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Title: Aftermath

Date of first publication: 1945

Author: John Russell Fearn (1908-1960)

Illustrator: Leopoldo Raul Morey Peña (as Leo Morey) (1889-1965)

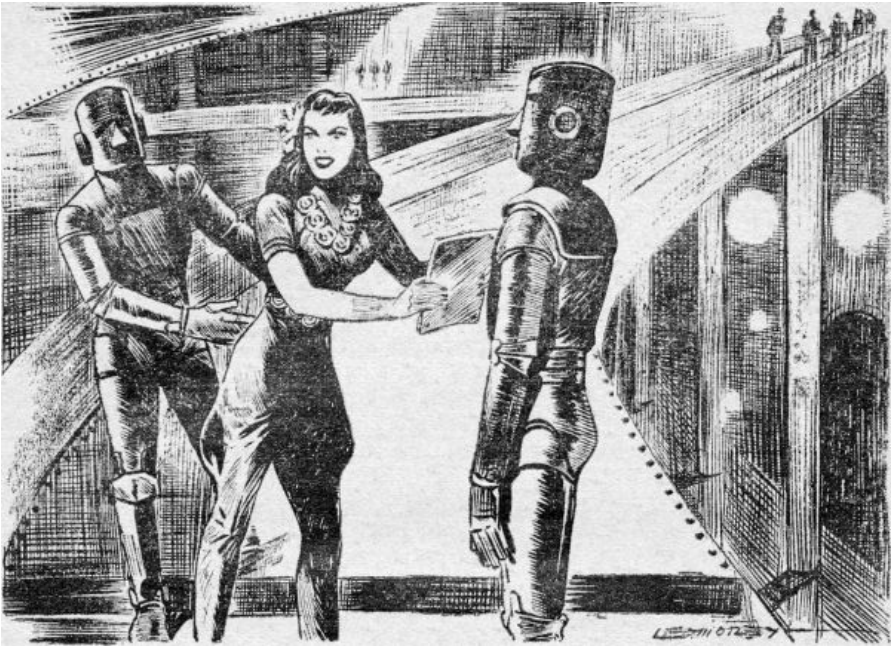
Date first posted: Apr. 22, 2023

Date last updated: Apr. 22, 2023

Faded Page eBook #20230435

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Another robot went clanking past Freida

AFTERMATH

By

JOHN RUSSELL FEARN

Illustrated by Leo Morey.

First published *Startling Stories*, Fall 1945.

An Amazing Complete Novel of the Future Disaster Stalks When the Earth's Heavyside Layer is Destroyed by the Holocaust of War!

When the laws of evolution go mad and the world is in grim peril of total chaos, Lincoln Bax and a brave band of human survivors battle against forces beyond man's understanding!

CHAPTER I

THE CHANGE

The devouring flame of war, kindled first in 1939, seemed inextinguishable. Sweeping first across Poland, then back over Europe itself to engulf the whole continent in ruin and destruction, it was not long before it assumed global dimensions with every nation sacrificed on its evil altar. Gradually, however, defense gave way to aggression and onslaught. The tables were turned, and towards the end of 1944 there was real promise of victory. Then Klenheiner of Europe discovered the fearful power of atomic force. Far from the struggle being ended, it was clear it would be indefinitely prolonged.

Through 1944—1947—1949, an endless procession of filthy, disastrous years, mad mankind played with the new and unthinkable violent toy. By 1952 the war had shifted from the military to the scientific field. The death ray, long said to be a myth, had been born. Atomic force too was used now for every conceivable method of destruction, the quickest way to kill a fellow man.

The object of the war? What did that matter? It had once been some sort of effort to curb the spirit of aggression. Now in 1952 it did not signify. The only thing to do was to go on destroying without mercy until somebody said stop.

The time to stop was not yet. In every part of the world there was the same satanic vision of atomic-force bombers cleaving red-hued heavens, of pencils of orange flame sweeping the low hanging smoke clouds. The air everywhere was filled with the stench of burning wood and rotting bodies. Now and again across the higher reaches there burst titanic stratosphere shells, blazing through the atmosphere's topmost heights and raining destruction on the groaning, struggling millions drifting homeless below. Security was a thing unknown, something swallowed up in the maw of the cannon.

The United States, Europe, the British Commonwealth, the Orient, European Asia—all worshipped at the juggernaut wheels of the war god. In his vicious retinue were the usual ghouls of famine, injury and plague.

Then suddenly it was over! As though an order from Providence had been given, all fighting ceased.

Commander Lincoln Bax could not understand it. He was practically the last military leader of the democratic forces and had been prepared to go on fighting to the death. Oh, what was the use of it all, anyway? On this particular summer morning in 1952 he could not figure himself out, either. It was as though something had happened to him during the night. It made him think. It made him pull his untrimmed beard and rub his tumbled mane of black hair in mystification. . .

Just now, standing vignettted in the sunshine in the crude doorway of his dugout, he epitomized the lineage of pioneers from which he had sprung. Westerners they had been, hard hitters and hard fighters, men and women who had given their all to create the United States which he had seen crash in flame and ruin.

“No, I don’t understand it,” he muttered. “War and destruction of the enemy have suddenly ceased to interest me. And after all the plans I’d laid!”

He turned back into the dugout and sat for a long time in thought. He was alone in this makeshift headquarters, surrounded by his operational maps and radio-television apparatus. The map now meant nothing to him, and the radio-television had become worthless. There hadn't been much use of giving orders recently in any case—soldiers were few and officers scarce. But at least such activities had enabled him to keep in touch with his comrades engaged in the struggle—Dr. Jan Eberhart for instance, the front line scientist whose fertile brain had supplied so many devastating weapons.

Bax smiled as he thought of the number of talks he had had with Eberhart over the radio, to pass away the time—or the games of chess they had played, watching each others' moves in the television-screens. Eberhart had suggested the idea. A good chess player is often a brilliant military commander.

And now? His perplexity became so great that Bax could no longer ignore it. He shook himself like a St. Bernard, got up, and went outside. There were no sounds of gunfire or bombing—no sound of anything save the trills of a soaring lark, carrying the silver thread of its song into the blue morning heaven. Bax listened to it, and wondered why it fascinated him. Then with a cold shock he realized it had been fifteen years or so since he had heard a sound like this.

But it was puzzling—very puzzling. He felt the need to contact others and see if they felt the way he did. Returning inside to the radio, he signaled Dr. Jan Eberhart.

After a while the scientist's face merged onto the television screen—a square, dogged face slanted with a habitually cynical smile. Gray hair tumbled back from a clifflike forehead. Gray eyes peered steadily from under bushy brows.

“Hallo, Bax!” he greeted the commander. “What's happened to that war we were fighting?”

“I was just going to ask you the same thing. I don't understand what's gone wrong with everything. Or with me.”

“You?” Eberhart's eyes became searching. “You look in pretty good shape.”

“Physically, perhaps. In fact I don't think I ever felt better. But I'm confused. It's rather like looking at life from several different angles at once and trying to understand what each angle means—” Bax broke off and grinned. “Fancy me, a hard bitten commander, actually getting a kick out of listening to the song of a lark!”

Eberhart was silent, for a moment, then spoke in a quiet voice.

“I've just solved the cosmic calculus.”

“I'm no scientist, but I suppose that means something?”

“I'll say! It means I'm just about five times as intelligent as I thought I was.”

Bax sighed. “Well, we can't just sit here like gods on a mudheap and talk of high things. What has gone wrong? From the lack of noise I'm wondering if everybody is dead.”

“Not dead,” Eberhart said. “This morning, when I saw how quiet things were, I had Squadron Leader Cranley make a reconnaissance. He reports that the opposing factions are roaming about the battlefields, chatting to each other! Through his radio he got snatches of conversation—and you'd think it was the Garden of Eden!”



Freida Manhoff

Eberhart's cynical grin spread.

"Think of it!" he went on. "Warriors talking of the glory of life, never once swearing, looking forward to the friendships to come! There's another thing, too. Freida Manhoff, my technical assistant, has been giving a hand at a field hospital. She tells me that a lot of the patients recovered in the night. And war? It just doesn't exist any more, Bax. It's gone from the mind of man like mist before the sun."

"Perhaps God himself ordained it," Bax whispered. Then, puzzled, he rubbed his maned head. "But we can't leave things in this state, Eberhart. I must lead the people to a worthwhile future, even as I was going to lead them to victory."

Eberhart took the assumption of leadership in silence at first.

"You'll call a peace conference of the various powers?" he said, at last.

"Definitely! I'll get into touch with the radio stations and send out a call. Even if we don't know the reason for peace, we can at least take advantage of it."

Neither Bax nor Eberhart were alone in their strange metamorphosis. Throughout the world there had been a stirring and shifting of mental outlook which had started the night Bax had sensed the change.

The men and women drifting about the desolated world, either homeless or at the best installed in drafty hovels, could not help but notice an inexplicable change in their ideas. To every person in life there remains some problem which cannot be solved, sometimes pushed into the subconscious. It was such personal problems as these which suddenly found solution. The general urge now was to hunt for security first and then examine the problem at leisure. One thing was certain—emotions were uplifted. Fear, horror, degeneracy, immorality, all the foul offshoots of war, had weakened amazingly.

The Peace Conference Bax had suggested over the radio was a briefer affair than the world had anticipated—brief because war seemed a useless product of a dark age. A new era had dawned on man and he was in a hurry to take advantage of it.

The Conference itself took place in the ruins of a one time famous administration office in a now nameless place, and it was the bearded, still vaguely puzzled Lincoln Bax who dominated the proceedings. He acted as if he were inspired. Though quite unscientific, there was a wisdom and idealism about his plans which completely carried the gathering.

To the left of him at the table sat Eberhart, silent but attentive, and next to him were Bruce Cranley—thirty-five, dark-haired, and clearly a man of action—and blond-headed, eager Freida Manhoff.

“We are going to build—Utopia,” Bax at length announced. There was a momentary silence.

“You can’t build a new world purely on idealism, much as I respect that point of view,” Eberhart said. “It needs money, power, hard driving, and above all science. I’ll build a new world quick enough, but not an idealistic flower garden!”

Bax smiled. “You misunderstand me. I propose that we create in this country a land such as the world has never known—a country of giant cities, streamlined, scientific, hygienic, using every amenity of science. This war has brought the deeper secrets of science to the top. Atomic power! Solar control! We must use them to help mankind.”

Bruce Cranley made an observation. “What you are planning, sir, will require three things—organization, science, and a profound knowledge of mass psychology. And you’ll need an army of experts to help you.”

“What is to prevent me having them?” Bax asked.

“You can have them!” Freida Manhoff declared. “Nobody would refuse. And you, Dr. Eberhart, with your great scientific knowledge, will be able to accomplish so much.”

He looked at her eager young face, the quick blue eyes. Then he shrugged and turned his attention back to Bax.

“Very well, Bax. I’ll lend a hand. I admit though that I had rather thought that a scientist should lead the people. Since it has turned out this way I am willing to abide by the general decision.”

“My very good friend!” Bax said earnestly, and looked around at the others. “It is agreed then that we—of every country here represented—try to make the whole world a Utopia?”

There was a general nodding of heads.

“Agreed!”

CHAPTER II

CAPITAL CITY

Bax's first act was to summon to his side all the leading scientific, engineering, agricultural, and architectural experts, issuing orders for other countries to keep a check on each of his proclamations and follow them out identically.

To Bax belonged the welfare of the people—to Eberhart the scientific planning. Between them they got the work under way. Populations were conscripted in every country for manual labor. They set about removing the signs of carnage and laying the foundations of a new world empire. Christmas, 1952, started the busy clangor of giant machines on their new tasks. New blast furnaces smelted endless tons of scrap metal. Tractors driven by atomic power plowed up the land. Submarine dredgers cleared the oceans of foundered craft and retrieved vast quantities of sunken treasure.

Scientists worked as never before, and through the combined efforts of Bax and Eberhart the technicians were provided with a program. Amongst other things Bax discovered transite. It was definitely Element 93—clear as glass, durable as gold, extremely heavy, and forming the basic metal from which the cities were to be built. The idea for it—for Bax was no scientist—had come right out of nowhere, and proved to be ideal as a material. It made Eberhart think a good deal, and on none too cordial lines either. He felt a march had been stolen on him.

Bax did not keep the secret to himself either—again much to the annoyance of Eberhart. He gave it freely to other countries and so, as the Capital City grew on the site of the old New York the key cities in all parts of Earth grew too. Under tropic suns, in far distant Northern climes, in the temperate zones, slender towers of glittering transite began to reach to the clouds.

Towards the middle of 1953 the great dream began to be realized. Months of unceasing work and all the forces of science brought about Bax's idealistic vision.

Capital City was a masterpiece, a giant edition of all the sister cities gracing the world. It was made up of immense blocks of buildings with two-thousand foot high facades. On top of these, lofty skeleton towers spiked heavenward, used for radio beams, atmospheric observations, power radiation, and a hundred and one devices. The cool open spaces on surface level were for the pleasure of the populace, a triumph of the landscape gardener's art.

On special runways silent traffic skimmed along and foolproof locking systems prevented all chance of accident. Pedestrian ways below, even though perched five hundred feet from the ground, were barred to traffic and each way was connected with a ground elevator, robot controlled.

Really the city was a titanic automat. Mighty power rooms, absorbing the energy of the sun, provided much of the city's huge current consumption while subsidiary engines used atomic power, as did all the vehicular and air traffic. To the west of the city, using tidal energy, were the engines of weather control by which the eternal vagaries of Nature were forever mastered.

Utopia, in the name of Capital City, had come. Envisioned by Bax, the science of Eberhart had made it possible. Bax was exultant, but Eberhart was non-committal. It was plain that he

was thinking all this paradise should be his alone, even as its magnificent science was the product of his brilliant brain. . . .

Once the problem of the city's creation was off his mind and his other organizations were working smoothly, Dr. Eberhart went back to the struggle of finding the reason for the extraordinary change in world thought. Being a skilled scientist in any case, and gifted now with a far greater intelligence than he had ever possessed before, he rightly wanted to know what had given Bax the revered qualities of a god, and himself the mentality of a super-Einstein.



The operator sent a messenger to summon Bax

Freida Manhoff, working at his side, had no exact idea of what he was driving at. She followed out his orders obediently every day, but he saw to it that she had little opportunity to watch his research. Most of the time he kept her busy ministering to the city's scientific needs, all of which were controlled by the Eberhart Organization.

What glimpses she had had of him at work had revealed him absorbed in analyses of poison gases and explosives from the war, or else studying spectroheliographs of the heavens. Then, on another occasion, he had spent a whole morning showing books and colored flags to a variety of dogs of all breeds!

It was odd all right, but Frieda valued her job too much to allow any hint of Eberhart's activities to become gossip in the city. In fact the only one she confided in at all was Bruce Cranley.

Much to her surprise she found him sitting in her private office when she arrived at work one morning.

"Why, Bruce!" She came forward eagerly, hands extended. "You're a long way from your airfield, aren't you?"

He grinned. "Worth it to be near you."

"But Bruce, we agreed. There were to be no meetings during business hours. It's against regulations for both of us."

He laughed outright at her serious expression, cupped her slender hands in his big fists.

"I was summoned here, sweetheart. Old Eberhart wants me—though I can't think why. For ten-thirty," he added, glancing at the chronometer. "Wonder if he's likely to be long?"

The girl shrugged. "Last I saw of him he was nosing over a lot of spectroheliographs. He's going to solve the reason for the Change even if it kills him."

"The Change was a bit queer at that," Bruce admitted, thinking. "Still, it makes no difference to us in any case."

Freida looked at him steadily. It was such an odd look it made him frown. Then she drew up a chair and motioned him to sit down again, opposite her.

"Well, what's the matter?" Bruce asked, rather crisply.

"Do you really think, dear, that we are unchanged since the peace came in? Haven't you noticed any differences?"

"One or two. This city is one of them. That queer old patriarch Bax is another—"

"I don't mean those sort of differences," Freida interrupted. "I mean personal ones. For instance, when I first met you during the war I was simply a fairly good chemist and nurse. Then on the day war stopped I woke up to find myself—well—clever." She paused and stared in a puzzled way through the window at the city. "It was as though somebody had unlocked a window in my brain and I could see and know all the little things I had only guessed at before. How else do you think I could hold down my job as first secretary to a wizard like Eberhart?"

Bruce was silent for a moment, then gave a wry smile.

"Come to think of it," he said, "I am a bit changed myself. When peace came I knew so much about flying that I felt fully able to take over the job of chief mail flyer and controller. And I'm making a good job of it too!" he went on eagerly. "I've enough money now for us to get married as soon as you say the word. I've no doubt the Eugenics Council will grant us our license."

The girl's next words chilled his enthusiasm.

"I'm none too sure that I want to get married, Bruce. It isn't that I love you any the less, but that there is something different inside of me. I—I can't quite explain it. As a matter of fact, I feel rather afraid."

"Afraid!" Bruce echoed. He laughed and caught her hand gently. "All that's the matter with you is that you have been working too long with that old dabbler Eberhart. And you are

going to marry me, as you promised. Don't let old Eberhart scare you out of—”

Bruce broke off, staring fixedly. He noticed that the door behind the girl had opened silently and that Eberhart was standing there. With a sardonic smile Eberhart came forward into the office.

“Oh—er—good morning, doctor.” Bruce got hurriedly to his feet, and Freida rose too and turned to face the scientist.

“Good morning, Bruce. I fancy my arrival was a little unexpected, eh? I've been paging you through the building speakers, Miss Manhoff, never thinking you'd be in your private office here when you should normally be at the distribution center at this time.” Eberhart stopped and surveyed the two young faces with his piercing eyes. “While I realize that your romance leads you to spend every moment with each other, I must ask you not to do it again. My time is valuable, and there is work to be done.”

The two nodded meekly.

“You summoned me here, sir,” Bruce ventured.

“Yes—to ask you to do something for me. You are piloting the Australian mail?”

“Within an hour, doctor.”

“Good. On the journey I want you to take a cinerecord of anything unusual you may see on land or ocean—particularly ocean.”

Astonished, Bruce glanced at the girl, then back to Eberhart.

“What exactly do you think I'll see, sir?”

“Unless I am very much mistaken you may find white hills on the ocean and seashores where none have been before. And if I were a younger man, and not your superior, I'd forgive you for calling me crazy. But I'm not, and I earnestly hope you won't see any of these things. If you do, radio immediately.”

“Has it something to do with the Change which came to the world?” Frieda asked.

“Yes.” Eberhart meditated a moment, his lips tight. “I am afraid that an idealist at the head of the world may not prove quite so beneficial as a scientist.”

Bruce glanced significantly at the girl and turned to go, but Eberhart stayed him.

“A moment, Bruce. You and Miss Manhoff expect to get married soon, don't you?”

The girl hesitated, but Bruce nodded firmly. “We do! We've been planning it for long enough.”

“And, if you are anything like normal young people, you intend to have a child, or children?”

The two looked embarrassed, and Eberhart gave his cynical grin.

“Don't mind me. I'm simply an old dabbler interested in biological reactions. So tell me this”—he studied them keenly—“Do either of you want children?”

“Well, I—” Bruce paused and frowned. “I've never given it much thought since the Peace came. Deep down, I don't believe I care whether or not I have any.”

“And neither do I!” Freida declared abruptly, her face flushed. “That was what I was trying to tell you a moment ago, Bruce, only somehow—somehow I couldn't. Dr. Eberhart!” She turned to him earnestly. “Bruce and I are not normal. That's the truth, isn't it? Love for each other, yes—that's still there. But there is no physical attraction. You can explain it, can't you? While we're on hard truths, let's face it.”

“If I do explain it,” Eberhart said slowly, “I am likely to pronounce judgment on the people of this entire planet—and before I do that I have got to be sure of every fact. In the

meantime, thank you both for being so frank. Okay, Bruce. That's all. You're going to miss your deadline."

Bruce nodded, cast another worried look at the now silent girl, then went out.

"There is work to be done, Miss Manhoff," Eberhart reminded her. "If you'll come to the office I'll give you your latest batch of instructions. Capital City certainly takes a lot of looking after."

To the east of Capital City, in the pastoral region given over to the rearing, breeding, and painless slaughter of animals, Overseer Meredith was faced with a problem. As newly appointed chief cattle controller, a job he thoroughly understood from his earlier life on a ranch before the war, it was his task to see that an uninterrupted supply of carcasses reached the storehouses of Capital City.

Normally it was easy enough—simply a matter of herding the beasts into the vast lethal chambers and ordering the release of the gas.

But right now the trouble lay in the fact that the beasts refused to obey!

Standing at the window of his little controlling kiosk, overlooking the vast area of synthetically created fields and grazing land, Meredith watched the efforts of his men to herd the beasts into formation. But they were getting nowhere. With an almost human obstinacy the beasts were forming themselves into circles and closing in on the hapless men giving the unheeded orders.

Meredith's grizzled face became grim. He switched on the radio connecting him with the distant unit.

"What's the matter with you mugs? Lost your touch?" His voice bawled over the open space. "How much longer are you going to take?"

"Not our fault, boss," came the hurried answer. "If it wasn't so darned cockeyed, I'd say these brutes know exactly what we're going to do and are working against us!"

