Expedition Venus

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By Hugh Walters

A Chris Godfrey of U.N.E.X.A. Adventure

Book 5 in the Series

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By the Same Author

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Chapter One

The debate which had been going on in the tall glass building of the United Nations Organization in New York reminded older delegates of the fierce discussion that used to take place in the late fifties and early sixties. Then U.N.O. had been divided between East and West—between Soviet Russia and her allies on the one hand, and America, Britain and the countries of western Europe on the other. Now the division was between the scientists of the various delegations, quite irrespective of their nationalities. Once the interminable wrangles had been political. Now they were about the next steps to be taken in the exploration of the Universe.

There was a large body of opinion in favour of consolidating Man's precarious hold on the Moon before proceeding further. But other delegates believed that Man should waste no time in probing the mysteries of other planets. The Moon, they argued, could be left to routine exploration.

In the end, as usually happens, there was a compromise. While the long discussion went on, a lunar base had in fact been established. After the first short stay on the Moon by four young men some time before, a permanent station had been set up there with a regular rocket service to carry materials and relief personnel. U.N.O.'s decision was to expand this lunar base and to use it not only for surface work but as the headquarters for further space exploration. Both sides were satisfied.

To carry this decision out would mean a considerable enlargement of the base to turn it into a miniature replica of one of the great rocket stations on Earth. This made the "moon-firsters" happy, for the vast accumulation of stores and men would permit the rapid expansion of lunar exploration. It also pleased the "planet-firsters," for here was a jumping-off ground that had many advantages over a

terrestrial one. So much more could be done with a space probe, launched under the low gravity of the Moon, than could be achieved with a rocket which had to fight against Earth's much stronger pull. It would be possible for the planetary rocket to carry ample supplies of fuel, enough to touch down on its objective and then return to base.

A special agency of the United Nations, developed from the co-operation of Britain, America and Russia in previous ventures, had been set up. Like all other organs of U.N.O., it had a popular name derived from its full title. The Universal Exploration Agency was known, inevitably, as UNEXA.

Of course, the first task of UNEXA had been to plan and supervise the setting up of the permanent lunar base. It had been busily engaged on this while its parent body had been preoccupied in deciding the next step. And when agreement was finally reached work on the base was already well advanced.

"When's your next spell at Lunaville?" Chris Godfrey asked his companion. The name he used for the base was the popular title of Man's first permanent foothold beyond his own planet. The two young men who sat drinking their coffee together had spent several tours of duty on Earth's satellite. Indeed, they were the first two human beings ever to have set foot on that strange world. Chris Godfrey, a brilliant young British physicist, had won fame by his previous rocket flights. And so had his friend—and former rival—Serge Smyslov.

"I don't know," Serge answered in perfect English. "As a matter of fact I'm a bit puzzled about it. I was due for another tour of duty in a fortnight's time, but yesterday I was told it was cancelled. Apparently I'm needed for something else."

"That's funny," Chris said. "I'm on the tour following yours but my duty's been cancelled, too. Now I'm waiting to hear why. Any ideas?"

"No," Serge replied slowly, "though there is a rumour

going round about a manned flight to Venus. I wonder if it's anything to do with that."

"We ought to know soon," said Chris. "UNEXA won't leave us at a loose end for long." He paused. "Any news of Morrey lately?"

Morrey was their American friend Morrison Kant, the third member of the team which had established the first temporary base on the Moon.

"Not for over a month. He'd just come back from a spell up there and was going home on leave. I expect he's been too busy fishing and sailing that boat of his to write."

"You're darned right, I have," a cheerful American voice sounded behind them. Chris and Serge jumped as if they'd been shot, for standing not a couple of feet away was the very friend about whom they'd been talking. The first shock of surprise over, they welcomed him warmly and ordered more coffee all round.

"By all that's wonderful, what's brought you here?" Chris asked.

"Don't know," Morrey grinned. "Had my marching orders a couple of days ago—told to report here—and that's all."

"There must be something—what you say?—cooking," Serge ventured.

"Seems like it. Anyway, let's not worry about it now. Tell us what you've been up to," urged Chris.

The three young men talked eagerly together, exchanging accounts of adventures on Earth and on the Moon. And, in particular, they speculated and theorized about the mysterious grey lunar mist that had so nearly killed them but which, by now, seemed to have been brought by their successors under some sort of control. Was it permanent control, they wondered, or might it break loose again in some new and more dangerous form?

To their great regret, UNEXA hadn't allowed them to be

on duty at the lunar base together for some time, so more than a year had gone by since their last opportunity to have a get-together.

When they had finished swapping news about themselves they talked about people whom they all knew. There was Sir Leo Frayling—dead now—that strange and brilliant man whom they'd hated and admired, the man who had organized the first human journeys into space. Then Sir George Benson, Christopher's great friend, who was Director of UNEXA. Sir George, still thought of by Chris as Uncle George, had been in charge of the great rocket range at Woomera. Now that UNEXA had taken over the manufacture and firing of all rockets, it had also assumed control of all firing stations, and Benson, with an Australian and a Russian as deputies, had the responsibility of carrying out the decisions of the special agency.

Whiskers Greatrex was another great friend. Now retired, he'd been a Wing Commander in the Royal Air Force and, as a young pilot, had been one of the heroes of the Battle of Britain. His most noticeable feature, and the one which gave him his nickname, was a huge ginger moustache—a treasured relic of those exciting and dangerous war days. Whiskers had been closely associated with them all during preparations for past adventures. Now—that famous facial adornment a little tinged with grey—he'd retired from active service, though he still kept in touch with his friends. His boisterous good humour endeared him to them all.

The cafe where the three friends had met was one they had often been to in the past. It was not far from the Royal Air Force Establishment at Farnborough—the organization which had played such a vital part first in aeronautics and then in astronautics. It was here that they had drunk gallons of coffee while preparing for their first lunar flights. The cafe had many memories for them.

"Did you know you'd find us here?" Chris asked the American.

"No," Morrey answered. "All I knew was that I'd to turn up sometime today at Farnborough. I dumped my kit and strolled along here automatically."

"So none of us know what we're here for—or even that the others would be here, too," Serge summed up.

"That's about it," agreed Morrey and Chris. The American went on. "But don't let's worry about it now. Something's bound to break tomorrow."

The telephone bell was ringing. Chris opened his eyes and reached for the instrument beside his bed.

"Godfrey here," he yawned.

"Mr. Godfrey. I've a message from the Air Commodore," the operator's voice said. "Sir George Benson has just arrived and would like you, Mr. Smyslov and Mr. Kant to join him at breakfast in one hour. Will you let the others know, sir, or shall I call their rooms?"

At the mention of Uncle George's name Chris had shot up in bed, all feeling of sleepiness now vanished.

"No, I'll call them," he answered, and replaced the receiver.

In a flash, without waiting even to put on a dressing-gown, Chris bounded off to rouse his friends. Soon they were discussing the coming meeting with Sir George, for they all felt that the reason for their mysterious calling together would be revealed. This agreed, each returned to his room and in double-quick time was ready for the great moment. Indeed they were so quick that they had to wait nearly half an hour before the man they were so anxious to meet appeared in the canteen with the Air Commodore.

Benson shook hands warmly with the three young men, especially with Chris, for whom he felt a particularly deep affection. After an exchange of greetings the Air Force officer left them and the four made their way to a table and prepared to eat. Though Serge, Morrey and Chris were consumed with curiosity about what Sir George might have

to say, they had to be patient until the meal was over. And then, over their second cups of coffee, the older man spoke.

"I know you're all bursting to know why you've been called together," he said briskly, "so I'm going to enlighten you."

Now that they were going to get down to serious business Chris studied his friend intently. He could see that Sir George, his hair plentifully streaked with grey, was showing signs of considerable strain. Up till now the scientist had put on an air of gaiety for the benefit of his three young colleagues, but, knowing him so well, Chris was sure that Uncle George was a very worried man.

"You can guess, of course," Benson smiled wryly, "that the reason you are here is because I want you to go on another space flight. Oh, yes,"—he went on before anyone could interrupt—"I know that between you you've made dozens of journeys to the Moon and back. But this time it's Venus."

So that was it! The three young men knew all about the decision of UNEXA, and each of them had speculated on who the space ship crew might be. Of course, they'd all secretly hoped they might be included, but it had seemed too much to expect that all three would be selected. Yet here was Sir George Benson, Director of the Agency responsible for the project, inviting them to make the journey together!

The scientist could tell from the excited faces of his companions what their answers would be, but before they had a chance to commit themselves, he hurried on.

"I'm afraid this project isn't going to be quite what we'd originally planned. As you know, it was decided to make an orderly exploration of our nearest planet following investigation by satellites. The Moon is to be the launching ground for the manned flight, but the satellites and unmanned probes are being sent off from Earth. Already a great deal of information has been obtained and the date planned for the manned flight had been fixed for the end of October."

"In six months' time!" exclaimed Chris.

"Yes, that's what we planned," agreed Benson. "Unfortunately our plans have been knocked for six. The launching must take place within a month!"

The three young men listening to UNEXA's Director gasped.

They knew that something serious must have happened to cause such an important and complicated operation to be speeded up so drastically. A fantastic amount of detailed work was necessary before the manned flight could be made. Hence the target date in six months' time. But to say that everything must be squeezed into one month seemed to set an impossible task. What could have happened to cause Sir George Benson to telescope his plans in this panic fashion?

Benson's face had suddenly become old and lined as he prepared himself to divulge information known only to a very few people. He spoke slowly:

"What I'm about to tell you is at this moment the world's top secret, so I needn't tell you chaps how important security is. If a single word of what I'm going to tell you were to leak out, the consequences would be disastrous. I can't emphasize that too much.'

He paused and then went on. "This is what's happened. To collect samples of the atmosphere, a couple of probes have been sent to Venus and back—that is in addition to the observation satellites which send back their information by radio. Well—the probes brought back atmosphere samples all right. But they brought back something else."

Chris and his two friends were listening to Sir George with the utmost concentration. They all knew that the probes he spoke of were specially designed rockets which orbited the planet and then returned to Earth. At some point in their journey round Venus the probes collected samples of the Venusian atmosphere. Then the rocket motors were re-started by a signal from Earth, the orbit was broken and the probes returned with their prizes.

"You know the routine when a space probe returns,"

Benson went on. “It is subject to careful disinfection by radiation to prevent the introduction to Earth of any alien spores or viruses which might be harmful to us. Well—one of the probes wasn’t disinfected carefully enough. It brought back from Venus a spore which escaped destruction.”

“What’s happened then?” Morrey asked breathlessly.

“This particular probe landed in the Sahara. It touched down in a small oasis called locally The Three Sisters from its three palm trees. For a month nothing happened. Then, six weeks ago, a team from the French atomic testing ground at Reggane made a routine call at the Three Sisters. The oasis had been blotted out. The three palm trees and every scrap of vegetation was smothered in a strange grey mould. A couple of wandering Arabs and their camels were found there covered with mould. They were dead, of course.”

“Horrible,” Chris said.

“It is,” agreed Benson. “Of course no one knew what the mould really was at first. Some botanists visited the site but they couldn’t identify it. In the meantime, the French team must have carried some of the spores back with them, for within a few days the mould appeared at Reggane itself.”

“What has all this to do with our expedition to Venus?” queried Morrey.

“This spore has begun to spread with explosive rapidity,” the scientist answered gravely. “It seems that conditions on Earth are ideal for it, and it is completely out of hand.”

“Is it harmful?” asked Serge.

“Very. It is spreading and wiping out all plant and animal life in the infected areas. We’ve tried everything we know to kill it, but without success. Unless it’s conquered very soon it will choke all life on Earth.”

The three young men looked at each other in consternation.

“Is there nothing that can be done?” Chris asked.

Benson hesitated, then took the plunge.

"There is only one thing we can think of," he said, and his voice became hoarse as he spoke. "As its presence hadn't been detected spectroscopically by any of the observation satellites, it can only be present very sparsely on Venus. In other words either conditions there or some other agent is keeping it under control. You three must go and find out."

For a time no one spoke. Each of the men realized what was being asked of them. A journey to Venus would be full of unimaginable dangers quite apart from the ordinary hazards of space flight. If Venus could produce such a malignant form of life what chance had they of survival? But if they didn't go all life on Earth would come to an end. No wonder Sir George Benson looked like an old man.

Chris looked at Morrey and Serge. They had gone pale at the scientist's words, but in their eyes he read the answer he was seeking and he knew he was speaking for all three.

"Very well, Uncle George," he said. "We'll go."

Impulsively Benson grasped his hand, and then those of the other two.

"Thank you," he choked. His voice was scarcely audible.

Chapter Two

Chris and his friends listened silently to Benson's account of this stupendous disaster. It was incredible that no news of this had leaked out, and Morrey asked why.

"It's been prevented by a ruthless censorship," Sir George said. "If an inkling of this got out there would be world-wide panic with the most horrible consequences. That's why we've got to move quickly. Unless we can find the answer within the next five or six weeks it will all be over."

"What are your plans?" the young Russian asked.

"We aim to blast you off from the lunar base on the twelfth of next month. Venus will be fairly close but not at her closest. We can't afford to wait for that. You'll get plenty of fuel, so you'll return direct to Earth—to Woomera probably."

"Do we go alone?" Serge voiced the question they all wanted to ask.

"No. There'll be room for five people in the rocket. One of your companions will have to be a biologist, and I'm not sure about number five."

"What are the immediate plans?" Chris wanted to know.

"There won't be time for much training," the scientist answered. "Not that any of you require much as you make regular Moon flights. There will be some special briefing, however, and I expect we'll have to knock the other two members of your crew into shape. Hope we can get hold of someone who's had experience. It would save so much time."

"But why have we come to Farnborough?" The question was Morrey's.

"Firstly, because it's a convenient meeting-place for all three of you; secondly, to comply with regulations you've still

got to have a medical check-up and a short, sharp toning up in this establishment's torture machines; thirdly, because it's a convenient place from which to make your journey," Sir George answered.

"Journey?" three voices chorused.

"Yes. You're going to Africa to see this mould at first-hand. As part of your briefing you've obviously got to see what you're up against. It's far too dangerous to bring the mould to you, so you've got to be taken to the mould. Of course you'll be protected because we've found that the ideal protection against the spores—-which are really mould seeds —is a light-weight space suit."

"When do we go?" asked Serge.

"This afternoon."

Four very serious-looking people rose from the breakfast table more than an hour later. In their places were half-empty cups of cold coffee which they had completely forgotten. An impatient waitress, who'd had strict orders to leave the quartet undisturbed, cleared the table in a furious temper.

"Heaven knows what they've been gassing about all this time," she stormed. "Pity they've got nothing better to do."

"The idea is this," Benson was saying to his three friends as they walked along in the warm sun. "You'll fly to Oran which is three hundred miles north of the infected area. We've made our temporary headquarters for the study of the mould at Oran, but we'll probably have to evacuate before very long. From Oran you will fly over the infected area and penetrate it on the ground in your space suits. You'll be given all the information we've managed to gather.

"After you've become acquainted with the enemy you'll have a short spell of conditioning here or in Russia, after which you'll be ferried to Lunaville. When you blast off on the twelfth you'll be carrying plenty of fuel, so we'll be able to build up a high velocity and reduce the time of your journey.

You'll orbit round Venus at a height of your own choosing until you've found how to conquer the mould. Then you'll break orbit and be guided back to Woomera. Any questions?

The quartet was just about to enter one of the establishment buildings as Benson concluded his outline of their future plans. They paused as Morrey asked:

"Suppose we don't find out how to kill the mould?"

Sir George shrugged his shoulders.

"There won't be much point in coming back, will there?"

During the rest of the morning the three young men received medical checks both before and after runs on the giant centrifuge. It was a trying time as they waited for the report, because it could mean that if any of them failed to come up to the standard required, he would be barred from making the journey. They were greatly relieved when each was pronounced fit.

Sir George Benson joined them again for lunch.

"I've been in touch with my office in New York," he informed them, "and now that you three have been roped in preparations are going ahead at top speed. Unfortunately I shall not be able to come to Africa with you as I've to be back on duty in the morning. All the resources of UNEXA will have to be mobilized if we're to hit the target dates. Would you like Whiskers to come?"

The pleasure which this suggestion gave his companions was sufficient answer.

"I thought you'd like that," he said, as the hubbub died down, "so I was on the phone to him this morning. He's on his way here now."

"Good old Whiskers," laughed Chris, "he'd have broken his heart if he'd been left out. How's he managed to get away from his family?"

"I think we'll get round Sylvia all right," said Benson. "His sons are both away at school, so I think he'll manage it. I

know he's been browned-off lately, with nothing to do except prune his roses. When I saw her a few weeks ago Sylvia said he was turning into a grisly old bear. She'll be glad to get rid of him for a while."

"What time do we take off for Oran?" asked Serge.

"Four p.m. Whiskers should be here an hour before that. I want you all to go to the stores and draw some kit. More stuff will be issued at the other end, and there'll be someone from UNEXA waiting for you. Well, I must push off now. My plane leaves London Airport about the time you take off from here. Good luck to you all. I'll be seeing you when I get back."

Sir George shook their hands warmly and then turned and strode sharply away.

"Come on. Let's get our tropical kit," Chris suggested. The others forced a smile and with a jaunty air marched along to the stores.

Evidence of meticulous planning was obvious as soon as they entered the building. In four neat piles lay clothing suitable for the sub-tropical region they were to visit. An officer was waiting for them and indicated to whom each pile belonged. The fourth, of course, was ready for the gallant Wing Commander who should be there at any moment.

"I think you'll find they fit," the officer said. "We have all your measurements and we've done the best we can. Would you like to get into them?"

Though it seemed a bit incongruous to wear khaki drill in England, they knew that before long they would be in a climate where it was essential.

With a grin Morrey seized his pile and walked through the door indicated by the officer. Soon they were all examining their equipment with close interest and before long were admiring each other in their new clothes. Suddenly the door burst open and someone outside gave a loud whoop. The three young men turned and rushed to greet their old friend Whiskers, who came in, panting and blowing, with his own

pile of kit. Letting it fall on the ground the new-comer seized and pumped in turn the hands of his friends. After dancing happily around for five minutes they all suddenly realized that what they were trampling on was Whiskers's new tropical kit!

The Royal Air Force plane skimmed smoothly above the clouds. Chris, Serge and Morrey looked very smart in their new lightweight clothes, but poor old Whiskers was very bedraggled.

"I'll get these cleaned up a bit when we get there," he muttered, as he looked down at himself.

Just then an Air Force corporal appeared from the galley at the rear of the plane.

"Ices with the captain's compliments," he said, standing stiffly with a tray.

The ices certainly looked very appetizing and the four passengers lost no time in getting down to them.

"Who is the captain?" Whiskers asked the corporal.

"Squadron Leader Dunbar, sir."

"Wonder if I know him. Tell him I'd like a word with him when he can spare a moment, Corporal," Greatrex said.

"Very good, sir," the man answered, as he went forward to the crew's compartment.

"These buses are today," sighed Whiskers, "about twenty times as big and four times as fast as the old Wellingtons and Lancasters. Good job they'll never be used in anger. They could carry a real packet."

His musings were interrupted by the arrival of Squadron Leader Dunbar.

"Glad to be of service, sir," he said, shaking Whiskers's hand. "I've never met you, but I've heard about you. One of the instructors at Cranwell was an old friend of yours—Wing Commander Wood."

"Old Woody! Yes, I know him well," Greatrex laughed, his moustache quivering with pleasure. "Remember me to him when you see him again."

"I will, sir, I will. I've heard about you chaps, too," the officer said, shaking hands with Chris and his companions. "I suppose this kind of a trip must seem rather tame to astronauts like you."

"Don't you believe it," Chris said. "I always get a thrill out of a plane flight. What time do we reach Oran?"

"In about four hours," Dunbar informed them. "I don't know what's going on out there, but we can't use the airfield during daylight."

The pilot's unsuspecting reference to the object of their flight had a slightly dampening effect on the little party, for Whiskers, too, had been hurriedly briefed on the object of their journey. So there was no chance of them catching a distant glimpse of the invading growth from Venus.

When the pilot had gone they began to discuss seriously the menace that threatened Earth.

"Sir George did tell me that they'd tried every possible fungicide and weedkiller. And flame-throwers and petrol. Nothing really kills it. Within a few hours of a patch being scorched clear, it's overgrown again. The mould seems to spring up again from the ashes. The one thing they're afraid to try is blasting it with H-bombs. They think it might only distribute the spores more widely," Whiskers told them.

"I still don't understand how the whole thing can have been kept so quiet," Chris observed.

"Oh, I can," Serge put in. "If the security measures are thorough enough it can be kept secret all right. And it's got to be kept secret. Just think what would happen if it weren't."

To switch their thoughts to another direction, Whiskers asked if any of them had seen or heard of Tony Hale, the boy who had accompanied the three friends to the Moon. Young Tony had been cured, then, of a fatal disease and had helped

to save the lives of all of them.

"He's not a boy any longer. He must be about twenty now," said Morrey. "No, I've never seen him since we set up Moon Base One. He writes, of course."

"Tony writes to me, too," Serge told them. "I believe he's doing very well. He's a mechanic with International Rockets."

"I saw him about five months ago," said Chris. "I was at International Rockets talking about a new alloy for nose cones. The chief designer was taking me round the plant and I came across him accidentally. He told me Tony's one of their best mechanics. Of course, he's a bit of a celebrity there because of his flight. He's pretty modest though. Never boasts about it. But he told me he lives for the day when he can get into space again."

A little later Squadron Leader Dunbar rejoined his passengers.

"We'll be landing in about half an hour," he told them. They looked through the windows of the plane, but they could still see only the sea of clouds far below.

"Though it's still light enough up here it'll be nearly dark by the time we touch down," the Squadron Leader told them. "You won't see much of Oran tonight."

Sure enough, as Dunbar had said, the lights were twinkling below as they broke cloud. Soon the airport beacon came into view and within minutes they were skimming along the concrete runway. It was a smooth landing. Quickly the plane was slewed round and began taxi-ing towards the lighted building in the distance. As they bumped along the concrete they could see other planes landing and taking off. Oran was a busy airport that night.

Come inside, gentlemen."

General Leclerc had escorted them from the plane and now they stood outside his office in the white concrete building at the edge of the airfield. Following the military

governor's invitation, Whiskers led the way, closely followed by his three companions.

The sparsely furnished office was not very large, and the General's desk seemed to fill most of it. Their host, with a wave of his hand, invited them to be seated.

"During the last twenty-four hours," he began, "the mould has started spreading more rapidly. Over a thousand square kilometres are now covered. This afternoon it was reported that an Arab settlement less than two hundred kilometres from here has been infected. Only by the most rigorous measures have we prevented the news from reaching this city. Tomorrow a helicopter will take you to the danger area. Tonight I will offer you what comfort I can."

Chapter Three

News that the creeping growth was so near made the travellers give little thought to comfort. They were more concerned to learn all they could about the enemy from Venus. The military governor explained that he was no scientist, but that a number of the best men in their respective fields had been rushed to his city, which they had briefly made their headquarters. It had been from Oran that the great effort had been made to destroy the mould, but all had been in vain. Most of the scientists had withdrawn to continue the battle from another point.

"I suggest you get what rest you can, gentlemen," Leclerc concluded. "You will be called at first light tomorrow, and under the guidance of two of our biologists who have remained behind for this task, you will be taken to see the mould."

Long after he'd stretched out on the camp-bed Chris lay tossing in the sweltering heat. How he would have enjoyed visiting this wonderful sun-drenched city in the ordinary way. It was hard to believe that it was to be the scene of an ignominious retreat before an invader from another planet. Suppose they reached Venus and suppose they failed to discover the means to destroy the grey enemy. Would the Earth indeed be doomed as a result of one fatal mistake? How easy it was to see—too late—what tremendous care ought to be taken when contact is made with extra-terrestrial life.

If anyone had asked him, Chris next morning would have declared that he'd not slept for more than ten minutes. In actual fact he'd been asleep for two hours before he was wakened by Whiskers shaking his shoulder.

"Come on, Chris. Time to get up. The others are dressing already."

The Wing Commander sounded unusually restrained as he roused his friend. Usually such a ceremony would have taken place rather more vigorously, and Chris could remember some hectic scrums in the past. Perhaps Greatrex, too, was feeling the same depression as he was about to come face to face with the grey enemy.

When they had all dressed, General Leclerc greeted the four friends punctiliously and invited them to join him at breakfast. During the meal he told them that two biologists, Dr. Jacques Lorin and Dr. Pierre Isnard, would take charge of them and introduce them to the mould. Understandably none of them felt really hungry that morning.

As soon as they had finished, the General stood up and put on his peaked hat.

" Follow me, gentlemen," he requested, and—glad of action—his guests walked close behind.

Rarely had Chris seen two men so dissimilar as the two biologists. Dr. Lorin was a man of uncertain age with a large domed head which was completely bald. He wore thick-lensed glasses and stooped slightly. His handshake was feeble compared with the firm grip of his much younger colleague. Pierre Isnard was much the same age as Chris, Serge and Morrey. fie had a shock of unruly black hair and broad shoulders. The young men took to him at once, for they all liked his flashing smile.

After he'd finished the introductions General Leclerc took his leave, saying he hoped to see them all once more after they had been to see the mould. Meanwhile they would be in the care of Lorin and Isnard. With a stiff little salute the General was gone to perform other duties.

It was the older of the two biologists who began their instruction.

"A spore," he explained, "it is a tiny seed. Many of our plants have them. Usually they can preserve the life germ within them in the most adverse conditions—of heat, of cold and of lack of moisture. Some of them seem almost

indestructible—but not quite. It is the spore from Venus alone that has beaten us. That it has been evolved to withstand far greater extremes of temperature than could be found on Earth is understandable. What we do not know is why it should be able to survive temperatures of over seven hundred degrees centigrade."

He paused and then went on. "We have actually destroyed the mould spores by baking them at an even higher temperature, but it is physically impossible to do this on anything like the scale necessary to control its spread. If you will come along to the laboratory we will show you some spores."

The little party trooped after Dr. Lorin, who led them into his lab.

"I am sorry. Most of the apparatus has been removed," he apologized, "and I have only a microscope of low power. Pierre, will you show the enemy to our guests?"

The younger biologist put a glass slide under the microscope and then adjusted it before calling the others to look through it. There wasn't much to see. Imprisoned inside the glass was a brown blob, irregular in shape. Actually it was almost too small to see with the naked eye, but under the microscope it looked the size of a thumbnail and seemed harmless enough.

"Now this is a fragment of the mould itself," Pierre informed them. He handed round for their inspection a sealed glass jar. Inside was a mass of what looked like grey cotton-wool. When they had each looked at the glass it was taken from them by Dr. Lorin, who locked it away carefully in a glass cabinet.

"One of the most terrifying things about the mould," Dr. Lorin went on, "is that it lives on any type of organic matter —vegetation, animals, human beings. You see how carefully we handle these laboratory specimens. If there were to be an accident and a spore were to touch the skin of one of us, within twelve hours that person would be a mass of mould.

In the early days of this invasion some dozens of people died. Now we take rigorous precautions and we retreat well ahead of its steady advance. It is possible to come into close contact with the mould by wearing a specially designed suit—but then you young men are used to wearing space suits. Ours are very similar, with self-contained oxygen supply, of course. They are entirely metallic to avoid spore contamination—rather like diving-suits. As you leave the infected area you will be sprayed with a flame-thrower. Don't worry. Your suits are insulated."

