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OCT.

WONDER

STORIES

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By FLETCHER PRATT

THE MERAKIAN MIRACLE

By KENDELL FOSTER CROSSEN

THE PLAGIAN SIPHON

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THRILLING WONDER STORIES

VOL. XXXIX, NO. 1 A THRILLING PUBLICATION OCTOBER, 1951

Complete Novel

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SAM MERWIN, JR., Editor

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The ABC's of SERVICING

How to Be a Success in RADIO-TELEVISION



A DEPARTMENT FOR SCIENCE FICTION FANS

IT WAS in midsummer of 1944 that we wrote our first editorial for **THRILLING WONDER STORIES**—for the Winter, 1945 edition, as we were on a wartime quarterly basis that lasted until December, 1946. If not a complete stranger to stf, we were certainly green to TWS and to Sergeant Saturn and his eerie companions, who were at that time running amok all over *The Reader Speaks*. Having no ideas of our own we went along with the gag as follows—

Careful with that Xeno jug, Frogeyes, you're spotting my spacevest—and with the dry cleaners shot to Pluto and gone! That's better, but less noise, please. Old Wart-ears is after my scalp since last issue. He's still sore about that misplaced hyphen, the one that made his name War-tears.

"That tears it," were his exact words the misguided son of a Jovian cobrax plant. So don't disarrange the camouflage of Uranian mustard blossoms, and we'll take a look through the space warp into time ahead . . .

So almost seven full years have elapsed since we penned the above screed and our writing of this, our last editorial as editor of TWS, SS and the two reprint magazines. As explained more fully in *The Frying Pan*, *Thrilling Wonder Stories* will have a change of editors as we are retiring to get back more single-mindedly to our first-love—the writing of fiction. By the time this appears we shall have been gone on our more or less merry way some six weeks or more.

The Gremlins Were Out

The elimination of Sergeant Saturn and gremlins was one of the first real changes under our tenure—although that took time since we needed orientation in our job before making drastic alterations. The galaxy was simply not big enough for the Old Serge and the reality of atomic fission. The latter, you will note, is still very much with us.

About all we could do while first feeling our way was to get the fact across to our authors that we did not want adventure or western or detective stories which were labeled science fiction through location spatially on some distant planet or temporally in time to come.

The first issue we edited—that Winter, 1945, job—was in several senses a fortunate one. While the featured short novel, **FOG OVER VENUS** by Arthur K. Barnes, was a holdover—big business on an alien planet—it was a well-above-average opus of its genre. We still chuckle over Fred Brown's novelet, **PI IN THE SKY**, and find that three of the shorts from that issue—**THEY SCULP** by Leslie Northern, **YOU'LL SEE A PINK HOUSE** by Wilm Carver and **DE PROFUNDIS** by Murray Leinster—hold up solidly on re-reading.

Jerry Shelton did the major job of supporting the Spring issue of TWS with his Thorne-Smithian riot, **DEVILS FROM DARKONIA**, and Henry Kuttner helped with a novelet entitled **BABY FACE**. The issue of Summer, 1945, was notable not only for Murray Leinster's fine **THINGS PASS BY** but saw the debut of Jack Vance with his horrifyingly ingenious novelet, **THE WORLD-THINKER**.

Kuttner's **SWORD OF TOMORROW** led the Fall issue and the Winter, 1946, TWS saw Ed Hamilton step in with **FORGOTTEN WORLD** as well as Leinster's **THE DISCIPLINARY CIRCUIT**, first of the notable Kim Rendell trilogy, since published in hard covers as **THE LAST SPACE-SHIP**.

Postwar Bradbury

In the Spring issue that year the magazine was made notable by Ray Bradbury's first postwar appearance in TWS with **ROCKET SKIN**. And the Fall edition found Kuttner, under his Keith Hammond byline, coming up with **CALL**

[Turn to page 8]



What Strange Powers Did The Ancients Possess?

EVERY important discovery relating to mind power, sound thinking and cause and effect, as applied to self-advancement, was known centuries ago, before the masses could read and write.

