NEW WORLDS SCIENCE FICTION

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PETER HAWKINS

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The Golden Age

Conclusion

Guest Editorial

BRIAN W. ALDISS

Cover Painting

BRIAN LEWIS

★

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16th Year of Publication

NEW WORLDS

PROFILES

Brian W. Aldiss

Oxford

This month's Guest Editorial is by one of the brightest stars in the British science fiction firmament for in five short years Brian Aldiss has undoubtedly become our most prominent author. A penchant for off-trail approaches to various s-f themes makes his work controversial but more than adds lustre to the changing mores of the genre. Undoubtedly his new book *Hothouse* **(from Faber & Faber next Spring) will cause arguments over the authenticity of the "science"—but Brian maintains that it is a fantasy and as such he is allowed a certain license. (Incidentally, Signet will publish it in U.S.A., retitled** *The Long Afternoon Of Earth*).

Literary Editor of the *Oxford Mail*, **he is the logical bridge between the old and new order of science fiction. In this respect an anthology edited for Penguin Books (see Book Reviews) and another for Faber & Faber for next year are pylons in the structure, for, make no mistake, s-f is rapidly widening its literary horizons.**

He is the present President of the British Science Fiction Association and despite busyness as an author, book reviewer and literary editor, still finds time for extensive correspondence with many of its members and attending as many meetings as possible.

NEW WORLDS SCIENCE FICTION

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CONTENTS

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TWO SHILLINGS AND SIXPENCE

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Guest Editorial

Sorry—John Brunner's promised Guest Editorial has been held over to make way for this much longer diagnosis of s-f writing trends by Brian W. Aldiss.

The Origin Of Originality

by BRIAN W. ALDISS

When I was suborned into writing this Guest Editorial for *New Worlds*, a brilliant idea came to me—well, I say it came to me, but actually I worked my way to it hand over fist. And when I got to it I discarded it.

My idea was to compile a tiny anthology of extracts from s-f stories that stood in their own right as fine, amusing, elegant, or dramatic slices of prose.

In case you are interested, I had selected the passage from Edmond Hamilton's *The Star of Life* where Hammond's space ship enters the Trifid nebula: "They moved along the coasts of light like a mote beside a sun, past fiery-glowing capes that could have held the whole Solar System, past great bays of darkness that ran back into the nebula." And so on, two pages of it that seem to me particularly vivid.

For humour, well, perhaps you know that nicely grim satirical piece of William Tenn's that finishes with a mutated human pronouncing this sentence: "Looking about us, we can say with pardonable pride that we have been about as thoroughly liberated as it is possible for a race and a planet to be."

For drama, I had picked the passage in an old tale, Ross Rocklyyne's "Time Wants a Skeleton," where the 'asteroid

planet' between Mars and Jupiter is about to break up. It begins, "Heavy, dully coloured birds fought their way overhead."

I had amassed several passages of like merit but dissimilar matter (and you'd be surprised how few were by the Biggest Names in s-f!). And then I got to cogitating on the nature of writing, and how it can but reflect the nature of its author; this holds true even with stereotyped writing, which betrays either an author of stereotyped mind or one not fully engaged with his subject. And from there it was a small step to coming up against the whole vast question or originality in writing, and particularly in s-f. Finally I abandoned the anthology idea and just thought about originality.

To tackle any serious subject, one does best to sneak upon it from behind. On the question of originality, I was ideally qualified to tackle it in this way because my reading for the tiny anthology provided me with a number of stalking horses from ancient science fiction magazines. These I now propose to lay before you.

Exhibit A. This is a copy of "Stupefying Science Sagas," dated January, 1930. It is old, precious, battered. Two of its pages are missing. Fortunately the Gripping Novelet entitled "The Silicon Man" is preserved intact, for this is the story we want to examine.

"The Silicon Man" has two learned heroes, Dr. Paul Winter and Professor Albrecht Geschweit. They are interested in the philosophical question of whether life could exist if founded on other than a carbon biochemistry. For several pages they discuss the pros and cons, eventually deciding that the question can only be settled by visiting another planet where such life might be found.

Along about Chapter Three, we get some action. Professor Geschweit's father dies, leaving him an armaments factory, complete with a new and powerful explosive that has just been invented. After the funeral, Geschweit and Winter move into the factory, retool it, and build themselves a rocket ship —powered, of course by the new explosive.

Just at the last moment, there is some argument about where they shall head for. "We will try Mars first," says Winter. In 1930 it was so easy to say.

Continued on Page 74

Somewhere in the Galaxy there was a library containing the sum total of all knowledge. To use the information or destroy it was the major factor in the Earthmen's quest.

BLACK KNOWLEDGE

by PETER HAWKINS

The system was old, much older than the Solar System had been when Gagarin first penetrated into space but there was still an abundance of use remaining in the second, third and fourth planets without too much terraforming being imposed on them. The best of them, like Earth the third, held life however ; life which had produced cities that were artificially lighted on the night side in addition to being intermittently and feebly illuminated by any one or more of three small moons. There were large lakes and rivers but no seas and the surface temperature generated by the ageing sun would never rise above fifty-seven on the hottest of days.

" It's a pity," murmured Vincent, " it's one of the best we've seen. I wonder . . ." His voice trailed off into silence without saying any more. Guest, Somers and Franklin were all thinking just the same things.

Was this a world that had survived, even in the most limited fashion, the colossal war to extinction between the Entoloids and the Cresparians which had ground to a conclusion in approximately late Cro-magnon times ? Was it one of their subject worlds, still surviving without the dead hand of its master ? Was it a civilisation built on the ruins of another ?

" Let's get down there," said Vincent anxiously.

" Can't wait, can you ?" chuckled Franklin. He was the captain, the pilot and the engineer ; apart from navigation, which was Vincent's division, he was the final authority aboard the ship. Guest and Somers were fully trained and on their first apprentice cruise yet even they had learned patience, patience, which Vincent hadn't, so far. " An hour or so won't matter . . ."

" Earth needs worlds for colonisation and stations for refuelling . . ."

" We know, we know," soothed Franklin, nodding his bald head slowly. It glistened in the light of the lamps overhead. " Don't forget there are others here before us. We can't have this one however much we want it."

Vincent nodded. Franklin didn't altogether like him ; Franklin was practical, down to earth and without fear. Vincent, he knew, was in many ways his antithesis. Vincent liked poetry, the exotic kind without rhyme, form or reason and paintings in which even the colours didn't balance, let alone give a reasonable picture. He was quick and alert but he never gave quite the right answer to any problem, other than a navigational one. Vincent's genes had meant him to be a brilliant man but somewhere their influence had been short-circuited and he had matured into a wanderer among the lunatic fringe of the arts and a navigator in the Stellar Exploration Corps.

" Any sign of life, yet, Somers ?" demanded Franklin, his attention returning to the world below and pushing analysis of Vincent into a corner of his mind.

Somers had his eyes to the huge visiscreen beneath him and was covering it with a micro-scanner. His answer, when it came, was puzzled.

" None yet . . ."

" Not a single movement ?" demanded Franklin.

" No," Somers was quietly confident, yet still mystified. " Instruments are working correctly, too."

" I should hope so," said Franklin. " Let's have a look."

Somers relinquished his position to Franklin and looked over his shoulder while Franklin made a few minor adjustments to give himself just a little clearer picture. Then he switched in the micro-scanner and jockeyed it around until it rested on a section of one of the lighted cities. He could see

the intersection of two streets ; both were wide, with a central garden running between two roads each of which the scale said was fifty feet across. There were flowering plants and small trees in the carefully regulated garden but nowhere was there a sign of the kind of life that would build cities and roads. Franklin tilted the micro-scanner and studied the buildings.

" Late Cresparian," he murmured, qualifying it a moment later with, " very late Cresparian ; probably," his voice rose a little to match the excitement rising within him. " Some of the very last buildings they constructed."

He moved the scanner along the wide street until it came to another junction with a rather narrower road and for a while followed that one. Still he found no indication of life. From there Franklin followed another turning which lead into the main artery of the city. He looked at the central square for a long time, the typically neat, tidy, efficient Cresparian layout appealing to his own methodical senses. Then he swept out along the road wondering how many years it had been since a Cresparian had sped along it in one of the sled-like conveyances the race favoured.

It was hard to think of them as overgrown squirrels and Franklin felt much more in sympathy with them, although history and archaeology tended to consider them the villains in the long drawn-out war to extinction they had fought with the Entoloids, than he did with their opponents. The Entoloids, almost human except for their very long thin skulls and short,chunky bodies—their tallest specimen had been only five feet four inches—had never appealed to him in any way ; they carried their pleasures to extremes and constructed nothing unless it was, to Franklin, overdecorated to hide poor basic design.

Vincent he knew was an Entoloid enthusiast ; it was right and proper anyway that there should be an authority on each race in every exploration ship because some point could easily be overlooked if crew with knowledge of only one of them were shipped together, but at times tempers became raw on the subject of which had been the superior race.

" Franklin," said Vincent, " I think I know what we've found."

" What ?" demanded Franklin, inching the scanner along the road to where it ended in wharves, miles away from a sea

which had retreated to a mere lake nearly forty miles from what had once been its shore.

"This is the mythical Library of Milvane."

"Mythical is the word," disagreed Franklin. "The library never existed."

Reluctant as he was to agree with Vincent the seed of thought which had been sown in his mind began to germinate. Vincent could be right; the buildings were very late period Cresparian and there were hints from both Cresparian and Entoloid sources that towards the end of the war the Cresparians had devoted a whole world to the study of methods for annihilating their rival. On this University of Death they had collected the most amazing fund of information about methods of destruction.

They had started, so the stories ran, from the very beginning. How life began and how the smaller forms of life killed for food and destroyed their enemies had formed a very small commencement; from there it had grown into a forensic, biological and scientific nightmare of a world which no Cresparian wanted to visit and none who did ever left. Franklin had no desire to find such a world and could have easily believed such a library to be the product of the Entoloids except for one thing; they were never systematic.

"We'll soon find out anyway. I'm putting the ship down in this city; we'll start investigating at dawn."

When the sun rose over the horizon and thawed away the light white frost which had covered the trees and plants in the central square, an air analysis had been run which recorded an atmosphere breathable although somewhat deficient in oxygen. No dangerous bacteria had been detected in the air, which was remarkably free from micro-organisms but pressure suits would need to be worn for general comfort against the coldness.

"It looks as though we might be able to have this world as a refuelling station after all," said Vincent. "We've had no visitors and seen no signs of life."

"Somebody tends those plants," observed Franklin as he put on his pressure suit and clicked the helmet into place.

"Unless," persisted Vincent, "a tight ecological system was set up when they were put in."

Franklin couldn't tell why both of them had chosen to speak quietly, as if afraid of being heard. If there was nobody on the world apart from the four of them the apparatus was working perfectly for its age and even a little disconcertingly. The archway of the building lay directly in front of them and through the glass doors they could see lines of machinery. None of it seemed to be working and none was identifiable as to its purpose. The glass doors slid away as they approached and immediately a babble of voices assaulted Franklin's ears. Instantly he snapped off his exterior mike and glanced at Somers.

His companion's eyes stared, like huge glass marbles, from their sockets and his mouth opened and closed as he tried to speak. He was shaking with fear and trying helplessly to cover his ears with his hands. Franklin flicked up a hand and knocked the exterior mike switch closed. In a moment Somers began to regain his composure but his face was as white as a corpse and his jaw shook, making him stutter when he spoke to Franklin.

"Th-thanks," he spluttered. "Let's get back to the ship. Those voices——what were they talking about? I could understand what they were saying but not what they meant. Do you understand? Were you the same?"

Franklin grabbed his arm.

"I know what you mean and I'm pretty certain Vincent's dead right for once. This *is* the mythical Library of Milvane. What you heard was a talker plate cataloguing the contents of the place. Come with me and I'll demonstrate."

"Yes, I know what you mean but let's go back. I . . ."

Franklin increased his grip on Somer's arm and almost dragged him to the nearest exhibit. Like all Cresparian creations it was beautifully designed, the proportions as near perfect as possible and coloured to perfection so that it was possible to just sit and look at it for minutes on end.

Franklin switched on his mike; one voice came loud and clear over his phones as he stood in front of the talker plate. He could understand the words but what was being described to him was beyond his comprehension.

"Switch on," he instructed Somers.

Doubtfully Somers obeyed, fingers lingering on the switch. After a few seconds his hands dropped to his side as he listened intently. When two minutes had gone by he shook his head.

"I understand what it's saying but I've not the knowledge . . ." he protested.

"I'm the same. There's nothing to be afraid of here. All the living creatures except the plants have gone thousands and thousands of years ago." Franklin could see Somers didn't believe him.

"Look. You stay here . you're right by the entrance so you can make a dash for it if necessary. I'm going for a walk round to see if I can get some idea of what this place is for. All right ?"

Somers didn't look very happy but he agreed to the suggestion and Franklin walked off along the aisle of machinery, stopping every few steps to look at the exhibits and glance over his shoulder at Somers.

"I'm turning left here," he said. As Somers muttered an acknowledgement Franklin waved to him and turned up another aisle. Like the previous one it was lined with exhibits of machinery, elaborate cutaways and exploded diagrams which, in conjunction with talker plates, explained each one's purpose. Franklin knew an appreciable amount of Cresparian but all he could understand from his brief inspection were pronouns, conjunctions and a few verbs, although a considerable number of other verbs were certainly derived from nouns of whose meaning he was ignorant.

Franklin turned left again and increased his speed through the exhibits. There was nothing he could do apart from call up Base and tell them that the legendary library of Milvane was no longer a legend and ask them to send all the men they possibly could for analysis of the material. He was sorry that the legend had proved true and the Cresparians had indeed become sufficiently desperate to commence a project as vast as Milvane. He consoled himself with the thought that so far he had seen no evidence of the rumoured university of destruction Milvane was supposed to be but admitted, reluctantly, to himself that there were many cities on this world, all of which could, when examined . . .

He was back in the aisle facing the door through which he and Somers had entered. Somers was no longer there.

"Somers !" he shouted, ignoring the fact that whisper or shout carried equally well over the suit radios. There wes no reply.

"Somers." This time Franklin spoke normally, but with a tinge of fear in his voice he was unable to conceal. He dashed to the door to see if Somers had run outside knowing full well that even if he had he could still give answers.

"Hello, Franklin. This is Vincent. What's happened ?"

"Somers has vanished . . ."

"So I gather," interrupted Vincent. "You were fools to split up . . ."

"I know !" snapped Franklin, interrupting in his turn. "He was badly scared, so he's probably fainted." He paused, then added grimly, "If anybody was due to disappear it would have happened sooner or later, so it might as well be sooner, so that we're on our guard."

"I don't agree," snapped Vincent. "How about finding him ? Maybe his radio's gone and he's walking back."

Franklin had no idea what had happened to Somers and could form no theory ; the man had just vanished without a sound. He could have waited, outside the building even, if he had realised his radio had broken down.

"I'm coming back now. Send out all the probes we've got and be quick about it."

Vincent acknowledged the instruction and Franklin strode out of the building, firmly resisting the temptation to look around for a while or even look back at it. He blamed himself for pushing Somers when he had been afraid, yet had considered that the experience would be good for him. Had he agreed with Somers and returned as soon as they first heard the talker plates all would be well now but—talker plates ! Even though fear paralysed him Somers should have recognised them.

One of the probes sped past him, its multiple-faceted insect eye inspecting him for a few seconds and acknowledging him with a little flash of green light. When he reached the central square Franklin realised he had been hurrying as he tried unconsciously to wipe perspiration from his forehead with a gloved hand through his helmet. The gesture wasn't wasted on Vincent, who stood in the ship's airlock awaiting him.

Once inside and with helmets removed Franklin and Vincent glared at each other. Franklin had made a mistake and knew it ; Vincent knew it too and with a certain amount of justification, was going to roast him for it.

" All the land probes are out," he said. " Guest is up there watching their screens. We can't send out the airborne ones because the air's just that much too thin. Given time we can fit a different set of rotors and use them. I suggest we get moving with that immediately." He hesitated, then said, his face twisting with rage, " Your precious squirrels. Vermin—like Earth squirrels !"

" Vermin is a definition, and well you know it. The Cresparians were driven to develop Milvane by your evil-minded Entoloids with their dirty hedonistic civilisation. Ah, what's the use of arguing. Let's modify those airborne probes."

When Franklin looked in at Guest he sensed hatred radiating from him like light from a beacon. Somers and Guest had been together since the day they joined the Stellar Exploration Corps and a considerable friendship had sprung up between them ; now, as Guest saw it, Franklin had destroyed that bond.

" Nothing, yet ?" he asked.

Guest shook his head and returned to his study of the screens, each one showing the picture of buildings and interiors as the probes made their search. Franklin returned to the workshop and joined Vincent in fitting a different set of rotors on the airborne probes. They worked without speaking, only the clink of tools and the sound of their breathing disturbing the silence. They had modified and despatched eight probes when Vincent flung down the wrench he was using and said,

" If we go on like this we shall be living on pills. How about some food and sleep ?"

" What about Somers ?" countered Franklin automatically, although he knew Vincent was right. " Yes, we'd better stop I suppose. You get some food for us, have some yourself and take some sleep. I'll wake you after four hours and Guest can sleep. I'll take over the probes then and you can carry on here."

Vincent nodded and left in a flash for the galley. In two minutes, hardly before Franklin had got started again, Vincent was back, his face white and his whole body shaking.

" Your bloody squirrels !" he snarled. " They've got Somers. Guest is three parts wild and I don't blame him. I had to give him a hypodermic to keep him quiet. He was coming down here to kill you."

" All right, they've got Somers !" snapped Franklin. " Stellar Exploration expect to take risks ; Somers knew that and so did Guest . . ."

" Ever heard of the Vigors Permutation ?" demanded Vincent.

" Of course," said Franklin.

" Vigors theorised that with all medical and psychiatric knowledge it would be possible to remake a man into five hundred and forty-three different forms, one of which should be able to cope with almost any condition of world we discovered. The doctors wouldn't use it because, they decided, it would violate the Hippocratic oath. That's why we're out here light years from home star jumping to hell and gone.

" But anyway, your precious squirrels have done a permutation on Somers—nine hundred and sixty of them, they're all alive and kicking in their tanks in a building about five miles from here. And some of them are ghastly. But Somers can recognise the probe, every single version of him. Which would you like ? Bat, reptile, insect, fish, avian ? It's ghastly !" Vincent flopped into a chair and lowered his face into his cupped hands.

" I'll get you a tranquiliser . . ."

" Doesn't matter. I'll get one myself in a minute. You take a look."

Franklin was neither squeamish nor a coward but he was human. He disliked cruelty, unnecessary or otherwise and he could see no reason for Somers to have been processed in this way, except that some machine was keyed to do what it could to any previously untreated life-form. At the moment he hated the Cresparians ; when he reached the screens he positively loathed them as he saw Somer's familiar face hidden and disguised beneath the tissues of nearly a thousand different life forms. Most pitiful of all was an avian Somers not quite four feet tall, flitting wildly around a confining cage created by electronic fields which contained him in a cube far too small for any winged creature larger than a raven.

Then Franklin saw Somers. He was still alive, floating in a transparent sphere and staring vacantly at the ceiling. His face was white, he was a crazy man, there was no doubt of that and his hands made pitiful thrusts at something which was no longer there.

" Let's put a bomb on the place," said Vincent's voice from behind Franklin. " That's the best thing we can do for Somers. I wonder what he suffered." There was a note of curiosity underlying the intense pity of Vincent's voice.

" Don't let any of those nasty Entoloid notions about pain and pleasures come out, Vincent. What you get up to studying their rites when you're on leave is your affair but don't let me have any variations practised while you're aboard this ship."

Suddenly his loathing of the Cresparians for what they had done to Somers vanished. The Cresparians were an incredibly methodical, clean race. There was no word other than clean to describe them. They had been healthy, fun-loving, open-hearted, perhaps a little naive yet splendid engineers and architects ; nowhere in any of the traces they had left behind was there any indication of indulgence in the vile practices of the almost human Entoloids, with their debased copies of Cresparian achievements and their own topsy-turvy civilisation of sensationalism and material pleasures. The Cresparians had been at their wits' end in their desperate fight and despite their edition of the Vigors permutation they had not used it, when it would have been the ideal weapon for playing on the Entoloids' weaknesses. Most probably they had never even thought of using it.

" Euthanasia is the answer for Somers and all those creatures," said Franklin slowly, " but I think probably the Cresparians have taken care of that in the process and the whole performance is filmed."

" Franklin." The chill in Vincent's voice made Franklin turn away from the screens. " We're going to blow this world apart. Since it's Cresparian the power stations are linked on a grid and can be blown together. All we have to do is find the key and that won't be difficult. If what they've done to Somers is a specimen of what there is elsewhere here nobody must ever know about it."

" On the contrary, Vincent, the only thing we can do is ensure the widest possible distribution of all the knowledge on this world, so that there will never be the need for it to be rediscovered at anybody else's expense."

" We don't see eye to eye, do we ?" observed Vincent. " I suppose that was to be expected . . ."

" Consider it this way, Vincent. All anybody has to do is look at a textbook, buy a few articles which any of a thousand firms will supply and he can construct an atom bomb, which is a deadly enough weapon for anybody. But they don't do it ! If that knowledge was kept under lock and key half the universe would be looking for it. Once people know Milvane has been found and they can't have access to the knowledge there is . . ."

" I told you they won't have the chance. I'm going to look for the power grid key and blow the world apart . . ."

Franklin allowed him to ramble on. Vincent had studied and absorbed Entoloid culture and outlook and only as far as he needed had he glanced at the Cresparian civilisation. All its beauty, the inherent cleanliness, the orderliness, the thoroughness which in any other race would have been fanatical, the absolute precision the leaving of nothing to chance had passed Vincent by.

" Leave off, Vincent, will you ?" he asked wearily. " Either that or go and see if you can help Somers."

" Go out there ?" shrieked Vincent. " You must be mad ! I'd be picked up by their damn'd machines . . ."

" No you wouldn't. The Cresparians' machines have got Somers and processed him ; they're not interested in our race any longer."

" You can't be sure of that," stated Vincent.

" If you studied Cresparians instead of Entoloids you would be. I'm going to see what I can do for Somers, anyway"

" The ship will be gone when you come back and I'll have called for the Fleet to blast this world out of existence."

" You might do all that but the Fleet won't blast a world out of existence at your request. Worlds are too precious."

Without waiting for Vincent's reply Franklin turned around and climbed into his pressure suit. He was tired and longed for sleep but his mind, extremely active under the stress of the moment, refused to permit it. He picked up a first aid kit and took a human adaption of the Cresparian sled, a plastic, streamlined bubble on skids, from the store and left the ship for the building where Somers was trapped.

Just inside the door the same whispering assaulted his ears. He ignored it, trying not to stare at Somers, now obviously dead, his arms and legs outstretched slowly gyrating without

any visible means of suspension in a glass sphere. Sooner or later, depending on how long a visitor watched, every tiny visible detail of Somers' anatomy would be described as it became visible together with the physiological process which had existed under his skin. In the darkened tanks around the dead Somers would be the records and films of the variations made of him.

Franklin turned around slowly and left the building, his mind wrestling furiously with the two trains of thought running through it. Firstly, the fact that he had known Somers made him rebel instinctively against leaving his body in so ghastly a state yet he knew if it had been some creature from some other world both he and Vincent would have been vastly interested in what had happened. Secondly emotion, demanding with all the forces at its command and built up over centuries, that the dead of one's race should have proper respect paid to them, fought vainly against reason before going down beneath the immensely logical thought that there was no need for repetition now that the act had been committed.

A red light was blinking excitedly on the sled as Franklin left the building. He had not bothered to establish a link through his suit radio with Vincent so Vincent had needed to use the difficult means of getting in touch with him, and hope that the call would be seen. Franklin dashed to the sled and plugged himself to the radio.

" Hello Vincent ! What's the matter ?"

" Glad to hear your voice, Franklin. Bad news—the worst, I'm afraid. Guest has committed suicide."

" All right," said Franklin heavily. " I'm on my way back."

Franklin found Vincent surprisingly calm when he reached the ship. Guest had been laid out and was in the metal canister that would take his body to Earth. Franklin took one look at him before sealing the coffin and cursed the necessity of having dangerous drugs easily available abroad ship. Had they been less accessible Guest would still be alive, although with a severely bruised mind but one which would have been capable of being readjusted and brought back to normal.

Neither of them found much to say to each other as they ate a cheerless meal. Before they had even begun to explore the planet two of their men had gone ; it meant double work

for them or the ignominy of calling for assistance and both of them were too long in the service of the Stellar Exploration Corps even to think of that. Both of them took sleeping pills before settling down to a night of uneasy sleep but despite the drug they awoke in the morning feeling stale and without vitality.

Mechanically they prepared a probe and sent it up to photograph the city from the air, then they despatched ground probes in the approved fashion and allowed them to work unwatched, while they buckled down to the job of double maintenance. After an almost silent lunch Franklin started to run through the film taken by the probes while Vincent serviced one which had returned with a faulty transmitter.

Almost as soon as he commenced viewing the films Franklin felt uneasy. A large machine, balanced on rods like all Cresparian vehicles, had appeared on the edge of the city and was, it seemed, searching it thoroughly. It entered practically every building, its actions being recorded only in fragments, while it was within the range of a probe. Franklin called up Vincent and pointed out the machine to him.

"Your squirrels are nice creatures," observed Vincent. "At least Entoloids would only have led you to a den of advanced vice."

Franklin ignored the remark.

"We're going out to decoy that machine," he said.

"Oh no, we're not!" disagreed Vincent. "In all probability it's the one which picked up Somers . . ."

"You're staying here alone while I go out after it, then?" asked Franklin, very slightly accenting the 'alone.'

"What if the ship is taken?" protested Vincent weakly.

"Ever heard of a machine that could fly a spaceship unless it was purpose-built?"

"The Cresparians . . ." Vincent began and gave up the struggle. "Let's get into our suits."

In five minutes, suited up and tense they headed for the position at which the machine had last been plotted. It had moved perhaps half a mile from its position and was stationary when Franklin spotted it. Without reason he felt convinced that the machine had spotted them first and was scanning them. It was a little larger than the personal machine Franklin was controlling but of a more functional appearance than

most Cresparian machines. Humps and projections dotted its surface of dull grey, the only standard Cresparian fitting about it seeming to be the highly polished rods on which its body rested. Suddenly it started to move towards them.

Vincent drew in a sharp breath and Franklin felt the hairs rise at the back of his neck. The machine moved slowly towards them with apparently no inimical intent. Some sixth sense made Franklin look over his shoulder a few seconds after the machine started to move ; behind them, nearer than the first machine they had seen was another similar object, moving slightly faster. Franklin threw all the power of the motors into his own vehicle and darted about three feet over the top of the first machine.

" There was another one behind us," he muttered in response to Vincent's startled question. He banked the vehicle in a sharp curve into a narrow street and sped along it, halting at the first intersection. Two more machines, both light green, approached from the far end of the street.

" Let's get back to the ship," whispered Vincent. " If they get a ring of those around it we're done for."

