose of the radioactive elements is to provide energy to replace that used when the molecules are directed. If it were not present, then the gas would solidify from the lack of molecular motion. We could provide an outside source of heat, but it would be inefficient and cumbersome."

"It seems straightforward enough."

"It is, John, but for some reason we have found a snag. The radioactive half-life of the gas is not predictable. For some reason, what as yet we do not know, the half-life varies. Why?"

John shook his head. "I'm afraid that I can't help you there, but wouldn't it be possible to carry reserve containers of the gas, refill the tubes when they are spent?"

"No. The gas is unstable when not under pressure. Even taking all precautions, the chances of an explosion are too high to risk," Merrill sighed. "We have tried everything. It seems impossible to analyse the gas. In that it is similar to a virus. To examine it, means that we must kill it, then we are no longer examining a virus, but merely dead tissue."

"Have you built transparent containers for the gas?"

"Yes, John. Shall we look at one?"

"Please."

Wharton stirred restlessly. "I should be out at the ship-yards," he grumbled. "Every minute counts now."

"A moment more, Ben. This is important also."

Merrill led the way past several thick screens and shields of dull metal and concrete. He paused before a door. "One thing before we enter. Under no circumstance must you permit light to enter this room. We learned that when three men were terribly injured from an explosion resulting from sunlight striking the container."

He led the way through shielding drapes, and two other doors. Within no ray of light could penetrate, but it was not dark.

A blue, coiling, mist-like substance twisted and writhed before them in the gloom. Narrowing his eyes, John could see a thick panel of glass before them; on the other side of it the blue fire burned with fitful turnings. It was imprisoned in a thick container of some plastic firmly anchored to a metal base. For a moment, he had the wild idea that he was looking at some trapped Geni from dimly remembered tales of fantasy. Merrill's voice jerked him back to reality.

"We are looking at the elements of the impeller tube. Naturally we are protected by lead glass, the radiations, while not too harmful, could cause unpleasant burns."

"What happens when the molecules are directed?" John pressed forward, fascinated by the ceaseless twisting of the blue gleaming gas.

"Watch!" Merrill said quietly. He snapped a switch. Immediately the slowly twisting fire in the container convulsed with life. It jerked, leapt to the top of the clear plastic; a needle swung across a dial.

"I am giving a steady impulse, at a low voltage. Notice how the gas is pressing against a point directly opposite the electrical connection. Watch the dial. The thrust will weaken as the movement of the molecules is slowed."

Gradually the needle slid back across the dial.

"Now, this is the normal method of using the tube. An impulse, then a break, followed by another impulse. In the periods between impulses, the molecules are heated by the emission of radioactive energy. I will slow it down."

The gas spun in sudden release as the connection was broken, the blue fire burning with seemingly extra emission of energy. It leapt, clung to the top of the container, spun in release, leapt again. To John, there was something hypnotic about the ceaseless surge and flow of the shimmering blue fire. He shook his head with sudden fear.

"Enough!"

Merrill grinned, pressed his arm understandingly, led the way back into the normal sunlight. Wharton followed, looking still more impatient.

"Well?" Merrill asked, when they were once more seated in the laboratory. "Have you any suggestions?"

John paused, seeing again the surge and flow of the glimmering blue fire. The pressure, tremendous pressure it must be, against the top of the container. Molecules, forced to move in one direction, away from the electrical impulse. An idea struck him with blinding simplicity.

"I think so," he said, slowly. "I—"

A wave of air crashed against the walls of the laboratory. A blinding flash of light, and the snarling roar of a far explosion.

CHAPTER NINE

The Bombardment

WHARTON staggered to his feet, blood pouring from nose and ears. Wildly he glared about him, then, ripping the pistol from its holster, raced for the door. John, blinking desperately to clear his eyes from the dancing images left by the glare on his retinae, stumbled after him. Behind, he could hear Merrill shouting orders.

"Shield the impeller gas. *Shield the gas!*" He tripped, half fell through the door. Wharton grabbed his shoulder, pulled him to his feet.

"What was it?"

Grimly the space marshal pointed with the hand holding the pistol. Before him, coiling upwards from the horizon, spreading its tell-tale mushroom cloud to the heavens, soared a black-edged column of smoke.

"Atom bomb!" John said, incredulously. "But that's impossible! They couldn't be here yet."

"No?" Wharton snapped, curtly. "That cloud comes from near Argonville. We have no piles there, no atomics, nothing. Where else could it have come from, but the ships of Earth?"

A ground car came tearing over the sand towards them, slewed to a skidding halt. A man stumbled clear, snapped a brief salute, held out a sealed note. Impatiently Wharton

ripped it open, scanned the official message.

He frowned, squinted into the sky.

"What is it?"

"The space station. You know that we have an observation ship in orbit just outside Deimos? It's gone!"

"Gone!"

"Yes. The observers at Argonville report seeing a brilliant flash where the station was. A few minutes later, something flashed down from space, and exploded several miles from the city. I don't understand it, do you?"

"Yes," John said, heavily. "I believe I do." He turned, walked back inside the laboratory. Wharton hesitated, snapped orders at the driver of the car, and followed him.

"What was it, John?"

"The Earth fleet."

"So I was right; they are here!"

"No, at least not yet. What they did was to fire a long range missile, probably more than one. They knew of the station, of course, and decided to eliminate it."

"But how could they? We should have seen them, or been warned."

"The ships that fired the missiles are still several days' flight away, certainly beyond radar range, and even telescope range. Remember that they are probably in direct line with the sun, you could never see them."

"But how could they hit the station from so far away?"

"Why shouldn't they? You forget that there are few variables in space. They know the speed the missiles will reach, the exact position of the station, the time it will take for the missiles to travel the distance. The rest is merely a matter of exact calculation; the electronic brains would take care of that. All they had to do, was to aim the missile at a certain section of space, fire them at a pre-determined time, and the rest would be inevitable."

He smiled tiredly at Wharton's puzzled expression. "Ballistics is a very exact science," he said, gently. "Earth has had a great deal of experience with artillery."

"Then we're helpless?" Wharton gestured vaguely, noticed that he still held the pistol, thrust it angrily into its

holster. "They can sit way out in space and blow us to atoms."

"Possibly," agreed John. "But they won't."

"Why not? They've already nearly hit Argonville. The next time might be a direct shot instead of a near miss."

"No. That missile was never intended for the city. They probably fired a group of three; the torpedo which landed near Argonville was one which had missed the station. It landed too soon after the observed explosion in space to be anything else."

"Even so, they could still smash us and we'd never even see what was hitting us."

"Theoretically they could, but I know that they won't."

"You keep saying that," grumbled Wharton. "But what makes you so certain they won't?"

"Atomic missiles are expensive, even for Earth. To do as you fear would mean that they would have to bracket all the surface of Mars. It would take a long time and a great many bombs. It would also mean that Mars would become uninhabitable for generations; perhaps forever. It would be wasteful, illogical, and unnecessary."

"They shot down the station," protested Wharton.

"Naturally. The space station was a military object. It could have been dangerous, and as a potential menace, it had to be removed. They may blast a few cities, the shipyards, and any military installations known or observed, but that will be all."

"Then what?"