Meredith switched off, and pondered. An idea was twisting at the back of his brain. For some time now he and everybody else down here had been aware that the animals were behaving strangely. That an animal could defy a human being, especially a human being far more intelligent than he had ever been before—was ridiculous! It had got to be ridiculous because upon the control of the animals depended the chief food of Capital City. There was no synthesis as yet which could successfully replace natural meat.

Meredith suddenly swung to the door, his mind made up. Racing down the steps of his kiosk he jumped into the nearest tractor. As he sent the vehicle bumping down the runway he was impressed by the lowing and squawking of the massed cattle a mile away. Clouds of dust were rising in the hot, sunny air.

The nearer Meredith came to the disturbance, the more he realized it was not the fault of his men that trouble had arisen. It was the work of the animals themselves. In all, there were nearly three thousand head of cattle. Rapidly they had formed themselves into a mass four deep, like an army of soldiers obeying a command. In front of them, in their one-man tractors, twenty men were bawling orders through microphones and using their small cannon pistols instead of old-time whips.

Meredith put on the brakes and glanced about him. The slide leading to the giant underworld lethal chambers was half a mile away and the beasts had their backs to it instead of their heads.

He switched on the microphone.

“Turn them around, you dopes! Drive them in! What are you waiting for?”

At that precise moment things happened. Perhaps, because of his amplified voice booming out, the beasts were startled. Whatever it was they attacked! Three thousand strong they charged with a suddenness and unity which was devastating. With flying hoofs and lowered horns they rushed into the midst of the hapless men in the tractors, buried them under a hurtling mass of bone and sinew—and they swept onwards through clouds of dust towards Meredith’s solitary tractor.

For a second or two he was too astounded to act. Then, with a glance behind him, he jumped from the tractor and raced like a demon up the steps back into his kiosk. Even as he slammed and bolted the door that wall of living destruction cannonaded into it. It began to tremble under the blind onslaught.

Striding to the window Meredith gazed in horrified awe upon the living flood which had converted his kiosk into an island. In their dense, packed masses the beasts were sweeping towards the nearby city. Once they reached it—

Meredith gasped, switched on the radiophone, and had the operator at the other end send a messenger to summon Bax.

“Master!” Meredith cried hoarsely, as Bax’s face appeared on the visiplat. “Master, the cattle have gone berserk! They’re heading towards the city in organized formation!”

“Berserk?” Bax’s eyes looked back from the screen. His voice was amazed. “How on earth did they ever get out of hand?”

Bax broke off, his eyes startled. Through Meredith’s visiplat he had seen the events transpiring in the kiosk. He saw the door smash open suddenly before the impact of mighty horns. He saw too the malevolent, glare in the eyes of the beast which slowly entered. The animal came with no maddened rush but with the calculated intent of a human being about to commit a murder.

“Meredith!” Bax shouted hoarsely. “Watch out!”

Meredith swung round and snatched out his gun. For answer the bull lashed out with its front legs and smashed the gun out of Meredith’s hand. Meredith hesitated, sweat pouring down his ashy face. Suddenly he tried to escape, and that was his undoing. The bull charged, horns down, drove them deep into the hapless man’s chest. Impaled, he was carried backwards, crashed into the radio instruments.

To Lincoln Bax, tensely watching, the screen blanked.

CHAPTER III

A WORLD MUTATING

In the giant controlling office Bax stared in stupefied wonder at the dead screen. Then his secretary, who had followed Bax, spoke.

“Say, Mr. Bax, that bull acted like a human being! It used its front legs as we would our hands.”

“I hope it was just that it looked that way,” Bax muttered. “Otherwise—we have a major problem on our hands.” He switched a button on the control panel and spoke briefly. “Sector Nineteen? Cattle stampede heading from breeding grounds! Destroy them as they approach. Keep them away from the machine rooms and conduct an inquiry as to the cause. Overseer Meredith has been gored.”

Bax switched off and fingered his beard thoughtfully.

“I don’t like it, sir,” his secretary resumed uneasily. “Call it what you wish, but it looked like organized attack to me.”

“But organized attack by animals!” Bax cried. “I can’t believe that.”

“I’m thinking of the way human beings have changed since Peace came in, sir. We all have got more knowledge—some of us more than others, like you and Dr. Eberhart. Maybe animals have progressed, too. They’ve been restive for months.”

“Yes,” Bax admitted slowly. “That’s true. But I confess I never gave it much thought. I have been so busy planning for the welfare of the people it never occurred to me such an ugly development might arise in Utopia—”

He broke off and looked up with a frown as a distinct baying and barking came over the normal hum of the city. Moving to the window he stared down appalled on the vision of a black mass swarming towards the city from the north. Turning, he snatched up a pair of field glasses and stared out over the gleaming roofs of transite.

“Dogs!” he gasped. “Dogs by the thousand, all breeds, in ordered formation!” He swung back to the loudspeaker as an excited voice chattered at him.

“Outlook towers report convergence of animal attack on the city, Master. Dogs from the north and cattle from the east. All domestic animals have left their owners. Some have unfastened their collars with their paws. Wild animals have found their way out of the open air zoos. All animals of fighting breed have formed into units of their own and are intent on attacking Capital City by force. Either they have been deliberately urged to it by some unknown scientific means or else they’ve suddenly become highly intelligent. What are your orders, Master?”

“You’ll have to destroy them, of course,” Bax replied bitterly. “I don’t like hurting dumb animals, but it must be done. Use air attack, and for ground attack use gas only. Nothing that is liable to cause taint. Most of the animals can be used for food later on.”

He turned again to look through the window. The dogs—and it was plain there were other animals in their midst as well—were already pouring into the city pedestrian ways. Bax and his secretary watched in grim silence as their pouring hordes mingled suddenly with the flocks of people moving along the lofty ways. Men and women were flung helplessly into space, to go reeling down into the canyons of shining metal.

"This is frightful!" Bax whispered, distracted. "That it could happen in my Utopia, too, is worse."

He turned as the doorlock clicked. It was Dr. Eberhart who came in. He was wrapping a rough bandage around his blood-stained bare forearm. Half his coat sleeve had been torn off.

"Something is amiss with Utopia," he remarked cynically, seeing the surprised looks. "Place is full of mad animals. One bit me well and truly on the way here." He paused and eyed Bax directly. "This place needs a scientist to rule it, my friend, not an idealist. You see, animals have gone up a point in intelligence, same as we have. And you didn't know!"

"But I did," Bax answered simply. "I realized it suddenly, in a kind of flash of inspiration. But I did not think it would cause animals to become violent. Rather I thought it would make them more docile and anxious to be understood by humans."

"Your sense of idealism doesn't altogether appeal to me at this moment, Bax," Eberhart said acridly, massaging his arm. "You discover a great fact by a flash of inspiration while I provide the proof. Proof, I tell you—for which you'll no doubt take the credit. I have made experiments with dogs, and found they could—and can—distinguish colors, the titles on books, one number from another. They can reason, a thing no animal has ever been able to do before. Don't you realize what is happening, man? Everything is mutating! All forms of life! And in inexperienced hands that sort of development can breed a whole lot of trouble!"

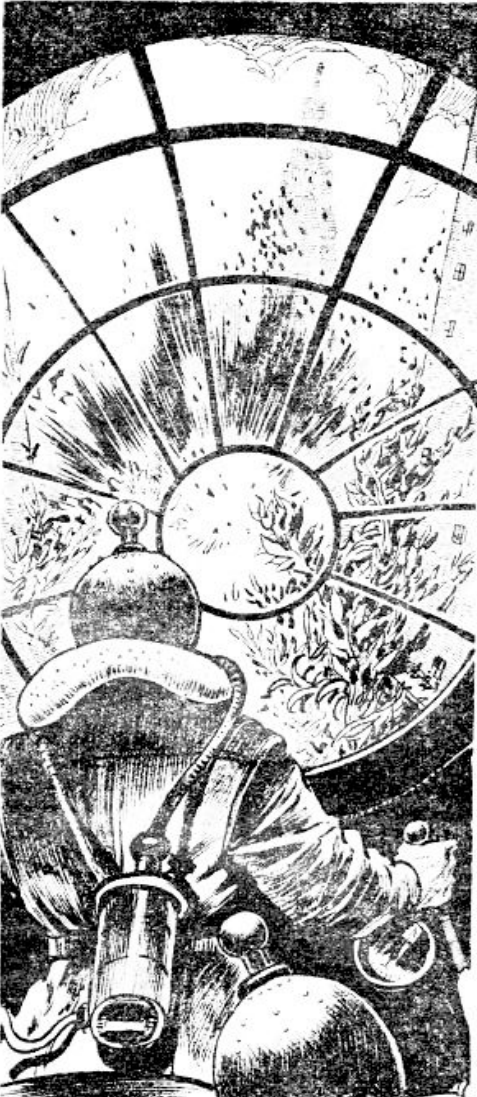
Bax smiled gravely as he turned back to the window.

"You really believe you ought to rule, don't you, my friend?"

"Yes! Because I am a scientist!"

Bax was silent. Below in the streets there was slaughter in progress. Cattle had supplemented the dogs, and smaller animals. Obviously working to some organized plan, they were driving the men and women before them, hurling endless numbers of them to death in the dizzy ravines below. Down there lions and tigers were at work with snarling fangs and slaving jowls.

The din which floated up through the huge ventilators was a cacophony of bestial growls, human shrieks, and the thunder of animal feet. Then there came the rattle of





Bruce pressed the button and the explosion ripped the vegetation

electric guns as remote-controlled robots marched into action. Overhead, a fleet of defensive bombing planes made their appearance.

“I hope you realize that in destroying these animals you are likely to kill thousands of human beings as well?” Eberhart asked finally.

Still Bax remained silent, watching the rain of gas bombs and small explosives descending on the screaming struggle. He saw the transit walls sprayed with blood from humans or animals as one or other was blown in pieces. In routing this astounding invasion there could be no discrimination.

“You promised the people peace and contentment, Bax. Remember?” Eberhart’s voice was coldly taunting.

“Because I believed I could give it to them,” Bax replied quietly. “And I still believe I can. This is a tragedy, yes—but no great ideal was ever achieved without suffering. I could not keep the animals from going haywire.”

“But *I* could,” Eberhart murmured. “I could have foreseen it. After this the people will ask for a scientist instead of a so-called inspired leader to guide them.”

“You sound like a jealous schoolboy who covets an apple.” Bax smiled. “I believe the people trust me far more than you think.”

He straightened up, majestic in his calmness. Outside, the scene was settling down again. Armies of men in tractors were coming behind the robots, forcing the animals in a madly disorganized multitude away from the pedestrian ways towards the great gaping eyes of the entrances leading underground. Once down there the brutes could be forced inch by inch into the great underworld spaces where gas bombs, their fumes unable to dissipate, would make short work of them.

Bax sighed, turning, “I wish I could understand the sudden complexity of everything since the Peace. It’s hard to analyze—for myself at least—this conviction of superhuman power, this longing to better the lot of the people, these glimpses of a future so perfect that they stagger the imagination. I just don’t understand it!”

“I do,” Eberhart said grimly. “I came here especially to ask you to come to my laboratory. I’ve solved the reason for the Change!”

Bax hesitated in surprise for a moment, then he nodded.

“Very well. I’ll come with you right away.”

When they reached the laboratory Bax was somewhat surprised to find Bruce Cranley and Freida Manhoff there. They got to their feet immediately as the two men entered. Bax looked at them inquiringly.

“Just two living witnesses to my theory,” Eberhart said, larding an ointment over his injured arm. “I asked them to come here in case you might have difficulty in believing what I am going to tell you.”

“Why should I?” Bax asked quietly. “I’ve never had cause so far to question your scientific ability. Why now?”

Eberhart frowned. "There are times when I wish you'd burst out into a fury, Bax—when I wish you'd show something of the savage fire which made you a military commander. I insult you to your face, and you only smile! If I were in your position and had your power I'd—"

Bax interrupted him, shaking his head. "No, you wouldn't. Not if you were me. Now shall we get down to the business on hand?"

Eberhart tightened his lips and glanced across at his radio transmitting equipment.

"This discovery of mine is going to stagger the world, Bax, when I broadcast the facts—which will be in about an hour. But before that all three of you are privileged to learn the truth in advance. You, Bax, know already that everything in possession of active thought has gone up one point. Do you know why?"

"No, I don't," Bax admitted.

"Because of cosmic radiations," Eberhart said slowly. "You recall the stratosphere shells and high altitude warfare which was a dominant phase at the close of the war?"

"Surely. What of it?"

"Immensely powerful explosives in unimaginable quantities were dispersed through the upper heights. The explosions, incessantly taking place, were sufficient to weaken the ionic layer which normally binds in the atmosphere at the greater heights. This Heaviside Layer is—or was—also responsible for turning aside the flood of radiations, known and unknown, which pour down eternally from the depths of space. Normally only a few get through. But since the war, the weakened layer permits one excessively strong radiation to get through with a seventy-five percent increase in power. It is affecting every living thing. It may cause a catastrophe! Wait—don't answer yet. Let me show you!"

CHAPTER IV

EBERHART'S DISCOVERY

Eberhart turned aside for a moment and switched on one of his many instruments. In silence the group watched the electric patterns crawl across a ground glass screen.

"There it is," Eberhart said, cutting the power.

"Do you mean that this radiation is the one which has always been responsible for evolution?" Freida asked slowly. "That is—in a diluted quantity? Do you mean it is now unscreened and is pouring down upon us?"

"You readily grasp it, Miss Manhoff," the scientist acknowledged. "Ever since the world was born this ultra-short radiation—fixed by Eddington as one-point-three times ten-to-thirteen cms—has passed down to Earth's surface, masked in its full intensity by the ionic layer. Under the influence of the radiation, life itself was born and man mutated from the amoeba to his present high status. But since we have weakened the ionic shield with senseless warfare, everything now is evolving rapidly—too rapidly! That is why many of us are geniuses. The brakes are off! That is why animals can reason—and, because of that gift, they know only one dominating motive—survival! And to the animal mind survival means the destruction of everything likely to cause danger—humans in particular." Eberhart paused.

"Yes," he went on, at last, "everything evolves by progressive leaps called mutations. Even metals are included, especially an element such as your transite, Bax, perched right at the top of the Periodic Table. Everything will go on evolving! Centuries are telescoping. Some brains, of greater receptivity than others, have been more quickly affected of course. Like yours, Bax—and mine."

There was a silence. Bax stood lost in thought and Freida and Bruce glanced at each other.

"In time our skulls may even enlarge to permit of the expansion of our brains," Eberhart continued. "It almost seems as though some of us may become Bigheads, the envisioned type of last man. If you want any further proof, look at the sky. It is pale blue because there is more evidence of the black void which lies beyond it. The pure blue of the former days has gone. And there are other things, too! Cranley, tell the Master what you saw on your recent flights."

"I saw white hills in the Atlantic, Mr. Bax." Bruce's face was serious. "And there were carpets of little lights deep down in the ocean. By night it looked as if the sea were afire. And there were blood-red streaks of coral creeping up many a tropical coastline. I mean creeping, too! It grew while I looked at it. Then there were birds! I never saw so many in all my life. The skies are thick with them. I had to alter my altitude several times to avoid them."

Bax glanced at Eberhart for explanation and the scientist smiled.

"Those white hills and coral streaks are the products of multiplied algae and sea mites which are usually consumed by the bigger denizens of the deep," he said. "Heightened instinct has shown them how to avoid immediate destruction and in consequence they have increased so rapidly that they represent swelling hills. Every shore, every reef, is made up of millions of living mites and not solid matter."

Eberhart finished with a grim note. "Now comes the final and biggest shock of all! Every living thing is sterile! There is not even the wish for union between the sexes. These young people here—who as you know yourself, Bax, were so much in love before the Change—are

only anxious to marry so that they can spend their lives together, and for no other reason! I have made endless tests and experiments and there is no doubt about it.”

“Sterile!” Bax whispered, stunned for the moment. “What a merciless retribution for the war we fools waged!”

Eberhart gave him an impatient glance. “We are dealing with the present—and a desperate situation! I have here reports from cattle controllers which say that no young animals have been born for several weeks. The mating instinct is simply not there. The animals are confoundedly intelligent but they do not produce any young. That is the cardinal tragedy. The few cattle we have left after the massacre are the last. The slain cattle represented seventy-five percent of our total supply for Capital City. The remaining fifteen percent, intended as breeders, are useless. We can hardly have enough for three days’ food.”

“And other countries?” Bax asked gravely.

“Their food controllers report similar conditions. Sterility of animals—and humans—is world-wide and without explanation as yet. I’ll have to produce synthetic meat as soon as possible. In fact I have a scheme under observation right now. But no matter how good it may prove, it cannot equal the real thing. The people won’t like it, but since vegetarianism died out long ago as a harmful practise, I have just got to provide a meat substitute somehow.”

Freida raised her brows in amazement.

“Why should this increase in the rate of evolution stop births?” she asked, plainly puzzled. “I don’t get it.”

“Because bodies are evolving too!” Eberhart answered. “Heads are getting larger, organs are altering, emotions are being undermined. Everything is in a state of unbalance and flux—and procreation, the most primeval reaction of all, is wiped out by this onrush of rapid progression. It means that the higher forms of life, human and animal, are completely barren. The lower planes of life, after an orgy of births, will also have the same blight descend on them. Then it may spread to metals.”

Eberhart paused and took a deep breath.

“The world is threatened by destruction from creeping things in the form of solids on the one hand, and the human race doomed to extinction because of sterility on the other. I can picture it all—swift evolution; the Big Heads; the growth of the big and little things. The metamorphosis of plants, flowers, and trees; the power of intellect given to lowly bacteria. The world itself, down to its basic rocks, spinning ahead several centuries in as many weeks. A future reached which should have been barred for ages to come. It’s not a pretty picture, but it is one we have to face—and you, Bax, in particular as ruler.”

“And the answer to it all?” Bax asked quietly.

Eberhart did not respond. Instead he turned to a sub-standard movie projector, rethreaded the film through the gate, and switched on the motor. Upon the screen there followed a succession of color scenes, all taken from a height of perhaps five hundred feet, showing markedly the gradual inroads of streaking coral and white sea life, the oddly shaped islands in formerly clear ocean, the monstrous green tentacles of swelling plant life up formerly barren hillsides.

“That is the movie record Cranley here brought home with him at my request,” Eberhart said, when it was over. “And you ask me what is the answer to it all! If there is one, it means an effort to create synthetic human beings on the one hand, and the use of every conceivable

weapon to destroy this teeming life on the other. We're facing another war, Bax, which only one man can fight with any success—a scientist!"

Bax pondered for a moment. When he looked up there was an odd gleam in his deep blue eyes.

"You never miss a chance to try and depose me, do you, Eberhart? Why is it? Have you a dislike for me, in spite of our happy association before the Peace—or an abnormally strong ambition which swamps your better judgment?"

Eberhart gestured impatiently. "It is just the fact that only science can hope to save this situation. For that reason a scientist should be the Master. For instance, if I had been ruling from the commencement I would have foreseen the cattle outbreak and taken steps to prevent it. Another thing, when I put this synthetic meat out for consumption, there may be a lot of people who won't like it. They'll blame you for your shortsightedness in not anticipating the trouble, just as they will blame you after I have broadcast about the Change and warned them what it means."

"I am prepared to accept the responsibility," Bax replied quietly. "I trust the people. They will understand after the broadcast I intend to give that I cannot be blamed for what is obviously a freak of Nature."

"What will you offer them as a remedy?" the scientist demanded. "Inspirations? Messages from the gods? They are human beings, deprived of the most primitive of functions. They will expect more than your ideals, Bax!"

Bax's tall figure straightened up. Clenching his big fist he beat it softly on the bench in emphasis to his words.

"Once and for all, Eberhart, we must have an end of this wrangling between us. There cannot be two masters. I intend to maintain my position. I choose to rule by the wisdom conferred on me, believing in the essential rightness and decency of human beings who follow me. I don't expect a path of roses. What problems there are to solve will be solved. The Deity which changed me will see me through. It enabled me to envision Capital City, to discover transite, to know that intelligence had risen up one point. It will not fail me now. So long as the people trust me I shall continue to rule them.

"So, my good friend—which I hope you still are—I must thank you for the brilliance of your research and be on my way. When you have anything to report on synthesis, perhaps you will acquaint me?"

Eberhart just stared at him.

Bax turned away, nodded farewell to Bruce and Freida. Quietly he left the laboratory.

"'So long as the people trust me,'" Eberhart repeated slowly. He stood thinking. Then he turned abruptly to the radio equipment and caught sight of Bruce and Freida. He started a little as though he had forgotten their presence.

"Thanks for your corroboration," he said briefly. "I'll send for you when I need you again, Miss Manhoff."

She nodded and both of them took the hint to depart. Out in the corridor the girl looked at Bruce inquiringly.

"Well? Any observations?"

He gave a rather rueful smile. "In face of this I don't see how I can have. It sort of takes your breath away trying to imagine what might be ahead of us. In spite of it all, though, I

don't see anything to prevent us getting married. We know it will be just marriage, and nothing more."

"Yes." Freida's voice was colorless. "I guess we'll go into it with our eyes open."

For a moment Bruce fancied he caught the glint of tears on her long lashes. Impulsively he caught her to him.

"Don't start worrying, dear. Something will turn up. Things like this just can't happen. Anyway, Eberhart is genius enough to think of something."

"Or anything," she said pointedly. "That passage at arms he had with Bax showed me plenty! And I don't forget his last remark about Bax staying ruler as long as the people trust him. It would be about like Eberhart to create disgust if he could."