" Don't worry ; that's where I'm heading," said Franklin.

Trusting his sense of direction he threw the vehicle along this street and that, endeavouring to confuse possible pursuit yet at the same time seeking the shortest possible route to the ship. They made it, shaking and scared, seeing more and more of the vehicles, all different colours, as they sped along. Once inside they shut all the doors and raced to the control room. Eight screens were blank, denoting eight probes out of action, an unheard of occurrence. Vincent pointed at one that was showing a picture and halted the probe in front of it.

" The Battle of Resuelen," he whispered.

Even Franklin, pro-Cresparian as he was, admitted Resuelen was a singularly black patch on the Cresparian record. Until then Cresparian thoroughness had been matched evenly by Entoloid eccentricity with neither race gaining any decisive victory despite many disastrous encounters. At Resuelen everything had gone well for the Cresparians and badly for their adversaries. It had been the only occasion on which the Cresparians had seemed to delight in slaughter ; battle madness overtook them and they pursued fleeing Entoloid ships for immense distances through space, blasting them to pieces light years from the original battle sphere.

Sickened, Franklin switched off the screen and glanced at Vincent, again sitting in his chair with his face pressed into cupped hands.

"I'm going to get some sleep," mumbled Vincent and tottered away to his bunk.

Franklin wished he could do the same but now he no longer dared leave the screens unwatched by human eyes. Carefully he re-arranged the angles of view so that all the ground around the ship was covered—unless a machine was already nestling beneath the vessel's overhang. From then on, until he felt he could safely wake Vincent he didn't dare leave the screens unless he took the ship out into space. That would automatically start transmitting all the information about Milvane back to headquarters and show how little he had accomplished in the way of a survey. So far the machines had shown no definite animosity, despite the apparent pincer movement two of them had made a while ago.

Franklin left the screens for a few moments to prepare himself some food. Can of coffee in one hand he walked along to Vincent's bunk to see if he was asleep. He was, breathing harshly and with his eyes wide open, deep in dreams engendered by happy pills. When he awoke he would be wild and erratic but with tremendous energy. Franklin downed his coffee and searched Vincent's bunk without finding any supply of the pills. People who took them were as cunning at hiding them as dipsomaniacs were at concealing their alcohol.

Franklin took another can of coffee and returned to watch the screens while he reviewed the situation. He was alone, very much so, on a world that wasn't wilfully inimical yet had managed to take two of his men and push under the neurotic third. The best thing for him to do would be to move the ship to another city and start afresh but he was well aware of the possibilities of further attack. A little thought, that of calling for help, tickled the back of his mind but he brushed it away as unworthy of consideration.

The hot coffee tipping over his thighs woke him up. It took Franklin a good three seconds before he realised he should never have slept at all. The clock had ticked five minutes away since he had last looked at it; muttering under his breath he went to his bunk and changed returning to find that four of the eight probes which had ceased operation were now transmitting again and on the course which had been

assigned to them. Nowhere was there any sign of the machines that had come out to investigate.

Their disappearance didn't delude Franklin ; they were machines and something activated them. If he or his men and equipment were the stimulus, they'd come out again. He compromised with himself ; he'd move the ship to another part of the city, say five miles away and start afresh there. Carefully he jockeyed the vessel a couple of hundred feet into the air and set off due south, landing in a wide road without a central garden but bordered by long, low buildings separated from the road by large tracts of grass—or something very similar both in appearance and colour.

When Vincent woke, and Franklin smiled grimly at the thought, he would be full of wild energy as an aftermath of the happy pills ; he'd be ready for anything and only too eager to do some exploring forgetful of his previous attitude. Perhaps the happy pills hadn't been such a bad idea for Vincent, although their effects were going to be put to a use he hadn't intended.

Eventually, wild-eyed and grinning hugely Vincent appeared from his drugged sleep. He looked at the screens carefully.

" You've moved ship," he stated.

Franklin nodded. " Care for some exploring ? The building there looks as good as any."

" Can't stop me," stated Vincent. In a few minutes he was suited up and ready but Franklin prepared himself more slowly and as an afterthought taking a gun from the armoury. Vincent saw it and clapped his hands delightedly, running away to collect one for himself. Franklin, tired and weary, watched him carefully regretting he had suggested investigating. Vincent was burning up his induced energy at a terrific pace and soon he would crack and have to be put to bed, a mere shell of a man almost incapable of doing anything for himself. Perhaps it would be an idea to call for help . . .

" What are we waiting for ?" demanded Vincent.

" We're not ; let's go."

With a last backward glance at the screens to ensure there were no machines in sight Franklin followed Vincent out of the ship and walked beside him up the wide patch to the building's entrance. Like the other its architecture was impeccable and the slightly yellow material with which it was faced glistened with a faint sheen under the light of the ageing

sun. Franklin felt Vincent's step falter as they approached the double glass doors which swung aside to admit them.

As before a barrage of whispers assaulted their ears but they were prepared for it and ignored it. Facing them was a transparent sphere like the one in which Somers was trapped and in it struggled a huge intelligent crustacean. As they watched terrified the creature was stripped of its harness by some unseen force and the eyes on the end of stalks spotted Franklin and Vincent. It recognised them as living beings and pleaded eloquently for help through its prominent eyes as the Cresparian processes began to tear it apart and permutate it.

Franklin knew he should have been prepared for what happened. Reaction hit Vincent and he drew out his gun, blasting away at the sphere until there was nothing left. Then he collapsed on to the floor. Franklin drew him over his shoulder in a fireman's lift and staggered out of the building, to the ship. Already he could see two machines travelling fast up the street towards him.

Panting heavily he drew his gun and cocked it, pointing it roughly towards the machines. They recognised it for what it was and halted until Franklin had entered the ship. He dropped Vincent on the airlock floor and climbed up to the control room, adjusting the screens once more to give maximum coverage of the area around the ship. The two machines were moving slowly towards him but there were no other signs yet of any others.

For a few moments Franklin sat in a chair regaining his breath and puzzling over the crustacean. It was intelligent, very intelligent; that much had been evident in the glimpse he had of the harness. There had been buckles, metal canisters and small, mysterious shiny patches. There had been the eyes, too ; they had belonged to a creature some considerable way up the scale of mental evolution. A stellar explorer, like Somers caught in a Cresparian trap elsewhere on the planet was an impossible solution because if another spaceship had arrived anywhere near the world all the alarms aboard would have been ringing as if tolled by a convention of lunatic bellringers.

The thought occurred to him that Vincent might have switched off the alarm ; a quick check revealed it was switched on and operational. Therefore where had the crustacean

come from, and how? At that point Franklin rose to his feet and collected Vincent, still unconscious where he had been dropped in the airlock. Franklin took him in deep unconsciousness and with his eyes tightly closed, to his bunk and laid him on it. Wearily Franklin searched the medical stores for a needle and an intravenous tranquiliser for Vincent and for himself some pills to stimulate his tired, flagging mind and body.

The effects of the dose were almost immediate; within seconds Franklin felt more alive and better able to cope with the situation, yet inside him was a still, wooden piece of fatigue which the stimulants couldn't touch. He had been too long without proper rest and saw no prospect of getting any for some long time, at least until Vincent's sensitive nature had been able to quieten down.

No more machines were visible on the screen but the two which had originally appeared still seemed to be patrolling the immediate area of the ship. There was no help for it, Franklin decided; he must take the ship elsewhere, reluctant as he was to leave behind him the undoubted mysteries of Somers and the crustacean.

A few hours later he was on the other side of the planet, watching the ageing sun rise again over a city not greatly different in layout from the one he had just left. There were the same wide streets, some with a garden dividing them and the same architecturally and aesthetically satisfying buildings laid out amid green lawns, except that everything was on a rather larger scale. Buildings were bigger, spaces between them were bigger and the central square was an immense, beautifully cultivated garden, a living tribute to the long-dead Cresparians' genius for organisation and in this case, ecology.

Once more Franklin walked down to the workshop and fitted out six more airborne probes with rotors to suit the thin atmosphere. He sent them up, varying their heights until he had all the city under observation, together with about three miles of the approach roads. There was no sign of movement anywhere and for a moment he was sorry; if there had been, if the ship's appearance here had triggered off the city's own machines he would have blasted off without hesitation and called for reinforcements, however much he hated to do it. No doubt the ship was noted on whatever records the city

kept for itself but as long as it took no action dangerous to its host Franklin supposed that they would be reasonably safe.

After some food, coffee and more stimulants he sent out six ground probes and followed them for a while, learning at first, very little from their observations. The buildings they entered seemed to be vast machines which bore a remarkable resemblance to data-processing machines, a resemblance which seemed to increase each time Franklin halted a probe and made a closer investigation. For a while he studied a machine that seemed to be a vast index ; words here and there he recognised yet his knowledge of Cresparian which was far from rudimentary, was desperately insufficient to meet the demands put on it by this colossal amount of knowledge.

Technical and general terms abounded ; most of the latter he understood and some of the former, because electricity and mechanics and astronomy were the same in any language but the Cresparians had evolved some sciences which, since nobody but themselves knew what they were, Earthmen had been unable to discover their nature.

Franklin felt humble as he twisted through this vast list of knowledge, compiled by a long-dead race ; without a doubt this was the legendary Milvane, the world both Cresparians and Entoloids had called the University of Death. Now all this evil knowledge was in Man's hands and fortunately he had no adversary against whom to use it, except himself and it was by no means certain he wouldn't do that. Vincent had a point when he said the place should be blown apart.

Suddenly an icy hand gripped Franklin's heart. This was the index of everything there was on Milvane ; given time anybody could find anything there was in it, providing he knew what to look for. That meant Vincent could find the power grid and blow the planet apart, if he had the time and sufficient knowledge of Cresparian language which, thank goodness, he hadn't. Since it was a more difficult, yet paradoxically more logical language to learn than Entoloid, Franklin considered Vincent would have a difficult job to learn sufficient to find what he wanted among so much other information. Next, to prevent Vincent having the chance of blowing Milvane to pieces he had to move ship once more.

" Hello, Franklin. See we've moved ourselves a little. Don't you think we'll be tracked ?"

Franklin hoped no indication of either annoyance or disappointment showed in his answer.

"Perhaps we will. We can always move on a little further, or even out into space if necessary."

"That brings reinforcements," protested Vincent. He, too, had his pride.

"There come times when you have to do something you don't want to," observed Franklin, turning to look at Vincent. Disgust must have shown on his face.

"Sorry. I suppose I made a fool of myself after those happy pills," Vincent muttered. "Did I . . . ?"

Quietly Franklin told him what had happened, quite believing him when Vincent having listened incredulously to the story of the crustacean, denied recalling a single incident in the episode.

"Do you feel all right now?"

Vincent nodded. "I'm going to have a shower and a general set-up," he said. "You must be pretty tired."

"I am——and no more happy pills for you."

"Don't worry. Once in a while is quite enough for me," he admitted.

In twenty minutes Vincent returned looking like the living model of a recruiting picture for the Stellar Exploration Corps. His uniform was trim, neat and clean, pockets that should be buttoned were and his shave was something to marvel at on a stellar jaunt the duration of their present one. Only the black rings beneath tired eyes showed he had been hitting hard at some form of excess in the immediate past. He grinned a little self-consciously.

"I try this now and again, in an attempt to get myself into the attitude the Corps wants. I've never succeeded yet, though."

Franklin nodded; he had known Vincent a long time and recalled at least six occasions when, feeling thoroughly depressed with his situation Vincent had tried to improve his standards. It had never worked and privately Franklin doubted if it ever would. Vincent could never accept discipline, either from outside or self-imposed. He tried to give Franklin some encouragement.

"Nothing like a self-imposed task," he said. "I'm going to have what you've just had but I'm going to follow it with a rest. Wake me in eight hours."

Despite overwhelming tiredness the stimulants Franklin had taken kept him awake long after he had laid down on his bunk. He clasped his hands behind his head and stared at the ceiling, pondering particularly about the crustacean. What had been happening to it was the same as had happened to Somers; of that he was certain. He was equally certain that the performance wasn't a film; the Cresparians weren't that crude in their presentation of material. He had witnessed a living creature being processed by machines directed by a hand long dead, a race the Cresparians had never known, any more than they had known Earthmen. The Cresparians had a quality no other race had ever known to the same degree; in that facet of their character lay an answer, the only possible answer to the problem of the crustacean. Come to think of it, it was so obvious; a quality that lived to this day, a quality more obvious even than the most beautiful of all their buildings Sleep, deep and natural finally overcame the stimulants in Franklin's body and, smiling to himself, he fell into warm, restful darkness.

Franklin awoke suddenly, conscious of the fact that long ago the eight hours sleep he had requested had passed, and with the sensation that something was definitely wrong. He leapt from his bunk and dashed to the control room. Vincent was not there, neither was he in his bunk. A quick check of pressure suits revealed one was missing. Franklin dashed back to the control room and started looking for Vincent with the probes. After twelve anxious minutes he located him by the vehicle outside the main index building. Curiosity had obviously overcome fear in Vincent and he had gone exploring on his own, with the power grid probably foremost in his mind. For all the good it will do him if he finds it, thought Franklin. Even so he had to prevent Vincent, whose self-discipline programme had apparently quickly dissolved under some kind of pressure, from blasting Milvane to pieces.

Milvane, the University of Death was no place for humour but Franklin laughed aloud when he sent a probe into the building to locate Vincent. Vincent was in a section, according to a sign of which Franklin could see part, dealing with Entoloids. That was reasonable; Vincent preferred them to Cresparians so he was reading up what was recorded about them. Then he saw the probe out of the corner of his eye, just a small portion of it moving behind a vast block of data-

processing equipment. His face turned grey and his eyes popped out ; doubtless visions of the same fate befalling him as had overtaken Somers flashed through his mind.

For a second he stood still, gazing at the spot where the probe had disappeared ; then, with a speed which would have been the envy of Hermes the messenger of the gods, he dashed for the door and leaped into his vehicle. With a spectacular sweep and turn it fairly roared back to the ship the probe coming out of the building just as it left its range.

Reaction enveloped Franklin. For the first time he really thought of the rumours about Milvane ; if you wanted to kill anything the way to do it was to be found here. If a world wasn't wanted a method was on file for its destruction ; entire races could be killed humanely or horribly, yet why, in the last instance, had not the Crespatians used the terrible weapons at their disposal ? Was it because they couldn't bring themselves to do so, or was none of the methods they evolved effective against the Entoloids ? Whichever way it was didn't matter now ; both races were history and the secrets of one of them were available almost for the asking.

Vincent was a long time coming to the control room ; when he arrived he was still white from the shock and told Franklin about it. Franklin grinned and retaliated with the information that it was a probe Vincent had seen and not one of the machines which had followed them. Vincent laughed a little and said,

" That was rather a dirty trick, wasn't it ?"

" Wasn't leaving me alone, asleep, and without information where you'd gone a dirty trick as well ?"

Vincent shrugged, reached in the pocket of his jacket and threw a small white object, the size of a golf-ball, at Franklin. Franklin ducked, took a deep breath and dashed for the door ; Vincent slammed it in his face and pulled over the bolt on the other side. Chest almost bursting Franklin sought refuge in the corner of the room farthest from the little sleep bomb which lay hissing gently on the floor. A thin, almost invisible vapour crept from it very pleasant smelling and bringing glorious drowsiness to Franklin's body.

He didn't go to sleep completely ; he was still conscious when Vincent returned ten minutes later and bent over him. Franklin tried to speak but couldn't ; he knew Vincent could

see his lips moving and he answered the questions Franklin couldn't phrase.

" Sorry I had to do this to you but it's the only way. I've been looking at the stuff the Cresparians have got in this library and it's much too deadly for anyone ever to know. I know your theories on the subject and you know mine but I'm the one who's in control. What I shall get out of this is dismissal from the Corps but that's nothing to the honour I shall receive from the Entoloid Society for destroying this vast accumulation of terror and horror. I filmed just one section of the index and even now I wish I had never seen it . . ."

The vindicating factor was, to Franklin's mind, that the knowledge was never used . . .

" I've got that power grid plan, so we'll be blasting off in about ten minutes. I can activate it from space easily enough. Now you'd like to know how I got that, wouldn't you ? It was easy ; on a project of this size and nature, devoted to the extermination of a race there was bound to be a colossal dictionary of all the Entoloid dialects and languages. I found it ; I asked the question in Entoloid, which I know very well and had the result translated into Cresparian. Then I put that through the data processing machine and it delivered the answer to me. This time the Cresparian thoroughness seems to have rebounded on to itself."

While he had been talking Vincent had been preparing the ship for space. The probes were all on their way back, crawling or dropping into the ship and transmitting their last pictures of Milvane as they marshalled themselves in the workshop. Eventually they were all in and Franklin resigned himself to watching the great repository of knowledge vanishing to dust.

The ship stirred slightly and sprang away from the ground, heading towards the vast blackness of space. In minutes the screens showed a sky of midnight blue speckled with thousands of stars, stars which had known the ebb and flow of a great battle to extinction thousands and thousands of years ago. Soon they might be witnessing another although Franklin hoped not.

Some five million miles out Vincent stopped the ship and transmitted a radio impulse. Fascinated Franklin alternately watched the screens and the sweep second hand of the clock Nearly a minute later came the signs of disintegration ;

clouds of dust connected the cities as giant rift valleys were artificially created and the cities fell into immense cavities in the ground. Gradually dust obscured the whole surface of the planet, dust that wouldn't settle for many a year, yet long before it did archaeologists would be probing the wreckage to see what could be found. It wouldn't be much but perhaps something would have survived.

Franklin felt power beginning to return to his limbs. He managed to turn his face away from the screens and croak to Vincent.

" Satisfied ?"

" Perfectly. The Cresparians did a good job there."

Vincent might have been satisfied but he wasn't happy with what he had done. For a while he had been carried along on a high wave of righteousness ; now he had committed the act he had deemed necessary he was beginning to wonder whether or not he had done the right thing. Unfortunately it was too late ; he could never reconstitute Milvane.

Franklin staggered to his feet and made for the galley. He punctured two tins of coffee and walked back slowly to the control room. He handed one can to Vincent and slowly sipped the other himself. Vincent looked up, worried eyes seeking out Franklin's.

" What's the matter ?" he demanded anxiously. " Aren't you going to create hell ?"

" No point," said Franklin, taking another sip from the can. " What's done can't be undone." Suddenly his restraint collapsed. He threw the coffee can to the floor, ignoring the sting of the hot liquid as splashes touched his leg through the thin material of the trousers.

" You bloody fool," he roared at Vincent. " What difference does it make ? The Cresparians were thorough to the nth degree ; you know that. This library on Milvane wasn't the only shot in their locker ; at the other end of the Cresparian empire there is a duplicate and at this very moment there's a race of intelligent crustaceans making hay among all that pile of knowledge, providing they have no idiot like you in their crew. No, it doesn't matter one little bit ; give 'em a few years and they'll be roaring down on us out of space armed to the teeth with all that Cresparian knowledge that you've managed to deprive Mankind of today. Now are you satisfied with what you've done ?"

Peter Hawkins

Mr. Ballard's versatility as a writer has been especially pronounced during recent months by the wide variety of his plots. This month the scene swings to the actions of a man who attempted to alter the course of History.

THE GENTLE ASSASSIN

by J. G. BALLARD

By noon, when Dr. Jamieson arrived in London, all entrances into the city had been sealed since six o'clock that morning. The Coronation-Day crowds had waited in their places along the procession route for almost twenty-four hours, and Green Park was deserted as Dr. Jamieson slowly made his way up the sloping grass towards the Underground Station below the Ritz. Abandoned haversacks and sleeping bags lay about among the litter under the trees, and twice Dr. Jamieson stumbled slightly. By the time he reached the Station entrance he was perspiring freely, and sat down on a bench, resting his heavy gun-metal suitcase on the grass.

Directly in front of him was one of the high wooden stands. He could see the backs of the top row of spectators, women in bright summer dresses, men in shirtsleeves, newspapers shielding their heads from the hot sunlight, parties of children singing and waving their Union Jacks. All the way down Piccadilly the office blocks were crammed with people leaning out of windows, and the street was a mass of colour and noise. Now and then bands played in the distance, or an officer in charge of the troops lining the route bellowed an order and reformed his men.

Dr. Jamieson listened with interest to all these sounds, savouring the sun-filled excitement. In his middle sixties, he was a small neat figure with greying hair and alert sensitive eyes. His forehead was broad, with a marked slope, which made his somewhat professorial manner appear more youthful. This was helped by the rakish cut of his grey silk suit, its ultra-narrow lapels fastened by a single embroidered button, heavy braided seams on the sleeves and trousers. As someone emerged from the first-aid marquee at the far end of the stand and walked towards him Dr. Jamieson sensed the descrepancy between their attire—the man was wearing a baggy blue suit with huge flapping lapels—and frowned to himself in annoyance. Glancing at his watch, he picked up the suitcase and hurried into the Underground Station.

The Coronation procession was expected to leave Westminster Abbey at three o'clock, and the streets through which the cortege would pass had been closed to traffic by the police. As he emerged from the Station exit on the north side of Piccadilly, Dr. Jamieson looked around carefully at the tall office blocks and hotels, here and there repeating a name to himself as he identified a once familiar landmark. Edging along behind the crowds packed on to the pavement, the metal suitcase bumping painfully against his knees, he reached the entrance to Bond Street, there deliberated carefully and began to walk to the taxi rank fifty yards away. The people pressing down towards Piccadilly glanced at him curiously, and he was relieved when he climbed into the taxi.

" Hotel Westland," he told the driver, refusing help with the suitcase.

The man cocked one ear. "—Hotel *where* ?"

" Westland," Dr. Jamieson repeated, trying to match the modulations of his voice to the driver's. Everyone around him seemed to speak in the same gutteral tones. " It's in Oxford Street, one hundred and fifty yards east of Marble Arch. I think you'll find there's a temporary entrance in Grosvenor Place."

The driver nodded, eyeing his elderly passenger warily. As they moved off he leaned back. "Come to see the Coronation?"

" No," Dr. Jamieson said matter-of-factly. " I'm here on business. Just for the day."

" I thought maybe you came to watch the procession. You get a wonderful view from the Westland."

" So I believe. Of course, I'll watch if I get a chance."

They swung into Grosvenor Square and Dr. Jamieson steered the suitcase back on to the seat, examining the intricate metal clasps to make sure the lid held securely. He peered up at the buildings around him, trying not to let his heart become excited as the memories rolled back. Everything, however, differed completely from his recollections, the overlay of the intervening years distorting the original images without his realising it. The perspectives of the streets, the muddle of unrelated buildings and tangle of overhead wires, the signs that sprouted in profuse variety at the slightest opportunity, all seemed entirely new. The whole city was incredibly antiquated and confused, and he found it hard to believe that he had once lived there.

Were his other memories equally false?

He sat forward with surprise, pointing through the open window at the graceful beehive curtain-wall of the American Embassy, answering his question.

The driver noticed his interest, flicked away his cigarette. "Funny style of place," he commented. "Can't understand the Yanks putting up a dump like that?"

"Do you think so?" Dr. Jamieson asked. "Not many people would agree with you."

The driver laughed. "You're wrong there, mister. I never heard a good word for it yet." He shrugged, deciding not to offend his passenger. "Still, maybe it's just ahead of its time."

Dr. Jamieson smiled thinly at this. "That's about it," he said, more to himself than to the driver. "Let's say about thirty-five years ahead. They'll think very highly of it then."

His voice had involuntarily become more nasal, and the driver asked: "You from abroad, sir? New Zealand, maybe?"

"No," Dr. Jamieson said, noticing that the traffic was moving down the left-hand side of the road. "Not exactly. I haven't been to London for some time, though. But I seem to have picked a good day to come back."

"You have that, sir. A great day for the young Prince. Or King I should say, rather. King James III, sounds a bit peculiar. But good luck to him, and the new Jack-a-what's-a-name Age."

"The New Jacobean Age," Dr. Jamieson corrected, laughter softening his face for the first time that day. "Oh yes, that was it." Fervently, his hands straying to the metal suitcase, he added sotto voce: "As you say, good luck to it."

Stepping out at the hotel, he went in through the temporary entrance, pushed among the throng of people in the small rear foyer, the noise from Oxford Street dinning in his ears. After a five-minute wait, he reached the desk, the suitcase pulling wearily at his arm.

" Dr. Roger Jamieson," he told the clerk. " I have a room reserved on the first floor." He leaned against the counter as the clerk hunted through the register, listening to the hubbub in the foyer. Most of the people were stout middle-aged women in floral dresses, conversing excitedly on their way to the TV lounge, where the Abbey ceremony would be on at two o'clock. Dr. Jamieson ignored them, examining the others in the foyer, telegraph messenger boys, off-duty waiters, members of the catering staff organising the parties held in the rooms above. Each of their faces he scrutinised carefully, as if expecting to see someone he knew.

The clerk peered shortsightedly at the ledger. " Was the reservation in your name, sir ?"

" Certainly. Room 17, the corner room on the first floor."

The clerk shook his head doubtfully. " There must have been some mistake, sir, we have no record of any reservation. You aren't with one of the parties upstairs ?"

Controlling his impatience, Dr. Jamieson rested the suitcase on the floor, securing it against the desk with his foot. " I assure you, I made the reservation myself. Explicitly for Room 17. It was some time ago but the manager told me it was completely in order and would not be cancelled whatever happened."

Leafing through the entries, the clerk ran carefully through the entries marked off that day. Suddenly he pointed to a faded entry at the top of the first page.

" Here we are, sir. I apologise, but the booking had been brought forward from the previous register. ' Dr. Roger Jamieson, Room 17.' " Putting his finger on the date with surprise, he smiled at Dr. Jamieson. " A lucky choice of day, Doctor, your booking was made over two years ago."

Finally locking the door of his room, Dr. Jamieson sat down thankfully on one of the beds, his hands still resting on the metal case. For a few minutes he slowly recovered his breath, kneading the numbed muscles in his right forearm. Then he pulled himself to his feet and began a careful inspection of the room.

One of the larger rooms in the hotel, the two corner windows gave it a unique view over the crowded street below. Venetian blinds screened the windows from the hot sunlight and the hundreds of people in the balconies of the department store opposite. Dr. Jamieson first peered into the built-in cupboards then tested the bathroom window on to the interior well. Satisfied that they were secure, he moved an armchair over to the side window which faced the procession's direction of approach. His view was uninterrupted for several hundred yards, each one of the soldiers and policemen lining the route plainly visible.

A large piece of red bunting, part of a massive floral tribute, ran diagonally across the window, hiding him from the people in the building adjacent, and he could see down clearly into the pavement, where a crowd ten or twelve deep was pressed against the wooden palisades. Lowering the blind so that the bottom vane was only six inches from the ledge, Dr. Jamieson sat forward and quietly scanned them.

None seemed to hold his interest, and he glanced fretfully at his watch. It was just before two o'clock, and the young king would have left Buckingham Palace on his way to the Abbey. Many members of the crowd were carrying portable radios, and the din outside slackened off as the commentary from the Abbey began.