"They will swing into a closed orbit, and with short-range weapons of relatively local effect, destroy any cities, large buildings, mines, vehicles, groups of men, and anything considered inexplicable or potentially dangerous. After all that, they will land, and occupy the planet."

John paused. "That is supposing you do not surrender."

"Surrender," snarled Wharton. "I'll see them in hell first!"

"Maybe you will," said John, quietly. "But at least you had better evacuate the population, scatter the industries, and camouflage everything of value and importance. You had better start with this laboratory, and the shipyards."

Merrill came gasping over to them, his wrinkled old face distorted by an ugly expression. He clutched John's arm.

"Are they at it again, lad? Are we to go through it all again? I saw the cloud, I know what it means. War, and all the horror that war brings. Are they going to ruin Mars as they ruined Earth?"

"No," said John, grimly. "They may try, the Co-ordinator, the military, the officer class, but they will fail. You will make them fail."

"I will? An old man, weak, helpless. Are you mad?"

John gripped the thin arm and stared into the wrinkled features. He felt a sinking of his stomach as he saw the eyes. Deep within them trembled the insanity he had once known.

"Merrill!" he snapped. "There is no need to play a part here. We are your friends, all of us. You are on Mars! We need you—your niece needs you, *Merrill!*"

He sighed, rubbed a pitifully thin hand over his eyes, and smiled. "Thank you, son. For a moment I thought that I was on Earth again, with the sound of the bombs in my ears. A man can play a part too long. After a while he forgets that he is playing. What can I do?"

"Prepare as many impeller tubes as you can. We must equip several ships, and attack the fleet. Somehow we must gain time."

"Yes," agreed the old man. "I'll do that, but before you go, did you have any suggestions to make?"

John hesitated, memory returning. Once again he imagined the twisting blue fire, pressing, pressing. He smiled.

"I do have a suggestion. You may laugh at it, and probably I'll deserve it."

"What is it?"

"Come on, John," snapped Wharton, impatiently. "What do you know of atomics? We have work to do."

"A moment, Ben." John turned to the professor. "Tell me, how did you ever discover the secret of your tube?"

Merrill smiled proudly. "By pure mathematics. It would take too long to explain all the formulæ and equations I had to evolve, but I theoretically determined the possibility of

such a gas as I use. It was relatively simple to construct the tubes afterwards."

"I see." John paused, then plunged ahead. "I had an impression while watching the tube working, that you had forgotten something. Maybe you haven't, but you asked for suggestions. Here is mine. The gas is radioactive, the molecules very small. Am I correct?"

"Yes. The molecules are composed of three atoms only."

"The gas is directed against one end of the container. It thrusts with all the terrific force inherent in each molecule. It is driven against the wall of the container. Do you begin to see what I am driving at?"

"No. I—" Merrill paused, a strange expression struggling on his wrinkled old features.

"Now do you begin to see? The gas is being forced from the tube. The molecules are being driven into the very metal, out of the metal, lost into the atmosphere. The half-life of the gas doesn't change; it can't do. But if a certain quantity of gas has a half-life of a day, and emits a certain amount of energy, then a tenth of that gas, while still having the same half-life, will have less than a tenth the energy. The gas is being driven from the tubes. Find a lining for them impermeable to the thrust of the molecules, and you will solve your problem!"

"You are right!" Merrill almost danced in his excitement. "Neutronium would do it, or—" his voice trailed off as he darted away.

"Don't forget the tubes!" Wharton yelled after him, then dragged John out to the waiting ground car. The laboratory lost itself behind them in a whirling cloud of dust.

The shipyards hummed with furious activity. Men, sweat pouring from their half-naked bodies, worked like demons as they stripped the fuel tanks, atomic engines, tubes, and elaborate controls from the ranked hulls. Welders flamed and sparked as new turrets, torpedo tubes, and heavy struts to hold the new tubes were swung into position. Most of the ships were converted cargo vessels; only a few had the sleek lines of warships, and even they were hopelessly obsolete.

John ran a critical eye over the activity, then turned to Wharton.

"Concentrate on getting at least five ships ready for the impeller tubes. The rest can wait for the new drive, but we must get something into space as soon as possible."

"You mean that you are going into space with the erratic tubes?" yelled Wharton above the din.

"We must. The fleet may be nearer than what we think. If we wait too long, they will blast the shipyards, and ground us." He caught at the arm of a passing armourer.

"What weapons are you fitting?"

"The usual, sir. Turrets of machine guns, one centimeter calibre, three guns to a turret. Launching tubes for powered missiles."

"Good. Which five ships are nearest completion?"

The man ran an eye over the ranked vessels. "Those two, sir. That one there, and the two small craft at the end."

"Concentrate on fitting them out. I want them ready as soon as possible—and, armourer—"

"Yes, sir?"

"Fit at least one launching tube for guided atomic-headed rockets. Load them all with the maximum of ammunition, and remember that we will be carrying minimum crews."

"What's the idea?" Wharton grunted as the man hurried away. "You can't stop a fleet with five small ships."

"I'm not worried about the fleet. I'm worried about the reserves. As soon as the Co-ordinator learns that we are using the impeller tube, he will throw every ship he can put into space against us."

"But you said that the entire Earth fleet consisted of thirty ships," protested Wharton. "How can he get more?"

"The Co-ordinator isn't a fool, Ben. The fleet does only consist of thirty ships, but he has more than that. The factories are geared to full-scale production. They have to be to keep the workers satisfied. Factories have to make something, and what more natural for a military regime than ships of war? Stored on Luna are more than two hundred space ships. Stored in the hidden hangers of Earth are twice as many more. Thirty ships comprise the Rocket Fleet, Ben,

but three hundred at least comprise the reserves."

"You think that he will use them?"

"He must. With the impeller tube we can rule space. In self defence we must make sure that he can never attack us again. Like it or not, Ben, we are in for a war to the finish, and the Co-ordinator has a lot to lose."

"So have we," Wharton said, grimly.

"Not as much. We can lose our lives, yes. The Co-ordinator stands to lose more than that. He stands to lose his dynasty, his empire, his entire civilisation. Earth is vulnerable, Ben. Too vulnerable, I can see that now. Any caste system must be rigid; people are channelled into too deep a groove. Stasis is the death of civilisation. Earth will break, but it cannot bend. We must save them from themselves."

"That's dangerous talk, John. We aren't missionaries. People can't have liberty thrust down their throats. If we ever try to convert them, then we are no longer true to our convictions."

"Look, Ben," John said quietly. "Don't misunderstand me. If you died, or I were to be killed, would freedom suffer? The rest would go on as if nothing had happened. They would elect new officers, and Mars would be just as safe. It isn't like that on Earth. Kill the Co-ordinator. Kill his successor. Kill the top twenty of the military aristocracy, and you cause chaos. To hold their power, they must make themselves indispensable. Earth cannot afford to lose them, and so they are safe through fear."

"So what?" Wharton shrugged. "Things will even out; they always do."

"Supposing that we were to invade Earth? We bomb a few cities, kill off a few of the top military. It would be easy to wreck communications, smash transport, destroy the factories and food dumps. What would happen? What could they do against us?"

"I don't know. For that matter, what could we do here?"

