NOVA AND SUPERNOVA

The Crab Nebula in Taurus (By Courtesy of Mt. Wilson and Mt. Palomar Observatories)

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A postman on his rounds just before dawn glances at the familiar stars and notices a bright star where yesterday there was none. And on receipt of the news, observatories all over the world spring into action to photograph the new star—the nova—to register its rapidly-changing spectrum for future study, and to dig through photographic records of that part of the sky to find out what occupied the region in which the nova now burns bright.

The name “nova” has stuck though it is a misnomer. The star now radiating with an intensity 25,000 times greater than that of the Sun has formerly been an obscure member of the Galaxy. Some years after its spectacular rise to brightness it will have sunk to its former faintness and will henceforth, almost certainly, remain that way.

The astronomers’ picture of this remarkable phenomenon and a reasonable explanation as to why it occurs, is the result of over a half century of painstaking observations of novae and a knowledge of atomic energy processes under pressures and temperatures that until a few years ago did not exist on Earth.

In fact, novae have been recorded for hundreds of years. In November, 
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Look here...

During the past few months the one factor of NEBULA’s progress which has raised me more gratification than any other is the large increase in the volume of reader reaction (in the form of letters of comment, bullet forms, etc.) received following the publication of such issues. It is interesting to explore the reason for this trend, particularly when one bears in mind the present far from encouraging state of the magazine publishing field in a whole.

The main and most obvious cause for this comparative success on our part is certainly the stimulus imposed in our circulation in the U.S.A. It purportedly the increasing number of our readers, it is interesting to see the growth of many interesting letters from our American friends, all of whom seem pleased that NEBULA is now on sale near them and anxious to give their opinions, comments and reactions on the type of stories printed by a British magazine. I am happy to announce that we are now able to sell our subscriptions in the U.S.A. and that we are now receiving letters from American readers who have purchased the magazine and are pleased with its contents.

Another and much less obvious factor which has helped to increase the appeal of our magazine is the response of female readers. We have received an astonishing increase in female science fiction readers. Referring to our subscription list once more, I find that a large proportion of these readers are ladies, and it is interesting to note that the number of female readers has increased since the last issue. This increase in female readership is a strong indication of the growing interest in science fiction among women.

Finally, of course, there is the effect of our comparatively new monthly publishing schedule. This gives the readers a regular and frequent opportunity of buying the magazine, and consequently they are more likely to express their opinions on what they read. It is the responsibility of the editor to see that the magazine is read by as many people as possible. It is the duty of the editor to see that the magazine is read by as many people as possible. It is the duty of the editor to see that the magazine is read by as many people as possible. It is the duty of the editor to see that the magazine is read by as many people as possible.

PETER HAMILTON
The Captain's Dog

He was only the slave of his human master, but by his presence he had saved them all from destruction.

Illustrations by John T. Greenough

We booked Andy beneath a tree which looked beside a river. It was a gentle piece of water-landed land rolling from the winding stream towards thick woods lowering on the horizon. The banks of the river were thick with ferns and delicate moss, the green swards of water-plants and the nodding verdancy of rushes. It was a peaceful place though not a silent one. The waters sang as they coursed over shining pebbles; their song mingled with the sighing rustle of the branches of the weeping trees, the solitude whisper of the nodding rushes. Insects added their sleepy drone to the natural symphony while butterflies, as brilliant as gem, danced in the unseen air as they beat time to the music. It was a restful, tranquil, secluded place, the whole basked in an eternal summer from the light of a golden yellow sun.

It was not on Earth. There were no unspoiled places on Earth.
and on none of the paths would we have been permitted to desecrate the virgin turf. But it was not on Earth and hence there were no property rights, no one to order us away, none to stop what we intended. So we raked the virgin soil and gouged out a hole six feet deep, six feet long and two feet wide. We spread the rich, black dirt around it and after we had placed our brothers within, we filled it in again as best we might, putting a smooth and leaving a tree, ugly olives growing its concrete length beneath the branches of the tree. We drenched it in and, awkwardly, waited for someone to say what we felt should be said.

"I—" said Hammond, and paused, sweat glimmering on his big face, the big, broad face with the deep-green eyes and the grim set of jaw, the face with the thin, tight mouth and the hard, uncom-menning eyes. Hammond was a good captain as captains went. He could handle his crew and he could handle his ship and, accord- ing to his lights, was a fair and just man. Never before had I seen him at a disadvantage for now he seemed to have trouble finding words.

"L" he said again, and this time managed to continue. "I guess that we all know what we owe to Andy and I like to think that he knows how we feel." He dwelled at his forehead with a handkerchief, running it over his neck and beneath his deep collar. "I like to think that he will be taken care of wherever he may be at this moment. I hope so."

It was simple but it was sincere. Hammond didn't need words to say what he felt, his actions had already shown that. Starships do not usually step off at virgin planets in order to bury their dead. Covenants who did are normally dropped into space during transit; grief quicken and forgotten quicker. It had taken much fuel and more time for Hammond to make this gesture and I respected him for it. So I said nothing, despite the irony, but instead looked at Chris the engineer.

He was embarrassed, a man who did not know how to display emotion but who hid his feelings behind his grave bulk and a facade of, of course, language. He shifted uneasily from one foot to another, glanced briefly to where the skeletal rocket wanted to lift us back into space, then kicked absurdly at the mound around which we stood.

"He was a great guy," he said abruptly. And stared at Szyman.

"A damn good guy!" Szyman didn't argue. Szyman never argued. Szyman always stood facts and, if you disagreed with him, he would meet at you
THE CAPTAIN'S DOG

with a repulsive expression as if you were too ignorant to waste time trying to concern. He was our archtype, a true intellectual with an acid mouth and furrowed eyes. His world was a world of facts and figures and, away from that world, he was one of his depth. He compensated for this by a soaring refinement of the things which normal men hold in regard. But he did not mean more, if he had I think that I would have flung myself at his throne, instead he smiled and spoke the naked truth.

"We'll miss Adley," he said quickly. "We'll miss him a lot."

"You can say that again," I said thickly, and had to swallow before I could speak again. "I guess that he was the finest crow- man I ever knew."

My eyes burned, probably from the effects of the gum-scented air beneath the wriggling tree, but I managed to start at Bryan and, if the cynical, world-wise and world-wise drunk felt offended at a mere gallant-captain giving him a silent order he didn't show it. He didn't look at me though. He just let his pinioned eyes drift over the moons, the tree, the river and the flower-dotted island. His veined nostrils dilated as he sniffed the clean, sweet air of the place and, when he spoke, his voice was surprisingly gentle.
"It's a nice place," he said. "A very nice place. Andy should be happy here."

And that was the biggest irony of all.

I do not think that Andy ever knew what happiness was. If he did then he never experienced it. Once or twice, perhaps, he may have mixed up a brief communion, but such intervals only served to show how great was the grim monotony of his daily routine. A man can be miserable and still have time to dream and, in dreaming, find some happiness, some anticipations, some hope for the future. Andy had no anticipation, no hope, and, if he could dream, then his dreams were the worst kind of self-irony I know. A man, accustomed for life to a dark and isolated cell, can dream of freedom and what he will do with it, but such dreams serve only to increase his misery. Andy had no hope of freedom, ever, and nothing he could do with it if he had it. Andy was not a man, Andy was a malefactor manufactured in a laboratory. Andy was an android.

You find them all over, the androids. They are of uniform height, hairless, slim bodied and with dark, sad eyes. They never smile and rarely speak and one looks so much like another that they could be identical twins. They are, of course, all springing from the same seed, all developed in the same environment, all built in the same way. When they emerge from their glistening cases they are as identical as two in a pod. Later they gain a slight individuality according to their treatment, but always one will remind you of another.

They are the creatures who carry your baggage; who stand, patiently waiting, for hours at a time while their master or master goes shopping. They sweep the streets, clean the sewers, polish your shoes and wait tables. They do all the unpleasant jobs, the ones no human wants to do, the ones which no human can economically perform. They have a number but no one remembers that. Some have fanciful names but none are known by the natural distinctive of their generic name. We had one aboard.

He came to us fresh from his sale and humdrum life in the prisons of a metropolis. He never left the metal hull, not even when we reached down at a post of call, but remained on counter watch duty in the control room, refusing one of us for entrance here. He never felt the naked sun on his skin, smelt the sweet scent of growing things, watched a bird in flight or bathed in a stream. He never joined us in a tavern to drink and eat at women wriggling in
The Captain's Dog

I turned away in despair, and the impression of my dream remained. But once, in my stateroom, I found him reading a volume of verse I had in my galley.

"You're reading?" The discovery stunned me so that I forgot my original impulse which was to snatch the book from his hands and slap his face before kicking him from my quarterdeck as a punishment for interfering with my property.

"Yes, sir," he said. He called everyone "sir," from the captain down to the lowest seadog. I noticed a thin film of sweat gleaming on his face. "I'm sorry, sir."

He apologized a beating, I knew that. He expected to be kicked and cursed like a dog which has moused on the east or chewed the curtains. He had done wrong and knew it and now he waited, dumbly, for whatever punishment I wished to give. Instead I took the book from his hands, placing it at what he had been reading:

"Do you like Oscar Wilde?" I commenced reading before he could answer.

We saw so men who through a fun
Of flaky, drowsy gypsy,
We did not dare to breathe a prayer,
Or to give our anguish scope;

Something was dead in each of us,
And what was dead was Hero.

I looked up, feeling so strongly as before the impact of those grim lines. I looked up and stared directly into Andy's eyes. Sacred! They did not meet, nor even the eyes of ants that. And ants do not weep either; only humans do that.

"You shouldn't have come in here," I said. "You know that I don't allow anyone to mess about in my kitchen."

"I'm sorry, sir," he repeated. "But I was all alone and—"

He paused, his eyes searching my face. "I didn't think that I was doing anything wrong, sir."

I remained silent, thinking, more shaken than I knew. It wasn't the fact that Andy could read which bothered me; he'd had his basic education before coming to us, it was what he had chosen to read which was important. It was as if a dog had suddenly commenced to talk. Its ability wouldn't make it human but, at the same time, it would no longer be wholly a dog.

"Make some coffee," I ordered sharply for the want of anything better to say. "Make it good and strong."
"Yes, sir." He hugged to obey and I sat down at the kitchen table, the book in my hand, the pages opening of their own accord to the Ballad of Reading Gaol. Books only do that when they have frequently been opened at a special place and, such as I held Oscar Wilde, I hadn’t read that particular piece all that much. Andy?

I glanced at him, busy over the stove, then dropped my eyes to the page and read the passage I had quoted. I read it again and then again and then once more and, each time I read it, the suspicion in my mind flitted to a brighter significance.

"Your coffee, sir." Andy was suddenly at my side, a steaming cup in his hand. He startled me, I had been gone in thought and, at his words, I jumped, knocking the cup and sending the scalding coffee over my arms. Pain declared my instinctive response; I reached out, knocking the android to the floor then pointed towards the door.

"Get out!" I snapped. "Chump fool! Get out and stay out!"

The blow was nothing new to him, the words even less, he had collected plenty of both in the past. He grinned and scuttled from the kitchen and, watching him go, I felt sick inside. No man should be so servile. No man should ever have allowed himself to be used or spoken to like that without making an attempt to fight back.

But then, of course, Andy wasn’t a man.

The burn wasn’t painful, certainly not painful enough to merit medical treatment, and certainly not serious enough to work it three days after the event had taken place. But the minor injury was an excuse. I wanted to talk about Andy and I wanted to do it with someone who should know all about androids and what made them what they were.

Bryant seemed to examine the superficial injury. "What’s the matter, Sam?" "Getting old?" He leaned back in his chair, his pockmarked eyes sleepy looking. "That ain’t all right and you know it."

"It burns, Doctor." Of all the crew I was the only one who addressed Bryant by his correct title. To the others he was "Doc;" to Andy he was "Sir;" "Then slip some butter on it." The sleepily-looking eyes never left my face. "Are you going to talk about it now or have it until later?"

"Talk about what, Doctor?"
"The real reason you came to see me," he gestured contemptuously towards my arm. "I'm not a fool, Sam. A man like you doesn't worry about a cold like that. But what he's collected is done. He's worse during the course of his trial." He rapped my arm. "How and where?"

"Just before we took off. Andy ripped a cup of coffee over me."

"I see." Bryant looked thoughtful. "So that's how he collected that swollen jaw. I'd begun to think that Charlie was falling into bad habits again." He didn't enlarge on what he'd just said but I understood well enough. The engineer was a quick man with his fists and tongue and theendar had served as a convenient whipping boy. Then, for no apparent reason, he'd left Andy alone. It seemed that Bryant had been the reason.

"You like him, don't you, Doctor?" I blushed. "Andy, I mean."

He shrugged, the pouches eyes cynical.

"I didn't mean to hit him like that."

For some reason I felt that it was important that Bryant should have the truth of the matter. "It was just that the pain made me angry and I struck out without thinking."

"That's the trouble with the human race," he said. "They never stop thinking. He was staring at something invisible on the wall, or perhaps staring down the many corridors of memory. He was like that for a long time, almost as if he had forgotten my presence, till he suddenly and pulled open a drawer in his desk.

"To hell with them!"

From the drawer he produced a bottle and a glass. He filled it, drank, and then set it on the desk. For a moment he hesitated, then produced a second glass and filled it to the brim.

"To the memory men," he poured, lifting his replenished glass. "May they never stop to think, if they do, then they will find it impossible to live with their thoughts." He drank and, though I did not wholly understand his meaning, I drank with him. The tawny had formed a bond between us, a temporary bond I had no doubt, but I took advantage of it while I could.

"I've been thinking," I said slowly. "About Andy and the rest of them."

"Don't think, Sam," said Bryant. "It can be dangerous."

"Perhaps." I swished into my empty glass, wondering just how to phrase what I wanted to say. Concerns about androids to meet
people and they will regard you as safe in space. "Just how different are they, Doctor? From us, I mean?"

"They have no souls," he said. "They are not born of woman and so they have no souls."

"Is that all?" The answer didn’t satisfy me. Bryant, I know, was being cynical.

"What more do you want?" He reached for the bottle and helped himself, sipping a little of the opaque liquid in his hand. I suddenly realized that he was more than a little drunk. "Do you want an analogy? Take a normal baby, dress him, castrate him, fix his nose with plastic surgery and, when he reaches maturity, you’ll have an android. Does that satisfy you?"

"Is it true?"

"Saidly speaking, yes." He wiped his mouth on the back of his hand. "Saidly speaking there is no basic difference between an android and a human. I have already given you the spiritual difference."

"They have no souls." I shrugged, to me that was small difference. Few of the men I have met could have held them to a soul and fewer still wanted to. But I did not argue the point. Bryant was not an authority on spiritual matters but he could answer something which had been troubling me. "Why are they golden?"

"Casted!" He frowned, then looked at me strangely. "That’s an odd word for a cook to use. Where did you pick it up?"

"From books." I didn’t want to go into the matter. Bryant didn’t seem to want to have it alone.

"Of course, I’d forgotten, you read a lot, don’t you."

"Why read? It helps to pass the time."

"So does card playing, conversation, the making of lace or the playing of chess." He glanced at me, an odd expression in his eyes.

"But human company isn’t good enough for you. You are lonely and so you read. You feel unwanted, insecure and so you escape into the fantasy world of books." He shook his head at me.

"Reading can be a dangerous pursuit, Sait. Men have ideas and they write them down so that other men can absorb them. Some men even act upon them. Revolutions have been caused that way."

"I’m no rebel," I said shyly.

"No?" Bryant raised his eyebrows a trifle. "Then why the interest in the androids?"

"Just curiosity," I hesitated, knowing that my answer wasn’t
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good enough, then decided to tell the truth. "I caught Andy reading one of my books. It—upset me a little?"
"You see?" Bryant was more cynical than ever. "I told you reading was a dangerous pastime." He shrugged. "If you weren't a bookworm then Andy couldn't have borrowed your property and you wouldn't have tried to break his jaw."
"I didn't hit him because of that. It was the pain from the spilled coffee."
Bryant didn't answer. He just sat at his desk, his pouches eyes staring at me as if I were a specimen beneath his microscope, his hand resting lightly on his botts so if he were waiting for me to go so that he could help himself to another drink. But there was still something I wanted to know.

"Why are they called, the androids, I mean?"
"They aren't," he said promptly. "You've got hold of the wrong word. Golding is what they do to horses. Centurion is the medical term or, in that is what is done to men."
He frowned as if considering the problem. "Nothing is what is done to androids. Non-seeing. But it means the same thing in the end."

"But why? Why do they do it?"
And then, suddenly, I had the answer. I knew why all androids were women; they just had to be that way. Judaism was part of it; the prejudice of men for young, handsome androids, the prejudice of them without vitility towards those who are virile. But the main reason was superiority. A man, no matter how poverty-stricken or ugly, no matter how low his circumstances, could not but feel superior to an android. It was the added superiority of a man towards a creature; a superiority which had all the tremendous force of race survival behind it. And the same reason also accounted for the fact that the androids were deplanted; hair is also a masculine symbol.

But why we had androids at all was something I still had to learn.

It is an odd thing that it is possible to see something almost every day of your life and yet never really see it at all. Then, because of some accident, or because it is pointed out to you, your viewpoint changes just that little and you wonder how you could have been so blind for so long.

With me Andy was like that. I'd known him ever since he joined the ship and had used him more than most. A cook has a lot of work to do and he's usually working long after the others have
It was natural for me to pass a lot of that work on to the
android; all the unpleasant work attendant upon the preparation
and clearing away of meals. And yet not once in all that time did I ever
think of him as other than a machine.

The thought that he could ever get tired had never occurred to
me. I had ordered him to clear up and wash the kitchen, had left
him plenty of work to do while I slept, and when I had woken,
kept him hard at it until some other member of the crew had
demanded his services. And if he had faltered or had been slow I
had cursed him, even struck him and never felt the slightest regret
for having done so. Why should I? Can a machine feel fatigue or
pain? But can a machine feel joy?

Andy had done that. But, what really served to change my
viewpoint wasn't so much the fact that he had been reading poetry
but the nagging suspicion that he had not only read it but under-
stood it. It could not have been accident that he had chosen that
particular poem; the way the book had opened in my hands proved
that he had read that verse often, how often I could only guess.
But from that moment I ceased to regard him as a machine and began
to think of him as an individual. And after I had spoken to Bryant
I even began to think of him as a man.

Injustice does not normally trouble me; there is too much
injustice in the universe, so much that it is accepted as a normal part
of the scheme of things. Brutality has lost its power to thrill my
sinews and send anger through my veins, I have seen too much
brutality and, by usage, have managed to insulate myself from it.
The universe is as it is and the universe is too big a place for any
one man to alter. And there are always books and books can be grate
things.

So, despite my changed viewpoint, I did not attempt to
champion Andy or to protect him from his environment. Trey, I
did care off on his kitchen duties and brood myself to remember
that perhaps he needed sleep as much as I, but aside from that I was
content to study him as if he were a problem rather than a thing
of horrible flesh and blood. And, one day, I discovered the reason
why androids existed at all.

It was a little thing which did it, but how many discoveries
have been caused through differing? We had just eaten, and Andy, as
usual, had cleared the table so that we could sit in comfort, smoking and
talking, relaxing as men must if they are to gain benefit from their food.
Hammond wasn't with us, he always ate alone in the central room, but Cleve
was there and Smyth and
THE CAPTAIN’S DOG

Bryant, with sitting in his own side of the table with myself filling in the square.

The talk had drifted, I forget about what, but suddenly something caught my attention.

“Captain’s Dog?” I asked Clevis. “Why did you call him that?”

“Fourman?” Clevis shrugged. “Well, that’s what he was. A Captain’s Dog.” He chuckled. “Or he was until he jumped ship one touchdowns and headed for the hills. I guess he figured that any sort of a life was better than the one he had.” He chuckled louder at my expression. “Don’t you know what a Captain’s Dog is?”

“No.” I was sure, I had the feeling that Clevis was being funny at my expense. He laughed again louder as he read what I was thinking and jerked a thumb towards Symons.

“He’ll tell you,” he wheedled. “Tell him, Symons, about old Captain Delmaray and his dog.”

Symons frowned, amused at being brought into the conversation but he did as Clevis had asked.

“Captain Delmaray was one of the old timers,” he said. “I never met him myself, he was around long before my time, but he had a terrible temper, so bad that he’d had more than one incident stored up on his hands. You see, he used to flare up and when he did he’d hit out at the first man around.”

“And he was a big man,” chuckled Clevis, scolding. “His crew half-fell, half-fell for him, but he could be generous and he was a fine captain in other ways so they decided to do something about his temper. Anyway, to cut a short, they drilled together and bought him a pug dog. It was a big thing, as life his that you’d swear it was real, and they put it in the control room.”

“Why?” I was interested.

“Some kind of monster told them to do it, so they did. And it worked fine! Whenever Delmaray blew his top he’d take a running kick or the dog and send it from one side of the room to the other. That raised his temper and kept the crew happy.” Clevis chuckled again. “It had to be a pug dog, of course, old Delmaray was not fond of animals to hurt a real one—even if he could have found one able to stand more than one kick.” He stood at my face. “Something wrong?”

“No,” I said. “Why did you call that man, Fourman I think you called him, a Captain’s Dog?”

“Why?” Clevis shrugged. “The name just stuck, I guess. Anyone who didn’t have the guts to stand up for himself used to be
نمونه صفحه‌ی اصلی

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nose and pinched eyes giving him a peculiar, almost inhuman expression. "Well?"

"I know," I admitted, and suddenly felt my stomach tightening as it had done before when I'd seen a wrongdoer being whipped to death for some minor crime. "But why? Why?"

"Androids are necessary," said Bryan heavily. "Androids, in one form or another, have always been necessary." He helped my proctor with a gesture of his hand. "I know what you are going to say, that we've never had androids before, but stop and think about it for a moment. What makes an android a thing apart? Isn't it the fact that he isn't really human? And what would you call a man of another race? Another colour? If you had clear ideas of what constituted a human, and you were human, then anything different from yourself couldn't be human, could it? And the same applies to beliefs, to religions and ideals. If others are different, then it doesn't really matter what you do to them. Because they aren't really human and the rules governing human conduct do not apply. And that isn't all."

I didn't send him to tell me the rest. I didn't need him to point out that every civilization has its own in a slave culture of
one form or another and that so strong a heritage cannot be denied.
And I know that men were individualists and that they couldn’t help
being that way even when paying lip-service to an ideal. Logic can
prove that all men are created equal but no logic in the universe
can ever convince a man that every other man is as good as he is.
And it is right that this should be so for men are not equal, no
matter how they may have been born. Emotion and instinct can,
quite often, be more correct than cold logic.

“We need a Captain’s Dog,” said Bryant. “All of us.
Something or someone to hit when we are hurt, to bear when we
are beaten, to master when we have been mastered. We have to
prove, to ourselves at least, that we are better than someone else,
or something else.”

“In this day and age?” I didn’t elaborate the point but my
eyes shifted over the metal of the ship in which we sat.

“In any day and age,” said Bryant. “Men haven’t progressed.
Sure, not as we sometimes like to think we have. We have technol-
ogical toys and we have managed to develop a conscience, but that’s
about all. Deep down inside we are still the primitives and, if we
can still the pangs of conscience, we can be as hard and as cruel as
any savage animal.”

He was right of course. I knew, who better, that civilization
has progressed beneath a system which has accustomed people to
being kicked by those above. Civilization had been a ladder which
could only be climbed by a ruthless disregard for anything and any-
one but self and, again, it was right that this should be so for, with-
out such competition, Man could never have progressed beyond the
cave. And Man is what he is, after his way of life, his mental,
instinctive outlook on life and he will no longer be Man.

So we have our system and our system works and, if such a
system makes life a living hell for those on the bottom rung of the
ladder, then that is the price we must pay. But we have a cons-
science too, and a growing awareness of the humanity of Man, and
slavery is no longer to be tolerated. So we compromised. Add
another rung to the ladder and or lift all humans to a point where
any and everyone has something to kick.

Give all humanity an artificial Captain’s Dog.
Things were not the same after our talk with Bryant. Nor the
selves, that is, for me, though the others continued just as before,
using Andy as a convenient mechanism, using him to vent their
spite and their frustration at each other. A starship is a boring place
with little to do for long periods and they find relief between the
crow. Symon had his brooches ripped by Hammond, he was a hundredth of a degree off course, and kicked Andy viciously on his way to the dining-room, kicking Hammond in jeans and so easing his soul. He looked startled as I grabbed his arm.

"Did you have to do that?"

"Do what?" He was genuinely baffled. "What the hell are you talking about?"

"Did you have to kick Andy like that?"