Much has been written about the wise men, of old. A popular fallacy has it that their secrets of personal power and successful living were lost to the world. Knowledge of nature's laws, accumulated through the ages, is never lost. At times the great truths possessed by the sages were hidden from unscrupulous men in high places, but never destroyed.

Why Were Their Secrets Closely Guarded?

Only recently, as time is measured; not more than twenty generations ago, less than 1/100th of 1% of the earth's people were thought capable of receiving basic knowledge about the laws of life, for it is an elementary truism that knowledge is power and that power cannot be entrusted to the ignorant and the unworthy. Wisdom is not readily attainable by the general public; nor recognized when right within reach. The average person absorbs a multitude of details about things, but goes through life without ever knowing where and how to acquire mastery of the fundamentals of the inner mind—that mysterious silent something which “whispers” to you from within.

Fundamental Laws of Nature

Your habits, accomplishments and weaknesses are the effects of causes. Your thoughts and actions are governed by fundamental laws. Example: The law of compensation is as funda-

mental as the laws of breathing, eating and sleeping. All fixed laws of nature are as fascinating to study as they are vital to understand for success in life.

You can learn to find and follow every basic law of life. You can begin at any time to discover a whole new world of interesting truths. You can start at once to awaken your inner powers of self-understanding and self-advancement. You can learn from one of the world's oldest institutions, first known in America in 1694. Enjoying the high regard of hundreds of leaders, thinkers and teachers, the order is known as the Rosicrucian Brotherhood. Its complete name is the “Ancient and Mystical Order Rosae Crucis,” abbreviated by the initials “AMORC.” The teachings of the Order are not sold, for it is not a commercial organization, nor is it a religious sect. It is a non-profit fraternity, a brotherhood in the true sense.

Not For General Distribution

Sincere men and women, in search of the truth—those who wish to fit in with the ways of the world—are invited to write for a complimentary copy of the sealed booklet, “The Mastery of Life.” It tells how to contact the librarian of the archives of AMORC for this rare knowledge. This booklet is not intended for general distribution; nor is it sent without request. It is therefore suggested that you write for your copy to Scribe A.H.B.

The ROSICRUCIANS
[AMORC]

San Jose

California

HIM DEMON, certainly one of his very best jobs, as well as Leinster's POCKET UNIVERSES.

December saw us back on a bi-monthly basis with a solid issue that included Kuttner's I AM EDEN, Vance's PHALID'S FATE and both Fletcher Pratt and L. Sprague de Camp (for once not in collaboration) among the short stories. Leinster's second Kim Rendell story, THE MANLESS WORLDS, appeared in February, 1947, and the same author, under the byline of William Fitzgerald, opened the Bug Gregory series in the April issue behind Kuttner's WAY OF THE GODS. George O. Smith made his first TWS appearance in the same edition with his interstellar *Kilroy* novelet, QUEST TO CENTAURUS.

Leinster concluded the Kim Rendell trilogy with THE BOOMERANG CIRCUIT in June, 1947, an issue which also included Ted Sturgeon's scary THE SKY WAS FULL OF SHIPS. Bud Gregory led the August edition with THE DEADLY DUST. Kuttner and G. O. Smith occupied the novelet spots.

A Ten-Strike

In October we hit a ten-strike with one of our very best. James MacReigh (Frederik Pohl) led off with a fine novel of matriarchal rule on Venus, DONOVAN HAD A BRAIN. Robert A. Heinlein's JERRY IS A MAN and Leslie Charteris' THE DARKER DRINK were the novelets and Kuttner starred in the short stories with his first Hogben saga, EXIT THE PROFESSOR. Manly Wade Wellman also contributed heavily in this category with THE TONGUE CANNOT TELL.

The lead novels fell off a bit for the next four issues but shorter works held up well. December, 1947, saw the appearance of Wellman's fine THE TIMELESS TOMORROW and Ray Bradbury's THE IRRITATED PEOPLE (one of his most neglected masterpieces). February, 1948, saw Bradbury's THE SHAPE OF THINGS, and in April the contents included Kuttner's second Hogben epic, PILE OF TROUBLE, Frank Belknap Long's THE WORLD OF WULKINS and Carl Jacob's GENTLEMEN, THE SCAVENGERS! In June we had William Tenn's CONSULATE and Perhaps Bradbury's best to date, AND THE MOON BE STILL AS BRIGHT.