"I'll tell you what we would do. We would scatter. Each man would be a potential leader, capable of organisation, of

hitting back. But not on Earth. The caste system is too strong. Tell a man from childhood that he is inferior, and he will be inferior. It was easy for me to make the break—I was born to the officer class, born to command, to make decisions. What did it take for you to make the break? You told me: a terrible emotional upset. Now do you begin to understand?"

"I see." Wharton scuffed the ground with his boot. "But Earth has no enemies, John. We don't want to invade her."

"We don't," agreed John. He led his companion outside. The sun had set, and the stars began to blaze forth in all their brilliant glory. He gestured at them.

"Look up there, Ben. Stars. Suns just like our own, some of them. Some must have planets, peoples, alien, but intelligent. One day they will come here. One day we will go to them; the impeller tube makes that a certainty. What if they aren't friendly, Ben? What if they choose to invade Earth? Now do you see why I'm worried? Earth is a ripe fruit for the picking. A facade of military power, yet without the first essential of successful militarism. Earth cannot withstand a heavy loss."

A light glided across the desert. It hung a few feet from the ground without any visible means of support. A man hailed them.

"That you, marshal? Merrill said you wanted these in a hurry." He settled the flat conveyor to the desert floor. It was loaded with impeller tubes.

Wharton yelled orders. Men spilled from the building, grunted beneath the weight of the heavy cylinders, staggered to the selected ships. Impatiently, Wharton stripped off his scarlet and silver tunic, bent to lift a tube. He tensed, straightened, squinted into the night sky.

A rushing sound whined across the desert, a murmur of violently displaced air. Something blossomed into harsh white fire low on the horizon, and seconds later the concussion wave hit them.

Wharton picked himself up, spitting sand.

"What was that?"

John stared tensely at the stars, flinched at a second gush of flame, wiped blood from his streaming nose.

"The bombardment," he snapped. "The fleet has decided to reduce us from a distance. Those are long range atomic missiles."

"What shall we do?"

"Evacuate the cities. Evacuate, and work. I've got to stop that fleet."

Grimly he stripped off his tunic.

CHAPTER TEN

Into Space

DAWN, and a thin bitter wind blew from the horizon, sending ripples of fine sand piling against the gleaming hulls of five ships of space. Around them, men sagged in utter physical exhaustion, the sweat freezing on their half-naked bodies. A litter of tools, equipment, and discarded components ringed them, but the ships were ready.

John blinked tiredly as he received the final report, yet tired as he was, he still remembered to return the salute.

"Inform the marshal that we are ready to take off at his command," he ordered the haggard soldier. He watched the man stumble across the desert to the ship hangars, and wearily struggled into his tunic of scarlet and silver. A car ploughed through the wind-borne sand, the tracks churning as they gripped the fine dust.

Wharton, his face lined, his eyes red from lack of sleep, his giant body seeming almost deflated with sheer fatigue, climbed slowly from the vehicle. His tunic, soiled, marred with grease and oil, flapped in the bitter wind.

"They tell me that you are ready to leave, John."

"Yes. As soon as the crews are aboard we'll take-off."

"So soon? Do you think it's wise? You are almost dead with fatigue, why not have a few hours' sleep first?"

John smiled, shook his head. "You know we can't do that, Ben. Every minute counts. Was there much damage?"

"Settlement Five was wiped out by a direct hit. Elysium partly destroyed. One of the mines is too radioactive to be worked, and the pumping station at the pole is wrecked."

"How about loss of life?"

"About two thousand. Bad, but it could have been worse, much worse." Anger flooded the tired features. "Damn them. Sitting safe out there in space murdering helpless women and children. How long is it going to last, John?"

"Another day at least. The rockets will continue to land on the edge of the night side. You can transfer all essential equipment and as many of the people as possible. They will be safe if they can follow the dawn."

He looked in surprise as a second car slewed across the sand towards them. "Who's this?"

"John!" A slim figure sprang from the car, raced towards him.

"Jean! What are you doing here?"

"I couldn't let you go without saying good-bye," she smiled, then surprisingly burst into tears. "Oh, John, it's horrible. All those poor people, the horrible radiation burns, the wounds. I never thought that war could be like this."

He held her close to him in sudden tenderness, gently stroking the wealth of thick dark hair. "It won't be for long," he promised. "I'm leaving soon. We'll stop this long-range bombardment, and make Mars safe for all men."

She smiled through her tears, slid from his arms, looked at the waiting ships. "Where are the rest?"

"There are no more, dear." The word came easily to his lips. "These are all we could get ready in the time. They will be enough."

"Five ships? Against a fleet? John, you must be joking."

"No, Jean," Wharton took her gently by the arm. "He isn't joking. Those five ships are all we could adapt in the time. All we dare to spare."

"But, John, you'll be killed!" Alarm widened the large dark eyes. "I won't let you go. Ben, you are the marshal, stop him!"

"I can't, Jean. Mars is too important for me even to try. We can spare him, but we cannot spare our planet."

"I shall be safe enough," John said cheerfully. "With your uncle's impeller tubes driving the ships, we are more than a match for double the amount of Earth ships. Anyway, we must stop this bombardment. It won't take long."

"Promise that you will take care of yourself," she whispered. "Hurry back. I shall be waiting for you." Suddenly she was in his arms, sobbing as if her heart would break. Above the rich glory of her hair, John nodded at Wharton. Gently disengaging his arms, he pushed her towards the burly figure of the space marshal.

"Look after her, Ben."

"I'll do that," Wharton promised, grimly. "And, John, I'll be coming after you as soon as possible. Take care, son." He lifted an arm in salute.

John smiled, turned, strode towards the waiting ships. The crews were already aboard, tensed and waiting at the controls. He entered the largest of the five, the flagship. Metal rang dully as the ports locked behind him.

Rapidly he made his way towards the control panel, strapped himself into the padded seat, nodded at the radio operator.

"Test radio."

"Yes, sir." The man bent above his instruments. "Testing," he snapped. "Come in all ships."

Tersely the other vessels acknowledged radio contact. John nodded. "Prepare for take-off. Follow flagship after one full second. Acceleration of one half grav. Ships will take off one full second after each other, in order of number. Ready!" His fingers gently swung a rheostat. "Minus three, two, one, off!"

Beneath his fingers the ship came to sudden life. Power droned from the generator, whined high into the scale of audibility. They lifted, the nose tilted to the heavens, acceleration pressure drove the crew deep into the padded seats. Before them the sky changed colour, turned from deep blue to midnight black. John sighed with relief, his hands dropping from the controls.

"Contact the ships."

"All ships following as directed, sir," the radio operator reported.

"Good. Number five to the left. Number three to the right. Number two above, and number four below. Fan out to limit of radar range, follow flagship at interval of three seconds." He waited, staring dully through the clear plastic of the forward vision ports.

"Ships in position, sir."

"Accelerate to one grav. Now!" His hands darted towards the controls, weight pressed at them, the seats swinging in their gimbals. Thankfully John unstrapped his belt, stretched tiredly.

"According to the observers at Argonville, the atomic missiles came from the direction we are following. That means that the fleet we are looking for must be somewhere in this vicinity. Where, is another question. They could have moved, but I don't think so. Tell all ships to keep close radar watch. Cut speed and coast after one hour." He rubbed his eyes.