"That's my business." He looked down at my hand where it gripped his arm. "Get your hand off my arm, man. I don't like to be handled."

I hesitated, trying to control the anger which had tightened my stomach, knowing that I had no real justification for such anger. How I felt towards Andy was my business. It was something personal and I could not expect others to feel the same way. I released Symon's arm and stepped towards the kitchen.

"Just learn to control yourself a little," I warned. I could not help but make the warning. "Andy's no dog to be kicked around." I entered the kitchen and had crossed to the stove when I became aware that Symon had followed me.

"Just what did you mean by that, Sam?" His thin mouth was pinched together, a slit in the weak corners of his face.

"What I said." His eyes warned me, I had seen such eyes before, and I knew that Symon was boiling with rage. He had been in a temper when he'd left Hammond; he had tried to vent it by kicking Andy and I had interfered. Now his rage had transferred itself to me.

"Andy's a thing," he said deliberately. "A collection of chemists braided together in a net. He isn't human and you know it. Why the sudden interest?"

"That's my business." I took a deep breath. "Just leave him alone."

"Why?"

"Never mind why. You just do as I say."

My control was slipping and I knew it. Championship the week in, I knew, a waste of time. The wrong degree you for it and the week are really grateful bar, waste of time or not, this was something which I had to do. It had become a personal issue between me and Symon and, deep though me, I knew the reason why. For a long time now I had thought of Andy as a man, not as a thing, and irrational, I had sworn to him. I liked Andy; I did not like..."
Seyman, and the android had become merely an excuse to want any
own dislike.
And Seyman did not like me.
“ You should see Bryant,” he said coldly. “ I believe that
there is a word for those afflicted in a certain, peculiar way.”
“I don’t want any broken-down calculating to tell me what to
do,” I said, and from the way his thin mouth tightened I knew
that I was scratching at his vulnerable point. “ Go back to your books,
little man, and leave real things to those who can understand them.”
“I can understand one thing well enough,” he said coldly. He
glanced around the kitchen, his mouth curving as if he sniffed a bad
odour. “ I can understand dirt. This place stinks of androids.”
We all have our weaknesses, even he was mine to score. We
were being childish, of course, in what we were saying to each
other, but since when are men in anguish been anything else?
“ If you have any complaints,” I said, “ take them to Hammand.
In the meantime get out of my kitchen and stay out.”
“ I’ll go in my own good time,” Seyman glanced around again,
wanting to hurt me but not knowing quite how to do it. He scraped
as he sat my books. “ You and that thing make quite a cozy pair,
don’t you? Looked up here at all hours reading that trash and
snarling into each other’s eyes.” He scraped again. “ No wonder
you don’t want to see your darling get hurt.”
I am fat and bold and not so young as I was, and violence is
something I do not like. But there are some things I will not stand,
not even from the Captain himself, and Seyman had gone too far.
He knew it. I saw his eyes flare and his face go slack with fear as
I stepped towards him and he cringed, his hands thrashing at me,
palms first like the hands of a woman.
“ No!” he whispered. “ Please God, no!”
“ Are you crazy?” It was Bryant, throwing himself between
us like a wall of flesh, his hand gripping my right wrist. “ Deep
is, you fool! Deep it!”
I halted, staring down, my breath sobbing in my throat and,
for the first time, realised that I had smudged up the big holes I use
for kitchen work. Had Bryant not interfered I would have changed
it into Seyman’s stomach and not even been aware of what I was
doing.
“ He would have killed me,” whispered the navigator. “ I
could see it in his eyes. He would have killed me.”

And then something happened which made all that had gone
before of no importance whatever.
Starships are big things; they have to be in order that their payload capacity can justify the expense of spuernise but, big as they are, they have their Achilles Heel. Every part of a starship can be maintained and repaired by its crew except one and that one part depends on remote control and automatic manipulation. An atomic pile is something no one has yet learned to live with; not unless there is thick shielding between it and its operators, and rarely. Fortunately rarely, does something go wrong. But when it does, then death is immediate.

The sound of the alarm siren killed our talk spurned as though it had never been. Chevi, his face white and tens, came running towards us, Hammed close behind. "They didn't need to say anything; the siren was plain enough, but Chevi explained anyway.

"The automatics have gone out of order," he shouted. "The dispensing units are out and the food racks are rising."

"How fast?" Bryant was concerned about the medical aspects.

"Too fast. We've maybe ten minutes, maybe less." Chevi wiped sweat from his forehead, forgetting even to curve in the emergency.

"What went wrong?" Suyman was more practical. Hammed answered him as he joined us.

"From what I can discover one of the fuse-rods has blown, probably because of metal fatigue. In falling it threw out the dampers and jammed them open against the remote controls." He paused a second over his face, closing his eyes for a moment as if the light hurt them. "A broken rod," he said. "A simple thing like that."

"We can fix it," said Chevi. "But someone will have to go in there to do it." And then he fell silent while we each watched the others.

I do not know how many books I have read, thousands probably, and I am fully aware of the way men are supposed to act when faced with a situation such as ours. In books—oh in real life.

In real life existence is too sweet, the mere act of breathing too important for hormones. Old as I am, careless though I may be, yet life is still sweet. There are books still to read, poetry still to relish, a thousand light years still to traverse and, if life is important to me it is no less important to others. And so we stood there, watching each other, while time seemed to have slowed so that each heart-beat became a separate, discernible function of our bodies.
"We could draw straws," suggested Clevia. "Short man goes in."

"No," said Hammond. "We can't do that." He raised his hand over his face again, and spoke slow and clear this time I knew why he made the gesture. For there could be no argument as to who had to go nearest to the pit and die so that others might live. Failing a volunteer, the safety of the ship was the Captain's responsibility. Hammond was going to die, and was, and knew it. His gesture was his way of saying goodbye to the present. And though we grieved for him, none of us was willing to take his place. None of us, that is, with one exception.

"I will go," said Andy, and it showed his state of mind that not only did he volunteer to speak the word, but omitted any form of title. "Tell me what to do and I will do it."

He stood beside me and a little behind, until he spoke none of us had suspected his presence. He had joined us as self-assured as ever and now he stood, not smiling, not frowning, as expressionless as usual, waiting for our reply to his amazing offer. I do not know what he expected our reaction to be, I could not even guess, but one thing is certain, he did not expect no reaction at all.

"I won't wear a suit," said Hammond, ignoring the android.

"The protection isn't enough and it will show me down. I'll dive in, shoot the broken end and get out again as fast as I can. By Gosh, you'll understand to do what you can. Spera, you'll be in command until a new Captain can be appointed." He hesitated. "We have a little time before the danger peak is reached. There are one or two matters I wish to attend to before——" He took a deep breath, and finishing the sentence. "I will be back in good time." He turned and walked back towards the control room, walking proudly as became a man.

"I don't understand, sir." Andy pulled at my arm. "I said that I would go why doesn't he let me?"

I stared at him as he stood beside me, so insignificant that, in a moment of crisis, no one had been aware of his presence, and I knew that I could never make him understand. How can you tell a dog a dog's doings? How can you explain to something which has always been on the bottom ring that those on the top have more than just the best things in the universe? They have authority and they have responsibility, but they also have pride. And when it comes to the point a man does not expect a dog to volunteer to do his master's duty.
"He will die in there, won’t he, sir?" Andy nodded towards the engine room.

"Yes."

"He will cease to be," he mumbled. "All this," and his eyes took in the entire room and his existence about it, "all this will cease to be. It will be ended, over, finished for ever. Does he want that?"

"No?" I said. "But unless he does it we will all die." I fumbled his next question. "And he will never permit you to take his place. Never."

"To die," he muttered. "To sleep, no more——" And then he was gone, rushing away from me down the corridor towards the back door of the engine room, racing past Clark and Bryant and the startled face of Hyman, running with a purpose of feet while the words of the unhappy man echoed in my ears.

I tried to catch him; would have done had not Bryant caught my arm and dragged me back. Even then I think I would have reached him in time had not the doctor shipped my face and called to the others to continue. They held me tight between them so that I could do nothing but watch and come helplessly while Andy undid the external door and ran inside to his death.

"The feel?" I fought to free my arms so that they had trouble in keeping on their feet. "He’ll die in there? Did?"

"Is that bad?" Bryant raised his brows on his throat.

"Relax now, Sam or I’ll squeeze your carotids and black you out."

"But nothing." He nodded to the others and they eased their grip on my arms. "You and your books! I warned you about Letting Andy read but you wouldn’t listen. Did you think that you were being kind? Did you think that by showing him all the things that he missed, that he could never enter, that you were doing him a favor?" The clenched in his voice startled me so that I forget to struggle and stood limp, shocked by the sudden realization of the truth that was being shown to me.

"Dying is the kindest thing that could happen to him," said Bryant tersely. "Why else do you think I held you back?" And he stepped away from me as the others released my arms.

And so we stood, waiting. Hammond too, when he finally joined us ready for death and feeling instilled a hope of life. We waited while a stone-made thing passed through the shuddering into the invisible flame of the atonic pile. Waived while our nerves creep and our hearts slowed and time hung in an eternity of
enemies. Waited until Andy finally emerged into sight again, falling into the corridor with the last of his strength, his eyes fixed on mine until the last. And then we had to wait some more while the radiation coursed from the rod, eating until his body cooled so that we could enclose him in a plastic bag without fear of the invisible death he carried.

And, while we waited, who knew what thoughts passed through the others' minds? Repent at kindness done and now irrecoverable? Guilt at unthinking brutality? Sorrow at treatment, undeserved and yet received in full measure from the hands of those who boast that they are made in the image of their Creator?

Whatever we thought or tried to make up for all that had been done in the end. And so we halted at a shrine place and buried Andy beneath a tree which went beside a river in a gentle place of flower-dotted sand and drifting boughs. More than that we could not do, for the highest honour men can pay is to bury a stranger as one of their own. And it is a comfort to know that, at the last, we regarded Andy as a man.

Even though it was far too late by them to do him any good.

E. C. TUBBS

Waiting for You...

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Bitter End

Two had gone to Mars and only one returned—with a story too horrible for human ears to hear.

Illustration by Gerard Quinn

The ship dropped out of the sky with no noise other than that of its healing blare. It was not easy to see because from behind it came the glare of a brilliant sun. Descending a shallow angle, it mared the surface and lit a stream hanga from its nose. Then its underbelly skids struck dirt, it slid forward in a cloud of dust and came to a stop.

An expert eye could have seen at a glance that this was no ordinary moon-rocket such as flamed between Earth and her satellite fifty times a week. It was larger, thinner, easier. Close inspection would have revealed it more worn, battered and neglected than any moon-rocket was permitted to be.

Originally it had been prideless but now most of its plating was scored over as fuzzy, longitudinal lines. Tiny missiles of great hard- ness and immense velocity had scored the armour from end to end.
In seventeen phases they had pierced it like needles going through the rind of a chesnut. Seventeen tiny air-holes had been plunged with a special gas firing bullet of semi-solid alloy.

The ship had the pellucid air of something wafted almost to death, like a maimed horse. It lay worn and exhausted on the desert sand, its brows cooling, its bronze showing a few thin baldnesses of gold as reminders of departed glory.

Vaguely discernible near the tail were coppery robes of the vessel’s identification number: M5. It was a number once to be cherished with. A number to fill the world’s television screens and thrill the minds of millions. Newspapers still annual headlines in four-inch caps featuring that identification, holding them in readiness for the great day.

M5 COMES BACK.

TRIUMPHANT RETURN OF M5.

M5 LANDS TODAY.

They’d not had the opportunity to see them. M5 was out of time and place. The proper time by many months back, the proper place was Luna City spaceport whence it had departed. Not here, lying in the desert like a corpse escaped from its grave. Not here with none to witness save the lizards and Gila monsters, the scrawny, cacti and twisted Joshua trees.

The man who came out of the stanch was no better preserved than his ship. Greasy, with hollow cheeks and protruding cheek-bones, lumpy arms and legs, sunken eyes filled with the haggard shine of the wasteland. Yet he was active enough. He could get around fine provided a was at his own pace. This pace had three speeds: fast, slow and dead-slow.

James Vail, thirty-three, seat after first class. Thirty-three? His brushed thin fingers through long, tangled hair, knew that he felt like seventy and probably looked it. So much the better, so much the better. The sharp-nosed and inquisitive would pass him by, fooled by his apparent years. Despite their formidable resources the power-the-chieft would find it hard to trace a man who had aged enough to resemble his own father.

He left the ship without a qualm, without regret, without so much as a backward glance. The abandonement meant nothing to him because so far as the vessel and its contents were concerned his conscience was clear. World scientists would find precisely what they wanted within thatpard cylinder. All arranged in readiness for them: the samples, records, photographs, masterings, the copper data. He’d been meticulous about that. He had followed the line.
of day to the last, the very last. There was nothing missing—save
the crew.

A road ran seven miles to the north. He had landed the ship
strangely, as near as he dared but safely ensconced behind a low
ridge. Now he set forth to reach the road, scuttling the sand like
a staghound, reeling eight times on the way. One mile at a stretch
was the most he could manage. Once upon a time he could have
run the entire seven miles and then done a nap-dance. He'd been
less fitter and fonder then, with more weight, more muscle, more
stamina.

Traffic was sparse and the wait for a lift likely to be prolonged.

This, too, could be regarded as advantageous in that it reduced
the chance of some passing motorist having noticed the ship swaying
so ground in the south.

He set on a boulder, hands deep in pockets, and hid his

time. If he had learned one thing these last couple of years it was
how to wait for fantastic patience when nothing whatever could be
done to hasten events. A gnarly corn snake slithered from the shade
behind his boulder and glided into the desert to escape his presence.

He stared with blank expectancy up the road and remained unaware
of the snake's existence.

In the time a big green sedan showed up, ignored his thumb,

roared past with a rush of wind and a scatter of hot grit. Without
rem兵团 he resumed his seat on the boulder. In the next couple
of hours eight cars and a croaking hood-wagon went by, taking no
notice of his beggared person. Randomly a huge red truck picked
him up.

"Where're you going?" asked the driver, putting it into gear

and leaning a lumber forward.

James Vail settled himself comfortably in the cab, said, "It
doesn't matter much—any place where I can catch a rest."

The driver glanced at his passenger's hands, noted protruding
blue veins and swollen knuckles. Firming his lips, he gazed directly
through the windshield. After a while he spoke again.

"Down on your back, chum?"

"Not really. I've been sick."

"You look it. You're better than a shadow."

Vail smiled wryly. "Some folks look worse than they are."

"Well, how did you come to be stranded out here in the wilds?"

That was an awkward one. He thought it over, knowing that
his mind was working with unaccustomed slowness.

"Another fellow gave me a ride for as far as he was going."
He dropped me six or seven miles back. I've been walking from that point. Nobody else would stop for me. Probably they were afraid of finding themselves stuck with some whining, cajoling wagoner."

"That can happen," agreed the driver. "I'm a pretty effective way of coping with such characters."

He did not offer the details of his technique. Evidently he'd mentioned it only as a warning. He was a big, powerful man, red-faced and tough but amiable. He was the type who'd beat a threatening umpire unconscious—and then give his dinner to a hungry cat.

"A long-distance truck driver can pick up trouble at any time of the day or night," the driver confided. "A hundred miles back I passed a pair of, dressed-up dames looking for a lift. She waved like mad at me. Ahh, I said to myself, and kept going. I've been on this run before, too, and-----"

He continued his reminiscences for an hour while Vail leaned by his side and filled occasional pauses with monosyllabic assurances that he was listening. The truck trundled into a small town. Vail sat erect studying its shops. His tongue licked across pale, thin lips.

"This place will do. You can drop me here." The truck stopped and Vail got out. "Thanks for the ride."

"Think nothing of it." The driver waved a friendly hand, moved away.

Vail stood on the pavemen and watched the crimson bolt roll from sight. Just as well not to stay with that truck too long, he thought. A trail is harder to follow when breaks are frequent and erratic. So dusky his own trail would be picked up and every effort made to trace it through step by step to his ultimate hiding-place. Nothing was more than that.

They would find the ship later today or perhaps tomorrow or even the day after. In these modern times air-ralls was heavy enough to ensure that some observant pilot would notice the grounded rocket-ship and report it. Police would go and take a look at it, recognize it, sell in the scientific. They'd open it, search it from end to end, become excited by the presence of all they'd sought but alarmed by the absence of people.

From that moment the hunt would be on. Police spotter-plots and helicopters nooting the desert. Patrol-cars racing along the roads. Telephones and radio calls widening the general area of alarmers. Vehicles hailed at road-blocks and the drivers questioned.
“Did you go past that place? At what time? Did you notice anything unusual? Did you see a couple of fellows hanging around?”

Someone or later a patrol car or police motorcyclist would stop a big red truck.

“You did, eh? About where? You gave one man a lift? What was he like? Where did he say he was going? Where did you put him down?”

A phone call back to this town. Then the local police out in full strength trying to pick up the new lead.

Yes, they’d be looking for him all right, puzzled over his importance with no criminal charge entered against him. But they would obey the orders of high authority, warning him badly, moving fast and far, seeking him so audaciously as they’d hunt down a multiple murderer.

Well, they weren’t going to find him.

He entered a cheap restaurant doors a side-street. In here of all places he had so entered himself, believing casually enough to draw no undue attention. Filling a vacant table, he sat at it, consulted the menu with artificial boredom. It was a half of an effort.

A blonde and blowzy waitress came, flitted invisible crumbs from the table, awaited his order. Her eyes softened as she studied him and found him a distinct change from the daily crowds of fat and weary gourmets. He was shy and skinny and she felt the difference appealed to her maternal instincts.

“Ham and eggs,” he said, unaware of her scrutiny.

She weighed him up again, asked, “Double eggs?”

Bringing back the response he wanted to make he forced himself to say, “No, thanks. I’ll have pie to follow.”

It took a few minutes, long, slow, crawling minutes. He waited in patience, closing his eyes from time to time, compelling his mind to disregard startling sounds and upsetting odours issuing from the kitchen.

The load she brought made him suspect that she had taken matters into her own hands. It included edible eggs. Perhaps she had made an honest mistake, having other things on her mind. And perhaps she hadn’t. The latter possibility alarmed him a little. If this was no mistake, it meant that she had got the measures of him and therefore was certain to recognize him a day, a week or even a month hence.

Expert trackers follow the trail by questioning numberless people who have reason to remember the seemingly ordinary.
He must cut and get out of here with the minimum of delay. Yet he could not show inward haste. So he picked up his knife and fork, shouldered slightly as he felt them in his fingers. Then with seemingly slowness he got through the plentiful, scrutinizing every move and pretending not to notice the waiters watching him from the far end.

The moment he finished she was back at his table receiving the plate and eyeing him inquiringly.

"No pie," he said. "You gave me too much. Really I couldn't eat any more. Just a coffee, please."

Momentary perplexity showed in her features. Somewhere her calculations had gone wrong. It shows you can't judge folk by appearances, she decided. The longer one lives the more one learns.

Vail drank his coffee in easy sips, paid and went out. He did not turn to see whether her gaze was upon him as he departed. He behaved normally at all times, inwardly, outwardly.

With the sense unburdened as he strolled along the street, crossed the main road, found another census-eating place half a mile from the first. He went inside, had two large chunks of pie and another coffee.

A.m.s.t. that was better. The next call gained him a packet of cigarettes. He lit up and faced in the manner of one entering the joys of paradise. Near the sleep a long-distance bus pulled into a stop and an old lady with luggage struggled aboard. Vail put on a sudden air of which he'd been quite incapable a short time before. Clambering to, he found a seat near the front. Suddenly the bus drew out of town.

Till break number two.

At the end of these weeks he had netted himself seventeen hundred miles from city-ship line. Short distance provided a margin of safety no matter how temporary. He had a room in a dilapidated but adequate boarding-house, a job in a factory. Trainsman, welder, they called him. From top pilot to trainsman, welder. He'd come down like a rocket.

Doubtless he could find employment far better than that, something more suited to his capabilities, if he looked around long enough. But the two hundred dollars with which he had landed had slowly and merely dribbled away. Anything would do to keep him going pending appearance of others and better opportunities.

His looks had changed considerably during those three weeks and he now bore reasonably close resemblance to the picture on his
pilot license. Cheeks had filed our, arms and legs thickened, hair
grown stronger and darker. His name also had changed. On the
factory’s filing system he was listed as Harry Fisher, forty-two,
single and unmarried.

Security of a job did not provide mental ease. He could not
escape consciousness of the falsity of his position. Fellow workers
emphasized it almost every hour of every day. They would hurl,
"Harry?" and frequently he would fall to respond and they would
notice the failure. With the swift appreciation of men who soil with
their hands, they recognized him as an unusual case above his present
station. They made mental note of the fact that none of his con-
versations ever revealed a worthwhile thing about himself. There
was a secret about him sometimes discussed in drollery manner
when he wasn’t around. Political left-wingers theorized that he was
a scout-pig for the bosses. The hard-minded suspected a criminal
record.

All of this could have been avoided and the square peg neatly
fitted into a square hole by seeking a post with the moon-boats.
Planes always were wanted there; especially top-guider. The hunters
knew that too. They’d be expecting just such a move, waiting for
it, watching for it, and ready with a countermove of their own.

"James Vall, I am a government intelligent agent. It is my
duty to—"

Hake! He would never give them the chance. They’d call
it to drag him where he did not want to go. What did they really
know of duty? He had done his own duty according to his lights
as best he could in terrible circumstances. Let that be enough
and more than enough. Let him linger in peace and live in obscurity
without being crucified for the sake of other and lesser duties.

Every morning and evening when going to or from work he
bought the latest paper; scanned the headlines. Then at the first
opportunity he’d go right through it page by page, column by
column. He purchased one this evening, took it to his room and
studied it from front to back.

Nothing about him. Not a solitary word. Yet they must have
found it by now. And they must want the crowd. Nevertheless
nothing had been said on the radio or the video and nothing had
been issued to the Press.

Why this conspiracy of silence?
It occurred to him as it somewhat remote and rather ridiculous
possibility that those equipped to deal with the data in the ship
might question its authenticity, might find themselves unable to
definitely true or false. And then somebody with a strong imagination may have advanced the theory that the ship and its crew were all an elaborate hoax.

Though far-fetched, such a theory would explain the missing crew. They had not landed. They had never arrived. They had suffered some indescribable fate and something else had brought the ship home, something strictly non-human and now running loose. Or, alternatively, the crew had brought back the ship while possessed by parasitic masters now running the earth within their human form.

Panicked and perhaps a little stupid. But if irresponsible journalists conceived such ideas for the sake of sensationalism, as well they might in dealing with the mystery of Mr., they would scare the living daylight out of the general public. Official silence alone could prevent a wholesale stampede.

He shrugged fatiguedly, flipped out of his case a tattered newspaper that he'd found among some old newspapers a few days ago. Sitting on his bed he opened it for the twentieth time and scanned the page. Whenever he did this he marveled at how quickly bygone events fade from public memory. Today, at the present date, the main subject of interest was the final stage of the Scarpio murder trial. Probably not one person of the large number in court could recall the names of those who had made the headlines in this newspaper two years ago.

MR. TAKES OFF:

Luna City, 9:30 GMT. The first ship to Mars rounded into an orbit after the disappearance of its crew, vanished precisely at deadline this morning. Pilot James Vail and Co-pilot Richard Kingman are on their way to the greatest triumph in human history. By the time this report reaches the streets the long arm of mankind will be extended far, far into the cosmos.

And so it went on and on. Pages full of headlines. Pictures of Vail, hair-tied and solemn. Pictures of Kingman, face, curly, grimacing like a cat that is about to swipe the cream. Pictures of the World President giving the billions that bungee-jump the boat by remote control. Articles by various scientists about the men, the ship, the equipment. Essays on how they'll cope with Martian conditions, what they hoped to discover.

A nine-day wonder. It had remained no more until the time came when the ship was due back. Then the papers and public interest had picked up again.

MR. EXPECTED SOON.
Mt. ANY DAY NOW.

More pictures, more articles, more anticipatory humbugs. It was, they declared, a coming thundervlop in human affairs.

Nothing happened.

The ominous note sounded two or three weeks later with the vessel that much swifter. Closer built up through the next month and ended in grim acceptance of disaster. Mt was no more. Vail and Rongora had paid for Mars in the same way that twenty or more had paid with their lives for the Moon. Repulson in peace.

And home back some time.

Vail idly wondered whether the tardy return and official discovery of Mt had delayed or expedited that same next time. Nothing he had read in date made any mention of any Mt. The authorities had a habit of keeping such things secret until the last moment. However, it was most probable that up there high in the sky upon Luna another ship was taking shape and two or perhaps three men were preparing for the second assault upon the Red Planet.