"When we go to Venus what is it we shall be looking for?" Morrey asked.

"We are hoping you will discover an organism that acts as a parasite and destroys the spore, or that will exude a poison which will kill it," Dr. Lorin answered.

"But how shall we know if we have discovered what we seek?" was Serge's question.

The elder man looked at his younger colleague as he answered.

"That is where the biologist member of your crew will come in. He will take some mould cultures on the voyage and as you orbit the planet he will be taking samples of the Venusian atmosphere and its contents. These he will inject into the growth of mould and observe the results. When he has discovered something that will kill the mould half the battle is won."

"Half?" queried Chris, Morrey and Serge together.

"Yes, only half. We have to be sure that the new discovery is not more dangerous than what we are seeking to destroy. We have to make certain that we can control it and that it will have no harmful effects."

"That will be some job, won't it?" observed Whiskers.

"It will be a responsible and dangerous task," agreed Dr. Lorin.

"Glad I'm a physicist and not a biologist," said Chris. "I wonder who the chap will be we'll take to do the job?"

There was a discreet little cough from Pierre, and Chris and his friends swung round to face him in surprise.

"You?" they chorused.

"I hope so," the young man answered modestly.

"It is not settled yet," Dr. Lorin observed severely. "My young colleague is very headstrong and insists that it shall be he who will go to this planet. I tell him it is for others to decide, so he must not—how do you say it?—count his eggs before they are hatched."

"But have you ever made a rocket flight?" asked the astonished Chris.

"Oh, yes," Pierre assured them. "Once I have been to Luna-ville. But it was for a short time only. You would like me to come with you to Venus?"

"Sure we'd like you to come," Morrey said heartily, "but we don't decide. Whoever is coming will have to get in some pretty slick training. There isn't much time left."

A few minutes later the little party had made its way to the airfield. A French Army helicopter was waiting for them. Silently they climbed inside. During the thirty minutes' flight no one spoke. Then the helicopter touched down on a small landing strip near a cluster of concrete buildings. Chris and his friends followed the Frenchman into one of them.

"Now you will put on your protective suits and go to see the mould," announced Dr. Lorin. "I am sorry, M. Greatrex, it will not be possible for you come too. Suits we have only for these young men. You and I will remain behind."

"But can't I get a bit nearer? I'd like to have a look at the bally stuff," grumbled Whiskers.

"That is not possible," the senior biologist stated. "We must not allow anyone within two miles of the mould without he is wearing a suit. Pierre, will you conduct our

visitors to the dressing-room?"

The young Frenchman led them along a corridor to another fairly large room. It reminded Chris and the others of a scene they had looked at many times before, except that the suits they saw waiting for them were rather different from the space suits they were used to wearing. They looked at them with interest.

"They have no radio," Serge said, turning to their guide.

"No. There has not been time to build suits with radios. All these have had to be made very quickly," he told them.

"How do you talk to each other with these things on?" demanded Morrey.

In reply the smiling Frenchman indicated a number of school slates hanging by cords from a hook.

"We write messages to each other on these," he announced simply.

"Well, I'll be blowed!" exclaimed the astonished Chris.

Half an hour later four weird figures, carrying their helmets, emerged from the building into the blinding sunshine. They made their way ponderously towards the place where two military trucks were waiting. As Pierre had already instructed them, Morrey and Serge went to one while Chris and the young biologist climbed into the other. Pierre drove the truck through the deserted streets of the gleaming white town. Only stray dogs walked the hot roads.

On the little convoy went and the palm trees between the houses became more frequent. Soon they passed the last house and trundled down the dusty road which was shimmering in the heat. Half a mile ahead they could see a little knot of vehicles alongside the road, and within a minute or so Pierre was slowing down to a halt beside them. Immediately behind, Morrey had halted, too. All four got out of their vehicles and were met by a half-dozen men in French army uniform.

Pierre spoke rapidly to the officer in charge who had stepped forward and saluted.

"We must leave one truck here and all go forward in mine," the young biologist said, turning to his companions. "You see—we must abandon any vehicle which goes beyond this point. We must walk back to the decontamination station over on the right."

"Can't we ride back, then?" asked Morrey.

"No. It would be too dangerous. When we go near to the mould the truck will be infected by the spores. It would not be worth the labour to decontaminate it. We must abandon it and walk back."

The four young men stood while the soldiers fixed their helmets and adjusted the oxygen supply. Morrey found himself trying to talk to the others, forgetting for the moment that they had no radio. Seeing his lips moving Pierre smiled through the window in his helmet and pointed to the slate which was slung across the American's shoulders. With a wave of his hand Morrey indicated that it was of no importance what he wanted to say. With an elaborate gesture Pierre invited the others to follow him aboard the truck.

Chapter Four

They all climbed into the vehicle and Pierre took his place at the wheel. The officer and his men were looking at them curiously, even with concern. And then Chris realized that they were really facing danger. If they should have an accident, or if a suit proved faulty, the microscopic spores would soon do their deadly work. No one could come to their rescue.

These solemn thoughts didn't seem to be shared by his companions, for Chris saw that Serge and Morrey were carrying on a conversation by writing on their slates as well as the jolting vehicle would allow. Suddenly Pierre stopped the truck and pointed. They all turned their heads to look.

There had been no houses or cultivation for some distance, but the ground was covered with rough grass interspersed with tall palm trees. As they looked in the direction indicated by the Frenchman they saw in the middle distance a change in the colour of the landscape. Instead of the olive green of the grass and palms, everything was a uniform grey. Even tall trees seemed to be enveloped in this grey shroud. In spite of the heat Chris shivered at this first sight of the creeping death.

The truck jerked forward and they rolled steadily on towards the mould. Each of them was looking intently ahead as they drew nearer to this invader from another planet. Pierre was driving very slowly now, and they were able to watch out for the advance guard of their creeping enemy. Then they saw it. A few yards ahead was a palm tree. At intervals along the length of its trunk appeared the fateful grey patches, which, even as they watched, grew larger.

In another few yards they were among the infected grass—at first a few tufts and then all of it. Now all colour had disappeared as far as they could see under the drab mantle of mould. The truck stopped, and at a sign from Pierre they all climbed down. Everywhere around them was this thick grey

carpet under which the road had disappeared. Occasionally they could see a lump in the flat surface where the mould had enveloped a tree or an abandoned vehicle.

As they stood and looked around they saw that in places the mould was almost knee high. Looking closely Chris could see thousands of little stalks growing up out of the grey mass. On the end of each one was a brown swelling, so that they looked very much like miniature bulrushes. While he was looking at the horrible carpet beneath his feet a slate was thrust in front of him.

"Watch for the spores," Pierre had written, and alongside the words was a sketch of one of the 'bulrushes' bursting with tiny specks being flung in all directions. Chris passed the slate to Morrey and Serge, and then bent down to examine the mould more closely. Keeping his eyes fixed on a number of the stalks Chris soon saw what was happening. One by one the bulbous swellings would burst and a tiny explosion would scatter the spores around.

Pierre was again scribbling furiously on his slate, and when he'd finished he passed the result round to the others. From this they learned that each explosion released into the atmosphere hundreds of thousands of these minute mould seeds. Any wind would carry them for some distance, and even in still air the spores travelled several yards. Wherever one of them landed the mould would spring up, soon to be producing its own crops of stalks and spores.

As some of the minute seeds would only travel perhaps a few inches, the grey carpet was constantly getting thicker as well as advancing. It was easy to see how it could soon choke out all other life as it had done for as far ahead as one could see.

For half an hour the quartet milled about, sometimes almost waist high in mould. At last they had seen enough. Chris and his friends, sickened, indicated that they wished to return. Pierre led the way as they plodded towards where they had left their truck. Gradually the mould got shallower

and at last it was broken up into scattered clumps. Yet Chris was sure that it was thicker around their vehicle than when they'd left it. A close examination of the tyres showed that the spores had already started their deadly work, and thin grey threads could be seen creeping over the rubber.

About a hundred yards away a movement caught their eye. Walking a little closer they saw a mass of mould move and then stop and move again. Serge, who was a little ahead, stopped and scribbled on his slate. He passed it to the others who read one word—"Dog". Horrified, they looked at the lump of mould again and saw that it was indeed a pitiable creature covered all over with this ghastly parasite. Feebly the dog tried to move again, but the grey covering was rapidly sucking away its life, and it sank down once more. With a sick feeling in their stomachs, Chris and the others turned away.

Now began the long walk back to the decontamination post. Even if they could have spoken together none of them would have felt like doing so on that journey back. They were all thinking about the dog. Two figures, clad in suits similar to their own, were coming forward to meet them. Pierre and his companions stopped while the others approached. Chris could see they were each carrying a tank strapped on to his back, and each held a nozzle under one arm.

"Flame-throwers," wrote Pierre, and in a few seconds long tongues of flame had shot out from the nozzles as if in confirmation. One by one they stepped on to a mat of asbestos which one of the soldiers had brought along. While on it they were well and truly blasted with flame from the front and back. Chris marvelled that they weren't shrivelled up inside their suits.

At last the ordeal by flame was over and they were able to move on. In another hundred yards they were met by the officer and some of his men who quickly helped them from their suits. Chris saw that they were all wearing gloves. These they stripped off after the operation was completed and threw them on to the ground alongside the discarded suits.

“Are they going to leave them there?” asked Serge.

“Yes,” Pierre told him. “The suits are never used again once they have been into the mould. Soon they will be covered with grey from any spores the flames did not kill.”

“No. No,” he went on hastily. “You are all right. There is no chance of any being on you.”

Soon they were back at Morrey’s truck in which they drove silently back into the deserted settlement. Chris felt appallingly depressed. What if they couldn’t find anything to kill this terrible vegetation? It was a good job that Whiskers was waiting for them when they returned, and even he had his work cut out to dispel their depression. Not until after he’d had a shower did Chris feel free from the unclean things he’d seen.

“My young friends, you have now met the enemy,” Dr. Lorin said, when they were all together again. “You can now see how deadly is this thing which is gradually enveloping us. You know now why your mission must be accomplished soon. The spread of the mould has been relatively slow in the desert area where, fortunately, the contaminated satellite landed. Soon it will be attacking regions of luxuriant vegetation and then its growth will be more rapid.”

The biologist continued talking for some time, imparting to them every scrap of knowledge that he had about the Venusian invader. At the end he told them that their work there was finished, and that next morning they would leave Oran.

None of the young men slept very well during the hot night which followed. Chris kept thinking about the doomed animal they had seen. Even as he lay there the spores, he knew, would be spreading and the mould continuing its sinister advance.

By morning a few more square miles of Earth’s surface would be enveloped by this fearful growth.

When morning did eventually come, all of them felt

relieved at getting away from the doomed city. General Leclerc and the two biologists saw them on to the plane with Pierre saying hopefully that he'd soon be seeing them again. As the plane gathered momentum they could see the diminishing figure of the General, still stiffly at the salute as if he were wishing them God-speed on their fateful mission.

By the time they had returned to Farnborough, Whiskers had managed to lift the cloud of depression a little, but their visit to the infected zone had, as was intended, given the young men an idea of the gravity and importance of the task that lay ahead.

"I wonder if Pierre will be chosen to come with us," Chris said, as they were having their evening meal.

"Hope so," Morrey ventured. "Seems to know his stuff and he's been in rockets before."

"They'll have to send a young biologist who has had space travel experience, so he might well get the job," was Serge's opinion.

"No time to train a new recruit," Whiskers reminded them. "Your friend would only need a quick refresher course the same as you're going to get."

"Perhaps Sir George might be able to use his influence," suggested the American. "We'll have to put a bit of pressure on him tomorrow."

So it was next day that after they had described to UNEXA's Director their experiences at Dakar, Chris remarked casually that Pierre Isnard seemed a very nice chap. Morrey pointed out what a good biologist he was, and Serge observed that he'd been in rockets before. However, Sir George seemed very dense that morning, so Chris blurted out the question they were all dying to ask. "Can you fix it that Pierre comes with us to Venus?"

To the astonishment of the others Benson laughed outright.

"So my little scheme has worked," he said. Then he went

on more seriously.

"You see, I really did want you to get first-hand experience of the mould. But that was only half of the reason you went to Dakar. I wanted to see how you all got on with young Isnard. Though he doesn't know it yet, he has actually been selected to go. Well, you all know how important it is to have someone with you whom you like. The Oran trip introduced you to him and here you are asking that he should go with you. Very well. He'll be wired right away and should be here in a couple of days."

"You're a wily old bird," was Whiskers's aggrieved comment. "Trust you to be responsible for a plot like that."

Chapter Five

Of course Chris, Morrey and Serge were delighted that the young Frenchman was to be their companion. Secretly they'd feared that it might be someone whom they might not like. In the confined space of a rocket cabin and under the extraordinary conditions of space flight, it was essential that all members of the crew should be able to get on well together. Normally they would have a long period of training in close association with each other, when conflicts of personalities would be revealed and changes made in personnel. It could well be fatal to the success of any project, particularly one so hazardous as that now planned, if there was friction between the crew during the long period of close confinement.

That they would get on well with Pierre none of them had any doubt. His gay personality had impressed itself on them as much as his undoubted ability. Yes—they were sure he'd make a welcome addition to the crew. Then a sudden thought struck Chris.

"What about the fifth member?" he asked. "You said there would be a crew of five."

Benson didn't reply immediately. Instead he looked at his young friends keenly.

"How would you like Tony to join you?" he asked at last.

There was no need for anyone to reply. The whoops of delight were a sufficient response. Of course they'd be thrilled to have their young friend with them. Did Sir George think it could be arranged?

"I'll do my best," Benson promised them. "Of course we'll have to see if International Rockets will release him. He works for them now, you know."

"Come off it, Benny," chided Whiskers. "You know quite well his employers would be thrilled if he were chosen."

"We'll see," the Director answered non-committally. "Now you three concentrate on your training. You've precious little time, you know."

With what patience they could muster and under the watchful eye of Wing Commander Greatrex, the three astronauts next day began the serious business of preparation for their journey. Runs on the centrifuge, sessions in their space suits, spells in the low temperature and vacuum chambers filled the next two days. To Chris, Serge and Morrey this was routine, for they'd done it dozens of times before. They knew, of course, that such conditioning was essential to accustom their bodies to the fantastic conditions they would experience during the rocket flights and whilst at the lunar base. Every astronaut had to undergo this preparation, for the human body is wonderfully adaptable and able to survive under conditions never dreamt of a few generations ago.

On the evening of the second day Pierre arrived. The young biologist was terribly excited at his good fortune and was delighted at meeting his friends again so soon. He told them that news of his selection to join the Venus expedition had arrived just as he and Dr. Lorin were about to take off for Marseilles.

On arrival there, Pierre had been immediately transferred to another plane for England, and almost before the young man had become accustomed to the idea he was here with his friends to prepare for the most vital journey Man had ever undertaken.

It had been some time since the young Frenchman had been in a rocket, so his conditioning was more painful than that of his friends. But he withstood the discomfort bravely, and soon he was better able to tolerate the strains and stresses to which he was subjected. The more they knew him, the more the three young scientists liked their new colleague, for his gay personality gave no clue to the serious task for which he'd been selected. It would be good to have him at their side when they faced the unknown perils of Venus.

What about Tony Hale? It would be marvellous if the young mechanic were chosen to complete the crew. That a skilled fitter should be included on each rocket flight had now been accepted. He was just as essential as the flight engineer on an air liner. Time and time again disaster had been prevented by the skill of the mechanic when something had gone wrong with the rocket or its instruments during a flight. Sometimes, in the largest rockets, there were two mechanics in the crew.

It had been during the time when Chris, Morrey and Serge had taken Tony along with them to the Moon that the boy had first shown his uncanny skill with his hands. Had he not been able to repair a vital instrument, none of them would have returned from the expedition to set up the first lunar base. Afterwards he'd been encouraged to develop his ability to the utmost under the guidance of the great rocket-building firm. Report had it that International Rockets had no one more highly skilled than young Tony Hale. Chris and the others told Pierre a great deal about their young friend, so that when Sir George Benson joined them once more and informed them that their wish was coming true, he felt almost as excited as they did.

In spite of the grave dangers which they would soon have to face, there was quite a party atmosphere when Tonyjoined the others at Farnborough. Beneath his ginger hair, his freckled face lit up with a delighted grin as he was warmly welcomed by Chris, Whiskers and the others. Pierre shook the mechanic's hand warmly, and in no time at all Tony felt he'd known the Frenchman almost as long as he had the others.

It fell to Chris, after the first greetings were over, to take Tony on one side and explain to him about their journey to Venus and why it was being made. Chris formed the impression that, not having seen the dreaded mould for himself, Tony did not really appreciate the gravity of Earth's peril. He seemed concerned only with the thrill of being in the first rocket crew to visit our sister planet, and left the

others to worry about problems he didn't understand.

Space suits, centrifuge, decompression chamber, low- and high-temperature rooms, all these the crew endured. Constant medical supervision, frequent briefings by experts, voluminous instructions from Sir George Benson, filled in the rest of their clays. At last the time came when they must venture on the first stage of their fateful journey, the voyage to the Moon.

The huge rocket was to blast-off from the great American base at Cape Canaveral. Chris had started several of his Moon trips from here, but this was the first time Tony had seen the vast space port. He would have liked to explore its many launching sites, its huge workshops, its marvellous control-room, but for him there were strenuous days getting to know his job.

The rocket which would ferry them to Lunaville was well known to young Hale. His firm had made them for years and most of them were of standard design, anyhow. What he would be most concerned with was the smaller rocket which would carry them from the Moon around Venus, and back again. It was on a duplicate of this that he spent almost all his time. The actual vehicle that would carry them was already being prepared for them on the Moon.

At last the day for departure came. Chris could well remember that almost unbearable tension that had preceded his first rocket flights. Now the lunar voyage was routine, many rockets making the journey each month. The departure of a ferry vehicle now caused little more excitement than did a plane flight a generation before. Though the danger—very remote—of collision with a meteor always existed, the passengers gave little thought to the possibility. Great advances in all the sciences had made journeys to the Moon reasonably safe. They were headline news only when something went wrong.

The faithful Whiskers had accompanied his young proteges to Cape Canaveral. Sir George Benson and a flock of

scientists had met the five young men for final discussions. When they were over Benson and Chris found themselves a little apart from the others. The older scientist laid his arm affectionately on Chris's shoulder.

"I pray God everything will work out," he said in a low voice. "Time is running out. Yesterday an American magazine printed a story and a photograph of the infected area. It was taken by a pilot who had escaped our patrol. Of course, the magazine was suppressed immediately, but a few copies were sold before they could be seized. How long it will take for the story to break we can't guess. It will be chaos when it does."

Chris appreciated the gravity of the situation. That the news of the spore invasion would sometime leak out was inevitable, but it was hoped that this wouldn't happen until the journey to Venus had been made. It was not hard to imagine what would happen in thickly populated areas when it became known that the Earth was threatened by the spread of this loathsome mould. The young scientist shuddered at the prospect. Dangerous though his mission might be, he preferred it to being in a big city when panic broke out.

When he rejoined his companions Chris thought it best not to divulge the disturbing news Sir George had told him. Far better if the crew went on its journey concerned only with the success of its mission.

Last-minute preparations were going ahead, and already the others were beginning to don their space suits, aided by teams of dressers. Chris followed their example, and soon he was helpless inside his heavy equipment. The space suits, specially designed to withstand extremes of temperature, intense radiation and zero pressure, were far too heavy to move about in under Earth's gravity. However, on the Moon where gravity is only one-sixth of the terrestrial pull, the suits would be light and easily manageable. Here the crew had to be carted towards the waiting rocket like so many heavy bales.

At last they had all been lifted on to their contour couches and secured. Last greetings were exchanged and the hatch was closed. Then followed the nerve-racking period of suspense until the rocket motor was ignited. The crew joked together with forced good humour as the last seconds of the count-down ticked away. Then suddenly they were pinned down on to their couches by the lift of the speeding rocket. So great was the pressure on their bodies that they would have suffered mortal injury had it not been for the protection of their space suits. Thanks to their training and previous experience the crew remained calm during the uncomfortable minutes while their vehicle built up escape velocity.

At last, after what seemed an age, but which was barely five minutes, the great motor died away and the awful pressure was relaxed. Now the crew had that intoxicating feeling of weightlessness as their vehicle coasted along its flight path to the

Moon. Though the condition of zero gravity wasn't new to any of them, they experienced the same hilarious gaiety that all rocket crews get for the first hour or so of free flight.

Released from their couches, the five young men performed the fantastic gyrations about their cabin which were only possible under these strange conditions. As always at first they found difficulty in controlling their movements, but soon they became adapted to weightlessness and were able to settle down to the normal duties of a crew with sobriety.

The guidance of rockets on this well-charted journey had now been brought to such a fine art that for the next two days Chris and his companions would have little to do. Of course, there would be the routine reports, but these were designed mainly to occupy the crew rather than to provide the scientists on Earth with any fresh information. Tony seemed to be the busiest of the five, for he was constantly checking instruments, oxygen supply, radio and temperature control. Then, too, a constant watch had to be kept for

meteor impacts, for though the chance of this was extremely remote, it was one that could not be neglected.

At regular intervals the crew exchanged messages both with Cape Canaveral and Lunaville, for at the Moon base all was ready for bringing in the rocket to the landing area. No longer was a lunar landing a highly hazardous undertaking. Now, under automatic control, it was as safe, smooth and uneventful as that of an airliner on Earth.

It was almost two years since Pierre had been to the Moon. Then, in a team of biologists, he had helped to investigate the theory of an American astronomer who believed that organic matter—perhaps even life—existed on Earth's satellite several million years ago before its atmosphere had escaped into space. By now all traces would be buried many yards beneath the Moon's surface, preserved by a layer of sediment from space.

Test borings had been made and the lunar material had been carefully examined by biologists. The results were inconclusive. Traces of what might possibly have been organic matter were found, though not all the investigators agreed on this. Pierre had been one of those who believed strongly that life had once existed on that airless world, but he was the junior member of the party and little attention had been paid to his opinion. One of the reasons why he'd been so keen to join the expedition to Venus was because he felt that now that life had definitely been found beyond the Earth, his own opinion about the Moon might command more respect.

The young Frenchman was informed by Chris and the others who visited Lunaville regularly that he would find the Moon base greatly developed. More than a hundred men were stationed there permanently—representatives of a score of sciences together with a number of engineers and technicians. Lunaville itself was fast becoming a sizeable underground city, built below the lunar surface as a protection against meteors and extremes of temperature.

There were laboratories, workshops, living quarters, recreation rooms—all hermetically sealed against the vacuum outside. Within the base the staff could move about normally if life under such low gravity can be called normal. They could work, eat, sleep and rest without the necessity of wearing a space suit. But to venture up to the surface each must wear his suit and proceed through an elaborate air-lock designed to prevent loss of precious oxygen.

The landing area towards which the rocket was being carefully shepherded was a crater not more than two miles from the vast underground base. It was roughly half a mile in diameter and the interior had been levelled artificially. Surrounding the landing area was a circular rim, the height of which varied between fifty and seventy feet. At intervals all round the rim were radar antennae used in the landing manoeuvre. An air lock and tunnel connected the crater to Lunaville so that incoming travellers could relax in the base as soon as possible after their long journey.

As the Earth rocket drew nearer, the duty officers handling the landing from the Lunaville control-room switched on its motor. Now that the base of the vehicle, being more massive, had swung round towards the Moon, the thrust reduced the velocity of the missile. When the speed had fallen to a certain critical figure, small lateral rockets directed the ferry towards the landing crater. Gently, with mathematical precision, on its tail of dying fire, the vehicle settled down.

Regulations demanded that passengers and crew of a ferry rocket must remain on board for thirty minutes after the touchdown. This was to allow the surrounding area to cool down from the blast of the motor and to avoid the possibility of danger from leaking fuel. It was always a trying time for those inside, and was usually spent in exchanging greetings over the radio with the men at the base who were waiting to receive them. The half-hour had barely passed when a dozen men, clad in the familiar suits, emerged from a dome-like building which was the air-lock from the tunnel to Lunaville.

This strangely garbed crowd made its way over to the waiting rocket in a series of kangaroo-like leaps which was the normal method of moving about. Owing to the low gravity on the Moon, anyone trying to take a normal stride would find himself travelling twenty feet at a time.

The landing crew was taking along with it a light ladder and as they reached the waiting rocket it was placed against the side. Meanwhile Chris and his friends, impatient to leave their confined cabin, were ready in their space suits and preparing to swing open the hatch. As the opening appeared in the side of the rocket the crew were met by a dazzling glare from the airless landscape.

How well Chris remembered the first time he had opened the side of a rocket to gaze out on to a dead, still world. Then the empty landscape, untrodden since the beginning of Time, awaited him, full of fearsome mystery. Now, a veteran of many trips, he knew that the landing crew would give him and his crew the usual vociferous welcome. Gaily calling on the others to follow, Chris disdained the use of the ladder and took a flying leap from the open hatch.

The young scientist found that he could never resist the temptation to enjoy the novel conditions of the low lunar gravity. As he jumped from the rocket he sailed quite a distance from the vehicle and then sank slowly to the ground. It was a most exhilarating feeling to be as light as air and to be able to perform such prodigious feats. Morrey and the others followed suit, and soon they were all surrounded by the landing crew. With their radios working overtime, the new-comers exchanged greetings with the men who were meeting them, and while the remainder of the landing team began work on the rocket, two of them led Chris and his companions towards the air-lock into the tunnel.

What a relief it was, when safely underground, to remove their helmets and relax. For the first time they could see the faces of the two men who were leading them towards the vast subterranean base. Chris could see that, whilst they tried hard to be cheerful, the guides were really tired and

dispirited.

"How are things here?" the scientist asked, wondering if the two men had any complaints.

"Everything's all right," the taller man answered, "except that we're all browned off because our leave has been stopped. To make matters worse, no one has told us why. It wouldn't be so bad if we knew there was a good reason for it, but we're fed up at not being told a thing."

"I was due home three weeks ago," the other man complained. "Now I don't know when I'll get back to Earth."

Chris knew how disturbed the staff of Lunaville must be, for each man's tour of duty on the Moon was rigidly observed. For health reasons the maximum time spent at Lunaville was usually three months. Older men had this period progressively reduced, but all looked forward keenly to their return to Earth in spite of the novel conditions and fascinating work at the lunar base. All the young scientists remembered how, towards the end of a tour, they had begun to count the hours until they were due to blast-off into space on the journey home.

"Are there no replacements coming?" asked Serge. He, too, sympathized with the men whose leave was overdue.

"Oh, yes," the tall one informed him. "There are plenty of fresh chaps arriving, but none going back. We're absolutely overcrowded at the base."

"Any special activity going on?" Chris asked cautiously.

"Well, the last few ships have brought a lot of electronic equipment, and the rocket boys are assembling a special job which has been brought up in sections. It's a monster."

Chris caught the glances of Morrey and Serge, for now they knew what the two men from Lunaville didn't—that all leave had been stopped to speed up their own departure for Venus. Not until they were safely on their way, would their new acquaintances have a chance of exchanging the barren lunar surface for Earth's green fields.

