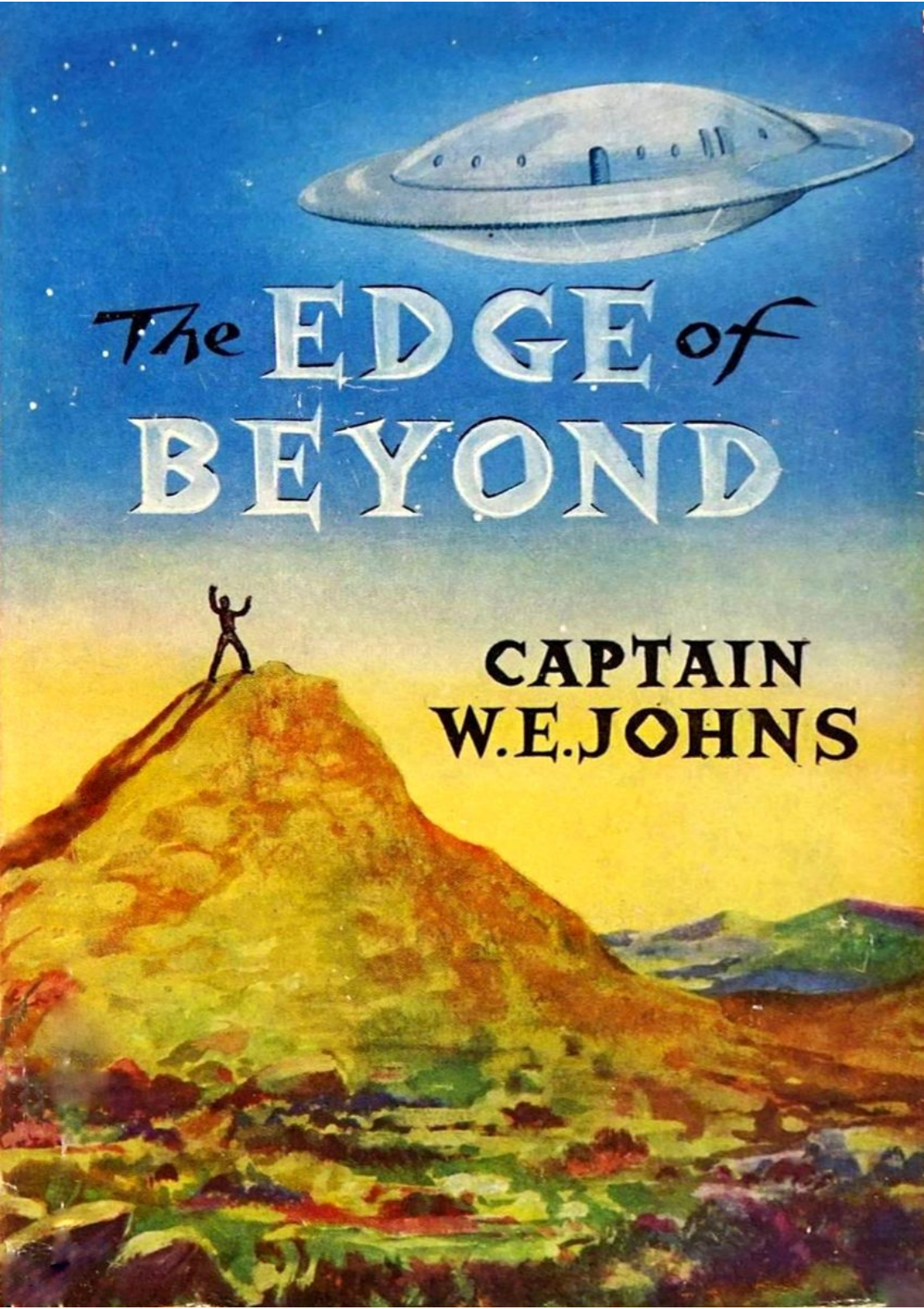
The EDGE of BEYOND
CAPTAIN W.E. JOHNS

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Rolto—the spaceship captain.

THE EDGE OF BEYOND

A story of Interplanetary Exploration

BY

CAPTAIN W. E. JOHNS

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THE EDGE OF BEYOND

A story of Interplanetary Exploration

by

CAPTAIN W. E. JOHNS

CONTINUING the story of the voyages into space of scientist-inventor Professor Lucius Brane, Group-Captain "Tiger" Clinton, D.S.O., R.A.F. (retired), his son, Rex Clinton, and Squadron-Leader "Toby" Paul, M.D., of the R.A.F. Medical Service. Their previous adventures are recorded in the following order:—

Book 1	*KINGS OF SPACE*, in which the first experimental voyages are made in the Professor's own ship, *The Spacemaster*, and the reader learns something of Astronomy and is introduced to the science of Astronautics, commonly called Space Flight.
Book 2	*RETURN TO MARS*, in which Mars is revisited, a pest is eliminated and the origin of the Planetoids is learned.
Book 3	*NOW TO THE STARS*, in which a tour is made of some of the nearer planetoids in a "Flying Saucer" of the Minoan Interstellar Exploration Squadron.
Book 4	*TO OUTER SPACE.* Again in a borrowed Minoan spaceship a voyage is attempted deeper into space and contact is made with ships of still more distant worlds.

FOREWORD

READERS who have accompanied Rex Clinton on his previous travels into the awful realms of Space should have by now at least a broad idea of the pattern of planets, nine large and some thousands of smaller ones called planetoids, which, with their central Sun, is known to us as the Solar System. Earth, the fifth largest planet in size, is one of them. They will also know that this System, vast though it is by Earthly standards of measurement, is but a speck in the infinite ocean of celestial space which we call the Universe.

Before embarking with Rex and his companions on this, his fifth venture, now in an attempt to reach the fringe of the Galaxy, the reader must understand what is meant by the term Galaxy. It will not be easy to visualize for it involves figures on a scale so stupendous that the brain falters as it strives to grasp their literal meaning.

If you look up on a fine night you will see a pale stream of light right across the heavens. This is commonly called the Milky Way and it girdles the globe. Wherever you may be you can see it. Actually, this belt of light is a swarm of stars, and it is the Galaxy of which our Sun forms a microscopic part. How many stars there are in our Galaxy is still not known, for the estimated number increases as new and larger telescopes are made; but the number is now reckoned to be in the order of *a hundred thousand million*. Think of it—if you can. Billions of Worlds, some cold in death (as our Moon is dead) others (like our Sun) blazing with their own internal fires.

And that is not all. Ours is only one Galaxy, one of millions. And the end is not yet, for as more powerful telescopes are built, and the eyes of astronomers penetrate ever farther into the cosmic depths, more and more galaxies are brought into view. Within the range of the great 200-inch telescope on Mount Palomar, in the United States, are an estimated four hundred million galaxies. So there you have it. Billions of stars to make a galaxy and billions of galaxies in the Universe.

Do they ever end or do they go on to absolute eternity? That is something we don't know and may never know. All we know is that the galaxies, while appearing to remain stationary, are hurtling away from each other at a velocity of something like a hundred miles a second. Again, this is

where the brain, striving to imagine such figures, fails, for while it is capable of much there are still things too titanic for it to master.

Some of the brighter groups of stars, called constellations have long been known, and the names given to them in the distant past after the human and animal forms they were thought to represent, are still the same. The ancient Greeks steered their ships by the Great Bear, one of the easiest constellations to pick out. These constellations are always there, in one part of the sky or another according to where we happen to be. The spinning of the Earth on its axis is responsible for the nightly procession of the constellations across the heavens.

These things we know. The rest is largely conjecture, and here even the scientists and astronomers are divided in their opinions. Theories that are accepted today are discarded tomorrow. For example, for a time it was thought by some leading authorities that a highly civilized race of men on Mars was trying to prevent, by means of canals, the gradual drying up of their world. That is no longer generally accepted, although, let it be noted, it has never been disproved—possibly because, as Rex could tell them, this surmise was very near the truth.

It was also within his knowledge to provide the answers to many other vexed questions. Indeed, Tiger had suggested to the Professor that it was time the results of their investigations were made public, and certain matters in dispute settled once and for all. But this the Professor refused to do, for what he claimed to be sound reasons.

Firstly, he asserted, he would not be believed, so to reveal the truth would merely invite ridicule. The sceptics would dismiss his photographs as fakes, although why they should take this attitude, insisting that of all the billions of worlds only one, their own, was capable of supporting intelligent life, was the greatest mystery of all.

Alternatively, said the Professor, even if he could convince people that he was telling the truth, he was afraid of what the impact on them would be when they saw their age-old beliefs and illusions shattered. Would they be any happier for knowing that far from being alone in the Universe there were more advanced civilizations on other planets, men who could blot them out of existence if they so decided? men who had not only solved the mystery of the Universal Cosmic Rays but had harnessed them to give their spaceships a velocity greater even than Light, thus disproving the theory that interstellar flight could never be achieved on account of the brief span of human life.

What, too, continued the Professor, would people say (and perhaps do) when they were told the story of Kraka, blown to pieces by an over-ambitious explosion set off by zealous atomic experts? All that remained of this once splendid world were the fragments now called planetoids.

His, the Professor's, views on atomic bomb explosions, were, Rex knew, simple and logical. Not only were they dangerous but a waste of public money. Either they would be needed or they would not be needed. If they were never needed then the money would have been better spent on constructive, not destructive, projects. If they *were* needed, then it was likely that Earth would one day follow Kraka to oblivion. So nothing was to be gained either way. Aside from that, it was now known that people on other worlds were watching the explosions on Earth with alarm and apprehension. There was even talk of preventing them by force—a course advocated by Rolto, captain of the Minoan Remote Survey Fleet.

Again, questioned the Professor, pursuing the argument, would any good purpose be served by adding to the troubles of the already perplexed people of Earth by reminding them that the fragmentation of their world by collision with another was an ever-present possibility? Astronomers, of course, were aware of that, but the great mass of people had either forgotten it or chose to ignore it.

What would they say, Rex sometimes wondered, if they were told that but for the Professor's intervention that might have already happened.[1] It was not the first time the peril had loomed in the sky. In October, 1937, a planetoid had, in astronomical terms, narrowly missed Earth. The same near-disaster must have happened often in the past. They might not always miss. The effect of meteors could be bad enough. The one that crashed into Siberia in June, 1908, tore a hole in the ground as large as Lincolnshire and laid flat eight million trees. That was a meteor weighing only a few tons. Even a small planetoid would weigh millions of tons. It was a disturbing thought better forgotten, and the professor, with first-hand experience, may have been wise in withholding his knowledge of such devastating possibilities.

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[1] See *Return to Mars*.

The simple truth was, Rex knew, wonderful though they were, the instruments so far available on Earth were not infallible. The spectroscope failed to find oxygen or water-vapour in the Martian atmosphere although

both were present. The Professor, of course, having been there, could say in exactly what quantity. But still, the scientists on Earth had done much, and some of their calculations had been remarkably accurate. Such as, for instance: a rocket given a velocity of seven miles a second would leave the Earth for ever, and one travelling at twenty-seven miles a second would even leave the Solar System, gravity being insufficient to hold it. These velocities, startling though they may appear at first sight, were not to be compared with those achieved by the ships of the older worlds, in some of which Rex had travelled, and was soon to travel again.

W. E. J.

CHAPTER I

A VISITOR FROM SPACE

For three months Rex, with his father and Doctor "Toby" Paul, had stayed on at Glensalich Castle, the Professor's retreat in the lonely Scottish Highlands, sometimes helping the Professor with his notes, sometimes doing nothing in particular. The fact that they had no homes of their own may have been responsible in the first place for their acceptance of the Professor's invitation to stay with him; and this, in course of time, as can so easily happen, had become an understood arrangement that was no longer questioned by anyone.

The Professor obviously liked having them there to discuss their discoveries, and the others, having nothing else to do, were content to accept his hospitality. It did sometimes occur to Rex to wonder how long this could go on but he did not broach the subject. Actually, he was a little afraid that it might end, for his thoughts were now so far removed from normal earthly considerations that an ordinary routine existence was not easy to contemplate. How could he, knowing what he knew, devote his attention to anything on earth without a feeling of futility? No. He had, he perceived, travelled too far down a road from which there could be no turning back.

The planet Mars came into "opposition", as near to Earth as it could come. By night he watched it almost with affection. By day he read with a smile the theories of the leading astronomers about what might be happening there. They were mostly guessing. He *knew*.

It was with something of a shock that one day he heard his father say when they were alone in the library: "Rex, you're growing up. Don't you think it's time you were seeing about getting a job?"

"J—job?" stammered Rex, making it clear that no such thought had occurred to him. "What sort of a job?"

Tiger shrugged. "Oh, I don't know. Perhaps something in the engineering line."

"But I'm not qualified," argued Rex, weakly.

"You never will be if you stay here," Tiger pointed out.

"But a job!" protested Rex. "After where we've been and what we've done even the most exciting job I could think of would be a pretty dull business. I doubt if I could stick it."

"You used to be crazy on motor racing."

"Motor racing," sneered Rex, "to me, now, that would be crawling. I'm sorry, Guv'nor, but with my head full of astronautics I couldn't give my mind to anything else."

"I was afraid of that," returned Tiger, understandingly. "How about aviation?"

"Horizontal flight! I'd as soon be a bus driver. For me it's vertical flight or nothing. That's something for which I'm better qualified than anyone outside this house."

"You'd find it difficult to get anyone to believe that," stated Tiger. "Unfortunately, or perhaps fortunately, there are no jobs yet in astronautics."

"What about the people who are making artificial satellites? I could give them a tip or two."

"That, to you, would be like designing a locomotive as obsolete as Stevenson's Rocket. You know what the Professor thinks about them. As you know, since we have taken to using borrowed Minoan ships the Professor has abandoned his own experiments with spacecraft, saying there is no point in them because he could never design one with a performance to compare with some we know, ships that have been developed over centuries of time."

"Using the Professor's workshop I could make a Flying Saucer of my own, just to potter about in."

Tiger shook his head. "I'm sure the Professor wouldn't hear of it. Once he realized that we were suspected of making unorthodox experiments here he was particularly careful that no Flying Saucers should be seen in the vicinity. For that reason alone he has refrained from putting out landing signals. All the same, I don't quite see how what we are doing now can go on indefinitely."

Rex pursed his lips. "Well, I don't know what to do and that's a fact. All I can say is, there's nothing like a cruise round the planets to get a fellow thoroughly unsettled. Everything else seems so deadly dull in comparison."

Tiger smiled ruefully. "I feel a bit like that myself," he admitted.

"Frankly, I've been hoping the Professor would suggest making another trip if only as far as Mars," said Rex, moodily.

"I've been expecting that, but he seems entirely engrossed with the papers he intends to leave to the Royal Society in his will," replied Tiger.

"And what is it you've been expecting?" inquired the Professor, walking into the room.

"I was wondering if you intended making another trip," explained Tiger. "The matter arose when I suggested to Rex that it was time he looked for some sort of employment."

"How did he take that idea?"

"Not very well. He seems to think he's out of step with events of everyday life on Earth."

The professor pushed up his glasses and regarded his colleagues. "The boy's right," he asserted. "After what he has done and what he has seen it would be asking too much to expect him to settle down in a humdrum routine occupation."

"You think that?"

"I am sure. For what purpose would he work? People work, and when I say work I mean just that, for one reason only. Money. Money to provide the necessities of life and perhaps an occasional luxury. Rex has no need for money. I have more than I could spend." The Professor smiled whimsically. "And if I ever did need more it would only be necessary to make another trip to one of the planets we know where the things most prized on Earth, merely because they are scarce, such as gold and diamonds, are as common as pebbles on a shingle beach. Money is the incentive to labour. Without an incentive work would be tedious indeed."

"But he can't loaf about indefinitely, doing nothing."

"I never intended that he should. That also applies to you."

"What do you mean?"

"I had always assumed that you would wish to come with me on my next interplanetary voyage."

Tiger's eyes opened wide. "So you *are* going off again! I thought you had settled down to write your memoirs."

The Professor chuckled. "Tut—tut, my dear Group-Captain. The malady which the Germans so well named *wanderlust* is one of the most difficult to cure. Indeed, when applied to space flight I would say it is incurable. Of course I shall go again. My notes are almost complete. I shall finish them in a few days. It was always my intention to embark on another flight of survey. Did I forget to mention that? Dear—dear. How thoughtless of me. Vargo will be watching for our signal and I am sure he will be disappointed if we fail to call him down, for we are of as much interest to his people as they are to us. Besides . . ." the Professor's eyes twinkled in a sidelong glance at Rex . . . "We can't leave Morino to die of a broken heart."

Rex blushed. “I admit I’d like to see her again. She’s such jolly good fun.”

Said Tiger, looking at the Professor, “Have you any particular object in view?”

“Naturally, as I was largely responsible for it I would like to see how the work of restoration proceeds on Mars. That should not take long. Afterwards, I have been toying with the idea of pushing out to worlds beyond those known to our Minoan friends. We might even reach the distant fringe of the Galaxy. We will ask Vargo what he thinks about it.”

For a moment Tiger looked startled. “That would mean we would be away for months, perhaps years.”

“Can you think of anything more exciting, more entertaining, to do?”

“Er—no.”

“Of course not. That’s how I feel about it.”

“So far we have been lucky. One day we shall fail to return from one of these jaunts.”

“What of it? If we are to die, as one day we must unless we discover the secret of rejuvenation, let us be original and find a last resting place on a wandering star rather than return to dust on a world with the millions of others who have preceded us.”

“This is becoming a cheerful conversation, I must say,” remarked Tiger, sarcastically.

The Professor smiled and turned to the door. “We will continue it after dinner,” he suggested, as he went out.

Tiger looked at Rex and shrugged. “Well, that seems to have settled that,” he observed.

“You’ll go with him when he goes?”

“Of course. What about you?”

Rex made a little grimace. “It gives me a sinking feeling in the stomach to think about it but I’d hate to be left behind.”

“It’ll be a month before we go,” said Tiger. “There’s a full moon tonight, which means that Vargo will be watching for the signal; but obviously the Professor isn’t going to send it or he would have said so. He’ll probably go next month.”

Nothing more was said then, but after dinner, with Toby present, the subject was reopened, and it was then that the Professor announced his intention of definitely pushing deep into the heart of the Galaxy, always

assuming that their Minoan friends would lend them a ship and its crew for that purpose.

"It is likely," said the Professor, "that this, the most ambitious project I have as yet contemplated, will present new dangers. I mention that in order that you may decide whether or not to come with me. You need not feel under any compulsion to do so."

The others brushed aside any suggestion that they should stay behind.

"That is capital," declared the Professor. "I would have been sad to go without you. Half the pleasure of these trips lies in our being able to discuss our discoveries en route. I will make plans accordingly."

Later in the evening, after darkness had closed in, Rex made his way to the top of the hill, as he often did when the weather was fine, to watch the constellations pursuing their age-old courses, and to ponder on what he knew about them.

It was a wonderful night, with the air crystal clear if a trifle chilly, so finding a soft patch of heather he lay on his back the better to survey the vast dome of heaven. Naturally enough his eyes went to Mars, which by now he almost regarded as a home from home; and as he watched it, wondering what changes had been made to its arid surface during their absence, it disappeared as if it had been snuffed out. But only for a moment. Soon it was back, still shining with reflected sunlight.

For a few seconds Rex was puzzled, startled, for there was not a cloud in the sky. Then a smile softened his features as he found the probable explanation of the phenomenon. Something had passed between him and the planet. It was not an aircraft or he would have heard it. It could only be Vargo in his ship, returning as he had promised on the night of the full moon, to watch for signals. Good old Vargo, always reliable. Rex was tempted to make the signal which would call him down, merely for the pleasure of having a chat with him, but resisted it knowing that the Professor would be displeased by what he would regard as an unnecessary risk.

So he contented himself with watching, thrilled by the knowledge that friends were so near. More stars were blotted out with increasing frequency, and suddenly it struck him that this could only mean one thing. The spaceship was coming lower, and nearer. He sprang to his feet, eyes trying to probe the gloom for a glimpse of the "flying saucer". When he did make it out, or rather, when suddenly it loomed large over him like a colossal umbrella, he realized with a shock that it was very low indeed. What was it doing? Did Vargo intend to land?

The answers were soon forthcoming. With a faint hiss from its exhausts the ship settled on the heather within a hundred yards of where he stood. The doubt crossed his mind that it might not be Vargo. What if it was that dangerous man Rolto, up to one of his tricks? He would soon find out, he decided, and raced towards it.

As he arrived the double doors were opened and against the pale blue glow of the interior of the ship he saw the lean figure of Vargo step forward to look out. Running up he caught him by the hand and shook it warmly, saying: "Hello, Vargo. How nice to see you again. This *is* an unexpected pleasure. But why have you landed? Is something wrong?" Without waiting for an answer, seeing the ship's captain and navigator inside he went on, "Hellow, Gator. Hellow, Borron. This is wonderful! We were only talking about you this evening."

Vargo stepped down, breathing deeply. "Excuse me," he said, in his thin voice. "This air of yours, to those not accustomed to it, is so rich and heavy that it is like drinking water. It nearly chokes me at the first gulp. My heart beats too fast. Phew!"

"Take your time and then tell me why you have landed," requested Rex. "We did not make the signal."

"I landed to see you," stated Vargo. "I would have come to the house, the lights of which I could see."

"You're not in any trouble, I hope?" said Rex, anxiously.

"Not exactly trouble, but there is a little difficulty. The work on Mars goes on so fast that we bring more and more people from Mino and Lentos. That means bringing more food, for there is not yet enough on Mars to feed them all. We could use more ships, and for that reason the Council is disinclined to leave this one with nothing else to do than watch for your signals."

"What you mean is, you are short of ships for what you have to do on Mars and the Council want this one."

"For a little while, until the harvest on Mars is ready. You have been away a long time. Every month I was sure we would see your signals. But no. I was beginning to wonder if all was well with you."

"The Professor has been busy with his writing," explained Rex. "But only today he said he was nearly ready to call you down. It would, I think, have been on the night of the next full moon. But now you are here you might as well come and see him."

"Will the ship be safe?"

"Quite safe. Nobody is likely to be on the moor at this hour of night."

“Very well. Perhaps we could then make a definite arrangement.”

“That should have been done in the first place,” declared Rex. “It was unreasonable to expect you to hang about indefinitely on the off-chance of seeing the signal. The Professor will be delighted to see you.”

Vargo told Gator where he was going. “Keep good watch,” he ordered. “You will see anyone coming from a long way off. If that should happen go away. I will make a signal when it is safe for you to return.”

Rex led the way to the Castle, chuckling in anticipation of what would happen when he walked in with Vargo.

He was not disappointed. The expressions on all faces when he threw open the library door and said, “I’ve brought a gentleman along to see you,” were all that he had imagined they would be.

“Did you call him down?” inquired the Professor, suspiciously, looking hard at Rex.

“No,” denied Rex. “I was lying on the hill watching Mars when the ship landed beside me. Vargo has brought a message from the Council. He will tell you about it.”

“Sit down, Vargo, my dear fellow,” invited the Professor, warmly. “I will send for some refreshment for you. You like our beverage which we call tea, I remember.”

Thus was the reunion effected.

CHAPTER II

VARGO COUNSELS CAUTION

SIPPING his tea with relish Vargo explained the purpose of his unexpected visit, after which the Professor gave his reasons for the delay in putting out the landing signal.

"From what you tell me the work on Mars must be proceeding very well indeed and I am most anxious to see for myself how much progress has been made," said the Professor. "I may be able to make further suggestions. We could try more experiments with some of our more hardy fruits and vegetables, but I am afraid your cold nights would be too much for most of them—the potato, for instance, which is one of our staple foods. I will think about it. You are no longer troubled by mosquitoes?"

"There are still a few, but not enough to be dangerous," answered Vargo. "Why is it, with so many varieties of insects on Earth, some of them don't get out of hand?"

"The chief reason is the wonderful balance of nature that has developed here. Birds are largely responsible for keeping insects under control. You must have some. No doubt you had some at one time, but they would be wiped out like nearly every other form of life on Mars when the planet was swept by the devastating blast of the exploding Kraka. The eggs of the mosquitoes, deep in the mud, would escape. They hatched to find their enemies had disappeared. That, I am sure, is the explanation of the swarms which made your original home untenable. We will deal with all your problems in time, but I cannot stay very long on Mars."

"Why? What do you want to do. Surely not more exploring? I would have thought you had done enough of that."

The Professor smiled apologetically. "I shall never have done enough."

"Your curiosity will one day be the death of you," warned Vargo, seriously. "What do you plan to do next?"

"I was hoping to visit some of the older, the most distant members of our Galaxy, to see how far their civilizations have developed compared with ours, with yours, and perhaps Ando."

Vargo looked grave. "I would not do that if I were you."

"Why not?"

"It would be very dangerous indeed."

“We have encountered dangers before.”

“Not such dangers as you would meet in the section of the older planets, what we call the Second Region.”

“I would have thought we had experienced every kind of danger possible.”

“You would be wrong. What you have seen so far was not, I think, altogether unexpected. You were prepared for extraordinary things and you found them, but none was really beyond your comprehension.”

“Are you suggesting that there are things beyond our understanding?”

“Yes. Beyond your imagination.”

“I have an excellent imagination,” claimed the Professor.

“That may be, but it is limited to an Earthly appreciation of what can happen. I have told you before, the dangers most to be feared are those that are not recognized as such until they happen, and then it may be too late to do anything about it.”

“Could you be a little more explicit?”

“Let us put it this way,” said Vargo, with great earnestness. “You know all that has happened on Earth in the brief span of what you call your civilization—a matter of a few hundred sun cycles. With your scientific knowledge you might imagine some of the things that will happen in the next few hundred years—as you call your sun cycles. But would you dare to say, would you dare to predict, what things will be like on Earth in *ten thousand years*—always supposing that your ill-advised inventors do not make a mistake and blow your little world to pieces in the meantime?”

The Professor hesitated.

“No, believe me, you can’t imagine,” said Vargo.

“Have you seen these wonders at which you are hinting?” inquired the Professor.

“No,” admitted Vargo. “But I have heard talk of them. Remember, rumours on Earth are limited to Earthly things. With us, because we have the means of moving from world to world, our travellers’ tales embrace the Universe.”

“Now you *are* exciting my curiosity,” declared the Professor. “Can you give us an example of the sort of thing you have in mind when you speak of perils beyond our understanding? From what do they spring? From natural causes or from men?”

“From both.”

“You mean there are men, highly civilized men, who would harm innocent travellers?”

“Yes. But not necessarily with the intention of harming you. In the case of the people of whom I am thinking, should they injure you, as they might, they would say it was for your own good.”

“Would they believe that themselves?”

“Certainly.”

“Then they must be mad.”

“They are not mad.”

“Then they must be bad.”

“On the contrary they are goodness itself.”

“Wait a minute, Vargo,” protested Toby. “What you are saying doesn’t make sense.”

“We are talking of things that do not make sense,” said Vargo, simply.

“Suppose you tell us about one of them,” suggested the Professor.

For a moment Vargo did not answer. “It is not easy to know how to begin.”

“Are you thinking of one particular planet?” prompted Tiger.

“I could think of several I would not care to approach,” replied Vargo. “But let us speak of one, the one we call Lox.”

“I’ve never heard of it,” said the Professor.

“It cannot be seen from Earth, I think. A telescope might find it, but then it would be called by another name.”

“Is there anything remarkable about it?”

“Not physically, but it was already old when this little planet which you call Earth was created—or so they say. Through all those millions of years the people of Lox have been striving, as you strive now, to reach the top of the ultimate peak of human endeavour. Think of how far they must be in front of you!”

“What is this goal that all men try to reach?”

“Happiness. No man can have more than that. Whether men realize it or not it is that for which, collectively or individually, they are for ever seeking, going their different ways to achieve their ambition. To different men that may mean a different thing, but at the finish it resolves itself into the same desire—happiness.”

“I agree,” put in the Professor. “Please proceed.”

"Every man of every race on every world goes his own way to what he believes is the great secret. But with that he is not content. So convinced is he that he is right that he will employ every means to make others believe him. If persuasion fails he may use force. That is why your different nations and different tribes on Earth are always fighting. Thus is it with different worlds, and it follows, naturally, that the older the world the better equipped is it to achieve what it believes to be right. Do you follow me?"