"Why not get some sleep, sir? I'll call you if anything happens." The radio man grinned as he made the suggestion. "I'll get one of the gunners to watch the radar. That way we'll have a double check."

John stared at the man, his old training screaming its protest at this insane familiarity with a man of lesser rank. Then he relaxed, grinned his thanks, loosened his tunic.

"Thanks. Maybe I will." He let down the high back of the pilot's seat, locked it into position, and sprawled thankfully on the thick cushions.

As he tried to sleep, his overtired mind insisted on reliving the details of the past few hours, the screaming whine of the atomic bombs, the ghastly mushrooming clouds, the muscle-tearing labour of the previous night.

He saw again the coiling blue cloud of the impeller gas; imagined the soft form of Jean nestling in his arms; imagined her sweet face distorted by the searing touch of radiation burns. He moaned a little, turning restlessly on the soft padding of the pilot's seat. A sudden startled cry from the radio operator jerked him upright, wide awake.

A blossoming cloud of eye-searing flame spread slowly to their right. It shimmered, twisted, little flecks of flaming

matter spitting from it, the geiger counters chattered in sudden frenzy.

"Gods!" cried the radio man, rubbing at his eyes. "What was that?"

"Contact number three," snapped John.

"Calling three," droned the man into his instruments. "Flagship calling three. Come in three."

Silence—the radio stuttered with irregular static.

"Cease calling," John said dully. "That was three that we saw. They must have run straight into an atomic missile." He cursed without emotion. "One ship wiped out, and not a blow struck at the enemy. Seven brave men dead. What incredible luck."

"Are we near them, sir?"

"Not necessarily, but we can plot the probable course of the missile." He busied himself at the compact electronic calculator.

"Contact the ships. Widen out. The fleet should be within an area of two square miles, distance problematical, but most likely within three hours of flight. Man the forward turrets, test the guns. All crew to wear space suits. Alert!"

Tensely he sat at the controls, his tender skin chaffed by the rough fabric of the space suit. As yet he had not donned the helmet, leaving it slung behind him. They would don them when actually engaged, until then it conserved the limited oxygen supply of the suits to breathe the ship's air.

A fleck showed on the radar screen. John watched it bitterly. "Another missile bound for Mars," he explained to the radio man. "Not a ship."

"How much longer, sir?" the radio operator said, nervously. "This waiting is giving me the jitters. Can't we speed things up a bit?"

"Not really. This method is the most efficient—if we go too fast, we will overshoot, then have to spend time back-tracking."

A second fleck showed on the screen, followed by a third. John watched them despairingly, raging at his impotence to

rid Mars of the threat of the deadly missiles. Impatiently his hands snapped to the controls.

"All ships alert. Increase acceleration to two gravs, we're going hunting."

The ships leapt ahead, the power generators singing a high note as the impeller tubes surged with their mighty thrust. John, tense at the controls, tried to ignore the nagging worry of their probable life. In a wide-flung net the four ships darted across the void, their radar screens at full power, sharp eyes watching for the tell-tale signals reflected from the metal hulls of the enemy.

Space was so vast, and the ships so small. Even the Earth fleet were but specks lost in the immensity of the void. Unless their radar could pick them up, they could search for days, and each hour sent more missiles plunging towards defenceless Mars.

Hours passed. John bit his lip worriedly. At their terrific speed they should have met the fleet long ago. Mars was a tiny glowing ball far behind, all detail lost even through the telescopes carried by the small ships.

A bell chimed softly through the cabin, followed by the radio operator's startled shout. "Look! The fleet!"

"Where?" John thrust the man away, narrowing tired eyes at the growing flecks on the screen. "Cut speed. Spin ships. Decelerate two gravs. Move!"

His hands flickered as he strapped himself into the chair, spun the ship with delicate touches of the opposed impeller tubes, swung the rheostat. Weight crushed them, drove them deep into the padding. Grimly John increased the thrust of the tubes.

"Five grav deceleration," he gasped to the radio man.

On the screen shapes grew swiftly into recognisable silhouettes. Through the vision ports lights gleamed, receding as they passed at their high velocity. John cursed dully.

"There they go. Thirty of them at least. Look at them!"

"They're going away from us," gasped the radio operator.

"We're going away from them," gritted John. "Contact the ships. Inflate grav suits. Ten grav thrust, we've got to slow down."

The thin high whine shrilled even higher as the full power of the tubes thrust against the structure of the ship. Stanchions creaked, plates started beneath the strain, the air whistling from the cabin with a thin whine.

Blood appeared at their nostrils, their ears, seeped from the corners of their eyes. Desperately John increased the thrust of the tubes, slowly, too slowly, their velocity dropped, fell to relative zero; they no longer fell away from the ships of Earth.

"Cut," gasped John. "Drop to two grav acceleration. We don't want to pass them again."

Groggily the radio operator relayed the instructions. "Ship number four reports strained plates, sir. They are losing air fast."

"So are we," snapped John. "Tell them to use their suits, connect the air tanks of the ships to alternate air intakes, and not to forget to connect the radio also."

He wiped the blood from his face.

A gunner, eyes haggard with the effect of ten gravities, staggered from his turret. "Carter's passed out. Dead I think."

"Strap him in the navigator's seat. Get back to your turret."

"Who's going to fire the launching tubes? I can't handle them."

"Can anyone else?"

"Not that I know of," the gunner shrugged. "I'll try if you like, but I won't guarantee the result."

John bit his lip, mentally cursing his luck at having half-trained crews. "I'll handle the tubes," he decided. "Can you steer a ship?"

"Yes. I used to be a pilot on the Earth-Luna run before I had to leave for my health," the gunner grinned with a flash of white teeth. "Show me the controls, and I'll handle her. Wharton may not have told you, but I'm supposed to be your second-in-command."

"Good. I'll call you when ready—no, wait. You'd better

stay beside me, and get to know the board." He turned at a call from the radio man.

"Approaching the enemy, sir."

"Contact the ships. Cut speed. Coast."

He stared through the plastic of the vision ports, studying the scene before him.

The Earth fleet was spread in traditional cone formation, the hollow base of the cone pointed towards Mars. Each ship could thus fire its atomic missiles along the same flight path, playing a concentrated hose of fire power at any approaching enemy, or at the distant target. As usual, the flagship was at the apex of the cone.

"Spin ships, one grav acceleration," snapped John.

He smiled as he studied the formation. Thanks to their incredible speed in passing the fleet, they were as yet undiscovered. He had to make the most of the element of surprise, and superior manoeuvrability. They were his main weapons.

"Spin ships," he ordered, tensely. "Align torpedoes on ships from centre counting clockwise. Aim at jets."

"You can't knock them out aiming at the jets," protested the gunner. "Why not aim at the control cabin?"

"We want to immobilise them. The torpedoes will make them spin, and prevent them firing on Mars. We shall have to use the machine guns to riddle the hulls." He grinned at the gunner's blank look. "We only have four ships," John reminded him, gently. "They have thirty."

"Contact all ships," he snapped to the radio man. "Fire at signal, then each ship on its own. Use your manoeuvrability, and machine guns. Riddle their hulls, concentrate on the turrets and launching tubes. You know what to do if you run out of power. Use sealed suits at all times. Luck."