"He'd never dare!" Bruce cried.

"No? You don't know him as I do, Bruce. You haven't worked beside him and heard some of the remarks I've heard. I think Bax got the dirty end of the stick over this business and his pride won't let him show how hurt he really is. I mean to hunt him up and tell him we're all for him. Perhaps you'd like to come and add your own bit?"

Bruce glanced at his watch. "Okay. I have an hour before I must report at headquarters. A little expression of loyalty mightn't do any harm at that."

CHAPTER V

DANGEROUS FORMULA

When they reached the head office Bax greeted them cordially enough from behind his big desk and bade them be seated. Considering the outlook for the future he did not appear particularly perturbed. But then he never did. There was a rock-like calm about him which manifested itself at all times.

"I—er—" Bruce began, wondering exactly how to start. "That is, we—Miss Manhoff and I—"

"Suppose I save you both a lot of embarrassment and thank you outright for coming here to express your loyalty to me?" Bax smiled.

Bruce opened his mouth, then closed it again. He caught the girl's surprised glance. Then Bax broke into a chuckle.

"There you are, you see!" he exclaimed, raising his hands. "The most peculiar ability to get strokes of prescience and genius without even asking for it. The ability to read thoughts, even! The touch of the gods indeed! Confidentially speaking, I hardly know whether to be interested or scared to death! It's a weird change for a tough military man to experience—"

Bax broke off and searched the two young faces earnestly.

"Since you came here to express your loyalty to me. I take it that you wish to work against Eberhart?"

"I do, anyhow!" Freida declared defiantly. "He was a grand man before the Change, but not any more!"

"You are young, Freida, and a little impulsive," Bax said quietly, again leaning back in his chair. "Eberhart is a brilliant scientist and a man to be respected. I shall not enjoy fighting him, even though I realize it is almost inevitable that we'll come to loggerheads in the end. I have listened to his radio speech and in ten swift minutes he made it clear that he blames me for the sterility gripping the world. He says he could have prevented it!"

"I doubt it!" Bruce snapped. "That's just a lever to turn the people against you!"

"You're going to broadcast a reply surely?" Freida urged.

"After my own fashion, yes, with none of the scientific terms Eberhart handles so expertly. I shall rely on the trust of the people." Bax got up suddenly and beat his big fists against his massive forehead. "If only I could give them something more than just promises! If only I could get another inspiration, like the one which gave me transite. I suppose it's no use for me to go on like this, though. One can't force such things."

He paused to calm himself.

"You see," he finished, "it is not for myself that I wish to remain ruler, but because I know Eberhart's methods in place of mine would lead to disaster. He isn't touched by the powers-that-be—he is simply a scientist, ruthlessly efficient."

"We want to help you, sir," Freida put in earnestly. "We'll do anything to keep the people on your side. Anything! You're our ruler and our allegiance is to you, not Eberhart."

"That's it exactly," Bruce added. "How can we help?"

"Only in one way," Bax answered slowly. "You work beside Eberhart, Freida. Tell me when you find him doing anything which you feel might be detrimental to the peace of the people. That is not spying, as I see it—it's just common sense."

"I'll do it!" she promised.

"Surely there's something I can do?" Bruce insisted.

"Not as specifically as Freida. You can keep a careful record of this algaec life and report to me on its advancement and possible danger. I can check Eberhart's reports that way." The voice of Bax became abstracted. "Later it is more than likely you'll both have real chances to prove your loyalty. I see it ahead of us—dimly. Certainly I shall never forget this unasked for allegiance to me. Never!"

With that he shook hands firmly with them both. They left. Out in the corridor again they exchanged resolute glances.

"Keep your eyes peeled, Freida," Bruce urged. "The sooner you can find Eberhart up to something, the better it will be for the good of Utopia, I'm sure of it."

She nodded. "I'll watch him—every hour."

Bruce caught her arm.

"But when I come back from this trip you must take time off to get married. Bax can perform the ceremony. If you're willing?"

She nodded again, silently.

"Good! Then I'll be on my way and make a call at the Eugenics Council offices on the way to the airport. They'll have our application rejected or accepted by the time I'm back." Bruce kissed the girl gently. "So long, sweetheart—and don't let the boogie-woogie man get you down too much."

Freida had barely returned to her office in the Eberhart Administration Building when she received a call from the scientist over the radiophone. She found Eberhart busy in his research laboratory, bending over a test-tube. Without looking up he motioned to a sheet of metal foiling covered over chemical symbols lying on the bench.

"The formula for synthetic meat," he said, studying the bubble of liquids before him. "See that Bax signs it, and then deliver it personally to our chemical department. Once that is done, distribution of synthetic meat can begin almost immediately."

"Very well, doctor." Freida picked up the foil and prepared to go.

"And, Miss Manhoff!"

She looked back expectantly. Eberhart had straightened up from his work and was regarding her steadily.

"Miss Manhoff, I would like you to remember that while you're in my employ every secret of this laboratory is ours alone."

Freida colored a little. "I don't quite understand."

"Then I'll make it nakedly plain!" Eberhart snapped, an ugly tightness settling on his lips. "I know all about the visit of yourself and Bruce Cranley to see Bax—all about your touching oath of allegiance. I am not quite the fool you seem to think. As chief scientist and builder of this city I took good care to wire every important building with invisible sound pickups. It is still my avowed conviction that I should rule, and not Bax, and the various so-called private conversations my listening staff hear convince me of it. So be warned! I can assure you any childish spying by you or Cranley will be dealt with very promptly—by me!"

The girl gazed at him wide-eyed. For a moment he had taken her off guard. Then, characteristically, he switched right off the subject, swore, and rubbed his arm.

"This confounded dog bite is giving me trouble! Have to find something to ease it. Poison, I guess. Okay, that's all."

“Not quite,” Freida said curtly. “It I find anybody, even you, plotting against Bax I shall consider myself justified in calling it treason. And if I decide to speak, you won’t stop me!”

Eberhart bared his muscular arm and kneaded ointment into the inflamed wound.

“You are a sensible woman, Miss Manhoff, so get this,” he said slowly. “Any unwise words by you to Bruce Cranley before your marriage, and you will find he won’t return to be married! Any unwise words after your marriage and you’ll find yourself a widow, rapidly—unexpectedly. Science can reach a long way when I wield it, young lady.”

“You—you would strike at me through him!”

“Yes, because you are a woman of courage. All I could do to you personally would be time wasted. For his sake I’m sure you’ll exercise caution. And now forget all about this unpleasant business. I’ve had my say and it’s done with. Do your work faithfully and we’ll both be satisfied.”

Freida compressed her lips and Eberhart smiled at her crookedly. She left him still massaging his arm vigorously. Then when she reached her own office she sat down at the desk and reflected. It seemed peculiar to her that Eberhart should tell her to deliver the formula to Bax and at the same time threaten her if she dared to reveal any secrets.

What secrets?

She looked at the metal foil intently, studied the formula, then as her eyes settled on the word “phanocin” her heart gave a little leap. Snatching up a pencil she figured rapidly in percentages, jotting down the proportionate quantities of the formula.

Afterward with a grim face she relapsed into thought. Finally she pressed the visiphone button and Eberhart appeared on the screen.

“Well, what is it?” he asked her impatiently.

“Isn’t there an error in this formula, Dr. Eberhart? You have fifteen percent phanocin in these ingredients. Compared with the other quantities the phanocin will taint the synthetic meat. I’m chemist enough to know that—”

“Will you please be chemist enough to deliver that formula to Bax as you were ordered to do?” Eberhart demanded. “And instead of thinking further remember our little conversation here a short while ago.”

He switched off abruptly. Freida looked bitterly at the blanked screen, then snatched up the formula and headed out of the office with it.

By the time Freida reached Bax’s headquarters her intention to speak her mind and give warning of the danger in the formula had weakened. It was gone altogether by the time she faced Bax across the desk.

“For your signature, sir.” Her voice was colorless. “It’s the formula for synthetic meat.”

Bax took the formula and studied it.

“Sometimes I wish I’d learned chemistry,” he said with a smile. “These chemical symbols are a little puzzling to the uninitiated. However”—he scribbled his signature in the space provided—“here you are.”

She took the foil back without a word and Bax looked at her curiously.

“Why so depressed, Freida? You’ve no reason to be. Everything is going splendidly—in fact, better than I had dared hope. For awhile Eberhart’s glum prophecies concerning the future almost caused trouble among the people but my own short broadcast, just before you got here, leveled things out again, so my scouts tell me. Now with the meat problem solved,

we are starting to get things cleared up. Science will master all our troubles finally. I'm convinced of it."

"Yes sir—I suppose so," Freida said, smiling faintly—then, conscious of Bax's puzzled eyes upon her, she turned and departed.

She had a stern mental struggle during her monobus journey across the city to the manufacturing chemists' department. Bruce's life was forfeit if she said a word to Bax, yet hundreds of people were going to be ill if she kept quiet. Bax, no scientist, had signed the formula and he would get the blame when things went wrong. Eberhart had obviously planned it that way.

When Freida heard the general talk of the people in the monobus and later in the streets, she felt even worse about what she knew. They were perturbed after the two broadcasts, certainly, but none seemed willing to blame Lincoln Bax. But poisoned food might change their sentiments.

Freida felt as if she were actually inflicting an actual wound on Commander Bax when she finally handed in the formula to the chief chemist for manufacture.

"Lots of phanocin here," he commented.

She smiled bitterly. "Dr. Eberhart seems to know what he's doing—and he's the boss."

"And Bax has passed it!" The chemist shrugged. "Okay, we'll start mass production right away."

Freida left the building moodily, upbraiding herself for not having deleted the phanocin from the list. No, she would not have dared do that. There was Bruce's safety to consider, and her own employment. She turned and went towards the monobus stop, sure that she had betrayed everything she held sacred.

CHAPTER VI

CONCERNING VIRUS

After two days at her usual laboratory work—days in which bitter self-reproach still clouded her mind—Freida found herself ordered to do the very thing likeliest to rub salt into the wound. Eberhart gave her brief instructions to supervise the distribution of the synthetic meat, now ready for the disposal centers.

She took the usual fast monobus to the city center and walked the rest of the distance to the great underground storage chambers where her task awaited her. She was glad of her decision to walk. Lots of things came to her surprised ears. Existing as she did in the upper quarters of the governing clique ordinarily she had little chance to mix with the masses and learn what they were thinking and doing.

But she was finding out now—with a vengeance.

Several times she passed men and women on the lofty pedestrian way, caught snatches of their conversation.

“Makes you wonder if Bax is all he says he is,” one man said.

“Aw, you can’t get away from the truth,” came the answer.

“This fellow Eberhart might have prevented the cattle massacre,” said the first man. “Remember that.”

With a deepening sense of worry Freida hurried on. She came suddenly upon a robot deliberately clanking along at the edge of the pedestrian path. Most of these complicated radio remote-controlled creatures were hired out to business enterprises for the purpose of advertisement, much the same as pre-Change sandwich men used to perambulate. But this particular robot was not extolling the virtues of a particular product by any means.

It was carrying a voice-box in its metal hand—a microphonic instrument fitted with a perpetual roll of sound track. The voice shouting forth was strident, harsh—unnaturally clear. Freida recognized it as synthetic track, a voice created by microscopic drawings of peaks and valleys on the sound track, reproducing the tones of a voice which had no living owner.

Freida paused to listen, glanced up and down.

It was quieter here and she could give greater concentration.

“—hundreds of you, all innocent, died in a ghastly massacre because the man who rules you had no idea of what was going to happen, nor has he now. The blood of thousands of innocents is on his head—the innocents who died in the quelling of the cattle stampede. Eberhart has told you that the world is faced with destruction from excessively evolved life and that you, the people, are doomed to sterility.

“Lincoln Bax has told you to have faith in him until, like Moses of old, his inspiration leads you to a life of normality and a world purged of the creeping, swelling, growing death which threatens it. Why are you so blind as to accept idealism before science when your very lives depend on it?”

Then the speech began all over again. Freida stared at the robot fixedly as it lumbered onwards. This was open propaganda, incitement to revolt, and scattered about the city there might be hundreds of such robots shouting similar messages.

Suddenly Freida’s indecision vanished. She acted. There was nobody immediately near to her. Running after the robot she caught its breast-plate and quickly unscrewed it. Turning the

breast-plate over she wiped off the film of warm oil, and peered at the die-stamp—43 ERL. That was enough for her. The letters stood for Eberhart Research Laboratory, as she'd good reason to know. She smiled mirthlessly as another robot nudged her aside, and went clanking by.

She replaced the breast-plate of the first robot. Then reaching into the voice box she felt with her fingers for the steel sound track tape whirring on its cogs. A tug, and the thing was done. Voiceless, the robot went on its mannikin way.

What to do now? Freida thought swiftly. Definitely it was high time for Bax to hear of the intrigue going on behind his back. But Bruce? Again that pall of hopeless depression settled upon Freida. She dared not speak—not yet anyhow, so, grim faced and pensive, she continued on her way.

Ten minutes later she reached the main food storage depot and for the next two hours was kept too busy arranging the details of food distribution to think of anything else. But an idea was at the back of her mind just the same. When she finally left, she had with her a piece of the synthetic meat which she took home.

Off duty in the evening, she deliberately ate some of the meat for her dinner, then settled herself on the divan to await results. She realized she had deliberately put herself in for what would probably prove an uncomfortable time, but she figured it was worth it if only to find out if her suspicions about phanocin were correct. Eberhart had spoken truly when he had said she was a woman of courage.

Ten minutes passed—thirty minutes, and she felt quite normal. Puzzled, but with a growing sense of relief, she switched in to a teleplay and settled herself to enjoy it. She was absorbed in the drama of the first act when suddenly the symptoms struck her!

A javelin of pain went through her chest, and another, until they merged into such insupportable anguish she felt herself close to fainting. It was an overwhelming suffering, as though powdered glass were driving through her bloodstream. But at least this was what she had wanted to find out. It showed the deadly power of the phanocin. Even amid her torture she had another thought—an antidote. If she could find one she might yet cure herself and at the same time enable Bax to be saved from disgrace. It all depended on whether she could stay conscious long enough to make a diagnosis.

Gritting her teeth she dragged herself from the divan and into the small adjoining room she had fixed up as a little laboratory for private research. She was shaking so much from pain she could hardly hold the syringe steady enough to draw off a blood-sample from her arm.

Fighting for control she let the droplet fall on a slide and then examined it through the microscope. In a moment her biological training showed her vital differences. The power of the lenses clearly revealed the streaks of phanocin which had been absorbed into her bloodstream—but they also showed something else. The blood itself was different, something she had never suspected.

With a shaking hand she drew the notepad to her and scribbled quickly:

Vast enlargement of bacteria in the bloodstream. The quantity of phanocin used by Eberhart would probably produce violent abdominal pains if a person were normal. But nobody is normal any more because bacteria is enlarged and has progressed in evolution, like everything else since the Change. Therefore the

injurious effect of bacteria on the human system is increased a hundredfold. Death is not unlikely—

Freida broke off, the pencil dropping from her fingers. The room was spinning round in a torrent of anguish. She had a last remembrance of plunging headlong from her stool into darkness. . .

When Freida became aware of her surroundings again she was lying in bed with the shades half drawn against the sunny windows. For a moment or two she remained silent, collecting her wits—but underlying everything was a heartfelt thankfulness that she was free from that appalling pain. She felt almost normal, but weak. Then she moved slightly and looked around her. The action brought a nurse to her side.

“Don’t worry, Miss Manhoff, you’re better again now,” she said with a smile. “Just take it easy. You’ve been very ill for a couple of days, but Dr. Eberhart is quite satisfied now that you’ll be all right.”

“Dr. Eberhart!” The mention of his name made Freida rise suddenly on her elbows. Then she sank back as her head swam dizzily.

“I’ll fetch him,” the nurse volunteered, and left the room. Freida waited, a thousand fearful thoughts chasing through her brain. Presently the door opened again and the scientist stalked in. He came to her side, made a routine examination, then stood looking down at her.

To Freida it seemed as if he somehow were different—or else it was her distorted outlook due to the illness she had been through. His face was set in harsher lines, and his eyes were cold and stern instead of twinkling with cynicism.

“A few hours and you’ll be well again,” he said briefly. “I have written out instructions for Nurse Grantham. She’ll know what quantities of antidote and restorative to give you.”

“Thanks.” Freida’s voice was tired. “Good of you, Doctor, to grant me your personal attention.”

Smiling coldly, he turned, pulled up a chair and sat down beside the bed.

“By rights I should have allowed you to die,” he remarked. “Both for turning yourself into a human guinea pig, and because you have now so little left to live for.”

Freida stared at him, and knew that he meant it. The harshly set lines of his face were enough.

“I mean that your employment with me is finished,” he went on. “I gave you warning that it would not be to your advantage to make too close a study of laboratory secrets.”

Reaching into his coat pocket, he held forth the note she had made on her condition before collapsing.

“I think it more than likely that you intended this diagnosis to go to Bax!” he snapped. “Luckily I found it first. When you did not arrive for your duties, I personally made a trip to see what was wrong. I found you unconscious with this note on the bench.”

“Hundreds are going to die through eating that meat!” Freida cried, stung into resentment. “You engineered it that way.”

“I am the chief scientist of this city, Miss Manhoff, and I will not have you questioning my actions. First I have this diagnosis. It shows you intended working against my interests. Then I had more evidence in the return of a robot to my headquarters with its voice-box sound spool smashed. The fingerprints on the tampered breastplate, originally sealed by me, tally exactly with yours at the Identification Bureau. At least I know where you stand, Miss Manhoff!”

“It’s a wonder you took the trouble to cure me,” Freida muttered.

“Simply because you made yourself the perfect victim of tainted meat. You served as an experimental specimen. I have satisfied myself that an antidote I have perfected is okay. Bax passed the meat formula and the people will become ill because of it. I will cure them, and at the same time make certain that my propaganda tells them the truth. There it is, simply explained.”

The girl remained silent. Then Eberhart got to his feet.

“You wonder why I disclose all this? Why not? If you tell Bax you’ll lose your fiance on top of everything else; if you don’t, Bax’ll find his rule is ended quickly enough by the people themselves.”

Freida still said nothing and a shade of irritation crossed Eberhart’s face.

“It’s no joke to be unemployed in this city, Miss Manhoff, as you’ll soon find out. And you’ll stay unemployed, I’ll see to that!”

She looked up at his threat. “I was just trying to decide, Doctor, what it is about you that’s so different. You’ve never been a particularly considerate man, but now—somehow—”

“I’m without sentiment?” he suggested. “I’m really enjoying this—and there’s a biological reason for it! You remember the dog bite I got? There was virus in it, and in the present state of bloodstream bacteria—about which you already know so much—it is impossible to cure it. It will have to pass away of its own accord. The biological effect of the poisoned bloodstream reacts on the quality of the blood feeding the brain, of course. The result is not a diminution of genius but a deadening of those areas responsible for restraint, conscience, compassion, and so on. Until the effect wears off I shall be devoid of such emotions—and glad of it! It comes at a time when a personal sentiment might hinder my plans for supplanting Bax.”

“And it explains your merciless attitude towards me?”

“Exactly. And this, I fancy, is the end of our association, Miss Manhoff. I will see to it that Nurse Grantham has the necessary instructions to speed your recovery.”

With that Eberhart left, and in a few seconds the nurse came in. Freida took the injections given her without a word. All she wanted now was complete recovery—and action. Her mind was made up.

CHAPTER VII

TOUCH OF THE GODS

Jan Eberhart, surrounded by the myriad complex machines of his own creating, stood facing Lincoln Bax.

“So, my wonderful idealist, you are in trouble?” he asked, smiling grimly. “The people of this glorious Utopia are ill! And you want to know what I can do about it?”

“That is why I came to you personally,” Bax answered. “Deputations by the score keep coming to my office, demanding to know what is wrong with the synthetic meat they’ve eaten. Some have died already, and others may succumb.”

“Others will die!” Eberhart said. “Let me show you.”

He snapped a switch and three telescreens came into action with their accompanying sound. The powerful probing photographic beams projected from the laboratory reacted right on the great living center of the people. Like a panoramic movie scene Eberhart swept over a whole range of harrowing incidents, mirroring them in the three screens.

Bax stood in grim silence watching the endless parade of squirming human beings, listening to their groans, their dry-lipped curses at him for passing the deadly formula. Tortured people were everywhere—in their homes, in the streets, some at the last gasp of life. Amid these scenes moved the forms of harried doctors and nurses—exhausted, baffled.

“This ghastly business has a far greater hold than I ever realized,” Bax muttered, as the scientist switched off the current.

“I agree. All Capital City is involved. Since this is the leading metropolis of the world, the other cities can be forgiven their scathing criticisms of your leadership. I have heard them over the radio, and read them in the newspapers.”

“But how on earth did it ever happen?” Bax demanded. “What was wrong with that formula anyway?”

“When it left me—nothing.” Eberhart paused significantly. “After you had signed it, it was altered by Freida Manhoff. I have full evidence of it. She even ate the synthetic stuff herself to find out conclusively just how ill the people would be. On top of that she has been engaged for some time in subversive propaganda directed against you. I have her fingerprints on the very robot which did most of the talking! A little while ago I saw her in her apartment. I told her that she is dismissed. But she is now well on the road to recovery.”

“And why did she do such a thing?” Bax asked, frowning.