"Perfectly," said the Professor, shortly. "There have always been fanatics on Earth who would destroy you for your own good, as they have the impudence to put it. Are you telling us that there are *worlds* engaged in this preposterous crusade?"

"Yes."

"And Lox is one?"

"Yes."

"Do they use weapons?"

"I suppose you could call their method a weapon. You have done well in so short a time to reach the hydrogen-bomb, but even that, to a world as old as Lox, would be a primitive device, as dangerous to the user as it is to the people against whom it is employed."

"In other words, there are worlds with weapons exceeding these in power?"

"Exceeding them?" Vargo shook his head sadly. "Have I not said that there are powers the existence of which you people of Earth have not even begun to suspect."

"Then for goodness sake tell us about them," broke in Tiger, impatiently.

Vargo met his eyes squarely. "The people of Lox," he said slowly and deliberately, "could *will* you out of existence."

The others stared.

It was the Professor who broke the silence. "Could you explain exactly what you mean by willing us out of existence?—as you put it."

"It is not as I put it. It is a fact. I warned you that your imagination might be overtaxed. If they took the view that it would be better for you to be mindless, to have no will of your own, you would certainly become so. They would only have to withdraw your mental capacity for you to become devoid of the power of thought. That is the only way I can put it."

"How do they do that—by pulling out our brains with a corkscrew?" inquired Tiger, sceptically.

Vargo did not smile. “For millions of years the minds of the men of Lox have been developing until they are now so powerful, and so positively charged, that yours are almost negative in comparison. Therefore, if they connect their minds to yours, as they can by the high tension of their superior will, all that is in your mind is drawn into theirs.”

“What dreadful people they must be,” muttered Rex, aghast. “Why don’t they kill people outright and have done with it?”

“Because they have a profound abhorence of destroying life in any shape or form. They never kill anything, holding it to be primitive savagery. To them you would be barbarians.”

“We’re nothing of the sort,” protested Rex.

“What do you do with your worst criminals?” asked Vargo.

“In the case of murderers we may hang them.”

“That to the Loxians would be unthinkable, although, to be sure, they may have done that a million years ago. Now they would remove the Evil from the brain of the man responsible for such a crime. Their one concern is happiness for all, and they have gone a long way towards that—or they think they have, although not everyone would agree. They abolished war long ago. They have also conquered Fear and Pain, as Earth may if it lasts long enough. They set out to eliminate suffering, and if what I have heard is true they may claim to have succeeded.”

“How did they eliminate pain?” asked Toby.

“You would not suffer pain if you were not aware of it, would you?”

“No.”

“It distresses you because you feel it.”

“Of course. Pain is only pain because you can feel it. But we also can relieve pain, by means of drugs. With anaesthetics we can make a person unconscious of anything.”

“Temporarily. The Loxians *will* away the cause, so their cure is permanent. Put it this way. Pain doesn’t necessarily make you ill, or kill you. It distresses you simply because you are aware of it. Remove that awareness and it can no longer trouble you. The Loxians have achieved that power. They destroy misery wherever they encounter it.” Vargo smiled faintly. “It is natural to be afraid of death. If you knew you were going to die you would be upset. Remove that fear and you would be happy. It is as simple as that.”

“But why should the Loxians interfere with us?” asked Rex. “We’re not unhappy.”

“Not you, personally. But they might think you make others unhappy.”

"How?"

"Because of your way of life on Earth. They would see a society in which everyone was trying to outdo the other. Some succeed, wherefore others must fail, and are therefore unhappy. The Loxians would hold that to be wrong."

"Stuff and nonsense!" exclaimed the Professor. "It has always been so and it always will be so. Some people are miserable by nature. Indeed, it has often been said that there are some who find happiness in being miserable. Wherefore it seems to me that if you deprive them of the misery which makes them happy you will defeat your object, for they will then have something to be miserable about—which, as dear old Euclid would say, is *reductio ad absurdum*. To me the most astonishing thing about all this is, after millions of years people should still be chasing that will-o'-the-wisp, happiness, as if it were a creature to be caught and put in a cage. Vargo, these Loxians are wolves in sheeps' clothing. By professing to do good they are doing evil."

"It sounds mighty like one of these dictator rackets to me," muttered Tiger.

"Vargo, do you mean that on Lox everyone is equal?" queried Rex.

"It cannot be otherwise. They are all of one mind. What one feels they all feel. Only their bodies are separate. They claim that theirs is the only state of society that can exist for any length of time without war. They sought happiness, and this is the road they have taken to reach it."

"What they have done is produce a race of non-entities," snorted the Professor. "Can all these people project this brain-paralyzing influence?"

"That I don't know. It may be born in them or it may be instilled into them when they are children."

"Is there any protection against this form of attack?"

"I cannot answer that. I know that on distant voyages of exploration some of the crews of the Remote Survey Fleet paint their skins, but there is no way of telling whether it succeeds or not. As some have returned perhaps it does."

"But some have not returned?"

"That is so. We don't know what happened to them. Some returned—but let us not talk of that."

"Is it some sort of ray that you're afraid of?"

"Rays—and other things."

"I always realized there might be danger from rays, those we know and perhaps some we don't know," stated the Professor.

"Bearing that in mind I once amused myself by making a sort of defensive armour of thin, overlapping steel plates, with dark glass to protect the eyes. I'll take them with us when we go. They may come in useful."

Vargo looked dubious. "You are still prepared to take risks after what I have told you?"

"I have no wish to have my brains picked by a pack of misguided cranks, naturally," stated the Professor, emphatically. "I will think about it. Let us leave it at that."

Vargo got up. "You would do well to think about it. What I have told you is not the only peril in the spheres of worlds where men learned long ago that the mind can dominate everything. Now I must go. Already I have been here too long. When will you be ready to leave? Tell me that and I will be here to pick you up."

The Professor looked at the others. "Shall we say a week today?"

They all agreed.

"Good," said Vargo. "Show the signal and I shall know it is safe for me to land."

"I'll walk with you as far as the ship," offered Rex.

This he did, and having watched the machine disappear into the night sky he returned to find the others discussing what Vargo had told them.

Toby was saying: "The business is not as fantastic as Vargo seemed to think. We know something about the power of suggestion. What these Loxians do is, I fancy, an extension of that. If, as he says, they can operate from a distance, which certainly is remarkable, they are people to keep clear of."

"I would say," put in the Professor, "that what Vargo has claimed for these well-meaning but obviously dangerous peace-seekers, is nothing more than what we call hypnotism carried to the limit of its possibilities. That hypnotism is possible is not to be doubted. It is even practised here, but only in an elementary way, apparently, compared with what can be done by people who have made a long study of it. As used on Lox as a weapon, almost as an invisible projectile, as one might say, it could have more far-reaching effects than an atom bomb. To mutilate a human being is bad enough, but to destroy the brain of a man leaving his body intact is even worse. The thought occurs to me that this horrible practice has something in common with what in certain coloured races is called voodooism. A witch-

doctor, it is said, can take complete control of a man leaving him what is known as a zombie—a man without a brain."

"Do you believe that nonsense?" asked Tiger, critically.

"I have always supposed it to be either sheer imagination or the power of suggestion exercised by a strong character over a weak one; but in view of what Vargo has just told us I begin to wonder if there is not more to it than that."

Toby frowned. "You mean, you actually believe that one brain can put a thought into another?" he questioned cynically.

"I don't see why it shouldn't be done," averred the Professor.

"Fiddlesticks!" exclaimed Toby. "As a medical man I'm not prepared to accept this fantastic stuff about a man's brain being dominated by a superior one, or that something as intangible as a thought can leap through space without a visible connection. Oh no! That's going a bit too far. It's about time we came down to earth. As practical men let us be practical."

The Professor regarded Toby over his glasses. "Very well. Let us be practical, keeping the argument to the things we know and understand. You will have heard the expression, someone had a brainwave?"

"Of course."

"Another one is, 'great minds think alike'."

"Yes, but you're not suggesting that these are to be taken literally?"

"They are," admitted the Professor, "usually said as a joke, and I have never given serious thought to them. But it now occurs to me, as a result of what Vargo has told us, that people using these expressions may be making a statement of fact. The brainwaves could actually be waves, and an idea forming in one brain might be transmitted, unconsciously, to another."

"How do you arrive at that?" asked Toby.

"As a doctor," replied the Professor, "you will know that there are brain impulses which are electrical in character; and that these impulses can be measured by an instrument called an Encephalograph."

"Yes."

"You know how the instrument works?"

"Certainly. To put it simply it receives from the brain electrical impulses which move a needle up and down across a paper to make a certain pattern. According to whether the pattern conforms to what is known to be a normal one, the chart will show a brain specialist if a patient is suffering from some disturbance of the mind."

"Exactly. Now, still being practical, let us proceed a little further with our enquiry. A bicycle tyre valve allows air to enter the tube, and once in it cannot get out. Many valves act that way. There is an electrical valve which will allow current to flow one way but not the other, the direction being from negative to positive. You, Group-Captain, as an engineer, will confirm that."

"Perfectly correct."

"Am I right in saying that the greater the high tension, the greater will be the pull from negative to positive?"

"Yes."

"Wait a minute," interposed Toby. "I can see what you're getting at, but the things you're talking about have connecting wires. I own that people's brains have electrical impulses, but they are not connected by wires; so that floors your argument."

"Does it?" The Professor's eyes twinkled. "What about wireless? Have you forgotten that an aerial picks up current from a transmitter many miles away? There are no wires. Every schoolboy knows this to be a fact."

Toby nodded. "Yes, you've got me there."

"Thank you. My point, as you will have perceived, is this. Brains can and do produce electrical impulses. We have established that electrical impulses can be transmitted without any connecting wires. Is there, then, anything so remarkable after all in Vargo's claim that one brain can transmit messages to another, or that the stronger brain can weaken the lesser?"

"Put like that I suppose not," admitted Toby.

"The simple truth is this, my dear doctor," said the Professor. "If the discovery of wireless had not been made on Earth, and Vargo had described such happenings on another world, you would have rejected the bare possibility out of hand. The fact that the explorers of Mino paint their skins with what may be an insulating material suggests that the basis of the beastly weapon Vargo has described is electricity. But let us not tax our brains any further tonight, or our impulses may get at cross purposes and give us nightmares. Tomorrow we will start making preparations for departure. Were you going to say something, Group-Captain?"

"Merely this," answered Tiger. "Some of these remote folks may have corny weapons, but let us not overlook the fact that ours would look just as odd to them. Taken by and large I haven't yet seen anything that does its job better, at both short and long ranges, than a rifle. Maybe I'm old-fashioned, but given a chance a machine-gun would make these brain-pickers sit up and take notice."

The Professor frowned. “Are you suggesting that we take a machine-gun with us?”

Tiger dodged a direct answer. “We might never need one, in which case so well and good. But if we did run into people with aggressive ideas it would be comforting to know that we had a trick of our own to fall back on.”

“Tiger may be right, at that,” put in Toby, looking at the Professor.

The Professor sighed. “I don’t like the idea, but I won’t stand in your way if that’s how you feel. You have a right to protect your lives by the method you most prefer. Meanwhile, let us go to bed and get some sleep.”

CHAPTER III

NEWS FROM AFAR

THE seventh night after Vargo's unexpected visit found the Earth party waiting on the hill with their baggage, watching the sky for the first sign of the ship that was to take them on their next venture into the great ocean of space above them. Rex, sitting on a bundle, was again conscious of the "butterflies in the tummy" feeling that he always experienced at the start of a voyage; or, it would be more correct to say, on leaving Earth; for, curiously perhaps, he was never aware of the feeling on any other planet. It was not the fear of falling. Rather was it, he thought, fear of the unknown, coupled with a fear that he might not return.

Vargo was as good as his word. Just after midnight the spacecraft settled beside them. The luggage was put on board. The usual preliminary routine was followed and in a few minutes the sombre mass of Scotland was dropping away below.

With escape velocity achieved, and the passing of all feeling of motion, Rex could look around to see that the ship carried its usual crew. He had a word of greeting with them.

"What's the news from your part of the Universe?" he asked Borron, the much-travelled navigator. "Have those big ships left Ando?"

"Yes," answered Borron. "They went away and they have never come back."

"Did they win their war?"

"I don't know."

"Have you found out where they came from?"

"No."

"Anyway, the Andoans will be happy again."

"Not entirely. They have a new anxiety. The more you know about what is happening around you the greater is the anxiety. I sometimes think it is better not to know."

"What is the new trouble?"

"The planet you call Jupiter. One of its moons is disintegrating. The particles may remain to make a ring such as you see round Saturn; but should they be flung off at escape velocity they may smother the planetoids

nearest to them, and Ando would be within range of such a bombardment. In any case there will be meteors and meteorites to make travel dangerous. Some may reach Earth, where you have told us that such things are not unknown. The burning core of this satellite may form a new comet, which would be worse, for it is impossible to predict which way it will go until it settles in an orbit. Then its course can be worked out."

Vargo stepped into the conversation. "What is the latest news on Earth?" he asked the Professor.

"There are two items that will interest you," answered the Professor. "First, it is proposed to launch artificial satellites."

"That is a dangerous thing to do," said Vargo. "What is the purpose of this?"

"For one thing, information is wanted about conditions beyond our atmosphere. No danger can be foreseen."

"Not for you, perhaps. But what about other people? You people of Earth think only of yourselves. These satellites will be a danger to space navigation. We may find it necessary to destroy them. You would not think of putting floating rocks in your seas, I am sure, but you think nothing of putting uncontrolled obstructions in space for our spaceships to collide with."

"They do not acknowledge the existence of spaceships."

"You will soon have to enlighten them. What is the other news?"

"Our astronomers have seen the canals you are reopening on Mars, from which I gather the work is going on well."

"Yes. What do your astronomers think is happening?"

"They have several theories, none of which is right. What amazes me is their reluctance to accept the obvious truth. I can only suppose that the idea of waterways does not fit into their other theories about the planet."

"They will soon be forced to change their minds about them," asserted Vargo. "You will be pleased to know that we are collecting more and more atmosphere, also water-vapour, it seems, for now sometimes we have a cloud."

"A cloud!"

"Yes. It is very thin, but dense enough to cast a shadow on the ground. All work stopped to watch the first one."

"Did it fall as rain?"

"No. It dispersed, but it was a good sign. There may be more, enough to give us rain. The news caused much excitement on Mino and Lentos. Many

people are now anxious to move to Mars."

"Why?"

"Because there is work to do. They are tired of having nothing to do. Work is now a pleasure, eagerly sought. That is why the restoration of Mars proceeds fast."

"Jolly good," put in Tiger. "By the time they have done as much work as the people on Earth you won't have as many volunteers, I'll warrant."

Vargo turned to the Professor. "Do you still wish to explore the more distant parts of the Galaxy, the Second Region?"

"I would like to proceed a little farther in that direction. I feel there may be more wonders to be seen nearer the older worlds. I would also like to visit that charming little planetoid which we named Arcadia, to see if it survived its periodic orbit near the sun—too near, we feared."

After that the conversation lapsed. The ship sped on its way to Mars. Rex picked up one of the books he had brought with him and read for a little while. Eventually he dropped off to sleep.

He must have slept for some time, for when he opened his eyes and looked through his observation port, Earth, with its moon clinging to it to form a double star, was far away, and Mars close enough for him to see with naked eyes the changes that had been made. Most conspicuous of all was the section of the canal nearest to the town which they had named Utopia. It was a broad black line as straight as if it had been made with a ruler. This was what had been observed from Earth. Geometrical patterns on either side showed where ground was under cultivation.

As they drew close, numbers of people could be seen moving about, and presently the Professor remarked, with a justifiable touch of pride, since he had been responsible, that it could now be said that Mars was once more an inhabited planet.

As they went down the people could be seen gathering round the central square to greet them, and after landing, as they stepped out they received a great welcome, old friends coming up to shake their hands as they knew was done on Earth. The improvement in the atmosphere was noticeable at once to all of them, and they remarked on it with enthusiasm, for it made the tiresome spacesuits unnecessary.

Vargo now suggested that he should leave them there to have a look round while he pushed on to Mino to report to the Council and return with another party of immigrants, and this was agreed.

The next few days, therefore, were spent surveying the work that had been done. One of the first things Rex did was, to the delight of the

spectators, release a pair of young partridges and a pair of thrushes which he had brought with him—following up the Professor's suggestion that Mars needed some birds to help to keep down the insects. He had hoped to bring some fly-catchers, but failing to find any he had to be content with what he could capture. Partridges, he had always known, were great insect eaters. The birds flew away quite happily, apparently unaware that they were on another world. Clearly, one planet was as good as another to them. There was an ample food supply, anyway.

One thing that did cause surprise was the way the corn seeds which they had imported had grown. The wheat stalks were eight to ten feet high, with ears in proportion. Why this should be was not known although the Professor gave it as his opinion that rich soil alone would not have produced this result. He thought it was more likely to be due to intense ultra-violet rays through a thin atmosphere or a lack of humidity. Anyway, it was an interesting and successful experiment. Of the other seeds they had brought from Earth, some had failed, but others had succeeded beyond expectation.

Rex had a somewhat disconcerting conversation with Rolto, the spaceship captain who did not agree with what was being done on Earth, his argument being that Earth was endangering every planet in the Solar System. He arrived with a load of immigrants, and seeing Rex walked over to him.

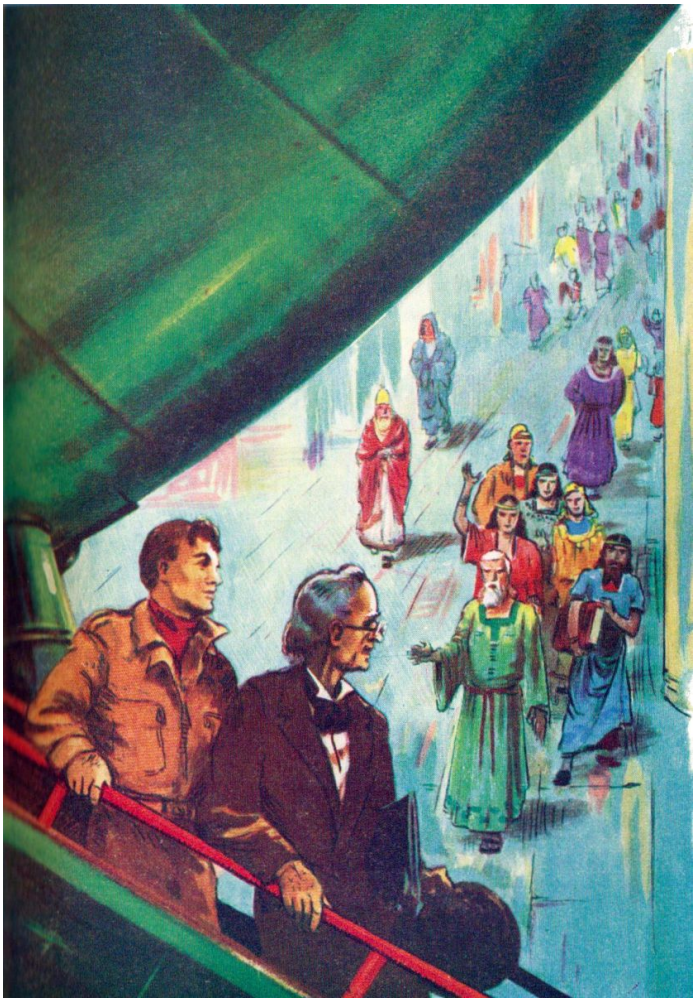
"Hello, Rolto," greeted Rex. "I see you've brought some more hands to carry on with the good work here."

"They would have done better to remain where they were," returned Rolto, coldly.

"Why?"

"Wise men will get as far away from Earth as possible. All this labour here is likely to be wasted."

"Why should it be wasted?"



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Old friends came up to shake hands.

"Earth is still going on with its mad explosions."

"What of it?"

"It's only a question of time before you blow your planet to pieces and then it will be Kraka all over again. Your latest madness, I hear, is to fill the space around you with artificial satellites."

"Who told you that?"

"Vargo. As if the risk of collisions with meteors is not bad enough. I also hear that Vargo visited you on Earth."

"He only came to the house for a few minutes."

"I can understand why he did not go out."

Rex grinned. "I fancy you didn't enjoy your secret visit."

"Enjoy it? I shall never forget it. This I will tell you. Of all the strange things I have seen in my travels, and as a captain of the Remote Survey Fleet I have seen many, none was harder to believe than what I saw on Earth. Why, with such a short span of life as you have, do you behave as you do?"

"How do you mean?"

"Instead of all this frenzied rushing about to do something, and then something else, why don't you just sit down and enjoy your lives?"

Rex shrugged. "Perhaps it is because we have such a short span of life that our people like to crowd into it as much as possible. On Ando the people we saw were sick, dying of boredom because they had nothing to do."

"They live longer than you, who are killing yourselves from exhaustion."

"We don't do so badly," asserted Rex. "Our people like making things."

Rolto smiled sourly. "There is one thing you make better than anyone else in the Universe."

"What is it?"

"Noise. Never, anywhere, have I heard such noises as you make on Earth. I have heard the noises of your world from far away in space when I have been watching. Why do you do it?"

"It just happens that way."

"I cannot understand why you don't all go mad—madder than I know you are. Have you no zone of silence anywhere?"

Rex thought for a moment. "I don't know of one—unless it's at our North Pole," he admitted.

"But you now make noises there," said Rolto. "I see men working at the Pole with machines. Why?"

Rex smiled. "To make a little more room. Through being happy our population grows so fast that we are in danger of being overcrowded."

"So you are now looking for a new world to which to transfer yourselves! Is that why you have come here?"

"Don't be absurd. You know perfectly well that Earth has no spaceships. But one day someone on Earth will discover your cosmic ray motive power and then it may be different. Flying saucers will become a reality. Had we wanted Mars we could have had it. There was no one on it when we came and it would still be uninhabited had it not been for us. You could do nothing

about it. The Professor knows how your ships work. He has kept the secret. Had he divulged it to engineers on Earth there might have been a whole fleet of ships here by now to take possession. Then you'd have had something to grouse about."

"Where are you going next?"

"I don't know. It hasn't been decided."

"Ask Gator to take you to Ardilla," suggested Rolto, slyly.

"Where's that?"

"Borron knows."

"Is it an interesting place?"

"That would depend on what you call interesting." Rolto walked away.

Tiger came up. "What had he to say?"

"Nothing much. He still seems to have a chip on his shoulder about us, or rather, about what is going on on Earth. He suggested that we should ask Gator to take us to a planet called Ardilla. I didn't like the way he said it. It may be one of the planetoids we haven't yet seen."

"We'll ask Vargo if he knows anything about it," said Tiger. "Come and have some lunch."

They made their way back to the others, stopping from time to time to look at the corn and vegetables, many of them strange, that had been introduced from other worlds. The idea struck Rex that some of these might be tried on Earth, but he dismissed it, knowing the Professor would be against it, saying, as he had said before, that it would be difficult to account for new introductions, animal or vegetable, without resort to falsehood, which he would not countenance. There might be some danger in it, too, for there was no guarantee that any living thing would retain its particular characteristics in the different conditions it would find on another world.

They reached the square where they had their quarters just as Gator's ship landed with a load of passengers. Vargo stepped out.

Suddenly Rex laughed.

"What's the joke?" inquired Tiger.

"A silly thought just struck me. I tried to imagine the sensation that would be caused on Earth if a voice suddenly broke in on television, saying: 'Our outside broadcast cameras are now on Mars', and then flashed a picture of this square with Martians walking about and doing their jobs as if they might be in a London square—without the traffic. I wonder what would surprise the viewers most, after they had got over the shock."

“Probably the quiet of the place. No noise at all. Just the soft pit-a-patter of footsteps. The only place I know on Earth where you can hear that same sound is Venice, where the streets being water, so to speak, people walk to work on pavements. But let’s go and hear the news. If the Professor has his way we shan’t be here much longer. He’s all agog to push on. Don’t mention that television idea to him or he might try it for a joke, just to hear what the scientists had to say about it.”

Vargo’s news, they learned presently, was as the Professor had hoped. The ship was now free and at their disposal. The Council on Mino were themselves now preparing to move to Mars. They could, said Vargo, find work for the ship, but in view of what the Professor had done for them, and the regard in which they held him, they were prepared to allow him to borrow it for as long as he wished, and for any purpose.

“Capital,” said the Professor, beaming. “That is an offer of which I shall certainly take full advantage, assuming that meets with the approval of the crew.”

Enquiry soon revealed that it did.

CHAPTER IV

BACK TO ARCADIA

TIGER's belief that the Professor would lose no time in pressing on with his main project, a survey of more distant planets, was soon confirmed, for he at once began to discuss the possibilities with Vargo, Gator and Borron. It was agreed without dissension that they should first move on to Mino, to pay their respects to the Council, calling at the planetoid which they had named Arcadia on the way.

Vargo said there would be no difficulty about that. It might be a good thing, he advised, to leave further plans until that had been done. He would speak to some of the old Remote Space Fleet crew men when they reached Mino.

"What do you know about a place called Ardilla?" asked Rex.

Vargo looked at him. "What do *you* know about Ardilla?" he came back quickly, in his thin voice.

"Nothing," returned Rex. "Nothing at all, except that Rolto hinted that it might be an interesting place for us to visit."

"You should know better than to listen to that man. Shall I tell you why he suggested Ardilla? The region of that planet is one of the most dangerous areas in the Universe."

"Have you been there?" asked the Professor.

"No. If I had it is unlikely that I would be here now."

"What do you know about it?"

"Only that it is a place of dangers beyond imagination."

"One of the places you had in mind when we were discussing these matters in my house?"

"Yes."

"How do you know about these dangers?"

"From rumours, the sort of thing I have heard you call legends—strange tales told by old men about ships that went out and never returned."

"But some ships must have returned or nothing whatever would be known of these alleged dangers," the Professor pointed out.

"Yes," said Vargo, slowly. "It is said that one ship did return, but the crew in it was not the one that went out. The men had changed. They never

did return to normal."

"Did they say what had happened?"

"No. They were unable to do that. We could only judge from their behaviour that it was something awful."

"They had not suffered any actual injury?"

"Only their brains had been injured, and beyond repair."

"And that was why they were unable to tell you what had happened?"

"Yes. They seemed afraid even to speak. They did not live very long afterwards."

"So you have no idea of how far the danger extends from the planet?" put in Tiger. "I am thinking of the range of the thing, whatever it may be."

"I don't know that, and I don't know anyone who could answer that question."

"What about Rolto?"

"He only knows what I know. He is a frustrated man, and such men are dangerous. It would please him to see you in trouble."

The Professor resumed. "But surely, Vargo, if this is a mystery it should be solved. It will have to be solved one day. Are you, with your facilities for space travel, prepared to regard a whole section of the Galaxy as a prohibited area?"

"Yes. Why should we look for trouble when there are plenty of safe places for us to visit? As you must know by now, even the worlds that are considered safe are not without their unpleasant surprises."

"On Earth, the more dangerous a place, the greater is its attraction for some people."

"So I judge, if your own behaviour is an indication. But I doubt if you have any dangers on Earth to be compared with those that may be encountered in space."

"Let us go to Arcadia for a start," suggested Borron. "There will be time to talk of other places afterwards."

This was agreed. The subject was dropped, and in a few hours Gator's ship was on its way to the uninhabited but comfortable little planetoid where they had found, and rescued, the crew of the Andoan ship that had been cast away there.[2]

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[2] See *Now to the Stars*.

After an uneventful journey, and a little trouble in finding it, for it was of course far from where they had last seen it, Arcadia came into view; but such were the changes on and around its surface that had they not known it could be no other—for Borron had mapped its probable orbit—they would not have recognized it.

"We shall now see," said the Professor, "what happens to a world with an orbit that takes it too near the Sun."

The changes were apparent even from a distance. Gone was the sparkling clarity of the atmosphere. It had been replaced by a dull pall, or overcast, which, while transparent from above, would obviously be fairly dense at ground level. Moreover, it had the strange property of slightly changing colour from time to time, according to the direction from which it was observed. The surface of the ground, instead of being green with vegetation, was now for the most part a dull, mottled brown.

Gator moved the ship horizontally until they were over their original landing ground, for the most conspicuous landmarks, such as the limestone cliffs in which they had found the caves, could still be made out. Rex could see the wreck of the abandoned spaceship, still lying at an angle as they had left it.