The radio man wiped hands suddenly moist with sweat, grinned, and closed his helmet. The gunner settled himself into the pilot's chair, winked through the face plate of his

helmet. John dropped into the bow gun turret, aligned the squat bulk of the launching tube, settled himself into the seat behind the treble barrels of the quick-fire guns.

"Ready?" he called through the inter-suit radio.

"Ready," answered the radio operator and the pilot.

"Remember. After we fire, move the ship. I rely on you to give me my targets, and to dodge enemy fire."

"Right."

John drew a deep breath, tensed his thumb on the firing button. Savagely he pressed it down.

CHAPTER ELEVEN

Space Battle

WITH a jerk the torpedo sprang from the launching tube, fire streaming from the jets studding its rear. At the same time the ship spun away, acceleration driving John deep into the seat behind the guns. A ship swung at him, looming huge in the gun sights. He swung the weapons, sent a burst of fire stabbing towards a bulging turret, raked the immediate hull, and released the pressure of his finger as the ship dropped away below them.

He grinned with the love of battle. The ex-gunner certainly knew his stuff. He flung the little ship across the heavens, never following a direct line of flight longer than necessary for John to aim his weapons. Speed, coupled with surprise, was their main weapon. Once let the crews of the enemy ships don space suits, and it would be impossible for them to be beaten.

Despite popular conception, machine guns were still the most efficient close-quarter weapons. The torpedoes would blast a ship open, smashing through the hull and exploding within the ship, but even they could not win a battle. While a single man remained alive on a vessel, that vessel was dangerous. Space ships could not carry thick armour. High velocity bullets could penetrate it as if it were paper. They could rake the turrets, search out the crew, blast the delicate instruments to ruin.

Space ships weren't vulnerable. They had no wings to be shot off, no fuel tanks to explode, no single man in full control. A space ship did not need air to operate, the crew could carry their own. A space ship could be a tangled mass of wreckage, yet a single man with a single gun could still bring his enemy to defeat.

John was gambling on the fact that the crews would not be wearing space armour; even so, he did not hope to annihilate the fleet. He wanted to prevent them firing on Mars, and he worked for this end alone.

The swelling bulges of the gun turrets were his target, they and the gaping mouths of the launching tubes. He riddled the hulls around them, sending streams of spitting death deep into the hearts of the motionless-seeming vessels.

Flame blossomed to one side, painting the silvery hulls with lurid colour. One of the torpedoes had reached the atomic pile of the target ship. Searing atomic fire had broken loose, was eating away the very metal of the stricken ship.

Stars gleamed before him, and he gasped at the sudden spin and surge of power. They moved fast, too fast. Each time they passed their targets meant savage deceleration, to kill their velocity, and sudden acceleration to return to the attack. John tried not to think of the short life of the impeller tubes.

A ship swung before him, turned, steadied as the pilot sought for a target. John squinted along the sights, pressed the firing buttons, saw the stream of incendiaries blast a turret to ruin. He grinned, swung the weapons to rake the still glowing ports of the control cabin, and gasped as the ship lifted, dipped, straightened again.

Automatically his fingers stabbed at the button controlling the guns. Beneath the thick fabric of his gloves he felt them shudder, saw the gaping mouth of a launching tube yawn before him, sent a stream of potential death streaking into the menacing orifice. The ship jerked away, and behind them flame blossomed in an atomic fury.

Over the radio he heard the pilot curse in startled rage, then heard his frantic cry.

"My eyes! I can't see! I'm blind!"

Desperately John scrambled from the turret, grabbed at the controls, swung them away from a looming vessel.

"What's the matter?" he snapped.

"That light burnt my eyes," cursed the pilot. "I can't see."

"Strap him down," ordered John tersely to the radio man. "Tell one of the rear gunners to man the bow turret. I'll resume command. You can fire a gun, I suppose?"

"Watch me," grinned the man as he scrambled away. "I've been waiting for a chance to have a crack at them."

"What was it?" muttered the ex-gunner. "That light, what was it?"

"A freak. They must have had an atomic missile in the tube, safety fuses off, ready to be fired. My bullets set it off, a thousand to one chance, but it has cost them a ship."

"I can't see—I can't see!" moaned the man, rocking from side to side.

"You can get attention when we land," snapped John. "You won't be blind for life, not with the grafting technique at Argonville. They'll give you new eyes; you'll be better than before."

He sat before the control board, slowed the ship with a quick turn and a thrust from the impeller tubes. The Earth fleet had broken formation. Flame stabbed fitfully from jets as the great vessels swung into a new pattern. Five of them seemed to be without power. They drifted in the old orbits, the rest all showed some traces of damage.

Five from thirty—it wasn't enough. He searched the heavens hoping for a glimpse of his own ships. To use the radio would give away their true strength and position, but almost he was tempted. The initial advantage of surprise was over. Now it would be a grim game of hit and run. The Earth ships were sitting targets, but their fire power could pattern the void with a curtain of destruction.

He closed a circuit. "Benson to Martian Fleet," he snapped in sudden decision. "Use remainder of torpedoes. Aim and fire at will."

He steadied the ship, dropped to the bow turret, loaded and aligned the launching tube. "Tell me when we're on target," he ordered the gunner. "I'll close in and you fire when ready. Don't make mistakes—we haven't any of these things to waste."

Back in the control cabin, he swung the ship, aimed at the rear of a flame-spouting vessel, swung the rheostat. The ship suddenly swelled before him. From turrets studding its hull, tiny fingers of flame flickered as their guns swung into action.

John gritted his teeth, held the ship on its darting course. From beneath him a pet of flame lanced. Immediately he spun the ship away, and aimed at a fresh target. Faintly he could feel the vibration of the guns transmitted through the floor plates and the fabric of his suit. He grinned.

Someone cried out, the sound ringing from the speaker set into his helmet. The cry was followed by a whistling sound and silence. He didn't need the third gunner to tell him that one of the crew had died, his suit ripped by a bullet. He had already guessed.

The radio flashed its call signal. "Ship five to Benson. Am damaged beyond repair. Crew all dead or injured. Ammunition almost exhausted. Good-bye."

"Wait!" yelled John. He slumped back helplessly. In the screen before him a small ship suddenly jerked into fantastic speed. It flashed through a hail of fire, straight towards the flame-spouting venturis of an undamaged vessel. Desperately the big ship tried to blast away from the bullet-riddled hull; the flames from the rocket exhaust stretched miles into space, bathing the little ship, turning the hull plates red with tremendous heat. Fascinatedly John watched; he knew what the end must be.

Speed alone carried the Martian vessel through the bath of fire. The crew were long dead, since nothing could live in that hull. It struck, ploughed into the venturis, blocked them, and tore into the heart of the ship. Atomic energy streamed from the broken pile, burning in sudden liberation. Tiny figures spun from the airlocks as the crew abandoned the hopelessly radioactive vessel.

It was a time of ceaseless effort, of bone-aching strain, of sudden thrusts and changes of acceleration. It became automatic: the swift dart towards the enemy ships, the shudder of guns, the quick move away. The slowing of too great a speed, the returning to the attack—it all became something that no longer had meaning.