Dr. Jamieson went over to the bed and pulled out his keychain. Both locks on the case were combination devices. He switched the key left and right a set number of times, pressed home and lifted the lid.

Lying inside the case, on the lower half of the divided velvet mould, were the dismantled members of a powerful sporting rifle, and a magazine of six shells. The metal butt had been shortened by six inches and canted so that when raised to the shoulder in the firing position the breach and barrel pointed downwards at an angle of 45°, both the sights in line with the eye.

Unclipping the sections, Dr. Jamieson expertly assembled the weapon, screwing in the butt and adjusting it to the most comfortable angle. Fitting on the magazine, he snapped back the bolt, then pressed it forward and drove the top shell into the breach.

His back to the window, he stared down at the loaded weapon lying on the bedspread in the dim light, listening to the

roistering from the parties further along the corridor, the uninterrupted roar from the street outside. He seemed suddenly very tired, for once the firmness and resolution in his face faded and he looked like an old weary man, friendless in a hotel room in a strange city where everyone but himself was celebrating. He sat down on the bed beside the rifle, wiping the gun-grease off his hands with his handkerchief, his thoughts apparently far away. When he rose he moved stiffly and looked uncertainly around the room, as if wondering why he was there.

Then he pulled himself together. Quickly he dismantled the rifle, clipped the sections into their hasps and lowered the lid, then placed the case in the bottom drawer of the bureau, adding the key to his chain ring. Locking the door behind him, he made his way out of the hotel, a determined spring in his step.

Two hundred yards down Grosvenor Place, he turned into Hallam Street, a small thoroughfare interspersed with minor art galleries and restaurants. Sunlight played on the striped awnings and the deserted street might have been miles from the crowds along the Coronation route. Dr. Jamieson felt his confidence return. Every dozen yards or so he stopped under the awnings and surveyed the empty pavements, listening to the distant TV commentaries from the flats above the shops.

Half way down the street was a small cafe with three tables outside. Sitting with his back to the window, Dr. Jamieson took out a pair of sunglasses and relaxed in the shade, ordering an iced orange juice from the waitress. He sipped it quietly, his face masked by the dark lenses with their heavy frames. Periodically, prolonged cheers drifted across the rooftops from Oxford Street, marking the progress of the Abbey ceremony, but otherwise the street was quiet.

Shortly after three o'clock, when the deep droning of an organ on the TV sets announced that the Coronation service had ended, Dr. Jamieson heard the sounds of feet approaching on his left. Leaning back under the awning, he saw a young man and girl in a white dress walking hand in hand. As they drew nearer Dr. Jamieson removed his glasses to inspect the couple more closely, then quickly replaced them and rested one elbow on the table, masking his face with his hand.

The couple were too immersed in each other to notice Dr. Jamieson watching them, although to anyone else his intense

nervous excitement would have been obvious. The man was about twenty-eight, dressed in the baggy unpressed clothes Dr. Jamieson had found everyone wearing in London, an old tie casually hand-knotted around a soft collar. Two fountain pens protruded from his breast pocket, a concert programme from another, and he had the pleasantly informal appearance of a young university lecturer. His handsome introspective face was topped by a sharply sloping forehead, thinning brown hair brushed back with his fingers. He gazed into the girl's face with patent affection, listening to her light chatter with occasional amused interjections.

Dr. Jamieson was also looking at the girl. At first he had stared fixedly at the young man, watching his movements and facial expressions with the oblique wariness of a man seeing himself in a mirror, but his attention soon turned to the girl. A feeling of enormous relief surged through him, and he had to restrain himself from leaping out of his seat. He had been frightened of his memories, but the girl was more, not less, beautiful than he had remembered.

Barely nineteen or twenty, she strolled along with her head thrown back, long straw-coloured hair drifting lightly across her softly tanned shoulders. Her mouth was full and alive, her wide eyes watching the young man mischievously.

As they passed the cafe she was in full flight about something, and the young man cut in : " Hold on, June, I need a rest. Let's sit down and have a drink, the procession won't reach Marble Arch for half an hour."

" Poor old chap, am I wearing you out ?" They sat at the table next to Dr. Jamieson, the girl's bare arm only a few inches away, the fresh scent of her body adding itself to his other recollections. Already a whirlwind of memories reeled in his mind, her neat mobile hands, the way she held her chin and spread her flared white skirt across her thighs. " Still, I don't really care if I miss the procession. This is *my* day, not his."

The young man grinned, pretending to get up. " Really ? They've all be misinformed. Just wait here, I'll get the procession diverted." He held her hand across the table, peered critically at the small diamond on her finger. " Pretty feeble effort. Who bought that for you ?"

The girl kissed it fondly. " It's as big as the Ritz." She gave a playful growl. " H'm, what a man, I'll have to marry him one of these days. Roger, isn't it wonderful about the

Prize? Three hundred pounds! You're really rich. A pity the Royal Society don't let you spend it on anything, like the Nobel Prizes. Wait till you get one of those."

The young man smiled modestly. "Easy darling, don't build your hopes on that."

"But of course you will. I'm absolutely sure. After all, you've more or less discovered time travel."

The young man drummed on the table. "June, for heaven's sake, get this straight, I have *not* discovered time travel." He lowered his voice, conscious of Dr. Jamieson sitting at the next table, the only other person in the deserted street. "People will think I'm insane if you go around saying that."

The girl screwed up her pert nose. "You have, though, let's face it. I know you don't like the phrase, but once you take away the algebra that's what it boils down to, doesn't it?"

The young man gazed reflectively at the table top, his face, as it grew serious, assuming massive intellectual strength. "In so far as mathematical concepts have their analogies in the physical universe, yes—but that's an enormous caveat. And even then it's not time travel in the usual sense, though I realise the popular press won't agree when my paper in *Nature* comes out. Anyway, I'm not particularly interested in the time aspect. If I had thirty years to spare it might be worth pursuing, but I've got more important things to do."

He smiled at the girl, but she leaned forward thoughtfully, taking his hands. "Roger, I'm not so sure you're right. You say it hasn't any applications in everyday life, but scientists always think that. It's really fantastic, to be able to go backwards in time. I mean—"

"Why? We're able to go *forwards* in time now, and no one's throwing their hats in the air. The universe itself is just a time machine, that from our end of the show seems to be running one way. Or mostly one way. I happened to have noticed that particles in a cyclotron sometimes move in the opposite direction, that's all, arrive at the end of their infinitesimal trips before they've started. That doesn't mean that next week we'll all be able to go back and murder our own grandfathers."

"What would happen if you did? Seriously?"

The young man laughed. "I don't know. Frankly, I don't like to think about it. Maybe that's the real reason why I want to keep the work on a theoretical basis. If you extend the

problem to its logical conclusion my observations at Harwell must be faulty, because events in the universe obviously take place independently of time, which is just the perspective we put on them. Years from now the problem will probably be known as the Jamieson Paradox, and aspiring mathematicians will be bumping off their grandparents wholesale in the hope of disproving it. We'll have to make sure that all our grandchildren are admirals or archbishops."

As he spoke Dr. Jamieson was watching the girl, every fibre in his body strained to prevent himself from touching her on the arm and speaking to her. The pattern of freckles on her slim forearm, the creases in her dress below her shoulder blades, her minute toenails with their chipped varnish, was each an absolute revelation of his own existence.

He took off his sunglasses and for a moment he and the young man stared straight at each other. The latter seemed embarrassed, realising the remarkable physiognomical similarity between them, the identical bone structure of their faces, and angled sweep of their foreheads. Fleetingly, Dr. Jamieson smiled at him, a feeling of deep, almost paternal, affection for the young man coming over him. His naive earnestness and honesty, his relaxed, gawky charm, were suddenly more important than his intellectual qualities, and Dr. Jamieson knew that he felt no jealousy towards him.

He put on his glasses and looked away down the street, his resolve to carry through the next stages of his plan strengthened

The noise from the streets beyond rose sharply, and the couple leapt to their feet.

" Come on, it's three-thirty !" the young man cried. " They must be almost here."

As they ran off the girl paused to straighten her sandal, looking back at the old man in dark glasses who had sat behind her. Dr. Jamieson leaned forward, waiting for her to speak, one hand outstretched, but the girl merely looked away and he sank into his chair.

When they reached the first intersection he stood up and hurried back to his hotel.

Locking the door of his room, Dr. Jamieson quickly pulled the case from the bureau, assembled the rifle and sat down with it in front of the window. The Coronation procession was already passing, the advance files of marching soldiers and

guardsmen, in their ceremonial uniforms, each led by a brass band drumming out martial airs. The crowd roared and cheered, tossing confetti and streamers into the hot sunlight.

Dr. Jamieson ignored them and peered below the blind into the pavement. Carefully he searched the throng, soon picked out the girl in the white dress tip-toeing at the back. She smiled at the people around her and wormed her way towards the front, pulling the young man by the hand. For a few minutes Dr. Jamieson followed the girl's every movement, then as the first landaus of the diplomatic corps appeared he began to search the remainder of the crowd, scrutinising each face carefully, line upon line. From his pocket he withdrew a small plastic envelope, he held it away from his face and broke the seal. There was a hiss of greenish gas and he drew out a large newspaper cutting, yellowed with age, folded to reveal a man's portrait.

Dr. Jamieson propped it against the window ledge. The cutting showed a dark-jowled man of about thirty with a thin weasel-like face, obviously a criminal photographed by the police. Under it was the caption : *Anton Remmers.*

Dr. Jamieson sat forward intently. The diplomatic corps passed in their carriages, followed by members of the government riding in open cars, waving their silk hats at the crowd. Then came more horse-guards, and there was a tremendous roar further down the street as the spectators near Oxford Circus saw the royal coach approaching.

Anxiously, Dr. Jamieson looked at his watch. It was three forty-five, and the royal coach was due to pass the hotel in only seven minutes. Around him a tumult of noise made it difficult to concentrate, and the TV sets in the nearby rooms seemed to be at full volume.

Suddenly he clenched the window ledge.

" Remmers !" Directly below, in the entrance to a cigarette kiosk, was a sallow-faced man in a wide-brimmed green hat. He stared at the procession impassively, hands deep in the pockets of a cheap raincoat. Fumbling, Dr. Jamieson raised the rifle, resting the barrel on the ledge, watching the man. He made no attempt to press forward into the crowd, and waited by the kiosk, only a few feet from a small arcade that ran back into a side street.

Dr. Jamieson began to search the crowd again, the effort draining his face. A gigantic bellow from the crowd deafened him as the gold-plated royal coach hove into view behind a

bobbing escort of household cavalry. He tried to see if Remmers looked around at an accomplice, but the man was motionless, hands deep in his pockets.

" Damn you !" Dr. Jamieson snarled. " Where's the other one ?" Frantically he pushed away the blind, every ounce of his shrewdness and experience expended as he carried out a dozen split-second character analyses of the people below.

" There were two of them !" he shouted hoarsely to himself. " There were *two* !"

Fifty yards away, the young king sat back in the golden coach, his robes a blaze of colour in the sunlight. Distracted, Dr. Jamieson watched him, then realised abruptly that Remmers had moved. The man was now stepping swiftly around the edge of the crowd, darting about on his lean legs like a distraught tiger. As the crowd surged forward, he pulled a blue thermos flask from his raincoat pocket, with a quick motion unscrewed the cap. The royal coach drew abreast and Remmers transferred the thermos to his right hand, a metal plunger clearly visible in the mouth of the flask.

"*Remmers* had the bomb!" Dr. Jamieson gasped, completely disconcerted. Remmers stepped back, extended his right hand low to the ground behind him like a grenadier and then began to throw the bomb forward with a carefully timed swing.

The rifle had been pointed at the man automatically and Dr. Jamieson trained the sights on his chest and fired, just before the bomb left his hand. The discharge jolted Dr. Jamieson off his feet, the impact tearing at his shoulder, the rifle jangling up into the venetian blind. Remmers slammed back crookedly into the cigarette kiosk, legs lolling, his face like a skull's. The bomb had been knocked out of his hand and was spinning straight up into the air as if tossed by a juggler. It landed on the pavement a few yards away, kicked underfoot as the crowd surged sideways after the royal coach.

Then it exploded.

There was a blinding pulse of expanding air, followed by a tremendous eruption of smoke and hurtling particles. The window facing the street dropped in a single piece and shattered on the floor at Dr. Jamieson's feet, driving him back in a blast of glass and torn plastic. He fell across the chair, recovered himself as the shouts outside turned to screams, then dragged himself over to the window and stared out through the stinging air. The crowd was fanning out across the road, people running in all directions, horses rearing under their helmetless

riders. Below the window twenty or thirty people lay or sat on the pavement. The royal coach, one wheel missing but otherwise intact, was being dragged away by its team of horses, guardsmen and troops encircling it. Police were swarming down the road towards the hotel, and Dr. Jamieson saw someone point up to him and shout.

He looked down at the edge of the pavement, where a girl in a white dress was stretched on her back, her legs twisted strangely. The young man kneeling beside her, his jacket split down the centre of his back, had covered her face with his handkerchief, and a dark stain spread slowly across the tissue.

Voices rose in the corridor outside. He turned away from the window, the rifle still in his hand. On the floor at his feet, unfurled by the blast of the explosion, was the faded newspaper cutting. Numbly, his mouth slack, Dr. Jamieson picked it up.

ASSASSINS ATTEMPT TO MURDER KING JAMES
Bomb Kills 27 in Oxford Street
Two men shot dead by police

A sentence had been ringed : '. . . one was Anton Remmers, a professional killer believed to have been hired by the second assassin, an older man whose bullet-ridden body the police are unable to identify . . .'

Fists pounded on the door. A voice shouted, then kicked at the handle. Dr. Jamieson dropped the cutting, and looked down at the young man kneeling over the girl, holding her dead hands.

As the door ripped back off its hinges he knew who the second unknown assassin was, the man he had returned to kill after thirty-five years. So his attempt to alter past events had been fruitless, by coming back he had merely implicated himself in the original crime, doomed since he first analysed the cyclotron freaks to return and help to kill his young bride. If he had not shot Remmers the assassin would have lobbed the bomb into the centre of the road, and June would have lived. His whole strategem selflessly devised for the young man's benefit, a free gift to his own younger self, had defeated itself, destroying the very person it had been intended to save.

Hoping to see her again for the last time, and warn the young man to forget her, he ran forward into the roaring police guns.

J. G. Ballard

It has been a long time since we had an interesting story located on Venus but Mr. High has made full use of the current interest in our neighbouring planet to produce a most unusual plot.

SURVIVAL COURSE

by PHILIP E. HIGH

Crichton was a brilliant chemist with one eccentrity—he thought he might be marooned.

He had, so he told me, studied woodcraft and survival techniques.

"I do not," he said firmly, "propose to perish without a fight. If we're cut off I'll know how to get by."

None of us expected to be cut off and, in any case, a relief ship would have been up in two years to take us off but Crichton was taking no chances.

He brought a crossbow and arrows ("Ammunition can run low, you know,") and had learned how to make fire by rubbing two pieces of wood together.

"Everyone," he said, "should be put through a survival course before a job like this. I am not setting a precedent, rather I am pointing an accusing finger at authority, survival courses should be *law*. If the base were destroyed and we needed food and fire—"

When we finally reached Venus, seeing Crichton make a fire would have really been something.

The previous expedition had warned us of conditions and settled the controversy as to whether the planet was a dust bowl or otherwise—it was otherwise. Crichton would have needed a waterproof tent to start his fire and as for dry materials . . .

Despite first hand reports and photographs, Venus was a shock. We had been prepared for the wet, the insects, the spores, the vines, the almost daily storms but not for the actual *scene*.

Baynes looked through the rain-washed port and said : " Brother !" in a shocked voice. As a comment it was an understatement but at the time of landing there was too much to do and only later were we able to see for ourselves and add profane detail.

Fortunately the previous expedition had done routine tests and radar mapped the plateau on which we had landed so we could begin setting up base right away.

Fowler broke open the base packages and we donned nasal masks and stumbled out into the deluge.

To me it seemed incredible that an operational base complete with hutments, miniature laboratories, three bunk dormitories and connecting corridors could be stowed away in a compartment no bigger than a hat box but the science wizards had done it. All one needed to do was to inflate the contents which, on reaching the correct size, hardened within eighteen minutes. Getting the damn things up was easy enough but anchoring them down was another thing.

Even on the plateau there was five feet of vine which had to be cleared and beneath this six inches of water. After the water came eighteen inches of decaying vegetable goo and four feet of soil before we touched bedrock.

The base had to be anchored, the hutments although surprisingly strong, were feather-light and in storms and driving rain likely to be blown away.

We sloshed about in the deluge, equipment clutched to our chests, tripping over the damn vines like a lot of slapstick comedians in an old silent film. The job took us nearly ten hours and physically it nearly crippled us. It was hot, sweat mingling with the rain ran in streams down our faces and, in the stifling nasal masks, we felt as if we were being slowly boiled alive.

It was more than a relief to get into the hutments when they were finally anchored down and to get away from the heat. Someone had started the air conditioners and it was sheer ecstasy just to cool off and *breathe*.

One thing the huments lacked however and that was sound-proofing. One never got away from the constant drumming of

the rain and, after a month or two, it seemed to become haunting and a little ominous.

When we'd recovered a little we took our first real look at the planet and, as I have said, we were not prepared for it. We knew there were no trees, only blotchy mushroom-like growths which occasionally reached a height of sixty feet. We knew there were vines, but this ! The vegetation was not green, not even sickly green, it was a pallid blotchy white with here and there a great area of black as if——impossible to imagine——there had been recent fires.

Venus looked like a giant mushroom-bed growing from a tangle of white worms.

The sky again was something. On Earth, rain skies are dull and often dark but here they were opaque, glaringly opaque, as if the sun was only just behind the clouds and almost bursting through.

We discovered later that ultra-violet penetration was prodigious and most of us suffered from severe sunburn despite the water running constantly down our faces.

Holz explained the whiteness of the vegetation in a long discourse about cellular linkages and chlorophyll which I never fully understood.

Mendoza surpassed him later when he got down to the burnished appearance of the sky. The only word I understood was ' refraction.'

Personally, I had only one reaction and that was emotional, the damn place gave me the creeps.

Gradually we settled down to routine and I had the tricky job of bringing down supplies.

Six Sputlites had been dispatched from Earth some months before our departure and successfully guided into orbit round Venus. Bringing them down by radio control safely, and close enough to the base to be accessible, is not a job I would recommend for the nerves.

Once I'd got them into the atmosphere it was not too bad, the underjets took over and I was able to keep them stable but even so I had to watch the director with one eye and the fuel gauges with the other. After a twenty-six million mile journey the supply of landing fuel was strictly limited. As one of the vessels contained refined fissionables for the return journey I lost nearly twenty pounds in nervous sweat before the job was finished.

Almost immediately afterwards work began on mapping. We could scan the whole planet by radar and, where required, photograph any part of it by air-born radio controlled cameras.

It was interesting work at first but after a time it became a bore, one part of Venus looked very much like another. There were two large continents, innumerable islands large and small, and vast areas of muddy-looking ocean which were always hazy with mist.

Holz, our biologist, however, was in his element and was constantly making new discoveries which he was quite incapable of keeping to himself.

" Curious evolutionary over-sight here, everything I have examined so far is blind and that goes for insect and organic life."

" How do they get around ?" asked someone.

" Ah, that's another interesting factor. All life emits an ultra sonic humming, above human hearing, the echoes of which the life-form uses to determine its position, like for example a bat."

I thought about it. Nature may have found it difficult to develop an organ of sight on this planet. All of us had been compelled to wear polarised goggles after the first few hours and even then our vision had been badly effected for some hours.

It was Holz again who sowed the first unease and misgivings in our minds.

" Something damn funny here, outward appearances suggest primeval Earth. True Earth is older but not that much older."

Ratcliffe, the geo-mineral expert nodded quickly. " Looks like a hundred million years but I'd say ten, give or take a million."

Holz banged a huge fist into the palm of his hand. " And only two organic life forms, that just doesn't make sense. Biologically something should have *evolved* by now, something with the beginnings of intelligence."

" I would," interjected Pearson, " raise a question about the age of the planet."

" We're speaking in terms of development, in terms of life if you prefer it." Ratcliffe was determined not to be drawn into an argument at this point. " Astronomically, of course."

" Save it," said Holz. " Let me work on what we have and then we can thrash this business out between us." And, there, for the time being, the matter ended.

Life went on and I was pretty busy. Everyone wanted camera vehicles and Ratcliffe could never work the probe for his radar-geological soundings but I had time to watch and think.

As Holz had remarked, only two organic lifeforms did seemed to strike an odd note. First there was the Splayfoot. Take a pig, paint it a dirty white, lengthen the snout three inches, blot out the eyes and add huge flipper feet—simple. It stank to high heaven and spent most of the time with its nose buried in the goo beneath the vines. Holz said that this decaying vegetable matter was its staple diet.

The Bouncer was simple enough at first and, as the name suggests, got around by the simple process of bouncing. About as big as a football and a blotchy white in colour it seemed ideal for its environment. It floated and by rapid contraction and expansion of its surface could bounce off water or solids with equal impartiality.

It had, of course, no eyes, nor come to that, mouth or other visible appendages.

Holz caught and dissected literally hundreds of the things and, strangely, became morose.

One day he almost dragged Mendoza and myself into his tiny laboratory. " This I can't bear alone, my closest friends should share the burden, then we can all go happily insane together. I'd better draw a few sketches—"

I liked Holz he was direct, uncomplicated and would take the trouble to explain things in simple terms without appearing to ' talk down ' to an inferior.

He was a big man with untidy brown hair, a high sloping forehead and a long puckered sort of mouth. He always reminded me, God knows why, of a rather profane Friar Tuck. He, I and Mendoza had become close friends on the long journey out.

Mendoza, our physicist, was a different character altogether, tall, dark-skinned, precise but excitable. Inordinately proud of his direct Spanish descent, he wore a small, rather straggly black beard which jutted out from his chin like a gesture of defiance.

Holz finished his sketches and straightened. " I won't bore you with technicalities, these sketches merely illustrate the specimens on the bench." He pointed to some rather gruesome-looking dissected parts of what, I presumed, was a bouncer. " Heart, lungs, air-sacs for buoyancy. Note the advanced and

complicated exterior muscle structure." He paused and looked at us.

Finally, Mendoza said : " Well ?"

Holz sighed. " It's all very wonderful isn't it ? This creature lacks just *one* vital organ—a brain."

We stared at him blankly and he nodded abruptly. " I felt like that too. I said to myself ' it must have *something* ' but it hasn't." He made angry motions with his hands. " All right, all right, so it's a neuter, I know that, so don't give me any of that guff about the hive mind or mass intelligence. Bees and ants are intellectual giants compared to this thing. Biologically speaking, this creature *can't* bounce, it *can't* move, it lacks even instinct, there's no receptacle for instinct. If you chaps would care to define a paradox, here's one."

" I suppose," said Mendoza carefully, " it is a mammal ?"

Holz sighed again. " It has a circulatory system, it has a body temperature of eighty nine point three and it breathes. Yes, I have to acknowledge it as a mammal much as I would like to dismiss it as a bouncing turnip."

Mendoza picked up one of the sketches, frowned at it, then found its equivalent under a magna-slide. " And this ? You've ignored this."

Holz scowled at him. " I haven't ignored it, I'm trying to forget it." He rubbed his forehead angrily. " It's a nerve ganglia, one of the most complicated and the most sensitive I have ever seen. If it was connected to a brain there would be a purpose for it but, as things stand, it's superfluous."

Mendoza had picked up another sketch. " It eats, I see."

" Oh yes, it eats. There is a sucker-like mouth which it can protrude when necessary. As a matter of fact, I have one over here with little retractable appendages which could be used as arms. Whether this is a different species of Bouncer remains to be seen."

" What exactly, does it eat ?"

" There, my friend, you have me. Perhaps when our pharmaceutical friend has finished playing boy scouts he will condescend to make an analysis of the stomach contents."

When I left some minutes later, I could not help thinking that no one really liked Crichton. As I have said he was pompous and overbearing but this alone did not account for his unpopularity. He had a way of looking at you with those cold

rather greenish eyes and making a *statement*. Crichton never 'expressed an opinion,' he issued authorative statements and, if you questioned him in any way, he would promptly proceed to *prove* you wrong. No one likes a man who lays down the law but when such a man's pomposities are proved correct inevitable he becomes detested.

Crichton, without recourse to an unkind word or the mildest sarcasm, had achieved a unique formula for making enemies—he was always right.

For example, despite not always good humoured remarks about his survival course, he had almost succeeded in refuting the obvious.

He had discovered that the skin or outer covering of the thicker vines could be removed and was waterproof. Once removed, the inner fibres not only served as a strong and durable thread but, if dried, burned for a long period with a bright smokeless flame.

Crichton had not only succeeded in making a tent and lighting a fire in it but had actually cooked and eaten part of a Splayfoot. In short, by his own efforts, he had almost made survival possible on Venus.

His activities with his crossbow were almost equally successful. Despite the obvious limitations imposed by the continual rain, constant practise had made him an extremely accurate marksman. He chose the bouncers as his moving targets and seldom missed.

" Why the hell don't you leave the poor damn things alone ?" Hogben once snarled at him. " If the splayfeet are edible why bother with the bouncers ?"

Crichton had shrugged in a superior way. " An intelligent man is always prepared for eventualities. I required a moving target. Suppose a swift hostile beast suddenly appeared ?"

Hogben scowled at him but did not take up the challenge. Crichton might be right again and there was no doubt whatever that in three terran months his progress had been remarkable.

There was, of course the occasion he lost both crossbow and arrows. Hogben found them again four days later among the vines but that was a matter Crichton never permitted us to forget.

" I looked *there*. I *know* I looked there. When I find the moron with the penchant for childish practical jokes, believe me, I'll wring his damned neck."

No one ever admitted the temporary theft but Crichton was far from satisfied. An expression of dark suspicion settled almost permanently on his face and he went around with a series of casual but obvious test questions which marked him down as a born interrogator.

" The man's mad," said Holz, wearily. " Why can't he let it drop ?"

" As if we hadn't enough on our plates," said Baynes. " I keep waking up in a cold sweat as it is, having *him* creeping around half the day and asking stupid questions is just about getting me down."

Holz frowned. " Cold sweats—why ?"

" Don't tell me you're *that* insensitive." Baynes put down the intricate camera mechanism he had been checking. " Haven't *you* felt we're being watched all the time."

" Don't be damn silly." Holz's voice was too abrupt to be convincing. " I'm a scientist, I deal in facts, I can't afford to be guided by my emotions."

Baynes grinned faintly. " Then you *do* feel it."

Holz scowled at him. " All right, I feel something, yes." He pulled at his chin angrily. " Nothing has ever showed up in your work, has it ?"

" Such as ?"

" Oh, I don't know, tracks leading into caves, things like that."

" No, I've made a pretty thorough check myself." He picked up the camera part again. " I can't help feeling it's the bouncers. When we first landed there were only a few, now there are always hundreds round the base. I can't help feeling they're watching us."

" They're blind," said Holz. " Believe me I've dissected hundreds, they're blind and they have no brains, no brains at all."