"Take care, Gator," warned the Professor, as the ship, with its jet-brakes hissing, prepared to make its landing on the flat piece of ground near the wreck. "I don't care for the look of this murk," he went on. "We know it indicates there must still be an atmosphere but it may have changed its composition."

"Poor old Arcadia," murmured Toby. "It looks as if Smog would now be a more appropriate name. This murk looks mighty like smoke to me."

As Gator made a cautious approach the Professor resumed: "Yes, there is no doubt that what we feared was going to happen has happened. Actually the damage is not as severe as I thought it might be. I was fully prepared to find this unlucky little paradise charred to a cinder as a result of its passage near the sun at the extremity of its orbit. Obviously it has not been as close as we presumed."

"It has been too close to be healthy," put in Toby.

"It appears to have been no more than scorched; but even that, I imagine, will have been sufficient to destroy all life, except perhaps some of the tougher vegetation with their roots well under the ground. Seeds, deep down, may have survived, too, so Arcadia is not altogether without hope of recovery, although that will take time."

Vargo, who had been making the usual routine atmospheric and habitation tests, now announced that the air had not changed much in character. It carried a little more helium, as was to be expected, and one or two other components that he could not identify. There was smoke, too, and water-vapour, probably the result of the evaporation of all surface water. This in due course would fall back to the ground as the atmosphere cooled. It might be falling now. The big change was in density. The air was heavier than it had been; but it was safe, thought Vargo, even if breathing might be a little uncomfortable. The smoke content might cause them to cough.

"We know all about Smog," said Tiger, cheerfully.

The ship made its landing. After taking the usual precautions they stepped out, and steadying themselves to become accustomed to their loss of weight, due to the weak gravity, found they were able to breathe and move about without difficulty. There was a strong smell of scorching, and this produced a certain amount of coughing. It caused Rex's eyes to smart a little, but there was no serious discomfort.

Looking about him it seemed to Rex that apart from a poor visibility, the result of the murk, the changes were mainly superficial. The actual ground, the soil, did not appear to have suffered. But gone was the verdant freshness of the deciduous trees and their secondary growth. The trees were still there, but shorn of their leaves, and with their bark scorched, they looked as if a fire had swept through them, as in a way it had.

But already a new growth had started, although this, to Rex's surprise, was obviously going to be different from what had been there. A few young palms, already a foot or more high, and cacti on the more sandy ground, suggested that the new vegetation was going to be tropical.

"There's nothing strange about that," said the Professor, in answer to a query from Rex. "This sort of thing happens on Earth after a forest fire. In Canada, I have heard, the great forests of fir and other conifers are sometimes replaced, after a fire, by birch."

"But how did these palms get here?" asked Rex.

"Obviously the seeds must have been in the ground. It may well be that they needed heat to crack them and so start germination. All this may be a recurring phase on Arcadia. It may not approach so near to the Sun again for a great many years—I use the word years in our own sense, of course. What will happen at the other extremity of its orbit is a matter for conjecture, unless Vargo is clever enough to work it out. It may go through a period of intense cold, which again may cause the vegetation to change. I have no doubt that for a long time now, as it leaves the Sun, it will become steadily

colder. Following that argument there should come a time when things will be much as we found them on the occasion of our first visit."

"It's cooler than it was when we left here," put in Tiger.

"I'd still call it pretty sultry," observed Toby, mopping his face.

"No doubt the ground will hold the heat it collected near the Sun for some time," said the Professor.

"But why should all these changes happen here?" inquired Rex. "They don't happen on Earth—luckily for us."

"I wouldn't be too sure of that," replied the Professor. "Certainly the changes, when they occur, are slower than they are here, and for that there is a simple explanation. Most of the planetoids, certainly those which have been watched from Earth, have elliptical orbits, differing only from the shape of an egg in that the track is more or less pointed at both ends. That, I have no doubt, is the case with Arcadia, on which we stand. One end of the orbit must be near the Sun, the other end remote. If that orbit is constant one end may be too hot to support life, the other end too cold. But that is surmise. If it is correct I don't think it could have held a high form of civilization at any time."

"I don't quite follow that," said Tiger.

"Well, in the first place, any advanced form of life would perish at one end of the orbit or the other. Indeed, I doubt if any civilization could endure if the people realized that calamity lay ahead. Progress would stop under the impact of a general feeling of futility. Suppose the influence of a new body passing near caused Earth to change its orbit. Remember, Earth would only have to approach a few thousand miles nearer to the Sun, a negligible distance in astronomical terms, for all life to be snuffed out in a blaze of heat. If people knew that was going to happen would they strive to improve their standard of living? No. They would say, 'What's the use? Why work if our efforts are to be in vain?' "

"But that hardly conforms with what we know about the place," argued Tiger. "There were people here at one time. That we know, for we found their remains.[3] They had been, quite obviously, destroyed by excessive heat, the sort of heat the place has again had to endure since we were here. If millions of years are required to produce an intelligent creature, how, with periodical scorchings, came men to be here?"

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[3] See *Now to the Stars*.

The Professor considered the problem. “I can think of several explanations,” he announced. “Firstly, the people we saw may have come here from another world. Secondly, Arcadia may have changed its orbit, slowly, over a great period of time, or suddenly due to gravitational interference imposed by another body crossing its orbit. A small planetoid like this could easily be affected. Again, the orbit of Arcadia might be one that takes aeons of time to complete, so that the periodical burning and freezing occurs only at astronomical intervals. In any case the people here would not know what was in store for them—not that it would make any difference if they did. The planetoid is now moving away from the Sun and will become progressively cooler; so if there is no interference the whole process of evolution will be starting all over again.”

“That’s a sobering thought,” murmured Toby.

“It must remain a matter for surmise,” went on the Professor. “My friends, few of the people on Earth pause to think how lucky they are to live on a planet with a regular orbit. There have, of course, been changes in the past. There must have been, or how are we to account for the Ice Ages, when glaciers reached to what are now the tropics? Arcadia has died, temporarily, of heat. More than once Earth must nearly have died from cold.”

“Could that happen again?” asked Rex.

“Who can say? I presume that anything that has happened once could happen again. But there, civilization is wise not to think too much about that. The only escape, if astronomers could predict the catastrophe, would be by spaceship to another world—as happened, by accident, to a few people of Mars when Kraka blew up.”

“That’s a pleasant thought,” said Tiger, sarcastically.

“What we were inclined to overlook in our earlier visits to the planetoids,” continued the Professor, “is that not one is stationary. All are hurtling through space at astronomical velocities. For instance, the planetoid which on Earth has been named Hidalgo, passes, at one end of its orbit, no great distance from Mars. The other end nearly reaches the orbit of the great planet Saturn. The difference in its distance from the Sun must therefore vary by hundreds of millions of miles, with a resultant change of temperature. As I have told you before, at least one planetoid approaches nearer to us than our moon. It is only a little one, a mere mile in diameter, but even so it must have a mass of billions of tons. But come—come. This is no place for such disconcerting thoughts. Where are you going, Rex?”

“I’m only going to look at the old ship,” Rex threw back over his shoulder.

He had started to walk to where he knew the wrecked Andoan ship lay, although he couldn’t actually see it on account of the murk that hung about.

“You be careful what you’re doing,” warned Tiger.

Rex merely waved. To him the remark seemed unnecessary, for although no one knew better than he that on unknown worlds danger could lurk in the most unexpected places, and appear like magic, here, he was confident, he had nothing to fear. He was familiar with the ground. He had been on Arcadia before, had in fact stayed there for some time. If there had been nothing to fear then, what could there be now that the place had been subjected to such heat that no form of life, animal, insect or reptile, could have survived? The Professor’s oft-repeated maxim, that nothing in space should be taken for granted, hardly applied.

So he strode on, casually, with the bouncing stride that could not be avoided with so slight a gravity. He knew that feeling, too, well enough. Even when, presently, he noticed things that puzzled him, he still saw no cause for uneasiness, much less alarm. But remembering other experiences, he resolved not to take too much for granted.

CHAPTER V

A WALK TO REMEMBER

As REX walked on towards the spot where he knew the abandoned spaceship to lie he became aware of a curious and rather fascinating phenomenon. From time to time the colour of the atmosphere seemed to change. Did it, he wondered, or was it his imagination? At the outset it had been a peculiar shade of yellow—or so he had thought. Now, suddenly, it was pink. Not a steady pink everywhere. In places it varied between lilac and mauve. Everything on the ground became diffused with these tints in the manner of a sunset. The effect, he decided, was rather charming, and in some way due to the fog.

The mist itself was patchy, sometimes tenuous and in other places dense. Not that there was anything particularly odd about that, for in certain weather conditions it happened commonly at home.

What did strike him as remarkable was the way it had of clinging to him in the thicker patches through which he passed. This gave the impression that the stuff was actually tangible, as if it might have been composed of masses of floating cobwebs. The stuff seemed to be getting thicker, too, as he advanced, yet in some extraordinary way the visibility remained fairly good, at all events for a short distance. Farther on it looked more solid. In fact, it created a wonderful effect of a multi-coloured curtain encircling the whole area. From time to time it moved slightly, as if a light breeze had caused it to shiver; and as it shivered so it changed colour; not abruptly, but with a slow creeping movement, as if it were caused by some trick of artificial lighting. No matter which way he looked the curtain was always there, sometimes flat, but more often draped in loose folds. He was still moving forward but he could never reach it. It was always the same distance away.

This, he told himself, must be where the rainbow ended.

He was not in the least worried, although it did occur to him that something in the air might be affecting his eyes, causing temporary colour-blindness. It merely struck him as an interesting set of conditions for which the Professor would no doubt have an explanation. The important thing was he felt no ill effects. Had he done so he would certainly have turned back, for if his travels had taught him one lesson it was not to take chances with

anything abnormal. He realized he must be breathing the fog, or whatever the stuff was, but as it caused him no inconvenience he carried on.

Occasionally he could smell it. Or he caught a whiff of smoke, sweet and sickly, and wondered if these weird effects were in fact caused by smoke still hanging about the planetoid after its recent scorching. The ground might well carry a smell of burning for some time, he reasoned. Metals, or metallic oxides, having been subjected to heat, might give off gas, or even minute particles of solid matter in the form of dust. The same applied to the trees, some of which were of a species unknown to him. They might, when heated, give off an aromatic smell, in the manner of frankincense and other gum-bearing trees on Earth. Anything thrown high by up-currents of hot air might remain in suspension for some time. A slow descent to the ground could, he thought, account for the curious quivering movement of the "curtain". He could think of no other explanation, for there appeared to be no breeze. On the contrary, the atmosphere felt utterly stagnant.

At all events, such were the thoughts that passed through Rex's head as he walked on towards his objective.

The first indication that all was not as it should be came when he saw the ship, their own ship, directly in front of him. He stopped. He stared. He gazed around. "But that's impossible," he muttered. He had been walking away from it. How could it be in front of him? He looked again. There was no possibility of mistake. There was the ship, Borron in the entrance, the others standing beside it. Tiger was in the act of lighting his pipe. The only thing was, in some queer way they all appeared to have shrunk in size. They looked like a lot of dwarfs seen through a piece of blue gauze.

The explanation that struck him was of course, the obvious one. In the fog, as not infrequently happens, he had walked in a circle and was now on his way back. So certain was he that this was the answer that he accepted it without question. What did occur to him was that it might be ill-advised to continue in conditions that were obviously treacherous. He had no particular reason for going to the wrecked ship. It was merely a matter of curiosity and an excuse to stretch his legs. It was not worth the risk of becoming lost, he decided. He would give up the idea and rejoin the others forthwith.

Without haste, for while the others were in sight he could hardly go wrong, he walked towards them, only to pull up again as they appeared to recede. Instead of getting closer he was farther away from them. But that, he told himself again as he went on, was impossible. But far from making any progress the figures continued to recede.

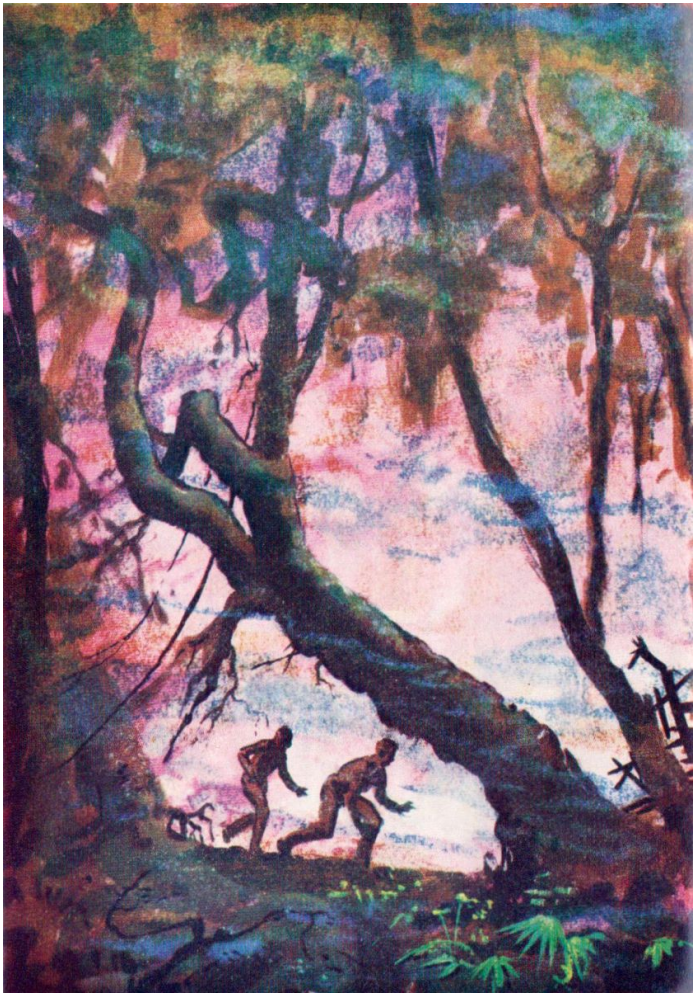
His first twinge of alarm came when they began to fade, as if mist or fog was coming between them. He broke into a run determined not to lose sight of them; but this defeated its object, for the faster he ran the more indistinct became the figures. By the time he had reached the spot where he could have sworn they had been standing there was nothing there. Nothing except an area of bare earth littered with the leafless remains of some heat-shrivelled shrubs.

Breathing heavily, partly from exertion and partly from annoyance, he glared around. In every direction, still the same distance away, was the vague opaque curtain. It was now mostly yellow, and it made everything else, including himself, look yellow, as a sunset glow will tinge a landscape with colour. Even as he stared at it, it shivered slowly to orange with crimson streaks.

Cupping his hands round his mouth he shouted: “Hi! Where are you?”

There was no answer.

The twinge of alarm mounted to something like fear as he perceived that he had been over-hasty in assuming he had walked in a circle. Exactly what had happened, and was still happening, he didn’t know, beyond the obvious fact that he was a victim of hallucination, although whether this was due to abnormal atmospheric conditions or something affecting his eyes, or his brain, he had no means of knowing. The thing was not to lose his head. After giving the matter some thought he worked out what seemed to be the most simple solution to his problem, which was or course how to find his way back to the others. All he had to do was retrace his steps. If he could do that, and he realized that this might not be easy, he would arrive back at the point from which he had started—the ship.



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"Why should all these changes happen here?" inquired Rex.

He set off, warily, suspicious now of every shadow, prepared almost for anything. This was just as well, or he may have been more startled than he was when out of the mist loomed the Andoan spaceship that had been his original objective. But so enormous was it that he was confident that he was being fooled again. He was, but not in the way he had anticipated. The ship really was there. It shrank as he walked towards it, and by the time he had reached it, it had shrunk to normal size. But he had to touch it to make sure it was solid.

That's all right, he told himself, with a sigh of relief. At least I know where I am. The rest should be easy.

Turning to proceed, he staggered back with an involuntary cry breaking from his lips as he found himself confronted by a giant. There seemed to be something familiar about it. There was, for, as he perceived a moment later, it was himself—with a purple face.

I'm going nuts, he told himself, grimly, as he tried to get a grip on his reeling faculties. But by now a suspicion of what was happening was dawning on his bewildered brain. The fog, obviously, was acting as a reflector. And there was no longer any doubt in his mind about that when he saw, on his right, another image of himself, smaller than the first, but still larger than life size. He laughed foolishly, and perhaps a little nervously, for while he realized that in some circumstances the situation could be funny, he was not in the mood to appreciate humour.

By way of an experiment he took a pace or two forward. He was not surprised to see the two images move with him, shrinking slightly. Nor was he surprised when presently they faded out. What did surprise him was to see himself appear in several other places, sometimes as solid-looking as life, sometimes blurred like a photograph out of focus, as if the images were by reflection multiplying themselves.

Now although he had a pretty good idea of what was going on it was taking him all his time not to panic. The phenomenon was no joke. To be lost was bad enough. He might wander about for hours without finding the others. Indeed, he saw that if these fantastic conditions persisted he might never find them, but would roam about the little dead world until he dropped from exhaustion. But to meet himself at every turn was, he feared, likely to end in madness. Again the figures, and the landscape, turned to orange.

It may have been from sheer fright, or for the comfort of hearing his voice to make sure that he himself was flesh and blood, that he let out a yell.

To his great joy it was answered. He distinctly heard his father say: "Rex, where are you? What are you doing?"

The voice seemed to come from behind him.

Spinning round he saw, as he hoped, the ship, with the others standing beside it. And had that been all he would have been happy. But it was not all. There were two ships, two sets of figures, one inverted on the other.

"No," muttered Rex. "It isn't possible. Now I know I'm crazy."

"Rex, where are you?" came Tiger's voice again.

"I'm here!" shouted Rex, desperately, for he felt the business was getting beyond him.

"Stand still and I'll come to you," called Tiger.

Good, thought Rex. They must have realized the place is cock-eye. “Be careful,” he shouted. “If we all get separated we may never find each other again.”

“Stand still,” ordered Tiger.

Rex stood still.

Presently Tiger appeared, and he did not come alone. He appeared to materialize out of the mist in half a dozen places simultaneously. It was as if he had walked through a curtain into a great hall of mirrors. His reflections joined those of Rex.

Tiger stopped, looking about him. “Which of them is you?” he asked. It sounded a silly question, but to Rex it was understandable.

“This is me,” he answered, instinctively raising a hand, although as every reflection raised a hand at the same time the gesture served no useful purpose.

“Stand still,” ordered Tiger again, and moved forward in the right direction, apparently guided by the sound of the voice, which at least was genuine.

The absurd thought struck Rex what a frightful business it would be if a dozen or more men were looking for each other, for they would appear as an army. As Tiger came near Rex noticed he was holding a cord, the other end of which was presumably attached to the ship.

“Did you ever know anything quite as ridiculous as this?” said Rex, as his father joined him. Then, as Tiger caught him by the arm: “What are you doing?”

“I’m only making sure it’s really you,” answered Tiger, curtly. “You can’t trust your eyes on this lunatic planet.”

“Where are the others?”

“They’re standing by the ship.”

“Did you realize what was happening?”

“Yes.”

“How?”

“When you walked off Vargo happened to look round and saw you going off in the opposite direction at the same time. I’ve never seen anything so uncanny in my life.”

“Are you telling me?” came back Rex, warmly.

“The Professor realized at once what was happening. He called to you to stop but apparently you didn’t hear him.”

By this time they were walking back to the ship, Tiger feeling the way, so to speak, by the cord.

"I was getting scared," confessed Rex.

"*You* were getting scared! How do you think *we* felt, when we realized we couldn't be sure which direction you had really taken? It looked as if we were in for a crazy game of hide-and-seek. There they are!"

"Are you sure it's really them?" questioned Rex, dubiously, staring at the ship that had materialized in front of them.

"I wouldn't be, if it were not for this cord," admitted Tiger. "That was the Professor's idea. Once you were out of sight he was afraid you might not be able to find your way back; and if we all went off to look for you we'd all be in the same fix."

"So here you are," greeted the Professor, as they marched up to the ship. "You gave us quite a fright, my boy."

"Nothing to the fright I gave myself," returned Rex, ruefully. "What's the cause of all this nonsense?"

"I can only assume that there are certain pockets of dense atmosphere which have the property of reflecting," said the Professor.

"Like still water in a pond?" suggested Rex.

"Not exactly. I couldn't imagine any atmosphere, however heavily it might be charged with moisture, giving such a clear reflection as that. There may be something in the atmosphere here, particles of dust, perhaps, the result of the sizzling the planetoid has recently had, or, what is more likely, a variety of atmospheric densities at different temperatures, due to the same cause. After all, similar illusions, if not so pronounced, occur on Earth, the result of those conditions. The illusions take different forms, but they are known collectively as mirage."

"I once saw one in Upper Egypt, but I have never been able to understand what caused it," put in Tiger. "I saw a caravan of camels that wasn't there."

"They must have been somewhere," said the Professor. "They were probably below the horizon. What you saw was the reflection."

"I've heard of people, dying of thirst in the desert, seeing pools of water and palm trees," interposed Rex.

"I had better explain," resumed the Professor. "Mirage is the name given to illusions due to reflection and refraction of light in peculiar states of the atmosphere. They occur most commonly in regions of calm where it is either very hot or very cold. Broadly speaking, the phenomenon occurs when there

are two layers of atmosphere of different densities lying one over the other. That can cause two images, one normal and the other upside down on top of it. Clouds may be reflected from a thin layer of dense air on desert sand to give the appearance of water. The shimmering of the hot air, as you may see on a summer day at home, gives movement to the reflection and adds to the illusion. In the same way, looking over a calm sea you may see the reflection of ships which are actually below the horizon."

"How do things become magnified?" asked Rex. "I saw an enormous image of myself."

"That is a form of mirage called looming, a word that is often used carelessly in the wrong sense. The object appears nearer and larger than it really is. There are forms of mirage peculiar to certain places, and here, incidentally, we have a good example. One of the best known is the Fata Morgana, which occurs in the Straits of Messina. A man standing on the shore can often see men, ships and houses, sometimes in the air, sometimes on the water. The objects may have two images, one inverted on the other. And there are others each with its own peculiarity, so that we have seen here, while unusual and disconcerting, is not by any means unique. As to the actual cause, that is a matter for surmise, but it would be reasonable to suppose that the atmosphere remains in a disturbed state following the passage of the planetoid near the sun, when, as we can see, it became overheated. The duplication of images must be caused by the presence of isolated patches of the reflecting surfaces, each one acting as a separate mirror. But let us have something to eat and move on. Poor Arcadia has had a bad time and is not what it used to be, but it has at least provided us with an interesting experience."

"We should rename it Fata Arcadia," suggested Rex.

"Fata is the Italian word for fairy," informed the Professor. "Did you see any fairies?"

Rex shook his head. "Not one. All I saw were monsters."

"Never mind. You may find one on Mino," consoled the Professor with a chuckle. "Morino must be wondering what has happened to us."

"Morino isn't a fairy, thank goodness," disputed Rex, as he took his meagre rations, for following the example of the crew he had learned to manage with very little food while travelling.

CHAPTER VI

BIG BAD WORLD

On the contented little planetoid of Mino they found things much the same as when they were last there. Nothing more had been heard of the big ships which, it had been feared, were bent on expanding their influence, so to the great relief of everyone the threat of invasion appeared to have passed.

Morino, Borron's daughter and Rex's girl friend, was there, and during their stay, while the Professor discussed recent discoveries on Earth with the College of Scientists, he spent most of his time with her, being teased, of course, by her friends and his own. But that no longer troubled him. They often played at wing flying, at which he was soon an expert.[4]

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[4] See *Return to Mars*.

At length the Professor called the party together and speaking seriously announced that as the Council was prepared to let them have the ship for a further voyage, he proposed, if the crew was willing, to start in a day or two.

It seemed to Rex, when he spoke to Vargo about it, that while the crew raised no objection some of the members were by no means enthusiastic about the projected journey to the edge of beyond, as Tiger called it. Normal physical dangers they were prepared to face, for that was accepted as part of their work; but when it came to entering a sphere where deadly perils of an unknown nature were believed to exist, they looked dubious. That there was reason for this was not to be doubted. It was the first time Rex had seen them show reluctance, and bearing in mind that they were all members of the Remote Survey Fleet, and therefore men of great experience, he himself began to wonder if the Professor was wise in carrying on with his plan. Morino was horrified when she learned what was intended, for her father, Borron, was involved as well as Rex. She begged Rex not to go, but he felt that to back out would be showing the white feather.

The disconcerting aspect of the alleged dangers was the absence of any reliable information concerning their character. Enquiries had been made and records had been searched without revealing anything definite. All that was known for certain was that some ships venturing into this region had

never returned. One had managed to get back but the mental condition of the crew was such that nothing could be learned from them. Crews of ships from other planets visiting Mino had spoken vaguely of strange “rays”, but they could give no details of them. Radiations were known to exist everywhere in space, but there was evidently something unusual about those in question.

This unknown factor merely excited the Professor’s curiosity and made him more determined to proceed. Mysteries were made to be solved, he declared.

The day before departure Vargo appeared with a heavy yellow varnish shining on his skin, and presently it appeared that the entire crew had anointed themselves in the same way. On being asked the purpose of this Vargo said the varnish, which apparently had insulating properties, would prevent the penetration through their skins of all the known rays. It might therefore prove efficacious against unknown rays. They often used it in regions where the common ultra-violet and gamma rays were known to be particularly powerful. Even these, taken in excessive quantities, could be dangerous, destroying the tissues of the skin. This the Professor readily admitted, remarking that what was called sunburn was common on Earth. Certain tribes had been provided by nature with a hereditary protection in the form of a dark pigmentation in the skin.

It was clear to Rex that what the crew had done was to provide themselves with what nature had failed to do, there being no reason for it on their own planet.

Vargo advised them all to adopt the same preventative measure, but the Professor, having examined the stuff, and finding it sticky with an unpleasant smell, declined the suggestion, saying he would use it should the necessity arise. The others followed his example and nothing more was said about it.

There was a perceptible hesitation, and a significant exchange of glances between the crewmen, when the Professor said he would like the first objective to be Ardilla, the planet mentioned by Rolto, and, of course, the very world which Vargo had said, if rumour was to be believed, was a place to be avoided.

“We can always turn away the moment danger threatens,” argued the Professor.

“I hope you are right,” answered Vargo, simply. He raised no actual objection so the next day, when the ship left the ground watched by a small

crowd, which included a weeping Morino, it was assumed to have started on its long journey to the outer edge of the Galaxy.

Rex settled down to pass the time by reading, with occasional periods of watching through his observation port the archipelago of planetoids, some large, some small, through which they first had to pass. He knew of course that the appearance of these bodies was no indication of their actual size. Magnitude was a matter of distance. A planetoid with a diameter of only a few miles, seen from a distance of a few thousand miles, which comparatively speaking was very close, could appear larger and brighter than one a hundred times that size much farther away. Sometimes several were in view at the same time, which gave the impression that they occurred in clusters, whereas in fact the distances between them were enormous. Sometimes they would pass one that appeared larger than the Moon seen from Earth, but a question put to Borron about it usually produced the same reply, "No use", which Rex took to mean that either the planetoid was dead, a mere mass of earth, or there was nothing on it of sufficient interest to make a landing worth while.

He still could not grasp the mysteries of navigation in such conditions, for even though old hands like Borron might know most of the planetoids by sight, as a sea captain on Earth might recognize rocks and reefs and islets in certain seas, how did he know where they would be at any given time? For none of them was stationary. All were racing round their orbits at velocities equal to that of the ship, more or less, and what that was he still did not know, having no means of estimating it. Time, as it was understood on Earth, had gone by the board. Days, months and years no longer had any meaning. They were simply in space. Nevertheless, he kept his watch wound up, for it did at least indicate the passage of periods in terms as he had always understood them.

According to time reckoned by his watch it was about seventy hours later that they first observed the unknown planet. At least, after a quick consultation with the crew, Vargo reported that it was not known to any of them. They had never seen it before although they had often been in that particular region. Where it had come from was, therefore, a mystery. It appeared to be rushing towards them and was obviously a body of considerable size.

After a discussion the older members of the crew, to whom the circumstance was not unique, gave it as their opinion that the planet was one that travelled on a tremendous orbit, passing through its present position perhaps once in ten thousand years or more. It was thus, explained Borron, that so-called new stars sometimes appeared. Actually such stars were not

new. They might be very old. They were new only in the sense that they could rarely be seen from the Solar System. Where this one had come from he would not hazard a guess, but he agreed that it might be from the far side of the Galaxy, or even beyond that. It was a stranger, anyway, so nothing could be known about it.