“It’s hard to say. But it’s probably because she’s a scientist and in a position to do what she liked with equipment and formulae. Doubtless she believed she was doing the people a good turn by increasing my popularity and decreasing yours. Since that isn’t playing the game fair, I discharged her. In all probability now she will appeal to you, with some kind of fantastic tale.”

Bax looked at the scientist steadily for a moment.

“You said you cured her?”

“I did. Here is a sample of her personal diagnosis. You know her handwriting. Read it for yourself.”

Bax took the girl’s note, pondered it, then returned it without comment.

“You cured her,” he repeated. “How long did it take you?”

“No more than three hours after diagnosing the trouble.”

A grim smile lighted Bax's face. "You're not very clever, my friend! You could not devise a cure for such a terrible malady so quickly without knowing beforehand the nature of the trouble."

"Are you suggesting that I poisoned the people?" Eberhart snapped.

"I am telling you you did! From my own acquaintance with Miss Manhoff—"

"And her allegiance to you," Eberhart sneered. "I know all about that—"

"Loyalty to a ruler is the first responsibility of a citizen," Bax interrupted. "Only you could have thought of a scheme as deep as this, and because you are afraid of Freida Manhoff you are trying to thrust the blame onto her, discredit her in advance for anything she might choose to disclose."

Bax took a step forward, his bearded face stern.

"As you know, Eberhart, our antagonism has not exactly been concealed for some little time now, and I'm sick of the ruthlessness you're exercising to overthrow me. You are making one big mistake. You take me for some kind of angelic idealist who hasn't the power to hit back. I am still the ruler. In that capacity I order you to use your antidote to cure the people you've poisoned. At the same time you must admit the mistake in the formula was yours!"

Eberhart's anger blazed. "What do you take me for? You say I did this thing. Very well, you cure the people with one of your great inspirations! It's time one of them worked again anyway!"

Bax stood motionless for a moment, a faraway look in his eyes.

"Perhaps I will," he replied slowly. Then without another word he strode out of the laboratory, leaving Eberhart staring after him in puzzled annoyance. . .

Bax found Freida Manhoff waiting for him when he reached his office. She looked pale and tired as she got to her feet.

"Sit down, young lady," Bax exclaimed. "I know of the torture you have been through in an effort to protect my interests. Yes, I see it all now," he went on, regarding her broodingly. "You tried to stop the propaganda, and you poisoned yourself in the hope of finding an antidote which you intended to hand on to me. You lost your employment, and now you know you are risking the life of Bruce Cranley in coming here now to testify against Dr. Eberhart."

"You're absolutely right!" Freida ejaculated in wonder. "How on earth did you learn that?"

"Just one of those times when a whole sequence of events in a past time is crystal clear to me," Bax said quietly. "And now that I have had the revelation, there comes the accompanying inspiration, that little touch of the gods. We are fighting Eberhart with the gloves off now, Freida, and we are going to win the first round anyway!"

"How?" the girl asked hopelessly. "He has the antidote."

"I know. And he cured you with it."

"Yes, but—I don't see the connection, sir."

"Just this!" Bax drew up a chair to face her. "You were clever enough to think of making a diagnosis of your bloodstream after you had taken phanocin—and you got first class analytical results under the microscope. Now you must do it again to determine the ingredients of the antidote!"

Freida thought swiftly. Her eyes gleamed.

"I see what you mean now! Because there must be some traces of the antidote still in my bloodstream you wish me to examine a blood sample and analyze its contents?"

“Right!” Bax caught her arm and she got to her feet. “We have a laboratory wing in the building here where we can soon settle the question. Come with me.”

She hurried beside him eagerly, and in a few minutes he had thrown open a door for her on a lower floor. Before her was a small, fully equipped but deserted laboratory.

“Here you are,” Bax said. “Now go ahead with your analysis.”

From her arm she drew off a blood droplet carefully and daubed it on the microscopic slide. Quickly she focused the lenses.

“This was one great idea you had, sir!” she declared after a while. “Everything is here, in minute quantities.”

“Enough for you to make an analysis?”

“Definitely!” She turned to the test-tube rack and began to busy herself with reagents, catalysts, and other chemical impedimenta, jotting down notes as she went. Bax watched her intently, quite in the dark so far as chemical knowledge went.

“Yes, I think I have it!” she announced at last, studying the formula. “All the ingredients are in good supply in our big laboratories. Only—”

She broke off with a troubled frown, thinking.

“What?” Bax inquired.

“I’d forgotten that Eberhart controls the laboratories and that I’m no longer employed by him. He’d never allow me to get anywhere near them.”

Bax grinned in a savage way. “That doesn’t even enter into it. We’ve got all we need in the way of chemicals right here. I had this laboratory stocked up in case of an accident any time to our headquarters. Tell me the percentages necessary and I’ll weigh them out while you make them up. Here,”—he waved his hand to the complete array of bottles—“take your pick. And don’t forget we’ll need enough to cure about three thousand people.”

Freida nodded. Consulting her list, she read out the necessary ingredients. Bax had pulled off his coat. Now he went to work vigorously.

“We’ve got to move fast, you know,” he remarked presently, busy with the spring-balance.

“I know, with deaths multiplying every hour.”

“Not so much because of that, Freida, but to prevent Eberhart from getting there first with the antidote. If he does, his trick will have succeeded. He’ll be the savior and I’ll be the miscreant. Not that it’s likely though. He’ll never believe we can find the antidote without him.”

Freida suddenly straightened up from her task with the measuring glasses.

“He won’t, unless—” She paused. Then, in a worried fashion, she began to prowl up and down the laboratory, peering into all the odd corners and behind the shelves.

“What on earth?” Bax demanded at last, as she climbed up onto the next bench and examined the ornamental angle of the roof.

“This!” she retorted, and with angry tugs pulled the ornament clean away, snapping the slender wires behind it.

“Microphone!” Bax ejaculated, as she dropped it into his hands.

“Yes, a mike.” She jumped down beside him. “I just remembered that he once told me he had wired up every important building when he built the city.”

Bax’s lips tightened.

“I’ll see to it that they’re found and destroyed. I begin to realize now how much I underestimated Eberhart’s ambitions.”

He tossed the microphone to one side. Then with a shrug, he went on with his work.

“The damage is done now anyway,” Freida muttered. “He knows just what we’re up to. Our only chance is to beat him to it.”

Thereafter they became too busy even to speak, except for vital remarks connected with the job. One hour passed—two hours. By that time there was an array of phials, all tightly corked, on the table. Freida straightened up with a little sigh and rubbed the small of her back wearily.

“I think we’ve enough here now, sir, considering the small quantity each patient will need. We’re ready to go.”

Bax nodded and put on his coat.

“Right! You pack them up and I’ll have my fastest plane on the roof park within ten minutes. Join me there.”

“You are coming too?” Freida asked in surprise.

“Certainly. There may be risks attached to this, since Eberhart knows so much. Better if we work it out together.”

Back in his own laboratory Eberhart was facing a grim, stolid-faced pilot. At one time the pilot had been a criminal, until the Change had swung his interests into different channels. Now he was the kind of servant Eberhart trusted most—spy, thief, and if paid sufficiently, still a killer at heart.

“I’ve a job for you, Morgan,” Eberhart said, starting to pace up and down. “It’s the biggest thing you’ve ever had to do for me. If you succeed I may become the ruler of Capital City, and you will occupy a prominent position. If you fail it may cost you your life.”

“A man dies but once, and my job is to serve you,” Morgan replied, unmoved. “What do you want me to do?”

“I have it on good authority that Freida Manhoff, my former assistant, will be leaving Administration Building presently for the city center, where the illness has broken out. Your job is to prevent her from getting there! That’s imperative—vital! It’s possible that Bax himself may go along with her, but I can’t say for sure, because someone broke the secret microphone before I could find out everything. They both have guessed I’ll try and stop them, so watch your step.”

“Do you want me to kill them?”

“Not if you don’t have to. Just delay things so that I can get there first with an antidote. I can’t let them. There’s two of them to do the work while I’ll be doctoring the people all alone.”

“I get you. Plane or car?”

“Use a plane. Cruise around and watch the Administration Building.”

Morgan nodded. “Okay. I’ll make it seem like an accident.” Then at the door he stopped and rubbed his heavy jaw. “Say, doc, how come that you’re doing it this way? With all the gadgets you’ve got here, couldn’t you—”

Eberhart looked up impatiently from the preparation of his antidote.

“And have it traced to this laboratory? Don’t talk silly! It’s got to be an accident. And keep your mouth shut. That’s a warning!”

Morgan nodded.

“You know me, doc!”

CHAPTER VIII

THE SPREADING DOOM

Outside the Administration Building, Bax found Freida waiting for him in the airplane, and paused to ask an anxious question.

“Everything ready?”

“Yes,” she answered and pointed at a small crate which was cushioned in the rear of the cabin.

Bax clambered into the driving seat, slammed the door, and then eased in the controls. Silently the machine rose straight up from the roof, hovered a moment over the canyons of streets with its helicopter screws whirring—then turned towards the city center.

Freida sat quietly for a while, glad to rest after her efforts in the laboratory. Then her eyebrows went up in surprise as she chanced to notice Bax’s left hand. It had strayed to the switch of the small but deadly protonic gun, a magnetic weapon so contrived that it could be automatically sighted by magnetism. All that remained for the operator was to press the button.

“What’s the matter, sir?” Freida asked presently.

“Matter?” Bax turned his massive head.

“Look where your hand is—as though you’re expecting trouble.”

“I am. But all the same it’s difficult to explain why.” Bax frowned ahead of him through the observation window, pursuing his thoughts. It was quite a while before he spoke again.

“You know, Frieda, I’ve discovered one thing about these queer inspirations of mine,” he said finally. “Before I get a visionary glimpse of a future time, or a great idea, there is first a definite activity in the subconscious area of my brain. I’ve noticed it many times, and afterwards when I come to question the reason for the action I find that I know why. My knowledge of psychology isn’t very extensive, but as I understand it, this is a matter of conation and realization, a desire to comprehend, a linking of subconscious with the conscious brain areas. The question is—why am I suspicious now?”

Bax paused, and Freida saw the gleam that came into his keen eyes.

“Of course there’s a reason!” he cried. “We’re being followed! We’re liable to be killed!”

Following his glance, Freida turned to look out of the cabin window. They both caught sight of a fast, wicked-looking, bullet-nosed flyer power diving out of the blue straight towards them.

“There!” Freida screamed. “Quick! Turn aside!”

Bax’s mane of hair shook silently. Freida’s appalled eyes jerked to his grim, bearded profile for a moment, then dropped to his left hand. The muscles on it were taut and ready for action. He kept the machine steadily on its way, eyes fixed on the hurtling plane.

Faster, lower! In their imagination they could both hear the scream of riven air through their sealed cabin walls. Then with a violent twist, Bax abruptly hurtled his own flyer sideways. At the same instant the interloper whizzed down, wide of the mark by twenty feet. For a brief instant only he was level, but in that time the protonic gun sighted itself and Bax’s fingers compressed the firing button.

Invisible streams of protons slashed forth from the weapon through the wall trap. A solid jet of protons slammed into the plane’s body with the inevitable result that its whole basic

makeup collapsed. It fell apart in mid-air, crumbled into a dozen disintegrating pieces and for a moment Freida had a glimpse of a human body turning, heels over head, as it dropped into the abyss below.

"I had to do that," Bax said slowly, releasing the gun and dipping the machine's nose towards the city center. "An antidote for thousands of ailing people is more important than the life of a murderous agent of Eberhart."

"You think he was Eberhart's agent?" Freida asked.

"I know he was! Better get the package ready. We'll be landing very soon."

Dr. Eberhart was still hard at work in his laboratory preparing the antidote when the usual mid-day news bulletin came to him over the main speakers.

"Before our general news, friends, here is an item of outstanding importance. The toxicosis which struck down so many of us in the city is rapidly being brought under control. A hundred people have already been treated with an antidote devised by our honored leader, Lincoln Bax, and recovery of these people is certain. Before the day is over, others who have been afflicted will likewise be cured. They are being housed now in buildings hastily requisitioned and converted into hospitals. Lincoln Bax has ordered the synthetic meat distributors to destroy all present meat and manufacture another consignment which this time will be perfect for human consumption, devoid of the particularly dangerous drug which somehow got into the previous issue—"

Eberhart reached out and turned off the speaker switch. In the ensuing dead silence he beat his fist slowly on the bench beside him. His anger grew. Swept by a sudden passion, he whipped up a chair and slammed it into the midst of the antidote phials.

He grinned a little as he watched the liquid splashing to the floor amidst the glass javelins.

"Nothing like a good physical outburst to relieve a mental shock," he muttered. "Now is the time to reason again calmly. This halo-headed ruler of ours wins the first round, eh? Evidently Morgan slipped up for the first, and last, time."

After pondering deeply, he turned to the radio short wave transmitter and switched it on.

"Calling Bruce Cranley, Machine Sixty-nine-A. Calling Bruce Cranley. Come in, please."

There was a momentary pause before Bruce replied. But Eberhart did not speak further. Instead he switched off the mike and studied the meters attached to the instruments, making a note of the readings. With a ferocious grimace, he turned the graduated pointer attached to a giant electro-radio transmission machine, mentally picturing the destructive violence that would be hurled forth on the carrier beam when he closed the main switch.

"At least Freida Manhoff cannot say I didn't warn her," he reflected. With that, amidst a crackle of sparks, he slammed shut the main switch.

For three minutes he left it in position, then pulled it open again. He had the air of a man who successfully has accomplished a very necessary job.

In the meantime, to Bruce Cranley the sudden failure in continued radio transmission was a complete puzzle. He called again and again after the original request to come in, but nothing happened. Finally he gave it up and shrugged.

"Some chump must have made a mistake," he grunted to Adams, his co-pilot.

"Yeah. Whole blamed world's a mistake since the Change, if you ask me. Look at that ice down there, and in temperate regions, too!"

Bruce looked, and his jaw set. It was a scene similar to the one that existed on the whole route to Australia and back—an ocean scattered with motionless areas of white. On the way

out to Australia they had been small islands. Now on the way back they were vast solid fields through which shipping was having to pick a tortuous way. In fact, here and there, a vessel lay crushed between opposing jaws of the stuff.

“Algae,” Bruce said grimly. “Not ice.”

“That stuff Eberhart talked about in his speech? Say, if it goes on growing like this, where’s it going to get us?”

“In a mess,” Bruce snapped. “Cosmic rays are causing it. You see,” he added, for he knew Joe Adams’ scientific powers were none too keen, “it’s because something has gone wrong with the law of Natural Selection.”

Joe Adams turned a freckled face from the controls.

“What’s Natural Selection?”

“It’s a theory of Darwin’s—sort of survival of the fittest. You see, he calculated that if the law of Selection didn’t work it would produce a disaster such as this. For instance, in one of his books on biology he says that if all the millions of eggs produced annually by a single oyster or sea urchin were to reach maturity, the sea would soon become a solid mass of the creatures. That is what is happening now. These sea mites are now intelligent enough to avoid the destruction which formerly overtook them.”

Joe Adams pulled his pendulous underlip. “Sounds sort of bad to me. It isn’t as if it was limited to the sea either. Just think of those jungles we’ve flown over. Green stuff thick as the devil.”

Adams broke off suddenly. Bruce and he both looked at their plane motors in alarm. Mysteriously the motors had cut out. Then before either man hardly had a chance to check the fuel-gage, they saw an area of red and a puff of smoke from the port motor.

“We’re on fire!” Adams yelled, leaping up. “Don’t ask me why, but we are!”

He jumped for the emergency fire switch, but there was not enough time to use it. Livid fire crept across the wall of the cabin, cutting through it as though an acetylene flame were being used.

“Bale out!” Bruce ordered. “It’s our only chance!”

He ripped the cabin door open and leaped into space, tugging his parachute ripcord as he tumbled downward. With a jerk his fall cushioned and he had the chance to look above him. Joe Adams was floating safely above him, not far off. As for their machine, it had crumbled into blazing pieces, each drifting downwards on the wind.

Bruce’s eyes narrowed as he watched the smoking debris fall past him. There had been something unnatural about that crack-up. Perhaps it had been sabotaged, by somebody anxious to prevent the Australia mail from reaching America. Bruce’s mind revolved around the possibility of photo-synthetic paint—a transparent substance invisible on ordinary paint, but generating terrific heat after a brief exposure to sunshine. It had been used in the war, and it might have been used here. It might have been something else. In any event he was unlikely to ever find out.

Then, glancing below, he bent his legs preparatory to the fall on the field of algae reaching up to him out of the sea. He landed safely enough and cast off his harness. In a few moments Joe Adams had dropped beside him.

“I don’t like it,” Adams growled, scrambling free of the belts. “Look at this stuff! It grows over your boots even while you stand on it.”

Bruce glanced down and jumped aside in alarm. The white growth was living, crawling, spreading, for all the world like barnacled wax.

“We’ve got to move quick!” he shouted. “If we stop here long we’ll be done. This awful stuff lives, remembers. Multimillions of sea-mites are dividing and increasing by the simple law of fission.”

“But where the devil do we go?” Adams demanded, stumbling. “We can’t just keep fooling around, away out in the middle of the ocean!”

“We’re not in the middle. America was in sight when the plane caught fire. I saw it, low down on the horizon. We’ll have to keep on the move constantly until we are either picked up or walk home.”

“Walk!” Adams screeched.

“Yes—from chunk to chunk of this stuff.”

“Five hundred or so miles of constant movement and never a rest! Not me!”

Bruce swung round impatiently. “It’s no more than two hundred and we’ll very probably be picked up. Come on!”

He strode forward resolutely, paused a second or two when he came to the edge of the solid area, then sprang with all his strength for the next nearest field. He fell short by a couple of feet and splashed into the water. Adams made the jump successfully and gave him a hand up. Then he uttered a shout of alarm.

“Hey, look out! You’re crawling!”

Bruce looked down at himself, and started batting savagely at his saturated flying togs. From head to foot he was covered in a furry green mold of living sea-algae. His efforts dislodged most of it, but left rents and holes in his flying suit.

“This is mighty serious,” Adams muttered, shaken. “If it goes on, we’re goners!”

“It’s us who’ve got to go on,” Bruce snapped, and strode forward again urgently.

Neither he nor Adams slipped again, but the constant need to keep moving was exhausting in the extreme in the hot sun. At the end of three hours of this leap-frog progress they were worn out and intolerably thirsty. Certainly their goal was visible in the distant haze of the afternoon, but so far away, that the misty, purple mountain range might as well have been on Mars.

CHAPTER IX

AN ACCOUNT SETTLED

Grimly the two pilots plodded on, laboriously, almost hopelessly.

“There must be some way to get a rest!” Adams protested at last, stumbling forward on leaden feet. “I can’t stick this out much longer. I have just got to rest a bit. I’m fatter than you, remember, and that makes more to carry. I guess it’ll be all right to sit down and only move when the algae become dangerous.”

Bruce looked back.

“You’re taking the devil of a risk,” he retorted. “And I’m not going to join you in it! See you in Capital City!”

With that he resumed his onward journey alone. As far as his eyes could see, the ocean surface was smothered now by these crawling fields. In a few more weeks at the most, the ocean would have disappeared. And this raised another problem to Bruce’s mind. The displacement of such a vast body of water would be bound to force it elsewhere. Over the land? Over Capital City, perched as it was on Manhattan Island? He had many grave warnings to tell Lincoln Bax once he reached him again.

Doggedly he still went on, his legs aching and numb. The algae was difficult stuff to walk on too, for it dragged back each time with something of the clogging quality of wet sand.

At a new sound—a glorious sound—he looked up. There was the throbbing of an airplane engine and with it the twittering crescendo of thousands of excited birds. Pausing, he sighted the plane diving swiftly from out of a fast moving black cloud. He recognized the cloud immediately as being created by birds—a swarm of them comprising tens of thousands. He’d encountered six such swarms himself on his recent flight, each one bigger than its predecessor. The skies were getting infested with birds, and they were a deadly menace to fliers.

Bruce stood marking time as he watched. Then as the plane twisted round and headed towards him he ripped the chest and sleeve from his already torn shirt and waved it vigorously. Just as he saw the plane bank steeply towards him, a faint cry for help came to his ears.

Wheeling round he beheld a sight that sent horror knifing into his heart. Half a mile or so away Joe Adams was waving an arm frenziedly as he lay full length in the smothering algae. In a flash Bruce guessed what had happened.

Worn out by his efforts Adams had obviously sat down and fallen asleep! Now death threatened him.

Bruce was galvanized suddenly into activity. He began to retrace his way as fast as he could. But long before he arrived anywhere near his unfortunate friend, he realized he could never make it. Before his very eyes the crawling stuff was mounting and spreading. It engulfed the arm and then the head.

By the time he reached the spot Bruce was faced with the grim sight of a higher mound of algae than elsewhere—and that was all!

Sweating, reviling the stuff crawling over his heavy boots, he turned as the plane he had signaled came bumping and bounding along over the uneven surface.

“Hang on as I go past!” roared the pilot’s voice through the external speaker. “Can’t stop in this treacle!”

Bruce obeyed, dived for the machine as it swept by him, found himself borne into the air with his hands clinging to the edge of the wing. A few minutes later he tumbled into the cabin, fell into the seat next his rescuer and began to drink greedily from the water bottle which was handed to him.