So the object of their journey wasn't generally known yet! Perhaps now that they'd arrived Commander Deitzer, the American naval officer in command at Lunaville for the time being, would reveal the true object of their journey. If these men on the Moon knew the true situation back on Earth they wouldn't think twice about a little thing like a delayed leave, Chris thought. Maybe he'd put this to the Commander when they reported.

The brilliantly lit tunnel, carved out of the lunar rock, led straight to Lunaville. An electric truck could have transported the new arrivals, but, like most people landing on the Moon, Chris and his little party preferred exercise after their long confinement in the rocket. In a few minutes they were passing through the last air-lock that would admit them to the vast underground base.

Chapter Six

Commander Deitzer, like everyone else on the Moon, was a youngish man. No one was allowed on Earth's satellite who had passed his fortieth birthday. Not even Sir George Benson, the Director of UNEXA, could ever visit this fascinating new world. It had been the greatest disappointment of the famous scientist's life that he would never see the wonderful base for the construction of which he'd been largely responsible. Instead, to Deitzer, Chris and younger men would fall the exciting task of pushing ahead Man's exploration of the satellite.

The Commander welcomed the travellers warmly, for he knew the task that lay ahead of them. He was able to assure Chris and the others that work on their rocket was on schedule. When he mentioned the great effort that all the personnel were putting in, Chris asked if they had been told the reason for this urgency.

"Not yet," admitted Deitzer, "but now you're here there's no reason why they shouldn't be informed. I gather you have had first-hand experience of this mould?"

"Pierre, here, is the expert. He's the biologist and can tell you all about it. We've all seen it except Tony Hale, our mechanic. It's pretty ghastly, sir, I can tell you."

The Commander listened intently while Pierre told him a great deal about the menace from Venus and the danger it was to Earth. He described the efforts to combat its spread and how the discovery of a parasite from Venus itself seemed the only hope. Chris, aided by the others, filled in the picture, and mentioned the brittle situation on Earth with news of the mould liable to break out at any minute. They all agreed on the disastrous results likely from such a leakage.

"It's been to avoid anything coming from here that I decided not to tell our chaps. Oh, I know I've had to stop all leave to push on with the job, but one of them might have

dropped it out in a letter home, you know."

"I think it's worth that risk now, sir," Chris observed. "Put your men on their honour not to write and alarm their folks on Earth and you'll get everyone co-operating to the utmost. They'll know that the work they're doing here may save their relatives back home."

"I agree. I'll call together as many of the men as can be spared from duty in twelve hours' time. Perhaps you would like to speak to them, too," Commander Deitzer smiled.

"Not me," averred Chris hastily. "If you want anyone to expand anything you say, Pierre here is the expert."

So in spite of the young Frenchman's protests, it was arranged that a meeting should be called in the great central hall of the base, and that the Commander and Pierre should explain the reason for the urgency of the task ahead. Those who could not be present would hear the news over the intricate lunar communications system. Chris, Morrey, Serge and Tony would be there to give Pierre moral support.

When their interview with the Commander was over, the five travellers were able to have baths and a meal. As he washed himself in the precious water, Morrey wondered how many times this same liquid had been used before. For water was perhaps the most precious commodity on that arid world, every drop being brought a quarter of a million miles from Earth. The American knew that after he'd finished with it, the water would be filtered and chemically purified ready for drinking or anything else. Time and time again the process would be repeated, so that practically the only water lost was the small amount of atmospheric vapour that escaped each time anyone passed through the air-lock into the vacuum outside.

In time it was hoped to set up a plant for making water from oxygen and hydrogen locked up in the lunar rocks. The colossal amount of power required could be obtained from the intense rays of the sun. Until such a plant was in operation, a strict routine had to be observed in handling all

water in the base.

With the air of the base, things were different. For more than a year it had no longer been necessary to transport oxygen from Earth's atmosphere. A cracking plant was producing all the oxygen needed from oxides discovered below the surface. Chris had never ceased to marvel that he and all the others in Lunaville were now breathing a gas that had been imprisoned for millions of years—from the time when the Moon had had an atmosphere of its own. Before its oxygen had escaped into space or had been combined with metals, the Moon must have had a fair amount of this life-supporting gas. But whether there had ever been life on this dead world had still not been finally settled, though evidence was mounting that there had been.

Morrey always liked his food. After the almost tasteless diet usual on space journeys, the variety of comestibles at Lunaville was very welcome. He refused to believe that much of what he was eating consisted of plants grown in huge flat tanks whose dual purpose was to provide food and also to absorb carbon dioxide in exchange for oxygen. Some 25 per cent of the food used at the base was grown there. The rest was ferried from Earth.

At Lunaville time was not divided up into day and night as on Earth. Here, on our satellite, the sun blazed down for fourteen earthly days and was followed by darkness equally long. Like polar explorers, the men on the Moon had to divide time into periods of work and of rest. Now it was time for Chris and his companions to take their rest period. They were allocated cubicles and soon all five were stretched out in their bunks.

Chris slept badly. He kept thinking about the dog he'd seen enveloped in that horrible mould. Unless they succeeded in finding the answer on their desperate voyage to Venus, every man, woman and child would eventually suffer the same fate as that luckless animal. If they failed to discover something to kill the spores, even the staff of Lunaville must soon perish—not by the mould but by lack of

support from Earth. There was no escape.

Eventually the young scientist did drop off, but his sleep was shallow and restless. He'd been awake some time when the rest period was over, and he roused the others in turn. In two hours' time would be the gathering of all the men stationed at Lunaville. How would they take the news that their relatives were doomed unless their labours were crowned with success?

Word had evidently spread throughout the base that the meeting called by Commander Deitzer was of the utmost importance. Many guessed that they were to hear an excuse for cancelling their leave. Others believed that it might have something to do with the huge rocket they were so hurriedly assembling. Only a few of the two hundred or so men gathered in the central hall of the base had any idea that it might have something to do with the five new arrivals from Earth.

The base commander called for attention, and the hum of conversation fell away, while the assembled scientists and engineers waited expectantly. Chris and the others were standing in front of the crowd alongside the little dais on which the Commander was standing to address the men.

"I've called you all here," Deitzer began, "because I have something to say of the utmost importance. It may also be the answer to some of the queries in your own minds. But before I begin I want to say quite clearly that nothing about this meeting, or the information you are about to receive, must be mentioned in your letters home. I'm certain you'll see why in a few minutes.

"Very briefly—our homes and families on Earth are in grave danger. Unfortunately some spores from a Venusian probe have taken hold and the resultant mould is spreading rapidly.

All efforts to destroy the growth have failed, so now UNEXA is to try a desperate gamble. The five people who arrived fourteen hours ago are to make a manned flight to

Venus in the rocket you are building. They hope to find there some means of combating this deadly fungus before all Earth is enveloped and all animal and vegetable life as we know it is choked out of existence."

The gasps that arose from the Commander's audience showed how staggered it was at this ghastly news. Many faces blanched as men thought of the dargers facing their families at home. All knew their leader well enough to understand that his words were neither an exaggeration nor an understatement. There was deadly silence as the crowd of scientists struggled to assimilate them. Then, as one by one they recovered from the shock, eyes were turned towards the young men in whom lay the hope of salvation.

"I am now asking Pierre Isnard, a biologist, to tell you more about the invader from Venus," the Commander said abruptly.

Pierre flushed uncomfortably as, with a gentle push from Morrey and Serge, he stepped on to the dais. For the next ten minutes—hesitantly at first, and then warming up to his subject—he gave a rapid description of the life eycle of the spores and told of the efforts to prevent their spread. Many of his listeners shuddered as the Frenchman described some of the places in North Africa which the mould had enveloped. He gave a calm account to his horrified audience of the sequence of events, when a spore came into contact with human flesh, or indeed any animal tissue. When he'd finished Pierre stepped down smartly and with relief joined his friends.

Commander Deitzer took over.

"So you see, gentlemen," he declared, "the reason for our present activity. And you also see the reason for the strictest security. The authorities on Earth are striving desperately to keep the position secret as long as possible. They are fighting for time—time in which our friends here may possibly find the answer. If it became generally known that this invader was attacking the Earth, civilization would disappear in the

resultant panic. You can well picture what would happen if an infectious hysteria were to break out."

A murmur ran round the gathering. Yes, they could well visualize the chaos if the secret leaked out. It was indeed their duty to their families to do all they could to prevent this. Now they had been told, it was inevitable that none of them could return to Earth until the battle was won—or lost. All that was left for them to do was to work. Work as they had never done before. Work in the hope that victory might yet be won.

Before requesting the gathering to disperse, the base commander asked all section leaders to come to his office to discuss a speeding up of all work at the base. Sir George Benson and other scientists of UNEXA would join in by radio, and Chris and his friends were invited to sit in. With serious faces the men returned to their tasks, while their leaders followed the Commander towards his office.

Never would Chris forget the next hour. Though some of the participants were a quarter of a million miles away, their presence in that office was felt strongly, and it was Sir George who set the keynote of urgency by revealing that the mould had now appeared in Oran itself and that the whole city was being evacuated.

"So you see—every hour counts," Chris heard the well-known voice say over the radio. "How soon can you be ready, Commander?"

Deitzer consulted some papers on his desk. They were progress reports of the different section leaders. For some minutes he studied them carefully. Then he cleared his throat and turned to the microphone.

"We can be ready in seventy hours," he replied.

A gasp went round the office. Seventy hours!

"My goodness! He's pushing it," Chris heard one of the men near him exclaim.

The loudspeaker was silent for a moment. Then it

crackled.

"That's good, Commander," Benson's voice said. "But the launching must take place in sixty hours!"

Even Deitzer was staggered by this request.

"We'll do our best, sir," he replied hoarsely.

Sir George's voice was sharp with anxiety. "You've got to do it, Deitzer. We can hold on no longer."

The Commander moistened his dry lips.

"Very good, Sir George," he croaked, and switched off the radio.

"It's impossible!" several of the men burst out. "It just can't be done, Commander."

Deitzer glared round the office".

"You heard what the Director said," he barked. "The fate of the world is at stake. If it kills every man on the base, we'll blast-off that Venus rocket in sixty hours!"

Chapter Seven

There followed an animated discussion which Chris and his companions watched with interest. There must still be a tremendous amount of work to be done before their vehicle was ready. Uncle George had sounded very concerned, and it seemed that the situation back on Earth was deteriorating rapidly. The engineers and technicians seemed stunned by the task which had been set them, but as they came to realize what was at stake they agreed, with resignation, to do all they could to achieve the target. As they turned away from the Commander, a dark little man, who hadn't spoken a word the whole of the time, stepped forward. He was Lebrun, in charge of the radar installation.

"Thank you, friends," he said quietly. "My home was in Oran."

"Can we do anything, Chris?" Serge asked.

"I'll ask the Commander," the British scientist answered.

When he inquired if they could help in any way Deitzer thanked them, but firmly refused assistance from them.

"No; you'll have your job to do when we've finished," he pointed out. "May I suggest that you relax as much as possible meanwhile. Of course you can visit your cabin and familiarize yourself with it if you think it necessary."

"We'll do that," Chris answered, brightening. Anything to pass the slow hours away, he thought. Shortly afterwards the little party donned their space suits again and prepared to leave the comparative comfort of the base for the region outside.

The area where the Venus rocket was being built was about half a mile away from the base on the opposite side to the landing ground. Normally a light, tracked vehicle would have taken them to the construction ground, but every man was tied up in the frantic effort to prepare the rocket on time.

In any case, the five young men preferred the exercise of making their own way across the surface in the usual kangaroo-like fashion.

Led by Chris they were passed through the air-lock out into the glare of sun-drenched rocks. The roadway along which the vehicles usually went had been constructed across the innumerable craters and clefts which are a universal feature of the' Moon's surface. In the distance they could see a huge crystal dome, and inside it their rocket, tall and shining against an inky black sky. Around it was the familiar gantry—a huge aluminium lattice-work used to help the construction.

The scene was similar to one Chris had seen dozens of times before back on Earth, except that everything was taking place inside a great plastic bubble. This time the scores of workers were strangely garbed in space suits. In their helmets sounded a babel of orders and instructions as the men about them conversed over their radios. Tony noticed that on the chest and back of each man was a white identification number to facilitate recognition. Otherwise it would have been very difficult for the section leaders to tell which man was which except by peering into the vizors of their helmets.

For a few seconds the din of words on the radio died away as the little party went through an air-lock and joined the busy crowd. Then it burst out again as a score of men greeted them. Finally one voice silenced the others.

"I am Svendson, Commander Deitzer's deputy," it explained, and for a moment Chris couldn't locate which of the men was addressing them. Only when someone held up his arm to attract attention did they guess which one was the deputy commander.

"What's going on?" asked Morrey, looking at the busy scene around.

"Just about everything," they heard Svendson chuckle sardonically. "You've heard of a 'glass house' back on Earth?

Well, this is the father of them all. Construction is taking place under the protection of this canopy so that the men have more freedom and the work can go on during the lunar night. Also the canopy protects the rocket from extremes of temperature and reduces the possibility of meteor damage."

"Is there air inside?" inquired Serge.

"Certainly, but at a pressure of only one-third of an atmosphere. You see, this is just about enough to sustain life and lets the men remove their helmets for brief spells. If the pressure was any higher the canopy would explode into the vacuum outside," the deputy commander informed them.

"The dome—canopy, or what you call it—is removed when construction is completed, I suppose," Chris said.

"Yes. It opens into two halves which slide apart for the launching. The mechanism is electric and is controlled from the console near the air-lock you've just come through."

Chris glanced in the direction Svendson was pointing. He could see the small panel where were the switches that cause the huge plastic bubble to split apart in readiness for the takeoff.

"Which part of the rocket would you like to see first," Svendson asked. "The cabin?"

"Of course," Chris answered, and he could hear the others agreeing.

"Very well. Follow me," the voice in their helmets requested.

As on earth, the gantry had a lift to carry equipment and men up to a series of platforms from which the main work of construction was done. The lift took the little party up to the top level but one. As he stepped on to the platform Tony could see the men climbing in and out of an opening in the rocket wall, giving their cabin its final touches. Without waiting for the others the young mechanic made his way eagerly inside.

This cabin was much larger than any other he'd been in. Not only did it contain the numerous instruments with which he was familiar, but there was an important new addition. It was a complete miniature laboratory, with a microscope and other equipment, which was being included for the use of Pierre. When finished this small lab. would assist the young biologist in his vital search.

Pierre was, of course, intensely interested in this domain of his, while the others paid attention to the rest of the cabin. One thing struck them all. There was still so much to be done it would never be ready on time—at least not in Benson's sixty hours. They all felt dejected at not being allowed to throw in their weight. However, they were under Deitzer's command, and his instructions had been very definite.

Under Svendson's guidance the little party visited all parts of the rocket, and everywhere conditions were the same—a frantic, hopeless rush to beat the clock. As they left the site Chris had the firm conviction that these toiling men could never do it. And he and the others felt so helpless!

In contrast to the former lack of information about conditions on Earth, the base commander was now passing on every scrap of news he received. When Chris and the others returned from their inspection of the rocket, news had just come through that the mould had spread as far west as Morocco and was also racing up the Nile valley. Perhaps the Commander released the news to be a spur to the efforts of his men, though indeed none was needed. Every man on Earth's satellite had taken up the challenge. The fight was on —a fight that would go on without pause until the giant rocket was launched or until every man collapsed on the job.

One man did collapse. He was a man named Thompkins and he'd been at work for thirty hours continuously fitting, adjusting and testing the valves through which the oxygen and the fuel would flow to the giant rocket engine. Thompkins was almost at the age limit for lunar work, and though he'd not reported it, he hadn't been well for days. This sudden crack-up was most serious, for every man had a

heavy schedule of work and there were no spare hands available to take Thompkins's place. Commander Deitzer was a very worried man, for so finely balanced and interdependent were all the work schedules, that to have an expert fitter go sick was likely to jeopardize the whole undertaking.

It was Tony who filled the breach. When the young mechanic heard what had happened, he saw the Commander and positively demanded to be allowed to take over Thompkins's job. This time Deitzer was only too willing for the young man to help out, though he did make a half-hearted suggestion that Tony should rest. Tony was able to convince the Commander that he was well qualified to fit the valves which were of the type that he'd worked on for International Rockets.

The young mechanic gave the news that he'd got a job to his bored companions. They all envied him, for they themselves could find little to do until the rocket was almost ready.

For the twentieth time Chris went over Sir George Benson's directions along with Morrey, Serge and Pierre. At this time their objective, the planet Venus, would be some forty million miles away—a fantastic distance that should take months to travel. The planet had long since passed through its nearest point to Earth, a distance of some twenty-six million miles. All the time it was speeding farther away, for—because it is nearer to the Sun—it travels much faster than Earth. Not for more than a year would the twins be close together again. And it was impossible to wait so long. Therefore something was to be attempted that had never been tried before. The rocket carrying Chris and his crew on their critical voyage was to be accelerated to a fantastic speed. It was to travel at a velocity of no less than half a million miles an hour which would help them to catch up the fleeing planet.

When they had first heard this staggering news the young scientists had doubted its possibility, but Benson had

produced figures showing it to be possible—-at least theoretically. As they all knew, with lunar gravity only one-sixth of that on Earth, the high energy fuel would be six times as effective. Launch-ings from the Moon had this benefit of low gravity together with lack of atmospheric resistance and a comparatively low escape velocity. By carrying an extra load of fuel—a simple task, for here its weight was so small—it should be possible to reach the projected velocity in about nine minutes. The rocket would then coast along its trajectory but would have to be slowed down when approaching its objective.

"What will it feel like to travel at half a million miles an hour?" wondered Morrey, during one of their numerous discussions.

"No different to travelling at a thousand miles an hour," declared Serge. "We shall still seem to be hanging in space, except that the Moon will rush away from us, and Venus speed towards us more quickly."

"I only hope we'll be able to slow down to a reasonable speed," the American smiled. "We'd make a bit of a splash if we hit Venus at five hundred thousand miles an hour."

"Fathead!" chided Chris. "If we didn't decelerate we'd probably burn up in the Venusian atmosphere."

Mention of the atmosphere of Earth's twin planet reminded them of the tremendous advantage it was to have an observatory on the Moon. From the time when Man first became interested in the heavens Venus had seemed as mysterious as she was beautiful, defying all efforts to pierce the eternal veil of clouds that shielded her from prying eyes. Now, unhampered by the dusty, turbulent mantle of air that had always been the despair of terrestrial astronomers, she was yielding some of her secrets to the watchers on the Moon.

Spectroscopic analysis had shown that she had a deep atmosphere consisting mainly of carbon dioxide, but oxygen and water vapour, essential to life, had also been detected by

the lunar observers. These observations had been confirmed by satellite probes which had taken samples of the Venusian atmosphere and brought them back to Earth for analysis. It was one such probe, penetrating into the deeper layers of the planet's mantle, that had brought back the fatal spores, proving beyond doubt that some form of life existed on Earth's twin.

While Chris and the others passed the hours as best they could, Tony was happily engaged in work on the rocket. Hour after hour the young mechanic toiled as did all the men around him. Occasionally they would break off and remove their helmets or return to the lunar base for a brief rest and refreshment. Then they would go on working furiously on the rocket once more.

Commander Deitzer paid many visits to the construction dome, anxiously checking the progress of the work with his schedules. Sometimes his voice sounded over Tony's radio commending him for his skilful work. But still the clock moved relentlessly on.

Forty hours before Benson's time limit expired! Several of the workers on the rocket had collapsed from exhaustion. Tony was now beginning to feel the strain and he no longer carried on a light-hearted radio conversation with his companions. One valve—a vital one between the main oxygen tank and the motor—proved to be very awkward. For almost six hours the young mechanic sweated on this one component before he was satisfied it was working correctly. Little wonder that the base commander was an anxious man, for the Venus rocket was a complicated piece of mechanism made up of almost one hundred thousand different parts. If a single one of more than a thousand of them failed in any way, the result would be disastrous not only to the astronauts inside, but also to the desperately waiting Earth.

Twenty-four hours to go! At times the Commander began to hope that work would be completed on time, but just when things seemed to be going well, something would happen that would cause him the utmost despair. Once it

was a fuel pump which had jammed; then it was a short circuit in the wiring that took many precious hours to trace; once it was a fractured oxygen tank that had to be carefully repaired.

All these difficulties were faithfully reported to UNEXA, but Benson's hoarse voice came back constantly urging greater efforts. Panic, he said, had broken out in Egypt. The whole country was on the move. Hundreds of thousands of refugees were flooding from the stricken land by every conceivable means. Even so, thousands would be left behind in the path of the ever-advancing mould.

The Governments of all countries on the American continent, together with Australia and New Zealand, had virtually severed communications with the rest of the world. They hoped that, as land masses insulated by great oceans from the infected continents, they could avoid or delay the arrival of the deadly spores.

In Europe the utmost difficulty was being experienced in preventing panic and avoiding the complete breakdown of civilized life. Practically all attempts to find something to destroy the mould had been abandoned, and to give the people what hope and courage they could, Governments had been playing up the possibility of finding the answer on Venus. Benson's strained words came over the radio chilling the hearts of all at Lunaville and forcing them to keep up their superhuman efforts.

Twelve hours to go. Tony was still at it. By now it took the utmost concentration, and a mental picture of the plight of his friends back home, to keep the young mechanic on his feet. Around him scientists and engineers had been dropping like flies from exhaustion, only to come back again after the briefest respite. Pierre was busy supervising the completion of his small laboratory, while Chris, Morrey and Serge concentrated on studying the flight programme that UNEXA's giant computers had worked out.

It was now that the ten great tanker rockets carrying the

enormous quantity of fuel for the Venus flight were due. Every man who could stand and who could be spared from the rocket, was pressed into service for the tremendous task of unloading and transporting the fuel. As, one after another, the tankers touched down, they were seized upon and their outer casing opened. Inside were banks of specially designed tanks carrying the vital liquid. These were carefully unloaded and placed on tractors for removal into the construction dome. The utmost care was needed, for an accident with a single tank—of which there would ultimately be more than a thousand—would cause an explosion capable of wrecking the whole project.

Commander Deitzer's face was lined and grey with anxiety as the critical fuelling operation began. Normally it was the last job before a rocket took off, with all workers except the fuelling crew at a safe distance. Now the fuelling had to take place while the last desperate efforts to complete the rocket were being made. Scores of men at all levels of the gantry risked their lives as the dangerous fluids were pumped into the storage tanks. Yet no one hesitated for a second—knowing that if an explosion did wipe them out, it would also destroy all whom they knew and loved back on Earth.

Whiskers picked up the phone with a shaking hand. He was alone in his room at Cape Canaveral and had been waiting impatiently for hours for this call. Not only were visitors from the Old World banned, but also letters, and the only means of communication was by radio or telephone. Consequently there was a terrific waiting list for calls, and the Wing Commander had been comparatively lucky in getting his through when he did.

"Hello, Sylvia darling," he choked into the phone. "How are things with you? I've been trying for two days to get this call. How are you and the children?"

The line crackled and the reply was so faint that Whiskers had to strain to hear it.

"We are all right," his wife's voice said. "Food is rationed

and it's just like the worst part of the war. Refugees are everywhere. There are two tents full of them on the lawn, but so far none of them are billeted in the house. Jeremy has found two young boys to play with and thinks it's great fun. Ian doesn't have much to do with the refugees, though. There doesn't seem to be anyone his age and he feels too grown up to mix with the younger boys. How—how are things with you, my dear?"

"Fine. Fine." Whiskers forced himself to say with assumed heartiness. "In another week or two I'll be back with you and this awful thing will be wiped out."

"How's Sir George?" Sylvia's faint voice asked.

"Haven't seen much of poor old Benny lately. He's going through the mill, of course. Don't think he sleeps day or night."

"Have you had any news from Chris?"

"Yes. We get regular messages," Greatrex told her. "He's fit and that's about all we do know. It won't be long now."

"Pray God they'll succeed," the voice at the other end said over the wire.

Chapter Eight

When his short telephone call was over, Whiskers made another determined effort to see his old friend. This time he was successful—but almost wished he hadn't been. When he went into Sir George Benson's office the Wing Commander received a great shock. Surely that wizened, red-eyed man with the white hair couldn't be Sir George?

"Hello, Whiskers," the weary voice croaked, and then the Wing Commander knew it was.

"Hello, Benny," Greatrex said lamely. There was so much he would have liked to say, but the look on the Director's face chilled him.

"Sorry I haven't been able to see much of you lately," Benson went on, "but you know how it is."

He ran his fingers wearily through his hair, which seemed much whiter than when Whiskers had seen him last only a week ago.

"You're killing yourself," the Wing Commander observed.

"Why not?" Sir George answered, with the ghost of a smile. "If we don't pull off this last gamble we shall all die. Heard from Sylvia?"

"Yes. I spoke to her a few minutes ago. Things must be getting pretty grim in the Old Country. What do you honestly think are our chances, Benny?"

"I'm not a biologist," Benson replied, "but those who are say that there's a fair chance of success. There must be something on Venus controlling the growth of the mould, otherwise the whole planet would consist of nothing else. We know from probes and spectroscopic analysis that this isn't so. It all depends on Chris and the others getting there—and then getting back."

"How is he?" Whiskers asked eagerly.

"I haven't spoken to either of them myself for a couple of days, but Deitzer says all is well. Tony has been a great help stepping in to replace a mechanic who got sick. Chris, I suppose, will be all tensed up waiting for the launching."

"How long is that now?"

Before Sir George could reply his phone rang. He picked up the receiver and listened without speaking except to say a brief "thank you" before he put it down.

"The fuelling is well under way," he informed his visitor. "It is the most dangerous part of the operation. Unless there is some catastrophe, the rocket should blast-off at almost the time I've set for it. Heaven knows how those chaps have managed it. Deitzer must have driven them like slaves. Still—we're not out of the wood yet. I won't be easy till the rocket's on its way."

"Then will you be able to take it easy?"

"Easy? I won't have much to do for a time if that's what you mean. But with reports like this," with a glance at the papers on his table, "coming in from Europe, how can one relax?" he asked wearily.

"Once Chris is on his way, will you let me take you along for a drink?" Whiskers persisted.

"All right," Benson smiled, but as Greatrex stood up to go the phone rang. He paused as the Director took the instrument, some dreadful premonition freezing him to the spot. He saw Benson's face change as he listened to the phone. If anything, his face lost even more colour until now it was deathly pale.

"My God!" the Director let out with a sob, "There's been an accident in the fuelling. It's all over."

The telephone dropped from his hand.

Tony straightened his aching back. The last valve was in place, the last nut tightened, the last connection made. And a

good job, too! The young mechanic felt that he couldn't have carried on a moment longer. He had tightened that last valve, hadn't he? Almost fainting with fatigue he climbed out of the casing on to the gantry platform. Yes, he was sure he'd given the fuel valve that final twist. Anyway, he was too tired to check up. The fuel would soon be flowing through the feed pipe by way of the valve into one of the storage tanks.

Commander Deitzer began to feel that the worst was over. More than two-thirds of the rocket's storage tanks had been filled with either liquid oxygen or high energy fuel. His tired team were doing their job well, and he was able to report back satisfactory progress to Sir George Benson. Keep things going for just a few more hours and then the rocket would be away. After that it would be up to the boys in the Cape Canaveral control to see the rest of the operation through. He'd just take another trip up to the top of the gantry to give his men final words of encouragement.