" I'm certain you're right," said Baynes. " Quite certain, I only wish the information gave me some comfort, but it doesn't."

We stood there looking at each other uneasily and the conversation might have continued but for a sudden interruption.

Someone pressed the alarm buzzer.

Automatically we snatched up nasal masks and ran for the door. Why we should conclude the danger came from outside we never knew but we all ran for the nearest exit almost knock-

ing each other over in our efforts to get out. I caught a glimpse of Hogben already out and sprinting through the rain and followed automatically.

We came upon a group of hazy figures just visible in the rain and joined them, panting. Wang, our Medic, was just rising to his feet. " Difficult to tell how long he's been dead, insects or something have mutilated the face, and in this heat decomposition is swift."

There was no need to say more, minute white tendrils were already sprouting from between the fingers and the body was swollen with internal gases.

Speaking for myself I experienced a sudden coldness deep in my stomach and an inexplicable sense of fear.

The dead man was Crichton. He lay face down in the vines and protruding from between his shoulder blades was *the feathered shaft of one of his own arrows.*

Hogben looked at us all and he had changed. From a big amiable, red-faced man we had once addressed familiarly as " Skip," he had become grim, hard-faced and implacable. " There will be an immediate enquiry, notify everyone to report to the ship."

It was quite obvious what he was thinking ; it was what we were all thinking. One of our number was a murderer. Suicide was obviously out of the question, a man cannot shoot himself in the back with a crossbow.

When we arrived at the ship, Hogben was in his ' cabin.' It was cramped but there was room for two.

" Mr. Holz, will you come in, please."

Holz glanced meaningly at me, nodded and crossed the room I watched the ' cabin ' door slide shut behind him.

It was quite obvious what Hogben was doing, he was taking personal statements from every member of the crew which he would later cross-check. I wondered briefly if he had ever been a policeman, he seemed to be acting like one. With only ten men to work on, each unaware of what the other had said, lying was going to be easy to detect.

We waited. With nine men in the control room there was little room for movement and even less for private conversation. We leaned against the walls in uncomfortable silence trying to avoid each other's eyes.

Despite efforts to hide it we were all doubtful of each other now, *someone* must have done it.

Personally I was trying to keep my mind on other subjects but somehow, and infuriatingly, familiar lines kept passing through my mind. I believe it was part of an old nursery rhyme I had once heard as a child but whatever it was I couldn't get rid of it.

Who killed Cock Robin?
"I," said the Sparrow.
"With my bow and arrow."

"Doctor Wang, please."

One by one we all went in and it must have been two hours after that that Hogben slid open the door.

He looked strained and unhappy and appeared to be having some little difficulty in facing us.

"This is not a court of law." He cleared his throat uncomfortably. "I am only authorised to place a suspect under arrest until such a time as he can be brought before the courts on Earth."

He paused, cleared his throat again and took some papers from his pocket. "The facts are these. Crichton, as you know, was shot through the back with one of his own arrows. The statements of witnesses confirm that he was last seen alive and, incidentally, leaving the base six hours before the discovery of his body."

He paused again and frowned at the papers. "During that period, only one other member of the expedition was 'outside' and to this man alone may we apply the term 'suspect.' As I have said, this is not a court of law but I must stress two points. One. The witness was perfectly frank and made no attempt to conceal his whereabouts at the approximate time of Crichton's death. Two. The evidence is circumstantial but nonetheless I must act on it. The suspect was the only man among us in a *position* to commit the crime and I must regard this, pending an open enquiry, as sufficient evidence to take action."

Hogben paused, cleared his throat and was suddenly grim again. "Mr. Baynes, in view of the evidence before me, I must regretfully confine you to locked quarters within the ship on suspicion of murder until such a time as we return to Earth. You will now stand before an open enquiry and hear the evidence of witnesses. You may, if you wish, question these witnesses and they, in their turn, may question you. Have you anything to say?"

Baynes opened his mouth then shook his head slowly, he looked stunned.

The open enquiry was painful. In the cramped quarters of the control room everyone was ill at ease and careful to avoid looking at Baynes directly. He was generally well-liked and no one was happy in helping to condemn him. Worse, despite the evidence, none of us really believed he *could* have done it. His personal statement, when Hogben read it out, made it even worse. It sounded like the statement of an innocent man. I think, towards the end, we all had to remind ourselves that Baynes was the only man who *could* have done it.

" Has anyone anything to add ?" Hogben looked at us in turn, obviously ready to close the enquiry.

" Yes." It was Mendoza who stood forward. " With your permission I would like to examine the material evidence. May I see the arrow which killed Crichton ?"

Hogben handed it to him without speaking and Mendoza turned it slowly over and over in his hands.

" It has his initials J.C. carved or burnt into the shaft just below the point I see." Mendoza laid it down.

" All his arrows had." Hogben was scowling. The enquiry had been a strain and he wanted to get away from it. " Is this relevant ?"

" I think so. As you know I helped supervise the loading arrangements. As you are all aware, everything was weighed even to the personal stuff in our pockets. Crichton wanted to bring, among his personal baggage, an electro-analyser and his crossbow and arrows. He was told he could not take both so he abandoned the analyser in favour of the crossbow, the exchange-weight allowed the crossbow plus *exactly* twelve arrows."

" So ?" Hogben was drumming his fingers impatiently on the edge of the computer.

Mendoza returned the exhibit. " Perhaps you would be good enough to count those arrows."

" Count them ?" Hogben looked at him then shrugged. " As you wish. One—two—"

Before he reached ten his face was pale and we never heard him say the final number.

There were exactly *thirteen* arrows.

There was a long uncomfortable silence. All of us realised that no one could have smuggled the arrow on board at the last minute, the extra weight would have been detected instantly nor were there facilities or material for constructing one on Venus.

Holz stepped forward. " I'd like to look at that arrow in my laboratory, please."

" Certainly." Hogben gave it to him and shifted uncomfortably in his chair. " This throws an altogether different light on the case. I must apologise to you, Mr. Baynes, but with the evidence in my possession at the time I had no choice of action"

" You know what this means, I hope ?" Mendoza's face looked gaunt and a little pale. " Despite evidence to the contrary there's intelligent life on this planet."

" Where ?" Ratcliffe's voice was slightly off-key. " We've checked every hill and valley both by radar and radio controlled flying cameras. If there had been a village, even a cave community we would have found it." He moved his hands jerkily. " Worse, there are no clues, no leads, no cave drawings, flint implements, we've never found an artifact of any kind—"

" We have now." Holz had returned and his face was grim. " It's here." He held up the arrow which he had broken in halves. " Now I know it's a bigger puzzle than ever." He handed the two halves to Hogben. " Take a look at that, you can see at once it's not plastic like the others. It's bone, but it's not old bone from a dead animal carved to make an arrow." He stopped as if uncertain how to continue. " It's *new* bone."

Hogben frowned. " What is this—some sort of riddle, Mr. Holz ?"

" You could call it that." Holz's voice was abrupt. " Not more than six days ago this arrow was part of a *living* animal. Perhaps someone here can tell what sort of intelligence can take a new bone, carve it to the correct shape and, at the same time, pack it with the correct amount of marrow-fat to give it weight and balance."

No one answered. There seemed to be no answer.

It was Hogben who broke the silence. " I think there can be no doubt that there is intelligent life on Venus, further it is hostile." He looked at us and sighed. " I see no reason to abandon our work here but we must take reasonable precautions. We must clear the vines well back from the base so

that the natives cannot approach unseen. Secondly, duties will have to be divided. I want two armed men on patrol at all times, we can work that on a rota system." He rose. "Thank God the intelligence here is primitive."

"What makes you think that?" Holz voice was acid. "Nine weeks ago Crichton lost his bow and arrows for four days. In my opinion they were 'borrowed' for copying purposes. Not only did the native life succeed in its attempt, it learned to use the implements successfully."

"The question which occurs to me," said Pearson, "is why they put Crichton's initials on the shaft?"

"It's a copy," said Holz. "They put the initials there because all the other arrows had them. Perhaps they thought they were necessary to successful use, how could they know otherwise."

Pearson thought about it. "We wouldn't have a lot to fear from even intelligent *copyists*, would we?"

Holz shrugged angrily. "Have it your way by all means. Live in a world of splendid illusion. Personally I'm going to have my stuff packed and ready to get out fast."

Work began next day on clearing back the vines. It was slow heavy work despite a jury-rigged cutter I made up from spares and in the middle of it we found two crossbows. They were both armed with arrows and pointing straight at the centre of the base but there was no sign of native life whatever.

We all became edgy and there were one or two shots from nervous guards who *thought* they saw something move.

Holz didn't make it any better. "Bone like the arrows," he said. "New bone of unnatural density and strength. The gut is real gut, God knows what from."

Work proceeded and for nearly three weeks there were no further incidents and we had begun to settle down again and then . . .

I must give Ratcliffe his due he didn't panic but he was badly shaken and obviously keeping a grip on himself with an effort.

"Thought I'd better see you first, Holz." He removed his nasal mask with unsteady hands. "Thought you said those bouncers were blind."

"They are, I've dissected more than—"

"I've just seen one with an *eye*. I was out on guard patrol and I saw it distinctly. It was no more than six feet away. It

was looking straight at me and I actually saw it blink." Ratcliffe shivered slightly.

" Easy." Holz's voice was soothing. " You saw a new species, no need to get unduly alarmed."

"You don't understand—" Ratcliffe stopped and swallowed nervously. " Look, you won't think I'm crazy, will you ? I didn't imagine this, I was close enough to *see*. It had Crichton's eye."

I saw Holz stiffen but he said quite calmly. "Now let's get this straight—what do you mean by Crichton's eye ?"

" Well, I don't mean it quite literally." Ratcliffe paused and swallowed again. " You know what Crichton's eyes looked like, sort of green and cold. It was exactly like one of those eyes and, when it blinked, a thin white membrane slid down over it." Ratcliffe stopped and shivered again.

Holz calmed him down after a time and he went to report the matter to Hogben.

" I shall have to capture one." Holz made an impatient gesture. " This damn planet is getting me down, the job is getting me down. How the hell can one preserve one's scientific detachment on a planet like this ?" He lit a cigarette and puffed at it angrily. " Obviously I choose the wrong line of research, I should have picked some happy mechanical pursuit like yours. It would have kept my hands and my brain occupied with known data—what is that damn thing, anyway?"

" It's a receptor circuit for a radio controlled camera vehicle." I held up the light alloy grid with its maze of fine wiring. " The impulses from the control box are received by the grid and eventually control both the movements and altitude of the vehicle. At the same time, the subsidiary circuits control the mechanism, lens and shutter of the camera. It's a complicated technique to learn from scratch but I could give you a lesson at a reasonable charge."

Usually Holz would have had a witty answer but this time he did not seem to hear me.

" My God !" He was staring at the grid as if hypnotised. " My God, now I've got to capture one—excuse me." He almost ran from the room and I had the sudden uncomfortable feeling that he had found part if not all the answer to something desperately important.

Less than ten minutes later I saw him and Mendoza leave the hutments with wire cages, Holz had wasted no time.

None of us realised how little time there was.

Four days later an eight foot arrow curved suddenly out of the rain and passed clean through number four dormitory.

Almost there was panic. The arrow had narrowly missed Pearson who had been standing by his bunk.

Some ran for the ship, others snatched up anything which would do for a weapon and ran outside. Already the two guards were firing blindly into the rain in the vain hope of deterring an attack before it developed.

In the midst of it another arrow hissed over heads, glanced off the side of the ship and plunged into the ground less than two feet from Ratcliffe.

" Back to the ship, everyone back to the ship." Hogben's voice through the amplifier was authoritative and calming. " Draw back slowly, watch out for arrows."

Ten minutes later the last man was in and we heard the door hiss comfortingly shut behind him.

Hogben waited until we had regained our breath, then leaned on the black box of the computer. " Well, gentlemen, it appears we must prepare ourselves to continue our work under siege or cut our losses and clear out. It is quite obvious that, within a week or so, the native will be in a position to launch a full scale attack if they are not already doing so. Any suggestions ?"

There was a long silence then Pearson said : " I was wondering if we couldn't make peace with them somehow."

Holz snorted contemptuously. " For God's sake, Pearson, place yourself in the position of the native. We come here uninvited, clear a large area of what may be a cultivated field, and shoot or dissect everything in sight. Would *you* want to make peace ?" He made an impatient gesture. " In any case, we have no choice, our only hope is to clear out before it's too late and destroy everything behind us."

" That's a bit drastic, isn't it ?" Ratcliffe looked flushed and angry. " We can't afford to run at the slightest—"

Hogben cut him short. " Mr. Holz no doubt has sound reasons, I suggest we hear him out before we decide. Go ahead, Mr. Holz."

" Very well and thank you." Holz took a deep breath. " None of you are going to like this anymore than I did, but I'm prepared to give biological proof after I've had my say." He paused and sighed. " Gentlemen, there is no native life as

we understand it, there are no humanoids or semi-humanoids crouched in the vines with outsize crossbows waiting to attack." He paused again, frowning. " There are, in point of fact, no natives whatever but somewhere on this planet there is a—a—' thing.' It may be under the sea, hidden in a cavern or perhaps, somewhere, it is part of the landscape but believe me it's here. I suggested evacuation not only because it has the strength to defeat us but because in terms of intelligence we're outclassed, beside it we're below the infant level."

" With bows and arrows ?" Ratcliffe's voice was derisive.

" Yes, with bows and arrows." Holz sighed wearily. " When we came to Venus there was no need for bows and arrows. This thing had the planet and its environment nicely tied down and working to its own plan. Everything which in the normal course of evolution have risen to challenge it had been successfully eliminated. All that remained was either incapable of harming it or retained for personal consumption like cattle." He paused and shrugged. " Then we came, I with my laboratory and Crichton playing Red Indians with his crossbow. In less than four months it not only perceived the use and application of Crichton's weapon, but successfully removed, exactly copied and learned to use it. It then killed its principle tormenter and began a little dissection on its own. The idea of ' sight ' was a totally alien conception but it not only removed Crichton's eyes, but defined their purpose and successfully copied them."

" You'll be telling us it has a fully equipped surgical laboratory next. The whole idea is absolutely fantastic." Ratcliffe was obviously frightened and didn't *want* to believe. The rest of us were too tense or too absorbed to interrupt.

" If you doubt me, the evidence is in my laboratory." Holz was pointedly curt. " And yes, it has a fully equipped laboratory but I'll come to that later." He looked across at Mendoza. " My colleague not only saw me examine the eyes but will confirm that they were specially adapted for conditions on this planet."

" You must have caught a native then, you *must* have done." Pearson sounded perplexed and angry.

" Again, I'll come to that—"

Pearson was not to be put off. " Where did it make the crossbow and arrows ? I back Ratcliffe, has it a workshop as well ?"

Holz looked at him and shook his head tiredly. "I told you, it was a 'thing.' It didn't *make* them, it *grew* them." Holz paused and stared at Pearson's suddenly pale face. "I see you are beginning to understand, both crossbow and arrows were *new bone*, the creature grew them from or in *its own body*."

I heard Pearson draw in his breath sharply and I found myself sweating. I had a sudden half-formed mental picture of a huge shapeless raw thing in an underground cavern but forced it out of my mind. The effort didn't help, the implications were even worse. I am not a biologist but I could imagine the process. The creature would probably exude a pseudopod and within it shape the bone structure of the desired artifact. Good God, with such mental control over its bodily functions it must be well-nigh immortal and, to all intents and purposes, indestructible. The body-mass of such a creature might conceivably be measured in miles rather than feet. There was worse to come.

"Where did you get these eyes?" Ratcliffe sounded as if he were on the verge of a nervous breakdown.

Holz's shoulders seemed to sag a little. "This is the hardest of all to take. I got them from the bouncers. The bouncers are the creature's eyes and ears, its means of controlling and dominating its environment."

"Some sort of symbiosis?" Hogben's voice was soothingly matter-of-fact.

"You don't understand even now and I can't blame you." Holz sighed. "The bouncers are the creature's units, part of it. It grew them from its own body for certain specific tasks, some collect food, others herd the splayfeet, and recently a new type have appeared with retractable appendages. Do I have to tell you what dragged those crossbows through the vines?"

There was a tense uncomfortable silence before Holz continued. "The bouncers have no brains, biologically they're incapable of movement or even fulfilling the normal functions necessary to life. They have, however, a peculiar and highly sensitive nerve ganglia and, through this, the creature controls its units mentally in much the same way a camera vehicle is directed from a control box. That's a crude analogy but the simplest way to explain it. Do you wonder that I stated we were mental infants beside it?"

We stared at him. The thing was controlling literally thousands of bouncers on hundreds of different tasks. No

matter how many we killed they could always be replaced and, worse, the creature would learn by experience. Subsequent bouncers would have specialist units adapted for assault.

" Let's get out of here," said Ratcliffe. " Let's pull stakes and get out fast."

I agreed with him wholeheartedly. I know I have a vivid imagination but even without it there were far too many possibilities and all of them unpleasant.

Suppose we stayed and were overwhelmed ? The thing no doubt already appreciated the value of living captives. Suppose it learned to communicate or, more frightening, found a way of linking our nervous systems with its own. It could bleed off not only our sensory impressions but all our knowledge !

When a relief expedition arrived to find out what had happened to us they would be overwhelmed before thay had a chance to fight. All our knowledge technical and otherwise would be in the possession of a creature a long way ahead of us in pure intelligence. Not only that but it could adapt those units to exploit and extend that knowledge.

How long before it developed a technology ?

How many centuries before a host of pallid things climbed into their own space ships and headed out for Earth ?

Philip E. High

Article

Several years ago many American newspapers carried leading articles concerning experiments being carried out to try and discover an anti-gravity device. Since then very little information has been released concerning the project. Let us have a look at this 'thing' called Gravity.

GRAVITY

by KENNETH JOHNS

Gravity is the villain that shackles man to Earth and brings expensive rockets, crashing aircraft and the dropped glass to ground ; but it is gravity also that tenaciously holds the life-giving wisp of gases we call the atmosphere to our planet. Gravity distinguishes between up and down and is Universal, from atom to galaxy.

Really to conquer space—which means to explore it fully and be at home there as on Earth—we will have to conquer gravity and, to do that, we will have to understand it. For gravity is still a puzzle.

We possess relatively effective anti-gravity equipment—from the high-jumper and the hot-air balloon to the latest satellite carrying rocket—we have electrical and magnetic machines in everyday use ; but gravity machines are noticeable by their absence. We can create pseudo-gravity with centrifuges and nullify its effects by putting ourselves into free-fall ; but, as to switching it on and off like an electric motor—we haven't the first clue.

When Mankind really spreads out into space *en masse* the great day won't be sped by the massive blasting of rockets, chemical or nuclear. The trick will have to be turned by the subtle twisting of the laws of gravity so that it becomes an aid and not a hindrance.

If you can't fight nor join the opposition—then subvert it.

Whatever we do with gravity, however subversive our cunning scientists may be, we'll need to use power ; but that power will have to be employed in a form far more deftly and efficiently applied than in crude heat engines.

At the time of the Armada—and before and since—signal fires were fine as warning beacons. But they were crude and wasteful of large amounts of energy. Even so, they were better than shouting from one hilltop to the next, or sweating messengers riding relays of horses. The semaphore brought speedier signals with less effort still. Today, we know that a telephone or radio message is faster and more efficient—but to work up the scale of greater returns for less energy you need a complex technology behind you to produce and maintain these complicated gadgets.

Why is gravity apparently so much more difficult of manipulation than other natural phenomena like magnetism and electricity ? After all, we've been aware of gravity as a force for a longer period of time than we've known about magnets and electricity. In fact—the simple and yet definite question—*what is gravity* ?

Galileo got down to the problem early on with his falling spheres, pendulums and balls rolling down inclined planes. By simple experiment he disproved the tenaciously held belief—current for nearly two thousand years—that heavier objects fall faster than light ones. After that Newton suggested that the gravitational attraction of one body for another was inherent in the inertial mass and was directly proportional to that mass. Gravity was obviously the result of an inbuilt attraction in all matter and the more matter you had, why then the bigger was its pull.

Newton also found that the actual force dropped off as the square of the distance between objects. He had discovered that he was dealing with a force field created by mass around itself.

This was fine ; it gave a mathematical basis on which the motion of planets could be calculated ; but it did little to explain why gravity *is*.

The next big step was taken by Einstein who postulated that the mass of a body warped four-dimensional space-time so that the shortest distance between two points is no longer a straight line, it is the track along which a planet swings. It is a geodesic line. This was more than a hair splitting-difference as to 'why ?' it was a radically new approach which opened up an original line of mathematical treatment.

What was more, it led to new explanations and hypotheses that could be tested experimentally.

After a great deal of furore, Einstein's ideas were vindicated when light was found to be bent by the gravitational field, or space warping, near the Sun, and when the precession of the major axis of Mercury's orbit was very accurately calculated and found to agree with measurements.

There was more to gravity than explaining it as a warp in four-dimensional space-time.

Many workers have been attracted by the analogy between gravity and electromagnetic fields. Both penetrate space and can be propagated in the absence of material substance.

But some metals will screen off electric and magnetic fields—— none is known to screen off gravity. Electric fields are associated with positive and negative charges and, since unlikes attract, an electric field will pull over charges in a material such as copper to create another field that opposes the applied field.

Electric and magnetic shielding is practical because of the existence of positive and negative electric charges and north and south magnetic poles. The cancellation of gravity would require the existence of positive and negative gravity particles. Negative gravity particles are unknown as of now and no one is known to have polarised matter against gravity.

However, anti-particles are known and, for all we know, they may have negative gravity. Unfortunately, anti-particles—the famous anti-matter—exist on Earth only for short periods of time. As soon as they come into contact with 'ordinary' matter there is a violent explosion on the atomic scale and they neatly convert each other into energy.

It has been impossible so far to determine whether or not anti-particles are repelled by ordinary matter. Even a beam of anti-particles from an accelerator show so little bending at their close-to-light speed that, along a mile beam, the effect is too small to measure.

Einstein's Principle of Equivalence, on which his theories were based, contained the postulate that in a closed spaceship there is no way of telling whether gravity or an equivalent acceleration effect is acting on the occupants. A dropped weight will ' fall ' to the floor in either case. However, an antigravity mass would ' fall ' upwards to the ceiling in a real gravity field ; it would ' fall ' to the floor in an accelerating space and thus give a means of distinguishing between gravity and acceleration, destroying the basis of Einstein's theories.

If solid gravity shields, such as H. G. Wells' famous and unfortunate Cavorite, are impossible, how about a force field to cut off gravity ? This would require power to create since anything in it would, in effect, be out of Earth's gravity pit with that equivalent amount of energy added to it. Centrifugal force would throw it off Earth, unless held down. But we do not yet know enough about gravity to begin the preliminary design study to create such a force field.

Cavorite would have similar energy problems. A man stepping on to a plate of Cavorite would need as much energy as he would in jumping straight off Earth.

Attempts have been made to integrate gravity and electro magnetic field theories into a unified field theory. Einstein was foremost in the theoretical attack on this problem, looking for a geometric explanation of electromagnetic fields as a counterpart to his space-time distortion picture of gravity. Not one of these attempts has been successful and little work on these lines is now being done.

One point is that, since moving electric charges produce electromagnetic waves moving at the speed of light, is it possible for moving masses to give off gravitational waves travelling at light speeds ? Einstein said : " Yes !" and it has been calculated that Earth broadcasts a thousandth of a watt of gravitational waves, an output so small that is defies detection.

Just as light is divided into discrete photons, each consisting of a quantum of energy, so gravity waves should consist of separate packets of energy known as gravitons. Gravitons have twice the spin value of photons and it has been suggested that two neutrinos, with their zero mass and electrical charge and ability to penetrate matter with only a fantastically small chance of being absorbed by collision, make up one graviton.

Just as electrically charged bodies emit and absorb photons from one another, it may be that all masses in the Universe exchange gravitons with one another.

Another suggestion, this one by Dirac, was that the gravitational attraction between masses is slowly decreasing. Through the long thousands of millions of years this insidious decrease has resulted in a weakening of the forces between astronomical bodies, leading not only to the expansion of the Universe, but also to a like expansion of the Solar System.

Obviously, if the Earth was nearer to the Sun in the past the terrestrial surface would have been much higher in temperature than it is now ; but there seems to be little evidence to suggest that this was so.

The practical study of gravity is proceeding apace in leading Universities and scientific institutes all over the world and much of this work is shrouded under the security blanket. The immediate rewards for a successful break through are enormous, and extend to every walk of life.

When the basic problems of gravity have been cracked and scientists go on to develop gravitics as the foundation of a technology as applied as electrics, then will come the chance to design, build and fly the enormous interplanetary liners so beloved of early science fiction, plodding the spaceways and leading up to the opening of Venus and Mars to Earthly habitation by terraforming. There resides a grandeur and power in the vision of a spaceship lifting silently off from Earth and plunging headlong into the vasty deep that all the fire and fury of a rocket can never match.

All we need is another genius to show the less talented the way.

Kenneth Johns

Like the animals in a National Park, Earth decreed that the inhabitants of some planets were to be 'protected' for their right to survival. That made things extremely complicated for everyone who visited them.

PROTECTED SPECIES

by DAVID ROME

Redroom was a rimmer, and a Rimmer is a funny kind of character. He's silent and he's stubborn, but most of all he's gentle. His eyes are almost foolishly sad. His mouth is set low in a huge, hanging face.

But he knows his home worlds—knows every strange, creeping inch of them. When the little red reel-yk took over from caviare, becoming the luxury food of the Galaxy, Redroom knew where to find them. And he knew how to trap them.

He must have been fifty years old, a tramp of the starways by nature. We had spun the dust from our heels across a dozen worlds now, sometimes penniless, never rich. Until finally, here on Maran, we had decided to settle until our fortunes were made.

In ten years Redroom hoped to retire. I would have to stay on for another five years, but even then I would only be forty. And that isn't old.

The secret of all this was reel-yk, and the reel-yk Flower. The Flower is actually an animal, a polyp. Flying insects—like the reel-yk—are lured to the petal-like tentacles. The petals close and a million cilia go into action, passing the insects down the tube body into supplementary sac, where—

preserved in natural juices——they await the demands of the stomach.

Transferred to Maran——where the flying life is almost exclusively reel-yk——the Flowers gripped happily with their snail-like, muscular feet, and standing waist high, colourful as candy, they waited for their meals to arrive.

They had a life span of seventy-five years. They were uncomplaining, non-striking, non-union workers.

And after Redroom had performed a simple operation which allowed them only enough food to stay healthy, the volume of reel-yk in their supplementary sacs began to increase encouragingly.

Twice yearly we made our rounds, squeezing the sacs dry, running the expensive agglomeration into the Holder. Then, purring gently, it would float its refrigerated way down to the beach, where, standing tall as a grain house, it would wait for the pick-up ship.

The first hint of trouble didn't come until the second year. Since our landing, when we had spread the reel-yk traps over our rented pitch on Maran, we had been prepared for competition, even for piracy; but from outsiders, not from natives of the planet. We expected hi-jackers, and were ready for them. Even Redroom, who had never fired a weapon in his life, never went out the house without his fifteen shot MX7. I carried a rifle on all our daily patrols of the Flower area.