“Thanks,” he panted, returning the bottle. “I needed that.”

The pilot smiled rather gravely. He was a tough, wiry-haired fellow with a square jaw.

“Thompson, coastal scout,” he said briefly. “You’re Bruce Cranley, aren’t you? I’ve seen your face in the aviation slicks. Say, am I crazy, or did I really see somebody being swallowed up in that muck down there just now?”

“You’re not crazy.” Bruce rubbed a hand over his bewildered face, and gave a little shudder. “That was my co-pilot, Joe Adams. I was idiot enough to let him rest and I guess he must have fallen asleep. The algae got him. It was the most horrible thing I’ve ever seen, him being swallowed up like that.”

“Yeah,” Thompson muttered. “I know this stuff is dangerous. That’s why I didn’t dare land and stop. How come you got into the soup?”

“Crack up.”

“Birds?”

“No, fire. And I don’t know why.”

“Thompson was silent for a while, piloting swiftly over the wastes.

“Lucky for you those birds chased me off my course,” he said at last. “I’d never have spotted you otherwise.”

“Drop me at Capital City airport.” Bruce said, and became quiet, exhausted by the ordeal through which he had passed. He closed his eyes and tried to relax, only to open them again when Thompson spoke. Thompson was puzzled.

“Where the devil is the airport? The landmarks are all changed since I took off this morning. I’m following the beam, but that doesn’t help much.”

Bruce stirred wearily, irritated by the man’s apparent lack of skill. But as he gazed out of the port he gave a violent start. The normal landmarks had indeed disappeared!

Where the great Central Park of the city had been there now sprawled a mass of green, utterly unrecognizable as the former neat, orderly square. The distinctive trees at different parts of the city had become up-thrusting green giants, towering to immense heights, their vast branches jutting out so far that they seemed to be about to embrace the lofty pedestrian ways.

Yes, everything was changed, especially so to Bruce who had been away several days. Apart from the riot of outflowing green from the park in the city center there were also evidences of similar leafy tentacles spreading in from the east where lay the pastoral and agricultural regions.

As the airplane swept low over them, Thompson anxiously searching out the way, Bruce caught a glimpse of men working amidst the crops, men utterly dwarfed by the titanic waving heads of corn and barley around them!

Thompson gave a sudden yelp of alarm as an avenue of brushy giants, which had formerly been bushes lining both sides of Central Boulevard, loomed abruptly in front of him. He pulled back on the stick and soared over them in the nick of time.

“What’s gone wrong here?” he panted, turning a sweating face. “Looks to me as though Capital City is in the process of being smothered!”

Bruce had grown worried. “Yeah. And there’s the airport down below. The landing runway looks kind of cracked up but you’ll make it okay.”

Thompson nodded and huddled himself over the controls, lowering the machine gently. While they skimmed along the runway they both saw that its cracked appearance was caused by thick, rank grass having forced its way through the weakest parts of the transite metal.

Bumping and bouncing they taxied to a halt.

“Thanks a lot,” Bruce said gratefully, pushing the cabin door open. “Be seeing you again maybe. Right now I’ve got to find out what’s wrong with the vegetation.”

He hurried over to the airport headquarters, made out a brief report of his accident assigning the death of Joe Adams to a forced landing—hurried to the Administration Building. It took a long time. Here and there along the traffic route men were busy cutting or blasting aside tenacious green stuff crawling over the paths.

When he finally reached Bax’s headquarters, Bruce found the anterooms filled with eagerly talking people. He did not wait to be announced for he felt conspicuous in his torn and dirty flying togs. He went right into Bax’s office and found him standing by the window, bearded chin on chest, hands locked behind him.

“Why, Bruce!” Bax looked round in pleased surprise and came forward with extended hand. “Am I glad to see you again, my boy! Say, you look a bit the worse for wear. Here, sit down.”

Bruce settled down into the chair and asked a question.

“Did you think I’d lost my way with all this green stuff smothering everything?”

“No, not that.” Bax looked at him somberly. “I’ve been afraid of Eberhart carrying out his threat to kill you.”

Bruce jumped up again. “Why would Eberhart wish to kill me?”

“Spite—nothing else. He’s a changed man. Listen to this while I tell you.”

Bruce listened, his face darkening. At the end of the story he slammed his clenched fist on the desk.

“So he’s to blame! Because Freida did the right thing and told you everything, he decided to hit at me. The reason why I’m in this state is because the plane caught fire in midair and we had to bale out. My co-pilot Adams is dead, sir. He got trapped and smothered by the algae which is choking the seas.”

“Yes.” Bax’s voice was sober. “I’ve heard the algae is pretty bad.”

“Pretty bad! You don’t know the half of it! You asked me to look out for any changes I might see. I’ve seen nothing but them! And when I landed back things were so altered my pilot could hardly find the way in.”

Bax rubbed his head. He was anxious.

“All this sudden onrush on growth has occurred within a few hours, just as though a sudden point in evolution has been reached—a mutation like that affecting the dogs, remember—and all plant life has decided to spurt forward to gargantuan size. This vast increase has happened since early morning.”

“Then something’s got to be done about it—and quick!” Bruce declared. “From what I’ve seen on my way here all Manhattan Island and Capital City with it is going to be smothered within a few days. Land, sea, and air is full of life. We’ve got to find some means of destroying it.”

Bax shrugged. “How? Eberhart is the only one likely to be able to suggest anything, and for that he’ll have his price.”

“Rulership?” Bruce asked grimly, and Bax nodded.

“Well, he’s not going to get it!” Bruce slammed his fist down again. “He’s not entitled to squeeze us for everything he does. Maybe I can talk some sense into him, sir. I owe him a reward for trying to kill me, anyway. It’s worth the attempt. I’ve got a pair of mighty persuasive fists when it comes to a showdown.”

Bax smiled faintly. “All right. Why should I try to cramp your initiative?”

At the door Bruce paused and glanced back. “You say Freida is nursing in the city? Do me a favor, sir. Have her come here while I’m seeing Eberhart. When I get back you can marry us as we planned.”

“I’ll do that. Oh, and one other thing, Bruce. Eberhart won’t know that you’re on the way. Since hearing about his microphones, I’ve had them ripped out of every important building.”

“That’s the way I want it.”

Bruce grinned, and went on his way.

Bruce paused only long enough to call at his apartment for a wash, change of attire, and refreshment. Then, fully fortified, he set off again. On reaching the laboratory, he was shown into the room where Eberhart usually worked—and without a prior announcement by the clerk.

“Well, what is it?” asked the scientist.

When he saw his visitor he gave a violent start.

“Unexpected, eh?” Bruce asked dryly, moving forward. “If it’s any consolation to you you managed to kill my co-pilot when you burned up my plane. I’m here—for a settlement.”

“What are you talking about?” Eberhart asked coldly.

“I’m talking about murder, microphone eavesdropping, the discharge and frame-up of an innocent girl assistant, and your efforts to depose Bax and to put yourself in his place.”

“If you’ve come to make trouble—” Eberhart broke off nervously, as Bruce removed his coat and tossed it aside.

“Suppose we get one thing straight, doctor,” Bruce said slowly. “In Bax you deal with a man who is quiet, tolerant, and disinclined to bloodshed—since the Change. In Freida you dealt with a clever, sensitive woman afraid of your powers. But in me you’re dealing with a tough aviator with a good pair of fists and a complete contempt for your scientific threats! I’m going to beat the ears off you, Eberhart, unless you promise me one thing—and I may still do it even then.”

“You insolent young idiot!” Eberhart exploded. “Do you think for one moment that I fear you?”

He got no further. Springing across the room, Bruce seized him by the throat and left wrist, forced him backwards against the bench.

“I’m going to do the talking, doctor. Your job will be to tell me what I want to know. I can break either your neck or your wrist whenever it suits me—so tell me what must be done to stop this growth that’s spreading everywhere. There must be some solution in that bulging head of yours!”

Eberhart wriggled savagely, relaxed, then with a sudden vast effort tore himself free. Reaching behind him he yanked up a heavy glass testing bowl, but he never got a chance to use it. A left hook to the jaw sent him tottering backwards. Another slammed him dizzily against the wall, his mouth salty with blood. He shook his head violently and stared at the blurred vision of Bruce’s merciless face.

“I’m not here to play games, Eberhart, I want information!”

“This—this is primeval!” Eberhart panted, straightening up and drawing the back of his hand over his reddened lips. “Beating a man up belongs to the old days!”

“Yeah. So does murder, but you still practise it! Come on, you’re wasting time! What’s the remedy? And for your own sake you had better be honest about it.”

“The only solution I know of is acid and explosive to be rained on the vegetation, and guns for the birds,” Eberhart snapped. “Make the law of Natural Selection operate again by destroying as much surplus as possible.”

Bruce reflected, then nodded. “Yes, I guess that is about the only remedy. I’ll suggest it to Bax. And don’t forget, Eberhart, that if you try any more funny business with either me or Freida—or Bax—I’ll come and get you for certain. I don’t quite know what’s turned you into a devil like this, but I can answer back in the same fashion.”

Eberhart smiled crookedly, dabbed at his cut lip.

“These violent heroics may have relieved your feelings a little, Cranley, but in the end we’ll see how much good it has done you or that spying, treacherous woman you hope to marry—”

Bruce was picking up his coat. At the slur on Freida, he turned and his rage exploded. Out went his right fist, into Eberhart’s midriff. The scientist doubled up in anguish, only to straighten again sharply as a bone jarring smash under the chin lifted him clean off his feet.

He spun backwards, made a desperate effort to save himself but missed. The force of the punch sent him slithering across the bench with glass racks and test tubes splintering all around him. Bleeding profusely, with his senses reeling, he dropped to the concrete floor.

“Sorry I can’t do more,” Bruce said curtly. Savagely whipping on his coat, he turned and left.

CHAPTER X

ATTACK AND FAILURE

Fifteen minutes later Bruce was back in Bax's office. His belligerent mood lightened somewhat at the sight of Freida, pale but expectant, waiting for him.

"Bruce!" she exclaimed in delight, and he caught her up in his arms for a moment. "Oh, thank heavens you're safe! I was scared when I knew you'd gone over to see Eberhart."

"Forget it," he said with a smile, setting her down again. "I can take care of myself. I had a scrap with Eberhart, sir," he went on, looking at Bax. "I gave him a wallop and made him suggest a way of curing this multiplying life. He says acids and explosives for the vegetation and algae and guns for the birds might cure the trouble."

"Somehow I can't picture Eberhart giving the right answer just because you beat him up," Frieda remarked dubiously.

"Perhaps not, but it is worth trying. Anything will do as long as we keep a headstart on him. One big victory on his part and he'll never let us catch him up. As a matter of fact, I knocked him around a lot just for the fun of it. He's turned into a perfect swine these days and needed a beating."

There was silence for a moment, then Bruce smiled and fished a form out of his pocket. He laid it down on the desk before Bax.

"Here you are, sir—permission by the Eugenics Council for Freida and me to marry. The rest is up to you."

Bax nodded, studied the two young people arm-in-arm before him for a moment, with a smile he got to his feet and performed the brief ceremony. At the end of it he stood in silence as they embraced. Then he fetched a deep sigh.

"Is it that bad, sir?" Bruce grinned.

"I was only thinking what a tragedy it is that two fine young people like you should be born into an age like this! An age of sterility, danger, too much power in the hands of an ambitious scientist. Maybe I'm selfish. Perhaps Eberhart should rule after all."

"That is sheer nonsense!" Bruce declared. "Isn't it, Mrs. Cranley?"

"Definitely," she agreed, nodding her blond head. She looked at Bax as he rubbed his chin in a worried manner. "Don't ever think that way again, sir! We're on your side, and so are the people, now you've cured them of their illness. We'll crush this opposing life somehow."

"But we're not going to do it standing here talking!" Bruce interrupted her. "Free, you'd better get back to your nursing right away. I'll gather all the pilots I can find and see what can be done with acid and explosives. I'll see you the moment I get back."

Freida nodded. They kissed again, and she hurried from the office. Bax pressed the button on the general call microphone.

"All pilots report at once in Briefing Room One for special orders," he intoned. He repeated it, then switched on to the Briefing Room itself. "Commander Blair? Get all supplies of corrosive acid and atomic force bombs you can right away. You'll find them in the underground storage rooms amongst the supplies retrieved from the war. The matter is urgent and must be done immediately. Flight-Commander Cranley will be with you with full instructions shortly."

Bax switched off and Bruce nodded.

“Thanks, sir. You might give the people warning to get off the streets to the underground. Now I’ll be on my way.”

“Best of luck,” Bax said earnestly. When Bruce had gone, Bax’s eyes strayed to the vision outside the window.

Green—nearly everywhere. In the early evening light Capital City was taking on the appearance of a gigantic ivy-clad castle. A mammoth branch with eighteen-inch wide leaves even now was snaking under this lofty window.

Bax turned as the radio buzzed for attention.

“Harbor Sixteen calling headquarters! Shipping unable to approach because of blocked water. Three vessels a mile out from shore sunk by fast growing white fields. Instructions please.”

“Stand by for further orders,” Bax replied. He opened up the microphone for the general public speakers scattered throughout the city.

“Friends, this is Lincoln Bax. Again our city is faced with unexpected danger through the short wave radiation from space which Dr. Eberhart explained to you recently. Trust me as you did during your illness and all will be well. Take shelter in the underworld for the next few hours while our airmen set about the task of trying to blast this life to pieces.”

He switched off, worried and puzzled. As he glanced through the window again, he could observe about two hundred airplanes, all fighters, starting off from the central airport.

“If only I didn’t feel so certain about my premonition,” he muttered. “If only I could laugh at this certainty of defeat! For defeat and failure it will be unless there’s a change. This time the gods don’t seem to be favoring me with a grand inspiration!”

Bruce Cranley, in command of the two hundred planes detailed to destroy the vegetation, cruised around for a while high above the city until he was sure that everybody down below was out of danger. Then he opened up the microphone.

“Okay, boys, go to it! Our first job is to destroy the center of Central Park. Dump everything you’ve got into it. If we can destroy the heart of the greenery, root and all, the rest will die soon. I’ll lead. You others follow.”

He leveled the machine’s nose, crossed the green target, nodded to his co-pilot, and pressed the bomb release. The first shower of atomic force explosives landed with shattering effect and sent disintegrating vegetation upward two thousand feet.

That was the beginning. For the remainder of the summer evening a continued savage air assault on the stuff continued, intermingled with frequent gun attacks on the clouds of birds which came sweeping down from the heights. But gradually Bruce was forced to realize that it was all useless endeavor. The birds were too thick for even protonic guns to thin them much—and as for the vegetation and harbor algae, it seemed that each shattered piece took root and multiplied. Probably Eberhart had known that, for the end of the attack left the masses of greenery and algae far thicker than they had been before, and growing fast.

“No soap,” Bruce grunted over the mike to his co-pilot. “Okay, boys. Return home.”

He sat watching moodily as the planes wheeled back toward the base. As he prepared to follow something prodded him in the side.

“No you don’t, Cranley! You’re not going back! Start taking this machine out to sea—and quick!”

Bruce looked sharply at the snarling face of his co-pilot. For a moment his eyes dropped to the automatic in the man's hand.

"I get it," he said slowly. "Working for Eberhart, eh?"

"You guessed it, feller. He told me to see that you never returned from this job and you're not going to. Bax bragged you were to be in command, remember. Go on. Keep driving."

Bruce tightened his lips and obeyed. Though he knew Eberhart had agents everywhere, he had never suspected that his co-pilot might be one of them. Steadily he flew away from the city, crossed the algae-choked harbors, and finally came out over the caked, white-strewn sea with its jammed, motionless ships.

"How much further?" Bruce snapped.

"Far enough for your corpse to be lost. When I chuck out your dead body I want to be sure nobody finds it!"

Bruce's eyes narrowed. Suddenly he whipped the machine into a steep bank. The loss of balance flung him and his companion sideways. As Bruce quickly righted the machine, he snapped in the automatic pilot and, with a downward jab of his left hand, knocked the gun from the other's grip.

Instantly the two men were at each others' throats, the plane roaring onwards on even keel. There was no mercy in Bruce's heart. This scoundrel had meant to kill him.

Like a wild animal Bruce Cranley rained sledgehammer blows into his enemy's face and body, knocking him off the seat and onto the floor. The would-be assassin hit back with all the strength he could muster. The blow knocked Cranley against the dial-board, disarranging the controls. The plane lurched violently. The men continued to fight but Bruce had time to notice that the algae-field was sweeping up to meet them. This meant the automatic pilot wasn't working, that they were heading rapidly toward the sea.

Bruce warded off a blow and threw in a knock-out punch. But another lurch of the plane upset his calculations and instead of delivering the knock-out he received it, with a violence that made his head swim.

Dazed, he went tumbling backwards into the cabin door. Under the impact the lock snapped and he went tumbling into space, plunging in the longest dive he had ever made, into the sea between two algae-fields.

The shock of the water revived him. With an effort he struck out for the algae-field. A sudden rending and tearing noise not far away, caused him to look back. The plane had landed on the field. The ship slewed around and screeched to a halt. Bruce waited, struggling in the slimy water. He expected something in the nature of a bullet—but nothing happened.

At last he clambered out onto the field, shook the mites from his tattered clothes and went forward slowly. He was ready for a trick, but the treacherous co-pilot kept out of view. When Bruce reached the plane he found out why. His attacker lay on the floor with a broken neck.

Reaching inside Bruce dragged out the corpse and threw it into the all consuming algae, and scrambled back into the driving seat. There was just a chance he might pull away before the machine became too firmly rooted in the algae.

The motors roared as he pressed the switch. A wing was damaged and the propeller was out of alignment, but it was worth a try. Slowly, creaking huskily, the machine tore free like a fly escaping from sticky paper.

Bruce heaved a sigh of relief and climbed swiftly, glancing down once in the dying light at the white and black mound where his former adversary's body was fast being swallowed up.

CHAPTER XI

EBERHART TAKES COMMAND

Now for a third time Dr. Eberhart straightened up from before the microscope and gently caressed the bandages on his right arm. Beneath them were deep glass cuts, the result of his fall after Bruce Cranley had delivered that final uppercut.

"This is indeed a misfortune," he muttered at last. "It means that my recent condition of conscienceless progress is coming to an end! Very shortly those emotions known as sympathy and humanity will return, and my ruthless ambition will be blunted! I wish to heaven I had the heart of a robot."

Once more he peered at the slide. There was no longer any chance of a doubt. That drop of blood drawn from his arm was almost devoid of the virus he had received from the dog-bite and, as he well knew, the reversion to normal bloodstream meant the end of that queer pathological condition under which his advancement at the expense of all else had held such a fascinating appeal.

The reason was clear. He had lost a good deal of blood from the glass wounds. Twinges of remorse afterward for some of the things he had done recently had worried him, led him to a diagnosis. Now he had learned the reason.

"Action," he muttered, making up his mind. "Action is needed before the virus is neutralized entirely. As my normal self I might lack that extra ounce of ambition necessary to oust Bax."

He turned and put on his coat. A short journey across a city, slowly refilling with people after the abortive attack on the encroaching growth, brought him to Administration Building. He went straight to Bax's office and found him gazing out of the window onto the confusion below.

"You didn't come here for any good purpose, Eberhart," Bax said, turning around. "What do you want? To gloat over the fact that I can't master the mad life gnawing at my city?"

"I don't waste my time gloating, Bax. I have the real cure for all this, not the one I told that impulsive young fool Cranley. But it'll never be used unless you step down from power. I'm offering you a dignified retirement. If you refuse to step down, I may have the people throw you out. This is no time to wait for inspirations." Eberhart chuckled mockingly. "Hour by hour Capital City is being overwhelmed. Other cities throughout the world are suffering the same way. I can save humanity and only I know how."

Bax drummed on the window ledge with his fingers. He shook his head.

"I still see no reason for relinquishing my leadership. If the people trust me enough they will hide in the underworld until I have worked out the solution to all this. I'll find it, given time. The gods can't be hurried, Eberhart."

The scientist tightened his lips. "Bah!" he snapped. He pondered for a moment. "Have you the courage to put the trust of the people to the test?"

Bax's blue eyes swept him.

"You talk to me of courage? Any test you can name?"

"Good!" Eberhart picked up the microphone from the desk, switched on the public speakers, then went out onto the balcony, motioning Bax to follow him. Side by side they looked over the rooftops for a moment. Lights were springing up like jewels in the twilight.

“People of Capital City!” Eberhart cried, and his voice boomed like a giant’s in every quarter of the metropolis. “An issue is at stake which only you can decide.”

Down in the brilliant streets, the people began to form into black masses, listening.

“Unless this encroaching life is destroyed immediately Capital City will be choked,” Eberhart shouted. “Already the harbors are jammed, the seas flooding over onto the land, the skies thick with flying life. Around you, your homes, places of work, and means of transport are being torn to pieces by devouring life. Do you want it stopped?”

A roar of assent floated up like a massive chord on an organ.

“Or,” Eberhart went on, “do you prefer to wait until your leader, Lincoln Bax has an inspiration, an inspiration which he himself admits may be delayed for a long time. Until he has it, you will be forced to retire underground to await the outcome of his genius!”

“No!” The anger of the shout was unmistakable. It was repeated even more loudly. “No! No!”

“In order to end this chaos, you must appoint me ruler in Bax’s place. Bax has agreed to abdicate. Here—he will talk to you.”

Bax moved over to the microphone.