That, of course, was enough to arouse the Professor's curiosity. "We must have a look at it," he declared. "A close look. Such an opportunity may never occur again."

"New worlds are best left alone," said Borron.

"But now that you have shown us the most interesting of your planetoids our purpose was to seek new worlds," protested the Professor. "Here is one presenting itself to us. It is, literally, a gift from heaven, and we must take advantage of it. I am not suggesting that we should land on it at once, or at any time without taking all reasonable precautions."

"On such places anything can happen," said Vargo. "Anything."

"At the first suspicion of danger we could retire," argued the Professor. "I would be the last man to invite disaster."

"That is exactly what you are doing now," replied Vargo. "However, if you insist we will go nearer." He spoke to Borron and apparently the ship changed course, for the approaching monster grew before their eyes.

Even so, it was still a long way off, and some hours were to elapse before they had a really close view of it, one reason for this being that it was now turning away from the Solar System, having apparently reached the limit of its orbit in that direction. At least, so said Borron, after several sightings and calculations.

"That's a relief, anyway," observed Tiger. "If that fellow barged into the planetoids, it would, I imagine, stir them up more than somewhat."

Vargo smiled faintly. "It would," he agreed. "Our whole system would vanish in a cloud of smoke," he added, calmly.

"And no one would know anything about it," put in Rex, pensively.

"No one—except perhaps an astronomer on a far distant world, who might notice the flash."

Rex turned his attention to the unknown planet, some surface details of which were beginning to emerge between long thin drifts of cloud which, as the Professor observed, indicated the presence of water.

It was soon revealed that the outstanding physical feature of the planet was mountains. Range after range was piled up one behind the other as if a mighty ocean of liquid rock had been suddenly arrested at the height of a

gale. What lay between these great *massifs* could not be seen, but there was little vegetation and so far no indications of human or animal life. The rocks themselves were as black as coal, and were, the Professor thought, basalt. The higher peaks wore snow caps. As the ship drew nearer it could be seen that the flanks of some of the mountains were streaked with dull red or orange, which Rex thought indicated volcanic origin. Otherwise the planet appeared to be colourless. Once Rex thought he caught the flash of water between two ranges; but that, he reasoned, was to be expected if there was snow on the high tops.

Taken by and large it was a horrible, gloomy-looking place, with so little to invite a landing that Rex would have been content to pass it by. Not so the Professor, however, it was clear that nothing but a close view would satisfy him.

"I think we might go down and set foot on it," he suggested. "I see several places where we could land—not large, but large enough."

Vargo hesitated.

"Do you see anything that suggests it would be unsafe to land?" inquired the Professor.

Vargo admitted that he could not.

"Then let us go down," requested the Professor.

"What do you hope to see from ground level that cannot be seen from here?"

"It's because I don't know that I would like to land, assuming that atmospheric conditions make it possible," explained the Professor, naïvely.

"You are the most inquisitive man I ever met," asserted Vargo, in a resigned voice. But he gave the order to go down.

Tiger put in a word, speaking to the Professor. "What you're really hoping to find is something new, something that doesn't occur elsewhere," he guessed shrewdly.

"Perhaps," admitted the Professor, with a twinkle in his eyes.

"Beware if you do, for always in the unknown there is danger," said Vargo, earnestly. "I speak from experience, and the misfortunes of others."

The ship's solar ray jet-brakes came into action to check the fall, and when these had taken effect it began a sideways movement to bring it directly above a small plateau which Borron had presumably chosen as the best place to land. Just before it arrived in the desired position the ship gave a tremendous lurch which nearly threw them off their feet. Rex clutched at his seat for it seemed certain that the ship was out of control, and falling.

But Borron acted swiftly. The power came on again. The fall was checked, and in a moment or two all was well again. Looking at their faces, Rex saw that even the crew, usually impassive, had been shaken by the incident—figuratively as well as literally.

"What was that?" exclaimed the Professor, stooping to pick up some caramels that had been jolted out of his bag.

"I don't know," answered Vargo, frowning.

Nobody could find an explanation. "The ship handles perfectly," stated Borron, looking puzzled.

"Could it have been an air pocket?" suggested the Professor.

"No," replied Vargo. "No air pocket, not even a complete vacuum, could affect such a ship as this. I have never known such a thing to happen before. That can only mean that there is something here outside our experience. Do you still want to go down?"

"There is now all the more reason for us to go down," asserted the Professor, looking at the others over his spectacles. "How can we learn if we turn away from the things we don't understand?"

"It sounds crazy to me but have it your way," said Tiger.

Vargo spoke again to Borron. The ship, coming in from a different direction, took up a position over the plateau. Everyone stood tense, prepared for a repetition of the "bump" incident; but nothing happened, and presently the landing legs scraped on hard ground as the spacecraft touched down.

"Good," said the Professor. "It couldn't have been anything serious after all."

Rex watched with some trepidation while the routine atmospheric and habitation tests were made. When they had been completed Vargo announced that the air outside was safe, if heavy. The presence of carbon dioxide made a long stay inadvisable, however. Gravity was rather more severe than on Mars. But . . .

"But what?" asked the Professor.

"There are reactions which I do not understand. I can't identify them or locate them."

"Could they be caused by rays of some sort?"

"They could be. There is certainly an emanation of something, but of what, and from whence it comes, I couldn't say."

"It must be something strange if you can't recognize it."

"Certainly it is strange."

"Would you say it would be dangerous to step out?"

Vargo hesitated. "I wouldn't go as far as that but it might be as well to take precautions."

"What sort of precautions?"

"The varnish we use might insulate you from the emanations, or whatever it is that affects the instruments."

"I don't like the idea of smearing myself with that beastly stuff," objected the Professor. His eyes brightened. "I've got it. This seems the ideal place to test my own protective armour—or what, for want of a better name, I call armour. I made only two suits. Or rather, I had them made to my design by some people who make bullet-proof vests. The first one turned out to be rather too small for me so I had to have a second one made. I have them with me."

"Very well," agreed Vargo. "They may be better than nothing and they can do no harm."

"Capital!" exclaimed the Professor. "Rex, would you care to take a little walk with me on our mystery planet? My smaller suit would just about fit you. It would be much too small for your father or the doctor. They can watch us to see what happens."

"Yes, I'll come," assented Rex. "I'd be glad to stretch my legs."

"We shan't go far—just far enough to take samples of the rock formations," said the Professor.

He went over to the luggage dump and presently returned with the two garments which he had aptly called suits of armour. Actually, they consisted merely of thin leather shirts over which had been sewn small, wafer-thin steel plates, so that the general effect was very much like the scales of a fish. Each shirt was fitted with a headpiece, made in the same way, the shape being that of a balaclava helmet, with yellow transparent material in front to protect the face.

The crew watched with interest while these were put on, Rex smiling through his eyepiece at the Professor who looked like a crusader who had been to the wars. The shirt was heavy, but not as heavy as he expected, as he discovered when he walked to the exit doors. But it was rather cumbersome, and he hoped he would not have to walk far in it. Privately, he thought the precaution quite unnecessary, and suspected the Professor was simply making an excuse to test them in the conditions for which they had been designed. They had managed without them so far, he mused, so the whole business was rather pointless.

"Are you ready?" inquired the Professor.

“Quite ready, Sir Lancelot. Lead on to the dragon,” answered Rex, grinning behind his eyepiece at his little joke.

The exit doors were opened. Fresh air, cold and clammy, but refreshing after the stale atmosphere inside the ship, filled Rex’s lungs. The Professor stepped out; Rex followed him, to sway a little as his feet found the surface of the unknown planet.

For a little while they stood there, looking about them while they adjusted themselves to the particular conditions of a new world, one on which, Vargo had opined, no human being had ever set foot.

CHAPTER VII

TRAPPED

To Rex, as he gazed around, the spectacle presented to his eyes was heart-chilling in its bleak immensity, its awful loneliness, its grim colourlessness and sullen silence, a silence so profound that it seemed to be dropping from the skies. If it conveyed a message at all it was "Go back! You are not wanted here."

It struck him that the place looked precisely what they had decided it was, a dead world, a world where life had never been. So this, he pondered, was what a lifeless world really looked like. Until this moment he had not realized how lifeless a world could be, how bare, how ugly. Beauty came only with life. True, he had seen one or two planetoids where, for one reason or another, life in any shape or form was manifestly impossible—the world of ice, for example. But that was different. Here was a planet which looked as if it should support a thriving population, if not of human beings at least of plants and flowers. With those there would be birds and insects. There were plenty of mountainous districts on Earth, but always there was something to make life worth living. But here there was only death. No bird sang. No insect buzzed.

Had an imaginative artist been asked to depict a world that had died in convulsions, an inferno where the fires had cooled leaving nothing but death and desolation, this was the sort of picture he might have painted. In all his travels Rex had never seen anything so hideous.

Nothing moved. Nothing. Not even the air. With the exception of a few lichens on the open ground the scene was one of sterile rock, mostly black, horrible to look at. It was rock underfoot and rock all around. Rising on all sides were the mountains, often with faces that were absolutely sheer. Between these forbidding walls, as they had noticed from above, were occasional narrow canyons or gorges, as if the mighty masses of rock had cracked as they cooled. The very atmosphere struck cold, with a bitter penetrating quality. Even so, there were colder places on Earth where life had secured a foothold. A feeling came over him that they were being watched: that the place was waiting for something to happen.

The Professor broke in on his sombre meditations. "Well, Rex, are you ready?" he asked. In the eerie silence his voice sounded strangely loud and hollow, as if he had spoken through an amplifier.

Rex caught his breath as from all sides the words were repeated in mocking echoes. WELL REX ARE YOU READY . . . ARE YOU READY . . . ready, ready.

Had anything been needed to complete the horror, this was it, thought Rex, with a shudder. He waited until the ghostly voices had subsided before he answered: "Yes, I'm ready."

Back again came the hollow echoes, gradually diminishing. YES I'M READY . . . I'M READY . . . ready . . . ready.

"Tut-tut," said the Professor softly. "How very disconcerting."

Rex, as he had said, was ready, but he would have preferred to rejoin the others in the ship. "This place gives me the creeps," he muttered. He wouldn't be able to stand too much of it, he thought. It was too overpowering. Great mountains could have that effect anywhere, but here they made him feel like a worm.

"There appears to be nothing of interest here," observed the Professor, after a comprehensive survey of the plateau. "Let us move on a little way."

He had dropped his voice a little, but it made no difference. The echoes merely whispered back. The effect was even worse than when he had spoken in a normal voice.

"Oh shut up," shouted Rex, irritably.

The result, as the echoes boomed and reverberated round the cliffs, startled him. Realizing the futility of arguing with an echo he closed his lips.

"Let us go this way." The Professor, with a curious dragging gait, moved forward, evidently making for the entrance to the nearest canyon, a gaping slit in the cliff where the outer walls were streaked with rust like the sides of a derelict iron ship.

"What are you going to do?" asked Rex, for there seemed little purpose in this, or, for that matter in the expedition at all. As he followed he discovered that he, too, was dragging his feet as if he was wearing boots too heavy for him.

"There is metal in these rocks," answered the Professor. "I shall be interested to see what it is, although I suspect it is merely iron. Still, there is always a chance that it may be something new. Don't worry. I'm not going far."

Reaching the wall he stopped to examine one of the reddish streaks, rubbing it with his fingers and then looking at them closely. Apparently satisfied with his inspection he entered the canyon.

Rex followed, but not without reluctance, for anything less inviting would have been hard to imagine, if for no other reason than the bottom of the gorge was strewn with loose boulders, sometimes precariously poised one upon another, so that it would have been an easy place to break a limb. The boulders, he noticed, had a feature in common. They had no sharp edges. All were smooth and rounded, like those found in fast-flowing streams.

"These rocks seem to be water-worn," he remarked.

"It's quite likely that they are," answered the Professor. "Water may pour through here at certain seasons of the year." He stopped to examine one. "Hm," he went on. "I don't think the surfaces are smooth enough for water to have been the agent. From the scratches on them they look more as if they had been abraded by the action of sand. It is not important."

They went on, picking their way carefully, for as the only light came from far above they had to proceed in a sort of gloomy twilight. But the Professor seemed unaware of any discomfort. Once he glanced over his shoulder and said: "Are you all right?"

"Yes, I'm all right," returned Rex, unwilling to admit that he was anything but happy in conditions which, to say the least, were morbidly depressing, although, to his relief, there were no echoes in the gorge.

"You're not feeling affected by any of these funny rays Vargo has spoken of?"

"I'm feeling perfectly normal, thank you," returned Rex. Physically this was the truth.

"We'll just go as far as the bend in front of us," decided the Professor. He chuckled. "There's nothing as fascinating as a bend in unknown country. You never know what may be round the corner."

Rex agreed. In his heart he was hoping that there would be nothing round the corner except more rocks. Actually, in the event he never did know what was round the corner. They never reached it.

It was shortly after this exchange of words that Rex felt, or thought he felt, an invisible force urging him towards the stark wall of cliff on the right hand side of the chasm. At first it was so slight as to be hardly perceptible, but presently it became more definite, as if unseen hands were pushing him, or rather, dragging him, towards the wall. Very soon he found himself leaning away from it, as a man might lean against a gale of wind. But there was no wind. The air was absolutely still. It was a curious sensation the like of which he had never experienced. But he was not particularly worried, for after all, had there been anything to fear he would have seen it. Or so he

supposed. He could only think it was some peculiar trick of gravity, particularly as the pull sometimes seemed to come from below, as well, even causing his knees to bend and making walking hard work. He didn't even mention it to the Professor, although he could see he was having the same difficulty, moving forward with his body at an angle as if he too was leaning against a wind that was not there.

The explanation came suddenly, and when it did the first thought that flashed into Rex's head was Vargo's remark about perils beyond imagination, the worse because they could not be foreseen.

They had nearly reached the bend of which the Professor had spoken when they found their way almost barred by a fall of rock. That is to say, the fall left only a narrow gap between it and the right hand wall of the cliff. This meant, of course, that in order to pass through the passage they would have to move nearer to the rock face. The Professor, who was leading, made for the opening, altering his course slightly by taking a few paces to the right. Suddenly a cry broke from his lips. He flung up his arms so that for a moment it seemed to Rex that he was fighting an unseen enemy. Rex stopped, staring, trying to make out what was really happening.

The fight, if fight it could be called, did not last long. The Professor thrust both hands against the wall and appeared to be pushing against it with all his strength. While doing this he shouted something, but in the commotion, and perhaps on account of his mask, Rex did not catch the words. The end came when the Professor's arms seemed to collapse, with the result that with a metallic clang he fell flat against the wall, his face towards it, his arms extended at full stretch. And in that position he remained. Only his legs appeared to be free, and with these he kicked violently, although to no purpose.

Rex, still having not the remotest idea of what had happened to cause the Professor to act in this extraordinary way, did what might have been expected of him in the circumstances. His brain was whirling. It was evident that the Professor was in difficulty so naturally he went to his assistance. But even before he reached him he found himself behaving exactly as the Professor had—fighting something that he could neither see nor feel. It was as if arms had reached out from the wall and were dragging him towards it. He resisted with all his might. Indeed, he fought inspired by terror, but it was no use. He found it impossible to compete with this invisible enemy. Feeling his strength failing he made a last desperate effort to break free; but it was in vain, and with a loud clang he too crashed against the wall, there to remain, fixed, rigid, no more able to move his arms than if they had been

nailed to it. Only his legs were free, as he soon discovered; but they could not help him.

The only difference between his position and that of the Professor was that he faced outwards, his head, held tight, half turned towards the bend that was to have been the limit of their walk. The Professor's face was turned to the wall. In vain Rex strove to detach himself. He was as powerless to move as a stamp on a letter or a nail held by a giant magnet.

As he struggled he cried, "What is it? What has happened?"

The Professor answered: "It's no use struggling. Save your breath or the carbon dioxide in the atmosphere may kill you."

"But what is it?" Rex's voice was shrill with near-panic.

"There can be only one answer," was the reply. "This cliff must be a mass of magnetic iron. It is holding us by the steel of our shirts. Dolt that I was not to realize the danger. We had ample warning. It was this magnet that caused the ship to lurch as we passed over it on the way down. I saw oxide on the cliff face, too."

"What can we do?"

"Unless you can get out of your shirt you can do nothing."

Rex wriggled, trying to slip out of his shirt. But with his arms held fast against the wall it was like trying to escape from the grip of a vice.

"When we are missed the others will come to look for us," said the Professor, hopefully.

"They'll come too late to save us," gasped Rex. "I'm being squashed flat and my arms are aching already."

"Relax," advised the Professor. "Conserve your strength."

Rex took the advice, hanging in his shirt. He felt he could not hold out much longer. With his back to the wall he was fighting for breath under the dreadful pressure on his chest and stomach. Even in this dilemma the irony of the situation did not escape him. Had they taken no precautions this horror might not have happened. It was galling to think that the safeguards they had employed had proved their undoing.

Finding the heavy icy air biting into him, promising a quick death from cold should their rescue be long delayed, he made another effort to get out of the shirt; but he soon realized that escape that way was impossible. He tried shouting, hoping those at the ship would hear his cries. Noise was better than the awful silence, anyway. His shouts brought no response. Would the others never come? What if they never came, having failed to mark the particular canyon they had entered. There were several, he recalled. A

search party might easily take the wrong one. Why couldn't they hear him? Were they being confused by echoes? He tried to work out how far they had travelled down the ravine. Was it a quarter of a mile . . . half a mile? He couldn't remember, for they had often stopped, and he had paid little attention to distance.

Time passed, and all he could do was hang there, like a fly on a strip of gummed paper. He was now half dead from cold. His arms, held rigid, seemed to be already dead. To make matters even worse he began to feel sick, presumably from the excessive quantity of carbon dioxide he was inhaling.

It was for these reasons, no doubt, that when the sound first reached his ears he was hardly conscious of it. But when it came again he let out a strangled cry, for it did not occur to him that the sound could have been made by anyone except the anticipated search party. There was no reply. He listened.

The sounds were repeated. They bore a resemblance to human voices but not the sort of voices to which he was accustomed. They were too deep, too sonorous. Apart from that they were uncouth, and quite unintelligible. He listened again. The sounds continued. They seemed to be coming nearer, as if someone, or something, was approaching from just beyond the bend. That was the direction, and it settled any hope that it might be Tiger and Toby in search of them. Fear took possession of him. His eyes, which he could still move, switched to the bend.

"I think something's coming," he said, in a voice from which hope had departed. This was for the benefit of the Professor who, having his face to the wall, would be unable to see the bend.

"Good," replied the Professor. "But surely you mean somebody—Tiger, or one of the others?"

"No. I mean something," returned Rex. "It's none of our party. The sound's coming from the wrong direction."

"How very alarming," said the Professor. "Tell me what it is when you can see it."

Rex did not answer. His eyes were on the bend, held by a fearful fascination.

The deep mumbling voices drew nearer, and such was the agony of his suspense that it was only with an effort that he refrained from crying out aloud.

Presently it was the appearance of the two creatures that rounded the corner that struck him dumb. He was no stranger to fear. Now he knew the

meaning of the old saying “nearly died of fright”.

Were they men? He decided that they were, although they were unlike any he had ever seen; and he had seen many strange variations of the classic human form as that was understood on Earth. In the broadest sense, in general shape and habit they conformed to the ordinary human being. They walked upright. They wore clothes—a simple skirt of what looked like woven lichens. It was their size that took his breath away. They recalled the pictures of giants in books of fairy tales. He judged them to be nine or ten feet tall. But they were well-proportioned, with arms and legs heavily muscled. A shock of matted hair hung over low foreheads, yet, curiously, there was no hair on their chins. Their feet, unshod, were huge, flat and soft, so that they walked over the rough ground without a sound, and apparently without discomfort, the soles acting like a cushion.

But it was their skins, both in colour and texture, that provided their most inhuman feature, and, in fact, gave them a beast-like appearance. They were coarse and grey, and hung loosely on their bodies, as its hide hangs on an elephant. Indeed, for a moment Rex thought they were clad in some sort of hide. Their faces appeared to be made of grey rubber. However, there was nothing bestial about their expressions, which were amiable in a simple childlike sort of way. This impression may have been helped by their eyes, which were large, round and placid, although they had a penetrating directness. From time to time a glaze, a sort of semi-transparent film, seemed to spread over them, as with a barnyard fowl.

Even at this frightful moment Rex found himself—remembering the Professor’s maxim that life could only develop and exist in conditions suitable to its environment—wondering what sort of conditions could have produced such uncouth types. Why those great soft feet? Why such monstrous skins? Why those peculiar eyes? Needless to say, he did not reflect on these problems. It was not the moment.

The creatures came on, slowly and ponderously, in the manner of the elephants they somewhat resembled. It seemed that at first they did not notice the two figures spreadeagled on the wall. The one that was first to do so gave a grunt, whereupon they stopped for a moment to stare before jumping back several yards. There they remained, their curious eyelids shuttering up and down, in attitudes that suggested they were on the point of running away. A brief conversation ensued—if a series of grunts could be called conversation. Then, as if having reached a decision, they advanced with slow, wary steps. Rex watched their approach with the calm resignation of one who knows he is lost.

He waited for the end.

He said nothing to the Professor, feeling it was better, since nothing could be done about it, that he should not know the horrid truth. So dry was his mouth that he would have found it difficult to speak, anyway.

Slowly, ponderously, in absolute silence, their huge soft feet making no sound on the rocky floor, the creatures drew nearer. One stopped. The other came right up, so that for the first time Rex was able to look right into its eyes. Then a strange thing happened. At once his fears began to fade and hope leapt in. There was nothing malignant in the eyes, nothing vicious, nothing cruel. On the contrary, he could see only friendly understanding in them. From that moment he knew the creature was not going to hurt him.

It seemed to know exactly what to do. A queer animal smell reached his nostrils as it came right up. It thrust an arm between his back and the wall and without any great effort pulled him clear.

Rex lost no time in removing his metal shirt, and made no effort to save it when it crashed back against the wall, as if snatched back by elastic cords. By the time he had done this the Professor had also been released.

What the shock must have been like for him when he saw his rescuer standing beside him Rex could only imagine. He just stood, blinking, with pardonable amazement. Rex never forgot the expression of utter incredulity on his face. “Dear—dear,” he muttered. And again, “Dear—dear.” He looked at Rex. “Where did these remarkable gentlemen come from?”

“Round the bend,” answered Rex. “You wanted to know what was round the corner,” he added, with a touch of sarcasm. “Now you know.”

“They seem quite harmless.”

“I think they are.”

“Then we must be infinitely obliged to them. Excuse me.”

The Professor removed his shirt, stepping away from the wall in order to do so. Like the other, it flew back to the wall as soon as he released it. And there, flattened now that it was empty, it stuck. The Professor followed it and collected his steel-rimmed spectacles, which had remained adhering to the rock.

With these adjusted on his nose, he surveyed their benefactors who, still silent, were watching them. “We owe these poor creatures our thanks,” he told Rex. “We can’t merely turn our backs on them and walk away. The question is, how can we show our gratitude for our liberation from what was a most uncomfortable predicament?”

There was a brief, embarrassing silence. Then Rex had an idea. He held out a hand, only to shudder at the impact of the cold coarse hand that took it.

“Yes, since conversation is impossible I think that is all we can do,” said the Professor. “What a pity we can’t talk to them to learn something of their life here.”

“It must be pretty dull,” opined Rex.

“Yes, indeed. Well, there is no point in just standing here. We’d better make our way back to the ship.”

They set off.

Out of the corner of his eye Rex could see the sub-human creatures following them.

“It was lucky for us they came along,” observed the Professor.

Rex agreed. “I didn’t think so when I saw them come round the corner,” he added, with some feeling.

CHAPTER VIII

THE REASON WHY

As they walked on Rex said softly to the Professor, “Why do you suppose these people have developed such disgusting skins?”

“I have no idea,” answered the Professor. “But since nature has provided them there must be a reason for it. It can only be as a protection against something. Nature only provides protective characteristics when they are necessary. If we stayed here long enough no doubt we could ascertain the answer. But always bear in mind that our thin pink skins may appear just as unlovely to them. Again we made the blunder of taking something for granted. We supposed the planet to be uninhabited.”

“There was good reason for that.”

“That may be so, but we were wrong. Considering the appalling conditions, had we suspected there was life here, I would have been prepared for something extraordinary. I only wish we could stay here long enough to learn the language of our friends and so ascertain their way of life. It must be quite remarkable. You must have had a shock when they appeared.”

“Shock! That only half describes how I felt. It seemed to me that any creature living on this awful world must necessarily be a savage beast. I expected to be eaten alive.”

“We must learn not to judge by appearances, or by Earthly standards, and that is not so easy as it may sound,” stated the Professor.

At this juncture they saw Tiger striding down the ravine towards them. He stopped when he saw what was coming, which was hardly surprising; but a reassuring wave from Rex brought him on again.

“I must say you’ve collected some unsavoury-looking pals,” he remarked, as they met. “We were beginning to get worried about you. I thought I’d better come to see if all was well. What have you done with your tin shirts. Have these two toughs taken them off you?”

“Had they been toughs we shouldn’t be here now,” declared Rex. “We were stuck against the wall when they came along and rescued us.”

“What do you mean—stuck?”

“This mountain is a mass of magnetic iron. Our shirts being steel we were dragged against it and held fast.”

Tiger looked astonished, as well he might. “Well, that certainly is a new one!” he exclaimed. “What next?”

The Professor answered. “The next thing is to get away from here as quickly as possible in case the ship should find itself in the position we were in. That could happen, for it was, I think, the same magnetic attraction that caused it to lurch as we came down. We were lucky not to have been caught then. Ah! here comes a breeze. That’s the first movement of air I’ve felt since we landed.”

“I fancy your friends are trying to tell you something,” said Tiger.

The two elephant men, as Rex had mentally dubbed them, had caught up with them and seemed to be in a state of mild excitement, waving their arms, pointing, and doing a lot of grunting and barking.

“They behave as though they are trying to warn us against some danger,” said the Professor, looking at them over his glasses.

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The creatures came on, slowly and ponderously.

"I think they want us to go with them," opined Rex, as one caught him by the arm and pulled, at the same time pointing down the canyon towards the bend.

"Nothing would please me more than to go with them but I am worried about the ship, which may find itself unable to get clear," said the Professor.

As he finished speaking a gust of wind whistled through the canyon. Its force was sufficient to cause Rex to stagger.

"I believe these chaps are trying to tell us there's going to be a storm," he decided, as one of them pointed to the sky, high above.

“I think we should get back to the ship,” said Tiger, a tinge of anxiety in his voice, as another, even more powerful gust, funnelled screaming through the ravine. “There’s going to be a storm all right.”

The two natives evidently thought so too, for after some last frantic signals they set off down the canyon, bouncing from rock to rock with astonishing agility. They disappeared round the bend, and that, it may be said, was the last that was seen of them.

The others had something else to think about, for now with a shriek came another blast of air that not only threw them off their feet but made it no easy matter to get up again. Stones began to fly, and Rex lost no time in crawling to the lee of a landslide formed by several giant boulders. There the others joined him, as he squatted with his hands over his face. Tiger made two attempts to leave, but each time he was thrown down by a wind of hurricane force, a wind that was, moreover, increasing with every howling gust. Small stones were whistling like bullets and even the smaller boulders were beginning to roll. It was only with difficulty that Tiger was able to rejoin the others as they huddled at the foot of the largest rock. The noise was deafening. Ordinary conversation was impossible. There was no rain, no clouds. Just wind. But such a wind as Rex had never known.

As it increased in force it slowly dawned on him that what was happening was no ordinary storm. Not even a tornado. It had nothing to do with weather conditions. It was the result of something the planet itself was doing. The air might even be still. Should the planet increase its spin something like this would be the result. The air would of course be dragged round with it, but the change had come so suddenly that the air would, at least for a time, lag behind it. One thing was certain, he thought, holding his hands over his ears to shut out the terrifying din; the natives had known what was about to happen, which suggested that it was not an uncommon occurrence. They had tried to explain. The signs they had made were now plain to follow. They had invited them to retire to a place of safety. The invitation being ignored they had sought to save themselves by flight. No doubt they were by this time sitting comfortably in a cave. Nothing else would offer a secure shelter from such impossible conditions. The vital question was, how long would they last?