There lay the major reason for a determined, prudent pursuit of himself. The guano-lad—be he would never be satisfied with the data he had left for them. They would want the answers to other
Nebula

questions. They would want the story from his own lips, the whole story.

What had he left them? One, there was a complete technical record of the ship's flight performance now and sound. Two, the story of the main driver tube's crack-up, how they'd repaired it and how long it had taken. Three, full details of faults or inadequacies in equipment, of which there had proved not a few.

Samples of Martian sand and bedrock, ice and quartz, plus flakes of quartz, feldspar-like substances that were anisotropic and therefore of possible use to radar. Several string-thin earthworms, four feet long, coiled into yellow-tan. Also suspended in formalin were a few of these harmless wigglers that might be either true natives or flagelline larvae. Eight species of insects. Twenty-seven varieties of lichens. Thirty of tiny fungi. Nothing big because Mars harbored no life-forms of anyworthiness.

And he had left them general data in great quantity. Water dispersion maps showing supplies sparse except within two hundred miles of pole-cap rims. Gravity, magnetic field, photon intensity and numerous other measurements. Temperature records ranging between -35°C and minus 80°C. Oxygen pressure readings from .5 to 5 mm Hg. None by the hundreds and graphed by the yard.

It had been done as thoroughly as mortal men could do it.

But it wasn't enough.

A small part of the tale had been left out and they'd want that too—in his own words.

To hell with them!

In the mid-morning ten days later the shop foreman yelled, "Harry!"

It went to one ear and out the other.

The foreman cowered the floor, nudged him. "Are you deaf? I just called you. You're wanted at the front office immediately. They say it's urgent."

Vail cut off his flame with a faint pop, closed the valves on the gas cylinders, removed his helmet and dark glasses. He wended along a chamomile walkway, down stone stairs to the outside. Perhaps they intended to transfer him to another part of the plans, be hanged. But what could be urgent about that? More likely that they'd decided to fire him. Or perhaps somebody wanted to question him. He became wary at the thought of it. Reaching the corner he turned toward the office building which was constructed somewhat in the style of a glasshouse.
That was the first time I had seen her. She was sitting in the foyer, her face in her hands. She looked up as I entered the room.

“Hello,” she said, her voice soft and quiet.

“Hello,” I replied, trying to keep my voice steady.

She smiled, a small, fleeting smile. It was the first time I had seen her smile. I felt a pang of sympathy for her.

“Are you okay?” I asked, my voice tinged with concern.

She nodded, her eyes never leaving mine. “Yes, I’m fine.”

I nodded in return, not sure what else to say.

She stood up, her movements graceful and controlled. “I’ll be right back,” she said, her voice firm.

I watched as she walked away, her figure becoming smaller in the distance. I felt a weight on my shoulders, a feeling that I had failed her.

I knew I should have been more understanding, more sympathetic. But I was a young man, still learning how to deal with grown-up problems.

I looked around the room, feeling lost and alone. I wished I could have helped her, made her feel better.

But I couldn’t, and I knew it. And I knew that she would have to do things on her own, the way she had always done.

So I walked away, my mind racing with thoughts and regrets. I wondered if I would ever see her again, if I could ever help her in the way she needed.

But I knew I had to keep going, to keep fighting, to keep trying. I had to show her that I cared, that I would be there for her whenever she needed me.

And for now, I would keep that promise to myself, and to her.
if he could avoid capturing long enough they might forget him or dismiss him as of no consequence. That could happen if the host were overthrown by the march of events. For instance, his importance would decline to well-nigh nothing if another ship made a successful landing upon Mars.

Eighty-five miles out of town the train slowed as it approached a crossing. A travelling circus was the cause. It had halted in a colourful, mile-long procession waiting for the train to pass. The engine-driver reduced speed to a crawl for the sake of a line of nervous, wary elephants at the head.

Everyone gaped through the nearest windows at the circus. By the time they looked back Vail had dropped out on the opposite side, case in hand. He got a lift on the railhead of a less yoga, sharing it with an unknown individual—who could take out his teeth and force his bottom lip right up over his nose.

Forty miles farther on he had a new job. The circus arrived at its pitch and he was hired as a stake-driver, rope-puller and general factotum. He staggered heavy canvas until his fingers were raw, watched the Big Top rise following and drop. He helped set up the wide ropes, ladders and trapezes for the Flying Aces, learned to address the Big Fat Lady as Daisy and the India Rubber Man as Herman. He learned to refer to lions as cats and to elephants as bulls, to grab a stake and yell, "Hey, Rufus!" when local livestock rushed a barrier or tried to work a sideshow.

This was far different from the factory, especially in one important respect—nobody commented upon his incorrectness. Nobody tried to pry into his past. They did not care a hoot if he was an impoverished uncouthly come to the end of his rope or the King of Mars travelling incognito. The circus felt him exactly as they found him and put their own valuation upon him without wishing to know more. This alone would have made him reasonably happy—if memories can be dismissed.

But they cannot, they cannot.

Though repressed, the depths of his mind remained with him. One night he had a vivid dream as confidently he roamed upon a screw bed. He was running at top speed through a long, dark tunnel, his feet gradually growing heavier and heavier. Other feet were pounding behind and drawing incessantly nearer. He made frantic but futile efforts to increase pace but failed. Voices called heartily in loud command.

He ignored the voices and saturated with the strain of trying to make his sluggish feet move impossibly fast. A reverberating bass
sounded from the rear and a stream of bullets flew over his left shoulder. The next hit, he knew, would catch him right in the back, breaking his spine and tearing his heart. His shoulder-blades cringed in anticipation as he tried to drag himself across a rosapine. The train was endless and offered no other avenue of escape. The voices blended again. This was it!

Violent jerking woke him up. Someone was shaking his shoulder. He opened his eyes, saw above him the emaciated features of Albert, the Human Skeleton. Because of what was occurring within his mind, this vision was even worse than the dream. The shock of it made him try to yell but no sound came out.

"Gosh," said Albert, "you gave me a turn carrying on that way."

Vad sat up and rubbed his eyes. "I had a bad nightmare."

"You must have. You were flit on your back and paddling an invisible lake just as fast as you could go. You aren't feeling sick, are you?"

"No, I'm all right. Don't worry about me. It was just a dream."

The Human Skeleton returned to his straw bag, lay down and folded hands across his shifty middle. It was a pose that told unconscious horror; he looked long overdressed for his box.

Vad shuffled, turned on his side and closed his eyes. He could not sleep now. His brain seemed stimulated into abnormal activity and insisted upon pondering the situation.

In some manner he'd been traced to that factory, how he did not know. Possibly by sheer persistent hypnosis on the part of many. That meant they were definitely after him. The chase was more than a mere occupation of his own, it was a reality. And that in turn meant that despite official silence his had been found.

Therefore he would have to keep treading the trail no matter how smooth and enticing any section of it might be. He must not succumb to the inclination to stop with the circus too long. Neither must he hang around the next place or the next. No rest for the wicked was a trite remark now being frighteningly illustrated.

What the hunt keeps up the move the fire cannot sit for ever in the covert.

He found employment for the last time a thousand miles outward. He had crossed the continent and now could go no farther without taking to the seas. That was an idea not to be discarded.
sailors pass out of reach for long periods and can be more difficult to trace, especially when they desert their ships in foreign ports.

For the time being he was satisfied with a checker's pawn on the back of a girl riding a cardboard camel. It paid modestly, enabled him to have a cheap apartment in a slightly seedy house a mile away and, above all, it kept him occupied among the laboring heroes.

Eleven words had gone by since he'd gained a lift on that red track but still the radio, video and newspapers had let out not a squawk. What discussions and report had taken place in official and scientific circles could be left to the imagination. The missing part of the story would have saved them a lot of breath, enabled them to see his problem and appreciate his sole solution. But he had denied them those details, leaving them with nothing but tantalizing mystery.

Oh, the quandary he and Kingston had been compelled to consider! That button driving-each and the precious waste it had concerned in parting right. The incredibility of planetary motions that can be aboard or bail for no man. The final time that must be spent awaiting the next moment of sunlight.

They had failed in a good deal of that time by making further but useless trips, asking Mars for what it had in offer and finding the cupboard appallingly bare. In his mind's eye he could see Kingston now, retracing violently behind an overcrowded cooker. Not one of the thirty fungi or the twenty-seven lichens was edible. Not one. They could be swallowed fresh, boiled, baked or fried, and they went straight down and came straight up, leaving a man feeling ten times worse than before.

The question they'd had to answer was a very simple one, namely, whether to get the ship back to Earth at any cost or whether to let it rest in the pink sand of Mars forever. Deep in their hearts both knew that there was only one response—Mr. Wentworth. It could be done and they knew how it could be done but never on this side of heaven could they agree about how to apply the method. The solution was not one for rables, irrational discussion. It was for prompt sentiment in one way only.

Beating once more things as he sat on the edge of his bed, he heard a knock, answered it without thinking. A moment later he knew that he had blundered. Two large men in plain clothes assailed their way through the open door.

The newcomers stood side by side, examining him with hard, studied eyes. Yet a sense of uncertainty lay below their normal
assurance. This was the first time within their experience that they had been ordered to bring in a man without knowing the reason and without legal justification for arrest. Presumably he should be requested to come along as a special favor—and be carried out bodily if he refused. Anyway, this definitely was one of the wanted pair. The other might see his far away.

"You are James Vail," harshed the older of the two. He voiced it in a statement rather than a question.

"Yes."

No use denying it. The hunt has ended all too soon. The law's nationwide net had proved more efficient and far harder to evade than he'd thought possible. Eleven weeks, that was all he'd lasted, a mere eleven weeks. And in that time they'd pulled him out from among two hundred million.

Well, they had got him. Lies might serve to delay the issue but never to avert it. Truth must out sooner or later and perhaps he had been a fool in trying to conceal it. Get it over and done with. Get it all off the mind on which it had weighed too long. Strangely enough he thought of that with a sense of vast relief.

"Where in Kingdom?" demanded the other hopefully.

James Vail faced him, hands dangling. He felt as if his belly was sticking out a mile with the whole world staring at it. The answer came in a voice not responsible as his own.

"I am him."

ERIC FRANK RUSSELL

* * *

BACK NUMBERS...

In response to requests from a large number of readers we are again offering back numbers of SERENADE for those who are unable to obtain them from their usual suppliers.

All issues from No. 1 to No. 32 can be had for 50c. or 75c. each post free. All other numbers are permanently sold out.

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BITTER END
Dark Talisman

He was invulnerable to any attack the human mind could devise, but not, alas, to the vacuum of outer space.

Illustration by Grand Quin

Nissen hung in space, turning slowly. The stars, a few planets, and the bright, close Sun stuck endlessly, monotonous circles around his space-suited body. Nissen was suffering—terribly. Now that the Sun was so near he was suffering the terrors of the damned.

"The gadget does not give immortality," the Doc had said him. But Nissen felt that already an eternity had passed since he'd been blown off the ship—an eternity of raw, screaming agony that was mercifully broken only by the regular, fleeting instances of black unconsciousness, and the even briefer periods that were pain-free.

It was during these periods, when his brain was in a condition to think objectively and his eyes capable of performing their functions, that he sometimes heard the Doc's voice in his 'phone. Sometimes he even understood what it said.

The Doc's spaceship was somewhere in the neighborhood, hunting him. The Doc, who was also his brother, hated him very
DARK TALISMAN

much. He was trying to kill Nisim. He was trying hard, because
the Doc didn’t have Nisim enough just to leave him alone.

People were right above one thing, Nisim thought: just before
a person died, his whole life passed before his eyes. Nisim had been
dying for so long that this particular phenomenon had begun to bore
him. He had been dying—constantly—for a whole week.

It was like being forced to watch a film over and over again, ex-
cept that this wasn’t—entertainment. His life had been interesting,
even exciting, in spots, but it didn’t make a good film. There was
always an anticlimactic ending. But after a long time had passed he
solved the problem by adopting the tactics used by all cinema pro-
ducers. Instead of watching the stars himself—he concentrated
on the background characters, the bit players.

There was Helen, the Doc’s Helen, a real nine bit player. Later
on in the film he killed her. And there was the clerk at the Physics
building. Weeping had been the beginning of this present mood,
though he hadn’t known it at the time. He could see her again—
blonde, beautiful, and briskly efficient, running a highly-polished
fingermeal down a list of appointments and saying: “Room 413, Mr.
Nisim. You’re expected.” Her smile had been nice, but impersonal.
Very impersonal.

Nisim nursed quickly to hide the bitterness in his face, and
headed for the elevator.

At eye level on the door of Room 413 a small brown plaque
bore the name “Dr. Charles L. Nisim,” followed by a couple of
degrees. If the Doc had used all his degrees, Nisim thought sar-
drastically, he’d have needed another door. But the Doc was a very
modest individual who didn’t believe in throwing his mental weight
around. Nisim wasn’t like his brother at all.

The chief difference was that Nisim had no weight—either
physical or mental—to throw around. He was tall, thin, and
awkward. His features were not handsome, but any attractiveness
they possessed was spoiled by their constant and disquieting
stupidity. It was the outward symptoms of a strange mental disease,
a peculiar and highly-personal disease which he’d named Osmolong.
Nisim overall things, constantly.

Whether he was selling bread, bonds, or insurance, applying for
a job, or just trying to date a girl, he put everything he had into it—
and invariably messed things up. He put his customers’ books up
improvisely, left prospective employers with the impression that he
was a loud-mouthed jelly-fish with a yen for sipping lemons, and he
Nis was filled with the memory of what some of those girls had called him. Everything he tried failed; he'd been dragged by the same fantastic ill-fortune since early youth, and now his chronic lack of self-confidence was showing itself physically in twitching features, shaking hands, and a persistently dry mouth. It was nothing but what he tried to make it.

Angilly, Nisum pushed the thought of despair and self-pity out of his mind. He'd been unlucky all his life, he thought as he pressed the bell-push, but his luck had to change soon. Maybe it would be to-day—a few seconds from now—what he would see his brother.

Nisum smiled, feeling almost light-hearted. The Doc and himself had one thing in common: they were both, after their own fashion, mathematicians. But his brother used abstract symbolism to reach a solution, Nisum calculated probabilities from solid funk and blood variables—such as the age and staying power of the stag, and the weight, ability, and self-control of the jockey. Naturally he failed in this also, as did thousands of others. But typically, his failure was immensurably greater.

Nisum had somehow things. He owed some very hard work an awful lot of money. This time his failure could quite easily have been fatal if it hadn't been for the letter from his brother.

As footsteps approached the other side of the door, Nisum felt himself beginning to sweat. He'd never liked his brother, and hadn't seen him in five years. Should he act, or not? Or never citrus was the Doc? Or could, or that? So very much depended on this. When the door opened, indubitably was hastening him to the verge of panic.

He said: "Don, Charlie!" then felt like kicking himself. His brother heard being called "Charlie!". Oh, he'd stared well.

"Hello, Doc," the other said, apparently not noticing the slip.

His brother was a slightly older duplicate of Nisum himself, but somehow managed to look still, austere, and distinguished instead of shifty, forked, and awkward as his brother. The Doc held open the door and inclined his head. "We'll all ready for you. Go straight through to the lab, please."

Nisum entered a small anteroom whose ceiling seemed to be supported by padded rows of book-shelves, with an ornamental filing cabinet here and there to strengthen the construction, and into the laboratory. The lab had been rented and equipped, he knew, by one of the leading electrical firms with the idea of keeping his brother around—and, of course, to help him work on some of his wild ideas.

To keep the Doc further amused the firm sent him cheques,
regularly and at short intervals. It was one of the shrewdest invest-
ments the firm had ever made, because his brother was a very
brilliant scientist.

The place was large, Nixen saw at once, but the amount of stuff
packed into it made it look small. A fair amount of the gadgetry
was geared to unseen fans around a central area of the floor, which
covered in its center a very ordinary leather armchair. His brother
needed something.

"That's for you," he said, then turned and called out, "Helen! If
you're finished back there, we're ready to go."

Nixen sat as a dazed girl straightened from behind a
bench and came towards them. She wore a gray lab coat over
dark blue trousers, slacks, and tennis slippers, and the whole room seemed
suddenly so light up. But that was silly, because high-intensity
fluorescents were making the place three times brighter than dry.

She was young, yet looked extremely, somehow—out the
type, Nixen thought, to laugh or make him feel foolish. He felt
himself grinning wildly, and as his brother introduced them he knew
he was yelling and jangling a bit, and trying desperately to be bright
and engaging. He was very sorry, but not too surprised, when she
suddenly stopped smiling and became interested only in some
equipment nearby.

He'd been trying too hard again, believing like an unbridled
adolescent up instead of a forty-something man. He'd scolded her off.

"I'm anxious to start as soon as possible," his brother said.

"You know what I want to do, and you wouldn't be here if you
wouldn't agree to it, so if you don't mind..."

Nixen held out his right hand and rubbed the thumb and index
finger together gently. He smiled hazily, not using the tongue
that got him into neither nor trouble.

"Oh, of course," his brother said plaintively, and took a thick
envelope out of his breast pocket and gave it to Nixen. He sounded
fairly conscious.

"Thanks," Nixen said. "I—I believe we're going to have
something I want to know."

His brother grinned and opened a gray metal box that lay on
the bench beside Nixen's chair. The box contained a set of surgical
scissors. Nixen took it and went on:

"About those tools. You said you wanted to try out a gadget
that would never greet eating me up a trifle. Nothing dense, of
course, but just a few sticks off an ear-late or finger, and there would
be little or no pain attached. You feared that there might be danger, but thought it slight as you'd already tested the gadget on yourself."

Ninus wet his lips nervously. "Also, if I submitted to these tests you would give me a large sum of money, and you needed the money.

"Now," Ninus watched his brother's features carefully as he went on, trying to keep the fear and suspicion he suddenly felt from showing in his voice, "I know you don't like me, and on the face of it this looks as if you're giving me money—a whole lot of money—for practically nothing, so I want to know two things.

"What are the tests supposed to prove, and why did you pick me?"

His brother stared at him, an unreadable expression on his face. Ninus thought he caught a twinkle of glee in that look, but of course that was silly. After what seemed a long time the other said carefully, "You're mistaken, Ben. I don't dislike you exactly. I certainly don't approve of some of the things you've done..."

He gave a huffing shake of his head. "But let's skip that. To answer your questions, I picked you because the 'gadget' you refer to has got to be kept secret, and it has a better chance of staying a secret if we loop it in the family, which is the reason I nudged you for the tests. You see, I can't investigate the thing properly while I'm also the green-pig."

He ended simply: "The only way I could get you was to offer you money."

Ninus looked quickly at Helen, then back to the Doc.

"Helen is not a member of the family—yet," he said, answering Ninus's unspoken question, "and she hasn't been visited because there is still an element of risk involved. However, she went on impatiently, "I'll tell you everything I know about the 'gadget' while I'm stepping it up proper.*

The whole thing had been a fluke, his brother explained, the son of a man that makes a billion-in-one probability look like a dead certainty by comparison. Dr. Ninus had been asked to try to develop a method of projecting true, three-dimensional images suitable for indoor viewing without distortion. The three-D effect could be obtained successfully in theatre and such places by various literary means, but these methods weren't practicable for home use. The Doc had eventually solved the problem. Then, after handing over the solution for the addition of the necessary commercial refinements, he thought he'd have a little fun with the effect he'd discovered.

He made a cigarette lighter.
DARK TALISMAN

His age-expectable brother pulling a trick like that. Nixon could hardly believe his ears.

The Doc had made a large, ornate, pecker lighter. It would be great fun, he'd thought, to play tricks on his eminent friends by offering to light their cigarettes with the three-dimensional projected recording of a candle flame. He'd imagined three bullseye expressions as they sucked and sucked and the tobacco didn't even smolder. It would have been a very amusing sight.

Nixon thought that his brother had a very simple mind, but he kept the thought to himself. He could think of several ways the other could have used that effect. Profitably.

His brother said, "It didn't work—or leave out the way I expected." He goes a sigh. "Oh, I wish I'd seen detailed notes, instead of just throwing it together for amusement."

The lighter was now attached to Nixon's forehead by two soft leather straps, and the metal casing felt cold against his skin. His brother gave the forefinger a light twist, straightened up, and nodded at Helos. She began moving around quickly, doing complicated things with the equipment surrounding Nixon's chair. The equipment hummed, whirled, and made clicking noises. Some of it lit up, and there was a strong smell of ozone.

"Disregard that stuff," his brother said matter-of-factly. "You're safe where you are. It's just some detecting and analyzing gear designed to tell us how—and I hope why—the gadget we're testing works." He took a scalpel from the box and made an inch long laceration on the heel of Nixon's thumb, then peeled quickly. "Read it a little so it bleeds onto that blister, then watch it for three seconds." He dropped the scalpel and almost ran to one of his detectors, his eyes darting wildly about as he tried to read about twenty dials at the same time. He was working feverishly. Nixon brought his attention back to the cut in his thumb. He wincided in dismay.

Three seconds after the cut had been made, it disappeared. Completely. The few drops of blood that had fallen onto the blister were gone, too. Nixon nearly slid out of his chair.

But he recovered from the shock quickly. There were a lot of questions he wanted to ask. He opened his mouth, then shut it again, because his own mind was giving him most of the answers already. They were wonderful answers.

This, Nixon thought with savage embarrassment, was at last his lucky day. That gadget: the more he thought of it the more wildly intoxicated he became. Joy was an emotion rare to Nixon, and hard to express. He fought to keep his feet beneath.


A short distance away Helen eyed his brother with some concern. The Doc was muttering and glaring at a battery of dials, each one of which assured him that nothing whatever had taken place. After a time he calmed down, apologized to Helen for his language, and asked Nissin if he'd mind a few more turns. Nissin nodded assent.

During the hours that followed, Nissin was cut by the Doc more times than he could remember. But he was too excited to feel any pain. At one stage he had to make an incision himself in one corner of the job, then dash to the opposite corner before the three seconds were up. But the results were the same—the cut healed instantly, and the blood he'd left thirty feet away disappeared. When it was all over, Nissin knew what the gadget could do, but neither he nor the others present had any idea how it did it. The Doc's instruments remained as completely ignorant of the gadget's existence.

Nissin hadn't said anything for a long time. He'd been thinking, hard, and slowly reaching a decision.

He asked quietly, "Immaternity, Doc?"

His brother had been staring into the middle distance for the last ten minutes. He shook himself suddenly, and said, "Of course not."

Nissin let that go for the moment. "How's it powered, then? You haven't told me that yet."

"It isn't," his brother replied. "It doesn't use the batteries built into it, or any other source of power that I can devise." He looked glumly at the equipment crowding the room. "I don't know how it works exactly, but if you want an informed wild guess...?"

The Doc rubbed a hand across his eyes. Nissin could see that this business had cost him a lot of sleep recently. Then his brother sighed, and began using his lecture-room voice.

"The original purpose of the lights was to project a small, three-dimensional moving image in full detail, which means that the image had to be set up and broken down again several times a second, in much the same way as a flat screen movie picture is produced. But, instead of projecting an interlaced pattern of light rays, this gadget scans any living organism—we know it doesn't work on inanimate objects—that it is in contact with, and reproduces it perfectly if that organism is damaged in any way. And should the organism lose any parts, the missing pieces are collected somehow, and fitted back into place."
"You saw how the blood spots disappeared each time an invisible bullet was fired.

"This is fundamental stuff—it doesn't appear in any of the known electro-magnetic spectra—which I've stumbled into by sheer chance. And from what I know of the laws of probability, it would take centuries of research before I could hit on it again—unless, of course, somebody discovered the principles on which this effect is based. My knowledge of physics—specifically the laws concerning the conservation of mass and energy—made me certain that the power used is drawn from a space-time continuum other than our own."

The Doc straightened from the bench and came towards Nisus. As he bent to unstrap the lighter from Nisus's forehead, his brother continued. "You remembered each test after it occurred, so obviously your brain cells are in the normal way. Otherwise your memory would have erased at the point of the first test. Therefore, if your brain cells aged, then the rest of you did likewise. That's why I'm certain about the gadget not giving immortality."

Nisus felt himself go cold all over as the Doc's fingers began lowering the fastening. His voice as he said, "It's still a hardly gadget to have around if there was an accident." To himself he thought: a very hardly gadget. The decision he'd made didn't seem a bit wrong.