Of the original five ships, only one answered to the radio. Of his original crew, he had two men left alive. They crouched in the bow and rear turret, no longer jesting, their hands tense on the firing buttons of their weapons, knowing that each swift dart towards the enemy could be their last.

The radio broke into sudden life.

"Ship two calling Benson. Am out of ammunition. Ship no longer responds. Can you help us?"

"Signal your position," snapped John. He slowed his ship, frowning as he felt the sluggishness of the controls. From the edge of the screen a red light flashed in irregular bursts of ruby flame. He watched it for a moment, then swore.

"You are heading into the enemy. Have you any power at all?"

"None. The tubes are dead."

"I can't get to you in time. You'll have to run through the fleet. I'll pick you up when you have passed them. Stop signalling."

The ruby light died. Tensely John sat waiting. The little ship hurtled on its way, an inert mass of metal, helpless to change position. Straight for the ships of Earth it drove. From the several still-active turrets on the great vessels, fingers of fire spat a leaden hail. They couldn't miss!

"They have our range," gasped a pain-filled voice from the radio. "I'm wounded, and my suit's leaking air. Can you help us?"

"Not until you pass the fleet."

"Stupid thing to ask," muttered the voice. "You'd never make it." Surprisingly he laughed. "It was a good fight while it lasted. Tell Madge . . ." The radio fell silent.

"Calling ship two! Ship two, can you receive me? Answer, ship two. Answer!"

Silence! Dully John opened the circuit, and stared at the scene before him. The Earth fleet was finished. Of the original thirty vessels, ten spun lifelessly in the void, their plates gaping, their ports blank, mere wreckage.

Of the rest, only five were still efficient fighting units, the rest had smashed turrets, riddled hulls, torn launching racks. He smiled in tired satisfaction. This fleet, at least, would never menace Mars again. They would be too busy patching the hulls, clearing the wreckage, sorting out the dead from the wounded, the fit from the disabled. He could imagine the work needed before the ships could even be repaired enough to return to the shipyards on Luna. Mars was safe.

He tried to rub his eyes, jerked back to reality as his gloved hand struck the plastic of the helmet. A voice echoed thinly from the helmet radio.

"Bow guns out of ammunition, sir."

"I've only half a drum left," said the rear gunner. "What shall we do now?"

"Leave the turrets; seal them. We must patch the hull, and return to Mars."

"Return to Mars?"

"Yes. We did what we came for. The Earth fleet is finished."

Together they sealed the riddled hull, placing patches over the bullet holes. Internal air pressure would hold them firmly in position until the hull could be welded. Looking at the rows of holes, the almost sieve-like appearance of parts of the hull, John wondered that any of them were still alive. Philosophically he shrugged. War and battle were like that. A man could live through the heaviest fire, and then die from some foolish accident.

Air hissed from the reserve tanks. Gratefully they threw back their helmets, breathed the oxygen-rich air. The bow gunner looked around him, sighed, glanced at the other occupants of the small cabin.

"What shall we do with them?"

John stared at the dead. At the radio operator who had

wanted a chance to revenge his home world. At the third gunner, still in his ripped suit, with blood showing at his frozen mouth. At the ex-pilot, now no longer worried about his eyes. He stared at the two loaders, the observer and the youngster who had climbed aboard at the last moment. Almost he felt ashamed of still being alive.

"Space burial." He gestured towards the air-lock.

"Can't we take them with us, and bury them at home?"

"No. They are spacemen. They died in space. Let them be buried there." He did not even try to explain the psychological fact that the sooner the dead are buried, the sooner they are forgotten.

He watched as the wide-eyed corpses were slid through the air-lock into space. For a moment they stood silent, remembering their dead, then John settled himself at the control board.

They had moved while they sealed the hull, and disposed of the bodies. The Earth fleet had dropped away, lost in the vast immensity of space. Mars glowed to one side, surprisingly near, and the rear gunner frowned in bewilderment.

"That's funny, I thought that we were a long way from home."

"We have been following the Earth fleet. They were coasting towards Mars. Naturally we have come nearer during the battle." He turned the ship, pointing the nose a little to one side of the ruddy planet. The ship moved slowly as he spun the rheostat. Worriedly he bit his lip.

"Anything wrong?" The rear gunner had been watching his features.

"The tubes are becoming inert. I expected it."

"You mean that we may run out of power?"

"Yes."

A thought struck the burly gunner. "What about the other ships?"

"There are no other ships."

"You mean that we're all that's left? Three of us out of thirty? One ship out of five?"

"What else did you expect?" John snapped sharply. "This is war; we are expendable."

"Yes, but—"

"But what?" John fought to keep his jumping nerves under control. "You think that I like being the sole survivor? I knew, we all knew, that we came out here to die."

The gunner stood white faced, trembling with reaction from the nervous tension of the past hours. "I heard that call for help from ship two," he accused. "You refused to go to their aid. I knew the men aboard that ship. I know Madge. What shall I tell her? That I wasn't touched, but that her husband was killed because I wouldn't help him? What kind of a man does that make me?"

"A live man. Listen, you fool! You men who prate of freedom and liberty forget one thing. There are times when to live you must sacrifice. I know it. The men of Earth know it. The men of the Earth fleet didn't have a chance against us, yet they died at their guns. They fought for what they believed in, and they died for it. Can you do less?"

He slumped in his chair, the weight of utter fatigue crushing him with almost physical force.

"I understand how you feel," he said, gently. "But, believe me, your friends did not die in vain. There will be no more rockets blasting Mars with atomic death. We have gained the time needed to build a defence fleet. The lives of thirty men are cheap at the price."

"It's easier for you," said the gunner. "You are a professional soldier. I've never killed a man before."

"Is it?" John said, dully. "Remember, I used to be an officer of the Rocket Fleet. Those men were my comrades. You have killed your enemies. I have killed my brothers." He bent over the controls.

Slowly the ship responded to the thrust of the tubes. The

powerful surge, the bone-jarring snatch of high grav acceleration had gone, and instead the tubes gave only a gentle push, even at the full power of the whining generator.

Mars swung slowly past the vision port. John re-aimed the ship, pointing the nose far to one side of their objective.

"Can we make it?" asked the rear gunner.

John shrugged, stood up from his seat, rose slowly into the air, and bounced gently from the hull plates.

"There's your answer," he said, mirthlessly. "The tubes are dead; we are in free fall."

Glumly they stared at the distant ball of Mars.

CHAPTER TWELVE

Attack

THEY were rescued five days later, when they were resigned to death. Their air had leaked, and what was left was foul, heavy with carbon dioxide, and smelling of sourness. Their food had gone, and their lips were cracked and puffed with thirst, but they were alive.

Wharton, resplendant in his uniform of scarlet and silver, watched anxiously as they were transferred from the drifting wreck to the sleek flagship of the new Martian space fleet. His broad face split into a grin of relief as he saw John; tenderly he held water to the thirsty lips.

John drank, sipping slowly in deliberate lack of eagerness, fighting the desire to snatch the container and gulp its contents.

"We came searching for you as soon as Merrill could fit a ship with the new tubes. Your idea worked, John. The impeller tubes are perfect.

"Good. Did you see the Earth fleet?"

"Yes." His face became serious. "They refused to surrender. Unless they receive aid they will drift into deep space. We are salvaging what we can, but I will not risk men's lives trying to save people who shoot at us on sight."