While the base commander was still on one of the lower platforms the crew began fuelling through the valve Tony had so recently fitted. As each container was brought in from the ferry rockets it was connected to an electric pump and then by means of a flexible tube to the valves leading to the rocket's storage tanks. The man who connected the tube to the valve had done the same job a score of times in the last hour, and he was far too tired to notice that there was something different about this one. As soon as the fuel began to flow along the pipe a liquid began to seep through the valve joint. This was immediately vaporized in the low atmospheric pressure and so the leak was not very noticeable. However, a dangerous concentration of fuel vapour was building up inside the rocket casing. Soon it would become critical, and then it would only require a single spark to ignite it. Ironically, it was Commander Deitzer himself who supplied that spark.

Satisfied that all was going well with the multitude of last-minute tasks, the Commander made his way up to the fuelling level. He could see the long, snake-like pipe curling

down from the pump and entering the rocket'i ,ide. Every few minutes a fresh container, newly arrived from the ferry rockets, would be connected up, and in an incredibly short time it would be emptied and replaced with another. As he was watching, an empty container, eluding the grasp of the crewman overhead, began to fall slowly towards him. Though it would have little more effect than a feather if it had struck him, the Commander instinctively stepped aside. In doing so he stumbled and put out his foot to prevent himself from falling. The steel sole of his foot covering struck the gantry and a single spark flew off. There was an instant flash of flame and one side of the rocket seemed alight.

The next second scores of men were leaping off the gantry away from the doomed rocket. In a very short time now the flames would reach either the fuel tanks inside the rocket itself or the containers on the top platform. Then, indeed, would all hope of an expedition to Venus be doomed.

Chris and his friends had been back to Lunaville and had just come in through the dome's air-lock. They were almost at the foot of the rocket when the accident happened. They froze in horror at what they saw. In a flash they realized that something had ignited the fuel. Around them men stood gazing at the doom of Earth's hope, for in a very short time the whole structure would be alight and the rocket would explode into a million pieces.

No one knew whether it was Chris, Morrey, Serge or Pierre who recovered from the shock first. Perhaps they all got over it together. There was no need for a word of command from anyone. While Morrey, Pierre and Serge raced up the gantry steps, Chris leapt towards the air-lock.

"Helmets on, everyone," he yelled over his radio.

Pray God they would all hear! For any man who was without his oxygen supply would die in the next few minutes. There wasn't time to see if everyone was safe. As his three friends braved the flames with the temporary protection from their space suits and struggled to shut off the escaping

fuel, Chris pressed the lever to open up the huge plastic dome. Instinctively he'd known that the only way to put out the flames and save the rocket was to allow all the oxygen surrounding it to be sucked out by the vacuum outside.

For a few seconds nothing happened. The rocket was burning more furiously than ever. Occasionally, amidst the flames, strangely garbed human figures could be seen. Was that one Morrey, Serge, Pierre, or one of the other men who had returned to help? Suddenly, as if by magic, the flames had died away, for all the oxygen on which they were feeding had been drawn out through the ever-widening gap between the two halves of the canopy.

Chris heard the cheers of relief over his radio. On the gantry some dozen figures stood round the rocket irresolutely. At least it had been saved from total destruction. Mr. Svendson was calling urgently to Commander Deitzer, but there was no reply. A start must be made at once to assess the damage and prepare a report for UNEXA. The Commander's silence struck a chill in all their hearts, for they all knew he'd been there when the fire had started.

Then someone spotted him. The unconscious figure at the base of the great projectile was undoubtedly Deitzer. His helmet markings revealed as.much. Svendson bounded towards his chief, then ordered some of the men to get him to Lunaville as quickly as possible. While the Commander was being carried away his deputy was already asking the base radio operator to inform Sir George Benson that the fire had been put out and that a report on its effect would follow as soon as possible.

Where was Tony? Both Chris and the young mechanic's other friends on the gantry now realized that they hadn't heard his voice. Could he have been injured? They knew he'd been at work on the valves until shortly before the accident happened. Where was he now? A queer feeling came over Chris. Perhaps—perhaps Tony had taken his helmet off when the canopy opened! If so, then Chris would have been responsible for his young friend's death. Had he known that

Tony was unprotected he wouldn't have operated the mechanism. Or would he—with the fate of Earth at stake?

"Here he is, Chris."

It was Serge's voice that sounded in the scientist's helmet.

"Is he all right?" Chris called back quickly.

"I think so," the Russian answered. "He's flat out, but his helmet's in place, so I guess he's just passed out."

"Thank goodness for that," Chris breathed, and he heard Morrey and Pierre echo his sentiments.

"We'd better get him back to base," Serge said, and by now Chris had spotted his three friends bending over the recumbent figure. Full of concern he joined them and all four carried Tony to one of the tracked vehicles which were the main form of lunar transport.

Before they started off with their unconscious friend the four young scientists turned to look briefly at the scene behind them. Still dominating it was the giant rocket, scarred and blackened by flame. All over weary men were making a quick examination. What would they find? Was the Venus rocket damaged beyond repair and Earth's last hope shattered? Or could it be repaired? And even if it could, was it possible for the exhausted team to do the job before the mould had claimed its last victim?

Four silent young men brought their friend in through the air-lock and down the tunnel in the great moon base. Chris had already radioed for help, and a couple of doctors were waiting as they lifted Tony from the truck. While the doctors and their assistants gently removed the young mechanic's space suit, Chris and the others took off their own helmets and watched anxiously. In a very few moments one of the doctors turned to them.

"Nothing to worry about," he assured them, "he's only fainted from exhaustion and emotion. We'll have him round soon."

Sure enough, within a few minutes Tony opened his eyes. For a moment he stared round blankly. Then he sat up sharply.

"It's all my fault," he cried out in anguish. "Has the rocket been destroyed?"

Chris strode up and seized his young friend's hand.

"Steady, Tony," he called. "It was an accident. The rocket is damaged but not destroyed. It's being examined now."

"But it was my fault," insisted the young mechanic. "I didn't tighten up that last fuel valve. That was where the fuel escaped, wasn't it?"

"We don't know about that," Morrey assured him, "but even if you're right no one blames you. You'd done a marvellous job of work and you were all in."

In spite of the efforts of his friends to comfort him, Tony remained distressed, firmly convinced that the whole gigantic effort had been ruined by his own carelessness. The others were still arguing with him when the deputy commander strode in. Mr. Svendson's step was brisk, his face flushed.

"It's all right," he called, even before he'd reached the little group. "We can still make it. The examination shows that the damage can be repaired."

Chris and the others swung round to face him. Tony stared at Mr. Svendson with growing hope in his eyes.

"You—you mean it isn't all ruined? The rocket hasn't been destroyed?" the young mechanic gasped.

"That is what we've already reported to UNEXA," the deputy commander assured him. "Of course it's impossible to say by how many hours the launching will have to be put back. We're trying to assess that now. Sir George Benson is standing by for our report."

"Is there anything I can do to make up?" Tony asked in a low voice.

“Yes. We shall want you back on those valves again. You chaps, too, will have to lend a hand this time if you don’t mind.”

“Mind? That’s what we’ve been asking all along,” Morrey said, dancing about in his excitement. “When do we start?”

“Take it easy for a little longer,” Svendson advised. “I’ll let you know as soon as we get the O.K.”

“How’s the Commander?” Chris asked.

“Oh, better now. Just concussion. He’ll be on his feet again by this time I expect.”

A little later the recovery of Commander Deitzer was confirmed when his voice sounded over loudspeakers throughout the lunar base.

“Commander speaking,” the voice began, and everywhere men stopped to listen to their chief’s words. “We have reported the condition of the rocket to Earth and have given our best estimate for the time required for its repair. Consequently I have to inform you that the launching will take place forty hours from now.”

Forty hours! That was wonderful. Not weeks of delay as everyone had expected, but forty hours only! The weary men raised a cheer when they realized that their long, frantic efforts had not been wasted. It meant another period of gruelling toil, but what did that matter if, in the end, they succeeded in sending the rocket on its way?

Phoenix was ready!

Chapter Nine

No one knew who started it, but everyone at Lunaville was now calling the giant rocket after the mythical bird. Risen from its nest of flames the vehicle, which was to carry the five young men, stood ready to the last nut and bolt. There had been no further mishaps, and everyone had worked with every ounce of his strength to prepare Phoenix for its launching. In two hours' time the rocket would start on its journey.

Chris and his companions were resting. At the express order of Commander Deitzer they were stretched out and trying to relax. There would be time for sleep once Phoenix was on its course. Chris spoke to Sir George Benson back on Earth, and the tired voice of UNEXA's Director informed him that the mould had now crossed the Mediterranean to Sicily. Britain was crowded with refugees and it was only with the utmost difficulty that news of relatives was obtainable.

Benson's voice had lost its fire. Chris couldn't remember his friend ever sounding so listless. It seemed as if all vitality had gone out of him and that he was content to let events develop as they would. This lethargy was rather frightening after Sir George's constant urgings of the past. Had the Director given up hope? Did he believe in his heart that the visit to Venus would be useless?

It was Commander Deitzer himself who came to tell the crew that the time for action had come. In thirty minutes they would blast-off on their momentous voyage. With relief the five young men prepared to don their space suits, for the inactivity of the rest period had tried them all sorely. Svendson and a number of the section leaders came in to wish Chris and his party good luck. Soon they were all ready and then began a solemn little procession towards the air-lock.

The lunar base could hardly be described as a comfortable place in which to live. Yet to the five of them it had been home for the last few days. It was with a feeling of real regret that they turned to take their last look round and to wave good-bye to the men whom they'd come to know. Then, brusquely, Chris urged his party into the air-lock.

There was a vehicle waiting for them outside, but they would all have preferred to get their last chance of exercise for some time, by making their own way to the rocket. However, they allowed the vehicle to take them along towards the great plastic dome through which they could see the giant rocket. Again there was the air-lock procedure and at last the five of them stood in a little group at the foot of the gantry.

Tony took off his helmet as they stood waiting. Scores of men were still at work on the projectile which had so nearly been destroyed. The thought of his own part in that near-disaster made the young mechanic feel very grateful towards Chris, whose quick thinking and action had saved Phoenix—and perhaps much more.

"Coming?" Chris called, and Tony snapped out of his reverie to find the other four already climbing aloft. He hastened to catch them up. On the platform opposite the entrance to their cabin Mr. Svendson was waiting, and as they assembled he solemnly shook hands with each. No words were spoken, for none was necessary. All knew the frightful hazards of the journey and the consequences of failure. Yet each of the rocket crew felt wonderfully calm, a feeling perhaps springing from the belief that Fate would decide whether they and the rest of the world lived or died, and that already the answer was settled.

Chris and the others stretched themselves on their specially designed couches and then tested the radio. First came the voice of Commander Deitzer from the Lunaville control. He would be responsible for the actual launching. Then Sir George Benson's voice came through from Cape Canaveral. Benson and his staff would take over as soon as

the rocket was well away from the Moon. Jodrell Bank and all other radio telescopes in the uncontaminated part of the Earth would follow the flight" of Phoenix in the greatest link-up that had ever been attempted.

"Hello, Chris," Sir George's voice called from the loudspeaker, and then the chief scientist had a few brief words with each of the crew. Finally, Sir George wished them all Godspeed and handed them back to Deitzer. The base commander's voice came through crisply. No one could have guessed the immense strain the man had borne during the last few weeks. In a few minutes there would come the culmination of all that gigantic effort. Would Phoenix rise majestically from its launching pad, or would all their hopes be blasted away in a tremendous explosion?

The hatch was sealed and the crew heard the orders for all personnel in the dome to don their helmets. Then came the command to move the gantry and to swing open the great canopy. Everyone was to make for the safety of the lunar base. Tony could imagine the men outside clambering on to the transport vehicles and taking a last look at the lonely giant on which so many hopes rested.

"Five minutes to zero," Deitzer's voice called out, and now the young mechanic's calm began to disappear. He felt his heart thumping and he knew he was breathing rapidly. Still—the others would be the same, for Chris had assured him that no matter how many times a man had taken off in a rocket, there were always these dreadful moments of tension.

After what seemed an age Tony heard the Commander's voice call out "Four minutes". He shut his eyes and tried to keep telling himself that all would be well. Whatever happened he mustn't let the others see how nervous he was. It was part of the astronauts' tradition that no one gave a sign of his feelings as the last moments ticked by.

"Three minutes."

In three minutes he might be dead. He kept trying to think of all the people back on Earth who faced such a terrible

future. How much better it was to be obliterated instantly than to be slowly suffocated by the deadly mould!

"Two minutes."

Tony tried to remember the previous occasions on which he'd blasted off in a rocket, but then someone had always made the journey before. This time all five of them were venturing into the unknown—were blazing a trail where no man had ever been before. What would they meet? What deadly enemies would they encounter? The young mechanic shivered as he thought of the peril that lay ahead.

"One minute."

"Steady, everyone." This was Chris's voice. Knowing what his companions must be feeling, he tried to calm them. He knew that, like himself, each was engaged in a titanic struggle to avoid giving way to sheer panic. Seasoned space travellers as they were, this journey was unlike any of the former voyages and was fraught with unimaginable dangers.

Monotonously Commander Deitzer was now counting down the last seconds. Tony felt as if he would choke, but still he managed to stifle any cry of fear. It was with relief that he heard the order to fire and he felt his senses slipping in the agony of suspense. When he regained consciousness Tony found himself unable to move. Fear gripped him momentarily. Then he realized that he was pinned down on to the couch by the fierce acceleration of the rocket. He knew that his companions, too, would be immobilized and speechless under the terrific thrust of the huge motor.

As he lay, occasionally trying vainly to move his lips to speak, Tony tried to remember how long they would have to endure this severe discomfort. Was it nine minutes? Or ninety? Anyhow it was much longer than in any other flight he'd made. Ah! Now it was coming back to him. They had to reach Venus as quickly as possible, so it meant travelling at half a million miles an hour!

The thought of such a fantastic speed was very frightening. No man-made object—let alone a space ship—

had ever reached such a tremendous velocity. Was Serge right when he said that, in spite of this great speed, they would appear to be hanging motionless in space? Soon they should know, for the control, either at Lunaville or Cape Canaveral, would switch off the motor when Phoenix was travelling fast enough.

Suddenly Tony could move. He could lift his head and use his tongue. He let out a whoop of delight at being free from the tremendous pressure. A chorus of greetings from the others echoed round the cabin as each of the crew sat up on their couches. At once all was chaos, for the movement of their bodies had propelled them like balloons around their quarters. As they collided with each other they let out yells of laughter in the intoxication that all astronauts feel during the first moments of weightlessness. The first stage of their adventure was over, and they were coasting along effortlessly towards their objective.

"Come on," called Chris, first to recover, "we've all got jobs to do."

The hilarity died down a little while each performed his allotted tasks. Pierre checked his miniature laboratory to make sure it hadn't been damaged by the launching, Morrey tested the oxygen supply while Serge noted the temperature and pressure in the cabin. Tony's job was to see that all the instruments were working, and Chris passed the reports on to Control.

Cape Canaveral now had charge of Phoenix, and Benson's voice informed them that their launching had been entirely successful, and that the rocket was following the desired trajectory, the speed was almost exactly as planned, and any slight adjustments to the flight path could be made later.

The first few hours of the journey passed quickly enough, for every member of the crew had plenty to do. In addition to the routine duties, they each had to do physical exercises, so necessary in such a confined space. There were innumerable observations to record, for the rocket was now taking them

where no man had been before. A television screen enabled them to gaze on the wonders outside.

Tony was never tired of looking at the screen, and whenever his duties allowed he would watch the bright, unwinking images of the stars slip past.

"When shall we see Venus?" was his query to Chris.

"Soon," promised the scientist. "You see, the first part of our path seems to be taking us away from the planet, but in fact we are going to meet it, for Venus is travelling on its orbit round the Sun and we must aim not for where it is when we take-off, but where it will be when we arrive. You'll know soon enough when it comes on to the screen."

At regular intervals the crew swallowed drinks from plastic tubes, for it would be impossible to control a free liquid in this weightless condition. If a spot did escape from the tube it broke up into myriads of tiny droplets which floated about the cabin. Their food was in concentrated form and not very appetizing. They all knew that this was to save as much weight and space as possible.

Four million miles! That was the distance they were now from the nearest human being. When Control informed them of their position it sent a shiver down Tony's spine. Compared with the journey they were now making, a voyage to the Moon seemed a mere trifle. Thank goodness for the radio. By its means they could keep contact with their friends on Earth and at Lunaville. Otherwise their terrible isolation would be almost unendurable.

Now that rockets were large enough to carry a number of people there was no longer the danger of that awful feeling of loneliness that Chris remembered from the early days. Nor was there so much danger of a clash of temperaments, caused by the long, close confinement, that sometimes occurred when rockets carried a crew of only two. Great attention was now paid to the temperament of a man, as well as to his physical and professional qualifications, when a crew was being chosen.

Apart from Pierre, Chris's crew had travelled together before, so he was confident that they would all get on well together. The young Frenchman had been approved several times for rocket voyages, so he'd be all right, too. Besides, the others liked him instinctively. As he worked in his miniature laboratory, Pierre showed Tony many of its wonders, and the young mechanic became adept at manipulating the high-powered microscope.

"Come and have a look at Venus," someone called out.

It was Morrey who had been taking a spell at the television screen. At once the others left their jobs and crowded round the screen curious to see the strange world towards which they were speeding.

"That's it," Morrey informed them, and at the side of the glass they could see a brightly glowing crescent about the size of an orange.

"We'll keep heading towards it all the time now," Chris explained, as his companions gazed at the screen intently. So this was the planet which had caused the catastrophe back on Earth! This was the mysterious world that was so like Earth—and yet so unlike. This was a world that was shrouded in eternal mystery. Only in the last few years had some of its secrets been discovered. But still Venus remained one of the most mysterious objects in the solar system.

When they had gazed their fill at the moon-like crescent on the screen the crew returned to their tasks, but frequently they would glance again at the picture of Venus towards which they were rushing at such a fantastic speed. At intervals they would take it in turns to sleep on their couches, for some of them must keep constant watch on the instruments.

Tony was fast asleep when he felt someone gently shaking his shoulder.

"Chris wants you to come and have a look at this oxygen valve," Morrey told him in a low voice, so that he wouldn't wake Serge and Pierre. The mechanic sat up and promptly

bumped his head on the wall of the cabin a few yards away. Ruefully rubbing the bump he propelled himself towards his magnetic-soled shoes. At least he wouldn't go careering about the place when he'd got these on to anchor him firmly to the metalwork of the cabin.

Once he had his shoes firmly fastened, Tony could walk wherever he pleased over the cabin walls. In free flight there is no sense of direction, no "up" or "down". He could walk on the walls and ceiling as easily as he could on the floor, and this human fly act had never failed to fascinate all the members of the crew. Carefully he made his way over towards Chris, who was peering at the recaltricant oxygen valve. It was one releasing the life-giving gas into the cabin from the huge high-pressure storage tank.

"The gas is coming out too fast," Chris explained, "and I can't shut the valve down any more. We'll be in trouble if it isn't put right."

The mechanic bent over the valve and heard the hiss of escaping gas. Yes, he could do the job, but he'd have to strip the valve down and it would take about an hour. Could they manage without fresh oxygen for that long?

"We'll manage," Chris assured him. "Most of the air we're breathing circulates through the regenerative system. Only a trickle of new oxygen is necessary to keep the atmosphere healthy. If we get too little we'll gradually suffocate, and if we get too much we'll be in trouble besides wasting our supplies."

The mechanic whistled cheerfully as he set about his job. It was good to be doing something useful—something the others couldn't do. He felt as if it proved he wasn't a mere passenger but an essential member of the crew. First, he shut off the oxygen altogether by closing a stop-cock. Then he proceeded to take the valve to pieces, carefully putting each loose part in a plastic bag so that it wouldn't float away and get lost.

As he worked Tony could see the television screen. Bang

in the centre was the glowing crescent of Venus shining like a huge hypnotic eye. He glanced towards it more often than he realized and the sight of it made him feel strangely uneasy. Chris and Morrey, too, found themselves looking frequently at the planet's image.

In very little longer than the time he'd estimated Tony had completed the job. Just a little bit of grit, no larger than a grain of sand, had been responsible. Now the valve was functioning perfectly, and he felt proud that he'd been able to do it so well. He rose to return to his couch, but before he went he felt compelled to look at Venus again. Both Morrey and Chris were staring at the image. It was with an effort that they tore themselves away from the screen which seemed always to be drawing them towards it. Tony repressed a shudder as he went back to his couch.

"Good-bye, Whiskers."

Chapter Ten

Sir George Benson's hand shook as he gripped that of his old friend. Wing Commander Greatrex had come to say farewell to the Director of UNEXA, and neither knew whether they would ever meet again.

"Good-bye, Benny," Whiskers croaked, and for once the boisterous ex-officer seemed weary and depressed. He hated leaving his lifelong friend like this, but he just had to try and see Sylvia and the boys once more. For days Greatrex had had no news from his wife and family, as all private communication between the Old World and the New had ceased. A call had suddenly come for a volunteer to fly a courier plane to London—a volunteer who wouldn't be allowed to return.

To Whiskers it seemed like a gift from the gods, an answer to his fervent prayers. Now he no longer had anything to do a.t Cape Canaveral all his thoughts had been concentrated on trying to get back to Britain. With normal travel prohibited, it had seemed unlikely that his wish would ever be granted. Now, after a great deal of wangling, he'd been selected from a score of volunteers to make this one-way flight.

"Give my love to Sylvia," Sir George said, "and remember me to those boys of yours."

It was as much as the scientist could do to keep his voice even, for he'd been a great favourite with Greatrex's wife and sons. The chances that he would ever see them again were almost nil. How could Chris and his friends, twenty million miles away in a flying rocket, ever hope to bring back something that would save the world from the mould? For although the Director gave optimistic press conferences, in his heart he felt that his young friends had practically no chance of success. Indeed, as soon as Whiskers had left he was due to attend another such conference. What could he

say that would help the morale of countless millions?

All over the world the hopes of men and women were centered on the efforts of the five young men in Phoenix. Only by the utmost efforts of the Governments concerned were panic and bloodshed prevented as the hideous grey mass advanced relentlessly. By regular reports on the progress of the Venus rocket it was planned to keep hope alive as long as possible. The courier plane to be flown to Britain by the Wing Commander carried not only important secret Government dispatches, but also film of the Phoenix launching televised from Lunaville. There were filmed interviews with Sir George Benson and other leading personalities giving optimistic views on the chances of the Venus Expedition. All these were designed to give as much encouragement as possible to the people of Britain and her teeming multitude of refugees.

Benson found it particularly hard to appear cheerful on the films, just as he would find it difficult to seem confident at the forthcoming press conference. He hated this facade of optimism, but he knew how important it was to radiate hope while there was still just a faint chance of success. He salved his conscience by determining that if the expedition failed he would refuse further interviews. So while his old friend was taxi-ing his plane to the end of the runway Sir George Benson straightened his shoulders and marched into the interview room.

The babble of conversation ceased as if by magic as the Director walked to his desk. He tried to keep the tiredness out of his walk and the despondency from his face. As soon as he was seated he took a paper from his pocket. In his prepared statement Benson described the take-off of Phoenix from the lunar launching site, its progress to date, and reports from the young scientists forming the crew.

“So far,” Sir George concluded, “everything has functioned perfectly. I can see no reason why anything should go wrong.”

There was silence for a few seconds as the pressmen finished scribbling. Then two or three stood up together, each wanting to ask a question. Benson pointed to the nearest.

"Tell us, sir, what is your honest opinion of the chances of success?" the reporter asked.

It was the question the scientist had dreaded. All his life Benson had made a practice of facing facts and drawing logical conclusions. He was not given to flights of fancy, nor concealing unpleasant truths. What was he to say? All the room was silently awaiting his answer.

"I don't know," the Director answered slowly. "I don't know because none of us know all the hazards the expedition will have to face. So far all has gone well, and if there were no unexpected difficulties, then I would say they have every chance of success. None of the reports from the rocket so far have indicated anything we hadn't foreseen and provided for. But what things will be like nearer to Venus, or what will be the effect of the Venusian atmosphere, I have no idea. All I can say at this stage is—so far, so good."

"Do you think the expedition will discover something to combat the mould?" another reporter asked.

"Well, of course, we shouldn't have sent the expedition in the first place if we hadn't thought that there was a likelihood of success," Sir George declared. "Nature usually likes to keep things pretty well balanced. The mould has only spread on Earth because nothing has been evolved to combat it. On Venus, where it has developed, things are likely to be different. Unless Nature works in a different way on other planets, she will have provided something to keep the mould under control."

"When will Phoenix reach Venus?"

"The rocket should go into orbit in about sixty hours from now," Benson informed the new questioner.

"What will happen then?" someone else wanted to know.

"It will remain in orbit, dipping ever deeper into the Venusian atmosphere. Of course we have to avoid a burn-up by frictional heating, so the orbit will be elliptical, taking Phoenix alternatively in and out of the atmosphere."

"How long will the rocket remain in orbit?"

"There are supplies aboard sufficient for several weeks. Of course the rocket will return immediately the biologist has isolated a suitable culture."

"But suppose they can't find an antidote for the mould? Will the crew return at the end of those weeks?" the first questioner asked.

Benson's face had gone grey at the question. For a long time he remained silent. Then he looked slowly round the packed room, and his words sent a shiver down every spine.

"There wouldn't be much point, would there?" he said.

As his plane took the air Whiskers's heart lightened. At least he'd have a chance to be with Sylvia and the boys again. If the mould ever did reach Britain, then they would face it together. He'd been pretty sick at being away from them during these terrible times. Lack of news had made things ten times worse. Now, within a few hours, he'd be back in England and on his way home just as soon as he'd handed over his dispatches and films.

One other man only formed the crew. He was a character called Jock and had been working at the Cape for the last two years. Like Whiskers, Jock had been doing all he could to get back to visit his mother in Glasgow. Only the fact that he was an ex-R.A.F. navigator helped him. As they climbed over the sea and headed east the two men had leisure to talk.

"Have ye heard where the mould has reached, sir?" Jock asked in his strong Scots accent.

"I don't know any more than you, old lad," the Wing Commander answered. "It hadn't got beyond Italy the last time I heard from my wife ten days ago."

"D'ye think they'd tell us if it had?"

"Can't say. Since the U.S. Government has damped down on communications with the Old Country anything might have happened without us knowing."

"What's the idea of being so cagey?" asked the worried Scot.

"To preserve calm in the States as long as they can, and as long as there's a chance that the fellows in the rocket will pull it off," Whiskers told him.

"Will they manage it, sir?"

"If anyone can, they will. I've known Chris Godfrey and most of the others for a long time. UNEXA couldn't have sent a better or more experienced crew. Pray God they will manage it," Greatrex answered, and both men remained silent and occupied with their thoughts as the plane streaked east.

As they approached the English coast both Whiskers and Jock felt a strange anxiety. What would they find in the Old Country? They fully expected to discover Britain in a state of emergency, flooded with refugees and at bay to the mould. Whiskers remembered the far-off days of World War II, but the Glasgow boy was too young to recall them. Would things be as bad as then—or worse?

The Wing Commander had been instructed to approach up the Bristol Channel and then turn east just short of Clifton suspension bridge and head straight for London airport. As soon as the plane was over land the two flyers could see a change from the English countryside they remembered. Below were thousands of little coloured patches—a tented city that was sheltering some of the multitudes from Europe.