“My only wish is for your happiness and welfare, my friends. Make your own choice.”

“Eberhart!” The scientist’s name came floating up out of the city. “Give us Eberhart!”

Bax relaxed a little, stood gazing down. Whatever pangs he felt at the relinquishment of rule did not show in his majestic bearing or strong, bearded face. He turned away at last, back into the office. Eberhart followed him.

“You know,” he said slowly. “I only just managed it in time.”

“Oh?” Bax was busy putting his papers into a bag.

“It concerns a little matter of a dog bite and virus—too complicated to explain to a man who isn’t a scientist.”

“I take it you mean that the poison which has made you so brutal lately, is nearly worked out of your system?”

Eberhart looked up sharply and met Bax’s steady eyes.

“The gods told you?” he questioned dryly.

“You can attribute it to that. What I don’t know I am often told. I didn’t mind fighting the old Eberhart, you know. It’s easier dealing with the hard shell of a man you’ve been recently. I’m ready to forget it, but I can’t answer for Bruce or Frieda. They have every reason to be bitter.”

Eberhart was silent, lost in grim reflections. Then he gave a glance of surprise as he saw Bax’s hand extended towards him.

“You actually want to shake hands with me?”

“Why not? Each, in his own way, has the city’s interest at heart. Time will show which of us the people prefer.”

Eberhart shook the hand hesitantly. When Bax reached the door with the bag in hand, he called a question after him.

“Where do you plan to go?”

“The underworld. Maybe a few loyal followers will accompany me. I’ll probably take Freida with me. She’ll prefer to go along. I’m sure of her.”

The door closed behind Bax. Eberhart stood thinking for a moment. He turned to the desk and began planning how to save the city as he had promised.

Two hours passed. As night settled down, Eberhart continued to work steadily at the desk, covering sheet after sheet with diagrams and notes. For the first time in weeks his brain felt clearer, filled with a keen, calculating fervor instead of that grim, cruel ambition to succeed even if he had to destroy. But whenever his concentration wandered for a moment, he had many qualms of conscience. In particular he thought of Bruce Cranley and the order he had given for him to be slain. Then he shrugged to himself. After all, he had not been altogether accountable for his actions at that time.

It was midnight when his planning was finished. He pushed the papers on one side and took two tablets from the phial he fished out of his pocket. They would guarantee that all need or desire for sleep would be banished. He pressed the switch on the main loudspeakers.

“Calling all engineers and electricians!” he said into the microphone. “Report at once to Administration Building for special consultation. This is urgent!”

He switched off again and settled to wait, idly surveying his diagrams. At a slight sound behind him he turned sharply. His surprised eyes settled on a ragged, dust-stained figure coming through the open window from the balcony, service revolver in hand. The light from the shaded desk lamp cast on his white, harshly set visage.

“Bruce!”

Bruce paused a second, rather puzzled by the use of his Christian name. Eberhart had used to call him by it, of course, in the days before he’d got big ideas. With inward censure at his lapse, Bruce came on again, stopped beside the seated scientist and kept his gun trained on him.

“Yes, Bruce Cranley! That tree outside was pretty handy for getting in here unobserved. I’ve heard all about you taking Bax’s place. I’m going to kill you, doc, and risk the consequences. I warned you what I’d do if you ever again tried to wipe me out.”

“Wait a minute!” There was something in the serious urgency of Eberhart’s tones which made Bruce pause. “Let me speak first. Believe me when I say I’m genuinely glad that you are safe and sound. It means I haven’t your death on my conscience after all.”

With a harsh laugh Bruce moved closer. “Conscience! You haven’t got any!”

“I hadn’t until now, I admit. But that came from the effect of a toxic, a dog bite poison. It’s gone now. I’m the old Eberhart you’ve always known and I’m sorry for all I’ve done to you and Freida. I was out of my senses for the time being. As there’s a God in heaven, Bruce, that’s the truth!”

Bruce looked at him steadily, searching his mind. He could certainly see a decided change in the man. He even believed him, but he did not want to appear ready to admit it.

“You got yourself elected as ruler, I notice.”

“By popular acclaim, and from sheer necessity. Bax has gone to the underworld and probably has taken Freida with him. I need you, Bruce. I need all men with strength and intelligence. We’ve got to save Capital City from ruin. The engineers are on their way now to hear my plans. Forget our differences, at least for the time being, and work with me.”

Bruce slowly put his revolver away.

“Very well,” he said quietly. “I know the city is in a mess and I’m prepared to help save it. But if you pull anything, it’ll be just too bad, that’s all. My allegiance is still to Lincoln Bax. I’ll never recognize you as my ruler.”

Eberhart shrugged. He turned as the office door opened and a small group of men, the controllers of the city’s light and power under Eberhart’s direct orders, came in.

The scientist rose and motioned them to chairs. Soon they were seated in a half circle in front of the desk. Bruce sat down too, prepared to listen, but wary just the same. Then he caught the curious looks being cast at his disheveled appearance.

“Flight-Commander Cranley has just had a brush with the devouring vegetation,” Eberhart said briefly. “And it is to hear my plans for crushing it that I summoned you here. The cause of the growth—both vegetation and algae—is that each cell is in itself alive, and therefore an entity. So severing any particular part makes no difference because the severed part by reason of its independent cellular makeup grows again. The only way to destroy it, oddly enough you’ll think, is by ultrasonic vibration. Experiments before the war, and my own research recently, has proved conclusively that inaudible sound utterly destroys cellular life by agitating the atomic aggregates so violently they can no longer hold together. Total collapse follows. That is the plan we are going to follow.”

Eberhart turned to the drawings on the desk.

“Here are the designs of the machines you will build. There will be six mounted on tractors—six projectorlike machines. Ultrasonic vibrations will be directed at the vegetation as the tractors move along, and will destroy it root and branch. For the sea-algae and bird life six more projectors will be attached to airplanes, and used in a similar manner after the fashion of a gun. You, Cranley, will take charge of that.”

Bruce nodded slowly. So far, so good. If, as seemed likely now, Eberhart really was making a determined effort to save Capital City, Bruce was willing to shoulder his share of the job.

Eberhart picked up a set of diagrams and handed them to Beamish, the chief engineer of the group.

“Here you are, Beamish. Have photostats made immediately and tell the various firms concerned to start work at once. Drop all other projects. Every second counts now. Inform me the moment you are ready. I will televise a set of diagrams to other cities so that they can follow the same procedure. Mass attack by scientific methods is the answer to our problem. But you’ve got to hurry!”

“Right, sir,” Beamish nodded. In company with his fellow engineers, he turned and left.

Bruce remained seated, waiting. Eberhart pushed another set of diagrams over to him.

“I’m relying on your full cooperation in the aviation side of the problem, Bruce,” he said quietly. “Get photostats made, supervise the work yourself, choose your own planes and the best men you know. You have carte blanche—but for heaven’s sake get every scrap of speed you can out of your workers.”

Bruce picked up the plans, folded them, put them into his pocket.

“Very well, doc. I’ll do as you wish. But if and when we get the city freed you’ll have to excuse me for going back again to Bax and helping him return to power.”

Eberhart smiled glumly. “Suppose we save the city first—and then discuss it?”

CHAPTER XII

METAMORPHOSIS

During the next few days Bruce Cranley was busy carrying out his task. When he was assured that everything was going ahead as rapidly as possible, he made it his business to search for Freida. He did not find her, but she had left a letter for him at her apartment in which she announced her intention of accompanying Bax into the underworld. After collecting a hundred or so followers, who preferred his rule to Eberhart's no matter what the consequences, he had sought seclusion and safety below, cut off from all contact with the city above.

Bruce toyed with an urgent inner desire to dash off after his wife and explain what he was doing, but he decided against it. There was not enough time. The underworld was a complete city within itself, covering many acres where there were stored provisions, grain, agricultural produce, the ores from the mines, and the homes of the industrial and mining workers. There were factories too. In planning Capital City Bax had deliberately shifted all industrial eyesores below out of sight.

It would require days to go down that two-mile shaft, hunt out Freida, and get back. Besides, he might be needed at any hour. The only thing to do was hope for an early end of the battle with the growths. Freida must wait until then.

Putting thoughts of her out of his mind, Bruce hurried the engineering and assembly firms all he could. He realized the desperation which was gripping the city's inhabitants. Time was the chief obstacle.

On each succeeding day he was faced with evidences of the slow paralysis which was creeping over the city. Though equipped with the very latest tools, gangs of men found it impossible to keep the traffic and pedestrian ways open. Finally vehicular traffic stopped altogether, some of it jammed in the midst of leaves and branches. The buildings themselves were coated in green from top to bottom, the branches forming interlacing bridges and nets between them. It was fortunate that the buildings were made of transite, for probably no other material could have stood up to the strain.

There were other dangers rampant now. Tidal engineers reported that with every hour the steadily rising water from the Hudson and Delaware rivers was threatening to overwhelm Manhattan Island, as the algae forced the sea higher and higher from normal level.

Jammed ships and traffic, urgent pleas from other cities, darkening clouds of bird life in serene pale blue skies—all these things Bruce saw and worried over as the engineers toiled on.

At last the projectors were ready. The tractor machines were all set to start from the shops and the planes from the assembly fields kept clear at the cost of superhuman efforts.

Eberhart was immediately advised and summoned Bruce and chief engineer Beamish to his headquarters. For several minutes he gave them exact instructions regarding the handling of the projectors, arranging for television link up to keep check on their activities. Suddenly, in mid-sentence, he broke off and stared at a corner of the office ceiling.

"What the devil!" he muttered, and switched on all the lights. The window was blacked out with vegetation.

"Only a crack, sir," Beamish shrugged, looking. "You were saying?"

“Whoever heard of a crack in transite?” Eberhart demanded, then he swung round at a creaking, tearing sound in the corner behind him.

Astounded, all three men gazed fascinatedly as a fissure zig-zagged down the length of the opposite wall. It split into branches and a seam opened in the other side of the ceiling. Soon there was a new sound—a deep humming note which presently crept up the scale until it was like a fast revolving flange rubbing against a piece of steel.

“Look!” Beamish shouted suddenly, and pointed to the desk.

It was shivering, glowing weirdly with a million veins of subdued color. Its massive transite legs suddenly quivered, cracked, then literally flowed onto the carpet, letting the heavy top crash down in a litter of papers and overturned instruments. The top, too, shimmered like something out of the spectrum, melted into a gummy mess which slowly hardened like a lava round the paraphernalia in its midst.

“Earthquake!” Beamish gulped, jumping at the obvious conclusion. Quickly he amended it. “No! The plants must be tearing the building down!”

Eberhart shook his head quickly. “You’re wrong on both counts, Beamish. I’ve been afraid of this happening. That’s why I said matters were so urgent. It’s the very devil it had to happen now, before we can kill that other life.”

He paused, watching the opposite wall as it became suffused with color.

“Mutational change,” he snapped, with a glance at Bruce’s tense face. “We’ve got to get out quick! Transite, being element Ninety-three, is unstable. Now, like everything else, it has reached a mutation point and is changing—probably into lead. It’s that blasted short wave radiation at work again. Come on, while we’re still able to move!”

All three sprang for the door as the opposite wall flooded itself with color, twanged and creaked with the noise of its change, then began to smear and dissolve.

Out in the corridor Eberhart paused for a moment and looked anxiously about him. The whole building was filled with sound—the running feet of the staff, their alarmed cries, and above it all the deeper significant murmur of the dissolving metal.

“Our only chance is to try and get to the underworld,” Bruce said breathlessly. “It should be safe enough down there.”

They raced down the quaking corridor. Beamish turned and dived for the elevator.

“Come back, you fool!” Eberhart roared. “You’ll never make it!”

The scientist broke off, appalled at the accuracy with which he had foretold the danger. Jammed to capacity the elevator gave way at that very moment, flowed into glowing jelly and dropped its screaming occupants down the vast shaft.

“Jeepers!” Bruce whispered, sweating, as the floor shifted under him. “We’ll never get as far as the ground floor even with the stairs. The whole place is caving in.”

“The window!” Eberhart shouted over the din. “If we can reach the trees outside we might make it!”

He whisked up a transite chair even as it was beginning to glow and hurled it through the glass. Within seconds he had scrambled out onto a swelling arm of the vegetational cobweb that was stretched between the collapsing buildings. Bruce dived after him immediately. Neither of them had any time to spare for the Administration Building just sloughed and melted away even as they vaulted from it.

Buried in the greenery, hanging on for dear life, they were pitched up and down helplessly as the tough branches and tendrils tore free of their hold and went crashing down. It was a

wild, unearthly fall for both of them, accomplished in complete darkness.

For one thing the sky darkened to midnight gloom outside and the city lighting had failed. Even if there had been any, it was unlikely it could have penetrated the dense vegetation. For both of them the fall ended in a violent bump and left them buried deep in leaves and branches. From outside came the weirdest of sounds—the whispering creak of the crumbling city, the moaning of a fast rising wind, and remote concussions which might have been either atomic bombs or thunder.

“Okay?” Bruce called.

“Yes, I’m okay.” Eberhart was not far off, though hidden. “Let’s find the way out of this cursed stuff!”

But it took them a half hour of struggling and driving through the labyrinth to escape, only to undergo another horrible experience.

A wind of terrific force, the first wind they had ever known since Capital City had been built, smote them with blinding impact, knocked them reeling. When they faced it again they saw things which left them stunned and amazed.

Capital City had almost completely collapsed. The few buildings that remained were smearing like sand castles before an ocean tide, crumbling, melting away in great slabs of multicolored light. Overhead the sky was a tumbling riot of dense black nimbus cloud, edged with blinding flashes of lightning which spasmodically illumined the awful scene.

“The climatic machines must have gone,” Eberhart said grimly. “Quite a sad end for transite, eh? And it was such a glorious metal too.”

“Look!” Bruce yelled, pointing. For a moment a purple blaze of chain lightning revealed the distant harbors. Rolling in from them, high over the solid clifflike masses of algae, came a tidal wave, forced in on the island by the jammed ocean and unguessable fury of the wind in those open spaces.

Even as the two men watched they saw it spreading in mounting fury, smashing flat the few skeleton remains of transite, tearing away the green life, boiling and swirling onwards in a thundering flood.

“Run for it!” Bruce cried. “If we don’t reach that underworld, we’re finished!”

He caught the scientist’s arm and they went floundering side by side through the squirming green plants littering their way. Deep beneath it the transite had hardened to the consistency of lava, its mutation complete.

It was two miles across the waste to the underworld valves. Half a mile against blinding rain and hurricane wind brought the two men to the survivors of the catastrophe, all evidently imbued with the same idea. In droves, men and women were struggling along, some falling, others trapped and dead in the vegetation. Some had been struck by lightning. Others were rooted helplessly into the solidified transite and awaiting their doom.

Now, amidst the chaos, Eberhart was suddenly recognized. The news spread like wild fire among the survivors.

“Eberhart!”

“He’s here, with us, running for safety!”

“He got us into this mess with his fancy promises!”

“We must reach Bax! He wouldn’t have let this happen.”

In fact the survivors were in the mood to form a lynching party, so savage and disillusioned were they. But Eberhart paused and faced them, raised his hand.

“All right!” he shouted, over the din. “All right, so you blame me. I couldn’t help it, I tell you. It was science which killed this city, not I. Scientific law, I tell you. Kill me for spite if you like, but you’ll wish later on that you hadn’t. You still are going to need me in the future!”

“Bah! The man we want is Lincoln Bax. We never should have allowed you talk us into letting him go!”

For a moment or two there was an ominous silence among the people. Then the issue was decided for them as the approaching tidal wave smote them with a roar.

A yell of alarm went up and, their personal hatred forgotten, they turned and surged on again towards the distant underworld valves. Their hurried march soon degenerated into a pell-mell scramble for life, without regard for age or sex.

CHAPTER XIII

A WAY OUT

Sweating with excitement, Cranley and Eberhart hurried onward, too.

“Guess you had better luck than you deserved there, doc,” Bruce remarked angrily, as he and the scientist scrambled over obstacles. “One thing is certain—you’ve lost your short-lived rule.”

“I’ll get it back again, once these people understand. They’re excited at the moment, a natural reaction. When I get below—”

“If we get below!” Bruce interrupted him. “Take a squint at that! It doesn’t look too healthy.”

They stopped again amid a blaze of lightning. The giant underworld valves were visible now, fortunately clear of the plasma of hardened transite, but around them, in a solid phalanx, were the shoving, struggling, desperate people.

“We’re never going to get underground in time,” Bruce said finally. “Any ideas?”

Despite the wind Eberhart swung round and looked back at the chaos caused by the hurtling flood and melted transite. Eberhart found he had no ideas. He could do nothing except wait for the blow. From that tidal wave there seemed to be no escape now.

“Can you swim?” Bruce asked suddenly.

“Yes. Pretty well.”

“Okay. Then we take our chance. When the water comes, it will rush down into the underworld, and our one hope is that we may be carried along with it. Shuck your boots and coat. Get ready.”

Eberhart nodded. In the few seconds left them they both prepared to swim. When the tidal wave came it loomed up, awe-inspiring, monstrous in the flashing light. The din of its onrush drowned the cannonading thunder. Trees, vines, broken branches, all were churning in its midst.

Bruce and Eberhart were swallowed up in it, crushed down by its awful weight, fighting to get air into their laboring lungs. Desperately they both struggled upwards, ever upwards—

They bobbed to the surface in roaring darkness, found themselves being borne along with hundreds of other struggling men and women down one of the sloping valve tunnels.

“Doc!” Bruce yelled hoarsely. “Hey, doc! You there?”

The scientist’s answering cry showed that he was not far away. As light began to flicker upon the chaotic scene he shouted back.

“Bruce, cling onto whatever you can find that is floating. Hold on until the water has spent itself. If you miss there’s a two-mile drop which will probably finish us.”

Bruce had forgotten this deadly possibility. He shook the water out of his eyes and stared ahead as he was carried along with the current. The end of the main tunnel was near. The edge of the mighty elevator shaft leading below was in view, illuminated now by the two huge self-generating cold-light globes at its summit.

Nearer, nearer, the drop came. The sound of that torrent cascading below was like Niagara in flood. Bruce struck out desperately and missed the framework edge of the great shaft. An appalling chasm, fuming with mist and thunderous noise loomed near by. At this instant he felt

an iron grip on his shirt collar and with a mighty effort he was lifted clear of the water and dumped heavily on a huge girder above it.

“Th-thanks,” he stammered, as Eberhart, straddling the girder, gave him a rather crooked grin. “First you try and get me killed, then you save my life. You’re a strange fellow, doc.”

“No stranger than science and cockeyed bacteria make me,” Eberhart shrugged. “We’re quits now. I’ve evened up the debt I owed you.” He stared at the deluge and people being swept over the precipice like flies. “There’ll only be a few survivors from this catastrophe, I’m afraid. And the underworld itself won’t be much improved by this flood either.”

Bruce nodded silently, and for some time afterward the attention of both of them was fixed as they watched the fury of the water spend itself, which it did in about an hour. Simultaneously the shriek of the elements outside was suddenly silenced as the massive covers to the outer valves slid into position, sealing the underworld completely.

“That’s a good sign,” Eberhart said, shifting on the girder. “The power houses down below must be working all right. Seems to me we’d better start climbing down. It’s useless to wait for the elevator. Come on.”

They began to descend the transite ladder running down the whole length of the shaft. Resting occasionally on the giant girders, two hours elapsed before they finished the descent. Then knee deep in fast flowing water, climbing over dead, drowned, and maimed bodies, they finally reached the underworld. Unexpectedly it had not been deluged. The giant sluices and sewage conduits had handled the flood admirably.

Eberhart looked beyond the rescue and emergency squads in the immediate foreground to the army of people in the distance under the cold lights, a vast crowd trekking down to the center of the underworld city, survivors like him and Bruce. He turned with a bitter smile.

“Well, here it is,” he said dryly. “No way back, and only one way forward. Now we’ll join people who are waiting to cut my throat. Looks as if I’ll have to throw myself on Bax’s mercy. And will that be something!”

When they gained the underworld center, the people were certainly hostile, and Eberhart might have found himself in pretty bad shape but for the intervention of Bax. With his usual serenity, Bax calmed the mob, and assigned rooms in his own abode to both Eberhart and Bruce. For twelve solid hours they slept, and awoke to find good food and drink and fresh attire.

Shaved and washed, they presented themselves in the room where Bax had made his headquarters. Bruce smiled with relief when he caught sight of Freida, seated beside Bax. Jumping up, she threw her arms around his neck in a frenzy of relief.

“Oh, Bruce! Oh-oh, Bruce! My, but I’m glad to see you again! Gosh, was I happy when Mr. Bax told me you were safe. I’ve been simply wild ever since I heard the city had collapsed!”

“There, there, I’m safe.” He smiled, kissing her gently and helping her back to her chair. “Unless I miss my guess I’m going to be down here for a long time.”

“Very, very true,” Bax broke in, his voice somber. “In case none of you are aware of it, there are exactly two thousand people left in this underworld. On the surface there’s not, I believe, a single survivor. I heard from the other cities just before the final catastrophe. But none of their underworlds was as deep or strong as ours, since we were the major city. So I don’t think a single soul could have survived. Their last cries for help before the radio went dead were heartrending. I wished I could do something to help them.”