But the trouble, when it did come, was from an unexpected quarter. From a creature called the Banfu.

The Banfu is like nothing so much as a bottle with stalk-eyes and quick-moving legs. He's sharp as a needle, slippery as scrub-soap. And he threatened to bankrupt us.

It began uneventfully enough on a warm, clear-sky day when, for no reason at all, I shoved myself to my feet and dusted the powdery sand from my body and legs. I was suddenly bored with the swimming and basking between patrols. I left Redroom on the beach and, taking my rifle, began the long climb away from the sea, pushing into the jungle.

I wasn't hunting, and I hadn't set out to check the Flowers again. But when I broke out of a tangle of creeper and came across one of our beaten paths, I followed it.

I saw the Banfu a moment later. A small one——the first youngster I'd seen for a long time. I didn't fire. I couldn't.

The Banfu is Level Seven—a protected species.

Anyway, he just faded away, the way they always did. They were like ghosts. Somewhere in the almost impenetrable interior they had villages and families. Home Office had told us that.

But we didn't usually see their young, although for a month there'd been an increasing number of adults around the Flowers. Now, walking a little quicker, eager to catch sight of him again, I pushed encroaching creeper aside, crouching low. And came upon the first of the mutilated Flowers.

Squeezing a trap is a delicate business. You need a midwife's hands and the skill of long practice. The huge supplementary sac, responding to the caressing, upward-easing motion of careful hands, should allow its load to flow back through the petalled mouth.

Do the job roughly, inexpertly, and anything can happen.

In this case it was the worst—the sac had burst. The remains of reel-yk stew was slimed over its lining, but the bulk of its content was gone. Down on one knee, examining the Flower more closely, my first thought was hi-jackers. I still had my rifle in my hand, and now, scanning the jungle, I waited for a sound or a shot to come cracking out of the screen of undergrowth.

But there was no sound; no shot. After a moment I rose to my feet, warily, but with a quieter heart.

Two courses of action were open to me now. Either I could go on, examine the rest of our Flowers and find out the worst for myself, or I could return to the beach, and with the added assurance of Redroom and his MX7, make a delayed reconnoitre.

In the end I decided on discretion. I picked a hurried way down the hillside, calling for Redroom.

I'll always remember his face when I told him what had happened. He seemed to freeze, his mouth gaping. He fingered the butt of his pistol as though he didn't know what it was for.

" Squeezed? " he asked, disbelievingly.

" *Squeezed*. Burst. All the reel-yk gone."

Redroom closed his mouth, opened it again. Then, with almost startling suddenness, he began to run, drawing the pistol from his belt and firing it into the air. He flinched every time it went off.

As it turned out, things weren't as bad as they seemed. Only two other Flowers had been tampered with, and one of them would recover. The other was surrounded by a sticky red mess of reel-yk—and it was here, for the first time, that we discovered we weren't up against hi-jakers. Not outplanet hi-jakers, anyway.

In the very centre of the sticky film, edged with brighter, more concentrated red, was a single footprint.

I remember I actually felt relieved. And I think Redroom did too. although he still kept the empty pistol in his hand.

" Banfu," I said, and Redroom nodded.

Hefting my rifle, I scanned the jungle, remembering my panic—the fear of hi-jackers. I grinned, feeling almost foolish.

" Well," I said to Redroom, " no problem here. A couple of patrols off our usual schedule; a few shots over their heads. That'll keep them away."

The skin around Redroom's eyes crinkled for a moment. Then, smiling, but not quite hiding the faint tremble, tremble, of his hand, he raised the MX7 and trained it on an imaginary target. " Sure," he said. " That'll keep them away."

He sounded anxious.

We split the day into two shifts in the end, making a permanent patrol of the Flower area. It was best, we reasoned, to stop the raids quickly, before they had really begun.

Moving like lonely guardsmen from Flower to Flower in a ceaseless, monotonous round, our only comfort was that at least the Banfu weren't nocturnal.

At first, for a day or two, there was the occasional raider to break the routine. Twice, toward the end of my patrol, I came on Banfu crouching over the Flowers. When I fired—aiming not more than a foot over their heads—they leapt high in the air and plunged away into the jungle.

But soon these raids became less frequent, and Redroom and I began to congratulate ourselves. When, after a week without trouble, I returned to the house one evening, Redroom had poured wine for both of us, and we toasted each other solemnly across the opened bottle. We agreed to carry on the patrols for two more days, and then, if there was still no trouble, to abandon them and go back to our normal routine.

It was on the afternoon of the following day that a Banfu leapt out of the jungle twenty-five yards ahead of me, ignored

the whining bullets, wrenched a Flower free of the ground, and made off with it in his arms.

I stood, frozen. He was running slowly, the bulky trap making him sway from side to side. He was almost disdainful. He only turned once, looking back just before he vanished into the jungle. And then I swear that from all sides, I heard lilting, almost human laughter.

Redroom, of course, didn't believe me. I don't think I would have believed him if he had told me the same story. Even when I showed him the spot of bare ground from which the Flower had been taken, he just nodded and smiled, certain I was making a joke.

But when it happened again, during his patrol, he had no choice. He had to believe me.

He was strolling toward the last Flower in a line of twenty —he told me—when he suddenly became aware of scuffling sounds in the undergrowth to his right. He swung in that direction, and at the same time there a shriek of laughter at his back. He twisted around, but too late. The Banfu was already cantering awkwardly back into the jungle with— Redroom swore—the Flower in his arms.

" Didn't you fire? " I asked angrily.

" They're *protected.*"

" Hell! Who protects *us?* Of course they're protected. And they *know* it! They're laughing up their sleeves. They know we can't touch them! "

Almost thoughtfully, Redroom said, " I think I know what they're doing."

" What are they doing? "

" They're planning to move our Flowers into their own villages. They can eat the reel-yk at leisure then."

" *What?* Trap their own reel-yk? "

" I think so."

" Oh, fine. Oh, that's just great."

And as darkness came down over the rustling jungle, we made our silent way back to the house.

Next morning five more of our Flowers were snatched. The following afternoon, ten. The jungle borders of the Flower area became almost crowded with chattering aliens, each of them trying to pluck up the courage to make his own dash.

" Apparently. Now I'd like to get my hands on the zoologist who made the Banfu a protected species.

" Apparently the Flowers are thriving in their new environment," Redroom said.

" I doubt if you'll be able to do that. Besides, I'm inclined to agree. They certainly show remarkable comprehension."

" *What?* Are you crazy? "

For the next two days I patrolled with Redroom in the mornings, as well as doing my own rounds in the afternoons. I couldn't trust him any longer. The next thing I knew, he'd be hand-feeding the brutes so he could make a closer study of them. I took to brooding more, and talking less.

The crowd on the edges of the jungle was still thickening, and we lost a score of Flowers in less than a day. Firing over their heads had lost all effect, and when I tried to rush them, and club them with the butt, Redroom threw up his hands in horror.

" They're *protected.*"

" And we'll be out of the reel-yk business in a week. Do you want that? "

" There must be another way. There always is."

" You're a lousy alien like the rest of them," I said.

The argument broke down after that, and for a full day neither of us spoke to each other. Not that I wanted to speak. I was too busy thinking.

It was illegal. It was punishable by prison, or worse. But in the back of my head an idea was beginning to form. After all, we were on Maran, not Venus. We were light years away from the Home Office.

I took to watching the Banfu as they darted in, then lumbered away with the Flowers. It would be so simple. A single shot. A single carcass. The alien laughter would stop soon enough then. And we still had enough traps left to make a new start.

Vivid pictures began to flow through my mind. I imagined the body of a Banfu lying out in the open ground, while his people cowered back into the deepest parts of the jungle, never bothering us again.

Once the image took hold, the decision followed simply enough. It would only be a matter of time before one of the Banfu reared up within rifle range, seized a Flower and made off with it.

It was unfortunate that the moment came in the morning, when I was with Redroom. I would have preferred to have made the kill in the afternoon, during my patrol, when I could have shot it down without fuss.

But it made its run just before noon, when Redroom was walking no more than ten yards behind me. When I dropped to one knee, took hurried aim on the back of the creature's head, and fired, Redroom jumped as though he'd been the one I had hit.

He was by my side in a second, his head jerking frenziedly from side to side.

"No, no. *No!*"

I was already training my rifle on the alien again. It was lying quite still, but I wanted to be sure. Then, as my finger tightened on the trigger, the Banfu began to wriggle back toward the jungle, blood streaming from its head, its mouth giving out small, childlike cries of pain. When I fired again, my aim was spoiled. I hit it in the leg and heard it shriek. Then Redroom threw himself upon me.

I never ever saw a Rimmer fight before. But Redroom fought. He fought viciously and well, sobbing for breath, clawing at me like a woman, punching at my body and head. But we settled nothing. We were both out of condition, and we just came to a standstill, gasping for breath, actually supporting each other in the end, our arms wrapped about each other's neck.

When finally we staggered apart, Redroom made straight for the Banfu, which still lay in a huddled grey heap, fifteen yards out from the trees.

I sank on my haunches in the grass, too exhausted even to watch him. When he called my name, almost plaintively, I just looked up, shook my head and slumped again.

It wasn't until he came to my side and said, quite softly, "It's still alive," that I moved.

As I reached for the rifle, he spoke again. "No. No more shooting."

"Look," I said. "It's them, or us."

"The Banfu is protected by the Law of Level."

"This is the *law of survival*, man!"

Redroom was shaking his head, looking sadly down at me. "Violence isn't the answer. I'm sorry"—he sounded like a child—"if you go ahead with this, I'll—feel compelled to report you."

"*You!*" I made my voice grate. "You're an alien. You're no different to the rest of them."

"I can report you, though."

"Sure. And I can put a bullet through your lousy head."

"You wouldn't do that."

He spoke the truth. Redroom and I had covered a lot of ground together. We had faced danger all along the Rim. Redroom and I were close.

"No, I wouldn't do it. But you'd report *me*."

"It is a different matter."

I was beaten, and I knew it. Savagely, I shoved myself to my feet.

"I'm going down to the house, Redroom. The traps, the whole lousy partnership can go to hell. When the pick-up ship comes, I'm leaving. For good."

"I'm sorry you feel that way. We had some good times together."

"Sure," I said. "*Had*, you lousy alien."

I didn't know Redroom was bringing the Banfu down to the house until I saw him plodding through the sand, dragging a litter of lashed branches behind him. The alien lay grotesquely on its back, its head tilted at an angle so that it seemed to look up the length of its body, its eyes fastened on the sky.

I almost felt sorry for Redroom. His huge, gentle face was running with sweat. His chest was heaving, the hair sticky and tufted.

When he had almost reached the verandah I stepped into the sunlight.

"You don't bring him inside."

"I do."

He spoke very softly, but he held my eyes as he brought the litter right up to the three wooden steps.

"Give me a hand," he said, and he grinned.

This could have been the moment when we made the sign of friendship, clasped hands and took up where we had left off. I think he intended it to be. But I didn't speak. Instead, I stepped aside.

"We built the house together," I said, when Redroom didn't move. "I can't deny you your rights."

Redroom began shaking his head.

"The house is yours," I said. "I'll sleep on the beach."

I think these were the final words that passed between us during the time the Banfu was in the house. I lived and ate and slept out of doors, only going up the hill once, and feeling sorry afterwards that I had.

The whole of the Flower area, except for an isolated trap here and there, had been cleaned out. Carrying their prizes with them into the deepest jungle, the Banfu had destroyed our years of work in a little more than a week. Even the paths, kept free of undergrowth for so long, were beginning to vanish already.

It was on this same day that the Banfu, walking erect, came down the steps of the house and began to walk in the sand.

At first, I thought he was leaving. But his walk was taking him in a circle, and I realized then that he was only exercising his wounded leg.

This exercising became a regular feature of each day, and despite myself I began to feel a growing pity for the Banfu. The Flowers were gone, our project destroyed; and yet this alien, with his smooth hide glistening with effort as he walked in tight, stiff circles, somehow made me regret what I had done.

I don't know how I knew, on the morning of the final day, that he was going back to his own people. Perhaps it was the way he walked, or the way he looked straight ahead at the skyline. He came down the steps with Redroom hovering small in the background.

No look or gesture passed between them. Without looking back, the alien moved away through the sand, the early sunlight shining on his grey skin.

Neither Redroom nor I moved all the time he was walking away. When finally he dwindled into the distance, I looked across at the house.

Redroom, his old Rimmer's eyes still on the place where the alien had disappeared, spoke without turning his head.

"You can move in again."

There was nothing more I could do or say. I went inside.

All over the house there were signs of the care Redroom had given the alien. Every tube and vial and instrument from our medical kit was laid out at the bedside. There were stains on the floor where a bottle of something had been smashed.

But light stains. Redroom had scrubbed at them for a long time.

I sat in silence and smoked a cigarette. When I finished the cigarette I got up and strolled out on to the verandah. The sea was breaking softly along the shore, the beach was golden brown. It might have been the beach of Paradise.

I didn't see the figures moving along the beach at first. And when I did, they were still small and far away, like cloud shadows under the swell of the hill.

But the sky was clear.

I heard a step at my back, and I turned. Redroom had come out on to the verandah.

"We've got visitors," he said without surprise.

I didn't move my eyes from the advancing figures. I couldn't say anything. I didn't know what to say. Then Redroom smiled, his gentle eyes lighting up, and he was already walking down the steps, arms outstretched in the gesture of friendship, closing the gap between the Banfu and himself.

He didn't turn and look at me again. And I was glad.

Because every one of those goddam lousy aliens was carrying a Flower in his arms. *Our* Flowers. Full with reel-yk, bright as sunshine, unharmed. Like an offering.

And goddamn it, there were tears in my eyes.

David Rome

THE LITERARY LINE-UP

Story ratings for No. 108 were:—

1. The Overloaded Man - - - - - J. G. Ballard
2. Put Down This Earth (Part 2) - - John Brunner
3. The Trouble With Honey - - - John Rackham
4. Trinity - - - - - - - - - David Rome
5. Junior Partner - - - - - - D. D. Stewart

Editorial (continued)

Skipping a couple of chapters, a " meteor storm," and a patch of mysticism about " the great family of the solar system," we find that our heroes land on the Red Planet and claim it in the name of science. The speeches are scarcely over before they see someone crawling towards them over the desert.

This chappy is obviously a martian. Although shaped like a human, he is hard to the touch, has yellow eyes and sprouts very stiff hair on his head. He says " Moooeek " to them and slumps into Geschweit's arms, dying.

Alarmed, the philosophers carry him into their rocket. There the Martian revives enough to make a dash for some special glue they have lying about in the cabin; he drains the pot at one gulp. Thus fortified, he executes some quick drawings on the floor which give Winter and Geschweit a pretty clear notion of what has been going on here since Mars was created right up to yesterday.

To be brief, Mars has never consisted of anything but sand, which gave the locals a tough job of evolving. They managed it, until eventually there were thousands of them. They built cities and all that, yet somehow they never felt too good. Came a time when they started cracking up and dying. Extinction threatened.

" You see what this means," Winter says, clutching his forehead and pointing at the final picture. " This Martian is —is the last of his kind! " (Winter gets all the best lines.).

Even as they realise this, the martian falls down dead over the glue pot. His sorrow goading him to a sudden flash of inspiration, Geschweit snatches up the pot and reads the declaration of contents on the label. Yes, it was made chiefly of silicon.

" This glue was like a draught of pure water to this poor fellow! " declares Geschweit.

" If only we had come sooner! " cries Winter.

So they make their deduction, that martian life evolving out of the sand was a silicon life, thus satisfactorily proving their original contention. And they head back to Earth with the equally satisfactory corollary that there can be no basis for life as good as good old carbon.

Exhibit B. This is a copy of " Stultifying Stories Quarterly," dated January, 1935, brown paper down spine, otherwise good condition. The story we have to chase among

the looming grey cliffs of "Men, Be Taller" adverts is called "The Atavism on Island X."

Great changes have taken place in the five years since "The Silicon Man" was published. For one thing, writers have discovered that s-f can be milked for thrills as well as philosophy, so called. We open slap in the middle of the plot, with Xavier Bohn building a "big glittering machine" in his laboratory. He will not let even his assistant, Bobby Donovan, go near the machine. They are, by the way, alone on Bohn's private island, Island X, situated somewhere in the Pacific; alone, that is, except for Bohn's lovely girl assistant, Joan, a simple girl who trots round petitely carrying test tubes. She is in love with Bobby; he is too engrossed in research to know how he feels about her.

Xavier Bohn has been "investigating the table of elements," arriving at the theory that the nearer to zero an element's atomic number is, the "purer" it is. Hydrogen, with the atomic number one, is the purest, and so on. His glittering machine is called the Impurifier, because it induces impurity in elements by increasing their atomic number. Carbon (Atomic Number 6) becomes Silicon (Atomic Number 14) when transmuted in the Impurifier.

All this would be fair enough. Unfortunately, Bohn starts acting in a sinister way. He eyes Joan with a predatory sneer. He watches Bobby with an insane light in his eyes. Obviously, if he can get Bobby out of the way, Joan will be his. He warms up the old Impurifier accordingly.

When all is ready, he tries to force Bobby into the 'oven' of the machine. There is a fight. Bobby is knocked out. Bohn trips over him, staggers backwards, and falls into the glowing oven, carefully slamming the door after him.

Bobby regains consciousness to find Joan bending over him. As they exchange a few curt words of love, a terrible creature climbs out of the Impurifier after them. It is Bohn, transformed into a silicon man.

Bobby hits him, Bohn laughs and comes on. He is impervious to hurt—silicon is so much tougher than carbon, doncherknow. He grabs Joan, obviously intent on a spot of miscegenation. His knees buckle, he falls at their feet: the carbon dioxide in the air is fatal to a silicon man.

The lovers kiss rapturously over his still writhing body.

Exhibit C. Forward another five years to the defunct "Staggering Super Science," issue dated January, 1940. Here begins a three-part serial, "Plutocrats of Pluto."

By this date, science fiction has largely escaped from its early crudities and over-simplifications. It tends, if anything, towards the other pole and produces elaborate plots. I can give only the briefest outline of "Plutocrats."

Man has spread out over most of the solar system into a huge complex civilization. His social structure is graded according to the many amazing abilities he has developed; at the top of society are the Symbiotes, men who combine with the Venusian Peepers to form immortal beings.

One of these immortal beings, Red Lampusa, is coasting round Neptune when he meets a Plutonian ship. Thus man discovers the amazing alien atomic civilisation of the Plutocrats.

The Plutocrats are few in number. Pluto being a pretty chilly place even with atomic central heating, but they possess unlimited numbers of pugnacious robots which do their bidding. They are so alien that they at once declare war on man, invading the solar system in force, via the robots, which are intelligent and led by a dictator robot.

After much excitement, Red Lampusa captures one of the Plutocrats on Ganymede, complete with his ship. He finds that the plutonian has a silicon-based metabolism. Holing up with his captive in a camphor mine and using all his superpowers, Red forces the alien to tell him something of the plutonian way of life.

He learns that the Plutocrats were civilised many millions of years ago. Nearly all the metal on their planet is absorbed by the atomic reactors necessary to keep the world heated. So their robot armies are creatures based on carbon molecules, which are in plentiful supply.

Red emerges from this long bit of research to find that Earth has been defeated in the Asteroid Battle, and that the carbon robots are in command. (End of Part Two of serial). Narrowly escaping death, he shoots back in time with one of the Derelicts, a weird Martian race. There they discover that man himself is actually descended from a group of these carbon robots who defected from Plutocratic Rule, fleeing to Earth back in the Paleolithic Age and establishing a group from which mankind has developed. Man is therefore a sort of robot.

Armed with this knowledge, Red and the Derelict return to their present, confront the dictator of the carbon robots with it,

and claim kinship. In the fight that follows, both the Derelict and the dictator are killed. The dictator's followers, however, join Red: they did not like Plutocratic Rule anyway. So they overthrow and massacre their old rulers, and head out to Alpha Centuri to begin a new race very like man, while man himself settles back to clear up the mess. End with flags flying.

Exhibit D. Alas, I over-run my space allotted. Let me slip forward ten years, to present the January, 1950, issue of "Succulent SF." Here you will find the touching little short story so aptly named "Carboniferous."

Vance Buick's one-man ship lands, completely out of fuel, on the planet Deirdre. It is a beautiful planet. Vance grows roses round the escape hatch, but he's lonely. He keeps thinking of the ideal woman, wishing she would come along.

Well friends, not to hold out on you, she does come along. She is telepathic, and she homes in on his thoughts. Her name, she tells him during a cosy mental communion, is Sherbar. She is beautiful, she loves him . . . unfortunately, she is made of silicon . . .

However, love will find a way. In course of time they are expecting the patter of tiny silicon feet, but with her superb mental powers Sherbar turns her inside into a little atomic converter. When junior is born, it is literally a carbon copy of its dear old dad.

Quickly let us tiptoe across another decade to get a peek at the last exhibit, *Exhibit E.* This is the issue of "Salacious" for January, 1960. "Salacious" is really a girlie magazine, but hidden in its back pages you will find a brief science fantasy entitled "Over My Dud Body."

"Over My Dud Body" features an American congressman called Al McArthur, and his wife Gloria. They have developed psi powers by studying up on yoga, and mixing in a few kinks of their own. In between times, they've been at pains to warn the world about the dangers of H-bomb warfare.

The powers that be take no notice. The war comes. Riddled with radiation, Al and Gloria head into the desert and half bury themselves in sand. "Some instinct drove them on," it says here. Summoning all their psi powers, they identify themselves with the sand, turning themselves atom by atom into silicon beings. Silicon beings, as everyone knows, are

not affected by radiation. So they rise from the dust anew, like a pair of phoenixes, to start a better race of humans.

That is the end of the gallery of exhibits, but you do not think I am going to let you slip away without rubbing your noses in the moral of all this?

All these stories are built round the theory that silicon, with its ability to form compounds in a way similar to the carbon whose compounds comprise our bodies, may be a suitable basis for a life form. This theory was not originated by any of the five writers concerned. Each of them incorporated the theory into their story in the way that appeared most satisfactory to them at the time. However ludicrous the results may seem now, each story, when it was published, was hailed as an original story.

Let me ephasise the obvious: the originality of a science fiction story depends not so much on new ideas (which are as welcome as they are rare) but on new treatment.

Something further. Examine the outlines of these silicon stories. You will find the writers all suffer from the limitations of their times. Each story smells strongly of its own year: 1930, 1935, 1940, 1950 or 1960. The authors, although professing to be science fiction authors, did not, could not, would not, lift themselves out of their temporal surroundings. Their treatments, their writing, their minds, were stereotyped. Originality rests not in an abstraction but in an author!

Your good author may not be the most successful: it is unlikely he will be the most productive. But he will be constantly trying out new viewpoints and approaches; these will lend a freshness to his work that should last more than a twelvemonth. It was such a freshness that attracted me to "Star of Life," "The Liberation of Earth" and "Time Wants a Skeleton" from which I quoted earlier.

So readers, watch how a writer treats his treatment; there is nothing wrong with s-f until it loses variety, and you must be the watchdogs of that; don't forget that a conventional mind can produce only a conventional story, even if it is set in the Year Two Million. Fellow writers, I leave you with This Month's Darkest Thought: we have nothing to offer but ourselves!

Brian W. Aldiss

Pro . . .

Dear John,

I believe that most of the trouble with modern s-f (and what a deplorable state the U.S. mags have got themselves into) is that it definitely *has* lost its sense of wonder. I think that this is mainly due to the fact that the professional writers have reduced it to its present status of moribund mediocrity. What a lifeless, trivial thing magazine s-f has become! No wonder it's losing readers—they are finding it just about as dull as most mainstream fiction and utterly lacking that vital 'sense of wonder,' as we call it. Dreaming would be a better word, or speculation if you prefer. But speculation on a grand scale.

Editors like Gold can shoulder a lot of the blame for the current degeneration of s-f, and the influx of professional writers who invaded the field during the fifties and brought with them the formula of the pulp/detective/mystery/adventure magazines that until then had provided them with the greater part of their livelihood, can take the rest.

Ever heard of full-time, professional *dreamers?*

If there is to be any revitalising of s-f then I'm betting on it coming from the ranks of the new 'amateurs,' those who can find the time to inject this vital sense of wonder into their work, for wasn't s-f *once* a field of amateur dreamers, before the rot set in?

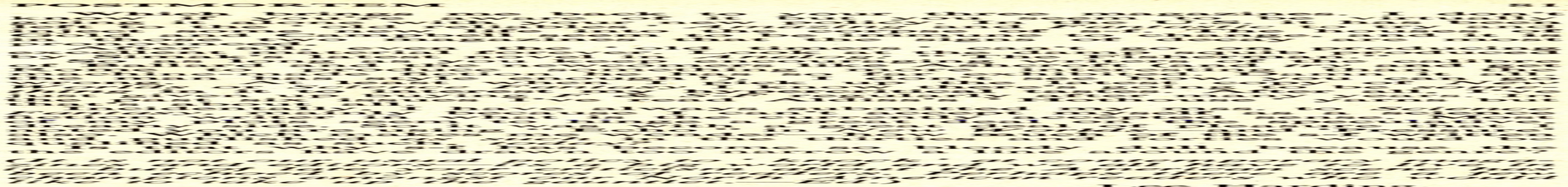
I can't see any of the U.S. editors accepting this changing status as you yourself already have. And what dreamers you have! Ballard is the finest practitioner I have encountered in your pages. Not one of his stories has failed to satisfy that search for 'wonder' for which my jaded eyes continually search. Ashcroft has it—his potential seems very exciting, and Aldiss too, although his best work now seems to appear in

dollar land. Perhaps one day when Donald Malcolm gets down to producing, *he* might also turn out something worthwhile instead of those tantalising glimpses of talent he has shown so far. Bulmer I continually admire—not because he is a great s-f writer but because he is a consistantly good one. His serials in *New Worlds* have been of that pleasant variety which once digested are quickly forgotten, but every so often he manages to bowl me over with a supreme piece of wonder dreaming.

In this category I would cite "Beyond the Silver Sky," "The Map Country" and "Strange Highway." (Not that I'm comparing him to Clarke or Sturgeon, mind you. I'm speaking purely in the terms of *magazine* s-f). Rackman, I'm afraid, continues to annoy me. He has brought to the field the familiar 'British' (ugh!) method of detective story writing and I'll never forgive him for throwing away that wonderful 'Dr. Gabriel' plot in such a trite, cops and robbers manner. What Sturgeon could have done with that one . . . !

As you can probably gather by now, I disagree most strongly with Alfred Bester's comments in a recent *F & S-F* that only a fulltime writer can hope to rise above mediocrity. On the contrary, it seems that most practising 'pulpsters' (and that term still appears to apply to all writers whose work fails to grace the pages of the slicks or the *Atlantic Monthly* (sic)) inevitably fall into a rut of routine. With 'normal' mystery and adventure fiction this isn't very important, for most readers of this type of story are used to accepting a certain familiarity of plot. But in s-f this can prove disastrous, and already has. After all, aren't people complaining about the lost 'sense of wonder'?