Everywhere it was the same. Before they had been over land more than ten minutes they had counted more than fifty of these tented cities. The roads seemed strangely deserted, only convoys of lorries being seen. They did not know that all

movement had been forbidden in an effort to control the flood of refugees. So far, thank God, there was no sign of any area infected by the mould. Jock kept an anxious look-out for the dull grey colour that would advertise the creeping horror, but to his relief he saw none.

Over village and town the aircraft sped. How on earth do they feed them all? Whiskers wondered, as he counted more and more encampments. Food must be strictly rationed. Bet Sylvia and the boys were having a pretty rough time. Pity he hadn't thought of bringing one or two things along in the plane. How soon would he be free to dash along to the family? Whiskers's alarm was increasing as he drew nearer the beleaguered capital.

London Airport was strangely quiet. The Wing Commander had often, in the past, had to stooge round the airport for an hour waiting to be called in to land. When he'd last seen it the airport had been as busy as a main line railway station, with planes leaving and arriving every few minutes. Now he was told to land immediately, and he couldn't see another single plane in the air. In the parking areas there were many planes and from the markings Whiskers could see nearly every European air line represented. Mystified, he put his plane down on the vast empty runway.

Taxi-ing along to the apron in front of the main building the Wing Commander braked and switched off the engines. While Jock was collecting the cans of film, he grabbed the leather case of documents and swung open the door. With the kind of leap he hadn't made for years, Whiskers jumped from the plane and hurried towards the two men who had come out to meet him.

As he shook hands with the two officials, Whiskers had a shock. Their faces were gaunt and grey like those of old men. Their clothes hung loosely on their spare frames, and their eyes were red-rimmed and weary. Was this how the people of Britain looked? Was this the change the mould had caused in the few short weeks he'd been away? Bewildered and

worried, he handed over the dispatch case and then, fearfully, asked how things were.

The officials, speaking quietly and without emotion, told of how, literally, millions of refugees had poured into Britain, driven from their homes on the Continent by the fear of the relentless grey scourge. Only emergency action by the Government had prevented a complete breakdown of law and order. Strict rationing of food had been introduced at once, and, unfortunately, the amount had had to be reduced on two occasions. Now men and women were getting a bare subsistence, and even children were not getting enough for full health and strength.

Emergency accommodation, some of the most primitive kind, had been found for the refugees, and every building in the country had been turned into billets. A constant watch was being kept for the first sign of the mould, but, as yet, none had appeared. In all large cities the old air-raid shelters were being reconstructed and fitted with closed circuit air conditioning, while in London all underground trains had ceased running to allow the Tubes to be converted into vast air-sealed shelters. The work was proceeding with frantic speed, and at the first approach of the mould key personnel—scientists, engineers, writers, religious leaders—would be ordered to the shelters.

"And what of the rest?" demanded Greatrex.

"Many women and children will be accommodated, too," the official told him, "but the rest of us will just have to face what comes."

The Wing Commander was silent for a while.

"I think I'd prefer to stay above ground," he said slowly.

"That's what many of us think," he was told. "You see, if the expedition succeeds, the people in the shelters might live long enough to survive; but if your friends fail, then the shelters become their tombs."

With a shudder Whiskers switched to his immediate

business with the officials. When it was concluded he posed the question he'd been dying to ask. How could Jock and he get back to their respective families?

"All movement is by licence only," one of the men told him, "but in view of your great service in coming here, every facility will be given you. Let us know whether you want transport by car, or plane, and when."

"My navigator wants to fly to Glasgow, and I'd like the use of a car. If you don't require us any longer, well—we'd like to get along now."

In less than an hour Jock was in the air again on his way to see his mother, while Whiskers—a special label displayed prominently on his windscreen, was speeding along the empty roads towards his home. As he saw more and more of the tragic change in the England he loved so well, his thoughts went to his young friends and the gallant effort they were making to save this doomed World.

Chapter Eleven

"The 'solar wind' is a continuous stream of particles radiated in all directions from the Sun," Serge explained to Tony. "Of course, it isn't a wind as we know it on Earth, but it's a highly dangerous radiation."

The Russian scientist and the young mechanic were sharing a spell on watch, and Tony, as usual, was asking a stream of questions.

"Is it dangerous?" he inquired.

"It can be," Serge told him. "Like an earthly wind, it varies considerably in intensity. Sometimes it's a gentle breeze, and at others it's like a raging storm. Within certain limits it's possible to predict When these storms are likely to occur. Space voyages are planned, as far as possible, to avoid periods of intense radiation. Unfortunately we've had to ignore the possibility of storms on this trip. Things are far too desperate back home."

"Is the solar wind likely to make us go off course?"

"Not to any appreciable extent. And if it does, we can always get back to it. No, the pressure of the solar wind isn't enough to do that, but it does blow the tails of comets away from the sun wherever they're in the solar system," the Russian explained.

Serge interrupted his talk with Tony to make his hourly report to Control. They were now more than half-way to Venus, and it seemed very strange waiting for so long for Control to reply. It was eerie to realize that after Serge had spoken his words were winging their way across space for two minutes before they reached Earth, and that a similar time must elapse before a reply could reach Phoenix.

It was Mr. Gillanders's distorted voice that told the scientist and the mechanic that the rocket was continuing to follow the plotted course almost exactly. In another few

hours it would be necessary to make a slight correction by firing one of the lateral rockets. Until then they must continue with their regular reports.

At the request of Mr. Gillanders, Tony switched on the television camera so that they could describe the latest appearance of their objective. As soon as Venus came on the screen the two watchers could see that the image was now much larger, and that almost half the planet was illuminated. Again it had an almost hypnotic effect on both Serge and Tony, and it took quite an effort to switch off the camera after their observation had been completed.

During each spell on duty it was one of Tony's tasks to don his space suit and climb down through a small air-lock into the compartment containing the huge oxygen and fuel tanks. Working his way in the confined space he had to examine the valves, the tanks, and the rocket casing to ensure that there had been no damage from meteorites. If Phoenix were to encounter anything of any size—more than half an inch in diameter—it might suffer critical damage. Fortunately such a possibility was extremely remote, though the rocket was constantly passing through showers of micrometeorites—minute particles that vaporized on impact.

The mechanic completed his inspection, found everything satisfactory and then returned to the cabin. As he closed the airlock after him he reached up to unclasp his helmet. Before he could touch the fasteners he was frozen into immobility. His startled gaze had fallen on Serge who was attached to the side wall by his magnetic shoes. The Russian appeared to be barely conscious, his chest rising and falling in great heaves. As Tony hurried over in alarm Serge managed to indicate a spot a couple of yards away. Looking closely the mechanic saw a discoloured patch in the centre of which was a hole as big as a finger-nail.

In a flash he realized what had happened. While he'd been making his check on the storage tanks a meteorite had struck the side of Phoenix. Not large enough to do great damage, the intense heat caused by the impact had penetrated to the

inner casing and had melted a hole in the cabin wall. It was through this small hole that the air inside the cabin was escaping into the vacuum of space.

Serge had probably been concentrating on the instruments and had not noticed the damage until the air-pressure had started to fall. Then he had made an attempt to reach the puncture to fix over it the special patches which all space vessels carried for such an occasion. Owing to the rate at which the air-pressure was falling the Russian must have been unable to complete his task, and now in a few seconds all the crew would die except Tony, who still wore his space suit.

Quickly the mechanic flung himself at the locker containing the patches as there was no time to find the one Serge had been trying to fix. It might be floating anywhere about the cabin. Grabbing one of suitable size he leapt towards the scarred wall and slapped it right over the hole. In almost the same movement he swam back across the cabin to the oxygen valve which he opened to the full. Then he searched the walls carefully but found no other sign of damage. Only then was he able to attend to his companions.

Serge, still attached to the cabin wall, hung limply above his head. Across on their couches Chris, Morrey and Pierre lay gasping like fish out of water. Their mouths were wide open and their chests rose and fell as they struggled to suck in the sparse air of the cabin. Thank God all his friends were still alive! As the pressure inside the cabin gradually climbed back to normal, they would all recover. Meanwhile he must explain to Control, who would be aware of the falling pressure from radio signals sent back by instruments, just what had happened.

As soon as he got through, plugging his suit radio into the rocket's powerful transmitter, Tony described the damage and the action he'd taken to put matters right. Sir George Benson's voice had sounded very concerned when the mechanic began to speak, but he commended the young man on his prompt action and requested reports on the condition

of the other crew members.

Cutting his radio link, Tony examined the pressure gauge but found that, though rising steadily, the pressure was still not sufficient to allow him to remove his helmet. Therefore he went round to his companions still clad in his space suit. All four showed definite signs of recovery. The tremendous gasps they had been making had lessened in intensity and frequency. Only Pierre was still labouring heavily.

Even before it was really safe to do so, Tony had whipped off his helmet to find that he, too, was compelled to pant heavily as if he'd been running very fast. Serge, still attached to the cabin wall, was moaning quietly, and the flickering of his eyelids showed he would soon recover consciousness. Morrey and Chris looked much better, but the biologist caused Tony some concern. An idea struck him, and laboriously he dressed the Frenchman in his space suit and clamped on the helmet. Then he turned on the oxygen stored in the cylinder on the back of the suit.

While he was engaged in this he heard a sound which both startled and cheered him. It came from Serge who had recovered consciousness and was asking what had happened. Tony explained that while he was inspecting the tanks a meteorite had struck Phoenix and burnt a hole in the casing. He'd returned to find them all unconscious from lack of oxygen.

"I remember now," said the Russian, making his way slowly down the wall and on to the floor, "I was checking the magnetometer when I found myself gasping for breath. Though I'd been too absorbed to notice the impact, I guessed what had happened. Before I could patch up the hole I must have passed out. How are the others?"

"Chris and Morrey will be all right, but I'm worried about Pierre," Tony told him.

They made their way over to the couches, and even as they bent over the silent figures Chris opened his eyes and looked round vaguely. Morrey would soon follow, so they

concentrated on Pierre. Tony explained that he'd put on the Frenchman's space suit so that he could let him breathe pure oxygen. Perhaps this would help to snatch their friend back from the brink on which he was tottering.

Serge peered closely into the botanist's helmet. Apart from the affection they all felt for their latest companion, he was undoubtedly vital to the success of the expedition because of his specialized knowledge. If Pierre died they might as well write the whole thing off, for none of the others would be capable of the work the botanist would have to do if they were to discover something that would destroy the mould. It was a very anxious moment.

Chris was sitting up now, and they informed him of the situation. He, too, looked at the Frenchman with concern, but Tony felt certain that he could see an improvement. What a relief it would be to have their friend up and about again, especially as they would be entering the atmosphere of Venus in less than twenty-four hours.

Pierre slowly sucked the tube of glucose. He had been many hours coming round, and now Chris had insisted that he should rest. The Frenchman's main job was to get himself fit enough to do the work that only he could do. And if he couldn't do it, he must be well enough to direct one of the others.

The normal routine of the rocket had been resumed, but excitement was growing as Phoenix sped nearer to its objective.

When Venus appeared on the screen it was in the form of a huge glowing semicircle that almost filled the field of view. Still no surface features were visible, for—as ever—the mysterious planet was swathed in pearly clouds. There was something very frightening about this strange world, for it was the home of Life—Life that was destroying the Earth.

As the hours passed by Pierre was getting steadily stronger. He insisted that he was now well enough to resume his normal duties. Though he allowed the biologist to move

around the cabin, Chris insisted that he must take still more rest. To pass the time away Morrey had a short, intensive course of instruction from the Frenchman—-just in case! Tony's visits to the storage tanks now had to be made more frequently, for within a few hours the great motors would be restarted to slow down the rocket from its fantastic cruising speed. All the valves and pumps had to function perfectly. Otherwise something dreadful would happen.

"Fire No. 16 for 10 seconds."

This was the command that came through the loudspeaker from Control. It meant that one of the small lateral rockets must be fired for a short burst, altering slightly the course of the giant rocket. From calculations based on information transmitted by the crew, Control knew just how much Phoenix was off course. The ten-second burst, followed by a seven-second one fifty-two minutes later, should bring the projectile back on to the planned trajectory. Chris set the timing device to ten seconds and pressed a switch carrying the appropriate number. A slight shuddering indicated that the small rocket was functioning and the image of Venus swam off the television screen.

Of its own accord the rocket cut out, and Chris waited, stopwatch in hand, for the fifty-two minute period to elapse. How slowly the time passed! True, he could have occupied himself with various jobs until it was time for the second lateral rocket to fire, but he preferred to give his whole concentrated attention to this important manoeuvre. As the second finger of the watch approached the given time, Chris raised his hand to the switch, eyes glued to the moving finger. Mentally he began a count down and at "zero" snapped the switch down smartly.

Nothing happened! For some reason, which they would probably never know, the small rocket hadn't ignited, and every second now took them farther off course again. Morrey had already informed Control, but it would be another three minutes before his voice reached there. They could only stand by helplessly while their message flashed to Earth.

Chris had the watch running again. Once he let go of it, but he had no fear of it smashing on the floor. Instead it floated gently just beyond his fingers. Taking hold again he watched the seconds go by. When almost six minutes had gone he looked expectantly at the loudspeaker. Sure enough the voice from Control came through acknowledging the message and ordering them to stand by while fresh calculations were made.

What would be their new instructions? All the crew had confidence that their colleagues at Cape Canaveral would be able to retrieve the situation, but it had been brought home to them forcibly that throughout their hazardous undertaking—there was always the possibility of something going wrong. They must get back on to course fairly quickly, for in a few hours the delicate operation of turning the rocket would begin. This was to allow the giant motor to slow down their headlong rush towards Venus. If this was delayed too long the result wouldn't bear thinking about.

It was a great relief when they heard the loudspeaker crackle out fresh instructions:

"Number Three for seven seconds; wait eight minutes forty-nine seconds; then Number Fourteen for three seconds."

It must be a very intricate calculation, thought Tony. They have to allow for all sorts of things—such as the time lag in sending messages and carrying them out, and the pull of Venus, the Sun and other planets. Hope the computers haven't gone wrong anywhere. We don't want to end up in the middle of the Sun or get lost in space.

The familiar shudder indicated that Chris had already started to carry out his instructions. This time all went well, and the crew were able to sigh with relief when, twenty minutes later, Sir George's voice informed them that Phoenix was now dead on course.

Under Chris's orders the crew took refreshment and what rest they could, for soon the final phase of their journey

would begin. Then—anything might happen, and they would get precious little time for relaxation. For the first time since the blast-off from the Moon all the crew were on their couches together. Safety belts fastened to prevent them from floating about the cabin, the five friends lay busy with their thoughts. Though each thought of his own particular acquaintances back on Earth and wondered whether they would ever meet again, they all had the mould very much on their minds. A picture of those shapeless heaps that were once living creatures, and that pitiful little dog, haunted all but Tony.

In a way it was perhaps a good thing that the mechanic had never seen the hideous effects of the loathsome fungus. Perhaps that was what helped him in the terrible events that were soon to follow.

Chapter Twelve

I am quite well now, thank you," Pierre insisted.

The time for action had come and Chris was questioning the biologist closely. Soon Pierre would be the most important member of the crew. Was he up to the job? Had he recovered sufficiently to carry out the important task for which the whole expedition had been planned? The Frenchman sounded confident enough, but Chris wasn't 100 per cent convinced.

Phoenix was just under half a million miles from Venus and the rocket had to be decelerated before being turned into orbit. After last-minute reports to Control the five crewmen fastened themselves on to their contour couches. Soon they would again be subject to the terrific strain they had experienced during the take-off. By carefully controlled bursts from the lateral rockets the projectile had to be turned tail first. When the motor started up at a signal from Control, the thrust would pin them down for eight minutes. After that they would be coasting along at a mere eighteen thousand miles an hour—at which speed they could easily turn into orbit.

The crew had been waiting on their couches for over ten minutes when they felt the giant motor awaken angrily from its long rest. Within seconds of the first quiver, they were forced down heavily just as they'd been when leaving the Moon. In spite of himself Tony had a moment of panic. It took all his will-power to believe that this time they were actually slowing down. Though the sensation was exactly the same, he knew that Phoenix was speeding towards Venus tail first and the terrific thrust was now against their momentum. Those eight minutes seemed an eternity, but the mechanic was proud to think that this time he remained conscious.

"Thank goodness that's over," Chris exclaimed as the pressure died away and he was able to use his muscles once more. The others joined him in expressing relief that another uncomfortable ordeal was behind them. Releasing themselves from their couches they floated over the cabin to perform their various duties. One of the most important of them was to report their distance from the planet. Radar echoes showed that Phoenix was now a mere hundred and twenty thousand miles from this mysterious world.

It was no longer possible to see Venus on the television screen which gave a view from the nose of the rocket only. The radar echoes were not much help and Chris explained to Tony that practically nothing was known of the planet's surface. It would still be some years before Man attempted a landing—always supposing their present venture was successful and there were any men left alive.

While the others were busy about the cabin, Pierre was occupied in his small laboratory. In tightly sealed jars were mould cultures on which he would test any organisms that he snatched from the Venusian atmosphere. Above his head was a small panel. Opening this, he would fix inside an adhesive strip. After closing the hermetically sealed door, a second one on the outside would open, bringing the adhesive strip into contact with whatever was beyond. Any organisms present would adhere to the strip and be available for examination inside the rocket. Pierre was aching to try out the gadget and perhaps discover new forms of life never seen before.

Several times the biologist operated his trap, as he called it. Ostensibly it was to test its working and to give him experience in its use. In reality Pierre was hoping, even at this distance from the planet, to discover something new. He was out of luck, for the rocket was still much too far away for any of the Venusian atmosphere to reach it.

Tony made his detailed inspection of the fuel tanks and pumps to make sure that all was well after their latest firing. The gauges showed that about the right amount of fuel and

oxygen had been consumed during the deceleration process. This was important, for Phoenix must have enough left to complete the journey back to Earth. Though the rocket carried a safety margin of each, this was not large, and any excess amount used would have seriously jeopardized the crew's chances of a return.

The effect of the planet's gravity was not yet very great, though it was increasing every minute as the rocket rushed steadily on. Before long the big motor would have to fire again and this would be the last manoeuvre before Phoenix swung into orbit.

Seventy thousand miles! This was the distance they were now from their objective. Steadily the speed of the rocket was increasing, for the gravity of Venus is much the same as that of Earth. Sixty thousand! Fifty!

Inside the cabin the four scientists and the mechanic seemed outwardly calm, but within each of them was a mounting tension. Soon they would reach the outer fringes of the planet's atmosphere, the true nature of which had so far been a matter of speculation and argument. Within a short time they would reach the home of the mould—and what else? If Venus could produce a simple organism with such a devastating effect on Man, what else might the planet have evolved that would be infinitely more deadly? Whatever terrors this mysterious world had in store for them, each knew that there was no turning back.

Twenty thousand miles! Phoenix was ready to enter its orbit, which would be an elliptical one. At its greatest distance from the planet it would be over ten thousand miles away. Its nearest approach would be four hundred and fifty miles, at which distance traces of atmosphere ought to be found. The orbit would be closed in progressively, until the rocket was near enough to the surface to capture living organisms, and to peer through the clouds at what might lie below.

The delicate operation was over. Phoenix had taken up its

predicted orbit and was speeding round the planet, imprisoned temporarily by its gravity. As the projectile streaked along its elliptic path it crept closer and closer to the sea of clouds that had forever screened the planet from human eyes. A complete circuit would take two hours, so that in half that time Phoenix would be at its nearest point.

Chris and his colleagues, nerves taut, carried out their duties smoothly. Pierre took samples every five minutes, but examination of the adhesive strips under his powerful microscope failed to reveal any organic matter. Serge reported that oxygen atoms, the first evidence of the Venusian atmosphere, were present outside. Morrey was able to calculate that they had now approached to within two thousand miles of the planet's surface. Tony was satisfied that all the gauges and instruments were working, and Chris kept in constant contact with Control.

The nearest point was past. Four hundred and thirty-eight miles, Serge reported. Now they were speeding away again and Pierre hadn't caught a thing in his trap. Even at this distance the rocket had barely touched the outer fringes of the atmosphere. They would have to penetrate deeper—much deeper—before they could hope to encounter anything living. Control would have to contract their orbit and bring them much closer to the surface.

At apogee, the point of greatest distance from Venus, Control directed the operation. This time they should pass within three hundred miles of the surface. The lateral rockets fired their bursts, and Phoenix set out on its new path. Surely this time they would catch something—or at least get a glimpse of the ground below!

Beads of perspiration stood out on the biologist's forehead as he peered intently through the eyepiece. Probably they would have to approach to within a few miles of the planet before he could get his samples. Maybe they would even have to skim the surface. Like the rest of the crew Pierre knew how hazardous this would be. In addition to any dangers from Venus itself, dipping into the dense lower layers of the

atmosphere would cause intense heating of the rocket shell. Though this possibility had been foreseen, the protection that could be provided was only limited. The outer casing of the rocket had been coated with a special substance that would vaporize under the atmospheric friction, but as the thickness of the substance was limited, it could only protect the rocket for eight or nine dips into the dense lower layers. After that the heat would act directly on the rocket casing itself, and the melting of huge holes in the side was the least they could expect.

It was no good. There were still no signs of living organisms on Pierre's strips. He reported this to Chris and the young leader decided on a very bold step. He would ask Control to contract their orbit so that they would pass within fifteen miles of the surface!

After the usual delay while the request sped to Earth and the answer came back, the loudspeaker informed them all that this dangerous manoeuvre had been agreed. Normally Control would have vetoed the suggestion, but things were so desperate back on Earth—the mould had crossed the English Channel—that caution must be thrown to the winds. The orbit would be changed immediately, and Phoenix could go right in.

News that the grey mass had established itself in the South of England alarmed Chris and Tony particularly. They had friends who were now exposed to its relentless march. With a sense of shock they realized that what they were feeling now Pierre had experienced some time before. Yet the young Frenchman had kept up his courage in spite of the fact that his homeland was menaced. The British pair knew they could do no less. Any anxiety they felt might affect their efficiency at a crucial moment. No—they must concentrate on the task ahead and exclude all other thoughts.

From Morrey's observations it was evident that their new orbit would take them plunging through the dense clouds far below. Somewhere the American had read that Venus was a planet covered with a dense tropical vegetation—or maybe its

surface was just one vast ocean. Other theories had been that it was a dusty desert, or barren, scorching rock. No one knew for sure—at least they hadn't until now. Perhaps in a few minutes thfey would find the answer to this riddle. Which one of the theories was right? Maybe none of them were.

Pierre had given up working his trap for the time being. Now that they would soon be dipping into the lower atmosphere, it seemed pointless to waste time on empty space. That he would trap something then, he had no doubt. It was from these same innocent-looking clouds that the probe had brought back the fatal spores. He eyed the little jars of mould culture thoughtfully. Pray God they would find something to destroy this horror.

For some time now they hadn't used the television screen. Situated in the nose of the rocket, the camera's field of view was limited. Would it be wide enough to catch a glimpse of the fleecy ocean towards which they were speeding? Chris switched on and was rewarded by seeing the curved shape of the planet in one corner of the screen.

"At least we'll see when we are in the cloud," he told the others.

"Skin temperature three hundred degrees," Serge called out suddenly. The casing was beginning to warm up as they entered the upper atmosphere.

"Height eighty-three miles," was Morrey's brittle report.

Pierre could no longer resist the temptation to see what was outside. He set his trap to work and was soon absorbed with his microscope. Slide after slide revealed nothing, but at last he shouted out in excitement.

"I've got something," he called, and though the others were pretty busy, they left their jobs and crowded round the biologist.

"See," he called, his voice high pitched with emotion. "I've caught some spores."

Chris bent over the eyepiece and the others waited their

turn. He could see little black specks of irregular shape, and then he turned questioningly to Pierre.

"No, they're not mould spores," the Frenchman replied in answer to his leader's unspoken query, "but they're the first living things we've met."

One after the other the crew examined the small, dark shapes—their first encounter with the strange life on this mysterious planet. They were all duly impressed except Tony, who found it hard to believe that what he could see under the microscope were really living things.

"You shall help me and I will prove it to you," declared the exasperated biologist. "That is if Chris will let you."

"By all means," the leader agreed as they each returned to their tasks. "Tony isn't too busy at the moment, and after all, yours is the most important job just now."

Apart from his routine inspections, the mechanic had little to do, so he was glad to be able to assist the Frenchman until the time for his next inspection came round. He joined Pierre in his tiny laboratory compartment.

"I tell you these are living organisms," the biologist insisted. He spoke in a low voice so as not to interfere with the work of the other three. "Look!"

Obediently Tony peered through the eyepiece once more. This time Pierre had set the instrument at maximum magnification, and the black spots looked much larger.

"Notice that spore just to the right of centre," Pierre said. "Can you see if it's different to any of the others?"

Tony looked intently for a few seconds.

"Yes," he said at last. "It looks as if it's got something growing out of it."

"Exactly," the biologist declared triumphantly. "A few minutes ago all those spores were alike. I have put them in some special solution and I think they will start to grow. The one you see is the first to respond. It has started to throw out

a root."

"Two more have done the same thing," Tony informed his companion, as he continued to look through the microscope.

"Let me see," the biologist said, and Tony stepped aside. He was convinced now that they had encountered life on Venus, though only in a very simple form. If those minute spores were to be found in the planet's upper atmosphere, what strange forms of life might exist on the surface?

"Temperature five hundred and forty degrees."

"Height thirty-two miles."

Morrey and Serge were still reporting their observations as the biologist and his temporary assistant continued their "fly-catching," as Tony called it. Each time they caught something new, Pierre would carefully remove the organism from the slide and transfer it to a nutrient solution. Later these cultures would be injected into a bottle of mould and the effect, if any, would be observed.

"Twenty miles," called Morrey.

"Six hundred degrees," responded Serge.

"If we get much hotter we shall be glowing like a shooting star," Chris murmured uneasily. Thank goodness they were almost at the lowest point in their orbit. Once past it, they would start to climb into the rare atmosphere again, finally shooting well out into space where they could cool off before the next close approach.

Phoenix had now entered the higher layer of clouds, and the observation screen revealed nothing but the thick fog outside. Pierre was capturing more and more organisms, including single-celled animals as well as more kinds of spores. These abundant samples of life had been carried aloft by the turbulent Venusian atmosphere. The biologist was working at full pressure, for he was eager to test as many samples as possible. To help out, he showed Tony how to inject the solutions containing new organisms into the jars of mould.

The mechanic was proud to be helping his friends in this way, and he followed Pierre's instructions meticulously. Perhaps the most vital thing to remember, Pierre had insisted, was that the hypodermic needles, used to penetrate the rubber stoppers with which the mould jars were sealed, should not be withdrawn in case they brought mould spores out with them. Instead the syringe was to be detached and the needle left piercing the stopper.

Dozens of the little jars now had the thin, steel needles sticking out of them, but Pierre's anxious scrutiny hadn't yet detected any effect on the mould. Maybe it was too much to expect that their venture should be crowned with success so soon.

"Perigee—Ten miles," called out Morrey in sudden excitement. This was their nearest point of approach to the mysterious planet, and Chris gazed intently at the screen to see if a break in the cloud would reveal any of the secrets that lay below. Once, for a brief moment, he fancied he saw a dark landscape, but it was gone in a second, and the all-pervading fog enveloped them once more.

Chapter Thirteen

"No results from the first low orbit," Chris was reporting to Control. "We're standing by for further instructions."