“When transite went everything went,” Eberhart muttered. “We made a mistake in constructing everything of that metal. Power houses, weather machines, everything just melted away. The whole world—or most of it—must now be covered with a skin of solidified transite-lead several feet thick.”

Bax nodded. “Quite correct. Down here is a small replica of your X-ray telescope and I’ve examined the surface through it. The surface is covered, yes, but most of the algae and plant life has died too.”

“That’s understandable,” Eberhart replied, reflecting. “For one thing the solidified transite would crush the cellular plant life, or seal down the roots and suffocate them. On the other hand the algae life would be partly obliterated by the terrific electric storms engendered by the breakdown of the climatic machines. But so long as that short-wave radiation pours down on the world’s surface, the algae will grow again.”

“And down here are two thousand persons with myself at the head, representing the last survivors of Earth,” Bax mused. “Sterile! The race of Earthlings is doomed to die because, so far, neither science nor inspiration has come to our aid. We have enough supplies in food, power, and other things, to last us for perhaps twenty years. We have also every scientific necessity. I had many valuable instruments transported down here when I had a vision of what was to happen to Capital City.”

For a moment or two there was silence. Then Eberhart asked a question.

“Just where do I fit into all this, Bax? Am I still the naughty little boy in the corner, or what?”

Bax smiled at him faintly. “You’re a marvelous scientist, Eberhart, but a poor ruler. Your mass psychology angle is all wrong. I have explained to the people that the catastrophe above was the work of Nature, and nothing else. They believed me. Down here I am the sole ruler and you are the chief scientist, just as it was at first. Actually we four are the Governing Clique. But the fact remains that, without my getting some great idea, I cannot deliver the people from the certainty of death or life imprisonment in this subterranean refuge. To you, Eberhart, may yet fall the honor of proving yourself our deliverer.”

The scientist sat back. A whimsical smile crept across his face.

“Funny how things work out sometimes,” he said. “If it were of any use to me any more, I’d still try and wrest power from you. But now it would be folly. Everything down here is so circumscribed. Give me a whole world or it isn’t worth the trouble. I guess I’m licked. And you’ve given me a tough one to solve! I’m just a scientist, not a miracle worker!”

“I thought, perhaps, synthesis,” Bax suggested, slowly. “In this condition of non-birth, isn’t it the only way to perpetuate the race? You once made synthetic meat.”

Eberhart sighed. “Between synthetic meat and living people there is an ocean of difference. Still, at least I can try. I’d like to see what resources you’ve gathered together, down here, the size of the laboratory I’ll have at my disposal.”

Bax got to his feet. “I’ll show you. And for whatever help you need, call on us or the rest of the people.”

Though doubtful about the possibilities of synthesis at first, Eberhart’s scientific imagination was stirred by the sight of the fully equipped laboratory Bax’s prescience had got together before the surface catastrophe. With some surprise, he also realized he had nothing else to do with his time. So Eberhart applied himself to the problem with all of his customary zeal. He spent hours studying cellular life and slow moving granules and virus under the

microscope or through the extra powerful ultra-lens machine. Finally he announced that he was going to try an experiment.

For two months he was at work, Freida, Bruce, and occasionally Bax, helping him. Gradually he molded together a mass of synthetic tissue in the form of a man. Day by day the others watched his capable hands knitting together nerves, synapses, and root-ganglia. They marveled at the delicate tracery of veins and arteries he had devised—the artificial heart made of gold with a valvular action as flawless as the intricacies of a clock—the eyes fashioned from lenses, complete with a synthetic optic nerve and irises which dilated and contracted on hair fine springs under the impact of darkness or light. Hair cells imbedded in the skull grew luxuriously under stimuli until by the time the synthetic man was fully fashioned, in the long, sealed transparent “creating tube,” it would have been impossible to distinguish him from an ordinary human being, asleep.

“Now what?” Bax inquired, when this stage had been reached.

Eberhart was silent for a moment, his powerful face thoughtful. After a brief checkup of the apparatus, he turned and answered the question, looking at the three interested faces.

“What I am going to do now will decide our future once and for all, so far as synthesis is concerned. I am going to pass a radiation current through this human being. It will be identical to the one streaming down on the surface, the one which Eddington said begot life in dead cells when the world began—one-point-three times ten-to-thirteen cms. We know such a current produces metabolism, evolution, and mutation, so it might equally well start life going here. The projectors at either end of this case will duplicate that wavelength exactly.”

Eberhart turned, grasped a switch, and gave a sardonic grin as he glanced at Bax’s thoughtful, bearded face.

“Say, Bax, you’d better ask those gods of yours to keep their fingers crossed. The fate of Earth’s peoples’ future depends on this.”

With that he jammed the switch home and a deep whining pervaded the laboratory. Tensely he stood watching the creature, but no more tensely than Bax, Freida, and Bruce.

A minute passed and nothing happened. Eberhart swore and put on more power. The creature began to glow with the fury of energy interchange passing through him. But there was not a tremor, not the faintest quiver of a reflex.

Eberhart looked ten years older when he cut the power off. He stood without speaking for fully a minute. Then he raised his gray eyes to the solemn faces.

“Useless!” he breathed, clenching his fists. “Useless! Months of work just thrown away on a theory! Life can’t be created by science—and truthfully I never thought it could.”

Bax looked into the case and gave a little sigh. Even his massive body was drooping a little from disappointment, but as ever there was no condemnation in his voice.

“At least you tried, and I never saw more brilliant surgical work. You are sure you haven’t overlooked something?”

“Only too sure.”

Bax pondered, his hand absently toying with the instrument beside him. Finally he turned and looked at it. It was the eyepiece of the powerful X-ray telescope with which he had viewed the surface at the time of the catastrophe.

“Is it another of those cases of conation and inspiration?” Freida’s voice whispered beside him.

“Eh? What!” He jerked out of preoccupation and looked down into her earnest eyes.

"You remember," she persisted. "It's the same as when we were in the plane. You told me about the physical guide operating before the actual idea?"

"Yes—yes, of course."

"Why did you take hold of that telescope?" she demanded. "You did it for a reason, sir. Think! What reason?"

"What's all this about?" Eberhart demanded impatiently, but the girl waved her hand at him.

"Don't disturb him, doctor. This may be the beginning of a great idea. His brain produces a physical sign and an effort of thought provides a reason for the act."

"Uh-huh," Eberhart admitted, raising his brows. "Could be."

"Yes," Bax said suddenly, straightening up with gleaming eyes. "I have it! Now I know why I held this telescope. The gods moved my hand to it, intending the movement to start an association of ideas. Telescope—space—planets! Eberhart! The only way for us to survive now synthesis has failed is to go to another world!"

The scientist gave a start of astonishment.

"Another world!" He laughed shortly. "And you say I am ambitious! We're trapped down here and you suggest another world—just like that. With what? How?"

"Hear me out," Bax insisted. "The gods are talking this time, not me. That's why I know my idea is right. The correct propulsive force for a spaceship would be atomic force, wouldn't it?"

"Well, yes—in rocket firing chambers. The usual recoil principle."

"Very well, then. We have huge quantities of copper down here from our mining activities, and that is the right stuff for disintegrative work. We must design rocket motors with complete atomic disintegrator equipment, then build the ship itself at the base of the elevator shaft. When the machine is finished, it can be tilted nose-up. The top of the shaft will have to be drilled straight on through because right now it bends at right angles to the entrance tunnel. It must be bored perfectly straight. A thin layer of transite lead will be left over the top like a skin, through which the departing ship will finally plunge like a clown through a paper hoop. A cut-off cover, controlled from our power houses down here, will be swung into place when the machine has passed through, thereby keeping our air supply at normal pressure."

Bax stopped, his eyes bright. Eberhart's face was a study.

"Why, hang it, man, you have it!" he cried. "And I believe it can be done too. But which world shall we travel to?"

"Venus," Bax said, without hesitation. "A young world, full of possibilities for a race trying to start again. On that world this deadly radiation will be masked by the dense atmosphere, so the power of procreation will surely function normally. What further difficulties we encounter, science will have to conquer."

Eberhart turned aside, his mind obviously made up.

"Leave me—all of you!" he ordered brusquely. "I want to work alone. I must design the proper motors."

Quietly the three obeyed his wishes.

CHAPTER XIV

AGE OUT OF SPACE

Later that same “evening”—judged by the clock for the cold light of the underworld never waxed or waned—Bruce and Freida found the first opportunity in many hectic weeks to while away an hour together. They elected to spend it in the rocky expanse just outside the city environs. Choosing a high eminence, they sat side by side, looking out over the busy life spread below them.

“I don’t know if you’ve noticed it,” Freida said presently, “but since we have been underground I’ve felt far better than I did in Capital City. Seems rather odd to me to be in better health away from the fresh air of the surface.”

Bruce puzzled over that for a while, his arm about her slender waist.

“How better? I haven’t noticed anything.”

“Are you sure you haven’t?” she insisted. “You didn’t notice something once before until I asked you to think carefully. I’m asking you to think again. For instance, I don’t feel quite as clever as I did, and I forget more easily, just as though I’m more human and less of a machine.”

Bruce shrugged. “Probably it is the air down here at that!”

Freida fixed her clear eyes upon him.

“No. I don’t think it’s the air,” she said finally. “I don’t know really how to explain it, but for the first time since the Change I feel like—like a woman in love.”

Bruce smiled, drew her closer to him, and kissed her.

“Suits me if you feel romantic,” he murmured. She pillowed her head on his shoulder as he went on. “Yes, now you mention it. I find a difference. Being a man and a woman means more than it did up there. I get a real kick out of holding you in my arms. Maybe I’m not so smart as I used to be, either. I’m doing a bit of forgetting myself now and again, too. Not that I care so long as we have each other. Newly-wed husband greets wife for the first time!” With that, he kissed her soundly.

She snuggled closer to him. In silence they gazed out over the reaches of the underworld.

“Do you believe Dr. Eberhart will succeed?” she asked, low-voiced. “Will it really be possible for us to start life again on another world?”

“How can I say? For myself I’m quite happy here without the hazards of space travel and the struggle to conquer a new planet. But, of course, there’s a posterity to think of.”

“Of course.” Freida whispered. “I guess it’s important.”

For perhaps an hour they remained in their quiet, peaceful eyrie until with a sigh, Bruce roused himself and helped the girl to her feet.

“This won’t do, honey,” he said regretfully. “We’ll have to be getting back to see if Eberhart needs anything.”

Arm-in-arm they began the return trip languidly, talking as they went. But before they left the high ground, Bruce paused and looked over the rocky expanse.

“Say, what’s that?” he asked.

He nodded at some delicate feathers of blue flame dancing about in mid-air not far away.

“Internal gas,” Freida answered. “Volcanic. Same sort of will-o’-the-wisps you notice over bogs. Rather pretty, eh? I’d forgotten you’d never seen it before.”

He watched the lights for a while. Finally taking her arm, he moved on with her again. . .

Much to Eberhart's annoyance and surprise, it took him six weeks to work out a practical method of utilizing atomic force for rocket recoil motors. Once he had accomplished this, the rest of the task was fairly simple, since he designed the space machine itself on the pattern of a submarine, and the immense resources of the underworld foundries did the rest.

Working from Eberhart's designs the engineers had the machine finished within a month, a period during which hundreds of workmen with atomic drills set about the job of straightening the underworld shaft. Eberhart supervised all of the work himself, not taking anybody into his confidence.

One "morning" he asked Bax, Bruce, and Freida to accompany him to the site of operations.

In speechless admiration they gazed on the dull black ovoid tilted vertically in its chrome steel cradle. Its blunt nose was pointing directly up the yawning mouth of the vertical two-mile-long shaft leading to the mouth of the cavern.

"Its blackness will do much to neutralize the spacial radiations," Eberhart explained. "I've made all the arrangements and am all set to go. I've stored copper in the power plant to carry me to Venus and back several times."

"By rights I ought to make this trip," Bax said.

"The only claim you have for making the trip is that you thought of the idea," Eberhart answered. "There's no other reason. This is a task for a scientist—somebody who knows how to deal best with the many physical disorders attendant on a space journey. Besides, the people here want you, not me. You're the man with the ideas. Also, I'm worried. It took me six weeks to work out these rocket motors, so I must be slipping. When I come back I'll analyze the air down here. I think there's something in it that dulls the mind, maybe that volcanic gas just outside the city limits."

"Can't be that," Bax said. "It's tasteless and odorless. I found that out when I first came down here."

"So is nitrous oxide, and that can produce queer effects all right," Eberhart grinned. "In excess it's deadly. Well," he looked at them sardonically, "maybe you'll shake hands with me before I attempt something no man ever did before?"

Bruce and Freida shook hands warmly enough, but said nothing. Eberhart looked at their young faces and frowned. Somehow they looked different. Then Bax's powerful grip was pumping his arm up and down.

"The very best of luck and our good wishes go with you, Eberhart. The fate of this planet's survivors is in your hands. Just make the trip, analyze everything you can about Venus for examination here, then come back. Agreed? No stunts? No dangerous explorations for the love of science?"

"You're the boss," Eberhart said dryly. With that he climbed into the machine and closed the airlock.

The gyroscopic interior kept the control cabin on even keel despite the tilt of the ship's outer casing. Settling himself before the controls Eberhart gave the warning for those outside to stand clear. Through the port he watched the immediate area gradually become deserted. Only now, fully conscious of the immensity of the thing he was doing, did he switch in the current to the atomic force motors.

The machine jerked. Then with a breathless uprush that flattened him in his seat, it began a terrific initial leap up the shaft. Faster and faster! He covered the two miles in a matter of seconds, and closed his eyes as the thick rock and transite barrier loomed before him. For an anguished instant he thought of what might happen if he had underestimated the thickness of that barrier!

There was an awful crash but, with hardly any jolt at all he roared through. Next, below, he saw the lid of the emergency lock sliding back into place.

Soon he was climbing high over the gray ruin which had been Capital City. He looked down on a vast plain, a titanic lava field as it appeared, already becoming remote. Far out to sea there loomed again a formation of new algae, born since the great electrical storms.

Presently he turned his attention ahead. The pale blue sky was darkening to violet. In thirty minutes of acceleration he had left the last vestige of atmosphere behind and thereby had become the first man to travel in free space.

Awed, he took stock. The sun hung before him, the pearly glory of its corona reaching for endless miles. The moon, nearly full, was of an incredibly bright silver and visibly a globe. To this was added the infinite hosts of stars, the distant planets and galaxial seas beyond. The void lay as a glittering abyss waiting—waiting to be explored. That made Eberhart forget everything else for a moment. Then his eyes searched for and found the brilliant blazing point of Venus.

He began to chart his course. Half way through, he hesitated and rubbed his forehead. An unexpected pain had him in its grip. The pain grew steadily as he flew onward. He no longer was capable of concentration—of doing hardly anything, in fact.

It was fearfully hot, too. He loosened his collar and mopped his face. Then realizing space might produce many unexplained ailments, his medical instincts came to the fore. He reached out for a clinical thermometer and thrust it under his tongue, at the same time testing his pulse rate.

Pulse, ninety-six! Temperature, one-hundred-and-six, Fahrenheit! It was preposterous! On Earth, he would be dead. Through a dizzy haze of pain he tried to think—until he noticed something else, something which jolted him into a full sense of his predicament and filled him with desparation. He had caught sight of his own hand holding the thermometer.

He held up both of his hands and stared at them in horror. They were thin as kite's claws and corded with blue veins under a skin as dry and yellow as a mummy's! Aghast, he reverted to his old habit when baffled, and thrust his right hand through his hair. It fell out in white chunks!

This brought him to his feet on quivering legs. Shaking with terror, he looked into the wall mirror and saw a bald-headed, stoop-shouldered man in flying kit which bagged on a shrunken frame! His face had grown incredibly old, sunken into shadowy hollows over which could be seen a tracery of fine seams. The eyes remained as feverishly bright spots in pools of darkness.

"Age," he whispered, and his voice rasped. His lips curled into a sardonic grin. "So that's what Methuselah must have looked like! Age! My stars!"

Dimly he knew why it had happened, but this was not the time to think it out. Fighting his pain he set the controls again, turned the machine around and began the return trip to the still not too distant Earth as fast as his throbbing heart and lungs would allow.

CHAPTER XV

THE LAST INSPIRATION

Half-dazed by pain and shock, Eberhart never quite knew how he made that terrible journey back to Earth. The interval was blurred and unreal, filled with periods of insufferable anguish that almost robbed him of consciousness. But when he came back into Earth's atmosphere the pain began to lessen, and finally ceased entirely. But the ordeal left him weak, tottering.

He radioed for the shaft to the underworld to be opened, refusing to answer Bax's amazed inquiries from the other end. He managed to guide the machine down the shaft to the base, before his senses reeled and everything became a blank.

The impression he made on those who found him was overwhelming. They discovered a man of apparently ninety years of age, feeble of build with only a few telltale evidences to prove that he really was Jan Eberhart, the fifty-year-old scientist.

Bax had him removed to his own dwelling and Freida, with her nursing knowledge, took over the job of ministering to him. A day passed, then a week, finally a month. Yet Eberhart lay in a coma, fed by injections, and delirious at times. Incessantly he continued to babble about cosmic rays, the solar corona, and Methuselah.

Bax, baffled, finally sought Freida's opinion.

"Senile decay," she said seriously. "But don't ask me why! Our advanced medical knowledge keeps him alive with drugs, and I have hopes that he'll recover and tell us what really happened."

"How long may that take?" Bax asked anxiously.

Freida shrugged. "Hard to tell. It may be several weeks, or several days. There's no way of knowing. As long as I can keep him alive, there's a chance."

Bax fell silent, clearly worried, gazing down at the motionless figure in the bed.

"One thing is certain anyway," Bruce remarked at last. "Space travel isn't the easy job some people imagine. If this is what happens, obviously we can't do it."

"True," Bax admitted quietly. "All our fond hopes dashed! As for me, I'm probably the most useless ruler in history."

"That isn't true, sir!" Freida objected quickly.

"Yes, it is," he said with a smile. "Thanks for being loyal to me, though. At one time I was able to get inspirations frequently, but not now. The last one concerned space travel, and that was many weeks ago. For some reason the inclination just isn't with me any more. In fact," he finished seriously, "I feel more like Lincoln Bax, military commander, than at any time since the Change!"

Freida shot a quick glance across at Bruce. Soon she looked back to the leader again.

"So you also feel it?" she asked.

"Feel it?"

"There is something wrong down here, sir," Bruce elaborated. "Freida and I feel almost as we did before the Change. Then Eberhart admitted before he set off into space that he was becoming less keen than usual. It took him a long time to work out those recoil motors, remember. Now you, too, say you feel changed, a sort of reversion back to what you were. Possibly others are affected the same way, only we don't know of it yet."

“Eberhart said it might be caused by that volcanic gas,” Bax mused. “I wonder?” Suddenly he made up his mind. “I’m going to have a look at it and get it analyzed if I can.”

He turned to go, but paused as Eberhart moved in the bed. Instantly Freida was at the scientist’s side.

“Doctor, you’re conscious again! Can you hear me? It’s I, Freida.”

“Yes, Freida, I can hear you.” The scientist’s voice was reedy with age. “I—I heard what you were saying.”

Bax leaned over him urgently.

“Eberhart, what happened out there in space?”

The aged face broke into a semblance of an ironic smile.

“Something I should have thought of—and forgot. Now I know I’m slipping! In free space one gets the full blast of that short wave evolutive radiation, with its attendant fast metabolism. I used up the energy of a good forty years in about as many minutes. My temperature and pulse rate showed it. Man will never cross space until a way is found to insulate space fliers against that danger.”

Eberhart closed his eyes for a moment.

“I may be very old in body, but I’m not old yet mentally, and I’m not going to die just yet!” he resumed. “Also, I know drugs, and if Freida will make them up I’ll be on my feet to annoy you again in no time.” His faded eyes rested on Bax’s strong features. “You see, Bax, I want to be here until we’ve conquered this mess we’re in. When we’ve done that I’ll be satisfied and you can pack this worn-out body into the first orange box you can find. And Bax, I should certainly get samples of that gas in an ampule. Freida will go with you. She knows about these things. The gas may be the cause of our queer recession. If not, I have another theory, probably the right one. Now clear out, will you?”

Bax glanced at Freida and together they turned to the door, leaving Bruce to handle things in case of any sudden emergency.

Once Bax and Freida had reached the gas area, Bax stood watching as the girl drew off a sample into the tube she had brought with her.

“Easy enough,” she smiled, returning to his side.

He did not answer, and a little frown crossed her face at the look in his eyes. Once before she had seen it, but never so brightly. He might have been carved in stone as he stared out over the swirling shapes in the rocky expanse.

“Freida—” his voice sounded oddly other-world—“Freida, I was wrong! The gods have not deserted me! Perhaps they have reserved their favors for this last—this mightiest—inspiration of all!”

Turning suddenly he caught the surprised girl by her slim shoulders and swung her to face him.

“This gas is going to be our salvation!” he said deliberately.

She hesitated, looking up at him, loath to question his intense earnestness.

“I know it!” he insisted. “Chance led me here. The moment I questioned why I came, I knew it was to find the means of delivering these people who have trusted me so long.” He paused, released Freida’s shoulders and drew a breath. “I shall never have an inspiration again,” he said slowly. “But that I don’t regret for I know that my duty as a leader will have been fulfilled with this final triumph.”

“I don’t see—” But Bax took Freida’s arm before she could get any further.