In a recent *New Worlds* you yourself have cited Poul Anderson as an example of this tendency to get into a rut. Is there validity, then, in my hopes for the new crop of *amateur* writers to inject some dreaming into s-f, and hope that those professionals who seem only to write s-f when they are genuinely interested in experimenting in form, context and dreaming (Sturgeon, Blish, et.al.) can meanwhile carry on a certain standard of mental stimulation while the new crop arises? I don't think they can come from the established ranks of 'writers,' but from where they always seem to have generated—amongst the *readers*. I don't think you can mass-produce the sense of wonder. It rests with the writers—*and those who edit them.*



and Con . . .

Dear Mr. Carnell,

I'm afraid that ordinary words can't express my feeling when I saw that Quinn was back . . . and a 'Profile' as well! This is just too much to spring on me at once. I was a bit disappointed that he had forsaken his paints, tho', but I must admit that he has done wonders with ink. Say, did you put that bit in about the coloured inks and varnish, just for my benefit? Whatever your motive, tho', thanks a lot, it certainly opened my eyes to the many different techniques available to me. What do you mean, " . . . we hope to see *some* more work from him . . . "? We want to see *lots* more!

Finally, I think Quinn would be pleased to know, that it was his work alone, that inspired me to far greater efforts in the field of drawing and painting than I had ever made before. If I ever make a success in the field of commercial art, it will be all thanks to Quinn, who set me on the right road.

We've now got three top flight artists who can match and surpass the best of the Stateside illustrators. By the way, will Quinn be doing any interior work?

Now to other topics. It's a very long time since I came across an argument in the letter columns of any magazine, so how would it be if we livened *New Worlds* up by starting one?

In my opinion, fandom has been sitting back, twiddling its thumbs for far too long. The fans grumble about not receiving the traditional support from the prozines. Well, they should just take a look at whose talking. What real support do the fans give you? They don't even bother to keep " Postmortem " filled with their letters. It is time fandom started to do something. What can an editor do with his magazine if his readers show little or no response to his efforts. Right? Well I just want to tell the fans that they're a lazy lot of layabouts. The current dullness of the British science fiction scene is just as much their fault as the editor's. Maybe most of the responsibility rests on their shoulders.

I expect that my previous remarks will stir up some form of anger or irritation in the breasts of the fans. I most sincerely hope that it does and that it leads to a long and lively argument which will keep *New Worlds'* letter column open for many months to come.

Harry W. Douthwaite,
Manchester 16.

Doctor ! Doctor !

Dear John,

Concerning the magazines, you were certainly right about *Science Fiction Adventures* improving once you got your hands on it. Unfortunately, being on holiday, I have not got my collection with me, so cannot look up any individual stories to comment on, although there is a vague recollecion of thinking that two were magnificent and one stank to high heaven. Generally, however, I like them all. Naturally, the medical stories have a special interest for me. The series in *New Worlds Science Fiction* about the space hospital I prefer. It all makes sense.

The series about the peripatetic doctors and their animals is less interesting, partly because less well written, partly because the wonderful animals stretch belief, but mainly because the social system involved is difficult to believe in. The similar series with its virtually immortal Doctors, " Soldiers of Light," made some sort of sense, but the idea that normal doctors could achieve on any given world such a superiority of medicine over other fully developed peoples is rather unbelieveable.

(Your last sentence is crossed up with two other Doctor series, doctor. Not ours.—Ed.)

It is roughly true to say that states of comparable technology and civilisation have comparable medical standards however they may be separated in space and time. In such separate cultures there will be a different emphasis on different fields, but comparing the best with the best the results are comparable. And any reasonable contact between civilisations rapidly brings about a levelling up—provided they both want to learn and teach. That is the situation these stories postulate, as opposed to the real situation in mediaeval times when the Europeans refused to learn from the Arabs, even as much as their inferior culture could have assimilated.

A mobile corps of doctors with regular rounds to undeveloped worlds, like the Newfoundland Coastal Service, or those in various colonies would make sense; as would a Galactic Flying Doctor Service. But that is another story, as Kipling would say. Of course, he would then go on to write it.

Dr. H. T. Kay,
Ottawa, Canada.

Dear Mr. Carnell,

Another letter to add to the many you must already have about your *New Worlds* 110 cover. A masterpiece! And James White's " Resident Physician " was a great story. I think his ' Sector General ' yarns are going to be remembered for a long time to come. Just keep him producing them!

David Boutland,
Ashbourne, Derbyshire.

(" Field Hospital " is a new three-part ' Sector General ' serial by James White which will be coming up soon—with more room to move he has produced a truly magnificent epic concerning the giant hospital. For good measure it has two Quinn cover paintings!—Ed.)

Dear Mr. Carnell,

New Worlds No. 110 was an " It's-been-done-before " issue. The skill of J. G. Ballard and the satire of John Kippax were the only redeeming factors.

Even Jim Ballard's " Storm-Wind " is the same thing as *The Tide Went Out* or perhaps *The Kraken Wakes* the only difference being wind instead of sea—still, even considering the abridgement which has been done cleverly, he takes the number one position.

John Kippax by artistry alone takes second place. So many we've-been-stranded stories have been published, many of them in *Nebula* and quite a few of them by Bob Silverberg, but Kippax always seems fresh.

James White, number three: These ' Sector General ' stories are starting to be of a sameness although the unwinding of the plot is exciting to read. Also, please Mr. White can you publish your system of e-t classification? I get lost with every story. I might add here that James White's photograph published in ' Profiles ' must be very old. He looked exactly like that when I knew him at the Methodist College in Belfast, some six years ago.

George Whitley's " Change of Heart " comes fourth, again, saved by the author's skill and not by the plot which was so obvious.

Fifth D. E. Ellis' " Stress " was a good story, I liked the idea. Again I am afraid it was predictable all down the line. Rather too much dialogue, and although I know it is imposs-

ible to paint characters in such a short story, at least they could be human? (Or should that be superhuman?).

Last, David Rome's "The Fortress of True." Unnecessary data included, some necessary data left out. Could be seen through from the word 'go.' In my opinion there are two reasons (apart from the cash) for writing a story:

(1) To display one's skill. (2) To surprise the reader.

If neither of these aims is reached, then the story is a failure.

Altogether a poor issue. Nothing has yet reached the glorious 100th Edition.

Robert W. Oswald,
London, S.W.6.

THE LITERARY LINE-UP

For the first time in many years we are not quite sure of the main contents in the next issue (at this writing, that is), mainly because the first instalment of James White's new "Sector General" serial, "Field Hospital," which should lead off the issue, is much longer than our normal length for such serials. This causes some adjusting with short stories to make a balanced issue—but on the other hand we also want to get in a long new Brian Aldiss novelette "Basis for Negotiation." Type not being elastic, there is only so much room in the magazine, so a lot will depend upon the short stories which are accepted in the next week.

You can count on "Field Hospital," however, with a Quinn cover giving his interpretation of what the giant hospital in space looks like, but whether there will be a short squib of a story by Brian Aldiss (in memory of the late lamented Guy Fawkes) or whether his long political novelette commemorating the present Berlin tension will be included remains to be seen.

That expected Guest Editorial by John Brunner, "Our Present Requirement," should definitely be amongst the runners.

Somewhere behind a locked metallic door leading into the bowels of the earth three scientists of golden Rathvane are trapped, perhaps even dead. Larrabee's one object, despite the attacks of the Gurone, is to find them again.

THE GOLDEN AGE

by RUPERT CLINTON

Conclusion

foreword

Culturally, life on Earth to the inhabitants of Rathvane had attained its highest peak as they entered the Steam Age, marred only by the threat of war with the neighbouring Gurone, a race of Earthly stock yet somehow non-human in thoughts and actions.

In Rathvane, service to the State takes up a nominal period, after which each citizen can follow his or her own profession. To Larrabee, nobleman of Rathvane, the choice was archeology and with others he is excavating in the Demming Desert when they find incredibly old artifacts. Specifically some geographical globes of the Earth which show the world of two million years earlier.

Later the expedition uncovers a metallic wall with a circular doorway which they manage to open. Three of the party—Toby, Mulvers and Fay Graybrook—enter to investigate and the door closes automatically behind them. All attempts by Larrabee and his team to re-open the door fail and they are severely reprimanded by the Conclave of Noblemen who rule Rathvane and who do not believe in further advances in science.

While Larrabee has been digging in the desert, Gurone attacks have been increasing, and when he leaves the desert to serve a month with the Air Service, his airship is attacked by Gurone flying on the backs of Opteradents, a winged creature similar to a pteradactyl. A fierce fight ensues and Larrabee is eventually shot down but finally saved by a squadron of the Rathvane Air Service in steam-driven airships.

Larrabee goes to see an old family friend, Professor Higham, who has been experimenting with electrical apparatus and they discuss the possibility of widening scientific research if only the Conclave will relax the laws—but Fay Graybrook's father is a powerful force on the Council and now has a personal grudge against Larrabee.

When the neighbouring continent of Travanslay is over-run by the Gurone news reaches Rathvane that the enemy have a new weapon which is to be manufactured in the ordnance factories of Travanslay. The "free thinkers" in the Air Service decide to attack this point and appoint Larrabee as commander. His main task is to discover the secret of the Gurone's new weapon.

seven

With all twelve propellers beating strongly, Rathvane Air Service Battleship *Invincible* flew at comfortable pressure height, scudding out over a bright sea where the white caps sported, heading on a direct course for doomed Travanslay. Echeloned with mathematical precision on her port quarters, *Inflexible* and *Implacable* maintained perfect station. Watch-keeping officers prowled the stacked decks, telescopes under arms ; men were hard at work at the never-ending tasks any ship demands of her company ; the furnaces roared joyously and grimed stokers cunningly slewed shovel after shovel of coal into their insatiable maws ; lookouts perched high atop the swelling bags scanned every scrap of cloud for what it might shelter—and Wing Colonel Larrabee sat in his air cabin and poured over a map of the Fortress of Dunluce.

The Ships quartered into the breeze and a strong and invigorating scent of sea odours permeated the air cabin. Just beyond the wide, square windows on a scrap of railed decking, a party of hands was busy darkening the bright work. Glints of polished brass reflecting on the satinwood walls gradually decreased and died away as the men applied their evil-looking black paste.

Larrabee glanced up at a sigh from the opposite corner of the cabin.

Air Commander Henley looked guilty as Larrabee's slightly blank expression settled on him. Larrabee was for a brief moment still in the arsenal of Dunluce. Then : " What's the deep sigh for, Henley ? Stomach ?"

" Infidel," Henley said, now smiling. " I was merely reckoning what dulling-ship meant to me—both financially and in pride."

" Don't want the Gurone to catch a gleam miles away from all your pretty brightwork." Larrabee rubbed his fingers delicately across the polished surface of the desk. "Anyway, I've never believed in all this prettyfying of fighting vessels." He caught himself, adding quickly : " Not that I condemn you, personally, Henley. The Air Service knows your reputation too well as a great fighting man . . . But you know what I mean."

Henley was not discomfitted. He followed the slow motion of Larrabee's fingers.

" Oh, yes. I know the argument. But you have to find the hands some work to do when they're not fighting. And that rosewood desk now—I treasure that. It's a priceless piece of furniture, at least five hundred years old. It makes the cabin."

" I'll grant you that." Larrabee took his fingers off the deeply-glowing wood and flicked a thumb at the map. "Dunluce. The plan Mordun suggested may work. At least, it's the best we can do as of now. But, I think it relies too much on one ship—"

" Commander Rackham has a fine ship. *Implacable* wins all the fleet tournaments—"

" Tournaments, yes. But in action ?"

Henley did not answer at once and the nagging doubt that had been worrying Larrabee festered some more. The plan called for Rackham and *Implacable* to circle the fortress, draw the defence and thus allow the other two ships to dart in about their business. Larrabee hadn't altogether agreed with that scheme ; but he was under orders and obliged to obey.

Now Henley said : " I don't think we need to worry too much over *Implacable*. But we ought to safeguard a rear exit, just in case."

" I agree."

" Mobius in *Inflexible* is on the top line . . ."

" Yes, I know Commander Mobius. A fine officer. Well, Henley, we should make landfall two hours after sunset. If our navigation isn't completely atrocious, we should then be three miles north of Dunluce. After that, well—"

" It's a tough nut, colonel. But three battleships ought to handle it well enough."

" They would," Larrabee said softly, " if the Gurone did not have a fire weapon to be figured into the account."

There was no answer to that.

" Hey ! Larrabee !" The jovial shout bounced into the cabin, echoing off the walls. " Those so-called steam jockeys won't let me near their precious machinery ! Was I brought along as a passenger, or what ?"

Larrabee chuckled. " Come in, Max, and let the ship's crew stoke their own boilers. Anyway, if they don't trust you around their engines they've probably heard about you from somewhere. Like from the breaker's yards, perhaps."

" Traitor !" Max said, his famous smile gashing his face. He walked in and flopped in a cane chair.

" I don't know why I bothered to send for you from the Demming Desert at all, Max. You could have roasted there and done just as much good—"

But then Larrabee abruptly chopped that off. For an instant he had forgotten in the planning of the raid on Dunluce the agonising truth, that Fay and two friends had been snatched beneath the earth. Max must have sensed that shocked understanding, for he began at once to speak about the coming raid, emphasizing its tricky points, needling Larrabee as only a valued friend could into concentrating his mind once more on the immediate object. After a few minutes of this Domrin walked in, big and bulky in half armour. They began again to run over the plan.

The three battleships raced on across the heaving sea and as the sunset flamed a lurid pink and emerald and crimson all along the horizon they took on the appearance of menacing shark shapes, black against the glow.

" Where the devil is Rackham's signal ?"

Commander Henley spoke in a muted whisper. Lightless and with engines dead, her stokeholds triply sealed off, *Invincible* floated downwind on Dunluce. Ghostly off her port flank *Inflexible* showed merely a dark bulk against the stars.

" He's ten minutes late already." Domrin's deep bass filled the night air with sound, try as he might to soften his voice. Clearly from the ground below floated up the barking of a dog, a weird alien keening that silenced the dog with savage authority. Sounds carried.

" Dunluce is about five minutes away with this breeze, sir." *Invincible's* navigating lieutenant spoke softly. They were all standing in the lower bridge, a wide-glassed expanse protruding from the bow of the hull like an out-thrust chin. Behind them, all along the length of the hull suspended from the giant gas bags above, men were standing to in full armour, weapons at the ready, faces blacked. The very stillness emphasised normally unheard noises ; the faint creak of wickerwork, the sigh of cables and suspension lattices, the groan of wooden decks. Nerves were keyed to breaking point.

This venture was, they all knew, the most desperate of gambles. If they were to stand any real chance at all then the diversionary attack of Rackham and *Implacable* had to go in successfully. Larrabee hadn't liked the plan ; but it had offered a hope of success. Now he found himself wishing fervently that he'd protested more.

Larrabee faced the same lonely choice faced by all commanders in the long lists of history. The decision was on his shoulders. Unconsciously, he straightened those broad shoulders as he spoke.

" In five minutes, when we are over Dunluce, we go in— Rackham or no Rackham."

The ship drifted downwind, closer and closer to the sprawling fortress. Much of the pile lay shrouded in darkness ; but here and there a watchfire burned and in one large hall a whole string of tall windows glowed red. A few clouds scudded, black and formless above, and after the heat of the day the night air struck chill. Larrabee shifted the hang of his sword, pushing the short gladius around so that the plain hilt snugged more comfortably. Behind him Max breathed in stifled snorts down his neck.

" Three minutes."

No alarm, no outcry, no unusual sounds at all broke the night stillness. Larrabee realised he was sweating.

" Two minutes."

" ' Into the misty mouth of hell with our banners all aflame,' " quoted Larrabee, half to himself.

Beside him, shadowy, grim Domrin took up the famous lines : " ' In search of reputation for the glory of our name.' There's a precious little glory abroad tonight, Larrabee."

" Maybe. But there's going to be fighting enough." Larrabee spoke a little louder. " Put her down !"

" One minute."

Faint reflections like witchfire from the hooded battlelamps gleamed on the helmsman's face as he turned his spoked wheel. Unseen above helium valved out. Larrabee felt the deck sway beneath his feet, sway and drop away. They all rose a little on the balls of their feet as *Invincible* swung down for a night touchdown.

Straight before them rose the crenallated wall, twenty foot thick, frowning, immense, a relic of the days when men fought hand to hand without the Steam-given power of flight through the air. The ship slid over the wall. Still no alarm. Larrabee strained his eyes. Through the darkness hanging blank and featureless he made out the central quadrangle, their primary objective. Here was room for both ships to land. But, after that ?

In his head he carried the plan of the fortress. Where he had asked, where would the Gurone carry out their devil's work ? Old Professor Higham had been the only one able to hazard a guess at that. " Here and here," he had said, indicating on the plan the main foundries and machine shops. " They must fabricate their fireweapons in much the same way we mould metal. Strike here, Larry !"

And there, Larrabee struck.

Invincible touched down. At once Larrabee and a score of fighting men leaped to the ground, the ship lurching as their weight came off. Back in the swell of the hull other crewmen would stand by the ballast tanks, ready to slash the throat cords and let the water gush out as soon as the fighting men were once more aboard. If they returned . . .

The second landing party under Domrin jumped and headed at once for the machine shops. Heart thudding within him, Larrabee ran swiftly for the foundry. So far there had been no alarm, so far surprise was with them. The defection—through whatever cause—of Rackham had at least given them the advantage of stealth and surprise. That would not last long.

Max thundered along at Larrabee's left elbow. He would, Larrabee knew, stay there until the last breath was driven from his chunky body. It was a comfort.

The plans had shown a tall stone archway leading off the quadrangle into a wide barn-like building. Through the building, in which were stored the artifacts newly fabricated, lay the foundries. Here, Higham had said, would be found the details of the work the Gurone were doing. Larrabee's footsteps rang under the stone arch. In counterpoint a lone voice raised in keening enquiry.

The voice was not human. Its alien overtones fibrillated the hairs on Larrabee's neck, made him lengthen his stride. Without a pause he led his score on, into the building, through the vaulted space and out into the foundry. Behind him others would be guarding key points and the men from *Inflexible* would be backing up those from *Invincible*.

The foundry lay, cold and dark and quiet. Nothing moved.

Where, here, to start the search ?

Not for nothing were the nobles of Rathvane scientists as well as poets, men of action as well as engineers. Larrabee led confidently on, finding his way partly by memory of the plans he had studied, partly through remembrance of many visits to the arsenals in golden Rathvane.

The alien challenge he had ignored was not repeated. Grimly, Larrabee guessed that some of the guards from *Invincible* were about their silent, deadly task.

Max's hoarse voice reached him. " Nothing stirring yet, Larrabee. Maybe they're all celebrating their victory !"

" That would explain that big hall with the lights."

No alarm . . . No further alien sounds . . . Darkness and stealth . . . Larrabee felt a lifting of his spirits, a surging of confidence. They would do it yet.

And then Commander Rackham in *Implacable* sailed by a bare two hundred feet up in the air, engines roaring, steam whistling, propellers thrashing, showering down lighted arrows and sheaves of steam peltas—a full twenty five minutes late.

At once all was a churning inferno of sound and light and the bestial panoply of war.

The quiet night shuddered as the air was riven by sounds of strife. Torches blazed along battlements and the ring of armoured men, the tramp of many boots, the quick slither of alien feet, reached the score clustered about Larrabee in the inner foundry of Dunluce.

" That fool Rackham !" raved Max. " He should have held off when he knew he was too late."

Larrabee wasted no time on recriminations. He had come here to do a job and, if it was humanly possible, he would do that job. He ran forward toward the vats and furnaces and banked piles of coal. As a habitual leader of men he knew the tragic ease with which any operation depending for success upon accurate timing could go awry. But now he shut out of his mind that part of his character that surged with heady excitement to the call of battle, clamped down on the fierce desire to hurl himself into the fray. He became exclusively the scientist, seeking strange information in alien and unfamiliar artifacts.

eight

From beyond the stone archway, through the vaulted barn, the clash of conflict clamoured insanely from wall and floor. Men shouting, Gurone shrilling their hateful cries, the solid thunk of steel cleaving flesh—alien or human—the stammering bedlam of a steam-peltas and a strange, eerie, blamming of sound like titanic hammers striking slackened drumskins.

Max swung his drawn and strung bow, arrow notched, in peremptory command. Men ran to obey, covering the entrances to the foundry. Steel rang and leather boot soles slithered. " At least they haven't caught up with us yet !" Max shouted as he ran at Larrabee's shoulder to the row of furnace-heated vats.

Those tubs were cold now, fires drawn, scattered heaps of ashes and clinker the only testimony to the fierce heat which once melted iron and made it run glowing and molten. Larrabee had reached the scene of all the effort and toil ; but now he had arrived—what to do ? He stared about helplessly and a sour knot of despair clenched on his stomach.

He recognised the scientific apparatus of iron-working, the moulds and tongs and eye shields, the neat stacks of pig iron, the sacks of sand, the troughs of water. But where, here, was the secret of the Gurone weapon ? Where, among these implements of industry, lay the vital tools, the moulds, the very core of the secret he sought ?

" Hurry . . .!" The call shocked back from the foundry entrance.

Larrabee did not spare a backward glance ; but Max turned and Larrabee through all the confusion heard his swift indrawn breath. But Max turned back to what lay before them and he did not speak to his leader.

[illegible]

The fight was bloody, murderous and not brief.

They lost six men reaching the stone archway and another three crossing the quadrangle to *Invincible*. Here Domrin, at the head of his own wedge, had just reached the hull bumper, and was standing on it, burly, grim-faced, visor up, shouting directions. Above his head steam-peltas in their casemates hissed and shuddered and showered sheaves of darts.

Of *Implacable* there was now no sign. In the background *Inflexible* was herself the centre of a furious melee, her steam-peltas hammering in a smothering mist of vapour. Men shouted and screamed and died; and so did the Gurone who sought with such tenacity to anchor them here for ever.

Torchlights burning at every vantage point threw a ruddy light upon those clouds of steam, painted men's faces red, licked a ghoulish sheen across the Gurone. The stink of blood and steam and hot bearings swirled in all nostrils. Sweat thickened on Larrabee's forehead. His blade showed as crimson now as those torchlights—crimson with blood that had flowed in no man's veins.

Max, at his shoulder, blood spattered solidly from hand to elbow, gasped: "We could use a steam-cannon now!"

"You may thank the Conclave that we don't have 'em!" a young lieutenant shouted venomously—and pitched forward, a gaping wound in place of his face. No Gurone were near him; no assegai or arrow showed. Revulsion flowed over Larrabee—that was the devilish Gurone fire-weapon!

Larrabee had by now associated the drum-like concussions with the fire-weapon; but sound was even less likely to propel leaden balls than either smoke or flame.

"Is everyone here?" called down Commander Henley, standing cool and poised on his bridge, his bloody sword dripping on to his immaculate decks.

"All who will ever get here," answered Domrin, his face a silver sheen of sweat.

"All aboard, then—cut ballast!"

Last aboard was Larrabee. As he leaped for the wicker rail a leaden ball crunched into the wood at his head, splintered chips that flew into his face. He ignored that, hauled aboard, felt the ship rising as tons of water spilled out and over the raging Gurone below. Up ahead *Inflexible* rose like a great grey ghost and already steam was spitting from her engines, her propellers turning.

Dabbing at the blood dappling his cheek from the wood splinters, Larrabee ran forward. He entered the bridge to hear Henley saying : " Now to see how much helium those devils have left us."

" Enough at any rate, to let us lift off." Larrabee forced himself not to interfere, not to take the management of the ship out of Henley's hands. Larrabee was in command of the expedition ; but Commander Henley commanded aboard his own ship. Max fussed up with a first aid box.

" That'll teach you to fight with your visor up," he chided Larrabee.

" Larrabee's like me in a scrap," Domrin boomed. " Damn the safety, I like my comfort !"

" Any pursuit ?" asked Larrabee.

" None that we can see." Henley turned back to face the group from his navigating lieutenant. " We can outclimb an Opteradent in sheer speed. But they'll have 'em out of the stables by now and be saddling up."

" Let's hope the Great Ones give us time before dawn to reach the sea in safety," put in Domrin.

" Where's *Implacable* ?" Larrabee put the question. It had lain smouldering in his mind since the time the ship had so infuriatingly sailed overhead, wrecking their surprise. No one answered. No one knew.

There was no need for Larrabee to ask Domrin if he had succeeded in his quest. Domrin was as much a scientist as Larrabee, as any noble of Rathvane ; he, too, had met failure in the machine shops of Dunluce.

Now tiredness and reaction clawed down at Larrabee just at the time when he knew he must remain alert to face the manifold problems that lay before this ill-starred expedition. He did not relish the thought of returning to Councillor Mordun and Professor Higham and all those others who in secret meeting had sent him forth with such high hopes. But he relished even less the idea of not reporting at all, of sinking beneath the sea for his bones to moulder for ever in the ooze in the great deeps.

With *Inflexible* keeping perfect station on the single riding light Henley permitted, they swam on through the night and saw the dawn begin to infuse the horizon with fresh colour. Not a single Opteradent challenged them. Uneasy, Larrabee forced himself to walk the length of the hull, hung overside from the aft docking pulpit to stare back on the path they had

come, seeking for a flick of wing, a glimmer of steel. He could see nothing beyond the cloud-dimmed stars and a hint of grey sea below.

Max joined him there in the icy rush of wind in the dawn.

" Maybe, Larrabee, the devils found *Implacable*. Maybe they concentrated on her and left us alone . . ."

" Maybe they did, Max. But *Implacable* should have had the best chance of all of coming through. After her run—which Rackham carried out twenty five minutes late—she should have extinguished all lights, dropped ballast and risen at full steam ahead. She should have been clear—" He stopped talking. " Perhaps she has gone on and not waited for us . . ."

" From what I've seen of the way Rackham carries on, that wouldn't surprise me." Max's tones were venomous.

" We lost a lot of good men, Max. But we don't know why Rackham was late. And—he may be dead, he and all his crew."

Max made no answer, turned away to face the rushing wind from forward, his snub nose a cherry red.

The sun rose and glittered down on a waste of waters, and in all that vast sea and sky scape only two lonely dirigibles ploughed their aerial furrows towards the beckoning shores of Golden Rathvane.

He had failed.

To report failure was ignominious ; to report failure on the scale that Larrabee was forced to do to a hastily convened meeting of the free thinkers in Councillor Mordun's palace in old Rathvane was more than that ; it spelt out in unmistakable letters the inescapable doom of Golden Rathvane. The very measure of that failure laid out for them the dark days of the future.

Of Commander Rackham and *Implacable* no word came out of Travanslay. They had gone. Larrabee mitigated Rackham's conduct in his report but Domrin was not so squeamish.

" All that now is of little importance," said Professor Higham tiredly. " What has happened has happened. The question remains—what do we do now ?"

" We fight on !" growled Mordun.

" Agreed. But—how ?"