"It is war," John shrugged. "They will fight to the last." He struggled to his feet. "What next, Ben?"

"Hospital for you, and work for us. One of the prisoners

we salvaged from space was an officer. He knows you, incidentally. You have been proscribed as a traitor, and he had orders to shoot you on sight."

"What else?"

"A second fleet is on its way to reduce Mars. He didn't know, or wouldn't tell me, the true strength, but he seemed very confident that we couldn't withstand it."

"Can we?"

Wharton slumped into a chair, his big body sagging wearily. "I don't know, John. "You have shown what can be done with the impeller tube, but what about Mars? I hate to think of a war of attrition; we just haven't the resources to hold out. Earth can send long-range missiles against us until the whole planet is radioactive."

"They can," John nodded. "We were lucky in locating the fleet. If they had been scattered, or had altered position between salvos, we could never have stopped them." He frowned. "Where is the prisoner?"

"At Argonville. We transhipped him to a tender. I was more concerned with finding you."

"How did you know that I was still alive?" John grinned. "I didn't fix our signal until two days ago."

"Jean made me promise to either fetch you back, or not come back myself." Wharton chuckled. "That girl's got designs on you, my lad, and don't say that I didn't warn you."

"Get me to Argonville. I want to question that prisoner."

"You think that you can make him talk?" Wharton shook his head. "I doubt it."

"I'll make him talk," promised John, grimly. He stiffened beneath the thrust of acceleration.

The prisoner was a sub-captain of Rocket Missiles. He looked surlily at John as he entered the tiny cell, then leapt to his feet with a startled curse.

"Benson! I thought that you were dead!"

"No, I'm not dead." John looked at the young man. "Fenshaw, isn't it? You were attached to my ship, weren't you? I remember you well."

He sat down on the edge of the narrow bunk. "How are you?"

"Need you ask?" Fenshaw sneered. "These friends of yours don't seem to know what to do with me, so they keep me caged like an animal. Tell them how to treat an officer, will you? I am a man of title and rank. I should not be treated like an ordinary rank-and-filer."

"Calm yourself," soothed John. "The remedy is in your own hands. Just answer a few questions, and I promise that you will be freed."

"Questions! Are you mad? Do you think that I'm a dirty traitor like you? The Co-ordinator himself ordered your death. You are not fit to be alive after what you did. You betrayed Earth. You murdered your own people, your own brothers-in-arms. You, an officer of the Rocket Fleet, a filthy renegade."

Deliberately the young man spat upon the floor.

"So that's what you think?" John sat, white faced, forcing himself to master his temper. "You, a mere sub-captain, to talk to me, a general of the Martian space fleet, like that. I could have you shot for your lack of respect."

"Kill me, then," snapped Fenshaw. "At least let me die clean."

"No," said John slowly. "No, I won't kill you." He rose to his feet, gripped the slack of the young man's tunic, slashed his hand across the white staring face. "You talk big," he snarled. "You talk of death, of titles, of renegades. You won't talk, and you want the treatment accorded to an officer. Well, I'll give you that treatment. I'll give you the same treatment accorded to me. Now talk!"

Slowly and methodically he slapped the white face. Fenshaw cringed, the angry red marks of the blows standing clear against his pale skin.

"Talk! Talk! Damn you, talk!"

"Don't," gasped the young officer. "What are you doing? You'll never make me talk like that."

"Thank you." John stepped back, smiling grimly. "You've told me what I wanted to know. You've been conditioned, haven't you? You have had hypnotic treatment. No amount of pain could ever make you talk, could it? Pain acts as a post hypnotic suggestion. When in pain, you forget. That means you have something important enough for you to have been conditioned. Information of vital importance. I know how to get it."

He stepped to the door.

"Bring a doctor. Tell him to fetch a hypodermic and neoscopolamin. Tell him to bring an euphoriac also, and hurry." The guard saluted, hurried away. John smiled at Fenshaw.

"I'm going to make you the happiest man on Mars. You will think that life is wonderful, and we are your friends. It won't last, of course, being drug induced, but for a little while you are going to talk. Talk, and like it."

The doctor came hurrying through the door, a hypodermic and several ampoules on a tray held by the guard.

"What do you want these for?"

"Inject the prisoner. Both drugs. Hurry."

The doctor looked sharply at John, made as if to protest, then shrugged, loaded the hypodermic, slid the needle beneath the skin. Fenshaw winced.

"I hope you know what you're doing," said the doctor, as he put away the hypodermic. "This combination of drugs is pretty dangerous."

"I know that," snapped John, tersely. He stared at Fenshaw. "Can you hear me?"

"Sure I can," grinned the young officer. He stretched.

"Fenshaw. Listen to me. When will the second fleet arrive?"

"I don't know."

"Will it come from Luna?"

"Yes." Fenshaw's eyes dulled as the neoscopolamin took effect.

"Will it bombard Mars?"

"No."

"No? Then why are they coming?"

No answer. John frowned as he remembered that the drug worked on the yes-no principle. He was wasting time by asking indirect questions.

"Will they carry atomic missiles?"

"Yes."

"Will the fleet threaten Mars?"

"No."

John bit his lip. The answers didn't seem to be making sense. He paled as a thought struck him.

"Is the fleet to blockade Mars?"

"Yes."

"Is Mars to be bombarded?"

"Yes."

"From the space fleet?"

"No."

"From Luna?"

"Yes."

Fenshaw's head lolled. His breathing sounding harsh in the little room. The doctor felt the limp wrist, turned back the lid of one eye, shook his head.

"With what type of missiles. Atomic explosives?"

"No."

"Radi-dust?"

"No."

"What then? Talk, damn you! What type of missiles?"

Silence. Fenshaw sagged, his skin turning a peculiar colour.

"Radi-germ bombs?"

"Yes."

Suddenly, as if he had been a puppet, and someone had cut the strings, he fell. The sound of his breathing became erratic. The doctor stepped forward.

"No more now," he said, curtly. "This man is my patient."

"Take him away, doctor," John said, tiredly. "I don't want him to die, but I had to make him talk. I didn't like what I heard."

White faced, he left the cell, bearing his terrible news. Wharton listened to him, then sat heavily down on to a stool.

"What can we do?"

"Destroy them."

"Must we?"

"Yes. I have heard whispers of the radi-germ bomb. I know little about such things, it wasn't my field, but I do know that all research on the project was done on Luna beneath sterile domes. It is the ultimate weapon ever dreamed up by the mind of man. Radioactive disease. Imagine it! Radioactive dusts are bad enough, but they can be nullified. Ordinary disease is bad, but can be held in check with quarantine and anti-vaccines. Combine the two, and you have something impossible to beat. They have evolved a strain of virulent culture which is radioactive. A form of virus, not only killing by the release of toxic poisons, but destroying by their own radiations. They breed, spread, multiply. It could mean the end of Mars."

"Would they dare to use it? Supposing it spreads, and contaminates Earth?"

"That is why the fleet is to blockade the planet. They will bombard us from the launching sites on Luna. The fleet will make sure that no single ship or person escapes. The Coordinator intends to destroy Mars. Utterly, finally, and forever."

"It's unbelievable," muttered Wharton. "How can you be so sure? What proof have you?"