Again they had the exasperating wait while their message flashed to Earth and the answer came back.

"What was your maximum temperature?" came back the query from Sir George.

"Seven hundred and ten," volunteered Serge.

Again the wait. Then the loudspeaker crackled.

"Another circuit in the same orbit. If you don't get anything we'll move you in closer. We'll have to risk the rocket case fusing. Things are very bad here," Benson told them, and even at that distance they could detect the strain and worry in his voice.

By this time Pierre was able to confirm that none of the organisms they had yet captured had the slightest effect on the grey mould. He doubted very much whether they would pick up any fresh samples until they went in lower. Still—he and Tony would do their best.

The mechanic was as silent and tense as his companions, for now that he was participating in the actual search for something to combat the mould, he seemed to realize how much depended on the success of their efforts. Sir George Benson would not have let them risk being scorched to death inside a ball of fire if there was any other way. Meanwhile Phoenix was streaking along on its next approach.

The crew of the rocket was silent now, none of them speaking unless he had to. An intense depression seemed to have fallen on them, for they knew that the next four or five hours must bring them success—or hideous failure. There was not one of them that, in his heart, had very high hopes. The chances against discovering something that would kill

the creeping grey horror were colossal. But still they must keep trying, for there was no alternative.

"Ready?" Pierre asked briefly.

Tony nodded. They would soon be approaching the upper clouds again, and for them a period of intense activity was about to start. At a height of twenty miles the biologist began taking samples from his trap as fast as he could. Then it became plain that it would be better if Tony caught the organisms, and Pierre identified them and injected fresh specimens into the mould jars. This arrangement worked well, and the mechanic soon had a pile of adhesive strips from the flycatcher waiting for Pierre to examine. The Frenchman worked as fast as he could, but he was unable to keep pace with his assistant, so Tony had to ease off while his friend caught up a bit on the work.

While he was waiting the mechanic examined some of the strips curiously. Maybe one of them would carry the salvation of the Earth. It was impossible to see anything on them with his naked eye. Then a disturbing thought struck him. The strip might also carry mould spores like those which had caused so much devastation on our own planet. Maybe they had also caught something even more virulent. He put down the strip he was looking at very carefully.

"Any luck?" Morrey called to Pierre, but the biologist, bent intently over his instrument, merely shook his head.

"Nothing for it then, but to skim the surface," Chris muttered grimly. "I only hope Phoenix survives this warming up, too."

As they climbed away along their orbit the leader made his report and ten minutes later came the terse reply—"Go in closer." Then followed instructions for making the slight change in the rocket's orbit that would bring it within grazing distance of the planet's surface. A very short burst of power would be sufficient.

All the crew were now perspiring freely, for though Phoenix dispersed much of its external heat by radiation

during the distant part of its orbit, the temperature inside the rocket had been raised appreciably. Quite a large part of the special outer layer of the casing would have been melted away by the incursions into the lower atmosphere. Was there still sufficient protection to help them during this next circuit? was the question Chris and the others were asking. If not, they would die from the heat—or the fuel tanks would explode. This must be positively their last try to find something that would kill the mould. Unless ...

Serge stiffened at the thought that had entered his head. The placid Russian was shaken by the idea which had just occurred to him. Dare he mention it to Chris and the others? He must—for he was convinced it was their only chance. He attracted the attention of everyone, including Tony and Pierre.

"I don't think we shall ever succeed like this," Serge said, speaking slowly. "We are rushing through the atmosphere too quickly, and we get too hot to pick much up. The temperature of the outer skin must push away most of the organisms in the atmosphere. So I believe we must try something else."

Morrey and Chris had left their posts and were standing by their friend. The biologist and the mechanic were listening intently from Pierre's small laboratory. Seeing that all were looking at him, Serge plunged on.

"We must get close in without travelling at this speed, and we must avoid getting hot," he said deliberately, waiting for the significance of his words to strike the others.

There were gasps from all but Tony, who couldn't quite get what the Russian had in mind. It was Chris who spoke on behalf of them all.

"You don't mean we should—" he began.

"Yes," snapped Serge, "I do. I believe we should land!"

The silence that followed this astounding statement lasted fully half a minute, and again it was Chris who spoke.

"You're right, of course. It's the only thing we can do."

Now even Tony was staggered, for no one even knew what the surface of the planet was like. Was it land or water? Was it desert, rock or dust? Or was it even a dense tropical jungle as some folks had suggested? The eternal mantle of clouds had kept the secret inviolate from the probing eyes of Man. But now the crew of Phoenix would find the answer to the age-old question-—must find it if they were to help their fellow-men. Chris, his face deadly pale, turned to the microphone to transmit their request to Control.

Mr. Gillanders was on duty when Chris's message reached the Earth. On neither him nor the other exhausted men who heard the voice from space did the words at first make any impression. Then the scientist's jaw dropped in amazement, as his brain took in the significance of what Chris had said. With a quick movement he caused the tape-recorder that was always working to repeat the incredible message.

The crew of Phoenix requested permission to land! They wanted to land on Venus! Mr. Gillanders looked round at his colleagues who had been similarly affected by the implications of what they had just heard. Sir George must be told at once.

Benson wasn't asleep. He doubted whether he'd ever sleep again. His brain throbbed and his hot, smarting eyes stared up at the ceiling. Without any conscious command his hand reached out for the jangling phone and he listened wearily.

"What's that?" he shouted suddenly, sitting bolt upright in his bed.

Mr. Gillanders repeated the amazing request he'd just had from Chris Godfrey. The Director of UNEXA, like his deputy, could hardly believe his ears.

"Are you sure that's what he said?" Sir George gasped.

"Listen," Mr. Gillanders said laconically.

Benson heard Chris's actual words played back to him by the recorder. It was a definite request to be allowed to land

on the unknown surface of Venus as a last desperate effort to capture a suitable organism.

"All right. I heard," the Director said to Mr. Gillanders. "I'll be with you in five minutes."

Washing hastily and throwing on some clothes, Sir George turned over Chris's message in his mind. The risks involved in a blind landing wouldn't bear thinking about. Normally he would have turned down the request out of hand. But desperate situations call for desperate remedies, and none knew better than he what a hopeless position the Earth was in. If they'd had no success orbiting and Chris advocated a landing, then for the sake of millions of men, women and children, he had no right to refuse.

What about fuel? As he ran along a corridor to the control-room, Benson's brain was already grappling with the new problems involved. Had Phoenix enough fuel aboard to carry out a landing—and if successful—the return flight afterwards? It was no use the crew finding a beneficent organism if they were unable to return with it to Earth.

Mr. Gillanders and the other scientists were waiting for their chief as he burst into the room. All eyes turned to his haggard face in an attempt to read there the answer to this astounding request. Even as he was crossing the room Benson's voice rang out. "They shall land!" Many of the scientists gave a low whistle at the decision. The tension was broken and each braced himself for the gigantic task ahead.

The minutes passed by with incredible slowness as the crew of Phoenix awaited Sir George Benson's fateful decision. They could picture the consternation in Control at this totally unexpected development, and the anxious heart-searching of the Director before permission was given. At long last a voice sounded on the loudspeaker. This time it was the voice of Benson himself.

"Your request to be allowed to land is granted," it said. "We are working out the manoeuvre."

So be it. Chris and the others now felt deadly calm. They

had all agreed to ask for this thing, knowing full well the risks involved. Yet they had little to lose, for they just couldn't return to Earth empty-handed and so destroy the last hope of countless millions.

Phoenix shuddered as Chris fired a lateral rocket. A slight alteration of course, Control informed them, so that they would keep well above the atmosphere while the landing was being studied. A report on the fuel stock was urgently requested and Chris, with Tony's help, provided the information.

The rocket had made a complete circuit of the planet before Control came through with the instructions which they had all been waiting for so tensely. Yes, they had just about enough fuel to make a landing and to return to Earth. But the safety margin was minute, so nothing would have to go wrong. In the almost complete absence of any information about the surface there was no point in choosing any one landing spot rather than another. It would be just a matter of luck if Phoenix touched down on solid, level ground.

On no account were the crew to attempt to leave the rocket. After thirty minutes, which should be ample to collect a variety of specimens, the motors would be started and the projectile would blast off. Or so they hoped. The full attention of the whole crew was to be directed to obtaining the samples, and no time was to be wasted in trying to collect data about the planet. It needed no words from Control to remind the crew that if they didn't succeed in their mission, information about Venus—however interesting—would be useless.

"All set?" asked Chris, looking round the cabin. There were responses in the affirmative from the contour couches to which they had all returned in preparation for the landing. Tony shut his eyes and wondered what the next few minutes would bring. Gently scratching the back of his left hand which itched a little, the mechanic waited for the tremendous pressure which would indicate that the motors were at work. First the rocket would have to be slowed down, and then

orientated so that it would land on its tail. All the crew had been through the procedure many times before, but always in the past they had known much about their destination. Now they were touching down in sheer blind ignorance of what—or who—they would meet.

Chris informed Control that all was ready, and after allowing time for his message to get to Earth, and for the radio signal starting the motors to return, they felt the terrific pressure of the motors, Their fate, and that of many more, would be decided very soon.

The pressure lasted for several uncomfortable minutes. Though he knew he couldn't do it, Tony tried several times to move. He wanted to scratch his hand which kept itching, but found he was clamped to his couch by the deceleration. Of course, that made him want to scratch more.

Several times the pressure eased off briefly. Then it went altogether and they all returned to the weightless condition which they had been under for the last few days. Now they were falling towards Venus and it would be their responsibility to complete the last stages of the manoeuvre.

"The time-lag between here and Control is too great," explained Chris. "We shall have to operate the motors manually."

Morrey returned to his instruments which told him that Phoenix was some two hundred and eighty miles above the planet. Serge gave their velocity as two thousand miles an hour and this was increasing every second under the pull of the planet's gravity.

"Stand by for blasting," called Chris with forced cheerfulness.

In a series of short, sharp blasts the rocket was slowed down to less than nine hundred miles an hour, while the height was now barely one hundred and fifty miles. In his laboratory Pierre was all prepared for his vital task with Tony standing by to give help wherever it was needed. His wretched hand kept itching, and it was all he could do to

resist scratching it constantly. When he looked at it, it seemed inflamed. What a nuisance it was just at the moment.

"You're on your own now. Good luck."

Sir George Benson's delayed greetings came through to the cabin. Indeed they were on their own, and the strained silence, interrupted only by curt readings from the instruments, bore witness to the tension of all the crew.

Seventy miles. Sixty. Like a well-drilled team, Chris, Morrey and Serge were handling the giant rocket with the utmost care as they came nearer to the surface of Venus. Always in Chris's mind was the necessity to conserve fuel as much as possible. The speed of approach must be carefully regulated. If he fired the motors too much they would shoot off into space again and waste fuel; if the motor was not fired enough their speed would increase and they would crash into whatever lay below.

Amid the electric atmosphere inside the cabin Pierre began calmly taking samples as they entered the cloud layer. Tony stood at his side waiting to help, for the biologist would no doubt want to concentrate on the microscope. At the moment Pierre was examining intently the first strip they had taken from the flycatcher. He gave a low whistle which only the mechanic heard.

"Absolutely teeming!" he muttered, his eye glued to the instrument. So Serge's idea was already paying dividends. Phoenix was no longer tearing through the Venusian atmosphere like a meteor. Instead it was entering relatively slowly and gathering up an abundant collection of micro-organisms on its journey in.

"Take over the flycatcher, Tony," Pierre called, still bent over the eyepiece. It was only when he looked up, ready for the next sample, that he found the mechanic had disappeared. Puzzled and annoyed, he looked round the cabin for his missing assistant, but the young man wasn't to be seen. The biologist was about to call out to Chris to ask what had happened to Tony, but he could see how he,

Morrey and Serge were concentrating on their delicate task. Angrily, he turned to the flycatcher to take samples himself.

"Steady now. Hold it," called Morrey. Phoenix was now well inside the cloud layer, and they must depend entirely on instruments to help them. In more ways than one this would indeed be a blind landing.

Six miles to go. If there were any mountain peaks like Everest the rocket might well smash itself against one. Every second the crew awaited the sickening jar that would spell disaster.

Four miles. Three. The tension was unbearable, but still they stuck grimly to their posts.

"Watch out," shouted Serge. "It will be any second now."

Without knowing it the crew were holding their breaths. Suddenly they all let them out with a gasp. Phoenix had touched something solid.

Chapter Fourteen

"We've landed," Morrey said weakly.

The rocket had been scarcely jarred as it came into contact with the planet. No matter how carefully a ship is handled in making a terrestrial or a lunar landing, there is always a slight impact with the solid surface. None of the crew had felt anything. It was as if they had touched down inside a bowl of cotton-wool. That they had not dropped into a sea was certain, for all motion had ceased, and instruments showed an atmospheric pressure outside very similar to that on Earth.

Rather fearfully Chris switched on the television set, but none of them could make out what it revealed. Certainly there wasn't much light outside. It was as if they were in the depths of a dense forest and the trees had cushioned their fall.

However, it was not their job to worry about what was outside the rocket, except to find the organism they sought. Pierre—now the anxiety of landing was over—was working furiously with his flycatcher and microscope. Dozens more of the little jars were getting strange new organisms injected into them, and Chris came over to watch.

"Tony not with you?" the leader asked in astonishment.

"No," Pierre snapped. "He's disappeared just when I needed him."

Chris was puzzled. The cabin was too small for anyone to be concealed, yet there was no sign of the mechanic. It was as if he had vanished into thin air.

"He must be looking at the fuel tanks," suggested Morrey, who had joined Chris.

"Wonder what he's doing that for?" asked Serge. "There

was no need to inspect them again, was there?"

"Not when there are more urgent things to do," snapped Chris. He was angry with Tony for this strange behaviour. Some explanation was called for. He could see that Tony's space suit was missing so he must have put it on to enter the airless space between the tanks. The mechanic must have slipped out stealthily, for none of his companions had seen or heard him go.

Chris went to the radio they used for internal communication.

"Tony," he called into the microphone. "What the blazes are you doing? Pierre wants you to help him take the samples. Why are you inspecting the tanks again? No trouble is there?"

There was silence for a few seconds, and then Tony's voice came through.

"No. Everything's all right. I—I just thought I'd look things over."

"Then come down at once and get cracking with Pierre," commanded Chris.

"I haven't finished the inspection yet," the reply came. "I'll come down later."

"You'll come down at once," Chris called back, now thoroughly exasperated. "You're not going to mutiny, are you?"

That dreaded word was hardly ever heard in space ships, for it was the worst possible crime to disobey an order when the lives of all the crew and the safety of the rocket was possibly at stake.

"No, Chris. I'm not going to mutiny," the mechanic's voice came back, "but I can't come down just now."

There was something strange about the way Tony spoke. The flat, toneless voice hardly seemed like his at all, but Chris was too angry to notice anything wrong. He repeated

his order, but this time there was no reply. He was just about to make towards his own suit so that he could go and haul Tony back when the rocket gave a sickening lurch. Chris grabbed the side of a couch to prevent himself being thrown down. Morrey and Serge were not so quick and so found themselves in a tangled heap on the sloping floor. Pierre's chair saved him, and it was indeed fortunate that his microscope and all the sample jars were well secured.

"What's happened?" gasped Morrey, as he and Serge struggled to their feet.

"She must be settling down," Chris ventured.

"I guess we're sitting on something soft," the American said, and it certainly seemed that Phoenix was sinking into whatever it had landed upon. Would it be able to escape? Would the rocket motor be able to tear the projectile free from whatever was holding it? Even while these alarming questions were entering the minds of the scientists, another movement shook them again.

"We'll be swallowed up soon if we don't blast off," Morrey called in alarm.

"We can't blast off yet," Chris answered doggedly. "Pierre must get as many samples as he can. Let's all help him."

The three scientists went to assist their colleague, who showed them that the adhesive strips from his flycatcher were now covered with fragments of vegetation. Phoenix must therefore be in direct contact with the Venusian planet life and was possibly sinking into a thick layer which covered the surface.

During the next five minutes, while the crew exposed dozens of strips to the world outside, there were two more movements of the rocket. Chris now had to agree that if Phoenix didn't blast off at once it would probably be sucked well into the vegetation and imprisoned forever. He gave orders to the others to get into their suits ready for the take-off.

“Tony,” he called angrily into the microphone, “come into the cabin at once. We shall be blasting off in a couple of minutes.”

There was a pause before the mechanic’s voice replied.

“Sorry, Chris,” it said, “I’m staying here.”

“What the blazes do you mean, you young idiot,” Chris stormed. “We can’t start up the motor till you’re on your couch.”

“You must, Chris. I’m staying here,” Tony answered. His voice sounded flat and lifeless.

“Tony, you know quite well you’ll be seriously injured, if not killed, unless you are on your couch during acceleration. How can we take-off knowing what will happen to you?”

Again the rocket moved, and Chris saw the pale, strained faces of his companions watching him as he tried in vain to persuade the young fool of a mechanic to obey orders. Had he the right to risk the lives of Morrey, Serge and Pierre if Tony would not take to his couch?

“Tony, I’m ordering you for the last time to return to the cabin and prepare for blast off. I’ll give you twenty seconds to obey,” Chris called, his voice vibrating with anger.

It wasn’t fair for the young fool to thrust such a difficult choice upon him, to place him in such an awful dilemma. It was Tony’s wilful disobedience that caused this terrible situation, so in fairness to his loyal colleagues, he must blast off before Phoenix was finally trapped. If there had been more time Chris would have gone up into the fuel compartment himself and would have tried to haul Tony back by force. But that wasn’t possible now, for even a minute’s delay might prove fatal.

“Ten seconds. Will you come?”

“No, Chris.”

The anger the leader was feeling prevented him from detecting the suspicion of a sob in Tony’s voice.

"Then I'm waiting no longer," he said icily. "We blast off—now."

So saying Chris lay back on his couch and reached to press the button that would ignite the motor.

"God help the young fool," he prayed silently, for he was very fond of his friend.

After Chris had pressed the button there was the usual agonizing delay while everyone waited to see if the motor would ignite. If Phoenix was indeed almost entombed by the dense Venusian vegetation, would it be able to tear itself free? The searing flame of the motor should deal effectively with the plant life—that is if it was similar to that on Earth. But what if it was as strangely different from terrestrial vegetation as the grey mould? Maybe then the rocket wouldn't be able to burn its way to freedom. Never had Chris felt such a conflict of strong emotion—fear that Phoenix had already sunk too far; despondency that their expedition had seemed futile—and anxiety for that young fool Tony whom he might have condemned to death.

One, at least, of his fears was vanquished when he felt the cabin shudder and then the familiar pressure of acceleration. For the first time Chris positively welcomed the acute discomfort as the rocket's speed built up. Good old Phoenix had torn itself free from whatever it had fallen into!

What was Tony doing? Chris wondered. Though all his muscles were immobilized by the tremendous pressure, his thoughts kept racing on. Even though he knew that the mechanic was solely responsible for any hurt he might suffer, Chris felt that perhaps he should have tried to force him into the cabin. As soon as the period of acceleration was over and they were in free fall, he would get one of the others to go with him to find out what had happened to their young friend. What ever had come over Tony? Why had he refused to obey orders? Why had he gone to examine the fuel tanks instead of staying on the job with Pierre?

Though his body was extremely uncomfortable, Chris's

mind was in even greater torment. Would his temporary imprisonment never end? He would—he must—go as soon as possible and find out what had happened to Tony.

Then a shattering thought struck the scientist. He hadn't reported to Control that Phoenix was blasting off from the planet! In the turmoil of the moments preceding the launching he'd completely forgotten to tell of their change of plans. Normally they would not have taken off for another fifteen minutes, but with Phoenix constantly sinking into the substance outside, it had been necessary to take emergency action. Control would have handled the operation once the rocket had left the surface. The motor would have been switched off by remote control after the required interval. Now Control didn't know Phoenix had taken off and none of the crew were able to send a message. Even if one of them could, by the time the information had reached Control and the impulse cutting off the motor had travelled back, they would be far out into space with all their fuel burnt up. Chris almost fainted with anguish when he realized the consequences of his omission.

It was no use waiting for the acceleration to be completed in the usual eight or nine minutes. Instead it would go on until all the fuel was burnt up. After that there would be no way of slowing down the rocket, which would shoot right past the Earth and away into space. Had any of the others realized what Chris had failed to do? They could not tell him, neither could he speak to ask while the pressure lasted. Perhaps they, like he, had just remembered. If so they would be suppressing the same mental anguish as he. The Phoenix expedition had seemed fated to fail.

"Gracious! What's happened?" Chris gasped. Suddenly he was able to speak, for the thrust of the motor had died away and they were weightless once more. The fuel had burnt out! That was it, thought Chris, but before he could voice his thoughts, the loudspeaker blared.

"Control to Phoenix," came the voice of Mr. Gillanders. "We see you have blasted off without informing us, so we've

assumed you were in trouble. We've cut off the motor at once because by the time our signal is effective you will have reached escape velocity. Please report."

Good old Billy Gillanders, thought Chris, overwhelmed with relief. When his instruments told him we were on our way he must have done some pretty quick thinking!

"Sorry I forgot to inform Control, you chaps," Chris apologized to his companions, who were now releasing themselves from their couches. But the rest of the crew would have none of it, maintaining that every one of them, too, had forgotten it in the scurry of the moment. While his friends were still congratulating themselves on their escape from the clutches of Venus, Chris was reporting to Control and explaining their hurried departure from the planet. One thing he did not tell Mr. Gil-landers. That was the trouble with Tony. Anxiety to shield the mechanic from the inevitable trouble that would follow made Chris want to delay this part of his report as long as possible.

"Any luck with the flycatcher?" Mr. Gillanders asked tersely.

Pierre had gone back to his lab. and was examining the jars of mould which had been injected with the different organisms he'd captured from Venus. One he looked at for a longer time than the others, but at Control's question the biologist shook his head, and Chris had to give a negative answer.

"Remain on your present flight pending further instructions. Report fuel position as soon as possible," the voice of Mr. Gillanders requested.

This last order reminded the crew very forcibly of the missing member. Was he still alive, or had his unaccountable disobedience caused his death? Chris and Morrey prepared to climb into the fuel compartment to find out. While they were away Serge was to assist Control in plotting their new course, while Pierre was too absorbed in his work to be of much use elsewhere.

Grimly the two scientists climbed through the hatch and made their way towards the huge tanks. Where was Tony? They couldn't see any sign of him, so they were forced to explore the compartment more thoroughly.

Chapter Fifteen

It was Morrey who spotted him. Wedged in the narrow space between two liquid oxygen tanks the American saw the crumpled figure. Clad in the grotesque space suit, it was impossible to see if Tony was alive or dead. He did not respond to calls on the radio. By dint of very carefully squeezing himself into the space, Morrey was able to reach the mechanic, and on Chris's instructions began to tow him gently round the tank towards the hatch.

"Let's get him into the cabin. Then we can get his suit off and see what's happened to him," said Chris, and the two of them managed to propel the still figure towards the hatch. Five minutes later they were all back in the cabin. Morrey and Chris were removing their own suits and were joined by the anxious Serge.

"Is he still alive?" the Russian asked.

"Don't know yet," Chris answered briefly, as he climbed out of his own suit. "Give us a hand to get him stripped, Serge."

As soon as he was clear, Chris went over to the suit-clad figure which they had strapped to a couch. Anxiously Chris bent over to undo the fastenings of the helmet. Then he sprang back with a cry of horror that startled all the others. They looked at their leader in surprise. He looked pale—as if he had seen a ghost. Then he seemed to pull himself together and bent over Tony again. Yes, he was not mistaken. Through the front-piece of the mechanic's helmet he could see his face inside.

It was covered with grey mould.

Morrey and Serge looked through the helmet with horror. This was the closest either had been to an infected human being, and it wasn't a pretty sight.

“But how on earth did the mould get into his space suit?” gasped Morrey. It was just impossible.

“I don’t think it did,” Chris said, now a little calmer. “I think that, somehow, Tony was in contact with the mould before he put the suit on.”

“Gosh, how awful,” breathed the American. “How would the poor chap feel when he felt the mould growing inside his suit?”

“My theory,” Chris said slowly, “is that Tony picked up a spore while he was helping Pierre. He found he was infected, and without telling us, went and put on his suit.”

“Because the suit would stop it spreading to us?” asked Serge.

“Precisely. If the mould can’t get into the suit from outside, neither can it get out of the suit from inside. I guess Tony thought this out.”

“And then he went up into the fuel compartment?” suggested Morrey.

“Yes. He had to find an excuse for putting on the suit without making us wonder why,” answered Chris.

“So that’s why he wouldn’t come back into the cabin,” Morrey whistled. “He didn’t want us to find out.”

For a moment they all looked in silence at the heroic youth whose sacrifice they had just realized. His face was hardly recognizable under the thick grey mass.

“What are we to do now?” asked Morrey.

If they removed Tony’s helmet the mould would escape into the cabin and it would be the end of all of them. If they did nothing, then their friend—if not already dead—would surely die. It was a ghastly position to be in. What were they to do?

“Everyone put his suit on,” ordered Chris. “I’m going to remove Tony’s to see what’s happened to him.”

“But, Chris,” Morrey protested, “the spores will escape into the cabin. We shall have to remain in our suits all the time.”

“Pierre will not be able to work in a suit,” pointed out Serge.

“Well, we can’t just let him lie there and do nothing,” Chris argued desperately. “He may still be alive.”

“If he is, the mould will soon kill him,” the Russian argued. “I don’t think we should remove his suit.”

“Neither do I,” Morrey said. “It isn’t as if we can do anything for him now that he’s been infected.”

“What do you say, Pierre?” asked Chris, turning to the biologist. But Pierre had seemed too preoccupied with one of the jars even to notice what had been going on in the cabin. Now his leader had spoken directly to him, the Frenchman looked up from his task. There was a strange, wild look about him, and Chris had a momentary fear that there was a second casualty among the crew.

“Chris, Morrey, Serge,” the biologist said hoarsely. “I believe we’ve got it!”

“What?” yelled the other three, forgetting Tony for a moment. They leapt over to their friend.

“I—I think we’ve got something that will kill the mould,” Pierre repeated, his voice trembling with excitement. “Look!”

He held up one of the mould jars, but it was empty. At least it seemed so until Pierre pointed out a small amount of brown dust on the bottom.

“A quarter of an hour ago that jar held quite a large mould culture,” he informed them. “Now there’s just a pinch of brown dust left.”

“What have you done to it?” gasped Morrey.

“Injected an organism—just as I have done more than two hundred more.”

"Do you know which it was?" asked Serge.

"Of course," the biologist answered impatiently. "I have labelled the organism I used as Number One Five Eight. Look, here it is."

As he spoke Pierre put a slide under the microscope. In turn his colleagues peered at the minute thread-like bacteria which had conquered the grey scourge. There was no doubt about it, the Frenchman said, this new discovery had definitely destroyed the deadly fungus. If only it could be conveyed to Earth and cultivated in sufficient quantity then the whole world might be ...

"Let's tell Control," shouted Morrey in intense excitement.

"No, no," protested the biologist, "I must try One Five Eight on other jars before we announce our discovery."

Chris had been the last to use the microscope. For a long time he examined these fragments of Venusian life while his friends were arguing. At last he straightened up and the others waited to hear his verdict. Without speaking he clumped with his magnetic-soled shoes across to the mechanic.