This led to the thought, what was happening to the ship. Even if it was not overturned by one of the tremendous gusts it could hardly escape severe damage from a bombardment of rocks and stones. Would Vargo realize that and take the ship out of range in time to save it? It wouldn’t have to go to any great height. Or would it wait for them until it was too late to save the ship? That did not bear thinking about.

The fearful wind raged on with no sign of abatement. What with its howling and the crash and clatter of rocks and stones the din was unbelievable. Rex could feel the jar of rocks striking the windward side of their shelter like cannon balls. But their greatest danger seemed to be from rocks falling from above as they were blown off the mountain slopes. No wonder the bottom of the ravine was littered with them. No wonder, too, these rocks were scratched and abraded. He had supposed them to have been scoured by water. Now he realized that flying dust and debris had been responsible.

It was not easy to think coherently in such an uproar, but with his face pressed into his father's back to save his eyes other possible explanations dawned on him. Was this why life on the planet had been so slow to develop? Was this why there were no trees. Certainly no form of vegetation could endure such treatment. And—enlightening thought—was this why the natives had developed skins like elephant hide?

How long the incredible wind persisted Rex never knew. It seemed an eternity of time. When to his unspeakable relief it did begin to subside, and he moved a little, it was to find himself stiff and numb with cold. Stones were still bowling, but no longer flying up the ravine.

Cupping his hands round his mouth he shouted: "What sort of a storm do you call that?"

Tiger answered. "The Professor thinks the planet is lopsided. Too many mountains all on one side. They give it an eccentric spin. When the *massif* has passed top dead centre it begins to fall, gathering impetus, so that the whole place gets a faster spin. It revolves faster than the atmosphere can follow it and so you get a wind."

"We got a wind all right," muttered Rex. He shouted: "What about the ship?"

"As soon as it's safe to move we'll press on and find out."

They waited a little while longer, cold, exhausted and as far as Rex was concerned, thoroughly miserable; then as soon as a resumption of their journey back to the plateau seemed reasonably safe, they left their retreat and hurried towards it. The wind was of course still blowing at gale force, for such a storm as there had been could not be expected to end abruptly; but compared with what had been experienced an hour earlier it was of small account.

"What do you reckon was the speed of the worst gusts?" Rex asked his father as they strode on.

"I'd say not less than three or four hundred miles an hour," was the answer. "They were certainly far in excess of anything ever experienced on Earth."

"They could only have been caused by abnormal conditions, by which I mean conditions far removed from those we understand," put in the Professor. "The natives knew what was on the way, poor fellows, and did their best to warn us."

"What a miserable existence theirs must be on a world like this," said Tiger. "No wonder they look fed up."

"There are some faces one forgets, but those were two I shall never forget," asserted Rex. "I suppose they're happy enough in their own way but I couldn't help feeling terribly sorry for them."

Quickening their steps they covered the last few yards to the end of the canyon and so to the open place where they had left the ship. A glance was enough to tell them what they were so anxious to know. The ship was not there. The knowledge that they were marooned produced in Rex the feeling that something inside him was sinking into his feet.

"So they've gone," observed the Professor, without a trace of emotion.

"I was prepared for that," stated Tiger. "I'm relieved to know it. I was afraid we'd find the ship damaged beyond repair. That's what would have happened had it stayed here. Gator must have had the good sense to get clear."

Rex looked up, his eyes scanning the empty space above them. They caught a movement, a white spot of reflected light, and focused on it. "There they are," he cried, pointing. "Shall we try to make some smoke to let them see we're here?"

"I don't think there's any need for that," answered Tiger. "They'll come back as soon as they see it's safe for them to land."

"They're coming down now," observed Rex, relief in his voice.

"Let us hope they don't get too near that mass of magnetism or they may find themselves stuck on it," remarked the Professor.

"As we've no way of warning them they'll have to take their luck," Tiger pointed out, philosophically.

They watched, and Rex's heart jumped into his mouth, as the saying is, when he saw the ship make a sudden swerve for no apparent reason. But Gator must have corrected the "bump" for he came down on, clearly making for the original landing ground.

Before the legs had touched they were running towards it. As far as Rex was concerned he felt he couldn't get off the beastly place soon enough.

The doors were opened and there stood Toby waiting to greet them. "What happened to you?" he wanted to know, as they lost no time in getting aboard.

"Let me get my breath and I'll tell you," panted Rex. "But I warn you, you'll find our story hard to believe," he added.

"Not I," put in Vargo. "I can believe anything, without the slightest strain on my credulity. Have you any reason for wishing to stay here or shall we leave?"

"Let us go," decided the Professor. "I think we have seen enough. But take care to keep well clear of the direction from which we came. I will tell you why presently."

The ship took off on a course diagonally away from the danger spot. As soon as they were well clear, Rex, with interpolations by the Professor, described what had taken place in the canyon.

Vargo showed no surprise. When they had finished he said, simply: "You will now perceive what I mean by unsuspected dangers, where all seems safe."

"But who could have imagined anything so preposterous?" cried Rex.

"Nobody," admitted Vargo. "That is exactly the point I am trying to make. On unknown worlds there is always danger."

Gator put in a word.

"Gator wants to know where you would like to go next," said Vargo.

"I see no reason to change our plan," answered the Professor. "Let us proceed to our original objective."

"Do you mean Ardilla?"

"Yes."

"As you wish," acknowledged Vargo, evenly. "I can only repeat, you have been warned."

"The important thing is not to lose our way," requested Rex, nervously. "We did that once, and nothing could be more frightening than that."

"We shall see," said Vargo.

The ship sped on through the great emptiness.

CHAPTER IX

FORCED LANDING

THE ship was well out in the seldom-visited spaces of what the Minoan astronomers had classified as the Second Region when it happened. Rex was preoccupied at the time, star-gazing in the literal sense of the word. He was, in fact, contemplating a skyscape as fascinating as any he had seen. Ardilla had been sighted and pointed out by Borron, but it had not held his attention for it was still a long way off, far beyond the system, or constellation, into which they were moving. It was these nearer bodies that had captured his interest.

The constellation comprised several bodies obviously governed by a star so brilliant that it could only be a sun blazing with its own celestial fires. Nearer were several satellites which, reflecting the light of this sun, appeared against the darkness of empty space as the Moon appears from Earth. Rex could count seven. The largest was, or appeared to be, more than twice the size of his own familiar moon. The smallest was a trifle less.

There was nothing unusual in having a number of bodies in view, and close, at the same time. He had seen something of the sort during the exploration of the planetoids that form part of the Solar System. What was unusual was to see so many bodies of that size in such close proximity. That they were entering another solar system was clear. It was evidently well furnished with satellites.

It transpired that Borron and some of the older members of the crew had seen this formation before, but they had never actually passed through it. As far as they knew no Minoan ship had ever landed there, so the mass of these particular worlds was still unknown; but it was thought they were not very large.

Asked why these particular bodies had always been given a wide berth, as Gator alleged, Borron said that certain colours on most of them suggested the presence of gases that might be dangerous, and for that reason were best avoided. There was always a risk that a concentration of poisonous gas might affect the power units. It might even find its way into a ship. A landing would almost certainly demand the employment of spacesuits, he opined.

At this juncture there was no suggestion of making a landing. Rex could see these warning colours, or rather, tints, for himself. They were quite pale:

blues, mauves, and in one case, yellow.

The Professor made the remark that some of the bodies in the Galaxy were closer together than was generally supposed by astronomers on Earth.

It was then that the ship struck something, or something struck the ship. At all events there was a collision. There came a crack like a rifle shot and the ship reeled as if it had been struck a glancing blow. For a few seconds it continued to rock. There was a hiss of escaping pressure.

Rex's heart lurched. But there was no panic in the ship. Gator rapped out the word which Rex knew meant emergency, and in a matter of seconds everyone was wearing a mask connected with the air cylinder provided for the purpose. The crew began looking for the damage.

Rex assumed, and probably everyone in the ship assumed, that the ship had been struck by a meteorite. It was obviously not a large one or the damage would have been severe and therefore apparent instantly; but even a small one, one no larger than a pea, at the velocity at which they were travelling would have had enough force to penetrate the thin casing of the ship and perhaps go right through it. A glance revealed that by great good fortune no one had been struck by the object in its passage.

Rex had of course always known that this could happen. The Professor had known, and in his first ship, the *Spacemaster*, he had made provision for such an event. Which was just as well, for it had been struck on its first voyage. In space travel it was a hazard that had to be accepted. It would always be present no matter what advances were made in spaceship design. Space was bombarded constantly by pieces of matter which on Earth are called, or rather, miscalled, shooting stars. Only when such objects enter an atmosphere, when they become incandescent with heat by friction, can they be seen. In space it was impossible to see them, whether they were travelling in an orbit, moving towards the nearest source of gravity, or, as could happen, be stationary, held at the neutralization point of two or more gravities.

Considering the number of meteors and meteorites for ever hurtling through space the mystery to Rex was that collisions so seldom occurred, even making allowances for the vastness of space. As the Professor had once explained, there might be thousands of meteorites in the zone through which a ship was passing, yet so vast was space that the distances between them could be so great that the chances of actual contact with one were negligible. That, to Rex, was always a comforting thought.

The same risk applied, although to a lesser extent, to collision with another spaceship. Although there might be several in the same area the

distances between them would be even greater. This was another comforting thought, for there could be no question of two ships seeing each other in time to take evasive action. Unless two ships were deliberately flying in formation they were only likely to see each other in the rare event of being on the same course and travelling at the same or similar velocities. Rex derived no small satisfaction from the fact that no member of the crew, for all his experience, had ever known of a collision between two ships in space. But that was not to say it had never happened, or couldn't happen. The only comfort there was, should it happen, the occupants of the ships would know nothing about it. They and their ships would be destroyed utterly and instantaneously. The thought occurred to Rex that this was a risk which aeroplanes on Earth would have to accept should their speeds become much greater.

The hole in the side of the ship, fortunately a tiny one, was found, and once located a temporary repair was made by covering it with one of the small metal plates carried for that purpose. It was a simple operation, for the pressure inside the ship was sufficient to hold it in place without any appliance or adhesive. The crew, assuming that the object had gone right through the ship, were looking for the exit hole when Rex recalled seeing, at the moment of impact, a sudden movement in a bundle of luggage as if it had been hit by something. Going over to it he found a small hole in the outer covering. This he followed through to a canvas grip of his own at the bottom of the pile. As there was no hole on the opposite side he opened the grip, knowing that the missile, its force checked by the things through which it had passed, must be inside. It was. As he shook out a spare pair of slacks something hard rattled on the floor. He picked it up, looked at it, and passed it on to Vargo who, with the others, was watching him.

"What do you make of that?" he asked. "It doesn't look like a meteorite to me."

"It isn't a meteorite," said Vargo, and handed it to Gator, whose forehead puckered in a frown as he examined it.

The object was of some heavy metal, cylindrical in shape, perhaps two inches long and a quarter of an inch in diameter. It looked like a piece of slate pencil.

"This is part of a ship," said Gator. "If it is not part of a ship it is part of something that was carried into space by a ship. It would be impossible for an object such as this to put itself in space. If, as I think, there has been an accident somewhere, there will be other parts of the same ship in the region."

“The debris of a collision, perhaps,” suggested the Professor.

“Yes. Or the parts of a ship which, for some unknown reason, has broken up. In that case there will be larger parts.”

“We may run into them?”

“Yes.”

“What can we do about it?”

“Nothing. The pieces may have remained close together or they may have become widely separated. I think that is more likely or we should have encountered more than one piece.”

“It’s an uncomfortable thought that we may collide with a mass of stuff at any moment,” put in Tiger.

“Can’t we slow down, or something?” suggested Rex, vaguely.

“The only thing we might do is make a landing somewhere to give the debris a chance to disperse or leave the region entirely,” said Vargo, thoughtfully. “It would be advisable to make a landing, anyway, so that our puncture can be properly and permanently repaired. Temporary coverings are apt to leak slightly, and on a long journey like this we cannot afford to waste air.”

“There are plenty of possible landing places in sight,” said the Professor.

“None that we know.”

“Then it will have to be one that we don’t know,” returned the Professor, cheerfully, reaching for his caramels. “We can always make tests. It wouldn’t hurt us if we had to sit in our spacesuits for a little while.”

There was a short discussion between Vargo, Gator and Borron, as a result of which the ship was turned towards one of the nearer planets in view, the size of which, at the distance they were from it, was a matter for conjecture.

Rex looked again at the object that had pierced the ship. “What puzzles me is how this thing retained its shape. I would have expected it to buckle, or be flattened, when it hit the hard metal shell of our own ship.”

“Oh no,” answered the Professor. “Have you never heard of the old trick of shooting a candle through a barn door?”

“I’ve heard of it but I always took it to be a joke?”

“There’s no joke about it. It’s a fact, governed by a simple law of physics, as you can prove for yourself when we return to Glensalich. But please don’t shoot holes through my front door.”

Nothing more was said. Rex turned his attention to the planet that was now the objective. It appeared as a big balloon, for the most part silver but

with just a trace of blue in it. In fact, it might have been their own Moon, the moon of Earth, that they were approaching in free fall, for Gator had already cut the power jets.

Rex had often landed on worlds the existence of which had not been known even to the Professor, but to set foot on one about which nothing whatever was known to the ship's company was, with the exception of the planet they had just left, a new experience. Wherefore the approach was made with more than usual caution, everyone watching the great globe of light, now rushing towards them, with interest not unmixed with apprehension. Not that the Minoans were afraid of death. The job they did demanded that they walked in the shadow of it always, so that from long familiarity they had ceased to fear it. They were under no compulsion. They received no pay, having no use for money. Why did they do it? Rex could only conclude that they were actuated by the same sense of curiosity as the Professor, to whom the appeal of the unknown was irresistible.

It was soon evident that the sphere towards which they were falling was no mere planetoid—or if it was it was a large one. The surface, as much as they could see of it from high above, appeared to present no unusual features. There was no sign of water, which, now that the world was a dull brown mass, would have revealed itself by reflection. It bore a strong resemblance to the moon of Earth without its craters or towering mountains. It looked more inviting than the two moons of Mars, although that was not saying very much. The place might, remarked the Professor, be a small planet in its own right.

Gator was now descending in steps; that is to say with pauses at intervals to check the instruments. His hands, Rex noticed, never left the controls, as if he was ready at an instant's notice to rocket away. Apparently nothing occurred to alarm him, for he continued on down and finally brought the ship to a halt at an altitude of a few hundred feet over a fairly open area of what in Central America would be called mesa. That is to say, it looked like a dry, sandy waste, well-studded with patches of coarse vegetation that might have been cactus, scrub heather or perhaps the giant lichen that occurred so commonly on some of the planetoids they had visited on their previous flights. In places there were wide areas of it without a break.

"There is an atmosphere here but I doubt if it would be safe for us to breathe it," stated Vargo, after consulting with Borron.

"Of what is it composed, then?" inquired the Professor.

"The usual things, but there is much carbon dioxide. There is also helium and argon in what might be dangerous quantities. To breathe such air

might injure our lungs. That does not mean that nothing could live in such an atmosphere."

"We could put on our spacesuits for the short time you will be repairing the ship," suggested the Professor.

"That would be necessary if you intend to go out," answered Vargo. "But first we will confirm that there is no form of life here likely to cause trouble."

Gator put the ship into horizontal flight, maintaining his height and swinging round in a wide circle.

"What are those things?" asked Rex.

The things to which he referred, which had come suddenly into view, looked like a cluster of large flat molehills. Together they formed a circle.

"Except that they appear to be made of mud instead of thatch and are not so high, they remind me of the huts built by the tribes of Central Africa," said Tiger.

"That is not a natural formation," asserted Vargo. "There must be a colony of living creatures there, but whether human or animal I would not care to say. I see nothing moving so the creatures responsible may be dead."

"I can see another lot over there—two lots," Rex pointed.

"This might be worth investigating," said the Professor.

"No," declined Vargo. "We came here to repair the ship. If there are creatures there, and we disturb them, we might have to leave without having done that. The ship must come first."

"Very well. It is for you to say," agreed the Professor. Gator took the ship back to the level arid area. There spacesuits were put on by those who were going out, and preparations made for the work to be done. The ship then went on down and settled quietly, stirring up a fair amount of dust as it came to rest. The outside repair party went into the exit chamber.

"We'll watch them for a minute," decided the Professor. "If nothing happens we will follow them and stretch our limbs. I would like to examine that vegetation. It looks unusual."

This programme was followed. The repair party could soon be seen outside doing what was necessary. The Professor, Rex, Tiger and Toby, watched for a little while then they too went out, Rex regretting that the cumbersome suits were necessary. They were, and always would be, a nuisance, he thought.

They tested the radio equipment without which conversation would not be possible.

"You'd better keep near the ship this time," Tiger warned.

"Be sure I shall not go far," replied the Professor, advancing towards the nearest clump of vegetation, which now revealed itself to be a mass of prickly growth in the manner of the cactus commonly called prickly pear. The leaves were huge and bloated, and bristled with ferocious-looking spines. If ever a plant had protected itself this one certainly had, pondered Rex, looking at the three-inch-long needles.

The other most common growth was similar, but boasting a grotesque bulbous trunk might have claimed to be a tree. It carried, on the extreme top, some fruit of a livid blue colour. Again, both trunk and leaves sprouted spikes, so there seemed to be no possible hope of anyone or anything ever reaching the fruit. All the growths were obviously primitive, and from their bloated nature, for moisture storage, indicated a scarcity of water.

"Ah!" exclaimed the Professor, who had advanced to as near as it was possible to get to one of the trees. "What have we here? Some of this fruit has been picked, and recently. I can see where it has been torn off. Some has been thrown on the ground."

"Are you sure it hasn't dropped off?" queried Toby.

"The fruit on the ground is green, which I take to mean it is unripe. Fruit doesn't fall until it is ripe. It looks very much to me as if some fruit has been picked, and that not wanted, being unripe, left on the ground."

"But who, or what, would pick it?" said Tiger. "No animal could climb that tree, and a man couldn't reach the fruit without a ladder. Even then he would need to be careful, for to fall into those thorns would be a nasty business."

"You have posed a question I cannot answer," confessed the Professor.

Rex took a fresh interest in the landscape. Watching, he saw, or thought he saw, a movement. Something that might have been a head had bobbed up and down again, in the cactus, as if to snatch a look at them. The doubt arose on account of the cactus. It seemed hardly possible that anything could move in such thorns. However, he thought he should warn the others.

"Mind how you go," he told the Professor. "I have a feeling we are being watched from the shrubbery."

"I can see what look like tracks in it," said Tiger. "What did you see, Rex?"

"I thought I just caught sight of a movement, as if something had bobbed up and down again. There it is again. Either it has moved to another position or there are more than one. Hi! Look out!" he went on quickly, in a rising, startled voice, at the same time taking a pace backward, as from the area

where he had seen the movement, shot up, in the manner of a jack-in-the-box, a figure that was undoubtedly a man—of sorts.

He was dark brown, or black, in colour, and naked except for a garment that looked like a piece of coconut matting draped across his body. He carried no weapon, Rex was glad to observe, particularly when several identical figures popped up beside the first.

With beetling brows, large ears, flat noses and wide mouths and long hair it was clear that they were savages of a most primitive type. They reminded Rex of the pictures he had seen of Australian aborigines. But appearances were not everything. The important question was, were they dangerous? The manner of their appearance puzzled him not a little. They did not get up as if they had been in a lying or crouching position. They shot straight up, erect, as if impelled by a spring, as if their legs had suddenly been extended in some extraordinary fashion.

"We'd better get back to the ship," advised Tiger, for the others had of course seen what was happening. "I don't like the look of that lot. If appearance is anything to go by they're capable of any devilment. I'd make a wager they're cannibals."

"I see no need to hurry," answered the Professor. "They may be quite harmless. They must be the fellows who live in those huts we saw. I've seen worse-looking types on Earth. I wonder will they fraternize?" He took a pace towards them, hands extended, in what presumably was intended to be a sign of greeting. But he stopped short when with one accord the figures, without moving their positions, shot up at least another foot. "Dear me," said the Professor. "What a remarkable performance. How tall *are* these odd creatures."

"They must have telescopic legs," declared Tiger, but in a tone of voice that suggested he was not really serious. "It's either that or they must have concertina bodies," he added.

"I suppose even that is not outside the bounds of possibility," averred the Professor, pushing up his spectacles.

The natives began slowly to advance, chattering like a lot of monkeys.

"Let's get out of this," urged Tiger, beginning to back away. "They mean trouble."

But the Professor lingered. "They appear to be unarmed," he observed. "Unless they have missiles of some sort they can't hurt us at this distance. Besides, we have the bushes between us, and they're as good as a barbed wire fence."

The natives came on, their bodies going up and down as if they were in fact telescopic, providing a spectacle which was almost comic.

Curiously, perhaps, it did not occur to any of the spectators that what these peculiar people could do with their legs they could also do with their arms, which, admittedly, had not so far been seen at full length. They realized it quickly enough, however, and with a shock, when, although the men did not move their bodies, their arms suddenly appeared and came groping forward like the tentacles of an octopus. The only difference was they remained rigid. As they were extended so they shrank in diameter.

Tiger was the first to recover from the shock. “Let’s go,” he rapped out.

Rex needed no second invitation. Turning to retire he saw Vargo and the crew watching them from the door of the ship, beckoning furiously. Such encouragement was by this time unnecessary. As Rex had thought so apparently had the others, and the return to the ship was in the nature of a rout.

Looking round when he reached the door Rex saw men coming from all directions, bobbing up and down like rabbits.

Whether or not they intended harm was still not clear, but no one, not even the Professor, seemed inclined to wait and see. He and Tiger were the last to enter the ship. Each stood aside for the other to go in first, with the result that there was a momentary hesitation. This brief delay might have had serious consequences, for a long arm shot out and caught the Professor by the ankle. Tiger knocked it off with a sharp blow and they both bundled inside. Vargo slammed the door. Even before they were out of their kit the ship was well away.

“It is a pity we had to behave as we did,” said the Professor, sadly, putting on his spectacles, while they were still between the double doors. “If they meant no harm they will be thinking we were a churlish lot.”

“If they did mean harm they can now kick themselves with their stilty legs for letting us get away,” growled Tiger. “What could you do with people who could knock you down without you being able to reach them. I must say creation has produced some weird effects. That one was a masterpiece.”

“Strange to us, perhaps, but not to them,” replied the Professor. “It goes to confirm the theory I have always held, that local conditions must produce different results.”

By the time they were inside the ship the planet was a fast shrinking ball of light far below.

“For what possible reason could men have developed extending limbs?” questioned Toby, as they settled in their seats. “There must have been a reason for it.”

“Without a doubt,” agreed the Professor.

“For stepping over those horrible spiky bushes,” suggested Rex. “Without long legs they wouldn’t be able to get about without tearing their legs to pieces. Yet without collapsible legs they wouldn’t be able to sit down or get into their huts.”

“There is a theory,” observed the Professor, “that the giraffe evolved its long legs and neck in order to be able to reach the leaves of the trees on which it lives. As the fruit I saw grew only on the tops of the trees, and there was nothing else to eat as far as I could see, the same form of evolution may have been followed here with the peculiar modification that astonished us. It provides an enthralling problem the correct solution of which we shall never know.”

“That suits me,” muttered Tiger. “Did you get the repair job finished, Vargo?”

“Yes. Just in time.”

“Are we going on to Ardilla,” asked Rex.

“I hope so,” said the Professor. “I see no reason to turn back.”

CHAPTER X

RAY-STRUCK

THEY were far out into the Minoan Second Region, with Ardilla a brilliant planet, dominating the sky, when a suspicion slowly dawned on Rex that something was wrong, that something was happening, a feeling that all was not as it should be. He could find no reason for this. The ship and everything in it appeared to be perfectly normal. He told himself that he was losing his nerve, but try as he would he could not shake off the premonition that danger was present, or would be, presently.

He remembered what Rolto had said about a visit to Ardilla, and the expression on his face when he had made the suggestion. He remembered what Vargo had said, too, when he had repeated the conversation to him. Again, on more than one occasion Vargo had remarked on the strange effects that emanations of cosmic energy, and certain unknown rays, could have on the bodies and minds of men. He had not described these effects, either because he could not or was reluctant to do so. That these perils were real was proved by the behaviour of the crew, who at first seemed unwilling to undertake the voyage, and when they did agree had varnished their skins with what they claimed to be a ray repellent.

They were now in the section of space where such radiations, if they existed, might begin to make their presence felt. Were they already in operation or was his instinct of self-preservation anticipating them? pondered Rex, uneasily. He could not have explained in actual words exactly how he felt. The nearest he could have got would have been to say a feeling of unreality, as if he were a distant spectator of a scene in which he played no part. In short, he was not himself. His body felt sluggish and his brain worked with difficulty as he strove to diagnose his symptoms.

After an interval of time had passed without the feeling wearing off he looked at the others. They appeared to be behaving normally so he came to the conclusion that he was imagining things, or that he alone was suffering from some slight indisposition, perhaps the result of an unusually long exposure to the artificial conditions inside the ship. Had they picked up radio-activity on the last planet they had touched, the others would surely have been conscious of it by now.

Ardilla was by this time faintly gleaming in the sky. It might almost be said to be glowing, like an evil eye. Was it coincidence, wondered Rex, that

his sensation of unreality, far from passing, was slowly becoming intensified? With a frown of perplexity on his face and alarm in his eyes he looked again at the others in turn. They were looking at him, and they, too, were frowning, as if they had suddenly become aware of something unusual. Moreover, in some peculiar way they appeared to have changed. Their expressions had an intense, fixed quality. Or was this, too, a trick of the imagination? wondered Rex vaguely. At all events the crew were unaffected. They were going about their duties in the ordinary way.

He was now finding it difficult to concentrate without an effort of will, and for a moment the alarming thought struck him that his memory might be failing. But he soon realized that this could not be the case because he could recall clearly some of the adventures they had shared, such as the panic flight away from that evil star Ardilla. Ardilla? But that was absurd! They had never been to Ardilla. They were on their way to it now. Or were they . . . ? What was he thinking about? He clapped a hand to his head. What was the matter with him? Was he going out of his mind? How could he remember flying from Ardilla in a panic if he had never been there?

Rex moistened his lips, which had suddenly turned dry as fear mounted and set his heart beating faster. How could he remember things that had never happened? Or had these things happened? He didn't think so but he couldn't be sure. With a shock he realized that if he couldn't be sure of that he couldn't be sure of anything. His hands, he discovered, were trembling. He drew a sleeve across his forehead where beads of sweat were beginning to form. Why? Did the others know the answer. Why were they silent?

Speaking in a voice that seemed far away, a voice which he hardly recognized as his own, he asked the others if they were aware of anything unusual happening.

As in one voice they asked the same question at the same instant; and simultaneously to every face leapt an identical expression of bewilderment.

For a brief period they stared at each other, as if they were all striving, separately or collectively, to work out what was happening, or what had happened. The crew, Rex noticed, were still at their posts, apparently unaware of any change. He half rose in his seat to confirm that he still had the use of his limbs. The others did the same thing at exactly the same time. Rex stared. They all stared. And from then on every movement was made by them all in perfect unison, as if they were one person; or, to put it the other way, four persons actuated by a single brain. No one could do anything without the others doing precisely that same thing.

Now, dimly, Rex began to comprehend. Their minds were no longer their own in the individual sense. Did he think that? Or was it one of the others thinking? Then he realized that the same thought must have occurred to them all at the same instant. This was by no means easy to grasp. In fact, it tended to make a fantastic situation all the more confusing.

He took a grip on himself and tried to work it out. Oddly enough, it did not occur to him, which meant apparently that it did not occur to any of them, to ask Gator to turn back. Turn back from what? The only thing certain was that something had happened. Only their brains were affected. What had caused this? They were obviously under the influence of something, but what could it be? Was it some mysterious external agency that linked the past the present and the future into one entity without the usual punctuations of time?

Vaguely Rex suspected that this was not his own thought, for such a tremendous theory was beyond his mental capacity. That was what the Professor, with his superior brain, was thinking. What he thought they all thought. Somehow their brains had become synchronized. How? Why? Was this the effect of too close a contact with the universal cosmic rays? Or some unknown, even more powerful ray, that sprang from the very roots of creation? Were these rays themselves a form of mind, a brain, a thought-producing phenomenon?

Again Rex knew that this must be what the Professor was thinking, for such a staggering theory, such an incredible concept, would never have occurred to him. Only a master-mind could have imagined such a possibility.