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"None" admitted John, grimly. "The prisoner can't have been mistaken, or relaying false information. While the launching sites on Luna remain usable, while the Earth fleet is waiting ready to send atomic missiles against us, I don't feel safe. We must destroy them, Wharton, or never again know peace of mind."

"Destroy them? But how can we?"

"Give me every ship you can spare. Load them with explosives, atomic, chemical, anything. I must blast the launching sites and Earth fleet to dust, or Mars will die within weeks."

"Are you certain?"

"No, but how can we take a chance? Once the missiles are launched, then we could never stop them. Even now they may be on their way here. One missile, just one, could wipe us out." He stared out of the window to the star-studded heavens. "It could be on its way now."

"We have a new explosive," Wharton said, dully. "Merrill invented it. He's found a way to detonate the impeller gas. It's almost as powerful as atomics."

"It may help. Load the ships—the quicker I take-off the better."

"But, John! You can't go; you're not fit."

"Who else do you suggest?" John smiled. "I know Luna Base. Does anyone else? I can sleep on the journey, but hurry, Ben. Hurry. Hours, minutes even, may make all the difference."

Wharton nodded, stamped out to give orders, to send men into a frenzy of desperate effort. The very life of Mars was in danger, and they knew it. The ships were soon ready.

Past Phobos sped the ships. Past Demios and into the dark reaches of interstellar space. Behind them, Mars and its twin moons shrank into a reddish ball, a tiny sphere, then became a ruby speck among the glittering stars.

Beneath the steady thrust of the impeller tubes the little

fleet drove across the void, their speed increasing each second from a two grav acceleration. Hours passed, the ships reached the half-way point spun on their short axis, used the same thrust of their tubes to lose the speed so quickly gained.

To John, it seemed as if the journey would never end. He lived on his nerves, each tell-tale fleck on the radar screen bringing the sweat of apprehension to face and neck. Fenshaw could not have been lying. Beneath neoscopolamin a man does not lie. The Co-ordinator feared for the safety of his regime. He knew that the Merrill tube could mean the end of the rigorous caste system which kept him in power. Luna Base did have new and untried weapons, and John considered that he was justified in destroying the Base and the Fleet.

Yet he was an Earthman, a soldier, and he loved his world. The men at Luna Base, the men manning the launching tubes and rocket fleet had been his comrades, his brothers-in-arms. From birth the essential rightness of the military system had been drilled into him. The rigid credo, the wrongfulness of liberty, which could only lead to chaos.

He dropped his head into his hands, and tried to quell the growing conflict within him. He had been on Mars so short a time. Things had happened so fast. He had had little time for thought. Why had he changed? What was it about freedom which could turn a man against his comrades?

He thought of Merrill, and the sheer genius of the man. He thought of Wharton, and how he had tried to kill him, and had been forgiven. He thought of Jean—and the threat of radioactive disease. He had changed, but he couldn't tell why.

A man's voice broke into his reverie.

"Luna ahead, sir. Ten minutes' flight. Your orders, sir?"

This was it! This was the time for decision. To destroy Luna Base would be murder, yet it was staffed solely by the military, and they were trained to expect death at any time. It would still be murder, yet the bombardment of Mars had been nothing else.

Through the vision screen he could see the tiny figures of space-suited men. They ran across the broken pumice of the Moon, clustering about the serried ranks of the gaping launching tubes. Others ran towards the long lines of gleaming space ships. Launching tubes and space ships, both menacing Mars. The sight decided him. Stiffly he gave the order.

“Proceed according to plan.”

The little fleet spread, ships dived down towards the grounded space fleet, squat cylinders spitting from tubes set in their hulls. Where they struck flame blossomed in soundless fury, and the grounded ships heaved and fell in tangled wreckage.

The serried tubes fluffed apart, the delicate aiming apparatus dissolving into powder. From hidden turrets on Luna, fingers of fire began to spit towards the invading fleet. A ship dived, and kept diving. It struck, and fire gushed from the broken hull. It spread, swelled, and the cargo of explosives erupted with soundless violence.

John watched, features expressionless. “Second stage,” he snapped, and sat tensely before the screen.

Fully half of the Martian ships left formation. Tiny figures sprang from their ports, to be picked up by other ships. Controls locked, the ships, loaded with the assorted explosives of an entire planet, drove down towards the dome and turrets of Luna Base.

Below, the space-suited figures raced in sudden desperation, their little figures bounding across the broken plain. John watched them, his hands clenched, the blood running unnoticed down his chin.

The ships struck!

Fire splashed from where the ships had driven deep into the luna surface. A gush of soundless flame, spreading, blossoming into a second miniature sun. It climbed high above the pumice, burning, destroying, sterilising. A second thrust of fire, a third, then a titanic upheaval as the hidden stockpile of atomic missiles detonated.

ATOM - WAR ON MARS

John slumped before the vision screen. He felt tired. The reaction of the past few days seemed to be crushing him.

"Return to Mars," he ordered. "Luna Base has been destroyed."

The ships turned, hummed beneath the thrust of the impeller tubes. Behind them, Luna sparkled with the blue of radioactivity. John knew that the atomic fires would continue for months, perhaps even years. None but the Coordinator would ever know just how much atomic material had been stockpiled there.

He slumped into the deeply padded chair, dozing as they sped towards Mars. There would be work to do. The Merrill tube to be manufactured in quantity, distributed to the peoples of Earth. With the means of easy escape, many of them would throw off the subtle bonds of Earth, and head for the freedom of Mars.

There they would build a new world, a free world, where every man would be the equal of his neighbour. Liberty could not be forced down their throats, but when they wanted it, Mars would be waiting to welcome them.

John smiled and stirred in his sleep. Ahead gleamed Mars, and Jean would be waiting.

THE END

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Dear Sirs,—I am writing to thank you for helping me to stop tobacco craving. It is now nearly two months since I received your treatment, and can safely say I now have no wish to smoke either pipe or cigarette. I stopped Smoking in 3 days with your wonderful treatment. Thanking you once again. I remain, yours sincerely, R. E. Richardson,

St. Helena.

Dear Sir,—Your remedy for removing the tobacco craving reached me on Tuesday last, and after only four days I am completely cured. I did not think it possible to remove the craving by any means, but being determined to give your remedy a fair trial I find that it does everything you claim and more besides. My nerves are better already, and I sleep better and feel far livelier than I did before. You may use this letter to your advantage if you wish and let me say "Thank you." Sincerely, R. Mooney.

Bromley, Kent.

Dear Sir,—I am writing to thank you for the Victor Treatment. I have given it a fair trial. It is now six weeks since I have smoked, and I have never had a crave to smoke. I have told my friends about this great treatment, how it has proved satisfactory. Thanking you once again. E.J.B.

Glasgow.

Sir,—Words cannot express my thanks for your wonderful cure from smoking. I was a heavy smoker of cigarettes for thirty years, but since taking your treatment I have no further use for smoking. I will certainly recommend it to all who wish to stop smoking. Alex. Vance.

P.S.—Please use this letter if you have a wish to do so.

VICTOR INSTITUTE (GHL. 50)

VICTOR HOUSE, LAWSON ROAD
COLWYN BAY, NORTH WALES