"Here is the crucial test," he said quietly. "We'll try One Five Eight on Tony."

Before anyone could move the voice of Control sounded, querulously demanding a string of data about their position. Motioning the others to assist Pierre, Chris reported to Earth, carefully toning down his voice so it would not betray any excitement. There would be an interval of at least eight minutes before the next questions could come from Control —time enough to find out if One Five Eight was really effective, or whether they had failed in their mission and the Human Race was doomed.

While Pierre prepared the culture, Morrey and Serge debated the best method of administering it. It would be easy to inject it into Tony's suit just as it had been through the bungs of the jars of mould. But even such a tiny puncture

would ruin the suit, and they hadn't a spare. They decided that they must remove the suit from the still figure and apply the culture directly.

The decision taken, Serge and Morrey were about to put on their suits to protect them from the grey fungus. Then, simultaneously, the same thought struck them and they paused. If One Five Eight was effective, there would be no need to fear, but if it was not they were doomed anyway. So why bother with their cumbersome suits?

"Not much point in taking any further precautions, is there?" Morrey said to Chris. The leader agreed.

Silently, efficiently, the two scientists began the job of stripping Tony. But for his weightless condition it would have been a superhuman task. Tensely, Chris watched. There was little he could do to help. The next few minutes would be critical. Would they save Tony and the people back on Earth, or were they signing their own death warrants? Before the suit was more than half off the mechanic his friends looked, at him with horror. It was as if he was wearing a thick grey fur coat beneath the space suit. They could hardly see Tony's face which was completely covered. He looked like a grotesque teddy-bear.

Was the mechanic alive or dead? The repulsive mould was blocking his nose and mouth. Without hesitation Serge tore at the grey mass with his bare hands, ripping away pieces of skin with the fungus. But at least air could now get to Tony's lungs, and it was with a flood of immense relief that they heard the whistle of his breath.

"Ready?" Serge called out to Pierre, for he could already see thin fibres of mould starting to grow across their unconscious friend's nostrils. Glancing down the Russian saw the fungus starting to grow on his own hands, but he tore away at the fresh growth on Tony without hesitation.

Now the biologist approached and bent over the recumbent figure. In his hand he held a swab on which was a minute globule of culture medium containing a few of the

precious One Five Eight organisms. Pierre wiped the swab across Tony's face and then, with the others looking on breathlessly, watched in brittle silence for the result.

The minutes ticked by. Control was calling from the loudspeaker. Phoenix was speeding along unheeded. But still the crew remained frozen round the grey-covered figure, oblivious to all but the spot on Tony's face where Pierre had wiped the swab.

A sharp intake of breath came from the biologist, and he bent even closer.

"It's—working," he whispered.

When Chris bent over he could see a brown patch on Tony's face. Even as he watched the patch seemed to grow, and in the centre of it bare flesh appeared as the brown dust fell away.

They were all unconscious, now, of anxious calls from Earth. All that mattered was that patch of brown—which was certainly spreading. At Pierre's suggestion Serge touched Tony's face with his infected hand. By so doing the biologist hoped that some of the One Five Eight organisms would be transferred to the Russian and that they would destroy the mould before it spread all over his body.

"Well, Pierre?" Chris asked quietly.

The four scientists looked into each other's eyes. It was a moment fraught with emotion.

"The World can be saved," was all the biologist said.

Chris, as leader of the expedition, put his hands together in an attitude of prayer.

"Thank God," he said simply.

Then he went to the microphone and, ignoring the frantic calls from Earth, informed Control that their mission had succeeded. While his momentous words were singing their way across space, Chris turned his attention to the mechanic. Now he had time to think more clearly he was sure that

Phoenix had been the scene of silent heroism when Tony, seeing he'd become infected by the mould, had gone away to die alone.

The mechanic's body was now almost free from the loathsome grey covering. Carefully his friends examined him and were relieved to find no bones had been broken. Whether or not he'd been injured internally by the terrific acceleration it was impossible to say—but at least his mouth and ears showed no signs of bleeding.

Serge's hand, too, was now rid of the clinging fungus, and Pierre took the opportunity to examine it closely.

"We must be sure," he explained "that One Five Eight isn't merely a substitute for the mould, and that we are not faced with a new enemy. It would be little use killing off the grey fungus if something even worse was left in its place. Serge's hand seems all right, and so does Tony, but we must watch both very closely for the next few days."

"I think he's coming round," called Morrey, who was bending over the unconscious mechanic.

They all turned to look and saw Tony open his eyes. A bewildered look came on the young man's face and he struggled to sit up.

"Easy, boy," called Morrey, and held a glucose tube to the patient's lips.

"What's—happened?" Tony asked hoarsely after he'd taken a few sips.

"We've won," the American called jubilantly. "Pierre's found something which will kill the mould."

As his friend spoke Tony looked at his own body and saw that it was clear. Apart from the sore patches round his lips and nostrils where Serge had torn the mould away, he felt no ill effect. An immense surge of relief welled up inside him, and the next moment he was weeping like a baby,

"Sorry," Tony gasped between sobs.

"Think nothing of it old chap," Chris said. "This will do you a world of good."

Attention was now concentrated on the loudspeaker. At any time now Control's reply would come through to Chris's announcement about their discovery. They all tried to picture the effect this would have in that long, low room at Cape Canaveral. Maybe even now a new hope was spreading over all the world.

"Is this true, Chris?" It was Benson's voice, but none of them recognized it for a moment. "This isn't a joke, or a false hope, is it? I tell you we couldn't stand either."

Now they knew why Benson's voice had sounded so strange. The Director, almost crazy with worry, had no doubt given up hope. This amazing eleventh-hour reprieve was almost unbelievable after he'd resigned himself to the end of all human life.

"What a nuisance," thought Chris irritably, "that we have to wait so long for our words to reach each other."

He went to the microphone again and gave a detailed description of the effects of One Five Eight on Tony and Serge. Then he called each of the others, including Tony himself, to the microphone to confirm what he'd said. Surely now Sir George would believe the good news.

Again the tedious wait. It was not until you were in a situation like this that you realized the importance of instant communication, Morrey reflected. Meanwhile, with Tony recovering every minute, they discussed with Pierre the probable results of their discovery.

First of all, the biologist said, arrangements would have to be made for cultivating One Five Eight on a large scale. Then there would have to be world-wide distribution with probably high-flying aircraft spraying the organisms over the infected areas. After that there would be problems of re-cultivation and re-population of the devastated territories. It would be a colossal task, but at least the saving of Earth was the reward. But now it was time for Control to come in once

more.

"Thank God," came Benson's voice, "it's—almost too good to be true."

"Sorry I couldn't swallow it at first," the Director went on, "but I can now confess we'd all given up hope here. It—it takes some getting used to when you learn the world isn't going to end after all.

"But now to business. We shall bring you back by the quickest possible route, of course. Details will be worked out when we've got your exact position. Meanwhile concentrate your efforts on cultivating and studying this One Five Eight of yours. We must commence work the very minute you land. Every second is vital, for poor old England is getting it badly. Now perhaps we can get some data from you."

The relief in Sir George Benson's voice was tremendous, and it wasn't hard to imagine what everyone on Earth would feel now that salvation was speeding towards them at nearly three-quarters of a million miles an hour.

Chris and the rest of the crew set about their task with a will. As they worked they laughed and joked hilariously. It seemed tremendously funny to find that the pressure in the cabin was seven hundred and twenty millimetres, and that the temperature outside was minus two hundred and fifty degrees. Tony became helpless with laughter when Serge informed them that Phoenix was passing through a shower of micro-meteorites. Morrey floated about in a fantastic aerial ballet.

Like an icy blizzard from the North, chilling them all to the marrow and freezing the crew in their tracks, came the despondent voice of Sir George.

"You're travelling at almost six hundred thousand miles an hour," it said, "and you haven't enough fuel left to slow down."

Chapter Sixteen

It was too much! After incredible hardships and danger they had discovered an antidote for the mould and they had proved its effectiveness on one of their own members. They had escaped from the clutches of Venus and they were speeding homeward with the precious One Five Eight. But now they learned that they were travelling too fast and Phoenix hadn't enough fuel left to decelerate! This was all because Chris had forgotten to warn Control about their hasty departure from Venus! At least so Chris thought, but all the others were vociferous in telling him he was wrong.

"It was my fault for staying up in the storage compartment," declared Tony.

"Nonsense," insisted Pierre. "If I'd instructed you more carefully you would not have been infected and so wanted to shut yourself away from us."

So it went on. But none of this was of any help to them now. If they were unable to decelerate sufficiently they would shoot right past the Earth and continue their journey into endless space. The world would never receive the One Five Eight organism which would save the human race from eventual extinction. All those people who had been told that salvation was on its way to them would have new hopes cruelly shattered, so that their second state would be worse than the first.

Phoenix hadn't sufficient fuel left to decelerate sufficiently to land on Earth! The exasperating time lag had delayed the cutting off of the motor, so using up much fuel and also causing Phoenix to build up a velocity of nearly six hundred thousand miles an hour. Though the tanks were not empty, the remaining quantity of fuel and liquid oxygen was not enough.

"What are we to do?" asked a white-faced Tony.

"There's nothing we can do," said Serge calmly, "except wait."

"Has Sir George anything to suggest?" Morrey inquired despondently.

As if in answer to the American's question Benson's voice sounded again.

"We may as well decelerate you as much as possible," it said, "but we won't start till you're a bit nearer."

In their anxiety following such dreadful news, the crew had forgotten that the rocket was rushing towards earth with terrifying speed—far faster than had ever been contemplated before. It felt no different to when they used to make their comparatively leisurely journeys to the Moon.

Chris had been thoughtful for some minutes. At last he spoke to his companions.

"Control may or may not be able to work out something for us," he said, "but even more important is the One Five Eight. Suppose we can't get back to Earth, couldn't something be done about landing some of Pierre's new culture?"

"Gosh, that's a thought," Morrey agreed solemnly. "If we could land some good old One Five Eight the expedition wouldn't have been wasted."

"But how can that be done?" inquired the biologist.

"Don't know yet," Chris told him, "but at least we'll make the suggestion to Control. Meanwhile, see if any of you have any bright ideas."

The scientist communicated his suggestion to Earth and patiently waited for an answer while the crew discussed the problem.

"We should have to eject a small canister attached to a parachute," ventured Morrey, "but we haven't got one."

"We could make one—at least I think I could," Tony

declared.

"How would you do it?" Serge asked. They all knew the skill of the mechanic, but it seemed a very tall order.

"The parachute will be the difficulty," Tony informed them. "I don't quite know what we could use. As for the canister, that's quite simple. I could make one from some of the metal in the cabin with the aid of my small electric welder."

"How big would it have to be?" asked Serge.

Chris provided the answer.

"The best way of ejecting it would be to push it outside through Pierre's flycatcher," he said. "How large is that?"

"Ten centimetres by twenty centimetres," Pierre informed them. "Not very large, I'm afraid."

"It certainly isn't, but we'd have to do the best we can," agreed Chris.

"Maybe I could modify the flycatcher," Tony interposed.

"How do you mean?" he was asked.

"Well, as it is we could only push out a cylinder ten centimetres in diameter by twenty centimetres long. That's because the flycatcher is so shallow that we'd have to push it out sideways. Now if I increased the depth of it, and we ejected the canister endways, we could use one ten centimetres diameter by whatever length to which I increased the depth of the flycatcher. See what I mean?"

"Not quite," confessed Chris.

"You see—the opening to the outside is ten by twenty. Because Pierre had only to use adhesive strips, the covering of the aperture is only a few centimetres deep. If I make a new covering—and I can make one any size you like—the flycatcher will hold something much larger than a strip of paper. As long as the diameter is not more than ten centimetres so that it can go through the hole, it can be as

long as the covering will allow. Now do you get it?"

"Yes, I've got it this time," Chris smiled. "But what about this parachute?"

"There's only one thing for it," declared Morrey. "The nylon covers of our contour couches."

It said volumes for the courage of the crew that none of them objected to the American's suggestion. Each couch, carefully moulded to fit its particular occupant, was covered with a thin sheet of strong nylon which held the foam rubber padding in place. If these sheets were removed the padding would possibly be displaced, and the effectiveness of the couches would be considerably reduced. Deceleration, normally a very uncomfortable experience, could be turned into a time of excruciating agony.

"The very thing," agreed Chris, "but can we make a parachute out of them?"

"I think so," Serge said quietly. "We have several tubes of strong adhesive which we carry for emergency repairs. We could use it to join the parachute together."

The time taken to get a reply from Control was getting noticeably shorter as Phoenix continued its headlong flight towards Earth.

"It's a good idea if you can do it," Benson's voice now came through, "but you haven't a canister, and we should have great difficulty in recovering it unless it had a built-in transmitter."

"Tell him I can put a transmitter in," Tony whispered urgently, and Chris gave a full report of what they proposed to do.

"Do you think Sir George will agree?" asked Serge, as they waited for the reply.

"Sure," declared Morrey. "What's he got to lose?"

Not once had the crew spoken of their own fate, so concerned were they to get the fruits of their labours back to

Earth. Yet perhaps in the backs of the minds of each was the fear of being condemned to wander endlessly through space.

"Shall we start?" asked Tony impatiently. "There'll be a lot of work to do."

"Better wait for the O.K. from Control," Chris replied. "It won't be long now."

It may not have been very long measured in minutes and seconds, but to the crew of Phoenix, waiting tensely for permission to try out their idea, the interval before the Director's voice came back seemed enormous.

"All right," Benson's voice boomed at last. "Do the best you can. But you haven't much time. We shall start deceleration in twenty-three hours, and if it's going to be effective your canister must be thrown out before Phoenix starts to increase its speed again under the pull of Earth's gravity. Do you think you can make a canister, parachute, and transmitter in time?"

"Of course we can," Chris called back confidently. "Before you hear these words we shall have started. We'll report progress as we go along."

Sure enough the crew were all waiting impatiently to start. Chris was glad they were so keen on the idea. At least it would keep all thoughts from their own fate for a little while longer.

"Right," he said, after the briefest pause. "Now we must plan the job out. Tony, you'd better take charge. Most of the work will fall on you, so you'll have to tell us how we can help."

"O.K.," the mechanic grinned. "I'll make you all jump to it. Now this is what you must do ..."

Tony detailed how each of his four companions could help, allocating various jobs to them. Chris and Pierre were to be entirely responsible for the parachute, while Morrey and Serge were to assist him and work to his instructions on the cover for the flycatcher. A feeling of exhilaration spread

among them. It was good to be working hard. They were a team with one aim only—to provide the means of sending One Five Eight to their friends on Earth.

By the time Sir George Benson's voice filled the cabin again they were all busily engaged. The Director was full of praise for their confidence and enthusiasm, but reminded them that it was still essential that Control should receive regular reports from them. At this Chris and his friends frowned impatiently. Why waste valuable time reading instruments and reporting when they had so much to do in such a short period?

With the utmost care Chris and Pierre began to strip the contour couches of their nylon sheet coverings. Tony put on his space suit and climbed into the storage compartment. Ten minutes later he returned to the cabin carrying a large sheet of the tough aluminium alloy of which the rocket was built. He'd removed it from a non-essential part of the inner casing and proposed to fashion from it the cover for the flycatcher. Morrey and Serge listened carefully to the mechanic's instructions, and while they were laying out all the tools, he disappeared again to get a sheet for the canister.

For the next few hours the crew were too busy to think of anything else but the job they were doing. Only Control's insistent requests for reports every hour marked the passing of time. None of them had thought of food or of the future. All were concentrated on the effort to have the canister ready in time.

Tony had quietly taken charge of the whole operation. He spent his time between the group making the parachute and the other one working on the cover. The mechanic himself was building the small transmitter without which the precious canister would never be found. He'd taken components from various instruments quite ruthlessly, for neither of the transmitters in the cabin were small enough for their purpose. Fortunately batteries were no problem, because many of all sizes were used in the complicated instrumentation of Phoenix.

Chris gasped when Control told him they had only eleven hours left. He could scarcely believe that twelve hours had slipped past since they had started work. But a glance at the record sheets he'd kept of the data relayed to Control confirmed this. And the job was not nearly half done!

All the nylon had been removed from the foam rubber couches, and now it was cut up into panels which Pierre and

Chris were laboriously joining together. It was a slow process, for the joints had to be secure and smooth. Morrey and Serge had almost finished the cover for the flycatcher. It would permit a canister forty centimetres long to be used—twice the original size. This would greatly facilitate the stowing of the parachute, and the inclusion of the transmitter.

Tony had not progressed very far with his instrument because he'd spent quite a lot of time helping the other two pairs. Even after the cover had been finished, he'd have to fix it, while the others started on the canister. It was going to be a very close thing.

Though the thermometer wasn't recording a higher temperature inside the cabin, every member of the crew was damp with perspiration. As more time sped by the fear began to grow that the task was too much and they wouldn't complete the job in time. Six hours was it Control had said? They were all very tired now, but there was no time to rest. At least the cover had been finished and fixed, and Tony was satisfied it was working efficiently.

A great problem now confronted the makers of the parachute. What were they to use for cords? With their part of the job almost done they must find something to use, but Phoenix carried nothing that would do. Pierre wondered if they could cut some of the nylon up into strips, but Chris doubted if these would be strong enough. Then a solution struck him.

All round the cabin were thick bundles of wire and cables taking power to the many instruments or carrying readings

back to the recorders. Many of the wires were covered with plastic insulation in different colours to help identification. They must rip out some of these wires and use them for the cords. But which ones should they choose? Here again Tony had to decide, and he indicated the coloured wires that served the less essential instruments—some of which he'd already put out of action by removing parts for his transmitter.

Soon the cabin of Phoenix began to look as if it had been the scene of a bomb explosion. Loose pieces of wire hung everywhere, the contour couches looked dishevelled and torn, pieces of metal were becoming a danger floating about the cabin until a magnet was used to collect them. A magnet also had to be used to anchor the various tools. Tony had found it most exasperating to discover that a pair of pliers he'd been using had floated away and had to be captured like a butterfly.

Now the sense of urgency was increasing. Time was running out. They were all very tired but there was no thought of rest. Only four hours left and much to do. Still Tony wrestled with the transmitter which he must make very strong and reliable. In the confined space at their disposal Chris and Pierre were having the utmost difficulty in attaching the wires to their parachute. Time and time again they became entangled, and their weightless condition made matters worse. Serge and Morrey had done their best. The canister—divided into separate compartments for transmitter, parachute, and the One Five Eight culture—was almost ready. They had bent and shaped the metal, and Tony had done the final welding. If only they could get the wires on to the 'chute—and if only the transmitter would work.

There were less than two hours left when Tony succeeded in getting his apparatus to work. Carefully he installed it in the centre section of the canister ready for testing. It was a nerve-racking moment as he switched it on. Then, sure enough, he could hear the regular clicks in the earphones of his receiver. What the range would be was anyone's guess.

The close proximity in the cabin was no guide. Unless the signals reached tracking stations on Earth the canister and its contents would be lost.

Everyone now turned to help Chris and Pierre, but they got in each other's way. At his own suggestion the biologist left them to it and went to his own laboratory where he prepared the jar of culture. Then, well packed with rubber ripped from Qne of the couches, he forced it into the first part of the canister.

The cap was placed on and Tony secured it. Had he welded it all round, the heat generated would have set the foam rubber on fire so he tack-welded it in three places.

With less than half an hour to spare the job was done. The final task had been to fold up the parachute and stow it in the rear end of the canister. It wasn't possible to devise any elaborate mechanism to ensure its release. They had to be content with leaving the end of the cylinder open. The air locked inside the folds of the nylon material would be—so they hoped—sufficient to expel the parachute. Exhausted and tired, they watched Tony place the metal cylinder inside the enlarged flycatcher ready to be released as soon as their speed had fallen. It was as if they were all sending part of themselves as a farewell gift to the Earth they would never see again.

Chapter Seventeen

Fire lateral rocket now."

The order from Control was the beginning of the end. A burst from one of the small rockets would turn Phoenix tail first, so that when the big motor roared out for the last time its pressure would be against the projectile's headlong flight. How long would the rocket fire? No one knew for sure as the gauges could not record the fuel and oxygen left with 100 per cent accuracy. Every gallon would be vital.

Chris pressed the firing button for the side rocket while the others surveyed their couches and climbed into their space suits. As soon as Phoenix had been turned, which he could tell from one of the instruments, Chris, too, began hurriedly dressing.

"Five minutes," the loudspeaker warned, and they settled themselves as comfortably as they could on the remains of their couches. All of them knew they were in for an appallingly painful time during deceleration, for parts of their bodies would now get little or no support. Yet they all prayed the fuel would last out as long as possible.

"One minute."

The time now taken by messages from Earth was less than thirty seconds, but it was strange to think that, as they lay waiting for their ordeal to commence, the signal would soon be speeding across space towards them.

"It's on its way now," muttered Tony from between clenched teeth a little later.

Ugh! The motor had responded—and didn't they know it!

Without proper support they found the terrific pressure excruciating. It was almost as as much as they could do to remain in control of their reeling senses. Yet they all wanted the agony to continue as long as possible.

In front of Tony's eyes there seemed to be a red mist. His left leg felt as if it would snap at any second under the tremendous strain. The young mechanic forced his brain to start counting. Slowly he reached one hundred and still the fuel lasted out.

One hundred and forty. One hundred and fifty! He certainly hadn't expected the fuel to last as long as this. When he'd last examined the gauges Tony guessed a couple of minutes would see the burn-out. How long he'd been counting he had no idea. The time had seemed endless, but reason told him that it must be less than three minutes. One hundred and seventy-one! One hundred and seventy-two. Every precious second knocked down their speed.

For brief moments Tony lost consciousness. At least they may have been brief moments, though he had no way of telling. Miraculously the welcome torture continued, but it must end at any moment now. Would their speed be low enough, with the help of the parachute, to enable Earth's gravity to capture the canister? At the height at which they would make the release there would be almost no atmosphere to fill out the parachute and to act as a brake. If its speed was too high it, too, would shoot off into space instead of circling the Earth in ever lower orbits.

Ah! It was all over. The motor had burnt the last drops of fuel and oxygen, and the terrific pressure was off. Bruised and aching all over, the crew members struggled from their couches. How long the deceleration had lasted none of them knew, for all—like Tony—had suffered black-outs. All that mattered now was the canister lying ready to be released in the flycatcher. Chris made his way painfully to the microphone to report, but Control beat him to it.

"Well done," Sir George's voice said, "You had more fuel than we thought. No, you're still above escape velocity, but only just. You must alter the course slightly before jettisoning your canister. Give Number Three a two-second burst. That will bring you within one hundred and twenty miles of the surface. We dare not bring you in any closer or

you'd burn up, but that will be near enough to give the parachute some drag. You can drop it off as soon as you like after you've altered course."

So they were to pass within a mere hundred and twenty miles of Earth—a minute distance compared with the millions of miles of their journey. As Benson had said, at that height there is sufficient atmosphere to exert some drag on the canister, but it would also cause an appreciable amount of heating to Phoenix. As most of the rocket's protective cover had been fused away in the atmosphere of Venus, they couldn't risk getting too hot—though why Control was being so fussy Chris didn't know. Maybe it would be better to burn up quickly, or crash like a meteor into the Earth, rather than go wandering to a slow death in endless space.

Long training enabled Chris to carry out the manoeuvre without putting his thoughts into words. They could enjoy the luxury of thinking about their own position after they had dispatched the precious canister safely. Ten minutes later Control was able to confirm that Phoenix was now on the desired course, and that they could release the canister. As soon as Tony had made sure that the transmitter was working Chris pulled the lever which opened the outer casing of the flycatcher. Though they couldn't see it the crew knew that the metal cylinder would be ejected from the rocket by the sudden expansion of the air in the flycatcher. It would now be travelling parallel to Phoenix some yards away, and the parachute would be spilling out of the open end ready to collect the first thin wisps of atmosphere. To confirm that the cylinder had really left on its journey down to Earth, Chris opened the inner cover to find that the flycatcher was indeed empty and that the precious culture was on its way.

As the leader turned to his companions a sense of despondency came over all of them. The canister dispatched, there was nothing more for them to do—except wait for a slow, inevitable end. The activity of the last twenty-four hours had effectively prevented them from thinking of their own hopeless situation, but now there was nothing else to

do. How long would it be before their courage deserted them?

"Canister away," Chris reported. He tried to keep his voice from betraying how he felt. In any case he must put on a brave face in front of the others.

"Give Number Seven a two second burst," ordered the voice of Sir George Benson. Silently Chris obeyed. This would be to take Phoenix away from the canister so that its radio signals could be detected. No doubt Control would now be concentrating all its attention on the tiny cylinder that was bringing new hope to mankind.

A hundred and twenty miles from home! That is the distance they had been. Just a few minutes' journey by plane, and even by car a very moderate ride. But now they would be drawing away again, and every second would take them farther from all fellow-humans. A thousand times better if Benson had allowed Phoenix to crash on the Earth!

"We're picking up signals from the canister," Sir George's voice informed the crew. That was something, anyway, and for a few moments they forgot the gloom that was rapidly settling on them.

"Will you be able to pick it up?" asked Chris.

"Every possible plane and boat has been alerted," Benson replied. "Of course there are vast territories we can't cover, because half the world's airfields have been put out of action by the mould. In another ten minutes we should know."

Ten minutes! In that time Phoenix would have carried them some hundreds of miles farther out into space, Tony thought bitterly. What did they matter now? Still—it would have been nice for someone to have wished them "good-bye".

"What will happen if the canister lands some place where you can't pick it up because of the mould?" Morrey asked through the mike.

"There's still a good chance, if Tony hasn't made the canister too strong, that the cylinder will fracture on impact

and release the culture. One Five Eight could still accomplish its purpose, but it would be a much slower process having to spread out from one point. If we can recover the canister, we shall breed the culture and distribute it very widely. Thus the Earth would be cleared of mould in a matter of days instead of perhaps months," Sir George answered.

"But if you don't recover the canister, and it doesn't fracture, what then?" queried Serge.

There was a long pause before the Director answered.

"We shall recover it," he said. "We must."

The great bowl of the Jodrell Bank radio telescope swung round slowly. It was controlled from a building a quarter of a mile away from the lowering mass of steel. A score of men sat at the banks of instruments that filled three sides of the room. Just the touch of a switch on one of the panels was sufficient to move the telescope. Visitors had often marvelled to see, through the control-room windows, the instant obedience of the metal monster. Never in its history had the telescope had such a vital task to perform.

Outside the control building were three white-painted caravans. The largest housed a mass of radio equipment. It was with this that Cape Canaveral kept in touch with Jodrell Bank, and all tracking stations were linked up. The team of Americans which lived in the other two caravans was the descendant of that company which had joined the British for the first satellite launchings. So fruitful had been this co-operation that it had been continued. Now both British and American scientists at Jodrell were united in the supreme task of tracking the fateful canister.

Upon information received in the radio caravan from Cape Canaveral, the men in the telescope control based their calculations of the canister's track. Now the giant bowl was wheeling to pick up the faint signals from Tony's transmitter. From these would be ascertained the cylinder's exact speed, height and direction. Every tracking station still operative would be following the flight, and aircraft and ships were

already patrolling vast areas of sea and land.