From force of habit he reached out to take a caramel from the bag that lay on the table. As if operated by an automatic control the others did the same thing; but as four hands could not enter the bag together they were withdrawn, empty. Rex started to laugh foolishly, but checked himself when the others laughed. They all checked, and the laughter stopped abruptly.

Rex drew a deep breath. I'm mad, he told himself. We're all mad.

Another thought struck him—or struck one of them, who transmitted it to the others. It was a suspicion that if ever they returned to normal they would have no recollection of this weird experience because in this realm of supernatural forces there was no past. Or was there? And what of the future? Had he been in the future when he had seen them, or thought he had seen them, flying away from Ardilla? Ardilla! Was that the evil genius that had done this to them. Were they already in its fearful power?

It was Vargo who provided the answer. He happened to glance up, and either from their expressions or the rigid poise of their bodies must have

recognized certain symptoms. For a second his eyes saucered. Then he uttered one sharp word to Gator, who was at the controls. Gator moved swiftly.

Exactly what happened after that Rex did not know. He never did know. There was a split second of terror as he felt that something inside him was being torn out. It was rather as if an electric current had been running through him and this had been suddenly switched off, leaving his muscles, which had been taut, slack. White light flashed in his eyes as if his brain had exploded. From white it turned to orange, to red, to purple, and finally black. He felt his body going limp and he knew no more.

When next he opened his eyes he was reclining in his seat. He yawned. "I must have dropped off to sleep," he told the others, who were also in their usual seats.

"I think we've all been asleep," said the Professor. "How very odd that we should all fall asleep together."

"You were none of you asleep," said Vargo, quietly.

"Nonsense!" exclaimed the Professor. "I know I've been asleep because I had a quite ridiculous dream."

"So did I," stated Rex.

"And I—and I," put in Tiger and Toby in turn.

"What did you dream?" inquired Vargo.

The Professor answered, with a whimsical smile. "Believe it or not, I dreamed that our brains and our bodies had become fused, united, so that each one of us was no longer capable of individual thought or movement."

The others stared.

"But—but—that's what *I* dreamt," stammered Rex.

"Me too," put in Tiger.

"And me," said Toby, in a queer voice.

The Professor pushed up his glasses. "Well—well. How extraordinary. Such a coincidence is hardly to be believed."

"It was not a coincidence because it was not a dream," said Vargo, seriously. "What you have described really took place. That is why we have turned away on a new course."

"Are you serious?" asked the Professor in a shocked voice.

"Ask Gator," returned Vargo.

"But I don't understand," muttered the Professor.

“Nobody understands. I warned you there were things beyond all reason and understanding.”

“Dear—dear,” murmured the Professor. “Why was it necessary to change our course?”

“To get away from Ardilla.”

“Why?”

“Because Ardilla is discharging radiations that make it dangerous to approach. You, having no protection, were the first to feel the effects. Fortunately I noticed what was happening to you or the situation might have become serious; for while I have some protection against such emanations I would not claim complete immunity if subjected to their full force. Or it may be that some people are more susceptible than others. Of this I am sure. Had we been affected as you were this ship would never have returned to Mino.”

“When you speak of rays, are these being projected by the planet itself or by some form of life on it?”

“That is a question I cannot answer, because, as far as I know, for reasons that will now be obvious to you, no ship from our Region has ever landed on Ardilla. I can only give you my opinion and it is this. The radiations of Ardilla are a natural force that may occur everywhere. Perhaps by reason of the composition of Ardilla they happen there to be exceptionally strong. But that does not mean they have the faculty of intelligence, the power to think for themselves. It is more likely that the inhabitants of the planet have learned how to bring the force under control and utilize it. Other planets may project the same or similar radiations. If so, either they have not been discovered, or they are less powerful and so do not have a range sufficient to penetrate far into the Universe. That is what we think.”

“Could they reach Earth?”

“They might. Men on Earth go mad, I believe. Rolto is convinced you are all mad.”

“I don’t quite follow you.”

“When a man falls victim to the rays, one particularly susceptible perhaps, what you call madness comes upon him. He is no longer master of himself. I have heard you use the expression moonstruck in connection with men who do strange things after sleeping in the open exposed to your Moon: from which I suspect that your Moon may give off these same emanations in a lesser degree. Or, on certain occasions, the rays may come from Ardilla. I don’t know.”

"Are your people on Mino or Lentos ever affected by these rays?" inquired the Professor.

"We think so. It is the explanation of why a man who has always led a blameless life is suddenly capable of a dreadful act. He cannot be blamed for he cannot help himself. The thoughts that enter his head are not his. They come from without and he is powerless to resist them. For good or evil he must obey what is commanded. We protect ourselves as far as it is possible with our limited knowledge and in due course the people of Earth may learn to do the same. You have acquired a certain amount of scientific information but there is still much you do not suspect, much less understand."

"Just a minute," put in Rex, incredulously, "are you saying that a thought can float about loose in space, so to speak, like a thistle seed?"

"Why not, if it is transmitted and no one picks it up."

"But can a thought be transmitted?"

"Of course."

"By accident or design?"

"Both. We on Mino have learned to transmit thought, over a limited distance admittedly; but if we can do it over short distances there may be people who can do it over immense distances. You have seen it done. Two people in close sympathy can do it by accident."

Toby, his medical interest aroused, looked interested. "That's true. It's not uncommon on Earth, notably in the case of twins. One person says something and another says, 'How queer, I was just going to say that myself'."

"Exactly," resumed Vargo. "Actually there is nothing queer about it. The thought simply jumps across the short distance between them. The closer the relationship, the stronger the emotion, the more likely is that to happen. Fear can spread through a crowd and cause panic; with animals a stampede. It was from this that we on Mino developed the ability to pass thoughts at will, as you saw when Rex spoke my thoughts when first we met on Mars. Thought projection saved the *Spacemaster* when it was about to crash on Jupiter, you remember.[5] There was no connection between me and the ships that rescued us but something must have passed between us. What was it if not a ray of some sort? What, if not a ray, operates your radio and radar on Earth?"

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[5] See *Return to Mars*.

"That's electronics."

"That is the name you have given them. By any other name they would still be what they are, artificial radiations developed from the forces that link the masses of solid matter that roll for ever in space, held in position by what you call gravity. What is gravity? You don't know. We don't know. There are other worlds much older than ours and they don't know. We only know it is the mysterious power, the unseen force, that keeps order where otherwise all would be chaos. Consider these things and ask yourselves if your recent experience was so remarkable after all."

"I wonder," murmured the Professor, pensively. "I wonder if the ancients, who talked of a man being possessed of a devil and tried to cast it out, knew a secret that has long been lost. Was the devil in fact an evil thought, lost for a time in space, eventually to find a lodging in the brain of the man possessed?"

"Here, wait a minute," protested Tiger. "I'm a practical man and you're getting out of my depth."

"Well, now you have seen what some rays can do," said Vargo, simply. "We know they exist. Scientists on Earth know they exist for I have heard you mention some of them—x-rays, gamma rays, ultra-violet rays, infra-red rays, and so on. Where they come from or what causes them we have yet to discover. That they are all essential to the existence of the Universe we need not doubt. They are eternal and indestructible. They are the beginning and the end of all things. They are all-powerful, the real rulers of the Universe." Vargo paused. "It would be well if your scientists realized this," he went on, "for interference with these forces can lead only to disaster on a scale beyond imagination. Use them by all means, but treat them as friends, as we do. After all, they provide the motive power for our ships. But misuse them and their wrath can be terrible. This is the lesson Earth may learn too late, and the reason why Rolto would destroy you before you destroy us all. In a flash of flame and a whiff of smoke our Solar System could disappear, yet so vast is the Universe that it would not even be missed."

Vargo, after what for him was a long speech, turned away, leaving Rex to ponder on the solemn words he had spoken.

"You are sure those radiations that upset us were coming from Ardilla?" asked the Professor, presently.

"Yes."

"Why are you so sure?"

"For two reasons."

"What are they?"

“First, because Ardilla is the dominant star in this region.”

“And the other?”

“The men of whom I told you, the crew that returned to Mino with their brains disordered and under a single control, had set out with the intention of landing on Ardilla. They may or may not have reached it. We don’t know. We shall never know. But it now seems certain that either they went very close or were exposed to the baleful influence for so long that they never recovered.”

“I can’t recall that you told us exactly what form this mental disorder took,” remarked the Professor.

“Would you have believed me? Would it have made any difference if I had?”

“No. But we would have been prepared.”

“With cosmic radiations, sinister or otherwise, there can be no question of being prepared. By the time you are conscious of them the damage is done. They have you in their grip. Your experience was brief, and, therefore, the effects only temporary.”

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"Hi! Look out!"

"Rolto knew all about this when he suggested we went to Ardilla," put in Rex.

"Of course."

"You knew that."

"Yes. That was why we protected ourselves and advised you to do the same. You declined, for which reason I was watching you closely, knowing that if anything happened you would be the first to feel the effects."

"How did you know that something was wrong with us?"

“The expressions on your faces told me,” answered Vargo. “They were beginning to wear the same vacant look as those of the men who returned to Mino with their minds unhinged. I realized at once that only prompt action would save us so I told Gator to retire at maximum velocity, assuming that the radiations would lose power with distance, as, fortunately for all of us, they did.”

“Thank you for acting so quickly,” said the Professor, earnestly.

“I take it you no longer wish to go to Ardilla?”

The Professor smiled wanly. “We have been close enough, thank you.”

“Where, then, would you like to go?”

“I shall be content to leave that to you.”

“I will speak to Gator and Borron about it,” promised Vargo.

CHAPTER XI

ON AND ON

One of the problems of voyaging through the interminable void that has been called space was how best to employ time between landings. This had been anticipated. To a much lesser extent the same problem was set on Earth for long-distance passengers in aeroplanes. In that case, however, the time involved could be reckoned in hours, due to the limited endurance range of a machine which must be refuelled at regular intervals if it is to remain airborne. There is usually something to be seen from the windows of such an aircraft, if nothing more than a distant panorama.

In space travel, journeys inevitably must be of long duration, with nothing more exciting to look at through the windows of the ship than a view of the heavens more or less the same as they appear from Earth.

There were, Rex learned, three things one could do to while away the time and relieve boredom. One could read. One could talk, debating a subject of mutual interest; or one could sleep. In actual practice there was found to be a limit to each of these time-passing occupations, with the result that as any one became tedious it was dropped, and succeeded by one of the others. This became a regular routine.

Those members of the ship's crew not on watch, long faced this problem, had solved it in a more simple manner. They did nothing at all. They merely sat silent, unmoving, so still that they might have fallen asleep with their eyes open. For all Rex knew they might be sleeping. Whether they thought, and if so what they thought about, he did not know. He suspected they had from long practice developed a faculty for sinking into a state of coma, wherein their brains were as inactive as their bodies.

Another thing that Rex had learned about space travel was that it induced a peculiar form of fear that was not the fear of death, and was not to be compared with what on Earth is known as fear. That sort of fear only returned when he was confronted with a physical reality—such as the elephant men. He could only think that this strange state of fear, the fear of nothing in particular, derived from a mental condition that had not yet had time to adjust itself to what he was doing. He was not afraid of anything he could have described.

He was certainly not afraid of falling, for there was nothing in sight on which to fall. It was impossible to imagine falling on a star, although this of

course would be the ultimate fate of the ship should anything go wrong. Fear of falling comes only when there is a connecting link between a person and the ground, as in the case of looking down from a high building or the edge of a cliff. As far as Rex was concerned he realized that the effect of falling ten thousand miles would be no worse than falling from a height of a few hundred feet. The result would be the same. He would be killed either way. Admittedly, the thought of falling ten thousand miles was more disturbing than a drop of a hundred feet.

No, his fear was not that sort of fear, reflected Rex who, with time on his hands, often gave his mind to such ruminations. It was fear of the unknown, brought on either by complete and utter isolation from all common objects, or the awful immensity of the Universe which he was now beginning to appreciate. One could contemplate the Universe on Earth, of course; but there, with feet planted on solid ground and familiar objects around one, it had not the overwhelming effect as it had from the inside of a vehicle in space itself, with only the mighty forces of nature around it. On the ground if one was afraid it was always fear of something, some tangible object. In space fear seemed to be born from the fact that there was nothing to be afraid of.

At least, nothing that one could see.

If only there were clouds, or if the sky were blue, it might be different, conjectured Rex. That, being its normal colour, real or imaginary, might create an illusion of being near home. But now. Always around, above and below, was that awful vault of black emptiness which the gleaming points of light that were the stars in their eternal orbits only served to emphasize. There was something disconcerting about seeing stars below one, too, as if one was standing on one's head. The place for stars was above.

Rex was lost in such thoughts as these when Tiger broke into them with the question: "By the way, where are we bound for—anywhere in particular?"

The Professor, who had been making some notes, came to with a start. "Yes, indeed. Where are we going?" he asked Vargo.

"I had thought you would wish to return to Mino."

"Why?"

"After your recent experience surely your curiosity is satisfied?"

"I'm afraid such experiences only add zest to my curiosity," confessed the Professor. He pushed up his glasses and looked at the others. "It seems a pity to go home," he said. "Having come so far we might as well make a

thorough survey while we are here. How do we go for air and provisions, Vargo?"

"There is no difficulty about that," replied Vargo. "We came equipped for a remote operation."

"Then have you any suggestion to make?"

Vargo hesitated. Borron said a single word, softly. Gator stepped in with a remark in the Minoan language. One of the older members of the crew said something, and this led to a discussion in Minoan.

By this time Rex could speak the language fairly well; so could they all, for that matter; but his command of it was not quite up to the standard of Vargo's English, which could now be called perfect, except that his natural speaking voice was pitched differently, and he had a little difficulty in the pronunciation of certain words. He was inclined to accentuate the vowel sounds, to drag them out, particularly the letter A, as was done in some local dialects at home. Actually, Rex could understand more than he could say. The Professor could by this time speak Minoan fluently. Like some people on Earth he seemed to have a natural aptitude for languages.

Listening to the conversation still being carried on in Minoan, presumably for those members of the crew who had not picked up much English, Rex could follow it well enough to make out that the debate centred round a proposal to go somewhere. Several names were mentioned, obviously the names of planets; but one was repeated several times. It was Terromagna.

"We probably know the place under a different name," said the Professor, who was listening.

The same difficulty always arose when stars and planets were being discussed, for the Minoans had their own names for them and no way had been found of identifying them by their Earthly names. In space, certainly in the Second Region, the heavens presented a picture entirely different from the one seen from Earth. Stars of the third or fourth magnitude now appeared as bodies of the first magnitude. And vice versa. The constellations, too, seen from a different angle, had lost their familiar positions, and the Professor admitted that he could no longer recognize them. The only member of their own Solar System still outstanding was the Sun, and even this had diminished to a point where it was sometimes lost to view behind a nearer body—much to Rex's concern, to whom it was the last remaining link with home.

"What is this place Terromagna of which you are speaking?" asked the Professor at last.

“It is a world,” answered Vargo.

“I had already gathered that. Is there anything remarkable about it?”

Vargo’s face registered a peculiar expression. “There are many remarkable things about it.”

“Remarkable in what way?”

“It’s age, its size, its knowledge.”

“Are the conditions there congenial?”

“They are perfect.”

“What you are saying is it has an advanced civilization.”

“The most advanced of any known to us.”

“Could you be a little more specific?”

“Terromagna is the dominant planet in a Solar System of forty bodies, large and small. It’s age is unknown to us, and, I believe, to the people who live on it, although I am told that their records go back to before the time our own Solar System came into existence. They were then at war with each other. When they saw the folly of this, for their populations were dying out, they made an end of war and so were able to devote their energies to making life perfect.”

“You once asked us to imagine what our own world would be like in a million years provided we did not destroy ourselves,” reminded the Professor. “Was this one of the worlds you had in mind?”

“Yes. Their knowledge is far beyond imagination.”

“What sort of knowledge?”

“Scientific, medical, philosophical.”

“Then they understand all about rays,” put in Rex.

“Of course.”

“Have they any nasty ones—like Ardilla?”

“No doubt they could put out such radiations if they wished, but as far as I know they do not. They are concerned only with peace in the Universe. Of course they emanate some radiations. So does every planet as it becomes what you call civilized, the strength and purpose of such rays depending on the degree of knowledge. In this matter Earth is no exception. The atmosphere around you is alive with the beams and rays that operate your many instruments and electrical devices. They reach ever farther into space, farther perhaps than you realize. Other planets in the same stage of development are doing the same thing, with the result that these radiations are now interfering with each other.”

“Interference on our radio machines is put down to atmospheric conditions,” said Rex.

“The result of your obstinate belief that Earth alone in the Universe carries life in an intelligent form. The truth is, compared with Terromagna you are still ignorant children.”

“Why have you never told us about this place?” questioned Tiger.

Vargo did not answer.

“Have you ever been there?” inquired the Professor.

“No.”

“Has any member of the crew been there?”

“No.”

“Can you speak the language?”

“Not more than a few words.”

“Then you must be speaking from hearsay. You have no first hand information?”

Rex thought he caught a meaning glance pass between Vargo and Gator, but what this signified he could not guess. He suspected they were thought-reading, as if there was a conspiracy between them, although he had not the remotest idea of what it could be, or why.

He asked the next question. “Is there some peculiar danger attached to this place?”

“No danger whatever.”

“Then why don’t we go there?” queried the Professor. “What is all this secrecy about?”

Vargo seemed to find the question difficult to answer. “It is far away,” he explained.

“That’s not the real reason,” challenged the Professor, shrewdly.

“You would see on Terromagna things so wonderful that you might become dissatisfied with your own world,” opined Vargo, rather lamely, Rex thought.

“How do you know if you have never been there?”

“I have been told.”

“By whom?”

“A friend.”

“How does he know?”

“He lives there.”

"Lives there!"

"Yes."

"How could that come about?"

"He went there in a ship from Terromagna that called on Mino."

"What made him do that?"

"He was ill. He suffered from a mental sickness. The captain of the visiting ship said on Terromagna they could cure him. So he went."

"And did they cure him?" asked Toby.

"Yes. But he came to love the place so much that he stayed there. He is now married to a woman of Terromagna."

"Well," breathed the Professor. "What a remarkable story, although I see nothing in it to strain the credulity." His eyes twinkled. "One of these days we may have a young man from Earth marrying a girl of Mino."

"Don't talk nonsense," protested Rex.

"The name of my friend is Multavo," went on Vargo. "He has done very well and is now an important engineer-doctor."

"What do you mean by that?" inquired Toby. "On Earth we have engineers and we have doctors, but they are two different professions."

"On Terromagna a man may combine several professions which overlap. By reason of a highly developed brain which makes learning easy he may be master of several subjects. He can be a scientist as well as an engineer and a doctor."

"This is all the more reason why we should go," declared the Professor, enthusiastically. "This sounds like the sort of planet I have always hoped to find. I felt sure there must be one somewhere."

"I have said it is far away," insisted Vargo. "The crew do not like to be away from home for too long in case the ship is reported missing."

"Is that the real reason why you have made a secret of the place?"

Vargo dodged the question. "There is Terromagna." He pointed to a star shining in a distant constellation, the brightest of a group set around another body, one that blazed with a light so brilliant that it could only be a true star —a sun. They all looked at it. As Vargo had said, the constellation was obviously far away.

"It is in the Third Region," said Vargo, reading their thoughts. "Rarely do our ships go beyond the Second Region."

"We are already half-way there," the Professor pointed out. "Please ask the crew if they are willing to go."

Again Vargo hesitated.

Toby now took a hand. Looking Vargo straight in the eyes he said: “You have still not told us the true reason why you are opposed to a visit to Terromagna. Why not be frank with us? Tell us the truth and we shall be content to accept your decision.”

“Very well,” said Vargo, slowly. “But first let me ask you a question. Would you put a dangerous toy in the hands of a child too young to understand it?”

“Of course not. But what has that to do with us? We are not children.”

“Some of your scientists on Earth behave like children.”

“I think I see what he means,” rejoined the Professor. He turned to Vargo. “You are afraid that on Terromagna we might learn things which, if we revealed them on Earth, might fall into the hands of men who, not properly understanding them, might do a great deal of mischief.”

“That is the fact of the matter,” admitted Vargo. “They were not thinking so much of what you might do on Earth as what you might do to your neighbours. You are dangerous enough already.”

“Who do you mean when you say *they* were not thinking?”

“The High Council on Mino.”

“I see. So they ordered you to keep away from Terromagna.”

“They did not order me. They suggested it would be better if we kept away and said nothing about it.”

“So actually it was left to your discretion.”

“Yes.”

“Surely that was a strange decision for the Council to take?”

“I don’t know for certain, but I believe Rolto had been talking to them.”

“Ah! Now we’re getting to the bottom of it,” asserted the Professor.

“Rolto was willing enough for us to go to Ardilla, where we might have lost our sanity,” said Rex, bitterly.

“You have always known him to be a dangerous man,” said Vargo. “He is still obsessed with the idea that Earth is a menace to the rest of our System, in particular to its near neighbour Mars, our original home, which has already suffered one major catastrophe through the folly of ambitious scientists.”

“Well, now we understand the position it is for you to decide whether we go to Terromagna or go home,” declared the Professor. “But I promise that if

we go to Terromagna anything we may learn there shall be kept secret. That answers your objection."

Vargo turned to the crew, presumably for their opinion. There was a brief conversation and he turned back. "We will go to Terromagna," he announced. He smiled faintly. "I have long wanted to see the place," he confessed.

"Capital!" cried the Professor. "Let us be on our way. Dear me! I am all excitement. It has always been my hope to visit a world of such an age that its civilization surpasses all imagination. By the way, Vargo. I assume these people have spaceships?"

"They have everything," replied Vargo, somewhat vaguely.

"Then they may have been to Earth."

"They may have looked at it to see what was going on there, but nothing more than that because, if I have been correctly informed, they have a strict policy of non-interference with other worlds. Guided by experience, having had troubles of their own, they believe that adventures outside their own System might lead to disunity at home. They are self-contained and happy, having found long ago what so many worlds are seeking. The Truth."

"Then we have nothing to fear from them."

"Nothing. All we have to fear are those hazards that are inseparable from space travel in unknown regions, where the capricious behaviour of one unstable world can cause disaster."

Rex frowned. "No need to remind us of that," he muttered.

"That is a risk we were always prepared to accept," reminded the Professor. "Can you, Vargo, give us an idea of what we might expect to see on this world of wonders?"

"To anticipate is to spoil the pleasure of surprise," averred Vargo. "But for the benefit of the doctor this I will tell you. On Terromagna they are masters of all human ailments and weaknesses, physical and mental. In medicine they are supreme."

"Well, there is this about it," interposed Tiger, always practical. "If we're really going places, by which I mean to the outside edge of the Milky Way, we have at least the satisfaction of knowing we have the right crew for the job. And if Vargo has a friend on the spot it should simplify matters."

Everyone agreed.

CHAPTER XII

TERROMAGNA THE MARVELLOUS

Of the long voyage to Terromagna nothing need be said, for it was made without incident worth recording. Rex passed much of the time sleeping, or dozing, as did those of the crew not on duty after the watches had been arranged.

It was by far the longest non-stop trip Rex had made, and before the end it had introduced a new but not unpleasant sensation. So slowly did time seem to pass, and so remote did his own world seem, that he began to wonder if it did really exist. A feeling gradually came over him, although with a sense of unreality, that he had been doing this, travelling through space, all his life. Of course, he knew that was not true, but it needed an effort to convince himself of it.

Nor was that all. With nothing to do, with nothing to hold his interest, he became more and more lethargic, so much so that he was prepared to go on dreaming away the time for ever. It was so easy. One thing only brought momentary relief. Every time he opened his eyes the distant star that was their destination appeared a little brighter, a fraction larger, otherwise he would have found it difficult to believe that they were not stationary, suspended in space from some unseen object in the dark, unknown zone above them. The others, too, even the crew, he thought, suffered to a more or less extent from this same state of unreality.

Once he thought he caught the sound of distant music, but supposing that to be impossible he put it down to his condition, or the long-continued silence in the ship playing on some half-forgotten chord of memory. But he recalled reading in a book that travellers in the desert, and at sea, sometimes suffered from a similar delusion.[6]

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[6] Kinglake, the 19th century traveller, records that during his journey in the Sahara he once heard quite distinctly the ringing of the church bells of his home village in England. He could offer no explanation.

But all things, even in space, have an end, and one morning, after a prolonged sleep, gazing out of his window Rex observed that their objective

was at last beginning to look like the great planet it really was, with its sun flooding the nearer hemisphere with light. Watching, he perceived that with their approach it grew perceptibly in size, even the dark side taking shape as the coastline of a continent appears from a ship at sea. By evening, relatively speaking, the great curve of the planet was blotting out half the sky, which was already, as they entered the tenuous fringe of atmosphere, turning slowly from black to navy blue. Impatiently Rex waited for it to turn the old familiar blue of the sky at home. That in itself might help to dispel the feeling of remoteness.

Their languor banished by mounting excitement they all stood at their windows and watched the mighty planet rushing towards them, Rex, and no doubt the others, relieved that at long last there was something solid to look at. Before long, even if he had not been told, he would have known they were approaching a world of intelligent beings, for it became possible to pick out areas of ground of such regular geometrical patterns, indicated by their different colours, that they could only be fields under cultivation. Across these, as straight as the flight of an arrow, were white lines that were obviously roads. At least, Rex could not think of anything else they might be, particularly as at intervals the lines were punctuated by broad white marks that looked like towns and cities built of some light-coloured material. Seas showed up boldly, and presently, lakes and rivers. Woolly clouds in a sky of lapis lazuli cast their shadows on the scene as they do on Earth.

As the ship dropped still closer, with its jet-brakes beginning to check its fall, the outlines hardened, and those within the ship fell silent in wonder and admiration. Even the unemotional Vargo showed signs of astonishment, as did the crew, for all their experience.

As Gator put the ship into horizontal flight, still descending, the better to survey the scene, it became evident that what Vargo had said about a great civilization was no more than the truth. Below them, plain to see under a sky of immutable serenity, on the shore of an inland sea, was a city that only a race of super-architects could have visualized and built. Magnificent buildings flanked straight, wide, tree-lined streets, on which vehicles were moving in swift but orderly procession. Pedestrians walked on broad pavements between long beds of colour which could only be flowers. Dwelling houses, each with a garden of flowers, lined the side roads. There was colour everywhere, and an orderliness about everything not usually to be found in cities.

Here, clearly, was a great and wonderful civilization, a world of beauty and culture. Dumb with admiration Rex noticed many spaceships, standing,

taking off or landing on numerous open squares apparently provided for that purpose. One of these squares was exceptionally large, and after a word with Vargo towards this Gator now took his ship.

"This must be the capital city of which my friend Multavo has told me," said Vargo. "He lives here. Even though he has told me much I was not expecting anything quite like this."

"I fancy that goes for all of us," said Tiger.

Slowly the ship lost altitude. No one appeared to be taking the slightest notice of it, which suggested that there was nothing unique about a visiting spaceship.

The Professor spoke in a voice that sounded somewhat dazed. "Tell me, Vargo. How big is Terromagna?"

"I don't know," admitted Vargo. "I only know that it is many times larger than Mars."

"Many times means it must be much larger than Earth."

"Of that there is no doubt."

"In that case we are likely to be inconvenienced by a gravity greater than that to which we have been accustomed."

"Not so much as you might expect. Your body and muscles will soon adapt themselves to it, even if provision is not made for it, as I think it may be."

The Professor stared. "Are you telling me that it is possible, by means of a device, to adjust oneself to variations of gravity?"

"Yes. It was necessary here for interplanetary travel within the system; such travel goes on constantly by regular services. Even now you can see the ships coming and going. You would not expect the many satellites of this particular sun to be all the same size. In fact, they vary considerably. Hence the need for some form of gravitational adjustment. For you people of Earth the necessity has not yet arisen, but it may when space flight becomes commonplace."

The Professor turned again to his window. "I see no signs of industrial activity," he remarked.

"What do you mean by industrial activity?"

"Factories, workshops, mines——"

"Big chimneys that pour smoke into the air?"

"Yes."

"If such methods ever existed here, and I would not say they never had because they are a common step towards civilization, they occurred so long

ago that they have been forgotten. As I have told you before, what you must try to grasp, although it may not be easy while you persist in the notion that your own civilization is paramount in the Universe, is this. Your industrial age, you have told me, is not much older than a hundred of your sun cycles."