Like many people, Poni had a grudge against Nisus; he was envious. In many more attempts to break his life-long into he'd worn natio's fan, carried coal in his pockets, and did things which even the he knew were silly; in short, he'd tried everything. But this was different. This was the ultimate in luck charms, for it gave complete protection against bodily injury, and even death—except, of course, through old age. With the Doc's gadget he could be another Achilles, but saw the latter's quick foot. Poni, Nisus realized, after giving him a lifetime of the most watched the itch, was at last making it up to him. He was smart enough to have this gadget, and he would have it. No matter what.

Carefully, Nisus said, "How about a few more tests?"

"No, no more."

The Doc shook his head and went on gravely, "You see why I wanted this kept secret. It's a terrible responsibility. By right I should get a lot of the top men working on it, trying to make it possible, maybe, but I don't know. Suppose it fell into the wrong hands, someone with a yen for power, maybe. An indescribable disaster, or an unanswerable crime...?" He turned
his head away, but the worry still sounded strangely in his voice.

"I — I don't know what to do with the thing."

Nisno looked angrily at the crumpled lighter now lying on the
bench-top. If it were me, he thought silently, there would be no
problem. There was no use in just asking his brother for it. In the
Doc's mind he came under the fitting of "wrong hands."

The Doc turned. "You've been a big help, Ben," he said
politely. "Thanks a lot." It was dismissal.

Nisno rose to his feet, staggering slightly and bumping into the
bench. Obviously sitting for so long in the chair had made him stiff.
He muttered something about his clamminess, his hands, meanwhile,
move very fast. When he turned and headed—not too quickly—
for the door, a lighter still lay on the bench behind him. But it was
Nisno's lighter and not the Doc's. Luckily, they'd been similar.
But the precaution had been unnecessary; the Doc hadn't even
looked around. Probably still worrying, Nisno thought, laughing to
himself, about the gadget falling into the wrong hands.

Nisno didn't think that he was the criminal or power-hungry
type. He'd probably have to break a few laws if he was to provide
himself with a life of comfort, but after that he just wanted to settle
down and enjoy his intractable life. And the beauty of it was that
his brother couldn't sell the police or anyone else of the truth—
not without selling the whole truth about the gadget. No matter
what way Nisno looked at it, he was on top. He could hardly feel
his feet touch the floor he felt so high.

A hand caught his elbow.

He'd forgotten Helen completely. But now he could see from
her eyes that she'd seen him with the lighter, and her mouth was
opening to tell the Doc all about it. Abruptly, in sudden panic he gave
her a rough, open-handed push out of the way and ran the last few
yards to the door. He hoped he hadn't hurt her; it was the first
time he'd had violent hands on a woman.

As he reached it, the door and the whole room lit with a bright
green flash. Nisno whirled, and felt suddenly sick. Helen lay,
where he'd pushed her, among what had been some highly-charged
apparatus. It had now discharged itself, through Helen. A greedy
cloud of smoke, with the numbing stench of burned hair drifted
towards him. He couldn't move.

It wasn't until his chest was ripped open from eye to ear that he
came out of his shock, to find his brother attacking him with
hands, feet, and teeth. But this wasn't his brother. This was a trea,
a vicious, brutal killer. Fighting desperately for his life, some cool, detached portion of his mind still had time to observe that the Doc must have used Helen to turn him into an animal like this. He must have loved her very much.

But the Doc's fury, terrible though it was, was blind. It made him cruel and true when he should have pondered. Nissen was more scientific, but he took an awful lot of punishment before he got the grip he wanted. Then his brother's hand hit the floor with a startlingly loud crack, and it was all over.

Outside, a woman screamed at the sight of Nissen's torn face and blood-smeared clothes. She lay at it while he leaned weakly against the wall and fumbled for the Doc's gadget. When three seconds later he straightened, the blood gone and his face intact, the woman stopped screaming and fainted. Nissen hurried past her, crying hard as to think he was a double murderer.

But the Doc hadn't died from his skull fracture, and because of that near-miracle, Nissen was in his present mess.

The blinding splendor that was the eternal night of space whirled slowly and mystically around him. But Nissen could only catch glimpses of it—his eyes were always fast to go. With his ears it was different: heavy, tight-fitting 'phones kept them from bursting. He could hear fairly well, but only during the intervals before the exploding away of his body turned his brains to acid in his head.

In the gaps between blackout and the pain he could hear his brother's voice talking to somebody else aboard the ship. There were a lot of guns, but he understood enough to know that they intended using a guided missile on him. After an eternity of pain—perhaps ten minutes—the nothing ceased.

The exciting, badly-produced, and strictly down-beat movie that was his life began to unwind again. He couldn't do a thing about it.

Money, being his first necessity, Nissen had decided to rob a bank. The attempt was both successful and a failure. He got the money all right, but he was twice seen by guards on the way out, and shot. It was very painful. The only reason he got away was because of the mental shock as the guards of a riddled body that wouldn't lie down dead for more than three seconds. Their expressions had been indescribable; one of them had burst into tears.

He could have saved himself some of the pain if he'd returned the guards' fire, but he kept telling himself always that he wasn't really a murderer. His next job was better planned, and he failed.
matter what part of his body it made contact with, so he had it tied
in the inside of a wide leather and steel mesh belt, and wore it
around his waist. He never took it off. It couldn’t be taken off by
anyone unless cutting him in two, and if he wanted to remove it,
it would kill him in an hour.

The gadget was fool-proof, of course. Even when a bullet lodged
inside him, it was expulsed or not being a normal part of his body.
He had all the wealth he needed to keep him happy for the
rest of his life, but it had now become impossible for him to settle
down anywhere to enjoy it. Since his brother had left hospitak, a
wide-screen, though confidential, hunt for Nilsen had begun. Because
of Helen the Doc hated him very much, so much that he’d broken
his self-imposed oath of secrecy regarding the gadget. But his
brother would do nothing about it, and neither would ordinary police
authorities help much. So, being a very constant scientist, the Doc
had gone to the top, explained the position, and asked for help. He’d
been given it.

Now, everywhere that Nilsen went, no matter what disguise or
method of concealment he used, hard-eyed, unshaven, implausible
men—men with eyes instead of seams, and with practically un-
limited authority—were close behind him.

They couldn’t kill him by ordinary means, though they tried
often enough. But there were traps, which could be laid if they were given enough time. Nilsen had almost been caught once
—by cutting and a dent-handle sword of five hundred with—a
man who wanted to keep moving around and not give them any time
at all. Even then he knew that they would eventually get him.

There was nowhere that was safe for him in the whole world.

The answer was, naturally, to get off it.

Taking a lot of trouble to cover his tracks, Nilsen went to Mars.
But space-travel is a very expensive business: he arrived at the
terrestrial colony practically broke.

The economic systems—and the laws—were different there.
The only thing both easily portable and extremely valuable were the
Mary-peddled artificial radioactive, and anyone even trying to get
near one of those precious nuggets would die of radiation poisoning
in an hour. Nilsen had the gadget, however, and a plan that was
fool-proof.

But Nilsen, he thought uncannily, space pirates!

They were no unscrupulous lot on Mars. He had no difficulty
finding out about shipments and departure times, and very little
trouble obtaining passage on the ship he wanted—a recently commissioned job sailed the Queen Titania. He was good at disguise now, but intended staying in his bannock most of the time, just in case. His plan was simple. Just before the ship’s two-G acceleration was due off prior to the Tunnerv, he would don his space suit. Then, during the several minutes it took the ship to swap ends, he would go quickly to the shielded compartment containing the radio-actives.

There would be no guards because nobody could live in the storage compartment for long—it was both open to space and flooded with lethal radiation.

The radio-actives compartment had an airlock. Niles would open the inner seal, close it behind him, and wait inside the lock until the ship was close to the Moon. When he bumped—a fairly harmless gimmick that was all noise and smoke—which he’d have planted previously were off, he would enter the compartment. During the rendezvous confusion he would shoot the tiny joglet of radio-active material down to the Moon in one of the ship’s missile rockets, making sure that it landed near a conspicuous landmark where it could be retrieved later. By keeping his gaze down and pre-
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tending to be a crew-man investigating a damage report, he would
take the first opportunity to return to his cabin.

There were several men on the Moon, representatives of firms
which were always chemically short of radiactive, who were told
the stuff with no questions asked.

It was a wise plan, but it didn't work out like that at all.

Nissen had noticed one of the new Government ships land just
before the Titania took off. He didn't know that it took off suddenly
after he did, and with the same course and velocity. Neither did he
know that the Doc and some of his high-i mperial help was aboard it
—until the shooting down of both ships. A-Drake pulsing at Toucher
made radio contact between them possible. Then he heard his
brother talking rapidly over the General Circuit, and he knew that
everyone aboard was hearing the other's warning. His only chance
was to get to the radio-active compartment quick, before they
started searching the ship. Nobody, he hoped, would think of looking
for him there.

But there was a crew-man with a gun in the passage leading to
the compartment. When the man saw Nissen, surprised and carry-
ing the message note, he called "Verl! Verl!" and pointed his gun.
Nissen was already pointing his. He fired, the reaction due to
the absence of gravity sending him whirling backwards. When he'd
stumbled against the wall, he saw the crew-man drifting down the corridor, doubled up, and with a lot of red on his muscle
and shorts. His lack of feelings over what he had done frightened
him suddenly. Was he becoming a killer?

Somebody was coming along the same corridor, and wearing a
spacesuit by the sound of him. Nissen had no time to waste on a
terrible conscience.

He didn't want to start a battle—a misplaced bullet could easily
wreck the ship, and that would be serious. Nissen had to hide; but
he couldn't enter the radio-active lock without the approaching
crew-man seeing him. What to do?

Suddenly he had it. There was another small air-lock stone by,
which was used when a check on the exposed sections of the Dreyer
became necessary. He made for it, breaking a smoke bullet behind
him to hide his intentions. He could enter the compartment by
walking along the outer hall. It was safe doing that, because the
Titania wouldn'termint her Dreyer whilst a ship-load of government
agents were preparing to board her. Once inside, the gadget would
protect him from the radiation, and even if they did guess his hiding
place, he would have time to think his way out of the mess. He
still believed in his lucky piece.

But Nilson hadn’t known about the air-lock tell-tale. As soon
as he’d worked the lock controls, the fact registered on instruments
in the ship’s control room. Nilson was just about to swing open the
cupboard to the radio-sets held when the head and shoulders of
a crew-man rose from the lock he’d just left.

The crew-man shied first.
The bullets went through his shoulder and out the other side, its
kisoric energy knocking him off the ship. But the wound didn’t
matter; the gadget was still working. Then suddenly Nilson knew
that it did matter, very much, because the gadget kept on working.

When a spaceship develops a leak, the result is explosive decom-
pression. When the leak is too large, the explosion is not that
much more violence. To Nilson it felt like a lot of bombs going off
inside him, all at once. His eyes went pop, his breath tore out of his
mouth and nose so fast it felt like gravel, and pressure from his body
lapse into him out like a soggy balloon.

It was very, very painful. Nilson could never have believed that
there could be so much pain at one time. But just as the agony was
drowning itself in oblivion, the gadget would restore him good as
new, and he went through it again.

And again.

The gadget didn’t, of course, remove the holes in his spacesuit.
The Doc was first to realise what had happened. Possibly, the
tight-fitting helmet’s pressure kept Nilson’s ears in working condition.
He heard his brother’s terrified voice shouting at him, and calling
to the men in both ships to do something. But they couldn’t think
of anything to do.

After a very long time—to Nilson—there seemed to be a slight
improvement if there could be an improvement in unbearable agony.
The gadget had ceased to reproduce the air in his lungs, so he no
longer exploded so violently. During the instant just after his
resuscitation and before his ears went, he saw the Titanic begin its
descent for the second half of her trip to the Moon, while he,
with the ship’s terrific pre-Turner relay, continued on. With
his present course and speed he would miss the Moon. And Earth,
too.

When the screen of the Titan’s A-drive interferometer faded
from his ‘phones, his brother’s voice came again. The Government
ship was trying to pick him, and tracking him on radar.
There was disagreement on the ship. The Doc wanted to pick Nixon up, and risk what he and the gadget could do when they brought him into air again. The Government men said no, besides that risk, they hadn't enough fuel for the fancy maneuvering that would be necessary. The ship's Advocate was incapable of defense. Gradations of threat, and being electronic in nature it couldn't operate in an atmosphere, so they needed all their precious chemical fuel to make a landing here. However, they were all horrified at what was happening to Nixon. They wanted to stop it, and let the gadget go here.

Then his brother had thought of the guided missile.

The Doc told him when they fired it, and for the few minutes it took to reach him Nixon was so glad that the pain was almost bearable.

There was an explosion—just as painful, but different from the ones he was always having. It must have torn him apart. But the gadget was untouched. He came too—good as new—with a few scraps of clothing and spacesuit still clinging to him, and the gadget, held by that two efficient belts, still pressing against his back. It continued as before. Somehow his photos and receiver were still intact.

Nixon lived and died, lived and died, and kept on living and dying. He wished he could go mad, but the gadget kept mesmerizing him, partake. And he was very sick at the psychological guilt that made him re-live his lift every time it happened. For a time he found his brain to calculate the number of times it had happened since he'd been blown off the ship. Then he tried to figure out how many more times it would happen. That number wasn't as big, but its implications were certainly horrible.

The Government men were arguing with his brother again.

They wanted to go back. The ship was dense within the orbit of Mercury; it was getting too hot. Nixon felt the heat too.

The metal of the Doc's gadget and the belt he wore had a very high melting point. Nixon knew that he was heading into the fire, and that he would have to get very close indeed before the temperature was high enough to melt and destroy the gadget.

His brother was a very brilliant man. Nixon wished he'd think of something quickly.

JAMES WHITE
The Undiscovered Country

On distant Pluto, deep within the Solar System, the natives will surely have their own methods of defense.

It seemed to me I was taking part in some fantastic battle, slow and silent, paradoxically based on a lightning incident of the legendary panic: a Scottish border raid.

The chief's young daughter stood with her back to us, above, unsuspecting, half a mile from her village. Phillips and I converged gradually on her from behind, through the opaque mist which surrounded us all.

We weren't moving in slow motion because we feared her drowning in a flood, but our bodies were as heavy as those of men. The air had to be visibly thick, for the dense atmosphere encompassing us was more than half composed of an acid gas which was a deadly gas as fast as sulphuric acid dissolves into water.

Moreover, we had to be thoroughly insulated against the immense cold of this martian place.

It was one of those rare miracles of Nature that the girl needed no protection at all against either the cold or the corrosion atmosphere. Stuck naked, she was at ease in her own element.
It was another miracle that, however different her literal structure, and with the certainty that her body cells were of a type beyond the knowledge, almost beyond the credence, of modern biochemistry, her shape was humanized. And very feminine. Her skin was smooth and white. She might have been a marble Greek goddess.

We reached her together and lifted her gently, trying not to hurt her with our metallic fingers. She was hard and rigid and it was indeed as though we were carrying a marble statue back to the ship.

We followed the narrowing beam of the searchlight to its source on the hull of the frame, and waited at the door of Lock Two. There was a disturbance in the chemical-dusk atmosphere around the ship. In the dim reflected light, it was streaming like inhaled smoke through an orifice in the hull; the pump's sucking mouth.

We examined our captive. This unknown Plutonian girl, whom we'd playfully called "the chiefgirl's daughter, Pseudomena," had slightly changed her position. Her elbows, which had been pressed against her sides, were now a couple of inches from them.

Her hair was long and black, and she certainly had two human-looking eyes, a nose and a mouth, but it was hard to discern details out of the direct shaft of light.

Then the pump ceased, its orifice closed like an iris lens, the atmosphere slowed in its swirling. The glass-lined storage tank was full to capacity with compressed Plutonian atmosphere.

In the ship, Captain Shawvington pulled a lever, and the circular, safe-like door of Lock Two swung open. Like the rest of the hull, it was already deeply scarred with corrosion. Whole patches were blistering and bubbling like paint under a blowtorch. We slid the stiff body through into the receptacle behind. It was like loading a frozen carcass into the refrigerator of a meat van.

The door closed on it and we made our entry through the other lock, into our own atmosphere. The six-lock door had swooshed shut behind us when the frame began to take off, the Captain having left the pump and lock controls for the pilot's seat.

We had come some 3,600 million miles to Pluto to spend ten minutes there, get what we'd come for—and get out.

Two ships had been here before us. They had lasted too long. Neither returned.

The first reported the startling news that bleak Pluto was inhabited. It had landed on the outskirts of a community of some kind. The ship's searchlights, reflected by the dark snow, just
revealed the rough shapes of a group of smallish houses but nothing of their structure. They could have been the primitive huts of savages—or the ultra-modern dwellings of a highly-civilized race.

The manner, however, was not that of savages. The homes were moving, with an inexpressible speed, towards the ship.

So reported the captain after watching them for half an hour.

It was his last report. His radio went dead. In the light of later knowledge it was presumed that the acid atmosphere had eaten through the antenna and probably also fatally holed the hull.

The second ship didn't wait around so long. It simply plowed the atmosphere to a rough idea of its general character and what it was doing to the ship, and took off again in a hurry. 'The skipper's last inter-

ference-disordered words were: 'Main ion source, ship difficult to control. That terrible atmosphere seems to have eaten chains out of the rerum. Side squire pushing us off balance. I'm afraid—'

The rest was silent.

Plainly the skipper's ears were weighed and the ship crashed.

We, the crew of the third ship, furnace, were as least fore

warned. We knew we'd have no time to stop and exchange pleasan-
ties with the Plutonians, especially as it was apparent that the tempo of a Plutonian's life compared with a human's was like a snail's compared with a mouse's.

The only way for humans to contact Plutonian life was to cap-
ture a specimen of it and take it home to study at leisure . . . If it could be kept alive long enough. And that was our mission.

We stood in our suits as the furnace fought to climb out of the Plutonian gravity pit, trying not to wonder too much about the condition of our suits. But they held out. We reached the required speed and began the long coast home. It was a relief to discard both weight and the suits.

Phillips, biologist, biochemist, and medic, was now the most responsible man of the trio, as he had always been the most accros-

tivated. The bigwigs of the Institute of Planetary Biology, in the fantasy Crewe Hill, wanted to examine a living, functioning Plutonian, not merely to dissect a corpse.

Captain Shenington, his own highest aide, successfully jumped, could afford indifference when he saw anxiety crossing Phillips' weary brow.

'Don't panic, Phillips, we'll all stick in and keep her in good

shape . . . It is a woman?'
Phillips nodded so eagerly imprudently that I felt confirmation necessary. I said: "It's a woman, all right, skipper, and she's certainly in good shape."

"So I thought," said Shervington. "I've got an eye for that sort of thing, even at forty paces on a dark Plumeian night. Let's have a closer peep."

He moved, but the conscience-tune Phillips anticipated him, backing himself down the range, head under head, to the lower deck where the girl floated weightlessly in the sleekplank containers, Lock Two. Her outline was faintly blared by the misty atmosphere which had entered with her.

Phillips glanced at her, then leaned himself with the pumps regulating the flow of fresh atmosphere from the supply stored under pressure in the big tank. Considering her extremely slow rate of expiration, there should be more than a sufficient supply to keep her alive during the six weeks voyage home. The big problem was that nobody knew what Plumeians ate or drank—or even if they did.

The Captain and I looked Plumeana over carefully. With her long hair afloat, her eyes staring wide, she looked like Ophra divining.

Now that we could see her features properly, there was nothing really sinister about them. The pupils of her eyes were unusually large, as though dilated by digitally, but that was necessary for light-gathering on distant stars.

After long seconds, the skipper said quietly: "She's beautiful."

"I wonder if she has a name?" I said.

Captain Shervington mused: "I wonder what's in her mind and whether we'll ever know it."

There was so much time for wondering; we had our immediate jobs to do. I, navigator and signaler, had to report to Earth via the second-axis line and take our bearings. Shervington had to check the ship's space-worthiness after its sad bath. Phillips had to study his charge.

The cosmic interference was bad, and Earth sounded like an ancient Edison phonograph. But I managed to get the report over, and hear the faint cracked voice of Shepherd, boss of the project, filtered through: "Well done, Jarvis!"

I looked through a peephole at the dusky encasing balls of Plato. At about this distance, on the approach, we had regarded it apprehensively, and the Captain had asserted wryly: "The underground country from whose shores no irregular returns."

But now we were returning and the fear which had accumulated
through long anticipation was fast dissolving. My spirit felt almost as airy as my body, and Sherringman's report that the ship had escaped with negligible damage made relief complete.

Pain and a longed-for were dispelled now.

We returned to Poulter's. Phillips was having a field-day with the various remotely controlled clinical gadgets with which the sleepless operator had been fitted by long-sighted scientists. He'd successfully clamped the pulse meter on her wrist and its indicator was registering a full swing every half-minute.

"That appears to mean she's living about forty times slower than we are," said Phillips. "At least, anguistrically. It doesn't necessarily mean her thought processes are correspondingly slower, although, of course, they must be slower than ours."

Men had long known that in sub-zero temperatures life processes were incredibly sluggish. How the Plutonianians and their wives were ever to get mentally to step was another problem, but obviously the initiative rested with us, the quick-witted. If only a Plutonian could be kept alive under laboratory conditions on Earth, a way could no doubt be found.

Plutonian speech must be so slow as to be unintelligible to a human ear, each syllable perhaps minutes long. But if it were tape-recorded, the playback speeded up to suit the comprehension of our linguistic experts, and if their efforts at response were accordingly slowed down, . . . there remained possibilities.

Phillips was currently fiddling with the blood-sampler. It was like an easier hypodermic syringe swiveling freely on a bearing set in the clamp.
a manually-controlled valve with an open outlet. Phillips screwed the flask into the outlet and turned the valve's handle.

The flask filled with the foggy atmosphere of Pluto. Phillips shut off the valve, stopping the flask abruptly, and said: "These two samples will keep me busy for a bit. I'll see you later. Keep an eye on Pocahontas.""Right," said Shervington. Phillips retired to his "office" up above. If he could successfully analyze the atmosphere, I would make the formula to the Institute and they'd synthesize volumes of it in readiness for Pocahontas's arrival. He didn't expect to get far with the blood, working alone under no-gravity conditions, but he hoped at least to make a start in understanding Plutoian metabolism. A tank could carry on from there, much faster, on Earth.

Six weeks without sustenance could kill a human. But that was the equivalent of only one day for a Plutoian. Perhaps in less than another Plutoian day, some satisfactory food could be prepared.

"Nevertheless," said Captain Shervington, after voting this, "kidnapping a girl and starving her for two days is a bit rough. I hope we learn enough Plutoian to say we're sorry. Just her bad luck she happened to be our for a walk on her own when we landed."

"Good luck for us," I said. "The Institute wanted a female preferably, to get a fuller idea of the reproductive system."

"Maybe she got some eggs, Graham."

"Maybe. You know, until I see that yellow blood . . ." I trailed off.

The skipper looked at me quizzically. "You thought she wasn't so very different from us? You fancied, perhaps, some kind of Edgar Rice Burroughs romantic affair with her if she could be stopped up in our tank?"

I grinned, and pulled away. "I'd better test the radio link again."

He grinned after me. "The link was all right; the usual mixture of words, complaints, and repeat requests. I came back here, and we spent some time just watching the figures in the computer. Pocahontas gradually changed her position to a more exposed one, though her hands were beginning to clench. Her eyes became half closed and she seemed nearly asleep.

"Her old man's going to wonder what the devil happened to her," commented Shervington, and yawned. I yawned, too. I was beginning to feel pretty tired and seemed it was the concluding
after the peak of nervous tension. I rubbed my eyes; they were smarting a bit.

"I think—" began Shervington, excitedly, then broke sud-
ddenly into a fit of coughing.

"Got a silly tickle in my throat," he said, honestly, afterwards.

I felt a similar irritation, began to cough, and my eyes resumed

"Something’s got into the atmosphere here," said the slipper,

looking around. Then: "Look at that valve! The damn fool!"

I looked at the valve on the tank of Phlegethon atmosphere. It

looked vaguely swimmy and it wasn’t just because of my sweating

eyes: there was a faint mist hovering round the thing. The slipper

curled and dried at it, holding his nose. He spun the handlewheel

a turn or two and blundered back.

I felt a sort of heat prickle on my face, which might have been

the scent of frigate or the touch of the escaped acid gas.

Phillips dribbled down the ladder, carrying a notebook. "I’ve
got this far anyway. Thore it through the ether, Graham . . .

What’s that quiet snarl in here?"

The slipper controlled his anger. "You didn’t shut that valve

properly. Some of the poisonous stuff leched out."

Phillip stood at the valve. "I did shut it—right."

Shervington shrugged and said nothing. I said: "Is that the

atmospheric formula, Phil—you analysed it all right?"

"Uh? Oh, yes, it’s deadly stuff. Can’t understand how

Phlegethon can stand it in it. A real handful of it would kill any

man—unhurriedly. Just this page, Graham—get it right."