The bowl of the telescope was now almost on edge—pointing to that part of the horizon over which the little messenger from Phoenix would come. Tensely the men at the instruments waited, as did their colleagues in the nearby caravans. There was a deathly silence in the room. One man, walking across it on tiptoes, received angry glares from his listening colleagues. It seemed as if everyone was holding his breath.

Then, faintly, they heard it. There was a crackling noise which almost masked the pips from the tiny transmitter. One of the men on an instrument panel was turning knobs furiously. Suddenly the crackling was silent, and the signals from the canister came in faint but clear. All sorts of meters were now at work, and long rolls of paper passing through some of the machines recorded graphically the data about the signals.

At Cape Canaveral, Sir George Benson was greatly relieved. He knew that the team at Jodrell, the most experienced in the world, would hang on to the speeding cylinder and never let it go. Only when it disappeared over the telescope's horizon would the signals be lost. Long before then other telescopes would have taken over the task. So the canister would be followed anxiously on its path round the Earth.

"Can I leave the canister to you now?" Sir George Benson asked Mr. Gillanders, his assistant.

"Of course," the big Australian scientist assured his chief.

"It's in the bag—or will be soon," he concluded with a grin.

While Sir George was occupied with another important matter Mr. Gillanders followed the descent of the canister. When first released from Phoenix it was travelling at just under twenty thousand miles an hour at a height of one hundred and twenty miles. Because of the carefully chosen path of the parent rocket, the canister was hurtling along on a course that would gradually bring it deeper into the Earth's

atmosphere. But for the parachute it would still be travelling too fast to go into orbit when it left the atmosphere again. However, Chris and Pierre's efforts were worth while, and their parachute succeeded in slowing down the canister to just below escape velocity.

Once the precious cylinder was in orbit, the rest was comparatively easy. It would make one or two circuits of the Earth, getting lower all the time. As it entered the denser atmosphere the parachute would fill out completely and the descent of the canister would be assured. At this early stage it was impossible to predict exactly where it would fall, but as time went on the margin of error narrowed. Finally, as a result of data obtained by the tireless team at Jodrell Bank, Gillanders was able to say that the canister would fall within a fifty-mile circle just off the coast of Cornwall.

Now planes and ships were able to concentrate in the target area. Within half an hour there was such a concentration of craft that every square mile was covered. Binoculars and telescopes peered keenly into the sky. Fortunately it was daylight, though there was a fair amount of low cloud. The time estimated for the canister to fall out of the clouds and into the sea was less than two minutes, so there would have to be some pretty sharp action if it was to be scooped up before it sank below the waves.

Flight Lieutenant Cook often said he was the oldest flight lieutenant in the Royal Air Force. He'd been due to finish his service in another two months, and he'd hated the thought.

When the invasion from Venus had shattered the ordered way of life on Earth the officer had regarded it as a reprieve. Normally he should no longer be on flying duties, but rules and regulations had gone by the board and Cook found himself the pilot of an aircraft in the target area.

The AK-49 which the Flight Lieutenant was piloting had been ordered to keep at seven thousand feet—just below the layer of dense white clouds that covered almost all the area. In disgust he thought of the big boys up aloft in the bright,

clear sky. What chance had he of spotting the canister first? Surely it would be seen by one of the craft up above the clouds. Still—It was the chance to have a flip, and Cook consoled himself with all sorts of unauthorized acrobatics to ward off sheer boredom. On his radio he could hear the cross-talk of many other aircraft looking for the same thing as he. Down below, every mile or two boats were patrolling. Who would be the lucky chap to pick up the prize?

The Flight Lieutenant had just completed a couple of somersaults and a falling leaf when he spotted it. For one incredible moment he couldn't believe his eyes. With the back of his gloved hand he rubbed them fiercely. Yes, it was still there. Right in front of him and below was a parachute. And on the end of the parachute was a canister ...

With a whoop of delight and a hoarse "tally-ho", Cook banked his plane to prepare for his run. From the back of the fuselage trailed a huge loop of wire in which he would hook the parachute just as the capsules of the Explorer satellites used to be recovered. But the canister was falling faster than he'd anticipated. By the time he'd positioned himself ready to run in and scoop up the parachute he could see it was much lower than it should be. Maybe the parachute was torn and allowing the cylinder to drop more quickly. He'd have to look lively or the darn thing would drop into the drink.

Cook pushed down the nose of his plane and dived towards the falling object. Yes! As he zoomed nearer he could see that the parachute was in shreds, offering very little resistance to the fall. Must have been torn entering the atmosphere at such a high speed. He'd missed it! His wire loop was empty. As tightly as he could the Flight Lieutenant turned his plane and dived again.

Now he was getting worried. His altitude was only fifteen hundred feet. If he didn't catch it this time it would be too late. He doubted whether he'd have enough air to make another run. The sweat was standing out on his forehead as Cook swept towards the canister. In a fraction of a second he was over and past it. In a flash he turned his head and let out

a groan as he could see his loop still empty. Was the chance of saving Earth going to be lost after all? Was the precious canister to disappear beneath the waves under his very eyes? He could see a number of ships racing towards him, but they were all too far away to be any good. No. It all depended on him, and he'd get that canister—or die in the attempt.

The blood rushed painfully to Flight Lieutenant Cook's head as he turned the plane in far too tight a circle. Gritting his teeth he put down the plane in a fierce dive. The parachute was within yards of the sea and in a few seconds it would be too late. Now the sweat was rolling down the airman's face, for he knew that if his machine touched the water, it would explode under the impact. Down, down he went after the limp, falling shape that he must save. His plane almost touched it as it went past, but this time he was unable to turn his head to see if he'd succeeded. Instead he was engaged in a desperate effort to pull up the nose of the plane, for he'd actually touched the crest of a wave.

Chapter Eighteen

There was nothing more that the crew of Phoenix could do-except wait. Wait for what? Now that the canister was away there was a secret feeling growing up inside each one that Control seemed to have lost interest in them. Of course, there was nothing that Control could do, but at least a chap doesn't like to think he's been written off. When Mr. Gillanders came through and ordered another two-second burst on lateral rocket Number Three, it seemed one of the most irritating commands they had ever received. Only their respect and affection for the Deputy Director made the crew refrain from bitterly sarcastic comments. Chris did as required. Then they all sank back into their former despondency.

Tony couldn't trust himself to speak. He found it increasingly hard to choke back the sobs that kept rising in his throat. He wasn't going to break down in front of the others. He'd keep a stiff upper lip even if it killed him to do it. Killed him? Yes, it would have been better if their rocket had crashed instead of this endurance test to see who would crack first.

When Mr. Gillanders ordered another burst from Number Three it was too much.

"Pipe down," Morrey called back, and the others ignored the command.

The Deputy Director's voice came through sharply.

"A two-second burst on Number Three, quickly," it snapped.

Purely for lack of something better to do Tony floated over to the lateral rockets and did as they were bid. But what was the use of it all? He hadn't the heart to voice his question to the others.

"Now then, you chaps, I think we've got things worked

out," a cheerful voice broke out into the cabin.

It was Sir George Benson himself. Either the Director was being unspeakably cruel to the doomed young men—or he'd hit upon a plan. While the crew were still stunned by his words, Sir George went on to explain.

"You're moving too fast to get into a natural orbit," he pointed out, "but we are going to create an artificial one for you so that you won't get wandering off into space. At your speed you are moving in almost a straight line. We keep turning you with those lateral bursts, so that instead of moving in a circular orbit—which you can't do—we're moving you round on an octagonal path."

It seemed incredible. They were not to wander through space for ever, but were to remain reasonably close to Earth in this strange orbit! But then their spirits were dashed again when it struck them all very forcibly that this could only be done as long as their lateral rockets lasted out. When these became exhausted their rocket would wander off again. However, as they might have known, Benson was aware of this.

"We shall only be able to maintain your orbit for a very limited time, of course," he went on to say. "Long enough, I hope, for the S.T.1 to reach you."

The S.T.1! Great Heavens! Why had they never thought of that? The S.T.1 was short for Salvage Tug Number One, a specially designed space vehicle whose task it was to gather up the debris of space. In the last decade innumerable satellites had been placed into orbit. After they had ceased to function they and their carrier rockets were a menace to navigators. So periodically the salvage tug was sent out to gather in these useless lumps of metal. If only they could keep Phoenix fairly close to Earth, S.T.1 might be able to salvage them!

The tears were gushing from Tony's eyes and floating round the cabin like little balls of silver, so great was the mechanic's relief at the news. No young man wants to die if

he can help it. Chris and the others were just as deeply affected, but somehow managed to maintain their self-control.

Benson's voice broke in on them again.

"The tug has already taken off," he informed them, "so you may be able to pick it up now on your radar screen. However, it's my duty to warn you that it's going to be a pretty difficult job. You see you are travelling at a speed greater than escape velocity. The tug can't reach your speed or it, too, would fly off into space. We've got to put it into an orbit and allow Phoenix to overtake it. It will be pretty tricky getting you hooked up as you sail past."

This warning of the Director's had a sobering effect on the crew. Though efforts were being made to rescue them, their chances were pretty slim. Still, a few minutes ago they believed they had no chance at all, and that Control had written them off. It was good to know that their friends were doing all they could. And if everything failed, well it would be nice to know they'd tried.

"Can we do anything to help?" Chris asked, but Benson told them that all they could do would be to carry out instructions to fire the lateral rockets when requested. Meanwhile, had they spotted S.T.1?

Serge and Morrey were already manipulating the rocket's radar, but as yet no sign of the rescue tug had appeared on the screen. The American recalled that the headquarters was in Alaska, and so the tug would have taken off from there. None of the crew members had ever heard much about the work of the S.T.1 and its crew, for its job was usually undramatic routine. The rescue of Phoenix and its crew would be the most exciting and difficult assignment the salvage tug had ever had.

As leader of the crew Chris's main job now was to see that his colleagues didn't get too excited or too depressed. If their hopes were raised too high and the rescue attempt failed, the reaction would be devastating. On the other hand, he had no

wish for them to be despondent. A serious and well-planned operation had been launched and there was some chance of success, otherwise Sir George would never have told them. At all costs, now, they must remain calm and carry out instantly any orders received from Control. And they must keep their eyes glued to the radar screen ready to report the blip of the S.T.1.

Number Three lateral rocket didn't quite complete the next two-second burst. These side rockets were only small ones, for this type of manoeuvre had never been intended. Sir George called for a one-second burst from Number Four and informed them that this would cause a slight modification in their original flight path. New calculations would have to be made and transmitted to S.T.1 which was still climbing into orbit.

Inside the tug was a crew of three. A Canadian named Jeff Anderson was the captain. His was a unique job, for his vessel was the only craft in the world specializing in the collection of space debris. The tug had a high degree of manoeuvrability, from scores of lateral rockets, permitting it to come alongside burnt-out rockets or useless satellites and to seize them with a pair of retractable steel arms.

Anderson and his two friends had often complained bitterly about the monotony of their job, and had repeatedly requested transfer to other space vehicles. Even a transport ferry would do. But UNEXA had remained adamant, for Jeff and his crew were experts at their dull but essential job.

Chapter Nineteen

When orders came through from the Director himself that they were to fuel-up for a special mission the tug's crew had been feeling really browned-off. Mystified, but hoping for something exciting, the crew had completed the job in double quick time. Then when Sir George had spoken and personally given Jeff his instructions, the Captain had barely restrained his whoops of joy. Billing and Wynn-Evans, the other two members of the tug's crew, had been equally excited but less restrained. At last they were going on a worth-while mission—and a mission which only they could do. It even made up for their dreary past.

Captain Anderson wasn't blind to the difficulties and dangers of their task. In the first place he'd never had to pick up such a huge lump of metal. True, some of the old Russian satellites had been pretty cumbersome affairs, but none of them had been as large as Phoenix. Then, again, he'd never operated beyond escape velocity. He'd have to accelerate beyond this critical speed if he was to catch hold of his objective. Still, good old S.T.1 should do it, and then he'd have the tremendous task of bringing his captive gently back to Earth.

Like the well-trained team they were, the tug's crew handled their ship beautifully. The take-off was perfect and the ascent to orbital height went smoothly. Now they would have to coast along and wait for direction from Cape Canaveral. This Phoenix bird was flying a pretty strange path by all accounts and it might be a dicey business getting hold of it.

Jeff had never met the famous Chris Godfrey who was leading the Phoenix crew, but he knew all about the scientist's exploits. It would indeed be marvellous if, with the aid of S.T.1 he could contribute to the success of the greatest of them all.

The radars of Phoenix and the salvage tug picked each

other up at just about the same time. While Jeff was calling out to Billing and Wynn-Evans that there was a promising blip on the screen, Chris was saying almost the same thing to his companions. Morrey, Pierre, Tony and Serge crowded round the screen and peered intently at this small white blob that represented the vessel which might save them even now. It was hard indeed not to let their hopes go soaring out of hand, but Chris kept warning them of the difficulties that lay ahead.

Another turn was safely executed with the aid of Number Five lateral rocket. Thank goodness they hadn't had to use them much in landing on Venus! According to their best calculations, Control said, Phoenix would overtake S.T.1 in nine and a half minutes. So it wouldn't be long now before Tony and his companions knew their fate. It was now or never, for it was very doubtful whether the small side rockets of their vehicle would last long enough to make another circuit for a second try.

"Salvage Tug One to Phoenix. Are you receiving me?" a new voice asked from the loudspeaker.

Chris jumped to the microphone.

"Yes, we can hear you clearly," he called back. "You don't know how glad we are to make your acquaintance," he called back in a brave attempt at jocularity.

"Same here," Jeff Anderson replied in the same spirit. "I hope our acquaintance will soon become closer—much closer."

"We must leave it all to you two now," the voice of Sir George Benson interrupted. "There's nothing more we can do, so we'll stay off the air until you report the success of the operation."

It wasn't hard to detect the strain in the Director's voice.

"Good luck, Chris—and all of you," Benson concluded. They knew the Director had done all in his power to help.

"You there, Godfrey?" the voice of Jeff Anderson asked.

"Yes, I'm here," Chris replied. "What do you want me to do?"

"Nothing yet," the Captain of the tug answered. "You're nine hundred miles behind us and closing up rapidly. Don't touch any more of the laterals, just keep her steady. When you're about a hundred miles behind us, we'll start to accelerate so that when you catch us up we'll be moving at nearly the same speed."

"What happens then?"

"We shall manoeuvre alongside you and then grab hold," Jeff called back.

"But you'll be above escape velocity," Chris pointed out.

"I know. Don't worry, we've got plenty of fuel. We'll just have to turn around and decelerate gently. Not a thing to it!" the Captain of the tug declared confidently.

"Hope he's right," muttered Chris below his breath.

Back in the S.T.1 Billing was keeping check on the exact distance between the two rockets, while Wynn-Evans stood by to boost up the speed to match that of Phoenix. Occasionally the two captains exchanged pleasantries, but mostly they were silent as the critical moment approached.

"That's it," called Billing, as Phoenix came within the hundred miles. At a nod from Jeff, Wynn-Evans started the motor and they all felt the effect of its thrust.

"Seventy miles," called Billing. The tug's acceleration was not high enough to prevent their speech. As they increased speed Phoenix was catching them up more slowly. At forty miles the television screen was switched on, for the tug was equipped with a powerful camera used in locating floating debris.

"Ought to see it soon," breathed Jeff, as he peered intently at the screen, but it was when Phoenix was only twenty miles behind that it first appeared as a point of light to the watching salvage crew.

"Give Number Sixteen a touch," ordered Jeff. They must get S.T.1 so that Phoenix was dead astern.

"Right. That's got it," he said with satisfaction after he'd examined both television and radar screens. "What's the distance now?"

"Twelve," Billing called back instantly.

Jeff went over to the levers which controlled the retractable arms. Though it would be a few minutes before Phoenix was alongside he extended them experimentally. It wouldn't do to find out at the last minute that the arms had jammed. After working them about for a while Jeff drew the arms back into the side of the tug ready for the critical moment.

The five men in Phoenix were likewise watching the radar screen tensely. At frequent intervals Captain Anderson gave them their exact distance. As they steadily overhauled their rescuers Chris and his companions wondered what the fellows, on whom they were depending so much, were like. All they knew was that they were very experienced in ordinary salvage operations. But this wasn't an ordinary operation! Could Anderson and his men take hold of them as they slipped past? Or would Phoenix elude them and continue on into the unknown?

"One mile!"

The tension in both vessels was almost unbearable. Tony licked his dry lips. Serge looked serious and pale. Pierre seemed to be praying silently. Morrey and Chris looked grim. Jeff Anderson, breathing heavily, waited with his hand on the controls, while the other two bent all their concentration on their instruments.

Seconds ticked by like hours. Then Wynn-Evans yelled, "Here she comes!"

Instantly Jeff manipulated the arms. For an instant Phoenix and the S.T.1 rode side by side. Then the arms came together—on empty space. Phoenix had moved ahead!

Missed!

Jeff was filled with horror. They had failed on the most important job of their lives. The chaps in the other rocket were doomed. He'd let them down! No, he couldn't do that. He'd save them or bust!

"Motor!" he snapped. Billing never hesitated. Though the tug was already moving faster than it had ever done before, it must accelerate still more. They must overtake Phoenix and make another grab. Would S.T.1 do it or just disintegrate?

Billing touched the switch and the tug quivered. But already Phoenix was nearly a mile away. Could S.T.1 catch up? Its crew waited at their stations as the huge, cumbersome vehicle strove to catch up with its quarry. Whether they would be able to "kill" this fantastic speed and get back to Earth even if they could seize the fleeing Phoenix, never worried the tug's crew. First, let them stop those other chaps from being dragged off into space. They could bother about other things later.

Inside Phoenix, Chris and the others were stunned by their misfortune. In spite of trying to remain calm they had each allowed themselves to hope that rescue was at hand. Though Benson had warned them of the difficulties, the confident voice of the tug's Captain and the efficiency of his crew had made them believe that the S.T.1 would manage to drag them back to good old Earth. It was a terrible shock when they realized that the tug's groping arms had missed them and that their hope of salvation was rapidly falling behind.

None of the crew of Phoenix trusted himself to speak. They had come so near, so very near, to rescue. Each avoided the eyes of the others, for fear that his self-control would break down completely. To avoid looking at the others Serge had kept his eyes on the radar screen, hopelessly watching the blip of the receding rescue tug. How long they stood frozen like that they didn't know, but suddenly the silence was shattered.

“They’re catching us up again,” Serge shouted.

Instantly the others crowded round the screen while Chris spoke into the microphone.

“What happened, S.T.1?” he asked urgently. “What’s happened?”

“Sorry. We missed you,” came the calm voice of the tug’s Captain. “So we’re just coming after you to grab you by the scruff of the neck!”

Chris and his companions could have wept at the news. Instead they went almost wild with delight until the leader pulled himself together.

“Isn’t that a bit risky for your vessel?” he asked.

“Not half so risky as going back without you,” the cheerful voice responded.

Gosh! It was good to have chaps like that helping you!

Chapter Twenty

Gradually the gap closed. Now the crews of both vessels were silent, waiting. Suddenly Jeff worked his controls and instantly he knew he'd succeeded.

"Got it!" he called out in glee, and the cheers of his crew mingled with the rather uncertain ones of the fellows they had rescued.

Now that the two rockets were locked firmly together with the strong steel arms, Jeff was able to take stock of their position. His colleagues were soon able to inform him that the two vessels were seventeen and a half thousand miles from Earth-much farther than S.T.1 had ever been before. Now he would have to face the delicate task of gradually turning tail first so that he could kill their speed and get back into orbit.

The congratulations of Control made sweet music in Jeff's ears. He mustn't muff things now. Anyway, he was fixed for good to Phoenix and the two crews would either live or perish together. If only he could get them both back into orbit Sir

George Benson could work out the manoeuvre back to Earth. So while he chatted cheerfully to the other crew just a few feet away, Captain Anderson began to ease round the speeding rockets. By a series of bursts from a bank of tiny micro-rockets he slowly turned the locked vehicles round through one hundred and eighty degrees. He breathed a sigh of relief when this tricky business was over, for he shuddered to think what might have happened if Phoenix had broken loose.

"Ready to start deceleration now, sir," Jeff reported to Sir George, and the Director's advice to take things very gently was hardly necessary.

"Try one point five "G" to start with," Benson suggested.

Tony, Chris and company could hear the messages between Control and S.T.1, but there was nothing they themselves could do except wait. They were dependent for everything on the chaps in the other vehicle. This Captain Anderson and his crew assumed the stature of supermen to them. How Chris longed to meet them all—if only he had the opportunity!

"Going to take a long time to slow you chaps down," Anderson's voice came through to the Phoenix cabin. "Hope you've got a deck of cards to get yourself a good game while we're doing the job."

"Come off it," Morrey called back. "How can you play cards in free fall?"

"You won't be in free fall for a long time, mate, not if we've to be as careful with you as this," the irrepressible Jeff rejoined. "But don't tell me you've never seen a pack of space cards?"

"No. What are they like?" the American answered.

"Just like ordinary cards except that there's a magnetic metal strip on the back of each one. Same principle as your boots, you know!"

So the light-hearted banter between the two crews continued as their speed gradually decreased. The two rockets were over twenty-five thousand miles away before it was low enough for Earth's gravity to capture them and turn them into a great elliptical orbit. Now the computers could get to work on data from tracking stations and from information transmitted from the S.T.1. The flight path could be calculated and a programme worked out. There was no longer any danger of Phoenix wandering off into the depths of space.

But if there was now no possibility of being lost in the universe, there was still the utmost difficulty in returning safely to Earth. Neither Phoenix nor the S.T.1 was equipped with a jettison capsule—a compartment attached to a parachute by which an emergency landing could be made.

Both vehicles had depended on retro-rocket action for landing. Could the tug manage to bring its prize down safely?

There was much discussion between Control and Captain Anderson. Occasionally Chris joined in, but operations were now entirely in the hands of his opposite number in the other vehicle. All that the crew of Phoenix could do was to wait as patiently as they could while the salvage crew strove to save the lives of them all.

"Control calling Phoenix. Are you there, Chris?"

It was Sir George Benson's voice, and he sounded excited. What had roused the Director? In growing hope, Chris guessed it could be only one thing.

"Hello, Sir George. Yes, I'm listening," he replied.

"Great news, Chris!" Benson burst out. "I've just heard. The canister has been picked up safely!"

Tremendous relief flooded over the young scientist. So their expedition was a success! Whatever happened now they hadn't failed. Earth would be saved. Against this their own fate seemed unimportant. They could listen to the efforts to bring them home with interest but without alarm. It was great to know that they hadn't undergone all those hardships and dangers for nothing. At least their friends would have something by which to remember them.

"That's marvellous," Chris called back, and he could see that his companions were as excited as he. "Where did it come down?"

"It was scooped up by a plane just off the coast of Cornwall," the Director told them all cheerfully. "Just now it's being flown to the lab. all ready and waiting to breed your culture for mass distribution. In forty-eight hours we'll be starting the great clean-up. Now we're going to concentrate on bringing you down."

"Thanks," Chris called back, and he knew that, between them, Sir George and the fellows next door would pull the job off if it was humanly possible.

Apogee twenty-four thousand miles, perigee two hundred miles. Serge explained to Tony that this meant the exact path of their elliptical orbit had been computed, and that these were the distances of their farthest and nearest points to the Earth. At a predetermined point in the orbit, which Control would indicate, the motor of S.T.1 would be started and the orbit would be broken. Then would come the critical job of landing with one motor between Phoenix and the tug.

"Anyone want to eat?" asked Tony, but none of the crew was hungry.

"Better get on your couches now," Jeff's voice told them, and obediently they went to what was left of their contour seats.

There was silence in both rockets while they waited for the signal from Cape Canaveral. It was just as Tony thought it was never coming that the command blared out.

"Start motor in ten seconds from—now."

The mechanic drew in a deep breath, not because of the expected pressure of deceleration, but because soon they would know their fate. Would they and their gallant rescuers burn up like a meteor, crash with explosive force into the ground, or touch down more or less gently? In half an hour's time would he be bruised and shaken but otherwise fit? Or would he have ceased to exist?

There it was. The deceleration had started, but it was nothing like so fierce as that to which he'd been accustomed. Tony knew this was because of the risk that the rockets would break apart. And if that happened nothing could save Phoenix and its crew.

"How are they doing?" Benson asked Mr. Gillanders. The

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Deputy Director turned from the instrument panel and faced his chief squarely.

"Not too well, I'm afraid, Benny," he said soberly. "Had to

reduce deceleration from two "g" to one point seven five. Anderson reported the tug's arms were showing signs of strain.'

"I see," Sir George said slowly. He knew this meant that the rockets would strike at a dangerous speed—too great to hope for any survivors. There was only one thing to do—to deflect the falling vehicles into the sea!

"Number Seventeen. Two seconds."

Captain Anderson had been expecting it. Ever since he'd had to cut back the motor he'd been waiting for a new course. So they were to come down in the drink! Jeff pursed his lips grimly for he knew what this meant. Once before he'd come down in the sea and it hadn't been a pleasant experience. He and his crew had barely escaped with their lives. Could their luck hold a second time? The chaps in Phoenix would have to be told, of course. Jeff reached for the mike and broke the news to Chris.

The argument which followed was short and sharp. With the agreement of his colleagues Chris had told Jeff to cast them loose and make the landing on his own. S.T.1 could easily do it on its own. Anderson's reply had been terse in the extreme. Finally Control had had to intervene. There would be no parting company!

For the last few thousand feet their course was again deflected. The rockets were over the sea, and to lessen the shock of the impact they were to strike the water at an angle. This would also mean that they would remain much nearer the surface so that water pressure on the hulls would be less severe. Now there was nothing for the two crews to do but wait for the crash.

The destroyer's crew saw the huge cloud of steam and spray about two miles to starboard. With engines all out she raced full speed to the spot—and found nothing but a patch of creamy foam. Several planes were circling overhead, and other ships were racing to the spot, too. Suddenly several of the officers shouted out together. Less than half a mile away

the black shapes of the rockets had risen from the depths and were rolling gently in the waves.

Sir George Benson visited Tony in hospital. The mechanic had been the only member of the two crews who had been hurt by the impact. His injuries were not severe, but he was also suffering from reaction after the terrible strain of the last few weeks. Now he was recovering rapidly and his face beamed as the famous scientist came into the ward. How envious the chaps in the other beds would be!

The Director was able to tell Tony of the wonderful effect of One Five Eight. It was clearing the grey mould from the face of the Earth in double quick time. Soon refugees would be able to move back and start life afresh in the homes from which they had been forced to flee. It would be a hard life at first for everyone, but no one cared. Never had good old Mother Earth seemed so precious!

"And now what about you, young man?" Sir George said, as he rose to leave. "We've got you a wonderful job with International Rockets. You're quite famous now, you know."

The mechanic's face fell. At first the Director was alarmed, thinking his young friend had suddenly become ill again.

"But, Sir George," Tony gasped. "I—I don't want to be grounded. What did I do to be punished like this?"

"Punished?" Sir George exclaimed in astonishment. "You're not being punished. You're being promoted. And you're not being grounded either. You'll be in charge of the construction of a tremendous new project—a huge satellite which we're going to assemble in space as a permanent observatory."

But still Tony was upset. "I'd rather not if you don't mind, Sir George. I'd rather stay as a mechanic if I can still go on flights."

Sir George's eyes twinkled as he smiled into the anxious face that looked at him so earnestly. "I'll be very surprised indeed," he said, "if we can't arrange a few flights as well."

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