" The Conclavers, damn their black hearts, are pressing for fresh legislation in the use of steam power." Councillor Soames looked exhausted from an all night sitting. " Daily

their power grows while ours dwindles. Graybrook is a powerful factor, a dominating personality . . ."

To Larrabee and Domrin, sitting slack and spent after their exertions, the talk flowed on like a babbling brook. No single man of all those who had returned aboard *Invincible* and *Inflexible* had seen any artifact that could be construed with the greatest imagination to be connected with the Gurone fire-cannon. All had reported failure. Either the Gurone no longer manufactured weapons at Dunluce or the men of Rathvane were children in science.

Professor Higham spoke and Larrabee realised with a little shock that the fiery old man was carrying forward Larrabee's own dulled thoughts.

" I do not believe that any race, be they human or non-human, is meant to learn the secrets of science by stealing them from others. Details they may learn, tricks, gimmicks, know-how. But the deep basics of the hidden world of science must painfully be brought to light by each individual race of beings. Only in this way may they fully comprehend what it is they have discovered."

" Your experiments with lightning, professor—"

" Too little and too late. I believe we *can* search for hidden knowledge and pluck it from others. But not from the Gurone." He looked sharply at Larrabee. " When do you return to the Demming ?"

" Return—?" Larrabee was bemused. He wanted to return. He would wait until he was ordered back into the Air Service as a Wing Colonel, spend the time at the dig ; but—but was that the path of duty in these troubled times ?

" Yes, Larry, return." Higham showed impatience. " We've tried to counter the Gurone by the sword and, for the moment, we have failed. Now we must turn fully to the methods of science. Only through them will we stand any chance against these damned Earth-spawned aliens."

With a sudden rush of nostalgic affection, Larrabee visualised the site in the Demming Desert. The heat and sand, the rows of tents, the great excavation and the trench through the rock cap—the enigmatic screw cap drew him with the power of Higham's coil of wire drawing a bar of iron.

" Yes," he said slowly. " Yes. Everything demands I return to the Demming—today."

nine

Torrence said : " Custance won't like that point of view, professor."

" Do you ?" Professor Higham shot the question, peering sharply up beneath his tufted brows. His sensitive fingers rested, half-bent, gently, upon the famous globe.

" I have already made clear my opinion. I think these eight globes portray a world gradually being eaten up by ice."

Angela Domrin, her golden hair dusted with the red sand of the Demming desert glanced sideways at Larrabee, standing there grim-faced, drawn of lip, hollow of cheek.

The past month, which had seen his epic fight with the Gurone and his curtailed Grade M Assignment, had altered and aged him. Choked-down grief for Fay and continual worry over the next Gurone attack were wearing him down. Even coming back to the sands of the desert and to the dig, to meet old friends, Torrence, Custance, Max—had brought only sharp memories of that fateful night when Fay and Toby and Mulvers had been snatched away.

Archaeology remained rewarding ; but it posed some sticky problems. Already he was working out in his own mind how long they dared stay here, exposed in the desert. Since the fall of Travanslay the Gurone raids on Rathvane had been stepped up in intensity. Scarcely a day went by without the report of some small village being attacked, the fighting men falling under the leaden balls of the devilish Gurone weapon that killed from a distance no bow could reach. All Rathvane was mustering to arms. Plainly the future lay black and forbidding and filled with the sounds of battle, the screams of the dying and the wind-ripped tatters of flame from burning homes.

And, despite all, the Conclave still insisted that those who believed and were true to the old traditions should not seek to know more of new weapons, but should let the steam cannon moulder and go forth with sword and spear and bow against the Gurone. To the scientists with whom Larrabee came into contact, the very name Conclave was a curse.

As he had foreseen, the last meeting at Councillor Mordun's palace had broken up with nothing decided save the urge in them all to go on fighting superstition to give all men a chance against the Gurone. On the day he had left, travelling in Professor Higham's dirigible with adequate escort, there had even been an outrageous report that the Conclave had been

seeking measures to prevent the use by the armed forces of steam-peltas. This was part and parcel of their attitude, of course, seeking to bolster their own powers and positions through degrading of other men through superstition. A pitiful few of the Council felt strong enough to stand out against their fellow-members who were supporting the Conclave, even though they could see the folly of barring research into science and the betterment of weapons of war. The great mass of the people were split down the middle ; and no nation could fight the gruelling war demanded by resistance to the Gurone with only a half of its fighting strength. The whole picture was a muddle.

As Higham had said, prowling the wicker cabin of his airship en route to the Demming : " It makes you wonder if mankind has the right to stay master of the Earth."

Black superstition and the denial of scientific ways of thought also made one think like that. The Conclave had much to answer for.

And now Torrence, a little awed in the presence of the famous scientist, was talking to Higham and finding to his surprise that here was a kindred spirit.

" And Custance, your geologist, then, doesn't share the view that ancient civilisations flourished on Earth ?"

" Oh, yes. He thinks that, now. Larrabee persuaded him."

" Hmpf. Well, that is one damn good news. Now perhaps we can convince him that the earth hasn't always been as we know it today." Professor Higham looked again at the eight globes.

He stepped then to the flap of the laboratory tent and stared across the sands. Work on the dig went forward in an even flow. Torrence had indeed, as Larrabee had known he would, maintained excellent discipline and results. Angela and her assistants had many items to draw, measure and catalogue. Every day was full.

Walking up from the direction of the trench where still the enigmatic metal cap remained screwed obstinately into the rock, Max saw Higham and Larrabee at the tent flap and waved. Max's round face was as red as a furnace fire. His putty nose looked as though it would melt and drip off at any second. He stopped when he reached them and wiped his forehead. " All your gear is down there now, prof. The whole bloomin' works. But what it might be, now—"

" You're a good steam man, Max," Higham said, tickled, Larrabee saw, by Max's use of the abbreviation. " You may have to learn new tricks."

" Have you a chitty from the Conclave ?" Max asked, rudely. Then he made a disgusting sound and his grin almost acted up to its reputation.

" Can't we forget the damn Conclave for a moment ?" asked Torrence coming to the flap. " If you can open up that screw, professor," he added, respectfully. " We might—"

" We might what ?"

There was no hope of saving Fay or the others alive. Larrabee hoped Torrence wouldn't be fool enough to suggest that. Torrence didn't. Instead, he said : " We believe there were other intelligences, other civilisations before us on the world's surface. This then must be some of their work. But why should it still function ? How can a thing that old still operate ?"

" Custance checked the varves. A good two million years," Larrabee told the professor quietly.

" So old, so old," Higham said. " Well—if they could do miracles in those days, why should not we do them today ?"

" The damn Con—" Max started to say. He caught Torrence's eye and subsided.

" Well, let us go and see what an old man can do," wheezed the professor, clapping on the floppy hat he had borrowed. Following him they all went down into the excavations and thence into the trench of tragic memory.

The metal cap, dotted with its inexplicable studs and levers, stared back at them from the rock. Higham tapped it with a fingernail. " Sweet ring. Metal unknown, of course ?"

" Completely. We've had metallurgists down. Baffled."

" Could have used young Prowdon here," said Higham. " But he's stoking the furnaces on a war dirigible and being shot at by the Gurone on the frontiers. By damn, yes."

A shout arrested their attention. Custance was hopping on the lip of the trench.

" Airship in sight !" he yelled down.

" I'll go." Larrabee sprang for the ladder. " You carry on down here. Visitors may be welcome—or not."

Going up in the steam lift he had still enough spirit left to jolly Custance on his avoidance of the great professor. " He rather wants to see you, you know, Custance. He is an admirer of your work."

Custance hadn't been the same man since the loss of Mulvers ; but he cheered up a little at Larrabee's remark.

" What I'd like to know is what the old man thinks he can do down there." The lift reached the top red-scraped lip of the excavations and they both sprang out. " Two million years. And all catalogued as neatly as you like in the varves, with all the usual variations in thickness. I sometimes wonder—"

" Well, you can stop wondering who is aboard that ship." Larrabee began waving his hat vigorously. " That's Domrin's ship." He called to a running student : " Nip down and tell Angela Domrin her father's here, will you."

Domrin hit the ground before they'd tethered his craft, hastened over the sand to Larrabee and Custance. His tough face was red with exertion and anger.

" Larrabee ! Big trouble ! The damn Conclave have—"

" Can it wait for a moment, Domrin ?" Larrabee cut in sharply. Then, in a lower tone : " In my tent ? Don't want everyone scaring around with rumours."

Domrin kept a tight-lipped silence until they were in the tent, which was empty. " This is no rumour, Larrabee. That damned poltroon-infected Conclave have decided that your excavations here constitute a blasphemy of their principles. They have secured permission for you to be taken off the site and all work stopped—"

He couldn't go on for the roars of anger from Custance.

Then he said : " I've raced ahead to warn you. They're sending a dirigible to carry out the order." His face expressed disgust and contempt. " And they've sent Graybrook, as their newest recruit and most influential member, to do the dirty work."

" He'll just love that," was all Larrabee could find to say.

Custance shouted : " We won't stand for it ! By the Great Ones, we won't."

Slowly, thinking his way along, Larrabee said : " I particularly want to get into that blasted screw opening. Everything we've done here so far points to that as being the most important find in recorded history. Simply that ; because it goes back beyond recorded history and our legends of the dim times before that—"

" Recorded history began towards the beginning of the Tubbsian Empire. That epoch lasted for twenty-one thousand years." Custance was speaking more coherently now. " Then came the long period that we call the Muscle Age—or the

Manual Age—with its ups and downs, great kingdoms and republics. In all, something like thirty thousand years."

" During which time," Larrabee said bitterly, " the Gurone arrived."

" Yes, and from the end of the Muscle Age, when the dark ages swept over the land until the applied use of steam, another three thousand. Allowing for inaccuracies of calendars that adds up correctly. And now we are in the year fifteen hundred and sixty-two of the Age of Steam."

" So, you see, Domrin, if we can penetrate into whatever lies behind that damned metal cap, we'll be going back beyond the earliest periods of the Tubbsian Empire beyond that, back and back—and we'll find a technology superior to anything we know of today."

" Fifty-five and a half thousand years back to the beginning of recorded history, when men learned how to read and write—and the legends they wrote spoke of peoples and empires, nations and wars long before that."

" I recall the legends of the primitive peoples," Domrin said slowly. " And from them I suppose our own myths arise. Stories of the Great Ones in their timeless rest—"

He paused. The idea had struck both Larrabee and Custance at the same time. The silence stretched.

Then Custance said forcefully : " I don't believe *that* !"

" Maybe not, Custance, maybe not," said Larrabee. " But we must get behind that metal screw. Don't you see," he said violently, turning on Domrin. " A people who could build a metal contrivance that would still function after two million years—if we could see what else is there, explore their work—we must find something we can use against the Gurone. We *must*."

" I am convinced." Domrin stepped to the tent flap and looked up into the burning sky. " But you'll never convince Graybrook. His daughter went that way. He's no love for anyone or anything who had a hand in that."

" Custance," Larrabee said in his commanding voice. " Go and tell Professor Higham and Torrence. Tell the men to arm themselves. I mean to hold off these damned Conclavers until we can open that screw." His face was lean and grim with the resolve. He knew, win or lose, it would break him forever in the land of Rathvane. " Just give me time to open that screw. That's all I ask. Just time to open it and go after—and go in !"

Graybrook's dirigible was a true airship of war. She floated menacingly above the excavations, banners and pennants

fluttering from her rigging. She dominated the site. There was no other ship there that could live in the air with her.

Graybrook swung down a rope ladder, quick and lithe, his coal-black clothes tight about him. Above his head the snouts of steam-peltas aimed downwards, hungrily.

The men up there were all dedicated Conclavers. Clad in black leather, bronze studded brigandines, with round steel helmets flaunting a short clump of black feathers, they watched their chief descend.

Armed and armoured, the men of science awaited the man of black sorcery and wizardry and superstition.

To Larrabee the feel of steel breast and back, steel helmet, steel leg harness, felt good ; a man's dress after the grey overalls of his horse mucking days. His long rapier of nobility hung from the baldric at his left hip, the short broad stabbing gladius at his right. On his back the quiver of arrows thrust up above his right shoulder. His shield snugged comfortably on his left arm. He carried an assegai, openly balanced in his right hand. A scrap of poetry flittered through his brain, and he turned to shout a word of encouragement at Professor Higham, labouring over his strange jars and wires at the metal cap.

Torrence, similarly armed and accoutred, Custance, Max, others of the scientific staff of the archaeological dig stood about ready to buy the time the professor would need.

Graybrook was a tough-fibred noble of Rathvane with no time to spare. He strode along the trench, looking neither right nor left but keeping his eyes fixed on Larrabee.

" I command you in the name of the Grand Council of State of Rathvane to cease and desist from your devil's work !" His voice was a strong shout. Men in the ranks muttered and arrows were nocked into bows.

Larrabee answered not a word. But he raised the assegai.

Graybrook did not stop. Above their heads the steam-peltas frowned down. The sun struck a blinding shaft of light from the assegai's point, clear and glittering in the orange glow of the trench.

" Stop ! D'you hear me, stop !"

Professor Higham looked up sweating from his apparatus. " I don't know," he whispered. " I don't know ! My knowledge is small and weak and I sense—I sense—"

" Go on, professor," Larrabee shouted harshly. " You must."

Larrabee, Domrin, Custance and Torrence stood between the professor and the awful advancing figure of Graybrook, stiff in his black armour. Graybrook lifted both hands. His left clamped down his visor. His right whirled a jewelled dagger. The jewels caught the sun as the blade flew.

Professor Higham shouted and staggered, hand clapped to his right shoulder where the dagger glittered evilly and blood flowed.

" Damn you, Graybrook !" shouted Larrabee, and hurled the assegai. It struck Graybrook's pointed shield, struck and glanced to fly, ringing, to pierce a wooden ladder. Men in the black and bronze of the Conclavers were running into the trench after their leader.

" Larry !" screamed Higham.

Larrabee turned. The professor was standing before his apparatus, from which blue sparks jetted like the steel on an armourer's grindstone, crackling. He sagged back, the blood staining his bright clothes. " Larry ! *It's moving* !"

And the great metal screw slowly revolved.

In that frantic instant, buoyed by his rushing men behind, Graybrook charged. Larrabee met that smashing onslaught with upraised shield and felt himself forced back. He swivelled himself desperately behind the shield. The screw was winding forward ponderously. At its left side the door gaped, square and open and beckoning.

With a great shout, Larrabee leaped for the gap.

Graybrook, pressing on after with drawn sword, stumbled. Somehow, Domrin's sword was flickering, and Custance and Torrence, anxious to follow Larrabee, forced their way on.

Gloom surrounded them. Five men, catapulted by their own hates and angers, crowded in to the gap, their swords snagging and jumbling in the press. " And this," thought Larrabee, " this is scientific research !"

The squeal of the closing door cut that off.

The five men, Torrence, Custance, Domrin, Larrabee and Graybrook, plunged into inky darkness. Trapped, together, as Fay and Toby and Mulvers had been trapped.

Then in that pitchy gloom Larrabee heard Max's cheerful voice. " Seems we'd best stop fighting now, gents, and find a way out."

But the way out was sealed. And beneath their feet the smooth metal moved. It slid silently and evilly back. drawing them with it into the unyielding darkness of two million years.

ten

The basic fear of darkness swamped down over Larrabee then and he was thankful that the others trapped here with him could not see the terror he knew to be written large on his face. The mailed-gloved hand grasping his sword shook. Of them all he, only, had wanted to enter here. The others had been swept in by the blind anger and hatred of that frantic moment in the trench as the old professor laboured over his apparatus and the great screw had moved forward.

But now that he was here, actually in the same predicament that had engulfed Fay and Toby and Mulvers—was he so sure? Was he so confident that this was, after all, what he wanted?

Could he rely on Professor Higham again to open this dread portal?

The movement beneath their feet had steadied; but whether or not they had stopped, Larrabee could not say. The idea of rushing headlong down that metal tunnel they had partly excavated into bottomless darkness chilled him, dragged out memories and fears he thought he had forgotten. He felt that he must cry out when the direction of movement abruptly changed.

Someone collided with him. He felt the warm touch of armour against his arm; then Torrnece was cursing and flailing to regain his balance.

"Going down now, I'd say," came Max's cheerful voice.

Larrabee bit back the savage words. Didn't Max understand what was happening? Didn't he realise they were being carried into everlasting blackness?"

Custance said: "Can you give me a hand, Domrin? I think Graybrook is unconscious."

"I'm no such thing." Graybrook's heavy, biting tones reverberated in the metal space. Larrabee waited for him to go on—but, surprisingly, the Conclaver had no more to say. Probably he just couldn't believe what had happened.

The movement was now decisively downwards. And with that change of direction a fierce light sprang into life along the walls. The men cried out, closing their eyes. When Larrabee could open his eyes again he saw a thin and glowing strip of light ablaze down the walls, without a flicker, even and steady, beating like the level radiance of the sun.

" What forsaken light is that ?" said Max, gasping.

" Not gas—not torchlight—a radiance contained in a tube of glass," Larrabee breathed, awed. Then, sourly, he added : " And not glass, either. It'll be that damned plastic the ancients were always using."

Terror clutched at the throat of every man there. But they were men of Rathvane—men and nobles of a culture that had, albeit unintentionally, bred for courage. Very soon they were exploring the cylinder in which they were entrapped, marvelling

Leather that was not real leather covered benches running along smooth featureless walls. The light strip encircled the chamber just above head high. And that was all. Already Larrabee knew this was a mere conveyance, a cabin actuated by forces beyond his comprehension ; now he composed himself to await the end of the journey.

The end was not long delayed, perhaps a half hour. The cabin stopped with a perceptible jerk and Larrabee had time to wonder at the smoothness of the transit that a simple terminal jolt like that should be so apparent. The jogging of a steam car rattled everyone's bones back in Old Rathvane.

The metal door slid open.

Two or three of the men stood between Larrabee and that door. He forgot all about courtesy, all about the niceties of personal conduct that operate in a society where men wear swords upon their hips. In a pushing lunging rush he scattered the men and, with a ringing shout he could not repress : " For Rathvane the Golden !" echoing between the metal walls, he leaped through the doorway.

His feet hit grass. He stared out over a wide valley of trees and rivers. The sky pressed as a golden shimmer low above and he could smell sweet fresh air, the scent of leaves and flowers, and the penetrating odour of machine oil and warm metal.

The others followed him. Standing there in their armour, their weapons at the ready, the men of Rathvane stared out over the peaceful scene—and wondered.

" By the Great Ones !" breathed Graybrook at last. "Where are we ?"

That Graybrook had been first to break the silence, that he had been the one to admit, for the others, that they were where they were, amused Larrabee. Domrin's sword whickered

back into its scabbard. Max lowered his taut-strung bow. Custance and Torrence relaxed their tense grasp of assegais.

" Well," said Larrabee, " wherever we are, we won't starve or thirst to death. And that means—"

Domrin interrupted peremptorily. " I assume you all noticed the absence of dust in that—that car ? This valley is as well tended as a Councillor's private park in Travanslay was before the Gurone took it." Domrin's face beneath the steel visor was graven strong, unflinching. " I say there are people living here—wherever here is."

Custance had been nosing about. Now he looked up, the assegai tucked under his arm ludicrously. " On a very quick judgment I'd say this is an extinct volcanic crater of great extent and the tunnel in which that—that car ran penetrates the crater wall and this end emerges above ground level—"

" And where in Rathvane is such a gigantic crater ?" asked Torrence. His red hair was hidden by the helmet ; but his face expressed its usual scorn.

" We're no longer in Rathvane," said Domrin.

" And just have a quick look at that sky," observed Max, prodding upwards with his assegai. " Don't look right to me, gents."

The sky did not look right. It looked very very wrong.

There was no perspective of vasty blue. There were no clouds, white black or grey. There was no sun. There shimmered only that inscrutable golden lid over the world.

For one, Larrabee was conscious of the need to clamp an iron repression down over his screaming terror. He stared about haughtily, as though he were an honoured guest invited to a neighbouring noble's shikar, surveying the ground ready for the breaking of the game. His instinct yammered at him that this place was evil, was a place apart, set away from the sight of men and the golden radiance of the sunlight, buried beneath the earth and lit only by devil fires in glass tubes. No—in plastic tubes, dammit. And that little tripping thought brought him up short.

If this was a place, why then, if as Domrin had said men were here, why should not the men of Rathvane also be able to live here ? There was water in the rivers. There was food on the trees—and small deer showed dappled between the trunks. Men could live here.

Men—and women.

The same thought must have occurred to Graybrook at about that time. His ashen face with the constricted nostrils, drawn and severe beneath the great black steel helmet, tautened with a grim resolve that, Larrabee quite clearly saw, ran clean counter to everything that Graybrook had come to believe. A Conclaver, pitchforked into a wild world beneath the ground, shown examples of a technology that must have made a dark compact with all the devils of hell to create tunnels through rock that ran a car silken smooth, that put unblinking fire in glass tubes, that maintained all this intact for two million years, a Conclaver faced with all this had pitifully few defences to fall back upon.

Graybrook, besides being a Conclaver, was a noble of Rathvane. He turned stiffly to Larrabee.

"If we find my daughter alive, and we return safely to Rathvane, then—then perhaps I may have reason to alter my opinion of you and your black arts."

"Dirty Conclaver," someone said behind them. Max, probably, Larrabee guessed. Their voices all rang from the great helmets of war.

Choosing to ignore the remark, Graybrook took the first step down the grassy slope, out towards what the valley had to offer. Custance lagged to look at the metal cap, the metal car with gaping doorway in which they had travelled here. The cap looked exactly the same as the one they had dug up in the Demming Desert, save that the screw threads went in the reverse direction, and the car opening was on the right instead of the left. Inexplicably, that door remained open.

Torrence saw Custance looking and shook his head. "I doubt there is anything we could do to prevent its closure."

"A tree trunk—" offered Max eagerly.

"The screw pulverised rock, Max. I don't think a tree would halt it a single inch." Larrabee tried to infuse confidence into his voice. "When we need to return we'll find the way open."

"You always were damned cocky," Torrence said. But there was none of the acid bite in his words that would have stung a month ago. "Let us explore the valley. *Someone* built the tunnel and the screw and the car. Who?"

Marching steadily down into the valley, no one of the six of Rathvane knew the answer to that question.

eleven

To a thinking man of Rathvane, a man reared in the precepts and principles of the Steam Age, scientific knowledge could be sought for two reasons. One, the one to which Larrabee and his like looked to now primarily for help against the Gurone, examined scientific advance purely with an eye for the betterment of man and his condition. In the old days of the Muscle Age, before the heroic discovery of the power of steam, men had lived in servitude to other men, like beasts they had laboured all their days at a single task. Rathvane with its young ideas that all men were entitled to an equal chance had seized on the Great Ones' gift of steam power, using it where other races used slaves. The slave cultures died the death of the inefficient.

Larrabee knew a little of a couple of other continents on the earth's surface ; nothing at all of the lands held by the Gurone. Halfway around the globe he would have been bodily transported to lands of myth and fable. That globe he had bought on the tenth level of old Rathvane and had compared with the globes of plastic brought up out of their sandy graves represented an enormous technical and geographic achievement. That it was probably twenty per cent inaccurate two continents away from Rathvane had to be expected.

Twelve continents, five of which were occupied by the beasts of Gurone—no, by Steam ! Six, now that Travanslay had fallen. Mankind was being pushed off his world.

Walking with the other five down into the lush valley, heading for the nearest river course, Larrabee recognised that they were now following that other, second branch of scientific investigation. He remembered Professor Higham's passionate query : " Why should not one explore science for fresh facts purely because of the beauty of the facts themselves ?"

Well, come what may, they were exploring this hidden valley in the light of that second scientific precept.

And—they were looking for a girl and two comrades lost here . . .

Graybrook walked alone. Torrence and Custance followed, discussing everything with their scientific facets uppermost. Domrin and Max were heatedly arguing, the noble and the mechanic, over the composition of the golden sky.

Larrabee kept looking back to take bearings on the valley side so as to find the metal cap again. The inscrutable sky swept down and appeared to vanish close behind the cliff wall, stoppering-up this forgotten valley.

He began to entertain some curious fancies concerning that sky. His attention was taken back to his companions as Graybrook, alone and black in the van, halted. The others closed up.

Away down the slope three men in armour walked out from a clump of feathery topped trees. Max brought his bow up. Torrence and Custance, science pushed aside, became again warriors of Rathvane. Slowly, Larrabee nocked an arrow.

" Listen, Graybrook," he said, putting authority beyond his years into his voice, " we don't know where we are. We don't know what we shall meet. But we are men and nobles of Rathvane. I therefore suggest a truce—that we work with and for one another."

" Agreed," Graybrook said shortly, and set his visor down in preparation for combat.

The three men below stopped. Their heads went up as they stared along the slope to the six of Rathvane. All in armour, they were, all in a sheening blue-grey steel that covered everywhere with mail and left not a single chink. Never before had Larrabee seen such perfect armour.

Then he looked more critically, wondering why with such perfection of metal tailoring they had seen fit to retain the simple casque that, with rounded top, fell straight to rest directly on the shoulders. In that casque were set two round-lensed eyepieces that must assuredly severely curtail vision from within. Why, the man in that suit of mail could see with clarity only directly ahead !

" I see no weapons," observed Domrin suspiciously.

" Remember the damned new Gurone fire-cannon," Larrabee said. " Who are these men ? They may have weapons we know nothing about."

" They don't seem to be doing anything special," said Max.

" Six to three." Graybrook drew his sword and advanced.

A voice, high and shrill and with strange overtones that set a thrill along Larrabee's nerves broke from the three strangers. The words were entirely unintelligible.

The two parties drew closer. Now Larrabee could see the extraordinary thinness of these men's arms and legs ; the feet

were mere square boxes of metal, ridged for grip, and the hands—the fingers must have been as thin as the bone to be covered as they were with individual metal gloves. The three walked with a stiff angularity that such a full suit of mail must impose ; although Larrabee's leg harness was relatively complete and yet he walked with his old litheness and supple-ness. One of the figures raised a hand.

After ten fruitless minutes both groups realised that they could make little headway in speech unless they set about it methodically and, for the men of Rathvane, there was no time to sit and learn languages.

"They don't seem hostile," Larrabee said. "We ought to push on. If they follow, all right. If they seek to stop us why, then——"

Max's bow was still strung, the arrow still nocked.

The two parties began to walk down the grassy trail, the three strangers politely indicating by gestures a way they wished the six to follow. There was an aura, a feeling, a sensitive something about them not quite touchable by Larrabee, an impression they created he could not comprehend. Of one thing he now felt sure, despite their wonderful armour; they were friendly.

Custance, with the same idea, voiced a further query.

"This valley with the queer sky—if sky it be. These men dressed all in armour, this peaceful valley—all this reached only by a tunnel and an entrance that has lain sealed beneath the rock for two million years ?"

Domrin said heavily : "I suppose like us all you were expecting something strange, unworldly, quite outside our own experience, devils, perhaps——"

Max galloped up, munching. "First class fruit on those trees, gents," he announced. "But what fruit it is is beyond me."