"That is correct. But it has made, and still makes, rapid progress."

"You only think it is rapid. Actually it has been slow compared with some. However, multiply that hundred years of progress by ten thousand and you will have arrived at the era that Terromagna now enjoys."

"How do they produce power?" queried Tiger. "I am an engineer, but I must have power to work my machines."

"There is no need to produce power," answered Vargo. "Your sun is producing more than you could use. If in space there is enough power to control the Universe there should be enough to drive your little machines. From what you have told me it may be that your scientists are just beginning to realize that. The degree of what you call civilization on a planet is in ratio with its age, and the one you see below you is very old indeed. You would, therefore, expect to find things to astonish you. That is natural because you will be jumping from one era to another; in other words, jumping across, say, ten thousand years of time, instead of proceeding through them step by step in the ordinary way. What you will see here is only the extension of Earth's knowledge as it stands today."

Rex was still pondering Vargo's thought-provoking words when Gator checked their fall and presently touched down with hardly a bump on the main astrodome. No one came near them. Vargo opened the doors without the usual preliminaries, and not for the first time the thought struck Rex that their Minoan friend knew more about this wonder world than he had yet revealed. He was obviously so sure of himself, of everything, from the way he stepped out and looked around.

"You behave as though you were expecting somebody," observed the Professor.

"I thought Multavo might be here to meet us."

"Why should he be? Have you in some way been in touch with him."

"No. But he would know that a Minoan ship was on its way here. At least, someone would know, and as Multavo is a Minoan I thought the information might be passed to him. In that case he would be here to receive us. We will wait a little while."

Rex went out, and sitting on the steps inhaled in deep gulps. Never had that most common of all commodities, ordinary fresh air, tasted so sweet. A boy waved to him. He waved back, feeling that here at last was real

civilization, a place where a stranger was received without suspicion. Yet at home, he reflected, a man could not move from one country to another without all sorts of formalities. It struck him how silly, how backward, it all was. Here were people moving from world to world without being questioned. He took the opportunity of making a closer study of the men who enjoyed this freedom.

According to Earthly standards they were normal in the matter of height and size. Their faces, clean shaven or by nature hairless, were the same colour—a little more sun-bronzed, perhaps. If there was a difference it was in the size of their heads, which seemed to Rex to be slightly larger. Prominent foreheads may have been responsible for creating an impression that their eyes were more deeply set than actually they were. There was some variation in the colour of their hair, which was worn long, reaching nearly to the shoulders. Blonde tints predominated. Their figures were mostly slight and they carried themselves with a natural grace. Considered generally by Earthly standards they were a strikingly handsome race. Every man he could see looked a picture of health.

Clothes seemed standard in pattern as might have been expected, for this is a general practice with any nation. They were simple, consisting of a loose robe which hung in draped folds to just below the knees. The most common colour was a brilliant shade of blue. From the left shoulder hung a spare strip of material, in the manner of a Scottish plaid, presumably for extra warmth should it be required, or protection in inclement weather. Since no hats were in evidence it seemed reasonable to suppose that it could also be worn as a head covering. At the moment no protection was necessary for the sun was shining in a blue sky, cloudless, except for a few wisps of high cirrus cloud. Footgear was a plain soft slipper, although Rex was puzzled by one or two men who wore over this a short, heavier-looking boot with a thick sole. He could only think they were prepared for bad weather, or had come from a place where the weather was already bad, a supposition supported by the fact that these overshoes were worn chiefly by people disembarking from incoming ships. The square was rather like a bus depot at home with spacecraft taking the place of buses.

Watching the scene, it came as a mild shock of surprise to Rex to discover that he had lost all sense of unreality, of the feeling of isolation that had always been present when landing on undeveloped worlds. Why? Was it because everything was so real, so matter-of-fact? For the first time in his travels he had no awareness of being on a star. It needed an effort to convince himself that he was on one. It would have been easier to believe that he had landed in a foreign country on his own planet.

Yet behind this there was a vague sensation of having turned the clock back, of having spun back in time to some period of the Golden Age of ancient Greece or Rome. Gone was all feeling of the fear that came to him when he realized that he was far away in space and might never again see his home planet. But for the spaceships moving about, and elegant pavilions in their gardens of unknown flowers, he might almost have returned home after a long absence. Here, he was sure, there was no hostility; only warmth and friendliness. He was looking at a cultured civilization as it should be. Vargo had been right. Earth still had far to go before it reached this stage of enlightenment.

The temperature of the air, Rex thought, was perfect. There was colour everywhere, and from time to time he caught the perfume of flowers that grew everywhere in profusion. The Terromagnians were evidently a race of garden lovers, he thought, as he stood up and took a few steps, when the stronger pull of gravity, due to the size of the planet, was instantly evident.

His attention now switched to an open vehicle coming towards them. On Earth it would have been accepted without question as a somewhat large motor car. Travelling smoothly and noiselessly it headed directly for the ship, making it plain that that was its objective. Two distinguished-looking men occupied the forward seats. When the car had been brought to a standstill they alighted, smiling. One raised a hand in greeting.

"Here is Multavo," announced Vargo, stepping forward.

Slight bows, in accordance with Minoan custom, were exchanged.

Vargo, speaking in Minoese, then made the introductions, telling Multavo that the Professor's party were visitors from Earth, using the Minoan name for the planet to help him to identify it.

For a moment Multavo looked puzzled. "Do you mean that comparatively new little planet beyond Mars?"

Vargo confirmed this.

"You have come quite a long way," said Multavo, casually, and went on to say that the name of his companion was Normino. "Welcome to Terromagna," he continued. "We will do our best to entertain you during your visit."

"We shall not be able to stay long," said Vargo. "This call is unofficial," he explained, "and my crew do not want their families distressed by the posting of the ship as missing."

"I understand," replied Multavo. "By the way, I brought Normino with me in case any of you felt any ill effects from your journey. He is a doctor who specializes in space-sickness."

“I don’t think we are in need of treatment, thank you,” put in Toby.

“On Earth my friend is also a doctor,” informed Vargo, indicating Toby.

“We shall be able to compare notes,” suggested Multavo, turning to the car. “Please step in,” he invited.

Vargo took a slow pace forward.

“Just a moment,” requested Multavo, quickly. “I see you are inconvenienced somewhat by our gravity. Anticipating that I have brought with me some anti-gravity shoes that should help you.”

From the back of the car he produced several pairs of overshoes such as those Rex had noticed being worn by some of the incoming space travellers. Now he knew their purpose. Selecting a pair that looked about the right size he put them on, when, although he had resolved not to be surprised by anything, he was amazed to find that the sensation of heaviness had given way to one not only of lightness but of buoyancy.

“It seems that we have arrived at the home of magic,” said the Professor, beaming.

“Here we do not acknowledge magic,” said Multavo, seriously. “We are a practical people.”

Leaving the crew, with the exception of Vargo, at the ship, they took their places in the car, which at once moved off at a speed that took Rex’s breath away, until he realized that aside from the few vehicles on the road, and no pedestrians trying to cross it, there was a force at work which made collision impossible. Twice as they neared another car, although Multavo did not appear to touch the controls, an invisible buffer, a sort of spring cushion came between them.

He asked Vargo about this. Vargo spoke to Multavo and then explained. It was simple. Within a certain distance of another car the power was automatically cut and brakes applied. The driver had nothing to do with it. It was physically impossible for two cars to collide. The brakes began to operate some distance away. The closer the cars the stronger became their grip. Pedestrians were not allowed to walk on the carriage-ways. Broad pavements were provided for them.

After a short drive the car pulled up before a building which from its size and imposing façade was clearly an administrative headquarters. After they had alighted Multavo ushered them through portals that swung open at their approach, into a broad corridor with doors on either side. Turning into one of these the party entered a large room which, from the position of a long table with numerous chairs round it, might have been a council chamber. A man who had been seated in a chair at the head of the table rose and walked

to meet them. At a distance of a few yards he stopped and made a short speech in a language only Multavo understood.

At the end Multavo interpreted this to mean that they were welcome. The people of Terromagna were proud of their civilization and were always happy to receive visitors from the backward planets. He, Multavo, was to show them round the objects most likely to interest them. There would not be time for them to see everything. But first he was to offer them some refreshment.

Multavo bowed. They all bowed and withdrew to another room where food and drink had been set out, not as the banquet Rex was half expecting, for this would have been in keeping with their surroundings, but in the most simple manner possible. Colour was provided by bowls of fruit and flowers. The food, to Rex's disappointment, consisted entirely of cereals, fruit and vegetables; and plain cakes. He had hoped for something more substantial. However, he made the best of it.

At the end Multavo asked them what they would like to see first.

The Professor said he would be content to leave that to their guide. Toby said he would like to see a hospital.

Multavo looked puzzled and asked Vargo to explain what was meant by a hospital. Vargo did so, whereupon Multavo surprised everyone by saying there were no hospitals of the sort he had in mind because disease had long ago been banished from the planet. There was a casualty ward for accidents but as these rarely happened it was seldom used. They had a correction clinic, which he would show them presently, as it would be rather difficult to explain.

"How did you know we were coming?" asked Rex.

"I saw a Minoan ship coming and hoped it might be Vargo," answered Multavo.

"You saw it?"

"Yes."

"You mean, as we came in to land."

"I saw you from the watch hall long before that. You were in the region of Ardilla. I watched you leave it and take a course towards us."

"You saw us all that distance away?" gasped Rex.

"What is distance? What has that to do with vision?"

Rex did not know what to say.

"He must mean some sort of radar device," declared Tiger.

"Or television," suggested Toby.

“What is television?” asked Multavo.

“Ah! Perhaps we have the advantage of you there,” said Rex, and went on to explain the purpose of the invention.

Multavo smiled. “Oh that,” he said, clearly not impressed. “I think I understand what you mean. Come with me. I will show you.”

They followed him out of the room, down the corridor and into another.

CHAPTER XIII

SOMETHING TO THINK ABOUT

Rex found himself in a room of such dimensions that it might with greater accuracy have been called a hall. Rectangular in shape it was nearly the size of a church, although not so high. The ceiling was domed, and like the walls was devoid of any sort of decoration. Everything was white, and had a faint shine as if it might be plastic. Closer examination revealed that the walls consisted of a series of glazed panels about fourteen feet wide and twelve feet high. What the purpose of these panels might be Rex did not attempt to guess.

The only furniture was a long central table, or rather, stand, of the type commonly seen in museums; that is to say, double-sided, each side set at a slight angle. Whether this was metal or some artificial material could not be determined by sight or by touch. This table was quite obviously a switchboard, for inset into it were rows of dials and white studs. It looked like part of the equipment of a modern power station. On both sides of the table, facing the walls, were a number of soft-seated couches and chairs.

They accepted Multavo's invitation to be seated.

A man in white overalls who had apparently been on duty came over to them. He had a short conversation with Multavo, and at the finish made what looked like a gesture of assent. He regarded the visitors from Earth for a moment or two with mild curiosity, smiled at them with the utmost amiability and strolled away. Multavo remained standing by the long table in the posture of a tutor about to deliver a lecture or give a demonstration.

In an atmosphere of almost tense expectation the visitors, and this included Vargo, waited for one or the other to begin.

"You asked me," said Multavo, in a smooth, modulated voice, "how we knew a Minoan ship was on its way to this constellation, and from where. Minoan ships are of course easily recognizable from their size, shape and colour. I will now show you that section of the region in which you were at the time you were first observed by our officers in the central watch tower. I believe that science on Earth has reached the point of being able to project beams to produce both sound and vision."

"That is correct," confirmed the Professor. "We call these devices radio and television."

“Then you may not be greatly surprised by what I am now going to show you. Please watch the panel in front of you.”

There was no sound, but Multavo must have thrown a switch, for a section of the wall, one of the panels, began to cloud with swiftly-deepening colouration.

No one spoke as the clouds in the panel slowly took form, to resolve themselves into a picture of a section of the sky. Against this background, moving so slowly that for practical purposes they might have been called stationary, were a number of spots gleaming with reflected light, some large, some small. Between them, moving at a faster pace, were more points of light. Some were mere pinpricks, but one or two were comparatively large and appeared to be slightly elongated.

Multavo’s voice broke quietly into the silence. “Our pictures can of necessity cover only one section of the sky at a time,” he said casually. “The three largest spots are planets in our own galaxy, Colina, Lena and Normo. They appear large because they are comparatively close. The very small fast-moving spots are spaceships in transit. Other sections of the sky can be brought into view as required—thus.” The picture began to move horizontally across the screen, for that, Rex now realized, was what the panel really was. The effect of this was to cause the spots on the right to move off the panel while fresh ones came in from the left.

“Or we can move in the vertical plane,” said Multavo, dispassionately.

The picture halted and then moved on again, travelling vertically, bringing in fresh objects from the bottom.

“In this way,” continued Multavo, “we can cover any section of the sky around us, so as observation is maintained always in the Central Watch Tower it would be impossible for any ship, or a meteor for that matter, to approach us, without our being aware of it. The room we are in, by the way, is a public one, open to those who have reason to watch the progress of any particular ship. Would you care to see any particular planet?”

“Can you show us Mino?” requested Vargo.

The picture flashed across the screen, diagonally now, from corner to corner, bringing in a new area of sky, and, of course, fresh bodies. It slowed, and came to a stop.

“There is Mino and its neighbour Lentos, with the lesser planetoids around them. You can just see Mars in the far background,” said Multavo. “I will bring them nearer.”

The picture began to expand from the centre, creating a curious impression that the planetoids were rushing towards them, so swiftly did

they enlarge. Near Mino was a fast-moving point of light.

"Observe that a ship has just left Mino," said Multavo. "It appears to be on a course for Mars. There has been a lot of activity in that region lately."

"Mino is busy rehabilitating Mars," said Vargo.

"We thought it might be something of the sort," replied Multavo, calmly, "If we can bring the ship nearer you might be able to recognize it."

Some selective form of focus now appeared to come into action centred on the ship, causing it to become enlarged until it half filled the screen. It lost something in definition, the outline becoming somewhat blurred, but even so, Rex could see a line of blue stars on the ship.

"That's Rolto," he cried.

"Taking more passengers to Mars," guessed Vargo.

The picture diminished to normal and moved a trifle.

"There is the sun that controls your own system," said Vargo. "Your planet Jupiter stands out clearly on account of its size, but you may just be able to make out Earth a trifle to the right of it, in the same plane."

"This is fantastic," muttered Tiger.

"It is wonderful to those who have never before seen our astronomical aids; but it is not fantastic," answered Multavo. "It is no more than a development of what you yourselves possess. What did you say you called your method?"

"Television."

"Ah yes. If no disaster overtakes you it is only a question of time before you will be able to do this. In the matter of science development must always be slow, one step leading to another. That was the case here, of course. We are a very old world, and it may be that our civilization had begun before Earth took its present shape and position." Multavo moved a hand and the picture faded.

Rex drew a deep breath. "I still can't believe it," he said, weakly.

Multavo smiled. "Not so long ago you would have found it hard to believe in your own form of television, I think, limited though it still is in its scope and application."

"Have you, or any of your people here, ever been to Earth?" inquired the Professor.

"No. Our observers look at you sometimes, as they keep watch on the orbits of all planets within the galaxy, to confirm that they are in their proper places; for should they leave them the results could be far-reaching. But long ago we decided on a policy of non-interference with peoples outside our

own system. It is better that way. A world cannot jump from one form of civilization to another without the risk of chaos. A world must take its own time, adapting itself to new conditions as it proceeds. In our own system it is rather different for we have for a long time been in close touch. We on Terromagna lead and the others follow."

"By close touch I take it you mean by interplanetary transport?" queried the Professor.

"Not only transport," replied Multavo. "Each of our planets can always at any time see what the others are doing. That was a natural development and a comparatively simple matter once the basic laws of the Universe were understood and the fundamental principles of science emerged from them. You are still groping in the dark, but it is only a question of time before you make contact with your neighbours. I will give you a demonstration of what I mean." Turning, Multavo spoke to the duty officer, and having received a reply, continued:

"On Colina, one of the members of our system, there is today a public ceremony, with rejoicing, on the completion of the harvest. It is one of the old customs that has survived through the ages. Let us see how they are enjoying themselves. The objective, being so much closer than the last picture, should show up well, particularly as our friends are having a fine day."

"Then you are all friends in your Solar System?" said the Professor.

"Of course. That is an essential condition for the advance of culture. Please watch the second panel."

Multavo must have touched another switch, for the panel he had indicated began to brighten. Colours, vague at first, began to sort themselves out, to harden, and presently the picture was there. It showed a large public square through which moved a procession surrounded by people dancing and waving flags.

Rex's jaw sagged as he stared incredulously. The picture was life size, in full colours, and had a third-dimensional effect that gave it such a live quality that it was difficult to believe it was not the real thing; that the people were not in the next room. The colour rendering was perfect, with the flesh tones more true to life than anything he had seen on a cinema screen.

"It isn't true," he told himself over and over again. "It couldn't be." He was dreaming. These people were outside, not on another world. The knowledge that he was looking at something that was happening on another planet was so uncanny that he began to feel a little frightened.

“Let us hear what they are saying,” suggested Multavo. “The good people may be a little noisy. Normally they are quiet, but on occasions such as this they are inclined to forget themselves.”

Into the room poured the sound of music and singing, faint at first but swelling quickly to full pitch.

The Professor’s spectacles slid off his nose, but he caught them. “We are looking at and listening to people dancing and singing on another world,” he said in a voice that suggested he was having difficulty in convincing himself that this was true.

“Why not?” answered Multavo, cheerfully. “After all, if you are able to do this in its most simple form, project sound and vision over short distances, is it remarkable that we, who have had so much longer life, should be able to extend the process over a longer distance, over any distance? Distance is nothing. Time is everything. Perhaps you would like to see something more of Colina.”

The picture began to move, reminding Rex of the action of “roving-eye” television cameras at home. The crowded square moved off the screen, giving way first to suburban houses and gardens, then cultivated fields, woods, lakes and mountains, much in the style of Earth. This continued for some time. Then Multavo switched off and the picture faded. “We can visit any of our neighbours at any time in the same way,” he remarked. “For the purpose of a conference, for example, there is no need for a member to leave his home planet if he does not wish to do so. He can be seen and heard where he happens to be.”

“Does this sensational apparatus work both ways?” asked the Professor.

“Certainly. Any planet in our system can see and hear any other. I may say that we have made contact with worlds unknown to us, beyond our range of vision. We may have received sounds from Earth. It is not unusual to pick up sounds, both voices and music, that cannot be identified. Some we do know are at such a distance that there is a delay in their reception. I may be able to demonstrate what I mean.”

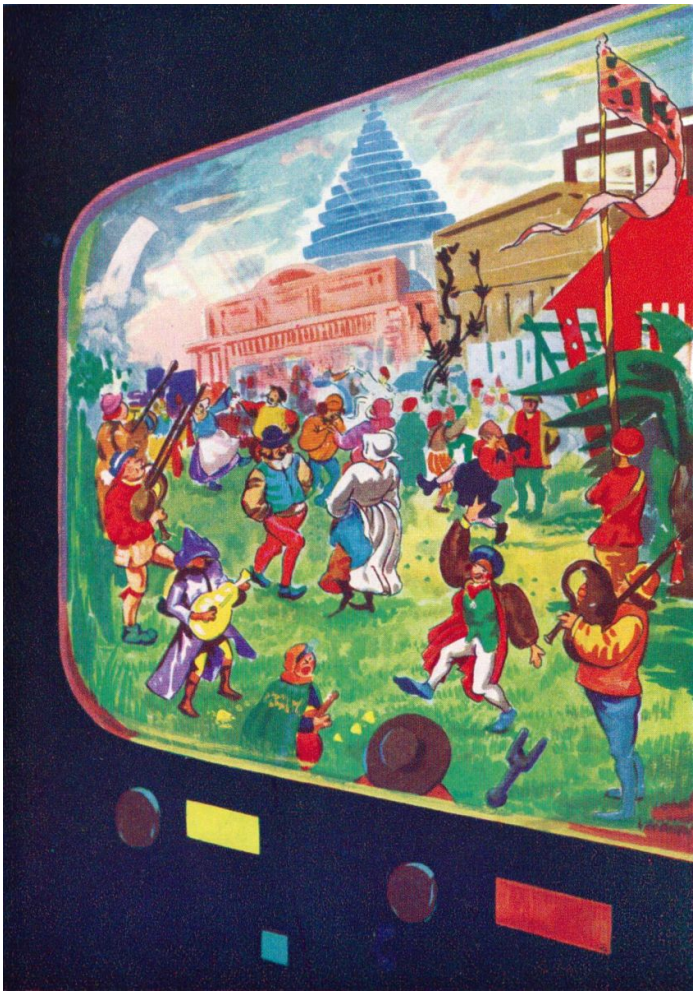
Music, soft string music, crept into the room from an unseen source.

“That is Lodna, the most distant member of our galaxy, broadcasting,” informed Multavo, imperturbably. “Or perhaps I should say *was* broadcasting, for the music you hear is already in the past. It was being played yesterday.”

“You mean, you took a recording,” said Rex.

“Oh no. This is direct reception.”

“How, without a record, can you hear what was broadcast some time ago?”



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“We are looking and listening to people dancing and singing in another world.”

“The sound is only just reaching us. That is what I mean when I say that sounds are sometimes late, the period of the delay being in ratio with the distance the sound has to travel. In the case of Lodna transmissions are received a day late. Some are even later. All remote broadcasts lose a little in volume, too, how much depending on distance. We shall overcome these

minor difficulties in course of time, no doubt, but at present we know of nothing that travels faster than our radio ray."

"I would like to know how this miracle was achieved," said the Professor.

"What is a miracle?"

"A manifestation for which there is no logical explanation within the limits of our knowledge."

"Ah!" Multavo thought for a few seconds. "I'm afraid the explanation is so technical, and would take so long to tell, that you would be confused before I had finished. I can only say that all these signals, both sound and vision, are beamed on natural rays. In other words, they are propelled on electro-rockets which occur everywhere in the Universe. The big problem is how to guide a sound in the desired direction."

"A thought occurs to me," said the Professor pensively. "You say you suspect you have sometimes picked up signals from Earth?"

"Yes."

"Then on Earth we may have picked up your signals."

"Certainly, if your receivers have reached the necessary degree of efficiency. If at present they fall short of that the day will come, as your receivers improve, when you will hear us."

"Then, having a mutual language, we shall be able to talk to each other," said Rex, struggling to keep pace with such astounding possibilities.

"I do not see why we should not make such contact."

"For some time I have had a suspicion that confused sounds picked up by our receivers were not what they were thought to be," said the Professor. "For want of a better name they have been called interference, or atmospherics due to abnormal meteorological conditions. It has more than once struck me that they might be miscellaneous transmissions from outer space, perhaps at the extremity of their effective range."

"Interference would still be the right word," said Multavo, thoughtfully. "We know that electrical disturbances occur in space, and these would certainly affect reception except by the most perfect receivers. At times when transmissions are being made simultaneously by several planets any interference in transit would result in incomprehensible signals. Even we sometimes receive signals that are unintelligible. Where they come from we don't know. Once, for a time, we were receiving what were definitely spoken words from a region in which our astronomers could find no trace of a body of any sort."

"How did you account for that?"

"There could be only one explanation. The transmissions were made some time in the past by a body that had ceased to exist. Either it had destroyed itself, or had been destroyed, by forces beyond its control. Such things do happen as you must know."

"Yes, we were aware of that," agreed the Professor, soberly. "Our name for these exploding worlds is Nova."

"It is a possible end that we all must face."

"We know that, too, although most people on Earth choose to ignore it."

"Well, as we are still here, so far we have been fortunate," said Multavo, cheerfully. "It is a strange thought that should disaster overtake Terromagna, Earth may at some future time receive signals transmitted by us here during our period of existence. But from what Vargo has told me you may be the first to go. You are, I gather, at the most perilous period of evolution, experimenting with forces you do not fully understand. But all must pass through that stage."

What shook Rex was the calm way Multavo spoke of such shattering possibilities. That, he could only suppose, came with advanced knowledge and acceptance of facts.

"This is where you experts strain to the limit my mediocre intelligence," said Toby, sadly.

"It is rather overwhelming, I must confess," conceded the Professor.

"Then let us return to matters that put less strain on the imagination," requested Toby. "I have had about as many shocks as I can stand for one afternoon."

Multavo smiled again. "Very well. Would you like us to move on to a subject within your own particular province—what you call medicine?"

"I would at least be able to keep up with you."

"Perhaps so, perhaps not," replied Multavo, softly. "That will depend on how far you have advanced in medical science. If it has gone no farther than the subject we have just discussed you should prepare yourself for further surprises."

The Professor looked suspiciously at Vargo who, throughout the demonstrations, had remained unmoved. "I believe you knew all about these things before you brought us here."

Multavo answered. "Vargo has never been here although I have often pressed him to come."

"When did you press him to come?"

“On occasional visits to my old home in Mino. There we were boys together. Lately we have talked much of what was being done here.”

“Vargo, why didn’t you tell us of what was in store for us?” scolded the Professor.

Vargo registered one of his rare smiles. “I couldn’t resist the temptation of watching your surprise when you were shown these wonders,” he admitted, frankly. “Don’t begrudge me my innocent little secret.”

“I’ll forgive you,” said the Professor.

“What would you like to do now?” inquired Multavo. “Would you like to continue, or would you rather retire to our guesthouse to rest for a while before doing so?”

“How long have we before darkness falls?” asked the Professor.

“A very long time. This is a big planet and we revolve slowly, so, as you will understand, our days and nights are periods much longer than those of the smaller worlds to which you are accustomed. Here, naturally, our periods of sleep have become adjusted to them.”

“In that case I suggest we carry on,” said the Professor, looking at the others for confirmation. “On the way here we may have done more sleeping than was good for us.”

This was agreed, Vargo remarking that as they could not stay for very long they might as well see as much as possible.

“I will lead the way,” said Multavo.

CHAPTER XIV

MORE WONDERS

SUBDUED by what they had seen, as obedient as a class of students the Professor's party followed Multavo out to the car, which at a touch sped away with its curious gliding motion due to a complete absence of vibration. It kept on the big broad thoroughfare, which presently skirted one of the astrodomes. Here there was a good deal of activity. Three large ships were on the ground, being unloaded, and another was just coming down.

A little to one side was what looked like a long, covered, but open-sided market, where, on stands, was being stacked fruit and vegetables of many colours. These were being examined, and apparently taken away, by a small crowd of women whose bright-hued, robe-like dresses, lent an atmosphere of animated gaiety to the scene.

"Please go slowly," the Professor requested. "What is going on here?"

Multavo brought the car slowly to a stop. "This is one of our several markets," he announced. "This is the hour the produce comes in from our neighbour Lena, and, as you see, the housewives come to collect what they require."

"Can't you grow enough on this big planet to supply your needs?"

"It isn't a matter of quantity," explained Multavo. "It happens that Lena is closer to the sun than we are, with the result that it is able at all times to produce fruit which here would perish during our cold season. One of the advantages of constellation unity and interplanetary transportation is that one is always able to supply the needs of the others. Between us all we cover every possible variation of weather. The seasons vary, both in temperature and duration, so it would be a remarkable coincidence if the harvest was bad everywhere at the same time."

"Wonderful . . . wonderful," breathed the Professor. "You are opening my eyes to the possibilities, the realities, to which a sane civilization can aspire."

"We are not yet perfect," replied Multavo. "We still have a few problems to solve. You cannot have a perfect world until the people on it are perfect."

"Are you all perfect here?"

"No. Most people are happy and contented, but there sometimes appears one who lapses back to one of the bad old impulses. We shall get over that in

time. You will see."

The car moved on.

"Before I leave I'd like to see what sort of engine you have in this car," said Tiger.

"There is no engine," answered Multavo. "We don't use engines here."

The car glided on, soon to pull up before another imposing building fronted by immaculate beds of exotic-looking flowers. The same procedure as before was followed, their guide leading the way to a spacious corridor with doors on either side. Here he hesitated for a little while as if in doubt about something.

Then, addressing Toby he said: "Not knowing how much knowledge you have I don't know whether to make a demonstration first or prepare you by an explanation of what you will see."

"I must leave that to you," answered Toby.

"We will go on," decided Multavo. "We can discuss any matters not clear to you as we proceed."