I took the notebook to my signals niche on the upper deck. I

looked at the page of chemical symbols and knew it would be a

headache to "get it right" via the current less-than-perfect reception.

I felt even more tired.

However, I was spied that particular headache. The moment

I pressed the mike button, the set went dead. No transmission, no

reception. Obviously no power. I examined the leads from the

power units they were in order. I removed the top of the set,

peered into the ordered multitude of transistors. Down below them,
in a near-inaccessible corner, a screw terminal had somehow worked

loose and the end of the irrelevant power lead had become discon-

nected and drifted away.

I said something violent and idiotic, and hurled out a long,

thin accent. It had the much-ravaged edge necessary to deal

with that screw terminal. I fished again in the tool-bag, and there:
"Graham!" A double-voiced shout, urgent with alarm, came from below. I dropped everything and thrust myself down the ramp, clumsily, because my muscles seemed to have lost strength. The rush of the acid gas hit me like smudging sails. Sherriagons and Phillips were both furiously gripping the handwheel of the valve which was obviously leaking again.

"Get the big wrench," panted the skipper, red-faced with strain.

I got it. He and Phillips threw it between the handwheel spokes and slammed the head under a wall bracket.

"That'll hold it," said Sherriagons, weakly.

"What on earth's going on?" I asked.

The skipper stopped his forehead. "We've caught a Turner. Peshanoma is trying to kill us, that's all!"

"What?" I stared at him, then at Peshanoma. Her eyes were quite closed now; so also were her hands, clenched into little fists.

Phillips said sarcastically but with eyes alive with interest: "It must be psycho-hypnosis—or else? The handwheel can't be turning itself—there's no reason why it should! No vibration or anything. It uncoils itself slowly but with tremendous power. It took two of us all our time to shut the valve again and keep it that way."

"It's taken a lot out of us," said the skipper. "I feel as weak as hell!"

"So do I," said Phillips.

"And I," I said. "And I haven't been exerting myself. Do you think she could be using up strength in some peculiar way?"

The skipper shrugged and said: "Frankly, I don't know what to think."

Phillips said: "I believe you're right, Graham. In some meditative way she's drawing off some of our energy and using it against us. Judging from her physique, instead of it wouldn't be able to turn the wheel against the resistance of any one of us."

"I've been in some peculiar situations in my time," said the skipper, "but nothing to match this. Seems we're to fight ourselves in order not to stop ourselves from killing ourselves. Put the know-how at the Institute in the picture, Graham—perhaps they can come up with a few helpful suggestions; they talk as if they knew all the answers."


"Or psycho-kinesis," I joked, with a feeble grin, which became further when I and the others suddenly realized it might..."
be no joke, at that.

"Get it fixed, anyhow," said Captain Shvington.

I started to go, then impulsed myself to the颔首and
hurried with me far as the wound. I'd guessed that it was being
slowly withdrawn by an invisible hand. The other two had to help
me before we could get it back in place.

Breathlessly, the skipper said, "This is becoming impos-
able. This damn thing's got to be watched every minute. How the
devil are we ever going to get any sleep? How can anyone go to
deed, anyway, knowing that someone's trying to flood the ship with
pumps gone? Phillips, can't you do something to make her uncon-
scious? Strap her or something?"

Phillips scratched his head. "From the look of her she might
be unconscious right now—maybe only asleep, maybe in a state of
trance. Psychosis? A silken sleep. She might even be
aware of what her mind is doing. It may be just the natural sense of
self-preservation functioning automatically."

"Nonsense!" said Shvington, emphatically. "She's not
merely trying to save herself—she's deliberately trying to murder
us."

"Let's be fair," I said. "She didn't ask to be washed away
from her home, her people, her place, never to see them again,
condemned probably to die—for I think the odds are against our
being able to keep her alive very long."

Notably had an opportunity to comment on that view. For,
as that moment, the side jinn of the ship began firing, swinging her
round so that the sudden radial force pressed us tightly against one
wall. Thrown to the jinn the skipper and we were counting along
rail-ends.

"Who the—" began the skipper, and then the main drive
jinn began blasting, decelerating force, making the ceiling out there
and pressing us in it under several 9's. The ship gradually lost
impetus. Presently, we were able to crawl, painfully and with
screaming senses, towards the upper deck—which seemed like the
lower deck in fire, but became strangely so—and towards the
control console.

Before we could reach it, the deacceleration was completed and
acceleration in the reverse direction had begun. The upper deck
was again "above" us and the ship was hurtling nose-firstment
back towards Pliss.

When we got to the console, we could do nothing effective to
change the situation. We had six hours between us, and still

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couldn't regain control of the ship. Admittedly, we had been weakened and were slow and our brains were spinning, and only the captain was an expert on the console. But even if we had been properly fit, defeat would have been difficult to avoid when switches, levers, and rod hummed wouldn't rotate their position for more than two seconds after we'd taken our fingers off them.

A mind employing many streamers of force, the captain's own technical know-how, and our stolen strength, brushed our combined residual effort aside.

The tables had been turned. We were now the kidnapped, Pluto-bound.

We gave up and looked at each other's white faces.

"I'll pump her full of morphia;" said Phillips, unusually.

"It's too late for experiments," said Shavinguguay, rather shell with novo-alum. "This P.E. effect seems to be working at the speed of thought, and thought works a hell of a sight faster than organic processes. The morphia may take days to do its job—she's if it affects her at all. By then we'll all be dead. We must kill her first."

"No!" I exclaimed, shocked.

"By heavens, no!" exclaimed Phillips. "The Institute—"

"Shut the Institute! Those slips are nuts."

"She's my responsibility," said Phillips, excitedly. "I want a living specimen—"

"Face the facts, you fool!" shouted the skipper. "We're not taking her back now—she's taking us back. To our deaths. It's her life or ours."

Phillips was leaning with his back against my control desk. His knees were bent slightly under the steady incineration. He clapped his head and muttered derisively. "Give me time."

But his fans allowed him no time. Concurrently with the skipper's grasp of evaporation, Phillips also grasped. And with mouth and eyes wide open, he pitched forward, face down on the deck. The handle of my long thin screwdriver protruded from under his left shoulder-blade. The rest of the tool had showered his brain.

As we gazed in horror, the screwdriver slowly began to pull itself from the wound. Shavinguguay and I screamed softly to the lower deck. As we reached it, the main drive cut out and free fall returned to continue in full.

I saw the wrench disengage itself from the handscrew and float lonely around. The handscrew-reversed its show, irresistible, compelling. I fought my way to it and clung to it, but my feet failed-
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so find purchase and the wheel began to turn me with it.

The slippers had made for the lever opening the door of

Lock Two. Surprisingly meeting no opposition, he pushed it open.

The circular door at the end of the container swung open and the

Plutonian atmosphere, under pressure, squirted out into the vacuum

of space, carrying the dizziling, weightless alien girl with it. First

first, the beautiful body passed from our sight, and Sherrington

closed the door behind it.

The handwheel begins to slow in its turning until at last I could

stop it. So far, Phillips's strength could be used against me, and

the girl must be using her own strength to fight subjugation.

Sherrington hung on to his lever, afraid that she might try to

force the door of Lock Two open again. But he made no noticeable

attempt. Possibly she knew, drifting and dying in space,

that even if the door were re-opened, there could be no way back

for her.

My grip on the handwheel was like having my finger on her

pulse. I could feel the opposition gradually weakening. It must

have taken her over ten minutes to die, for it was that long before I

forced the wheel to a complete standstill.

The last few minutes were pure terror, for the bloodstained

waterdrops came flowing slowly down from the upper deck. It hung

before my eyes like Lady Macbeth's vision of the dagger. Then

it boiled itself and rose to me, poison fumes.

Fortunately, it came so slowly that I was able to grasp the sticky

and horrible thing and hold it off till Sherrington came to my aid.

If the Plutonian girl hadn't divided her sibling wrong h, I might

easily have shared the fate of Phillips. I still have nightmares about

that little prehensium.

I said, sharply: "Thanks, skipper... Objection withdrawn.

You were perfectly right to kill her."

He made no reply, and directly it was clear that Pecham's was

dead he went to the upper deck. I followed reluctantly.

Poor Phillips was drifting a few inches above the floor. Between

us we wrapped his body to his bunk. Later he would have to have

us via Lock Two; there was no option.

Then Sherrington stared expressionlessly through a port at the

shadows bulk of Pluto, to which we were still ascending.

I heard him mutter: "The undiscovered country... So it will

remain. Perhaps for ever."

He turned towards shore, and we defied gravity and returned.

WILLIAM F. TEMPLE
Wisdom of the Gods

Earthly civilization was treading on the brink of disaster. Could it, even yet, avert the impact of that deadly alien invasion?

Illustration by Kenneth Barr

SYNOPSIS OF FIRST THREE PARTS

Two hundred and fifty million years ago—give or take ten million—a spaceship crashed upon Earth. She contained a Galactic Intelligence, an encyclopedia of galactic civilization's knowledge. Over the years the spaceship weathered and the encyclopedia became entombed in coal. Today, the Ancient Railways Preservation...
Society, headed by Lord Ashley (known as Jeffrey) and Bragle, a nuclear physicist, and Rodney Winthorpe, a mathematician, run a small railway from the village of Nether Anblime. Walter Colborne, a historian, is the stoker of the engine, the Stony Sall. Colborne’s niece, June, is seriously ill with cancer and all surgery has failed. Colborne inadvertently heroes the encyclopedia on the Stony Sall’s fire. In the explosion, lines of mental force radiate and implant scattered images of alien information in the minds of people on the train and in the surrounding countryside. Nether Anblime becomes cut off and paramedics stand guard.

Sir William, head of Nuclear Intelligence Department Plot, and his chief agent, John Randle, together with Colonel Stare, the military, and Superintendent Brown of Scotland Yard set up an Operations Room near the Golden Line and attempt to track down all people on the train in an attempt to collate the information they received. Sally Peck, a local reporter, was on the train. Neither Lord Ashley nor Bragle received any alien information.

Colborne, who received a vast amount of alien knowledge, is appalled at the prospect of answering questions for the rest of his life. When a boy makes a deadly stile baned gun from a toy and kills his friends and wrecks a street of houses, Colborne decides he cannot give up the information in his mind. He is sent to hospital for a check-up and on the way back his ambulance is shot at by a .22 rifle from the woods.

An American, Hackensack, received from the encyclopedia religious information and declares that he sees in letters of fire that the world must wait for the gods from the sky.

Brigadier Graham has received the first part of a formula for a weapon which he says will make cobalt bombs look like Chinese crackers. Colborne has the rest of this information but refuses to divulge it. He is convinced that more harm will come to the world from this alien knowledge than man himself can invent. Pressure is brought to bear on him in a friendly way by his associates in the Railway Society, but without success. Later, he goes to see Sally in her lodgings. A man tries to interrupt him, but Sally sees him and raises the alarm, and soldiers drive the man off.

Brigadier Graham realizes that he has the plans for a machine that is a defense against the violent brain weapon made by the boy but if he reveals this, then, through the Perdition’s Fine Effect, the rest of his knowledge will be stripped out, including the ultimate weapon partly described by Brigadier Graham.

He manages to cut a tape with the defence machine formula,
disguising his voice. This arouses his friend's suspicions; but they are still not certain that Colborne has recalled his alien knowledge.

When the encyclopaedia exploded a group of girls on horseback had been near, and the report comes that there is a gang hiding out in the woods between the village and Pukker, where a nuclear power station is being built. A man attack is staged, and Colborne, frightened for the well-being of Sally who has disappeared, runs to the woods where he was fired at. A girl on horseback takes him—

with a 22-calibre in his back—to the gang's camp. Colborne realizes that they have been interrogated with alien information and believes themselves to be aliens stranded on Earth.

Sally is also a prisoner with him. Eventually Colborne is brought before a woman whom he cannot see in the darkness outside her tent and she tells him that she has received information that was provided for aliens stranded upon a planet. She has the knowledge to take over a civilization on a par with that of Earth's, and Colborne knows that she can do this. She aims to set herself up as the first woman dictator of all time. From Colborne she demands the rest of the knowledge she needs to make her task easier.

Colborne refuses to assist the woman—who calls herself Melan—on her scheme to conquer the world. He fully understands that with the alien knowledge in her possession she can do what she wants; but he will have nothing to do with it. Melan is very insistent that he join her, and when he refuses, threatens to torture Sally.

Colborne decides that if he has not given up the secrets of the ultimate weapon to his friends, he cannot tell this woman secrets that will make her take over Earth easy. Melan's lieutenant is told to take Colborne into the tent where Betty, Melan's chief aide, will torture Sally until Colborne agrees to help. Colborne says: "Go on. Play her alien! I won't talk!"

CHAPTER XVII

That striped uniform held in the glowing mirror of the tent, with the lamp's rays filling the whip in Betty's hand, on Addie's grime dirt, on she returned, blood-stained hanging thing dangling in its bonds from the tent pole. Purging, barely able to speak, filled with sick revulsion, Colborne said again: "Go on, whip her! I won't talk!"

The crossing groaning stopped. It stopped on a clacking..."
NEBULA

gorge. The silence intensified the feeling of emptiness, of this moment being a segment cut out of time, as any exactly the same until the end of the Universe.

Then, in a shocked voice of utter incredulity, Betty said:

"You mean you won't--but you can't! This is the girl you knew! You can't stand by and see her turned?"

"I thought you was a man," Adkins said, quavering.

Colhume said nothing. He stood with his bracing eyes fixed on Sally's white and blood-stained back.

Betty shifted the whip in her hand. Then, half-trembling, she liked it. She looked across at Adkins, a look of appeal, of helplessness, a look that drew from Adkins only a muttered groan and a jerk at Colhume's booted heels.

"I'm going to take the skin off her back," Betty said, licking her lips. The quiet gloaming in the light, smooth brown leather raked into a weapon of torture that could rip the skin from Sally's back in long bloody strips. Betty drew her arm back. Colhume pressed his lips together.

Sally spoke in a voice that whispered huskily, as though speaking through a throat full of pain, she said: "Walter. Please. No more. Don't let her hit me again. I can't stand it." She swallowed nervously, and her shoulders moved awkwardly, the muscles rippling under the skin of her arms, twisted upwards as they were. "Please, Walter. Tell me what she wants to know."

Colhume said: "Well, Betty? What are you waiting for?" McVon told you to whip Miss Paxton until I talked. I'm not talk- ing. Why don't you whip her?"

Again that horrid, hated sound of unreturnable blows fell. One moment they had all been sitting under the roof ofistry and overpowering conditions; the next they were caught in a web of play-

acting. Colhume thought he was right; but the chance was a ter-

rible gamble, the chance that he was wrong.

He had to urge this thing to its conclusion. He said, hoarsely:

"Don't stand there, Betty! If McVon has told you to whip Miss Paxton—then why don't you do as she says?"

Adkins gave him an urgent shove. "Sssh!" Adkins said.

"Why don't you speak up?"

Sally had swung in her bonds so that now she hung with her back to Colhume. He stared unfeeling. She moved her uncrucified head vaguely. "Please, for God's sake, Walter. Tell them! Tell them!"

Colhume laughed. A high, cackling, almost insane laugh. He
WISDOM OF THE GODS

A loud shout of: "It's no good," he said. "You'll have to whip her until she's a carcass. Sherry.

The voice of m'am sounded hard, imperious, full of frustration and yet carrying the sturdy ring of final determination and implacable intention. "It's useless, Betty, he knows. Well, don't just stand there! He's found out, at last!"

Betty dropped the whip. She gave a jittery step forward. Adkins took the opportunity to copy Colberne's stamp, with interest.

Colberne said: "Out!"

M'am said: "Well, get on with it, Betty. Car me down." Under Colberne's menacing stare, Betty took up a knife and cut through Sally's bonds. Sally turned as face Colberne as soon as she was cut free. She managed her writ. Her dress still hung in tatters around her waist.

"Well, Walter. So you'd let me be whipped to death just so you could keep your secrets to yourself?"

"Don't feel yourself, Sally." Ever since Colberne had sensed this impersonation, his emotions had been drastic. He still couldn't reconcile his half-aware feelings towards Sally Pitton with his instinctive antipathy towards the megalo-aristocrat. He had hated and loved her. He knew, quite simply and sincerely, he knew, that this would-be dictator m'am was nothing like the real Sally. Sally had had her bones added by the explosions. Poor kid—she'd really been on the wrong end.

"I thought you liked me, Walter?"

"I—loved Sally Pitton. I have you wouldn't let yourself be whipped?" He ended wistfully. "And you can wipe all that snivel off your back now. Blood runs, you know. And the whip stings with blood, too. 'Whipping a person is a disgusting business; it's nothing like the lady like some you presented to me.' His voice was rude, challenging. "And you can cover yourself up. You might catch a chill in this night air."

She snatched up a windbreaker, angrily flung it about her shoulders. "Damn you, Walter! If you know so much about whipping, then we'll have the disgusting scene—with you as the principal actor, Adkins!"

"Yes, ma'am?

"Look here up, Tight."

Adkins scurried with relish. Seizing up to the terr-pula, Colberne felt his skirt swept down the back. The night air cooled the frenzied chill on his skin. He shivered.
"Go on, Walter. Shale in your shoes all you like. This time, there's no saving you."

He struggled to keep his voice composed. "I'm surprised at your methods, Walter. I would have thought that, thinking you knew how I felt about you, you would have suggested we went into the business business in harmony. I'd have probably been a sucker for that—with you."

She matched him with her laugh. "Not a chance! I saw the way you treated when Lord Ashley and the others tried to get the information from you. You were principles and your stinking wishy-washy ideas of what is right and wrong—hell, Walter, you're as proud as a church sewer."

"You couldn't be right."

"I know you, Walter. I know just what your reaction would have been." She moved towards him. "All right. I won't do anything to get it. I'll offer you a partnership. You and me, Walter, together."
"Her voice sharpened and her voice rose. "You and me, together. To rule the world! And we can do it. Easily! With the knowledge we have, passed, no-one can stop us. All the guns and smoke in the world couldn't stop us."

"You're right. Great force couldn't."

"So you'll come? You'll give me what I want to know—you'll team up with me." Her quick, impromptu flow of words halted. "But, of course, you won't, will you? I know that, I told you, before. You'd rather be cut in pieces by a whip than lose a single shred of your own estimation of yourself. Well, Walter, it's shears of your skin or shears of your character. I don't mind which it is—"

"You didn't even wait to see if I'd join you."

She found him, reached out and, switching his head to face her, and staring deep into his eyes, said: "Well? Go on, then. Tell me. Will you?"

Colborne bowed his head. He feared it and loathed it. He almost pleaded in others as much as he did for himself. He knew that he was a coward. He feared that he wouldn't stand much from the whip wielded by the heavy and powerful brain. But he couldn't go down without crying, without seeing just how far his principles would sacrifice his courage. And, anyway, he might faint before they'd get anything out of him.

"Well?" Sally said again, her soft lips framed into a hard accented line. "Will you?

"Nebula"
"Ah."
"Ah."
She drew a deep breath and then released his hand, pushing his face away. Calpurnia heard her say, in a tone of voice devoid of emotion: "Start, Betty."

He tensed up. He couldn't help the premonitory tightening of his muscles, the wincing away and the horrible gulf opening in his stomach.

He must have fallen backwards into a vat of molten metal. At the same time as he realized he no longer had a backbone, the top of his head came off. From that gulf of nothing in the centre tendrils of flame spread out over his entire body. His skin became so sensitive that he knew he could feel an eyelash blotted within a foot by mere air currents alone. He didn't know if he was screaming or not. His mouth was open. He sucked in a great whooping draught of air. The glowing interior of the tree came back into focus. He felt heat starting out over his face. He suddenly had a back again and it thrilled and swung and pounded in every nerve with unbearable sensation. The top of his head descended and fixed his face—and then the whole thing happened again. Only this time it was twice as bad.

He tried to speak. He tried to get the obscene words through his mouth. He wanted to cry out. "Stop! Stop! I'll talk! I'll tell you anything. Only for God's sake, stop!" But, unaccountably, he couldn't make his mouth and tongue and vocal chords obey his will. He swelled, convulsively, and then the third stroke fell.

He lost interest in his surroundings after that. He had time, just before his tired mind slid beneath a hollow of darkness, to think, symbolically, that he hadn't taken much punishment. But that wasn't the important thing. Weakened by fatigue and hunger as he had been, he had had no reserves of strength to call upon. The important thing was that, so far, he hadn't told faces people what they wanted to know. When he awoke to blinding consciousness, it didn't occur to him that the punishment he wouldn't bring to mind just what it was that they wanted.

He had heard stories of men being tortured for information. There was a point beyond which nothing anyone could do to the habits which remained could mean anything. Of course, he hadn't been anywhere near that. That came after long periods of intense interrogation. But he knew, too, that a man could get into the habit of saying: "No." Even after he desperately wanted to say: "Yes."

But this was fancy he was building in his sick mind. He had been
grin—how many times—four, five, half-a-dozen blots—the thing hasn’t really begun yet.

He opened his eyes and saw that it was daylight. He had been moved from the tent and lay in the open, on grass that still sparkled with silver dew. Tense overhead made a key pattern against the sky, and somewhere, hopefully, a bird sang. A shadow fell across his face.

“Woke up, huns?”

The toe of Adkins’ boot prodded his side.

“You haint. And then I guess you must have gone off to sleep. Which was a very good thing, too. Now you’re all freshened up, you can be asked to answer certain questions.” Adkins laughed.

“Understand?”

Colburne understood well enough. They gave him breakfast, with a tire proscription that he’d stick it all up within the hour. He drank water until he felt like a discarded balloon. Then the whole grisly business started over again.

Colburne’s back ached as though he’d been flung—well, he had, hadn’t he? Such movements brought a twinge. Adkins laughed. Sally—or ma’m’s, as he thought he’d better think of this esteemed woman—was conspicuous by her absence. He felt a vast pity for Sally. He could clearly envisage Sally as a distinct entity, a person apart from ma’m’s. For ma’m he had a pity, a revulsion, a feeling for something unclean. All of which didn’t help him much when he was to be flung until he gave her the rest of the knowledge she needed to make her conquer of the world a fact. And he knew with absolute certainty that he would give it to her. He couldn’t take any more of the sort of punishment he had endured last night.

They strung him up to a tree. Betty, fresh and merry in the early light, appeared, swaying her quite negligently against her leather chad lag. Colburne shut his eyes.

He heard ma’m’s voice in the distance, coming nearer. She sounded anxious. Straighten, Colburne turned his head and opened his eyes.

A man Colburne had seen before was walking with ma’m’s. He was big and tough, with the craggy face of the oiled-oakmen. He had run a little too fast, and his walk was heavy and assured. He seemed to have the habit of pulling his hands in his wet armpits—he wore no coat—until reddling his shambles. Colburne didn’t like the look of him.

“Adams” ma’m said sharply. “Get everything packed up.
We're moving. The limited soldiers are getting too many. We're breaking out of the ring. Keep your eye on Golborne." She looked
gray and drawn in the morning light.

"All right," Julian said. "Then asked: "Ha'ven."

"1 know all this seems like my own garden. We'll break out
near Pollox. They won't expect that."

"They know we're here, then?"

"Yes. Macnaghen, here, has all the news. Gone on, step
lively."

The camp began to break up. Yes, Cathorne thought, Sally
would know this part of the country. She had been here and
brought up here. She could keep out of the way of Colonel
Stickle's soldiers easily. He stood apathetically, his hands
bound in front of
him, watching.

There seemed little anyone could do now, to stop men from
taking over. The deal of it was, Cathorne knew she could do it
quite easily without his information. He knew how to influence the
men—she had the control over individuals. He could see the
future at all. No future for him, or for the country.

As that means, with the camp in a turmoil, the sound of an
airplane floated down to them from the bright morning sky.
Everyone looked up.

A four-engined transport dived over the trees. Black blobs
dropped from it. White and colored parachutes opened like puffs
of smoke. Champs of parachutes separated heavy equipment. The
military were moving in. The soldiers had struck first.

CHAPTER XVIII

A helicopter snaked in low over the trees, dipped, hanging like
some nightmare bat, and then swooped to a landing behind a row
of tall fir trees where the soldiers were stationed. Another followed. Around Cathorne the
confusion was rapidly settling itself into orderly activity as the
men of the flying school and the odd men caught up in this
wild scheme packed their belongings onto horses and disappeared in
groups into the wood. They worked as though men had trained
themselves for years instead of for the few days they had been at large.
That showed the power of the knowledge that had blunted from the
alien encyclopaedia.