"Have we perhaps gone back two million years ?" whispered Larrabee, half to himself. Torrence, at his elbow, jumped ; but said nothing.

The three armoured strangers led on and, beyond the belt of trees the party halted at the river. The men of Rathvane all drank gratefully. They tried some of the fruit Max had found. It was good, golden and pulpy, sweet but not syrupy. Max, his famous grin distended, offered some to their strange hosts. He was greeted with a torrent of words to which,

coupled with the unmistakeable gesture, he replied : " No ? Well, all the more for little old Max, then."

The three inhabitants of this land appeared to want the six from Rathvane to hurry on. Falling in with these wishes, the party again took up the trail, which led for a distance through the trees, eventually debouching on to a wide plain, screened by a rounded hill, flower-bowered, full of the golden light, inviting. At the far side, blocking off all view of what lay beyond, a mighty pile towered up. Larrabee realised that it must lie hidden from observation at the point at which they had left the metal screw car—but from the height of the buildings, white-marble, red-brick, ornate towers and spires and vasty domes, he had to discard that idea, particularly when, turning, he found he could see the metal cap on the hill quite clearly.

One of the strangers said something, high and quickly, and Larrabee guessed it to be explanation. What that might be, however, he hesitated to think. Invisible buildings ? The others were pressing on, exclaiming in wonder. He followed them, seeing more of the strange armoured men running from colossal doorways in the buildings.

Then he looked again. Running with the Strangers, holding out their arms in frantic welcome, quite clearly, were Fay and Toby and Mulvers.

The story of the missing three was incredible, simple and in essence brief. Despairing of ever finding their way back through the tube and unable to comprehend the men of this strange world, they had decided to make the best of their lot and find out as much as they could, and look always to the rescue they were confident would come.

Later, Toby confided to Larrabee, and Mulvers to Custance, how fragile that hope had been, and how low the spirits of the forgotten three had sunk. They lived in one of the giant rooms of the tremendous buildings. Food and drink were no problem. Their involuntary hosts walked everywhere in armour, although they carried no weapons that the three could recognise, and appeared to accept the three of Rathvane among themselves.

" But what a place this is !" exclaimed Fay, after they had all rested and eaten and the first tumbled words of greeting had exhausted themselves. " A huge series of buildings with a handful of men living in them. And we have seen no women at all—"

" Perhaps the women also wear armour," suggested Domrin.

" Why do men wear armour ?" asked Torrence. " Because they have to face an enemy. Well—where is the enemy here ? Us ? "

" Hardly," said Mulvers, jigging about still with the excitement of being rescued. " We get on famously, and I've already established a basic group of words. These men have been here a long time—"

Custance asked his question, and Mulvers chuckled. " I don't know how accurate your varve counting was, but assuming they use an annual measurement as we do, and they do use a decimal mathematical system, then two nundred years is the answer they give—"

The babble of conversation after that made individual comment impossible. Larrabee stared covertly at Fay. She looked edible. She sat by her father and already some of the iron had left that unbending figure. Larrabee knew that on other woman than Fay would do for him ; but the seige of her heart would take time, and more than a mere dramatic rescue. She'd greeted him affectionately ; but still with that cool feminine stand-offishness that infuriated him.

" You must come and see the museum, all of you !" she said, jumping up. " So much is there that it would take a lifetime just to catalogue."

Larrabee sought out Domrin as the swollen party ascended winding stairs into the immense and awe-inspiring buildings. Toby skipped ahead. The others had kept their armour on, and this despite the heat and the three old-timers' here assurances that nothing ever happened. Why did the inhabitants wear metal armour all the time ?

" Assuming that we can get back through the tunnel in the screw car, Domrin," Larrabee began earnestly. " I think we must search out here one thing for now, and one alone—"

Domrin smiled with satisfaction. " A technology that can build the marvels we have seen, and build them to last that fantastic number of years Custance is always prating about—must have other marvels for us."

" Yes. Keep your eyes peeled. I still don't altogether trust Graybrook, despite his assurances."

" Nor I. But his daughter's back—"

" Hullo." Larrabee pointed. " Toby's calling us away from the main body."

The youngster stood before the opened door leading on to a room of a size that Larrabee would have thought impossible. Roofing materials alone presented problems no architect of Rathvane could have solved. Around the walls and in glass cases on the marble floor stretched exhibits.

"A museum," Toby said. "And——look, Larry——Number One."

Immediately to the left of the door a glass case contained a black velvet stand. On the stand reposed a single silver globe, some eight inches in diameter. A small printed label evidently explained what the object was. The words meant nothing to Larrabee; but the errant thought entered his head that they looked framed from the same letters as the letters on the globes they had dug up from the Demming Desert.

"That's not Number One," Toby said. "That's the end. Here——this side of the door."

The case there showed a familiar object. A flint hand axe, similar to many Larrabee had taken up from early digs. The next case showed more hand axes and then an axe with a spur by which, Larrabee knew, it had been lashed to a wooden handle. They walked slowly in the silence, aware of the unblinking illumination flooding down from those globes in the ceiling, from case to case following the development of axes, spear heads, bolas, until they came to cases of flint arrow heads. The bows were there, too, small, flimsy constructions. Gradually the artifacts of war grew more complex and more deadly. Copper and bronze replaced flint, bone and crystal quartz. Then iron and then steel. Larrabee gazed with respect at a case filled with beautiful swords. Lances, spears, assegais, arrows, a gamut of the destructive powers with which he was familiar faced him.

Slowly, he turned about. He was barely half way up one side of the vast chamber.

Walking on, he saw no sign of steam weapons. Then he stopped short, pointing. Domrin gasped.

"The damn Gurone weapon! See——almost the same."

"What's this about the Gurone?" Torrence had joined them. They all stood looking at the cases, seeing the clumsy metal tubes gradually becoming more refined, lighter, growing clumps of apparatus at the fat end, looking more and more alien and deadly.

" We've got to break the barrier of speech !" exclaimed Torrence violently. " These people are men. They would help us against the Gurone."

A doorway showed beyond the next case. Larrabee looked within. A fantastic sight met his gaze ; machines and instruments whose function he could not guess, but whose purpose he now knew beyond doubt. All were machines of war.

They formed a break in the orderly sequence of development and he saw other doors opening out, each obviously containing a more detailed selection of the weapons of the time they portrayed. He turned back to the weapon in the case by the door. It looked like a small mirror, with a hand grip and a trigger such as a steam peltas used. He wondered what would happen if he reached in and . . .

His hand, half raised, fell to his side. From the open door a stranger, still in full armour, strode out. He raised a hand. He didn't bother to speak.

" Well, that settles that," said Larrabee.

High, excited voices rose from the doorway. Max and the others walked in. " . . . motive power and not steam !" Max was saying. " Incredible. The piston and cylinder layout was simple enough to follow ; but there was no steam boiler, and so many attachments—"

" And then the other motive power apparatus," said Mulvers, with the mischief of one who had been here before. " You saw, Max. You're a steam man. On those machines you just pressed a button and they worked. How ?"

" Max," called Larrabee. The engineer came over. " Just start down there, by that case by the door, and follow around, will you ?" Max did as he was bidden. Larrabee looked for Fay and her father. They were not in the weapons museum.

twelve

The rest of that day was spent in wondering, wandering from room to room of the buildings. There was so much to see and marvel over and fail to understand that the daylight had faded before they realised. That golden shimmer in the sky that was not a sky dimmed, grew grey-edged, shaded to a drifting grey that was strangely soothing. Stars shone out. And yet everyone knew they were not real stars ; and their configurations were such as none of them had seen before.

They ate more of the fruit and drank sparkling water from a stream and then slept on soft cushions provided by their armoured hosts. "Do they sleep in their armour?" asked Max.

The following morning the six newcomers awoke to breakfast and then to the entrance on to the plaza before the buildings of a stranger who beckoned them. Fay laughed. "Go on. You'll find out." Mulvers said simply: "I'd like to see it again." And so the whole nine from Rathvane went where the armoured stranger led.

The room was large and in semi-darkness. One wall was white, the others pale blue. That white wall abruptly glowed with light. The three laughed at the expression of the six.

Then, Larrabee saw pictures on that white wall of light. He saw men and women moving about giant buildings, and thought he recognised the buildings in which they now sat. He gained the impression that these pictures had been made at considerable intervals. And they moved! On that white wall he looked as it were into the city and saw men and women and strange vehicles moving, with airships in the sky that were like no airships with which he was familiar.

Everyone wore heavy clothing. Furs predominated. He could not understand half of what he saw. Men labouring at mighty machines. Workshops hammering at full blast. Then an incursion of eerie, repulsive shaped beings that were like the Gurone and yet not like them. Everyone gasped as they saw these monsters being cut down by weird luminous rays from machines set in the towers of the city.

Briefly, sound came from the wall, a screaming horrific tumult. Then it vanished and Larrabee guessed that their hosts had cut it off. More and more monsters swarmed down over the city and aerial shots showed them streaming down from the north, where a strange far-off whiteness glimmered and winked into the blue sky.

He saw mountainous machines moving mountains. He saw a whole section of the city sink into the earth. He saw a vast roof sheeted over that sunken portion of the city, clamped over it as a woman clamps the lid on a cooking pot. Then, for the first time on the wall of moving pictures, he saw that the men there had donned armour. They clanked about soundlessly, working at tasks clearly aimed at maintaining that sunken portion of the old city.

Above ground men and women and little children filed up long ramps, entering a silver metal building. There was a feeling so powerfully communicated that Larrabee felt the tenseness invade his being. Those people were sad. There was a racial agony written up there on the wall in moving pictures and he could not grasp its import. The view of the people and the building receded, as the sight of the ground drops away as an airship rises.

There was a long pause, with that silver pointed building rising in the centre of the wall.

Then the building rose into the air, rose higher and higher, faster and faster until it had altogether vanished into the sky.

Then, immediately after that, the picture showed a man in metal armour in the building left beneath the earth. His face was not visible beneath the metal visor with its two round lensed eyes. He was looking at a square of whiteness and somehow Larrabee knew that that square was a similar machine to the one which put the pictures on this wall in this room.

The square went black. And in its centre blazed a star.

Brilliant coloured lights flickered on the wall. Then Larrabee watched short sections of picture, flashing by, spanning the ages. The surface of the earth all in searing whiteness. Monsters roaming that waste—and men ! Tiny men running and trapping and eating the monsters. And then it seemed to Larrabee, seeing pictures of the inside of the city buried in the earth, that the numbers of men in armour grew fewer. And—he could have sworn that they were the same men as he had first seen—the same men who had met them when they had stepped into this fantastic world.

The tunnel was shown, many of them, radiating out to the continents of the earth, buried under the ice. And when the ice receded those continents had changed ; but the tunnels remained. He saw men enter the hidden world from the tunnels, and saw them leave. Men in skins and carrying flint weapons. He saw men in feathers with weapons of bone enter, and leave in all safety.

Then—he saw Gurone enter !

The men in armour reacted to that stimulus. Fires blazed from their hands, and the Gurone fell in incinerated clumps. And Larrabee saw that the fires blazed from small instruments with a mirror and a butt and a trigger—and more he remem-

bered. He recalled seeing one of these weapons at the belt of an armoured man when they had entered ; but, not realising it was a weapon he had not taken detailed notice.

Then, on the wall he saw a metal cap open to the impetus of a screw car. Out stepped Fay and Toby and Mulvers. He gasped in surprise. Almost at once he was watching himself and his five companions step from that screw car.

The wall went white. Lights blazed up in the room.

Larrabee did not know what to say.

It was left to the irrepressible Max. His strong voice sounded, loud and brash. "What price the Conclave now !"

Graybrook rose. He was ashen pale. Fay looked up at him and then rose quickly, took his arm. Together they went out. The others followed, and no one felt like talking.

Two days later the armoured men made it perfectly clear that the men of Rathvane should leave. In all that time Larrabee had been unable to get at a weapons' case, or to have a moment alone. One of the strange mailed men could be guaranteed to be somewhere within sight. Just how they managed to know where they were baffled Larrabee. He had tried to avoid them, only to leave one and run slap into another.

Perhaps they had in some way perfected the hypothetical transference of thought some people were always prating about ?

On that last day they were rounded up—by the simple means of hand-pointing directions—and set off along the path to the metal screw. Domrin wanted to fight. After a discussion in which Larrabee pointed out that each of the mailed ones carried that strange mirror-like weapon at his belt the idea was tacitly dropped. They went out in that glorious golden radiance and up to the hillside. When they had reached the cap and turned to look back the great complex of buildings had vanished.

They were all frantic with frustration. So near to frightful weapons that would destroy the Gurone for ever—so near and yet implacably barred. Larrabee whispered to Max.

Torrence was complaining that these strangers had given no slightest desire to teach the men of Rathvane their language. Graybrook was holding on to Fay as though she was his last hope in a sea of insanity. Custance and Mulvers, as usual were arguing. Max began to walk back down the path.

At once one of the three armoured men followed him.

" Go down now, Domrin," Larrabee said, tense.

The tough warrior set off, his miner's frame ready for instant action.

Another armoured man followed him.

Then Larrabee went down.

He struck off to the right. He did not feel overjoyed about his mission ; but for the good of Rathvane, to maintain man's precarious hold on his world against the Gurone, he must do what he must.

Circling back he kept trees between himself and the armoured man. His own armour felt like a second skin ; but for one who lived in it all day it must be like his own skin.

He watched and waited his time. When he struck he put all the pent-up force into his blow that the millions of earth behind him demanded ; it was for their future that he laid this cold, remote, disinterested stranger low.

Three minutes later he was running back up the hill.

Domrin and Max, with their escorts, had rejoined. They all scrambled into the screw.

" Hurry !" said Larrabee. He had a healthy respect for the unknown means of communication operative here. The screw revolved. The car was plunged into pitchy darkness, and then those strange plastic tube lights came on.

The ride back to the Demming was like a steam-car jaunt without the bumps and puffings of steam from the engine.

The car stopped. The metal door slid back. Into the opening pitched the body of a man, his whole chest ripped and torn. Larrabee recognised those lacerations.

He looked up at once. Up there Opteradents were circling. From their backs Gurone flung down spears, shot arrows— and aimed their devilish fire-cannon.

The others tumbled out of the screw. The trench was partially filled in with drifted sand. Men of Rathvane clustered in it were shooting arrows upwards and a wedge of them at the far end were struggling in a confused melee with landed Gurone, pressing forward with shouts and brandished weapons

The shields of the newly-arrived party came around and up in mechanical precision. Mulvers was behind Custance's shield, Toby behind Torrence's and Fay behind her father's.

Continued on Page 122

ARE YOU CONSCIOUS of your INNER-CONSCIOUSNESS?

Professor Higham, right shoulder bandaged, rushed up, shouting incoherently. His apparatus lay smashed in the sand.

Quite deliberately, Larrabee laid down his bow. He took from under his helmet where it had sat concealed on his head, a thing like a mirror, with a stock and a trigger. He aimed it up at the circling Gurone. He pressed the trigger.

Gurone began to fall from the sky, shrilling, their Opteradents and themselves charred and incinerated. Larrabee gave a high, wholly animalistic howl of triumph. He charged up the trench at the body of Gurone there, scattered and burned every evil monster body he could sight the weird weapon upon.

In under five minutes half a dozen Opteradent-mounted Gurone spun off up into the sky, headed out and away, anywhere away from that awful weapon of scorching fire.

Sighting carefully on the last straggler where the Opteradent struggled to beat the air with one wing-tip shot away, Larrabee pressed the trigger and waited for the beast to fall, scorched and burnt and broken.

Nothing happened.

He pressed again. Nothing.

Professor Higham reached over his shoulder and took the weapon away. He held it much as a man holds a new born baby.

"It is enough, Larry. Let them go. They will spread the word of this awful new weapon we now possess."

"We do not possess," Larrabee said dully.

"I can guess. You can tell me later. Now look at the metal cap."

Larrabee turned. Past the burned bodies of Gurone, past the panting, dishevelled but triumphant men of Rathvane, past the group of people with whom he had shared the strangest of adventures, he saw the metal cap and the screw car.

But it was not as he remembered it. The metal was a dull grey. As he watched it began to flake away, to crumble, to shrivel into dusty powder that drifted along the trench. When he reached the place where the metal cap had been, where the screw car had protruded from the trench, where the tunnel had led into a world of wonder, there was nothing to be seen save a black hole, rapidly caving in, in the rock and a few drifts of grey dust sifting under his feet.

" I shall regret to the end of my life that I did not have the privilege of going with you." Professor Higham sat in his own chair in his own villa dining room, right shoulder bandaged but mending.

Around him sat at the table all those who had been with Larrabee into that world of wonder. And, also, there were present Councillors Mordun and Soames, Old Francis, those men who had been present at that midnight secret meeting at Councillor Mordun's palace, held under cover of a dinner party. The meal had been cleared away and now there was no need to creep away into a locked room whilst the womenfolk kept pretence of gaiety and laughter through the corridors of the house.

On the long red-polished mahogany table lay two weapons. One—an instrument that looked like a mirror with a stock and a trigger such as were used on steam peltas. The other—a long tube of steel, closed at one end, with a wooden attachment suited for the shape of a Gurone chest and shoulder.

" And also, you will notice," said Professor Higham after his soft complaint that he had missed the chance of a lifetime, " you will see these iron and leaden pellets, which this fire-cannon shoots. But—a thing that we did not previously understand—they need a third item to shoot them. This." He touched another soft leather bag from which a few grains of blackish powder had spilled. " It must be handled carefully. It—creates a tremendous discharge of heat, light and smoke when lit. That pressure equals and exceeds the pressure of steam in a boiler. That fire-powder, gentlemen, is the secret of the Gurone fire-cannon."

" But what is it ?" demanded Councillor Mordun wrathfully.

" That we do not yet know. Neither do we know what this strange weapon is that Larrabee brought back from that—other place."

" A damned pity you couldn't have brought a weapon that would have lasted," said Mordun. " Or one of the other weapons you've told us about. Or, at least," he finished, "the knowledge of how to build them."

" Hear, hear," sounded along the table.

Larrabee felt called upon for an answer, and to defend himself. " Since the metal cap and screw car have crumbled to dust," he said, speaking slowly, taking his time, letting them wait on his words, " there is absolutely no chance of

our returning to that place, wherever it was. I believe those—those men in armour deliberately destroyed the method of entrance into their hidden world. I believe they are waiting there until the men we saw go into the sky in the flying building return, or—"

There were cries of amazement, of incredulity.

Larrabee went on speaking with more warmth. " Yes ! Or they were waiting until the men of the outside world have once again reached the same level as they of the sunken world in intelligence and culture. They will have no truck with the Gurone ; that we saw clearly."

" We may spend hundreds of years before we even begin to understand what you saw," said Higham, fingering the stranger weapon. All it had disgorged when they opened a small trap door was a chunk of inert lead.

" Yes. But we know that there is a future before us filled with marvels. I think we were never meant by the Great Ones just to tear open a portal into a superior civilisation that had been left over from the past and take what we wanted to help ourselves. I believe we have to work directly on what we know and have, to help ourselves by our own efforts. We have to study the Gurone weapon, study this stranger weapon, work on the experiments Professor Higham has been carrying on in face of so much ignorant superstition and opposition. I believe we have to fight our way up the rungs of the evolutionary ladder step by step. There can be no easy way for the men of Rathvane."

" And we have to rid ourselves of this blighting incubus of the Conclave. All men must understand," said Mordun, glaring at Graybrook, " that science and knowledge if handled with care and understanding can bring only good to mankind. All the weapons we need are to fight the enemies of all men. Not to fight man against man."

Around the table was a silence. Everyone looked at Graybrook. Fay, at his side, sat erect and very beautiful, and Larrabee, thinking of Fiona, knew that no matter how long it took—as long, perhaps as it might to understand these strange weapons—he would persevere and in the end win. Fay and he were bound indissolubly and, he could not stop himself thinking, since the adventure in that eerie other world, she, too, must acknowledge that.

Graybrook said with his granite-chipping voice : " I believed what the men of the Conclave told me. When my daughter was taken from me I would have laughingly killed every man of science. But now—now that I have seen—yes. I think you are right. I will use all my influence to bring the Conclave forward into scientific ways of thought. But it will take time."

" And time," said Domrin cheerfully, " has been bought for us by the single use of this stranger weapon. Those damned Gurone will spread the word that we have fantastic powers—we have a breathing space."

" Pray all the Great Ones that we make good use of it," said Professor Higham.

" There are other tunnels," pointed out Torrence. " We shall find another one day. Then we can go in again and show these men in armour that we are progressing and, perhaps, they will allow us more knowledge from their vast arsenal."

Larrabee kept his silence. He knew what he knew.

The men of Rathvane had gained a breathing space. They would develop the fire-weapons of the Gurone, improve them, fight off the Gurone and drive them off the face of the earth. And, too, men might find another metal cap and another screw car. And they would journey again to that hidden world beneath its golden sky.

But—would they find men there ? He remembered striking down that man in armour, hating the deed, knowing it must be done for the sake of all humanity. He could see again clearly as though it were recurring in this room before his eyes the man's armoured head jerking back, the body falling. And then the head—striking a sharp rock, splitting and disgorging a mess of glass bulbs and pieces of wire and strange tiny precise instruments.

He had stopped to look for one horrified instant. The man was no man. No flesh and blood body lay contained in that steel armour—the steel body was the whole. It was in very truth the skin itself.

He looked up to catch Fay's eye on him. He smiled. She smiled back. " We begin an Assignment tomorrow, Larry," she said. " Together."

His instant elation was punctured as she added, with malicious pleasure : " A Grade O Assignment. You'll just love that."

Rupert Clinton

British— Paperback

Penguin Science Fiction, an anthology edited by Brian W. Aldiss, is a very commendable collection aimed at the wide general public and as such should not be criticised too severely by the regular science fiction reader for whom it is not primarily aimed. Doubtless, because of Brian's position as a reviewer and author, some shotguns will be levelled, but viewed objectively the twelve stories in this first Penguin offering are good and make a well-balanced whole which sparkle with entertainment and show the ingenuity of plot and writing to which the genre can compete on equal terms with other branches of fiction.

There is Walter M. Miller's excellent " Command Performance," (telepathy) and Ward Moore's " Lot," (catastrophe); Isaac Asimov's moving astronomical piece " Nightfall " and James H. Schmitz' " Grandpa " (weird vegetables); and two stories which I suspect are Mr. Aldiss's personal favourites from the eulogies in the ' Introduction '— Katherine MacLean's " The Snowball Effect " and Algis Budrys's story concerning immortality, " The End of Summer," but my own preference goes to John Steinbeck's satirical " A Short History of Mankind " and Brian's own " Poor Little Warrior," one of the best short stories he has ever written. It has that Bradburyesque atmosphere about it which, like subliminal advertising, converts the masses.

Three other British authors are included, strengthening the international flavour of the contributors — Eric Frank Russell's " Sole Solution " (religion) and two vignettes from our own *New Worlds,* Jim Ballard's microsonics effort, " Track 12 " and Bertram Chandler's rather humorous ' search-for-the-missing-cuff-links ' " The Half Pair."

In a quiet and non-sensational manner Penguin have published some commendable science fiction titles—all the Wyndham novels, Fred Hoyles *The Black Cloud,* and the celebrated *Quatermass And The Pit* by Nigel Kneale. The Aldiss anthology fits the pattern well. I hope that it will be the forerunner of many more.

The 27th Day by John Mantley (Four Square), if you haven't read it before, is a psychological novel of a super-intelligent visitor from outer space who selects five humans (Russian, American and German males and British and Chinese women) and presents them with a deadly weapon for their respective governments, explaining that if they can solve its mysteries and live in peace the world will be left to shape its own destiny. If they use it against each other they will destroy all human life and the aliens, who are looking for a new planet, will take over.

Despite the moralistic value of the plot (you can see a simile with present world conditions and The Bomb) the story is fast-paced and enjoyable. It was made into a very third-rate film in Hollywood in 1957 at a time when " horror " was the central theme for all movies wih a s-f theme.

Ahead Of Time by Henry Kuttner (Four Square). Re-reading this " best " collection of Kuttner's short stories again after several years (it was an early Ballantine title in U.S.A.) made me realise just how much the genre lost when he passed away at the height of his writing career. Other collections of his works have been published since this one but the cream was skimmed off for " Ahead Of Time."

The Night Callers by Frank Crisp (Panther) is a novel that never owned up to being s-f even when originally published in hard covers by John Long Ltd. Which isn't surprising when you remember that so many publishers had the contention that " science fiction " were non-saleable words on a dust jacket. Fortunately, this one does nothing to enhance the genre so we can be thankful that somewhere along the line an editorial conference decided against the use of those naughty words.

Basically, the novel is a thriller with a s-f motive—mysterious crystal found by lorry driver, passes through several hands until it reaches an 'enquiring mind' in an electronics establishment; mysterious radio interference—unaccountable strange handprints and noises in locked room; dark cloaked stranger and the deadly disappearance of many beautiful girls eventually gets the plot moving. From halfway through it becomes a good thriller with plenty of Scotland Yard detection, but the method of getting it there seems hardly worth the effort.

To quote Australian reader Lee Harding, it fits snugly "into the field of familiar (ugh!) British . . . detective story writing." I can only echo "ugh!"

American — Paperback

Sardonicus And Other Short Stories by Ray Russell (Ballantine) is a collection of 17 off-trail, off-beat, slick stories written during the past six years by the ex-editor of popular *Playboy* magazine, who, somewhere among the canyons of Chicago apparently made a pact with Old Nick himself — one can almost visualise Mr. Russell in *Playboy's* penthouse apartments, sans cuties, resplendent in star-spangled cloak drawing pentragrams on the floor and exchanging his soul for worthwhile ghoulish plots and other propaganda bric-a-brac dear to the heart of Lucifer.

Excluding the lead novelette, most of the stories are ephemerae, beautifully written, pithy and often pungent, which, when read in their original presentation surrounded by other types of fiction were excellent but in a complete collection become a little monotonous — except that, lo, halfway through, a veritable gem sparkles in the shape of "The Pleasure Was Ours," one of the most delightful stories I have read for several years.

Sixteen short stories aside, the main vehicle for the book is "Sardonicus" itself, a gruey Gothic horror of a story which is being made into a film by Columbia Pictures starring Oscar Homolka, Ronald Lewis, Audrey Dalton and Guy Rolfe. In the story, Mr. Russell has successfully captured the style of the early Gothic chillers, a factor which apparently upset many of *Playboy's* modern readers when the story appeared there last year although many others were "with it" all the way. Quoting from *Playboy's* postbag they said:— "Compelling and reminiscent of Poe, will remain with me a long time." "Sardonicus and my mother-in-law must go to the same dentist." "A masterpiece." "Mr. Russell is at the bottom of a long list which includes such notables as Bierce, Poe and Lovecraft." "Ray Russell has achieved immortality in the classic tradition of Poe, Lovecraft and Bierce. . . ." "Unqualified admiration. . . ."

I felt sorry for those who didn't like it. It is one of the greatest modern horror stories in recent years. No free plot give-away. Read the book and see the film.

John Carnell