He opened a door and took them into a hall in which the most outstanding furniture consisted of what looked like a row of dentists' chairs. There were at least a dozen of them, each one surrounded by dials and meters and a maze of wires of different sizes and colours. Over each seat was suspended what appeared to be an inverted metal basin. On the back of each chair was a large label carrying what was presumably a symbol in the Terromagnian language. This, of course, meant nothing to Rex.

Multavo stopped by one of the chairs and the others gathered round him as he began to speak.

"I think it is unlikely that you have anything like this on Earth," he said, looking at Toby.

"No."

"You will not be able to read the labels so I will translate them for you if I can find the right words. That should give you an inkling of the purpose of this apparatus. Reading from left to right the notices read: Avarice, Conceit, Jealousy, Envy, Untruthfulness and Malice. That is the first group. Here in the second group we have Timidity, Weakness of Will, Inconsistency and Indefiniteness—if that is the right word. Now let me explain.

"Even here on Terromagna not everyone is born perfect. Some of the ancient imperfections remain. There is also a risk that on reaching maturity some mental weakness may appear. It may only be slight, but if it is not checked it may develop into a more positive, acute condition. These

primitive instincts will no doubt disappear in time, but they still persist, and the process of curing them has been a long one. Here, in what we call the School of Correction, we deal with such mental ailments."

"Are you going to tell me that here you eradicate these instincts?"

"Not exactly. But here it was recognized long ago that a true civilization is impossible while such weaknesses exist. Consider that most dangerous state called ambition. It can only be realized by inflicting trouble on others. It is the primary cause of that hideous thing called War. If such ugly impulses can be removed without detriment to the man affected it is surely better for the community that it should be done. So it comes to this. Group One removes from the mind the destructive impulses named. Group Two is for character building."

Multavo studied the faces of his audience to confirm that what he had said was understood.

The Professor spoke. "But by this method is there not some risk of destroying personality, of reducing everyone to the same level of intelligence?"

"No. Only evil influences are treated. In all other respects a man may go his own way. Proof of the result may be seen here, where everyone is happy and contented. Without the elimination of animal tendencies our civilization could not have been achieved. One bad man can undo the good of many. Our ultimate goal is absolute Truth. There can be no progress without Truth. Without Truth nothing is worth while. How can you have Truth while some men are addicted to falsehood?"

"How indeed," murmured the Professor.

"Do you force people to undergo this treatment?" asked Toby.

"No force is necessary. As soon as a man recognizes a symptom in himself he comes to us. People are taught from childhood that that is the right thing to do; that it is for his own good. Few actually have a mental disease. They merely lack control of their emotions. Take the case of a man or a child who yields suddenly to the temptation to tell a lie. Realizing that he is in moral danger he comes to us."

There was a short silence.

Multavo went on. "Our forefathers, who laid the foundations of our civilization, had their share of trouble. They realized that there could be no peace, domestic or national, while people were a prey to evil influences. These conditions are infectious. One bad character can influence others of lower personality. Without some form of treatment the moral character of the entire nation would be likely to deteriorate. The grooves in the minds of

those afflicted would become set, and once that happens they cannot be altered."

"I can't imagine how you first set about this problem," put in Toby.

"It was first ascertained that nearly all phases of mental activity are external. They occur in the first place outside the brain. The brain is merely the instrument, the vehicle, for keeping them in a concentrated form."

"You mean, the brain is exposed to an external force?"

"Yes. What these forces are we still do not know except that they appear to spring from a form of electrical impulse. There are men with brains unable to receive these impulses. Alternatively, there are brains strong enough to repulse them. Let us apply the principles of what you call radio. Reception depends on the quality of the receiving apparatus. The failure of a radio receiver to produce results does not necessarily mean that no stations are broadcasting."

"You are likening a brain to a radio receiver?"

"Yes."

"If there is no reception it means that something is wrong with the receiver."

"Exactly. Or put it like this. A receiver out of order can at the best only produce distortions. In the same way, the brain of a man can be so far our of order that it can only receive impulses that are either wicked or ineffectual. If you can repair that brain as you would a radio receiver you get the result desired. So, in brief, the object of the instruments you see here is the elimination of evil thoughts and so leave the brain pure. Is that clear?"

"Yes. At last I now understand the *purpose* of the apparatus I see here," said Toby. "What I don't understand is how it is possible for a piece of mechanism to sort out the particular characteristic with which it is labelled, without others being affected."

"Naturally, that would seem puzzling," conceded Multavo. "How can I explain? Let us return to the radio analogy. You know that several simultaneous broadcast transmissions must each be made on a separate wavelength?"

"Yes."

"Very well. The different characteristics named on these chairs are carried on different wavelengths—or rather, wave forms. Our instruments can be tuned in to receive or intercept any one of them."

"I see," said Toby, slowly.

“Actually they are seldom used nowadays because fewer and fewer people suffer from mental instability or weakness of character. For that satisfactory state of affairs these instruments were responsible. What do you do with a bad man?”

“We put him in prison.”

“Does that cure him?”

“Very seldom.”

“Surely it is more likely to aggravate the disorder?”

“I’m afraid you are right.”

“I could see from the expressions on your faces that you were alarmed by the idea of interfering with a man’s brain.”

“Frankly, I was,” admitted the Professor.

“But surely you now agree that our methods of dealing with mental sickness are better? Think what such sickness leads to on some other worlds. I have seen many. War, disease, misery, all brought about by ignorance. It is ignorance that leads to crime. Here there is no crime. But Terromagna is a large world with a large population, not including our neighbours, so it is inevitable that we should sometimes find people not as mentally fit as we would like them to be, or they would like to be. Here they can be treated in the appropriate chair.”

“Then what happens?” asked Toby.

“He stays here, usually for a short time, until the cause of the disorder is removed. There is no pain, although a patient sometimes falls asleep from exhaustion. That is a good sign, because when he awakes he is cured.”

“That is truly marvellous,” said the Professor, with admiration in his voice.

“Are your patients all equally easy to cure?” Toby asked Multavo.

“No. Homicidal and suicidal cases are the worst and must at first be closely watched for fear they might injure the operators. Fortunately such cases are now rare.”

“You appear to have achieved perfection,” opined Toby.

“Not yet. But we are perfectionists and hope eventually to reach the ideal state. What you see here is part of our plan to achieve that, for there is no worse form of misery or loneliness than that suffered by those who are mentally ill.”

“But have you no physical ailments?” asked Toby.

“Practically none. We can cure any of those that do occur. But remember, nearly all physical diseases spring from a defect in the brain. It is

no use trying to make a body well if the brain is out of order. There are admittedly a few diseases that are purely physical but cures for those were perfected long ago."

"Well, you have certainly given me plenty to think about," said Toby. "I am tempted to ask permission to stay here for a course of study for the benefit of humanity in my part of the Universe."

"You would be welcome," asserted Multavo. "That is what I am doing. I am sure you would be allowed to stay as long as you wished. The more worlds that share our knowledge the less becomes the risk of interplanetary war, which is now our one and only fear. You may be able to teach us a few things. But do not jump to the conclusion that the application of our methods would be easy on a world as backward as Earth. First you would have to educate your people to a high standard or it is unlikely that they would accept proposals which to them would probably sound ridiculous. You might even encounter opposition from members of your own profession who, suffering from pernicious jealousy, would themselves be prospective patients."

"I think that's more than likely," said the Professor, tartly.

"To improve the mental condition of an entire population, which means changing its outlook on life, is not a task for one man but for many," averred Multavo. "Even then it would be a slow process over a long period. You would have many patients to deal with on Earth, I imagine."

"I would say there are few men or women on Earth who do not suffer from one or more of the complaints named on these chairs," said the Professor, lugubriously.

"But what you see here, and what you would see on our neighbours, should convince you that over a period of time, given the right equipment, something near perfection is possible. Are there any questions you would like to ask?"

"Yes," answered the Professor. "I have just thought of something. This talk of mental sickness reminds me that on our way here, in passing within the influence of the planet which Vargo calls Ardilla, we had a most uncomfortable experience. Do you know anything about the place?"

Multavo looked serious. "All I can tell you is that it is a large planet, an old one and a dangerous one. I am glad we are no closer to it than we are. To the best of my knowledge no ship from this constellation has ever been there, but things have happened to give us food for thought."

"Something certainly happened to us," stated the Professor. "Vargo thinks we were affected by some sort of ray."

“We have reason to believe that Ardilla has surrounded itself with a network of dangerous radiations. We have felt them as far away as this. When they occur we send out counter-radiations to neutralize them.”

“For the love of Mike!” exclaimed Tiger. “Don’t tell me that the Universe is faced with a war of rays?”

“It could happen.”

“But why are they doing this?” cried the Professor.

“We don’t know.”

“Are they afraid of being attacked?”

“We have no information. The matter has been discussed here and we don’t think that can be the answer. Who would be likely to attack them? Certainly not us.”

“What conclusions did you arrive at?”

“We believe that their scientific knowledge proceeded like ours to a certain point and then took a wrong direction. Instead of using their knowledge as we did here, a bad man, or group of men, seized control. Good thoughts were stifled and evil ones encouraged.”

“What you mean is, they have invented an apparatus similar to yours but have used it in reverse.”

“That is what we think may have happened. What other answer can there be? It is certain that someone on Ardilla is a master of radiation and that he is using it with malicious intent. In those circumstances it is advisable to keep as far away as possible. There should be a limit to the effective range of this unpleasant device.”

“What if a ship, a stranger in this part of the Universe, should find itself within the sphere of these rays?” said the Professor, anxiously. “One can’t put up warning signals in space.”

“And we’re accused of being frightful because we have atomic weapons,” put in Rex, bitterly.

“Well, there it is,” said Multavo, in a resigned voice. “Nothing can be done. We shall not attack them, but if they attempt to interfere with us we shall do our best to defend ourselves. We know something about dangerous radiations as well as useful ones. But tell me. What do you wish to do? Will you stay here? If so I will take you to the guest house reserved for visitors.”

“Nothing would please me more than to stay here and perhaps see something of your neighbours, but I think Vargo is anxious to return home,” replied the Professor.

“It is the crew,” explained Vargo. “We did not set out with the intention of coming here and they fear their families will think they are lost. When they agreed to come I said we would not stay. Already they may be finding the waiting tedious.”

“But you need sleep.”

“There will be plenty of opportunity for that on the way home,” returned Vargo. “We have a long way to go. We could return at some future time having made provision for a longer stay.”

“As you wish,” agreed Multavo. “Keep clear of Ardilla.”

“We shall certainly do that,” declared Vargo.

“While we are on the subject there is one last question I would like to ask you,” said the Professor. “It seems to me that it may be of vital importance. Do you happen to know if Ardilla has any ships? I ask because if the equipment which discharges these rays can be carried in them, the distance one keeps from their base would be of little or no importance.”

“You may assume they have ships.”

“But you’ve never actually seen one, or encountered one?”

“No . . . but——”

“But what?”

“We have recently lost two ships in identical circumstances. There may be some connection between that and what we are talking about. In each case we received a signal from the captain reporting that he was in difficulties. A large, unidentified ship, was in the vicinity at the time.”

“And then what?”

“Silence. We heard no more. Our ships did not return.”

“Were they near Ardilla when they made their signals?”

“No. Actually, the second ship had gone out to look for the first, the position of which was known. It was thought it might have been cast away, through some technical fault, on one of the minor satellites that fringe our constellation.”

“Dear—dear,” murmured the Professor, looking at Multavo over his spectacles. “Is there any defence against hostile rays?”

“The only certain defence against a hostile radiation is a more powerful one. Did you see anything of a red ship when you became aware of a sinister influence?”

“No,” answered Vargo. “But we may not have been keeping a strict watch. We saw no reason for it. We’ll take a roundabout course home and keep a sharper look-out.”

“It would be advisable,” said Multavo. “Now, if you are ready, I’ll take you to your ship.”

CHAPTER XV

THE RED PERIL

It was with mixed feelings, some hours later, that Rex watched Terromagna falling away below. Their visit, he pondered, had been a memorable experience. The wonders they had seen had definitely proved what the Professor had always contended; that older worlds than Earth, given the right conditions, might be expected to have a civilization more advanced in outlook and scientific knowledge. The atmospheric and meteorological conditions on Terromagna were, and apparently always had been, as perfect as could be imagined, and they had seen the result.

What a strange thing was the call of home, he soliloquized, as he settled down to sleep. Why was its appeal so irresistible? The planet they had just left offered all that could be desired, but he had no wish to stay there. Not in any circumstances would he have become a permanent resident. That would be exile. Life on Earth had its discomforts and irritations, but it was Home. There was no place like Home. Why?

The same appeal operated on Earth, he mused. Home, to everyone, meant a certain spot in a certain town or village in a certain country, no matter how appalling the conditions there might appear to others. To the Eskimo his solitary frozen wastes were home. To the Toureg it was the sterile, blistering Sahara. Why did they stay there when almost any other spot on the globe offered a more comfortable way of life? Because it was Home. The farther away one went the more attractive did home seem. Now, far out in the eternal spaces of the Universe, it was Earth that was home. With a million worlds from which to choose the only one that really stood for anything was Earth, with all its troubles and strife. Because it was Home.

It was all very strange, brooded Rex. He had been anxious enough to accompany the expedition. Now he was just as keen to get home, with all its familiar sights and smells and noises. He hoped fervently there would be no difficulties, no delays, on the way. Earth was the land of his birth, and the sooner it came into sight, the better would he be pleased. He would be happy to see Mars loom up in the void, the planet for which he now had an affection, probably because he regarded it as a near neighbour.

What Multavo, with whom they had parted on the most cordial terms, had said about possible interception by a red ship, was a cause for anxiety rather than alarm. They had not been so molested on the way out so there

was no reason to anticipate trouble on the way home. Strict watch was being kept. They could do no more.

The matter had of course been discussed at some length. Ardilla could be given a wide berth, but that would not ensure safety if the inhabitants roamed in space with their infernal rays. Toby had called them space-pirates, although that seemed hardly to fit the case, for pirates operated only for gain; it was not easy to see what was to be gained by destroying the ships of other planets.

It looked, the Professor had said, as if the day would come, if Ardilla persisted in its habits, when space travellers would have to protect themselves with counter-rays. It was the old business of guns, and bigger guns, all over again. In the matter of guns the Professor had made a joke of the sub-machine-gun Tiger had stowed in his baggage, saying he might as well have brought a bow and arrow.

Tiger had argued that he had never contemplated using the gun while in flight, if for no other reason than he could not imagine any circumstances for which it would be needed. It had been intended for use on the ground should they find themselves being attacked by creatures of flesh and blood. So far there had been no occasion to take it from its case.

The ship sped on. Rex, tired after the excitement of what he had seen on Terromagna, went to sleep.

He must have slept for some time, for when he was awakened by the sound of conversation the sky was back to its deep-space colour of midnight blue and Terromagna was no more than a crescent moon in the far distance of the Third Region. Which meant, he thought, that they were back in the Second Region. Seeing the others standing at a window on the far side, looking at and apparently discussing something of interest, he joined them.

"What's going on?" he wanted to know.

Tiger pointed at a shining speck of light speeding across an almost starless section of great void.

"A meteor," surmised Rex, unthinkingly.

"How can it be a meteor? A meteor is only visible when there is an atmosphere to make it incandescent!" said the Professor. "There is no star near it to offer an atmosphere."

"There might be a wandering area of loose gas," suggested Rex, remembering that such things did occur.

"Had that been the answer the meteor would either have burnt itself out by now, or would have passed through the illuminating substance. We have been watching it for some time."

"Then what do you think it is?"

Tiger answered. "Vargo believes it to be another ship. Of course," he added quickly, "that doesn't necessarily mean that it's hostile. It might be one of our own."

"On the rare occasions that I have seen a ship in distant space that is how it appeared," offered Vargo.

"If it is a ship it may not see us, anyway," said Rex, with a confidence he did not feel. He remembered the warning of the red ships of Ardilla, and had no doubt the same thought was in the minds of the others, although so far no one had voiced it.

"If we can see it they will be able to see us should they look this way," stated Vargo, with what Rex thought was unnecessary candour.

"Are we doing anything about it?"

"There is nothing we can do," put in Gator, "We cannot hide. We cannot increase our velocity. All I can say is every second is taking us farther away from that accursed planet Ardilla. You can just see it from the other side of the ship."

Rex crossed over and looked at it, no great distance from the Nebula of Andromeda it seemed to be, although he realized that might be deceptive. He returned to his seat to await developments, hoping there would be none. Presently he dozed.

He was awakened and brought to his feet at the same time by a sharp cry from Borron.

"What is it?" he asked, tersely, although he had already guessed.

"The ship," said Borron. "I can see it. It is following us."

"I'm not surprised," asserted Gator. "For some time I have had difficulty in keeping the ship on its course. They are doing something to us."

"They are doing something to me, too," said Toby. "Look at my hands." He held them up. They were trembling violently.

Rex looked at his own hands. They were shaking. They felt stiff. He discovered he was stiff all over. "The rays," he gasped.

"Yes," said the Professor, calmly. "I'm afraid they have turned their confounded rays on us."

"There is nothing we can do," said Gator hopelessly.

Rex saw that his hands on the controls were white as though from strain.

"They are taking us where they want us to go," went on Gator. And again he said: "There is nothing we can do."

“Isn’t there?” grated Tiger. “Where is this ship?” He then strode to the window through which Borron had been watching. Rex staggering over to him, caught his breath when he saw a huge red ship astern. It was less of a saucer shape than their own, having a higher central dome that gave it more of the appearance of a basin. It was still some distance away, but even as he watched it he could see it drawing nearer.

Tiger spun round and walked swiftly to the baggage. “I’ll show you if there is nothing we can do,” he said, grimly.

“What are you contemplating?” asked the Professor in a voice pitched high with alarm.

“We’ll try them with a dose of this,” muttered Tiger, pulling out his gun and assembling it with feverish haste. “The cartridges, Rex—quick.”

“Are you mad?” demanded the Professor.

“Possibly.”

“You have no right to use that gun.”

“Right! What has right to do with it? They’re already shooting at us with their infernal rays.”

“You know I’m opposed to the use of force. The trouble with you soldiers——”

“When people shoot at me I shoot back.”

“But——”

“This is no time to argue,” expostulated Tiger. “You may be content to sit here doing nothing till you die like a rat in a trap, but I’m not. And I’m not thinking only of myself. This is going to happen to other people if it isn’t stopped. If those hounds behind us are shown that there are some ships that can hit back they may be more careful in future. Tracer bullets, Rex.”

“But how can you use that weapon from inside the ship?”

“I’ll show you.” Tiger began getting into his emergency air mask.

Vargo, Gator, Borron, and the entire ship’s company were staring at Tiger in round-eyed amazement. They had never seen him behave like this before. Apart from that, not having seen the gun they must have wondered what its purpose was.

Tiger, accoutred, with the gun loaded, faced Gator. “Are you prepared to do as I tell you?”

“If you think it will save us, yes.”

“It may or it may not, but we shall certainly perish if we do nothing.”

“Very well.”

“I am going between the exit doors. Rex will close the inner door behind me. I shall open the outer door.”

“But——” remonstrated the Professor.

“There is no time to lose. These rays are already draining my strength. When I am between the doors count ten slowly and then either slow the ship or circle to bring me close to the red devil. Do you understand?”

“Yes. But the risk of collision?”

“If we collide we shall at least have the satisfaction of crashing these red murderers with us. All right. Let’s see if rays can stop bullets. Come on, Rex.”

Tiger went to the door and opened it. He stepped into the exit chamber. Rex clamped the door behind him, convinced he would never see his father again. Feeling that he was choking he hurried to the nearest window. He could not see Tiger, and did not expect to, knowing he was inside the chamber with the outer door open. But he gasped with horror at the nearness of their pursuer. The red ship looked enormous against the empty background. It was closing in fast.

Would Tiger’s plan work? He didn’t know. It would depend on many things. The thickness and resistance of the enemy’s metal skin. The awful thought struck him that Tiger, now fully exposed to the rays, might be stricken helpless before he could shoot.

He waited. Inside the ship a deathly hush had fallen. The situation was fast assuming the fanciful frightfulness of a nightmare.

The big red ship came on, weaving slightly as it plunged towards them. It was now less than half a mile away, its pillar-box red shell glowing luridly as it caught the light of some distant sun. It looked like a monstrous bowl that had been dipped in blood. Rex knew it was still too far away for effective shooting; but not too far for its own noxious weapon.

He braced himself as Gator began to swing round in a colossal circle, which had the effect of bringing the two ships closer together, for the pursuer could cut across the arc. As it closed in faces could be seen at a long narrow window. Their own ship, which had for some time been vibrating, now began to rock and shake as if it might break up at any instant. Why, with the end so obviously near, didn’t Tiger shoot? Was he helpless? Already out of action before he could fire a shot?

The suspense became intolerable. “Shoot, Guv’nor, shoot,” screamed Rex, unable to bear it any longer.

It almost seemed as if Tiger had heard his despairing cry, although that was of course impossible. A curving stream of tracer bullets flashed across

the gap between the two ships. It looked like a chain of fire joining them together. Rex held his breath. He could see the shots striking the ship. As far as he could judge they had no effect. The bullets stopped. That meant that either Tiger was down or he was reloading.

He breathed again as another stream of tracer leapt across the void, the range lengthening as the red ship seemed to fall away. Rex saw its window shatter. The faces disappeared. Whether or not the red ship was still under control he had no means of knowing but it had obviously had enough. So swift became its departure that in a few short seconds it was no more than a spark of light, falling—falling—falling. He watched it until it faded from sight.

"It's gone," he managed to say, as he nearly collapsed from relief. "Tiger did it!"

He became aware that the vibration had ceased. Turning, he saw that everyone was still standing, white-faced, as he had last seen them. He looked at the door. Why didn't Tiger come back in? Had he been hurt? Was he still there in the chamber? He started towards it.

"What are you going to do?" cried Vargo, more agitated than Rex had ever seen him.

"I'm going to open the door to see——"

"Are you mad?"

"Mad?"

"The outer door may still be open!"

"So what?"

"Use your head, boy," croaked the Professor. "If you open the inner door while the outer one is open we shall be killed instantly."

"I'm sorry," stammered Rex. "I don't know what I'm doing."

"Spacesuits, everybody," ordered Vargo, crisply.

The minutes required for this were the longest Rex had ever known, but he realized there was no alternative. For both doors to be open together in space, allowing not only the air but the pressure to escape, would mean instant death for them all. He was the first to be ready, but he had to wait for the last man. Then it was Vargo who went to the door and opened it.

Tiger was a crumpled heap on the metal floor, the machine-gun lying half in and half out of the ship, for the outer door was still open. Evidently he had collapsed before he could close it.

Vargo dragged him inside. Then the gun. Borron joined him to help him to close the outer door. For an instant Rex saw the two men silhouetted

against the vault of empty space and the picture was photographed on his brain for ever. They came in, closing the inner door behind them. Vargo made a sign to Gator. The emergency air cylinders hissed as they were turned on to replace the lost pressure. Toby dropped on his knees beside Tiger, his hands running over him as if seeking injury. Rising, he fetched his accident bag, which he had always kept handy.

Rex could only watch. He thought Tiger was dead, so ghastly was the colourless face. Seeing Vargo removing his gear, thus indicating that normal conditions inside the ship had been restored, he did the same. Toby was working on Tiger.

It was some minutes before Tiger showed signs of life. Presently he raised himself on an elbow, and looking round asked shakily: "Did I get it? What happened?"

"If you didn't knock him down you gave him something to think about," answered Toby. "He's gone, anyway. That's all that matters. Jolly good effort."

"I thought he might find some good honest bullets a bit tough to digest," said Tiger, sitting up.

"Take it easy," warned Toby. "What caused you to pass out—do you know?"

"It must have been those confounded rays. As soon as I opened the outer door I had a queer feeling as if something was hitting me all over, giving me pins and needles. My eyes began to pack up on me so I let him have it. I remember seeing my shots plastering his red hide—and that's all."

"You knocked holes in him," declared Rex. "I saw his window go to bits."

"I saw that," put in Vargo. "Unless the men inside were wearing emergency equipment I don't see how they could have survived."

Tiger stood up, somewhat unsteadily. "It's a pity we can't let Multavo know about this. He'd be interested. He thinks radiations are everything, but some of our old-fashioned weapons still have their points."

The Professor chipped in. "I take back all I said about your gun, Group-Captain. It has done us a great service. Without it we should no longer be here. Congratulations."

"Thank you, Professor," acknowledged Tiger, dropping into his usual seat. "What happens now?"

"We're pressing on for Mino, I hope," said Toby.

“We are,” confirmed Vargo. “I warned you at the outset that this was a dangerous quarter of the Universe.”

“You did,” said the Professor. “But everyone will agree, I think, that our visit has been worth while. Would anyone like a caramel?”

CHAPTER XVI

AND SO TO HOME

THE wonders of Terromagna, and the duel with the red ship of Ardilla, were the last events of note in the voyage to the Edge of Beyond.

The journey back to Mino was made without further trouble, nothing more having been seen of the raider that had tried to destroy them, for what reason or purpose provided a subject for debate for some time afterwards. The conclusion arrived at was that Ardilla, for all its scientific knowledge, was a bad world. The people on the planet were either malicious by nature, or were under the influence of leaders who were. There could, opined the Professor, be ignoble worlds as well as noble ones, just as there were good and bad individuals.

In due course Gator brought the ship to its home port on Mino, much to the relief of everyone, particularly the relatives of those on board, who, not without reason, were beginning to feel anxious. Morino, Rex's girl friend and the daughter of Borron the navigator, was one of them. She was on the landing ground to welcome them.

They did not stay long on Mino, having nothing more to do than report on what they had seen and thank the Council for letting them have the ship. Apart from anything else the Professor wanted to get home to develop his photographs in case peculiar atmospherics or excessive humidity inside the ship should have affected the films. He had, of course, been busy with his camera, taking shots of anything of interest.

Watching him, Rex sometimes found himself wondering what the result would be should the Professor's big collection of carefully-captioned photographs fall into the wrong hands; or, for that matter, should he ever publish them. No one would accept them as genuine, of course; they were all in agreement with the Professor on that. But if proof of authenticity was provided, as it could be by taking a party of sceptics to Mars, for instance, the world would get the biggest shock ever. The thought of the reactions on Earth made Rex smile. The Professor was probably wise in keeping secret what they knew. The world had plenty of troubles on its plate without having all its fixed ideas turned upside down.

They went on to Mars, but stayed there only long enough to stretch their legs and see how the work of restoration was going. Rolto was there. He

seemed surprised to see them, and Rex, who had a word with him, knew why.

"So you didn't go to Ardilla after all," said Rolto, with something unpleasantly like a sneer.

"How do you know we didn't?" inquired Rex, coldly.

Rolto did not answer.

"I'll tell you," went on Rex. "You know that had we gone there we wouldn't be here now."

"How close did you get?"

"Close enough to realize it's a good place to keep away from," returned Rex, casually. "You should take a trip there yourself one day. That should keep you out of mischief for some time." Leaving Rolto with a puzzled frown on his face Rex walked away.

Gator took them home. Vargo went with them to see that all was well. He seemed to become more taciturn than ever as they approached the impending parting. They landed after dark, as before, to minimize the chances of being seen. After they had touched down Vargo asked the Professor what arrangement he would like to make about resuming contact at a later date. Should it remain the same as on previous occasions?

The Professor was undecided, saying that he now had so much work to do that it was not easy to predict when it would be finished. After some discussion it was agreed that Vargo should make a sortie to within vision of Glensalich every third month, on the night of the full moon. Signals would tell him if they wanted him to land. In the meantime there was nothing to prevent him from landing and having a chat should he feel so inclined, or in the event of having news of interest to impart.

That was all.

With that they said good-bye, the Professor's party standing on the lonely knoll watching the ship that had carried them so far until it faded from sight in the midnight sky.

Then, in silence, for this was always a moving moment, they walked slowly through the old familiar heather, down the hill to the house.

TRANSCRIBER NOTES

Misspelled words and printer errors have been corrected. Where multiple spellings occur, majority use has been employed.

Punctuation has been maintained except where obvious printer errors occur.

Illustrations by Leslie Stead. Some illustrations were moved to facilitate page layout.

[The end of *The Edge of Beyond--A Story of Interplanetary Exploration* by Capt. W. E. (William Earl) Johns]