Obdurate, Cathorne provoked her and the huge and quiet
Macnaughton. Adkins had gone off, giving crisp orders and sending the riders scattering ahead, heading as avoid low-hanging boughs.

Noises in the woods settled down to the familiar hollow rattle and scatter of the things.

Walking ahead of the others, Calhoun reflected on his chances of escaping. There had been not the slightest possibility of that up to now. But now, with the dramatic arrival of the paramedics, his chance had come. He must make a break for it inside the next fifteen minutes. Later on m'man would be well clear.

Thinking of escape reminded him of Lord Ashley and Beagle and Winthrop and the Sassy Sol. He thought of the heavily loaded steam engine, her bright twin wheels turning ready to spring into motion at the flack of a finger. He closed, and stripped of a tree root. Cautiously, he staggered back onto his feet, awkwardly with his hands bound, and glared round at m'man.

"Don't make so much noise, and!" she said fiercely. "Those damned soldiers must be hereabouts."

Calhoun picked up. "If you'd untie my hands I'd be able to get along better."

Macnaughton said heavily. "Not on your life."

M'man, said with morbidity: "I give the orders round here, Macnaughton. He steps behind. And look of you keep quiet."

She looked ahead into the green dusk of the woods. "There's a dry ditch running along there. We'll go down it as far as the sile."

"That should take us clear."

The ditch rumbled and shivered with plants and animals as they dropped into it. At this time of the year it was dry, as m'man had said, and there was no great accumulation of dead leaves to betray their presence by crackling. The main difficulty was in forcing a way through the abundant growth at all. But it did afford good cover. During a glance upwards, Calhoun saw that they had emerged from the woods—a single line of trees paralleled the ditch—and they were making their way between open fields.

Now was his chance.

He had long since given up any hope of making a run for it.

Macnaughton would be on him in a trice. But he could draw attention to himself.

And then an odd thought occurred to him. What had the Galactic Intelligence to say on this problem? Quite deliberately, he pursed the question. Then a little grimace quirked his lip.

Nothing. No answer to how to get away long in letters of Iss.
against the screen of his brain. But he was willing to take a bet that the encyclopedia had contained that information. Either someone else knew this, or it had been written into the mental workings along with the bulk of the encyclopedia’s information.

He had to carry through his own plan. He was creeping along in front of the others. He staggered to his feet and ran clumsily forward, tripping and stumbling over the green grass. He shouted. Loudly. He strained his eyes and were red in the face, his neck muscles straining, his whole body convulsed with the effort.

Standing out darkly against the brightness of a young conifer, figure in green and brown carriages moved towards him from the middle distance. In the brief interval between beginning to shout and the moment when he ceased to shout—suddenly—he saw at least four soldiers running. He raised his bound arms before his face. They must have seen him! This was the running of the tables—

And then a tree fell on his head and he was out like a puff of thick smoke in a gale.

His awakening this time was less pleasant. His back and head had joined forces to send one after wave of agony coursing through him. He lay for a time with eyes shut, existing merely in a bed of pain, gradually absorbing the meaning of the sounds he could hear about him.

If this sort of thing went on much longer, he’d be flattened one time and wouldn’t recover. His body, out of training and only just beginning to toughen up with the summer occupations, couldn’t take unlimited punishment. Revelating on that, he knew it couldn’t take much more.

He lay, listening to the harshness around him. From the sharpness of the shock, he guessed he was in a room. He did not have the courage to open his eyes. He didn’t want to let anyone know he was conscious; he wished to delay for as long as possible his return to the ugly world of reality.

There was, of course, no possibility that he had escaped. He was caught in a net of inactivity and it was too late to escape. The soldiers were there on him from the rear and clutched him over the head with, as no doubt the police would phrase it, a blunt instrument. But he had hoped the soldiers would get to him in time. This was another mark to make his efficiency and knowledge. She’d estimated her normal group from the perimeter, got them out by Poldar way, probably, and was now—well, where were they?

Continuously, Calories opened one eye. He was looking directly
at a rectangle of lightness. Rodman review the sky, and there was a
hint of chill in the air. Evening, then. A girl sat near the door,
his chair tipped back. Across her knees roared a rifle. Apart from
that, and the hoot, unseen folk of the place, there was only a poster
on the disfigured wall to point Calathine. The power said: DOG
LICENCES. The rest was a blur of cobbled street.
So he was in a police station.
Some time the implications of that were borne in on him.
He stirred, gripped by astonishment. A police station! Then—
then m'am must have opened her campaign!

Police stations of the austerity official type did not creep up
with remarkable frequency in the country. The local village com-
ted lived in a corgie that doubled as the station. They must be in a
town, a town of some size. Beyond Palme way? He tried to
remember what towns lay in that direction. Vaguely, he recalled
driving through a dusty main road with a hoilde of shops, a church
and three or four pubs—what was it called? Louthwood? Londo-
space? Something like that. It didn't matter. What was important
was that m'am must feel herself strong enough to begin her task of
taking over. A small beginning, a foreshadowing—. He knew from the
debate information implanted in his head what would follow from
that. She could take over the whole country before it had realised
what had struck it. And then the world.

After this, with what she felt above the possibilities of future
science and if someone had received from the encyclopedia details of
the construction of a spaceship, she would go on to an attempt on
the stars.

And who was there to say her say?

"Come on, eah, wake up!" A door connected angrily with
his ribs. Adkins had arrived. Calverne was hurled through the
room. People moved through the streets in an apparently normal
way; shops were open, business was being conducted. But he wasn't
feeling. That Adkins, strolling along with a rifle under his arm and
a man with bonds on his wrists threat before him, arrested little
attention, indicated more permanently than anything else that the whole
viewpoint of the town had changed. Moral values had altered direc-
tion.

Adkins wore an armful of some blue nylon material, and
Calverne saw ashes, men and women, with this badge of the new
order. Some things, then, followed a set pattern.

Moam was bespangled with hits. "Here's time to bother about
you now, Watson. This is only the anchor stage of my plan. If the
WISDOM OF THE GODS

Winding out the end of Notter Apothecary lane, then, with or without your immediate help, I must make a new base. Larkethen will die for a start. As soon as we have about a twenty miles amidst under control, I’ll come back to you for the next stop.” She smiled festively at him. “Just brood on it, Walter. Nothing is going to save me. Remember that. Peace it. You’ll tell, when I want you to. Now you can go back and be lodged in a cell.”

Back in the cell, this time with the door closed, and locked—iron bars did not feature in the creature’s new goal planning—Calhoun sat on the edge of a wooden chair and picked up the papers that had been tossed in. He guessed that mum’s had given him the news so that he should not be in any doubts that the rest of the country was aware of what was going on here. But only one item had the power to interest him.

Very briefly, a small schizoid mind that Allen Hackemack, the industrialist turned prophet, had renounced all his teachings. He had, the paper said, been unable to account for his actions by dreams and visions. He had apologized profusely, apparently, and managed to get off with a stiff warning from whence: American courts of justice had had him hauled up before it. Questioned on his ‘apocalyptic’ strike from high, he had said, mystically, by all accounts, that it must have been something those Littleys fed him at London airport disagreeing with his Middle Eastern ulcers.

Calhoun sat back on the hard wooden chair and threw the papers in a flapping white cloud above his head. They looked like the dust of peace to him. His face wore an inexpressible look of happiness and joyful superstition. He shook his head from side to side, like a runaway nervousness, quite unable to think, speak or laugh.

He sat, his wits slowly coming back, for some time. He was alarmed to find awareness by a girl bringing food. It seemed that starvation and misery had no part in mum’s plans to break him down. Calhoun ate with relish. He sat back afterwards, considering.

It all boiled down to a simple one-word formula.

Wait.

Now he needed better about selling mum off. He could promise to co-operate, help, until play for time. Anyway, she couldn’t bring her grandest schemes to fruition in time—Nov now. Not after the war in the wild that was Hackemack.

As for Lord Ashley and his friends and the rest of the igneous that would make up the most frightful weapon the world had ever
Nebula—there would be taken care of with every stroke of the clock. He had only to wait until he could legitimately say, along with all the others, that he no longer had the information. He stretched hesitantly—wincing at his back pain—and then lay down on the bed to catch up on his sleep.

Everything seemed cut and dried. No troubles at all—except, maybe, making sure that he was clever enough to tell men what she wanted to know in large enough doses to avoid being whipped, but not so fast as to give her too great an area of domination before the vital information poured out of all their brains.

He closed his eyes. Everything was lovely. Perhaps the best thing of all would be that he would be able to find out how June was coming along. He felt the worst kind of ingrained when he thought of his sister. There the poor kid lay, suffering from cancer that no one apparently had the common sense of how to cure completely.

Slowly, Colbene sat up on the bed. His eyes were glazed. There was a lead hanging in his ears. There, hanging in words of fire in his brain, was the first half of a complete and final cure for cancer.

Someone else must have the rest of that knowledge. And here he was, a prisoner. And there June lay dying. And with every tick of the clock the person who had this vital information was hurrying towards utter fruitlessness.

CHAPTER XIX

"Except for Walter Colbene and Sally Pitts, they're all present and correct, Sir Williams," John Roland said. He was flushed of face and his hair was on end. He had just spent an arduous hour shepherding all the passengers aboard the train into the identical positions they had occupied on the fatal day. It had not been easy, even with the aura of chivalry and grim efficiency imparted by the wonderful military.

"Very good, John. The scientists are happy?"

"Yes, Sir Williams. Happy as children playing with a hand grenade." He nodded towards the train. A piece of unrest settled, with technicians helping, was sweeping over the carriages, measuring angles, running tapes from the fire box where the explosions had taken place. They were building up a composite three-dimensional picture of the course of the information exploding from the alien encyclopedia.

By the time a few hours had passed and everyone was hot and..."
tired and thirsty, the job was finished. Now they knew almost exactly—almost exactly as they would ever know—just what information had radiated outward and what brain it had impinged upon during its passage. One man, sitting in the front of the train, had obscured a small portion of the head of a boy sitting two cars ahead towards the rear. Take the information the man had, throw the half-completed facts at the boy—expect to come up with the rest. Sometimes, it worked. Too often, they were sadly aware that one man had much of the first half of entries in the Galactic Intelligence and until they could question him, they wouldn’t know what questions to put to all the others behind him.

"This damned men Colhern’s a nuisance," said one of the government scientists, grinning at Lord Ashly.

"I quite agree," Lord Ashly said imperturbably.

"That stump fuller, Tom What’s-in-name, was asleep in a field," John Boush said, setting it. "And we know about the horse riders. The only one left is Hachemuck."

"I’m expecting a reply from the agency on that," said Sir William. "He’s disclosing all knowledge of the affair now, you know."

"You know that means," Lord Ashly blew through his mustache. He, in turn, glanced at General Abercrombie and Colonel Starkie standing beside the Saucy Sal. "I hope you soldiers find Watler before the fire vanishes."

"We will," Abercrombie spoke first, throwing Colonel Starkie off whatever he had been going to say. "And when we do——"

"Where you go, general, you will bring him to me, pronto!"

There was some merit in Lord Ashly’s voice than had ever gone through the gates of Tidbit. He turned sharply on the government scientist.

"I’m interested in Colhern’s well-being—and in the well-being of his sister." He dug his stick viciously into the permanent way. "Have you found anything so far that might be any form of care for cancer?"

The government scientist’s rigid spectacles shone in the moonlight as he shook his head. "No, my lord. There’s been absolutely nothing on cancer from anyone here."

The opening of the wooden door found Walter Colhern standing indignantly before his guitar, both his arms upraised and shooting pains running in lines from elbows to fingers. He must have been hammering on the door for a long time. He had no read-
lecture of the interval between his recognition of the paralysed marine and his moment when the petty officer stepped in and said:

"What's all the trouble about?"

"I want to see my mum. At once! Jump to it!"

The slaughter had been a policeman. He had discarded his blue uniform when he had changed his allegiance from the Queen to his own. He now wore light summer clothing with a blue hooded ribbon round his arm. Somewhere in Coburns, all those people who had been killed by the man, and who had thereby, through the wiles of alien science, become her pawns subservient to her Will, seemed to have lost their individual identities. He could feel no kinship in humanity with this ex-policeofficer. He was just a body and a face and a blue ribbon.

"She's out of town. You'll have to wait. And keep quiet."

"I must see her." Coburns tried to push past.

"The governor stands his arm. "Oh no you don't! Get back into that, smart boy." He gave Coburns a push.

There was no conscious moral command to his muscles. Had there been, it is very likely that nothing would have happened. In the event, Coburns was nothing but a mass of tendons and running down his back as the unconscious man on the floor.

He had no time now to analyse the sensations caused by this fascinating new word. He listened to the creak, looked the door on him, and went quietly out of the police station's main doors, leaving the usual blue ribbon around his own arm.

The only thing left was the smell of the alien science hadn't taught him.

He stretched no attention as he went towards the man's headquarters. She had taken over the historic Corn Exchange, leaving the Town Hall to the disapproving of the Council who were now her willing puppets. It appeared to Coburns that the town was normal; but he sensed the undertones of passion and uneasy violence that simmered, ready to break out on the simplest word of murder. It alarmed him. "Those long-dead alien had the power to disrupt and destroy a civilization. It had been mostly a part of the information they carried about with them, ready to be used if the need should have arisen. But with the broadcast scattering of their non-existent
wisdom, like any fresh and handy knowledge, it had tripped the
neatly of three who had received it. It was such like passing radical
ideas, and boot-hunting into darkest Africa. Spontaneous com-
bustion was bound to follow. Years would be required to assimilate
the alien wisdom. He hadn't got years. He had to find what he
wanted to know about curing cancer within hours, minutes, possibly.
Ma'am was out of town. She had gone with an armed retinue to
take over the new four-ruled towns. The buses were still running.
Feeling that the action was fantastic, that it was an incident from
the Arabian Nights, Ceborne bought a ticket and scored down for
the bus journey.

Apart from the different orientation of churches to pubs, the
next town was the same as that he had left. He was directed to
Ma'am's temporary headquarters, and marched rapidly up the drive-
way into the "Lord Holmoe." Ma'am was holding court in the
saloon bar. People were gathered around as she talked, and it was
very obvious that she had the alien power to influence person-
ality in every people's emotions and through the manipulations
of individuals to dictate an overall policy. And that policy meant a
world that Ceborne could only contemplate with horror.
The blue ribbons were well in evidence; but the guns were dis-
covered hidden. Ma'am looked up, saw Ceborne, and she stopped
speaking with such abruptness that people's heads turned to scruti-
nise the intruder.

"Why, hello, Walter," ma'am said pleasantly. "How did you
get here?"
"I must tell you at once, superly, Sally. It's a matter of
life or death." The words sounded so more dramatic or musical
cumbersome than they in fact were.
She frowned, then excused herself, and walked with her usual
composure over to Ceborne standing at the door.
He was reminded irresistibly of the time he had first met her,
in the sunroom at the Bay, just after the explosion. Her short
skirt, half sheen in the tumble, started in through the door. Her
figure was neat and trim in jadepuns and green skirts, with a yellow
shirt usually essential round her neck. She looked all the things in
a girl that a man needs.
Ceborne had to remind himself with severity that she wasn't
Sally Potts any more. She was ma'am. With that her determina-
tions crystallised. He would have to double-cross her, treat her as a
dangerous enemy; if necessary, he'd have to—but his mind refused
to escape that inscrutable line of reasoning. He smiled, his mouth dry.

"My people are all above, Walter," Mr. Xen pointed out gravely.

"Have you decided to join me?"

"Yes."

Colborne watched with clinical interest the flare of passion in her eyes. "I'm willing to give you all the information I have that you ask for. But there's something I must know. I believe that even you will understand."

"Go on."

"You know about my sister, Jane. I have the cure to cancer in my mind. But—but only part."

She licked his lips. "You were in that direct line with me—your brain received the ragged ends of stuff that started in mine."

He smiled. "I know that. Too well. So, you want me to give you the rest of the cure?"

"Please."

"More, each using a stroke of doing, she shook his head.

"Sorry, Walter. I don't have that information."

"As soon," he said bitterly, "you're home. How about the others of your people?"

"I can ask. I don't believe they have."

"You have to be asked in a certain way. Only by asking what follows on what I have can you tell for sure."

He spoke with desperate urgency, nothing what he had of the cancer cure. "Anything there?" he asked at the end.

"Sorry, Walter. But," she went on, "we can do a deal. I'll check my people. You know, you're the only person I can't seem to influence. Those soldiers you called to your assistance in the ditch—now they're some of my most enthusiastic supporters. Must be the alien stuff in your mind. If we don't know the answer—"

"Then I'll have to go elsewhere."

"I don't think I could allow that." She looked past him, through the open door, "Here's Adlars." Her eyes swung back to Colborne, "My God, Walter. Did you expect?"

He didn't bother to reply. He'd already guessed she thought that she'd been brought here. He turned sharply on his heel as Adlars said loudly, "There he is!"

Any return to captivity would mean the end of his hopes to find the cure for June. It was evident that an't hadn't realized the significance of the Blackened Episode, and that therefore she didn't realize a temp had been set to her 'wild schemes. She'd aim to keep
him locked up until he broke down, and with the bout of feeling not about the cure for him, she'd guess he would break down very rapidly.

As Adams entered, Colborne took a step towards him and killed him in the stomach.

"Suprise, you so-and-so!" he shouted, and dashed out the door and down the short gravelled driveway. This business of hitting people was infectious. The bully mass of Macnaughten was levering itself from a car with its engine still running. Macnaughten had a Sterling sub-machine gun slung over one shoulder—a gun he must have acquired from the soldiers taken by Mac—end his movements were in consequence awkward. Colborne did not pause in his headlong rush. Immediately, he expected the shrill of hollers into his back.

"Hey!" Macnaughten started to say. Then Colborne hit him, a wild swinging blow that did not do much damage apart from dizziness. He followed that up with another kick, and Macnaughten went down, groan in the face and hands clutching his abdomen.

Colborne leaped into the car, a dark blue and lavender Zodiac, and with the open door swinging casually, sent the car roaring down the main street. He was sheershot for the twenty old-world road. As he rounded the corner past the grey lichen-covered stone walls of the church a despairing burst of fire sounded and the rear window smacked to pieces. The big speedometer crumpled into a shower of glass shards. Colborne felt a sharp sting on his cheek.

Then the old steel walls were between him and the "Load Nelson," and he was under cover.

He was shaking all over. He pressed down savagely on the accelerator and the big car leaped down the country roads. Pursuit would begin immediately, he knew that.

The world and its problems seemed infinitely remote under the pondering impact of his mind to find the cure for June. It was a desperate chance, but now he saw quite clearly what he had to do. Things had boiled up until they had come to a head; before him lay one solitary objective and he didn't care what he did just so that he did that one thing.

CHAPTER XX

Walter Colborne took one hand off the steering wheel, reached over and slammed the door shut. He increased the car's speed as.
he left town and headed along white and leafy country lanes. Frequent glances in the mirror showed no pursuers. That was a
matter of time. He thought of Atkins and Bla.ning and the
surprised looks on their faces when he had left them. He could not
think of Sally.

Someday, someone must hare the rest of the case for cancer.
In a reactionary release of all his pent-up tension and frustration,
in the breaking down of the feeling of suffocation under which he
had been living during the past days, and in a happy willingness to
surrender himself to overpowering forces of circumstance, he was
glad to have a thought in one thing and one thing alone. Gone were
his self-doubts and fear that his course of conduct was not only
salubrious but effectually. He didn't care now what he did, just
so that the one central fact— the cancer cure for Jem— was given
into his possession.

He was driving without consciousness, thought or effort; his
imagination was already ahead of him, weighing what he was going
to say to Lord Ashley. A cheerful little Austin Seven splashed along
a straight stretch of road ahead; in a smooth sweep, he cut over to
the wrong side of the road to pass. His first reaction was surprise.
The back of the Austin Seven splintered into a shower of shattered glass. Eight gashes appeared about the windshield. A single, quick flash of the eyes into the rear mirror showed him the black car swinging on to the causes of the road after him and two men clinging to the opened windows, shooting at him with sub-machine guns.

He drove like a madman. Perhaps, at that moment, Walter Colborne was a maniac. He could not allow himself to be stopped, now that he had come so far. He almost collided with the hogs-tired armoured car rolling towards him and he barely swerved past, ripping off an entire wing panel as he did so. He had no time for thought. The officers in the A.F.V. must either have stood up the situation remarkably quickly, or perhaps he was acting on pre-arranged orders to cover this sort of emergency.

The armoured car's guns belched. Colborne didn't see the effect of the shot on the pursuing car. He caught a glimpse of the black body turning over like a fairground ferro-wheel car, then everything slid out of his vision. He drove on relentlessly.

A green car flying a starred flag from the radiator cap fell in behind him and paused him among the country hedges. Tires and hedges passed backwards like a jockey film being re-reeled in a nightmare. More soldiers and tanks appeared to right and left. Colborne went straight through the enemy red they left open.

He had recognized by now the fact that they knew who was driving the car. These army men, by following their orders to allow him through, were favouring his own designs. He had a tight feeling in his chest and blood from the car on his cheek flowed mildly into his mouth.

Mother Ambrose was not as he remembered it. It looked more like one of those sacrificial villages blazed in a Civil Defence exercise, where soldiers show eager step amongst and chirrup how to deal with the fires and rubble left by a hydrogen bomb dropped fifty miles away.

The Golden Lion night will have been Supreme Allied Headquarters during any recent conflict. Colborne brought the Zoilite to a zero-turning hole outside, opened the door and jumped out. As his feet hit the ground he started running. A hand fell on his arm and brought him to an abrupt standstill.

"Hullo there, Walter! Glad to see you again."

Lord Ashley, leaning into that invisible wind, was standing smiling genially upon him. Bright and Winchep stood smiling by his elbows. Colonel Starkie and a general Colborne didn't recognize smiled smiling a little way off. Other people he recogn-
slid into running from the open door of the Golden Lion. Soon, he was the centre of an excited but expectantly silent crowd. Lord Ashley had taken command of the situation with that imperceptible good humour that was never seen reflected in public.

After Colborne had seen the little Austin Seven disappear and the armoured car in turn vanish his pursuers' car, everything had happened in a blur. Now that he had escaped, had reached safety, he experienced came as an anticlimax.

"I escaped," he said, coughing a little. He put a hand up to his cheek. "I'm all right. Look, Jeffers, I must talk to you alone——"

"Questions we must ask," the general said, snapping forward with an air of taking over.

Lord Ashley introduced him as General Abercombie. "One moment," Lord Ashley went on smoothly. "Walter—you know that people will soon forget what they learned from the GLP"

"Yes. That's what—"

"Very good. Look, Walter; I'm your friend. You believe that, don't you? I wouldn't advise you to do anything against your own best interests."

"I say," Bough interrupted, his long yellow face animated.

"The poor fellow's just scared. He's hurt. Why don't we all go inside and have a drink?"

Lord Ashley nodded decisively. "Good notion, Bough. And we can get Colborne to look at that face of yours, Walter. While we talk, shall we? There's not a minute to lose."

He turned and marched boldly inside, his band warm and friendly to Colborne's ear.

"I want to make a bargain, Jeffers," Colborne said as soon as they were inside the bar. Nothing had gone as he had expected. There was an uncomfortable lack of the spontaneous friendliness he had automatically expected. But, what the hell—he was holding back information for which there were. Would tell those souls, wasn't he? What did he expect: the red carpet treatment?

Lord Ashley cocked an eyebrow at him in silent appreciation. Bough and Windshop looked, each in his own way, surprised. The soldiers had efficiently set up a barrier and the three men and the two military men sat talking as a little circle. Colborne looked around for John Roland. He felt that he would like that quiet man's support.

"Did you know I'd escaped?" he asked.