"You will, believe me. I want to have this gas analyzed the moment Eberhart is fit enough to do it. His is the only science I trust. Come. You'll have to fix up those prescriptions he was talking about. Get him well quickly!"

If any further indications of Bax's gradual descent from the heights of Olympus were needed, they were revealed by his anxious impatience during the week which followed. He constantly kept inquiring about the health of Eberhart and could hardly control his restlessness while waiting for the scientist to recover.

For his part, Eberhart convalesced as fast as restoratives permitted, but it was principally his curiosity to discover what was worrying Bax so much that finally got him on his feet and into the laboratory again.

There, a tired shrunken little man with a bald head, he took the ampule of gas Bax handed him.

"From what you've told me, Bax," he said, in his cracked voice, "this is going to prove the salvation of the people."

"I know it is! Analyze it!"

Eberhart glanced at Freida and Bruce as they stood watching, tense with interest. When he went through the routine of his test, he did it so thoroughly that it proved he had not lost his touch.

"Odorless, tasteless, it falls into no classification we know," he said finally. "There are traces of all the elements we can find in our atmosphere—nitrogen, oxygen, krypton, hydrogen. Here are all their bands in the spectroheliograph plate. In fact one might call it a composite gas. But I don't see what it can do for us." He shrugged.

"You've missed something somewhere," Bax cried. "Try all the other tests you know. So far you've only analyzed it. Try something else."

Interested by Bax's urgency, Eberhart went further. He tested the gas in various instruments, tried its density, its power of sound-wave carriage, its heat, its conductivity, its insulative resistance to various radiations. After this last experiment he looked up sharply and threw the switch on his instrument on and off several times, studying the fluorescent screen.

"That's odd!" he ejaculated. "This radiation doesn't pass through the gas. It's turned aside."

"What does that mean?" Bax demanded tensely.

"Presumably that the gas has a likely ionic quality in its molecular makeup."

Bax began to smile through his beard. "And what is radiation that fails to penetrate?"

"The shortest radiation," said the scientist. "It has a wave length of one-point-three times ten-to-thirteen cms." Suddenly Eberhart gave a tremendous start and glanced at Bax from beneath his shaggy white eyebrows. "Man, where do you get these ideas? This gas blocks the very radiation which is causing all of our troubles up on the surface of the Earth!"

Bax nodded. "That's it. I told you it was to be our salvation. I knew it even then."

"You mean it could take the place of our shattered ionic layer?" broke in Freida's excited voice. "Could it, doctor?"

"No doubt of it," he answered after a moment of thought. "It is very light in density and capable of mingling harmlessly with our atmosphere. Its own ionic quality and the ionization it will therefore impart to the molecules of the atmosphere surrounding it, should bring about a reestablishment of our lost shield. But," Eberhart finished with a dubious shake of his head,

“such a plan would require vast quantities of gas, millions of cubic feet. There would have to be enough of it to affect our atmosphere progressively.”

“We can get it,” Bruce answered quickly. “It’s volcanic and escapes through the seams in the rocks down here. It must lie in vast untapped quantities under our feet.”

“That’s what I figured.” Bax nodded at Bruce approvingly. “If we dig a shaft down, we can easily pipe the gas to the surface.”

Silence fell upon the group as everyone sensed the amazing possibilities of the idea.

“Yes, a giant funnel would do,” Eberhart said at last. “We’ll use atomic force to blast through the last skin of rock when our instruments show that the gas core is just below.”

“Then it will rush up the funnel and out into the atmosphere, to mix and form a protective surface for the Earth. What a triumph!”

“This time the gods have been generous.” Bax was smiling. “We must get the engineers to work immediately.”

“And who will take the final risk of setting off the atomic force charge?” Eberhart asked. “As I see it, to do things properly would be a suicide job. Somebody would have to remain in the shaft and fire off the explosive. Remote control won’t do for that. One slipup and the whole underworld might cave in, or be destroyed by volcanic fire from the shifting of the inner strata.”

“I’ll handle the dangerous job,” Bax said deliberately. “Since I’ve had my last inspiration and am fast going back to the status of a normal man, it’s my final duty to the people.”

“I see.” Eberhart meditated over it for a moment. “Do you know why all of us have less touches of genius and have grown more human?”

“It isn’t the gas, anyway,” Freida commented.

“No, it’s the transite. I realized that while I was convalescing. I’d plenty of time to think. Transite has mutated into the atomic equivalent of lead, just as radium will do over many thousands of years. It is an elementary scientific fact that cosmic waves and ultra short radiations—one-point-three times ten-to-thirteen included—cannot penetrate lead. So, shielded down here, our spurious gift of knowledge is fast waning. It never was a substantial thing, destined to persist. As the brain constantly develops a fresh layer of cells, those beneath are buried, and memory dies away. So, such cells affected by the radiation are being covered up. With it goes all pretense of being god-like.”

“Then if we stayed down here long enough, the human race might increase again?” Freida asked quickly.

“It might,” Eberhart admitted. “But to a human being a life in even a replete underworld like this is slow death. Lack of natural sunshine, fresh air, natural food—No, really to survive, life must go back outside!”

“It will.” Bax said softly. “It will!”

CHAPTER XVI

EBERHART PAYS A DEBT

Passage of many weeks found Eberhart, Bax, Freida and Bruce deep in plans for their proposed release of the volcanic gas, which the scientist had named Xogen-X. Soon their real troubles began. To plan out the sinking of the shaft and the building of the vast steel-and-rock funnel to the surface had been one thing, but the execution of it—especially that of the downward part of the shaft—was decidedly another.

Bax and Bruce took charge of the shaft sinking, and Eberhart and Freida that of the upper section which would be driven to the surface. But in the downward drive every conceivable difficulty was to be encountered.

After a month of burrowing with the transite-coated drills—for the metal was the toughest obtainable so long as it did not mutate—they encountered a hard core of rock. The core was under terrific pressure at this depth. The drills were chewed and broken and another month went by in comparative idleness while they were recast in the foundries. In the meantime suicide squads smashed at the barrier with atomic force charges.

The underworld rattled and vibrated incessantly when the drilling was finally resumed. But of course with every foot of descent, the pressure and hardness of the barrier increased with the square of the distance, slowing progress to eight feet a day. Also instruments revealed the core of the gas was still another mile or so below, at least.

“But we’ll make it!” Bax declared, when he and Bruce had studied the latest reports. “Yes, we’ll make it if we have to pick our way down the last half mile with teeth and fingernails! Come on. We’ve no time to lose!”

So back to work they went, struggling just as hard as the grimy, sweating engineers and laborers to bite deeper into the earth. Above them, floodlighted, rose the smooth walled shaft. There was no sign of a joint or break in it, except the tiny doorway.

More weeks went by, then months. Few noticed the passage of time. All attention was concentrated on the project itself. But everybody did take time off to celebrate when the upper half of the shaft was completed and tested, its valve cover was made all ready for the cover to be opened when the time came for the gas to be released. It was sheer misfortune that the gas wells were situated at the opposite end of the city, furthest from the surface elevator shaft and valves. Otherwise the work could have been halved. Still, such a thing could not be remedied. Eberhart and Freida’s part of the job was finished, anyway. But for Bax and Bruce work still went on.

Doggedly, despite shaft cave-ins, explosions, and outbursts of volcanic fury, they went on down, hardly noticing that in the passing months they had become ordinary men again. Particularly in Bax, was the alteration most apparent. Grim, bearded, strong as steel spring, that period of god-like calm and brilliant inspiration had gone. Instead he had changed into a husky, struggling even profane—giant. . . . But he was still the leader, and a superb one too.

At last came that wonderful moment when their instruments showed only six feet of unthinkable hard basic rock separated them from untold cubic miles of gas, under vast imprisoning pressures.

Drilling ceased. The rest was up to—Bax!

He, Bruce, and the engineers went up to the underworld for the first rest they had dared to take in many grinding weeks. So urgent had been the task they had slept and worked on the site of operations.

Now, as the elevator opened its gates into the underworld, it was like coming home to see the mass of eager faces waiting to greet them. As he stepped from the cage, Bruce paused and looked anxiously around at the throng.

“Say, Freida’s not here,” he said, in worried tones, looking up at Bax. “She must have known we were coming up.”

“Eberhart’s missing, too,” Bax frowned. They both turned as a woman in a nurse’s uniform approached them rapidly from the crowd.

“I have a message from Dr. Eberhart, sir—for you both.” The woman looked up at Bax. “I’m acting as Dr. Eberhart’s temporary nurse.”

“But that’s Freida’s job!” Bruce blurted out.

“Your wife is ill, Mr. Cranley,” the woman said quietly. “She is at your apartment. Dr. Eberhart wants you both to come at once.”

Bruce waited for no more. Tired though he was, he pushed through the crowd at desperate speed, Bax and the nurse trailing behind him. When Bruce reached the apartment ten minutes later, he found the wizened Eberhart awaiting him. Eberhart raised his hand for silence.

Bruce slowed up, caught at the scientist’s skinny arm.

“Doc, what is it? What’s happened? Why didn’t you tell me?”

“There wasn’t the time.” Eberhart paused as Bax and the nurse appeared. The woman went straight through to Freida’s room and closed the door.

“We’re near the crisis,” Eberhart said quietly. “Bax, see that Bruce stays here.”

He turned and followed the nurse. Frantic with anxiety, Bruce swung around to Bax who was standing in puzzled silence.

“They can’t do this to me!” Bruce cried. “Free’s ill! That means she needs me! Eberhart was inhuman not to have told me!”

“Take it easy,” Bax insisted, and pushed him into a chair. “You’re nervous and harassed. Sit down and get a grip on yourself.”

He saw to it that Bruce did not get up again either. There were many tense, anguished moments. Then at last their suspense was ended by an unbelievable sound—the crying of an infant!

Bax swung round and stared at the closed door. Bruce resembled a man who expects to see a ghost at any minute.

“It—it can’t be!” he whispered. “Bax, that’s a baby we hear. It’s an illusion. It isn’t there! The world’s barren!”

Bax said nothing. The surprise of listening to that crying infant had numbed him for the moment. To both of the men it seemed like an eternity before Eberhart appeared again.

He closed the bedroom door and stood with his back to it, a little goblin of a man in shirt sleeves. He was smiling cynically.

“I’ll bet you’re stunned,” he remarked at last. “Congratulations, Bruce! You’re the father of a lusty daughter! Hang it, man, don’t look so scared! It’s quite a natural biological function I assure you.”

“But—but it’s not!” Bruce stammered. “At least, not now. You told all the world there would be no more births.”

“That was before we had a lead shield over us. We’ve all gone back to normal. I’ve had news of other childbirths from different parts of the underworld. Both sexes, and since all the infants I have examined show no signs of genius, we may presume they are normal in every way, as your daughter is. It means, Bruce, that the race begins again!”

“Thank God for that,” Bax breathed. “All we have to do now is go up to the surface, after we’re sure the gas has reformed the ionic layer.”

Eberhart nodded. “And you still mean to do the job yourself?”

“Definitely!”

“And who will lead the people afterwards?”

“I see no reason why Bruce shouldn’t—he and Freida. Later on their daughter will have a say in it. Eh, Bruce?”

“Huh?” Bruce gave a violent start. “Oh, I—I don’t know what to think. My main worry is my wife. When can I see her, Doc?”

“Later. Right now you need a rest. You’re all in. Then when you’re awake again, I’ll see what I can do.”

Bruce hesitated but Eberhart was insistent. Finally he went into the spare bedroom and thankfully stretched out flat.

“Take this,” Eberhart said, handing him a glass of rosy-colored fluid. “It’ll help you sleep.”

Bruce drank the liquid, glad to ease his weary bones after weeks of toil. Eberhart stood watching him for a moment, walked out, closed the door softly, and rejoined Bax.

“I think I’d better get a rest, too, before preparing to set off the charges,” Bax remarked. “Maybe you can fix me some of that stuff?”

“Surely.” Eberhart opened his medical bag and prepared another drink. Bax sipped it slowly. In a moment or so, he rubbed his forehead vigorously.

“I feel—dizzy,” he muttered. “Just as though—”

He broke off, the glass dropping from his hand. At the same moment his knees gave way and he sprawled his length on the carpet. Eberhart stooped and, by exerting all his strength, managed to drag him into the armchair.

That done, he turned to the bureau and busied himself for a while writing a letter. He sealed it up, addressed it, then pondered for a long time. Finally making up his mind, he went to Freida’s bedroom door and called the nurse to him.

“You can finish this case by yourself now, if I send in Nurse Wilson from the hospital?” he asked.

“Why certainly, doctor, but—”

A curious look in Eberhart’s eyes silenced her.

“I have given both Mr. Bax and Mr. Cranley a good sleeping draft,” he went on, seeing her looking at Bax’s recumbent figure. “Neither of them will awake for about three hours. Whichever of them awakes first, give him this.”

The nurse took the letter and stared at him in astonishment.

“I’ll send over Nurse Wilson,” Eberhart finished. Picking up his bag, he left the room, quietly closing the door behind him.

After his call at the hospital—where in the privacy of his own room he tipped out the contents of his medical bag—Eberhart went direct to his laboratory and filled the bag with six

copper blocks, each with a magnetic detonator-terminal on the top. Then he went to the shaft elevator leading to the depths.

He, himself, sent the cage plunging down the vast length. Stepping out at the other end, he surveyed the scene of his operations. The foreman in charge came hurrying over.

“Oh, it’s you, Dr. Eberhart! Anything wrong?”

“No, nothing wrong. Bax has asked me to tell you men to get to safety. We’re going to destroy this barrier by remote control after all—but first I’m going to set the charges and make a test. Where’s the exact site?”

The foreman took him to the spot and showed him the special drillings which had been made. Eberhart nodded and put his bag down.

“Okay. When you reach the underworld, telephone me. Don’t forget to close the elevator doorway before you open the lid of this shaft to the surface.”

“Yes, sir.” The foreman hesitated. “What about you, sir?”

“I’ll tell you when my test is finished. Now be on your way.”

The man nodded, though he looked puzzled. Eberhart watched him collect his men and then head for the elevator. When the cage had soared up out of sight. Eberhart took the copper blocks from his bag and fitted them into the prearranged holes, wired them up to an electric contact-plunger, standing ready amidst the equipment.

The telephone bell connected with the underworld rang sharply.

“All set, doctor,” came the foreman’s voice. “We’ve shut the elevator shield and opened the surface valve cover. What do we do now? Put things back as they were and come and get you?”

“No,” Eberhart answered calmly. “That won’t be necessary. Just wait for further orders.”

He put the telephone back on its rest and walked slowly across to the plunger. He gripped the handle in his white, veiny hands, then stared above him. At an unthinkable distance over his head was a circle set with brilliant stars—

He slammed the plunger home—to the limit!

The explosion rocked the underworld to its depths. There was not a soul who did not feel it. In Bruce Cranley’s apartment the shock of it aroused Freida to alarmed inquiries of the nurse. In the adjoining room, the thudding shiver jerked Bax from his half sitting position in the armchair to the floor. He awoke, bemused, and rubbed his head until he was helped to his feet by the chief nurse attending Freida.

“Have I been asleep, or what?” he demanded.

“Yes, sir, for the past two hours or so. It must have been that dreadful explosion which woke you up—”

Bax was suddenly wide awake. “Explosion!”

“Yes, sir. Oh, Dr. Eberhart asked me to give you this.”

Bax took the letter and tore open the envelope. The nurse watched him read with widening eyes. He swung around as the door of the second bedroom opened and Bruce appeared sleepily.

“Did I hear something?” Bruce asked. “Sort of rumbling earthquake?”

“You bet you did!” Bax leaped forward and caught his arm. “Eberhart purposely drugged us so that he could blow up the bottom of the gas shaft himself. We must see what’s happened. Come on!”

Bruce hastily followed Bax out of the apartment. When they reached the elevator shaft doorway they found the steel slide barring passage and a mob of people milling around it.

“What’s going on around here?” Bax roared. At the sound of his voice the foreman of operations hurried up.

“It’s the gas, sir. Dr. Eberhart released it.”

“I told you I was the one who was supposed to release the gas,” Bax snapped. “You should have prevented him.”

“I didn’t guess what he was figuring on doing, sir.”

The foreman hesitated before explaining what had happened. Bax stood with compressed lips until he had finished.

“How about the gas?”

“It’s getting through fine, sir. We’re keeping a full check on it. Near as we can tell it will be about twelve hours before the pocket is exhausted.”

“Right. Stand by. I’ll stay with you.”

“But I won’t,” Bruce put in. “I want to see Freida and my new daughter. They mean more to me than all the gas in the underworld.”

Bax grinned. “I understand. All right, I’ll see you later.”

CHAPTER XVII

DELIVERANCE

Reports arrived, eight hours later, that the gas pocket was empty. When Bax got the news from the foreman, he studied the pressure gages. Their needles had dropped to zero. Next he inspected the atmospheric density meters connected with the surface instruments.

"There's one sure way to tell what's happening above, sir," the foreman remarked. "Zinc-sulphide screens turned face upward will cloud if that ultra-short radiation is still getting through."

Bax nodded. "See that the screens are tried, and report to me the moment you have any worthwhile information."

With that Bax left the instruments and elbowed his way through the excited crowd. They asked eager questions.

"Does it mean that we're going back to the surface, Mr. Bax?"

"Are you going to lead us as you did before?"

Bax turned and smiled at them.

"I'll be your leader again, if you still want me."

"Want you!" The gladness in their voices put an end to his doubts. Yes, he'd lead them to greater glories perhaps. Bax returned to his quarters.

For the next twenty four hours he waited impatiently for another report from the foreman. Finally news came over the radiophone.

"You did it, sir! Saved us again! The surface is fit for human life once more. The fluorescent screens are unclouded and our scouts report within the last twelve hours, the growth of algae life has practically ceased. In fact a lot of it is beginning to crumble away."

"So it will," Bax answered. "What Eberhart called the Law of Natural Selection is operating again—big things destroying little things. All you need to do is open every valve leading to the surface and leave the rest to me."

He switched off and opened the microphone to the main loud speakers.

"People everywhere!" His voice boomed through the underworld. "Our subterranean imprisonment is ended. I have just been advised that scientific research has at last conquered the deadly radiation which brought such a tragic aftermath to the greatest war in history. Continue to put your trust in me and I will do all in my power to lead you to a happier, saner mode of life. Remember that you and your few children form the nucleus of a new world state. Except for a miracle here and there, reports have shown we are the last survivors of an old world, and the pioneers of a new. So, you engineers and architects, draw out your plans for a new city and a new land. Those of you who are ready to go above and lay the foundations of our new empire can start any time you choose. Life begins again!"

Bax switched off and got to his feet, stood looking out over the busy surge of movement in the underworld. After a while, he hastened to Bruce Cranley's apartment. The nurse let him in.

"Could I see Bruce?" he asked.

"Why, certainly, sir. He's with his wife at the moment. We have all been listening to your broadcast. It's wonderful news that we can go above ground again."

"Yes, isn't it?" Bax said rather brusquely. Pausing at the door of the bedroom, he tapped first, then entered. The other nurse went out in response to Bruce's nod.

Bax's eyes strayed from Freida's blond head and eager, bright face to the tiny figure beside her. He advanced slowly, leaned over the little creature, massive, muscular and tall.

"I guess it's still the greatest event that can happen," he said at last, straightening up. His glance strayed to the bedside chair and Bruce, who was sitting there, unshaved but blissfully happy.

"We owe it to your foresight, sir," Bruce said earnestly. "If you'd never come into the underworld, things probably never would have been righted."

"We heard your broadcast," Freida cried. "It was marvelous! To think that as soon as I am up and about—and it won't be long with our medical knowledge—I can go out into the sunshine and fresh wind, feel the rain in my face. I'm looking forward to the simplest pleasures—a walk with Bruce." She drew the infant more closely to her. "How wonderful! Mr. Bax, you've mastered every problem we have had to face."

"With the help of the gods," he answered with a smile. "And, you know, Eberhart has a share in this final achievement. His letter to me is a typical example of the man—courageous, cynical—a scientist to the last. Listen."

He pulled the letter out of his pocket and began to read it.

"My dear Bax: Though you will never have an inspiration again or that moonstruck look in your eyes, you are definitely the only man to rule the people. I've decided that a doddering old nitwit who forgets can be of no use in the hard struggle of building a new world. I've done my share and skipped forty years of probably harrowing circumstance in the doing. I don't mind dying for I've often wondered what's on the other side. If I find more problems to be conquered that are as big as this one has been, I'll come back. So I'm going to release the gas.

"You'll find it will take about twenty-four hours to comingle with the rest of the atmosphere. Then it'll be safe for you all to go above. Good luck to you, Bruce and Freida. I feel I've paid the debt for the scandalous way I treated all of you when that dog virus got the better of my bloodstream. When the little lady grows up she'll marvel at some of the things we've done. Try not to paint me too black to her. I'm not so bad when you get to know me. Believe me to be, your sincere well-wisher—Jan Eberhart.'"

Bax lowered the letter and looked back at his two young friends. Again his eyes moved to the infant, then to the window through which he could see files of men and women who were already heading for the surface elevator.

Somehow to Bruce and Freida he looked symbolic as he stood there with the cold-light radiance etching into sharpness his powerful bearded profile and upright figure. He looked much as Moses probably must have looked when he at last had led his trusting followers to within sight of the Promised Land.

[The end of *Aftermath* by John Russell Fearn]