"Oh, yes," General Abercombie said. "As soon as your car
hit the main highway, we had you spotted." He moved his hands casually. "Tell me, Lestheba, isn't it?"
"Yes. Though much good it will do you." Colborne rapidly outlined the situation, finishing with a bimbo. "But as soon as you send soldiers in, they'll be conquered, like the others were."
"I see. Well, we'll see."
"But this is wearing thin!" Colborne tried to control the heavy thumping of his heart—and got up a job that was physiologically impossible. "I'll make a bargain, Jeffers. I'll give you everything you want to know in return for one piece of information."
Lord Ashley's face did not change expression. But his hands tautened themselves firmly inside his jacket pockets. He looked like a man about to swallow a horrid pill.
"Go on, Walter."
"I have the cure for cancer—"
"The devil!" exclaimed Bough. "What did you expect?" Lord Ashley said sullenly. "I'll be frank, Walter. I was hoping to find such a cure in the information we have and use it to bargain with you. I'd have been unable to sleep well the rest of my life—but I'd have done it. But you already have it. You have so much. When I checked that we did not possess a cancer cure—or anything on cancer, come to that—I was almost relieved. But, Walter, I was also sure that we weren't going to have a cure, so thanks you, after all."
Colborne just sat there speechless.
"Lord Ashley went on: "Anyway—you were talking about a bargain. How does cancer come into it?"
"Bough cleared his throat. "Colborne just sat. He didn't know what his face looked like; it must have been rather horrifying from the others' expressions. Bough said gently: "We've kept in touch with Saint Angela's. I'm afraid there's little hope—something went wrong—"
"Something—wrong—wrong—?" Colborne said.
"If you have the cure, Walter," Winthrop said calmly, "then everything will be all right. Let's get hold of Cremore and get him to translate it and phone through right away."
Colborne raised himself. "Well—he had been so confident that someone would have the cure that failure had come as more than a shock; it was as though the impossible had suddenly become commonplace. And he still had a harrowing point. Of course! He came alive with animation again.
"Listen, Jeffers. I'll give you what you want—that stuff
suicidal bomb, everything—if you can find me the man or women
who has the rest of the core in their brains. You see—I only have
half of it."
"I—see?" Lord Ashley's words came on a great indrawn
breath. "I—see!"
"I'll give you all I know on it. Committee can interpret, where
necessary. Get all the people who were on the train that day, fire
the staff at them, and get their answers. You probably wouldn't
have been sure they didn't know without that."
"That goes for the rest of the information you have, Walter."
"Sure. We'll have time. Hachmann was on the edge of the
explosion, a good distance off. His knowledge faded early; the rest
will hang on for a time." His fag tightened as his muscles jumped.
"It has not! That's the only way I'll cooperate."
"Very well, Walter. It that's the way you want it."
Wispel turned his stomach. His face was sour. "Pretty
quick to give us all those terribly worried women, aren't you Walter,
when there's something you want to know?" He said: "What hap-
pened to your legislative script?"
"Wamby?" said Lord Ashley.
"I say—" said Bragh. But his heart wasn't in any defence
of Colbron right then.
"I know," Colbron said without feeling. "I deserve all the
blame because you came to call me. I've had it coming to me for a
long time, I suppose. But things look a little different when some-
one you love lies dying and you almost have the core in your hands." His
face was very pale. "It's maddening! Something inside you
seems to choke you up, your hands itch to do something, to snatch,
to rend, to destroy—It's ghastly. I tell you, friends, I'll give you the
secret of how to poison every mother's year old baby if I can save
my sister. Faren, isn't it? How jealousies and principles crumble
when they run up against the old Shotlammers in full stride. Hell's
hells and beards of itself! I know I'm a fool, a coward—all the
things you care to name—but I can't sit idly by and watch my
sister die!"
"All right, Walter," Lord Ashley said quietly, into the breast.
"WELL chuck everyone."
"But they've all spread over hell and gone?" protested
Wispel.
"So we contact them."
"But the time!" Colbron started up, agitation flitting his
hands and making his stomach ache. "There's no time left!"
"We know where each person has gone. At least, John Roland does. We can contact them all by telephone and haveCommot speak to them. We'll reveal a horde of people, get a full scale operation under way." His thin old Martian face was funny. "We need the information you have, Walter, for the betterment of mankind in general. You know that the whole situation is in the wrong perspective. More good will come of this than bad, believe me." He sighed. "That the key forward of the human man, for a good century in a manner of days, must depend on the fate of one young girl—it's a queer commentary on human behavior!"

"Perhaps the human race isn't worth all the bother?"

"Don't talk rot! We—that is, all mankind—haven't come so far against all the dangers we've encountered just to blow ourselves off this little planet. Don't you believe it. We're a hell of a lot to do in the future, and this Galacto Encyclopedia is like having our future course charted for us. We won't go soft from having success of the Galaxy dropped into our laps. It'll spur us on to greater striving. We need what you know, Walter."

"Yes," said Bingle, softly. "We need what you know, Walter."

"Well—get these telephone lines humming," Colborne spoke with dejected tedium and collocation. God knew, he couldn't feel excited about it, nor any more. But if John died before he had done all he could—then—then—" if she dies, you'll freeze in hell before I tell you a single thing!"

Abortionists began to say something angrily. Lord Ashby hunched him up quickly. He began to issue orders in his cool, cultured voice, and soon things happened fast. Colborne spoke into a tape recorder microphone, detailing what he knew of the cancer cure. Then John Roland, waking brightly in and buckling down to it without waste of words and with a smooth, grim efficiency that harrowed Colborne, issued lines and started the long process of telephoning everyone who might possess the other half of the cure.

It became a lengthy, drawn-out process. Food and drinks were offered and coffee was served all the hours dragged on. The lights went on and still the long-distance calls went out and the news was crammed off. "Tell them to stay near a phone at all times," Lord Ashby ordered. "We'll be coming back with other questions later."

"I hope so," said Colborne. "I hope so."

"We will, Walter. I feel it in my bones." He hesitated, and then said: "Just in case—would you like to read the end of your
knowledge? I can supply you with plenty of starting off points beside the bomb. Interesting scientific stuff—pure science, that is.

Maths. Wingle's mind blanked.

"All right," it would be something to do. "Although, my knowledge will be the least to fade. I was nearest to the explosion."

The night passed slowly.

As John Ralston's blue pencil inexorably crossed off names after name on his list, Calhoun's feeling of satisfaction increased. From time to time he found himself staring down at the lit, rigid, empty box on the table, and seeing nothing else in all the world save Jane's young face, white and twisted with pain. It was strange how a man's whole conception of the Universe could be changed by the loss of one insignificant person. How even these things a man considered sacred could be as easily brushed aside as a clinging spider's web in the darkness, as soon as they interfered with the dictates of his own nature. And yet, however contemptible he might consider himself, he knew quite simply that he couldn't change. He had to go on. Nothing mattered now beyond the immediate objective of finding the cancer cure. He didn't even bother to think about any possible futures after that.

Towards dawn, he gathered his bearings, red-eyed, he forced down a cup of coffee and turned, sickened, away from the perfect food. The list was down now to four people. One after the other, the blue pencil crossed out through their names. The police had rounded up local people from their beds, questioned them again to the accompaniment of rigidures against the 18-lack of ever having been on the train that day, and reopened back their failure. Even old Tom the postman had sworn blind 'he didn't know nothing about it, I tell you.

"And you say these devils fed women riding horses didn't receive this information, Walt?" Lord Ashley asked. He had freshened up and now looked as poised and unapproachable as ever.

"I'm afraid it looks as though it's no good, then. We're both the losers."

"After all, Walt," pointed out Wingley. "It's not as though you've lost anything. No one knew how to deal properly with cancer and you'll have to look at it in the light that we still don't..."

"Gee us half, Wingle," Calhoun said despairingly. "I know. I know that I hold half the answer. Can't you see the difference between that and not knowing anything at all? Can't you see how that turns me to pieces?"
"That's how we live about the scientific aspects of it all, Watt," Beagle said gently.

Winstrop said: "I judge every private you've kept me away from this latest information of yours, Watt."

Colborne turned on him. "I suppose you don't have what I want to know in that one-mack trend of yours?"

Winstrop's Invidious vindict was cut short by the eruption into the room of General Abercorn, with Colonel Storke trailing along behind rather like a rag being swept along by a runaway liner.

John Reid, carrying his blue-pencilled led, followed. He looked helplessly at Colborne.

"You've had enough of this nonsense," Abercorn burst, flinging out his clenched as he spoke, giving an impression of half-fear of a narrative quite foreign to his nature. "This is a very simple matter of National Defence. Colborne here has military secrets which it is his duty to deliver up to the Crown. Any endangering is right out of the question." He glared with much bellowing of epithets and nouns, and muttering at Colborne. "You understand, Colborne. This is a serious matter and you are committing a very gross offence."

"All I understand is that you're carelessly wielded until the endangering idea has fallen through because your side hasn't got what I want before you took this stupid attitude." Colborne felt his wretched overpowering him, making him reckless with the luring drug of fugace. "As far as I am concerned, I know nothing that you want. And you'll oblige me by getting to hell out of here."

After Abercorn had slammed down, Colborne added:

"Tell me. What's happened about Lutherberg?"

"We're moving in today. Big operation. You'll have to understand, Colborne, that you are no longer a safe agent. You'll be conscripted into the Service, then you'll have to—"

"You can't—"

"But we can. Your commission as a second lieutenant—a suitable rank, don't you think?—will be through as fast as the machinery can manage it. Then you'll sing a different song, me lad."

"I didn't mean that. You and your saboteur—no, no, an out of date expression due to an historian—don't mean a thing. I fail to see why it is necessary to make a so-called big operation of Lutherberg. Don't you realize—?"

Abercorn interrupted. His face was purple, and his intonation was that of a voice. Colborne didn't recognize more than one word in them. He waited until the general had run out of breath and, then said quietly: "You know, general,
that knowledge of the encyclopedia is fading from people’s minds?
Well, then, in a short time things will be back to normal. So need
feel for violence or stuff.

"No need! No need! Here you have a gang of people—a
gang getting larger every day—a miserable collection of cue-drawers
who have thrown off their allegiance to this country and are nothing
but out and out rebels." He gestured violently at Lord Ashley.

"You’re disgustingly obdurate people. They’re nothing but a
bunch of aliens, of extra-terrestrials, wearing human bodies. We’ve
get to exterminate the lot of them. It’s the only safe course."
Calbren thought of his blows of the day before. He said:

"I’ve understood before, general. What would it cost me to suck
you on the elbow?"

"Now, now, Walter," said Lord Ashley, a little uneasily. "The
general doesn’t understand the scientific side of things as well."
He wished at Calbren from his disengaged side. He went on
speaking, riding over the general’s threatened explosion. "Well,
now, Walter. It seems we don’t have the rest of the magic formula.
What are you going to do?"

The vaguely feeling that after all, nothing really mattered any
more, had been creeping like a paty over Calbren. When all was
said and done, what right had he to stop other men from blessing
themselves to high heaven? He wasn’t God Almighty, with powers of
death. Although—looked at dispassionately, that’s just what
he did have. And the responsibility was pressing too much for him.
He couldn’t think clearly about June any more. Whatever he did,
a mere little smile of fate kicked out like a serpent’s tongue and
snapped him up, so that he felt with his face in the mire. One sheep
was certain—he wouldn’t do anything Aberrant wished. That
was for sure. And even that was a pitifully inadequate, a childish,
reaction of petitioners.

"Give me a microphone and the reports you have from the
infected people you questioned. I’ll give you all I know, except—
I’ll have to think some more about the bombs. It was an accident.
He was still trying to take the weeping’s middle course, and keep
his fingers clean.

"I’ll take your other Stuff and get onto all those people
again," offered Roland. "They’re going to love me."

"Everything I have, everything we all have," Calbren said
dully. "It’s all yours." He shook his head and waited until the
sparks of depression had cleared. "Everything except the one thing
I want. I suppose that’s life."
The morning passed slowly—from the viewpoint of waiting for anything to happen. It passed with extraordinary rapidity from the viewpoint of getting through the work before all memory of the Galactic Intelligence faded from the minds of the people who had ridden on the Satyr Sal that day.

Towards noon the mass of woodage was being reduced to transfigurable proportions; Roland reported good progress. Caliburn found he couldn't care less. He brooded. He wondered what he would do, now, in these changed circumstances, when the time came for him to make up his mind. Having given up all the information he could until the last few people's batch of knowledge was presented to him, he took a stroll in the Golden Lion's garden. The sun was warm, and flowers dropped frequently in the breeze. It was very quiet. Winthrop walked out, a paper in his hand, and came up to him.

"I say, Walter—don't mind me. Sharp tongues cover an overemphasized sympathy, you know. Or so I'm told. Look what do you know about——" He had screwed up his eyes and Caliburn guessed he was mentally reviewing some fragment of knowledge he had received from the G.I. An outrageous expression flashed upon his face. His eyes popped open—he looked as though he had sat upon a needle. "Walter! It's all gone! The encyclopedia! Gone! Vaisdoubt!"

"So it's come, then. You were at the tail end of the train. Gradually, the knowledge will fade from different people, here and there, in accordance with their sitting. I'm not really able to bother now." He clenched his fists. "Even if someone—someone we haven't found yet—had the cancer cure, it's going, it's fading from their brains, now, as I talk to you."

"Yes—I'm sorry, Walter," said Winthrop.

"You know, I'd have seen Sally had it. But she was too taken up with being m'dam. Silly girl—damn stupid woman. What'll happen to her when the knowledge fades?"

"She doesn't know?" Bingle had walked out to them.

"No."

"Could be many. Reverse of affection—you know."

"I hadn't thought of that. But no—it can't."

"It might. Reaction. Shame and hatred leading to——"

Lord Ashley walked out, striking purposefully, and standing straight up. "I've managed to detain Abechromie from beginning his manual operation—and now that the knowledge is fading, I've convinced him. We've established telephonic communication with
Larkhorne. One or two people there are beginning to realize just what they've been doing. They ask for strong police detachments to be sent in. There's going to be trouble.

Calhoun's insinuation lifted. Sally—Sally was going to be Sally again. The thought cheered him, even with his deep depression over June's issuing his emotions.

John Roland leaned from a window. He looked alarmed. "I say! Walter! A phone call for you—From Larkhorne." He looked around. "Come quickly—I've bypassed the wilder-boys. You've got about three minutes—that'll have to be enough."

Calhoun sprang into the air, caught the window ledge and hoisted himself into the room. His shirt ripped. The old tears when it had been torn from his back opened and he angrily shook it away with one hand as he took the phone from Roland with the other. "Hello. Calhoun here."

"Walter! Oh, Walter!" she sounded as though she was speaking from the bottom of a half-empty wine-bottle. "It's horrible! I'm barricaded in the Town Hall—they've gone mad. Musk, the lot of them. They're like wild beasts. It's the opposite effect, I suppose—they did—they know that?"

He had heard a dull, far-off booming.

"Yes. Are you all right?"

"They're breaking down the doors. All right. Yes! Oh! Yes—but I'm out of the nightmare. And, Walter—I'm sorry. Truly, sorry. I didn't—look—then carefully—I know the rest of that comes later."

"You know?"

"Yes. I wanted to bargain with you—wanted to play it clever—be mean—but you escaped. Walter—I—"

"Tell me!"

She began to speak, rapidly, almost incoherently. Calhoun saw that John Roland had cut the extension into a tape recorder. Sally had not spoken more than a half-dozen words before the distant crashing magnified, crescendded into a dull, ominous roaring. Something pinged sharply in the earphone.

"They're through!" Sally's voice became ragged. She tried to speak and Calhoun heard her vaguely. "It's no good. I can't make it. Goodbye, Walter—goodbye. I'm sorry for everything."

"No, Sally! It can't end—not like this——"

"Goodbye, Walter." There was a confused shouting, a dull, eternal baying. He heard a sharp scream. Then, quite clearly,
came Sally's voice. "Walter—I love you! Goodbye—bye . . ."

The plane was dead.

CHAPTER XXI

The sheep, claw-like things over his back moved Galbene in the helicopter to a realization of his surroundings. Sevencore had exploded with squal at sight of his back and Doctor Creanore had been hardly removed. Now, with the good doctor lurching on him as they winged through the corridor at his hand was Alching. John Roland sat at the controls with a terrifying guileless. Lord Ashley, still imperishable, sat with Beagle and Warburrow in the rear section. That was the helicopter's full load. As far as Galbene knew, other men—soldiers—were also on their way to Lachthor. They were going to check the foes that had broken out. Galbene was going to sit inside a grave.

"There might yet be time, Walter," Lord Ashley had said. "I knew the Town Hall there. Big old rambling place put up in the middle of the last century when they thought the railways were bringing prosperity to the town. Old rooms that could still contain dust from Diny's bones. Shall he
able to hide—get away—don’t worry, men. She’ll be all right.”

“...And what she alone knows?”

No one answered him.

After a while, Roland said huskily: “Anywhere in town I can land? Or shall we put down in the main square?”

Lord Ashley said: “You can land on the Town Hall roof, John. If you blow some of the rain-pipers’ stones off that’ll serve to remind them of the way they’ve behaved.”

“Wise.”

Colborne could see a second helicopter following along the same great black cycle hanging from a stream. He looked at it, and then said: “Don’t let that am Abercornie land there before us, John. There might not be room enough for two helicopters—and I’d have to have it land on top of his. But I won’t wait for him.”

“All right.”

The journey he had driven as much reckons spent the day before with the men-spikeyers after him was now covered in half the time. The helicopter started down, sliding past the grey stone church, hovering near the main square with its horse-toughed and cobble and electric street lighting and then with a whooshing rush of wind, cutting like a great bat on the Town Hall roof. The town was in a ferment. Men and women rushed through the streets, carrying sticks and hammers and chair-legs, converging on the town’s centre. Colborne could feel the mob violence rolling up in heavy waves.

There had been so much of violence in the quiet country-side since that explosion of the alien encyclopaedia. A small object from the stars had created what could have been—what would still be—a world-wide upheaval. He wondered fleetingly, as the helicopter coursed, what lay in store for humanity when or last it had thrown off the shackles of gravity and soared out into space. If this was any sort of footprint, then the future would be a very lively place—a very lively place indeed.

His litter were convexed from the ride and there was an aching suffusion over all his body, but he jumped from the helicopter nearly enough. He could not report a gap in the pain from his back as he landed. Then he was running towards the fire-styple light he could see.

The glass was already smoked. Looking down, he saw a long dirty corridor, with doors on either side. As good a place as any to enter the sort of search he had in mind. Something seemed to be
rushed from the world, and he was aware that the helicopter’s engine had been shut off.

In the now crisp of sound the baying of the hounds below fanned up, frighteningly loud. This must be the second wave. The first, those he had heard over the telephone, must have been her blustery bawled belles. He wondered if Adliss or Macarthur had been in that sudden flack-above, or if they had been driving the car that had been after him, the car that had been blown up.

He knelt the rest of the glass in with his hand. John Roland appeared at his side, calm and composed. Roland took off his coat, laid it over the barred wooden slats between the gaping holes where glass had been. Then, with a checklist: “This bauxite high-dering?” he plunged boldly through the skylight in a splintering chaos of wood and glass and fluttering clothing. Colborne took all that in his stride. He dropped down after Roland as though he escorted buildings in this fashion every day of his life.

Lord Ashley poked his head through the hole. “You all right, John?”

“Yes. Nothing broken, thanks, Jeffers.”

Even this Colborne felt a flash of pleasure that Roland was calling Lord Ashley Jeffers. They both ran down the passageway. All the doors were shut. No sounds disturbed the quiet of the old building, save the long faraway thud of the crowd outside in the square.

“Shall probably down somewhere. In the back quarters,” Roland said, running easily. “No sound from that mole on the telephone.”

Colborne knew, then, what he expected to find. A crumpled, broken and bloody body, huddled in a dusty room. The sort of unnecessary, obscene, anti-human sort of death that made the whole of life meaningless.

Running along beside Roland, he felt in his pocket to make sure the scrawny sheet of foiled up was still safe.

The inner vision of Sally lying crumpled and crushed persisted. If she was dead—even if by some miracle she was still alive but had forgotten the cancer cure—the sentence of death would have been passed upon June. If that did happen, then Walter Colborne found with a strange emptiness in him that he didn’t much care what the rest of the moronic world did about blowing itself up. His own personal interest in life would have been taken away. Oh, yes, there would still be his work; he’d go on, breathing about dauntless men trying to find out how the minds of people had worked.
hundreds of years ago, but that would take up only a minor portion of the spirit that was himself. He hadn't seen it so clearly before.

A man is made up of many components, but some of these parts are more important than others. If the props of a man's integrity to life were knocked awry, then the rest of him collapsed like a way beak in the sea.

Which was a fine piece of confused thinking and metaphor mixing—somewhat excusable due to the circumstances, Calhome decided, and scurried down the curving stairs with Roland at his heels.

"The Army's arrived," Roland panted out.

Calhome could hear我能transpired sounds through the pounding of blood in his veins and the thunder of drums in his brain. From the confused clatter he deduced that Roland was right; the Army with Abnercombie on a metaphorical white charger as its head was disporting the mob. That was one pair off their acrid, at least. So far, here in the Town Hall, they had come up no sign of enemy. They made no effort to conceal their presence. The hollow reverberation of slamming doors followed their progress.

Nothing.

When at last—in an oddly familiar spirit—they found her, the scene was almost too vividly what Calhome had imagined it to be, for him to enter the wide many rooms.

He stood at the door, looking in, as Roland and Lord Adlacy and his friends crossed the floor. Their feet made loud vulgar sounds. It was exactly like witnessing the last act of an opera from the front row of the stalls. The heroine—dying, say, of consumption and singing with village breathon the white—the variousMorning relatives standing about and weeping into complimentary song at the least excuse. Apart from the silence, which only made the Illusion the more grievous, the feeling of enginism was strong upon Calhome.

Betsy, her hair a piled red mass, lay in dog-like devotion at Sally's feet. One or two dead men, their blue arm stumps dreadfully spotted, lay in a corner where Betsy's gun had emptied itself.

Sally—the telephone receiver still clasped in one hand—and a dead man lying on top of her, with a depression in his skull that would surely match the receiver, Calhome guessed—fully lay limp and white and like a flower accidentally broken from its stalk.

Roland looked up sharply from his knees beside her.

"She's just breaking Walts,"

Crimieus said in his precise way: "Buffy injured. But I think we can save her. Here, like this——" He began to do things with
objects taken from his black bag. Colborne turned away. All
climbed. The dead man lying on her arms have peronzed the final
act. Butty had been loyal, to the end. Now the rest of her mur-
derers were being rounded up by the Army. It didn't feel right,
somewhere. Everything was red again. The opeonic effect had been
spilled at the last. But then—that was like itu, wasn't it? Nothing
turned out in the way you expected. He knew that he loved Sally. What
their relationship would be in the future he did not know; he
could feel only that now he needed deep peace, a little corner into
which he could creep and sleep and forget.

Some time later, with Sally lying upon a hastily made-up pallet,
she opened her eyes. She smiled at him. His first words dis-
oriented his mental orbit: "Walter—did you know that the
Encyclopedia Britannica contains over thirty-eight million words?
Over thirty thousand subjects! And that only covers in outline one
single ninety-two-year plant!" Her auburn hair framed against the
white of bandages. "We were dealing, with the G.I., with the
knowledge culled from a whole stellar civilisation, a galaxy-wide
culture. Too much for us, Walter." Her lips were bloodless.
"Too much."

"Quiet, Sally. Hush. You're going to be all right. But you
must save your strength. It's all over."

"Look into my mind, Walter. Do you still—-?"

He summoned something up, vaguely. No words of his
appeared. The encyclopedia had at last blown itself out.

"All gone, Sally. All gone. But you're the important subject
now—-"

"I'm sorry I—did what I did, Walter. It wasn't me."

"I know.

Lord Ashley said, gravely: "So the bomb has gone too, Walter?" He
shifted. "Thank God for that. Now I don't have
to be afraid by any day. Whilst it was possible for the country
to acquire it, I had to press on. Now—well, I'm again a private
individual, able to say—-"'To hell with the hell-bomber.' I can live
without my self again.

"You mean?" Colborne started. Then stopped. Sally was
smiling him with her eyes. He bent closer.

"In my pocket, paper-—"

He took it out and read the rest of the cancer cure, neatly
written in Sally's handwriting. It was all there, like the heavens
opening and the angels descending in glory.
When the room had steadied down around him, Cymrenius said gravely: "I’ll get through to Space Angel’s at once. This will take some, naturally. I think you can take it for granted that your alien will be running to full health."

Colbene couldn’t see anything. He fumbled the paper in his pocket. He might have guessed that Sally would do the same thing as he himself had done. And that left him in a cold and empty limbo between the crashing millions of opposing ideologies. His superior moment had come.

Although every man lives alone in the world, he yet bears responsibilities and ties to the rest of humanity. At that moment Walter Colbene felt the whole awful weight of his sole responsibility. It was for him—and him alone—to make the decision.

Bought said: "A pity about that weapon. But still, the exercise in picking it together from what we have will be good practice." His long yellow face lit up with enthusiasm. "I’m looking forward, rather, to the job. Most interesting."

"Meas," agreed Bought, nodding his head.

"I can’t say how relieved I am," Lord Ashley said, smiling fondly at Sally. "Funny how Machland always seems to muscle through to the right answer. Even in matters as grave as this."

"Oh—about that berserk," Colbene said. "Aberrant—"

"I’ll handle him. The right answer. Yes, most appropriate."

"You mean—we’ll get the infernal thing, when we’re ready for it, with all the practice we’re having with the current berserk?"

"The berserk, Walter?" Lord Ashley blew through his mustache.

"Good Lord, no! I mean—how convenient it will be for you to have such a charming and attractive wife when you take up your new problem as historian—"

Colbene’s fingers crumpled the paper in his pocket.

It was always there, insurance. It would be there, for as long as he lived.

It was always difficult to know what was right in the conflicting claims of the random world. It was inevitable that no one was right. But when you had the right answer at last, it seemed as though it had always been with you, easy of accomplishment, final, not to be questioned.

"Yes, fellow," Walter Colbene said, looking at Sally. "Yes, I think we’re all going to get along very well from now on."

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First Breakthrough

A factual survey of the very latest scientific information from satellites and American Space Satellites

Just over one year ago the first artificial satellite was launched. To date no one has been placed in orbit and already a wealth of information is pouring in from the earth and transmitted to earth. Much of this information is still to be verified and assimilated, and is still coming in, but a preliminary report can now be written describing this new, major breakthrough in the struggle of man to overcome the barriers that up to now have kept him out of outer space.

The first satellite, weighing 184 lbs., was placed in an orbit ranging from 118 miles to 660 miles above the earth's surface. At an altitude of 500 miles it reached maximum velocity and then began its plunge to incandescence above the earth's atmosphere. One month later, Sputnik II, 444 lbs., was placed, and with the dog Laika on board, was projected successfully into an orbit of minimum height 133 miles and maximum height 1,134 miles. This satellite lasted 3,400 revolutions, ending its life on April 12th, 1957.

The first successful American attempt, Explorer I, launched on February 1, 1958, weighed 30 pounds and was placed in an orbit of 1,387 miles above the earth's surface. Explorer I should last until the end of 1958. Vanguard I, with a 4 lbs. satellite, was launched soon after, on March 17th, into an orbit of perigee 210 miles and apogee 4,500 miles. Its lifetime will be many years long.

Explorer II was unsuccessful, as the satellite was placed in orbit on March 26th and had a mass of only 40 lbs. Since the project was of order two miles it lasted a short time only, ending its life on June 28th.

On May 29th, the Russians once again astounded the world by launching Sputnik II, weighing 1 ton 6 cts., into an orbit of perigee 140 miles and apogee 1,600 miles. Equipped with solar batteries and a whole laboratory of instruments, this instrumented satellite is in the form of a cone 3 ft. long and 14 in. in diameter and 11 ft. 7 in. in height.

It can be estimated, from information released by the Russians, that the ocean vehicle that launched Sputnik II was probably above 300 ft. high and some 400 tons in weight. This ability to control such means can be judged from the fact that, on entry into orbit, between 70 miles per hour and a half a degree can be held.

So it appears that at least one group of scientists and technologists of the world are very close to being able to place the world's first artificial satellite into an orbit that will allow it to be seen by the unaided eye and will permit all its secrets to be recorded and transmitted to earth.
satellite in a few hundred miles orbit is already near-middle of the way to the Moon.

The Americans, at the time of writing, have tried one Moon shot which unfortunately was not successful. A second U.S. attempt is expected shortly and no doubt a similar Russian programme exists; however, the Soviet scientists have stated that they are more interested in putting up a manned Earth satellite and satellites in elliptical orbit, thus increasing their knowledge of the conditions of life in such an environment.

Leaving the hardware that deploys the satellites in orbit, we come to the information they have collected. Some of their findings confirm earlier theories based on vertical rocket shots and other methods of sounding the upper atmosphere, but a large proportion of the data related to Earth has painted a much more detailed picture, in some cases more detailed than was previously known.

There are three ways of obtaining information from unmanned artificial satellites—first, by observing its orbit visually with or without a telescope; secondly, by using radio methods of observation (as was the Sputnik) and, thirdly, by making the satellite radio transmitter send back code to information collected by the instruments on the satellite.

The first method, carried out by Manzorowitsch and other Soviet observers, is useful in determining the orbit of the satellite and whether it is an elliptical or circular one. Such data provides insights into the effects of the Earth's gravity on the satellite; changes in the orbit are due to two main causes, the oblateness of the Earth and the drag caused by the satellite as it passes over the last wings of the Earth's atmosphere. The fact that the Earth is not a perfect sphere causes the satellite's orbital plane to precess like a spinning top while the perigee point moves in the opposite direction in this plane. Preliminary calculations these rates with the degree of flattening of the Earth and results from the Earth's surface show that the Earth is not quite as oblate as scientists had thought. This was also confirmed by the first Soviet satellite, and our knowledge of Earth's shape is now more accurate than ever before.

A much better knowledge of atmospheric density at high altitudes (of importance in ballistics) has been obtained from the decay of satellites orbiting. The original elliptic orbit gradually becomes circular with the perigee decreasing very slowly and from then on the satellite spins in rapidly. In addition, a search has been made for density estimates (based on indirect data such as the Aurora Borealis) and the heating of meteoroids have been too small by a factor of five to ten. In addition to this, it has been possible to detect the daily and seasonal variations in the atmosphere due to irregular heating by ultraviolet, X-rays and other solar radiation.

The second method, namely radio observations of the satellite, is to aid in establishing the orbit and also in determining the frequency of the transmitted signal. In order to determine the orbit, the transmitted signal is Doppler shifted due to the motion of the satellite. The changes are due to the approach and recession of the
satellite to and from the observer (just as a space-globe always appears to be approaching the observer, then falls in place as it passes overhead).

In addition, the radio pointing and tracking of satellites has been remedied and compared with optical pointing and tracking. Radio tracking occurs here than optical tracking, while radio tracking provides optical pointing. The time differences determine the magnitude of the deviation of the radio beam which depends upon the orientation of the earth's axis. The size of these deviations is related to the altitude with altitude. For example, the concentration of electrons at a height of about 300 miles was found to be about 10 times, electrons per cubic inch. Information such as this helps in understanding the interaction of the sun's ultra-violet radiation with the atmosphere.

The third method of collecting information, by installing instruments in the satellite, is used for measuring the earth's magnetic field. A wide variety of detectors was incorporated in the first satellite. In Explorer III and Explorer III, these instruments measure the magnetic field as they orbit near the earth. Among the apparatus in these satellites are devices designed to register the number of hits of micrometeoroids, the presence and composition of the atmosphere in its upper layers, the intensity of the earth's magnetic field, the temperatures experienced at such heights, the composition of cosmic rays, and their concentration, and the intensity of solar radiation. In addition, in Explorer III, a special thermal radiation system was incorporated which, by changing the efficiency of radiation and reflection of the satellite's surfaces, ensures a suitable temperature range for the normal operation of the instruments. This was done by having on the satellite's surface 18 shutters which are opened and closed by means of electric drives.

Figures in the number of micrometeoroids hits agree with previous estimates. For example, it is expected that a total of 100,000 micrometeoroids of about four micro-millimeters in diameter will fall onto the earth every year-over-year hour.

With respect to cosmic rays, results released by the American and Russian agree in part only. These very high energy particles, originating in the most distant reaches of space, are important to the future of interplanetary travel. They enter the earth's atmosphere and are then measured by the instruments on board the satellite. The analysis of data obtained from Explorer III shows that the intensity of cosmic rays increased by about 10 per cent, from an altitude of 260 miles to 300 miles. The increase is due mainly to the diminution of the screening effect of the earth's magnetic field. The data should also show that cosmic rays are deflected by the earth's magnetic field, but also on the magnetic field due to currents inside the earth.

According to preliminary reports to members of the National Academy of Sciences, the American Physical Society and the
Washington scientific community in a meeting on May 16 may be amazed to learn of a new breakthrough in the study of cosmic radiation. The research was led by a team of scientists from the American Institute of Physics. A new satellite, designated Explorer 10, was launched into orbit around Earth on May 15. The satellite carried a variety of scientific instruments designed to study the effects of cosmic radiation on Earth's atmosphere.

The satellite, named Explorer 10, was launched into orbit around Earth on May 15. The satellite carried a variety of scientific instruments designed to study the effects of cosmic radiation on Earth's atmosphere. The research was led by a team of scientists from the American Institute of Physics. The team, led by Dr. John Smith, was comprised of researchers from universities across the United States.

The satellite was equipped with a range of instruments, including a cosmic ray detector, a proton monitor, and a neutron monitor. The cosmic ray detector was designed to measure the intensity of cosmic radiation, while the proton monitor was used to detect the presence of high-energy protons. The neutron monitor was used to detect the presence of neutrons, which are produced when cosmic rays interact with Earth's atmosphere.

The team found that the intensity of cosmic radiation was significantly higher at altitudes above 300 miles than at altitudes below 30 miles, but that the intensity increased at rates similar to that of latitude. This finding was confirmed by measurements made from other satellites and ground-based observatories.

The team also found that the intensity of cosmic radiation decreased with altitude, but that the decrease was not as pronounced as expected. This was attributed to the presence of a magnetic field that shields the Earth from some of the cosmic radiation. The team also found that the intensity of cosmic radiation was higher during periods of solar activity, which is consistent with previous studies.

The team's findings have important implications for the design of future spacecraft. The results suggest that spacecraft may need to be designed to protect astronauts from the effects of cosmic radiation, which can cause mutations and other health problems. The team's findings also have implications for the study of the Earth's atmosphere, as cosmic radiation plays a role in the formation of the atmospheric ozone layer.
Nearly twenty years ago THE SWORD IN THE STONE was published, and in the same year (1939) its sequel appeared, THE WITCH IN THE WOOD. In 1946 came THE ILL-MATCHED NIGHT, making a trilogy of fantasy parts by T. H. White. White's fairyland story was an alchemical one, and 1946 brought the end of the series. Then Mr. White left his theme no long (and his books to become among some of the most sought-for items for fantasy collections, despite several editions) and concerned himself with other things until now a fourth title has been added to complete the Arthurian saga. This is The Once and Future King (Gallows, 367 pp.), a new book containing the four novels and the three-gigantic books in one binding. For the benefit of collectors who already have the titles I think it should be made clear right away that two chapters have been added to the first part, the second part has been largely rewritten, and several of the characters have been omitted. The third part has been thoroughly revised, while the third part has had slight revising. As the fourth and concluding book has been published nowhere else, it will be obvious that either you step as you are, or you get the new whole book—and if you get it now you may still be in time to secure a “fine edition.”

For those of you who have never read any of the first three books, let me say that in general the story follows one's familiar picture of King Arthur, but that Mr. White's conception, characters, and situations, never dreamed of by most mythologies and histories, makes the book weird and more extraordinary to Arthur, an amiable old gentleman (usually) who can remember to-morrow for the next couple of days. The motto of the book is: “Let's stand about the hearth and talk of yester-yesterday. Arthur, in a key in a boy in the 'Tom Sawyer' tradition, with a somewhat Kiplingesque flavor added to his activity by the 'special lessons' which Merlin provides to form his character. As for, for instance, when Arthur is placed into the body of an old man, and so on. In conclusion: I find delight in the book, and I hope that you will, too.”
SOMETHING TO READ

Morus D’Arthur will appreciate the breadth of dream, the all-enveloping sense of the struggle with Migno and Right. Arthur is continually faced with the problem of deciding when the two are one, and when Migno is the real Arthur. He also feels the other deeper implications of this story which, in the English tradition, perhaps our nearest approach to the “pandora’s” myth. At the same time, Migno’s vision introduces considerable elements of the lighter side of life, making the epic that much more one. As, for example, the hilarious adventures of Sir Gurnemanz and Sir Pantaloon who, during their quest to divert poor King Pellimor from his ways, and make up with the real Quelling River, who promptly develops torrential dimensions towards the lake created.

You will appreciate that this book is not “science-fiction,” but it is the very best fantasy traditions, and a work worthy of the attention of every science-fiction reader.

*THE YEARS ON* by Doreen Wallace (Collins, 11/6, £2.50) is one of those subterranean books written to depict the near future which appear a little too long. This does not necessarily detract from the worth of the book, but it is not to discourage the reader. In this particular case, the prelude to the story proper refers to recent events in Britain following the loss of the islands which “caused it, and at the heart of the story, the impact of fact makes it difficult for the reader to “get into.” The impact of fact, it is like an ill-fitting case, a little tight in the neck, however, the reader is advised to ignore this and suffer the entire discomfort for the sake of the rest.

The score of the opening chapters is the best of Ely, in the fen country, which tends itself admirably to illustrates after the work of the late Sir Arthur Quilling, destroyed the fen drainage system, and literally made an island of Ely. Being a fen dweller myself I cannot criteria agree with the geographical scene which are flooded, but I am willing to bow to the probable recrudesence of the author in this matter. In any case, who is to tell just when things happen given the causes of the flood?

The immediate reactions of the people are depicted with an imagination which is gratifying. Only too frequently authors make their characters effect ecstatic evolutions of their normal lives. Here, apart from enforced-by-circumstances changes (resulting of available commodities, the return to simpler methods of agriculture and production the life of the country people continues with little difference. There are no devices, no gadgets; there is still the same and then, so biologists stepping up new bees and codes. The one major trouble is economic, arising naturally from the countryside's old habits—generally in times of need—of keeping his money as an old under (or something) up the chimney or under the bed. In consequence there is no money coming into the towns where it is needed—now, the old form of life has personal changes, personal changes.

Later there are scenes with which one could supply. Gambling, in money and tokens, is condoned by the introduction of
find courage usable only by the person to whom they are issued and to that time. Frankly, this is absurd—no any person could possibly be so foolish as to agree. Lacking some form of federist unit which to gather, property or service becomes the state. Gambling is inherent in mankind; and several thousand years of history reveal a vast number of well-intentioned but totally ineffective measures to stop it.

The first half of the book covers the settling up of the Black community, its trials and triumphs, its failures and its failures. In the second, the author looks at the history of the state and decides to learn more of what has happened to the rest of the world. This journey across Britain from one to the next is a series of incidents and conversations with different groups of survivors, not activists, and although interesting falls short of being sensational-interesting.

The book, if say nothing else, conveys the impression that Britain is a far better place as an agricultural community, including a base living from the soil, that as a manufacturing, industrial, land of earning millions and the author's (the author) have little survival value, either physical or cultural. Just the same, I can't help feeling that the people in it are a pretty unambitious lot who could have done a lot better for themselves (that the author has let them) if a few wide-awake types had survived. For example, in the late at the early days of the Industrial Revolution, they employed 'unspeakable' hundreds who have been supported in Europe. At the same time there is only one thing is the absence of water, power, a couple of windmills and little else of productive value. There are quite a few 'towns' employed as follow up and pass-by-ways who could turn to a little smith's work if the road arose, a carpenter ('sawmill' or not) would be just as useful as a farm-hand, and so on. The whole of this type could apparently envisage the use of a band made over the vast system of railroads in the far country—and this I find hard to believe, as I know many farmers who are skilled themselves. If the author has failed in some respect in this book, I feel it is that she has credited her fellow men with too little de-
WALTER WILLIS writes for you—

If my calculations are correct, and I figure this is bound to happen sometime by the law of averages, this column should be the last one in which Ken Bolliner can express his opinion and the last Nebula's first four-part serial without mention of its author. In the circumstances, maybe I should try and tell you something about an author, Mr. R. Kennerley Pointer. As a matter of fact I have in mind a story which I haven't done this before is that I know too much about him. Yes, yes, this isn't going to be a Sunday newspaper feature of authors in the Nebula's first four parts serial. It's just that I have to go home and check something about having a handbilled cigarette for breakfast is that you have to smoke an egg. Ken Bolliner is about thirty-five, short, burly, wears glasses and has what in other people might be called round shoulders but in his case is obviously a scholarly streak. When I first met him some years a go he was a very talented writer in the science fiction field and was writing for a variety of pulps. He is now working on a novel which is entitled 'Anatomy of a Man'. The importance of this contribution to the history of science fiction is that it is the first novel to be written by a man who had never written a novel before. Ken's friends, the engine of the vehicle did fall out. I was in smoking the road, Ken accused a teenager named called Perzel who is still in good running order and now drives him. They live in an old house.
with a red door in an endless road in Brook End London.

At the time I first met him, Ken had no thought of being a
professional author, but had just published his first story in
any fan magazine. The nearest relative of us had got to profes-
sional publication at that time was a short story we collaborat-
ed on one Sunday morning in Regent’s Park Zoo, about the
crime of a speaking man who were starched on the night side of
an elaborate plan and were given a terrible fate by a horri-
able monster until dawn, when the long savagery found
they had landed inside a wall, hearing the notice “Please Do
Not Feed The Animals”. This story was at one time to be pub-
lised by a sudden professional editor in Australia, but the pub-
lisers got wind of it and promptly went into voluntary
liquidation. Undeterred, and reinforced by President, Ken
went on to a career of which I believe only a very few people
able to make a living by the latest science fiction writing.

As well as the scientific knowl-
dge shown in his stories and as
had of Kenneth Johns, Ken is a
rich resource of imagination in
topical subjects, from sailing
ships and aerodynamics to old
wars and nuclear physics. But
Ken is not just a dilettante, an
academic theorist. He uses his knowledge to sound practical use, as you
would desire if you own the
fantastic galaxies and bignes-
tions he makes for my children
out of old Woolworth patterns and
knead little sticks. Or witnessed
him dying his own designs of a
kite, half smugly in a corner
of a peculiar string we had got
from the local general store, so
here an on one destruction we
called it the Goddessatron. Oh,
and in later stories, Ken brought
a beautifully constructed and
compl-
pletely felt of sound. As White said,
simple pleasures are the last
refuge of the complex, and Ken
is one of these all too rare
people who have the capacity
to preserve in artfully the joyous
delusions of childhood. In this,
perhaps, is the sense of wonder
so many of us miss in current
literature. Bob Baine is the author
who may satisfy it and, if he continues
to show in his published with
the human understanding that
consider it his son, he

...
NIGHT OF THE BLOOD BEAST is the fine film scripted by 23-year-old Martin Ar veh, science fiction fan "ruman from the raith", whose Willard munions extend to acting, directing and producing as well. Star of popular action films, Varno, who has played with each of the three Grecs, young Varno now plays with Allen, star-crooner.

This review—a single time departure from the usual format of this department—might be called "The Biography of an Abortion." A lot of blood flowed under the bridge from the time producer Gene Corwin called me up, setting a writer to do a hop-up script for an ultra-low budget, and the fact that a writer who couldn't get off the carpet, let alone write, was assigned to the job. So I went to press, my typist... all right, my typist, Varno, at the premiere of his first picture, holding his hand, to prevent him from kissing his hand. The gathered sound in the theatre were not all engrossed from the season from Galaxy 27 or the ten. Despite the tranquilizing effect of a shot of scotch, Varno twitched like he'd swallowed a Mexican jumping bean. He looked like he wanted to join the Shrinking Man in incredible smallness.

Upon stepping (correction: being carried) into the foyer at the brae, the first words of the author were, "I'm mad enough money to buy the picture and $4. The average tycoon from the audience, putting by and charming to overawe the retrench, might understandably have felt it didn't ask any analysis, but to me, assured campaign of a thousand entrepreneurs, Diplomacy Congress and aid for years to associating with Varno, Varno's meaning was crystal— even, literally—clear, to the secreted,2 million: intelligence of the unwise spectator: one million.

And then, just when the audience had considered that the script was (though this time) come as a shock to sense, disappeared in the month!

Roy Cobb had designed a magnificent blood-maze. It was thrilling the Thing. Unfortunately it was never used, a cruel fate

...
ONE GUINEA PRIZE

To the reader whose ballot for Nebula was best made up at the Nebula publishing office and who also sends a check to help your favorite author win the $100 Author's Award, as in addition to the Nebula
your performance on the Nebula's latter or on a previous of preferred
work, if a Nebula East, to
Nebula, 212 Cannon St.
Cambridge, N.E.

The Satyr's Song

Ritter Cee

Dark Talisman

Unhappier Country

Widow of the Gods, Pt. 4

Name and Address:

Mr. O. E. Bochler, Philadelphia

was the first to compile the scores in Nebula No. 20. The first real
of the poll on the scores in this
was:

1. WIDOW OF THE GODS, Pt. 4
2. RITTER CEE
3. DARK TALISM
4. UNHAPPIER COUNTRY
5. WIDOW OF THE GODS, Pt. 4

The result of the poll on the scores in this issue will appear in Nebula, No. 20.

and annotated with a black
and some dried-green violets,
so the petals looked like they
were sticky when it came close-up.

For the records: I won't as
be appalled with the final product
my imaginative client was,
who said, "Ferry, I won't hold
it against you; I know you can't
write a good review of it." I
have seen far worse scientifics,
and so here you. One thing I
give this picture praise for: it
goes out as a way to give the
alien an even break. There are
pluses for vanity like: "Why
not give the creature an opportunity
in society so why it's here.

The creature: "Readbooks and
pleasure of killing—if you were
a creature in a strange place,
and wanted to communicate with
its inhabitants, but every time
you tried, they turned against you,
the only way to break through
to them would be to take a
hostage, wouldn't it?" It's been
acting in four and soul protec-
tion."

And the Creature asks:
"Does it make me evil because
my body is not the same as yours?
You fight great wars because
your brother speaks a different
language. You kill because somebody
else's philosophy does not
agree. That's different but not
any different you must not inter-
pret it as the embodiment of evil."
This might be Ray
Redbrow speaking the theme of
his own novel, IT CAME
FROM OUTER SPACE. I
believe it was the older
Commie brother expressing a personal
philosophy through the mouth-
piece of Marsyas. Venus
furn to speak his own piece in
CALL ME BROTHER.
1572, "Tycho's Star" appeared, being as bright as Venus, then gradually died away, becoming invisible after 16 months. Kepler himself discovered a nova in 1604 as bright as the planet Jupiter. It remained visible for almost two years.

The astronomical telescope, the camera and the spectroscope now form the main instruments used by astronomers to study novae.

When a star turns nova, its rise to maximum brightness is very rapid indeed, the time being as short as two days. For example Nova Aquilae, 1918, increased its output of energy by over 20,000 times in under four days. This output is not maintained for long. A decline, rapid at first, takes place with irregular fluctuations being superimposed on the main fall in brightness. The rate of fall decreases and perhaps a year later the brightness is less than a hundredth that attained during the outburst. Most novae follow this pattern; a few are unusual and tend to remain very bright for weeks or months.

The study of a nova's spectrum yields much information. It changes as rapidly as its brightness. The spectral lines, originating in the outer parts of the star, show large shifts towards the violet. Measurements of these displacements lead astronomers to believe that the stellar gases are rushing outwards at hundreds, if not thousands of miles a second. For Nova Lacertae, the velocity reached 2,000 miles a second.

In addition to this Doppler shift, bright bands appear, characteristic of hot gases. Later, a spectrum similar to those given by gaseous nebulae appears, to disappear some years later.

All this gives a picture of a star expanding explosively due to some deep-seated over-production of energy and throwing off one or more shells of hot gas. Some six months after the initial observation of Nova Aquilae, a shell in fact was seen in large telescopes, expanding year after year. Other novae have been found to develop these expanding nebulous envelopes and it has been suggested by some astronomers that the mysterious planetary nebulae, the hot, white stars surrounded by a shell of gas, are the remains of novae, or more probably, supernovae explosions.

For in addition to novae, a second, rarer class of explosive star exists—the supernova, which at its brightest shines with the light of a whole galaxy, that is, with the light of ten million Suns or more.

The Crab Nebula in Taurus, shown here, may be the wreckage of such an explosion in which half the mass of a star is dispersed into space. Work by Lampland, Duncan and others has shown that the expanding gases in the Crab had a central origin about 900 years ago. Chinese observers in 1054 A.D. noted a new star in that part of the sky.

The rapid development in the past thirty years of our knowledge of the interiors of stars has provided some glimpses of the possible cause of nova and supernova outbursts. The rate of output of stellar energy is rigidly controlled by central pressures and temperatures in a feedback system that adjusts the stellar interior so as to keep it in equilibrium. But any sudden increase in pressure that produces a sharp rise in temperature might initiate catastrophic chain reactions sufficiently energetic to disrupt the star. The outer layers of a large star are supported not only by the pressure of the deeper layers but also to a large extent by the mechanical pressure of the outpouring radiation. If a star's radiation pressure is suddenly reduced, perhaps because its nuclear fuel supply is exhausted, the outer layers, deprived of support, will collapse. Some astronomers believe this collapse may be sudden, giving the high central pressures and temperatures that make the star go nova or supernova. It's comforting to remember that astrophysicists believe the Sun has some 10,000,000,000 years of steady life ahead of it before it exhausts its fuel supply for, if it did turn nova, eight minutes later the Earth would cease to exist.