Noel Loomis gave us a needed hitch in the lead novels in August, 1948, with his strangely fascinating MR. ZYTZTZ GOES TO MARS and was solidly backed by Ted Sturgeon's

MEMORY. Tenn's THE IONIAN CYCLE and such shorts as Leinster's REGULATIONS, Kuttner's HAPPY ENDING, Bradbury's THE EARTH MEN and Fitzgerald's THE DEVIL OF EAST LUTTON, VERMONT.

In October we received last minute word of an all-too-brief expansion to 180 pages and were caught unprepared with only one short novel, THE MOON THAT VANISHED by Leigh Brackett, and two novelets, YESTERDAY'S DOORS by Arthur J. Barks and MIRACLE TOWN by William F. Temple. Consequently we had to strip the inventory and run ten (count 'em, 10) short stories, including Bradbury's THE SQUARE PEGS, Benj. Miller's first Orig Prem story, DATE LINE, John D. MacDonald's THAT MESS LAST YEAR, Brett Sterling's (Bradbury) REFERENT and Donald Laverty's NO WINTER, NO SUMMER. It was quite a jam filling that one.

December, 1948, found us still caught a bit short on our shorts for the 180-page length and we wound up with three about super-children, A CHILD IS CRYING, FUZZY HEAD and SCHIZOPHRENIC by MacDonald, Long and Loomis respectively. The same issue saw the first TWS appearance of Charles L. Harness with his fine novelet, FRUITS OF THE AGATHON, along with Fredric Brown's terrifying KNOCK.

Memorable Titles

In February, 1949, A. E. van Vogt led the pack with his memorable THE WEAPON SHOPS OF ISHER, in an issue that also saw Bradbury's THE MAN and Sturgeon's MESSENGER. April gave us Bradbury's THE CONCRETE MINER, Leigh Brackett's QUEST OF THE STARHOPE, Raymond Z. Gallun's OPERATION PUMICE and Leinster's THE LOST RACE. And March found Brackett's colorful SEA-KINGS OF MARS backed by the first of Raymond F. Jones' "Peace Engineers" trilogy, THE ALIEN MACHINE, Fred Brown's MOUSE, Kuttner's SEE YOU LATER and Leinster's THE LIFEWORK OF PROFESSOR MUNTZ.

August, 1949, offered Arthur C. Clarke's THE LION OF COMARRE, MacDonald's AMPHISKIOS and van Vogt's PROJECT SPACESHIP among the long stories, the first of Cleve Cartmill's "Salvage" series among the shorts. In October Wallace West popped up with his provocative THE LURE OF POLARIS, got fine novelet backing from de Camp,

(Continued on page 134)

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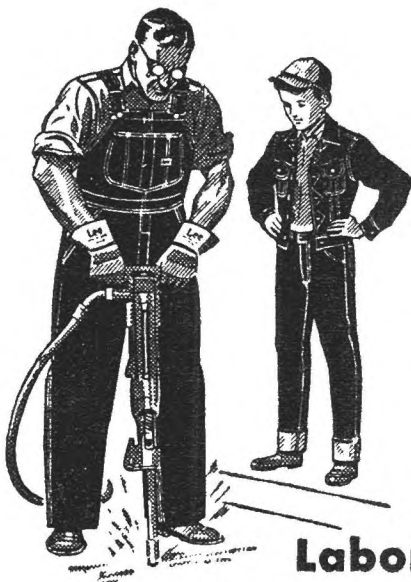
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ASYLUM SATELLITE



A Novel by
FLETCHER PRATT

*Duruy was a scientist and the
girl an enemy agent, but
out of their treachery
was born a shining cosmic light*

11

I
THEY sat together on the broad veranda with the light from within gilding the curl of smoke from Duruy's cigarette, watching white curls of foam speed up out of the

dark Atlantic to hurl themselves against the beach below the balustrade. Overhead the stars of the southern hemisphere marched in a tremendous parade. But as they watched, one, more brilliant than all the others and perceptibly round, slowly climbed above the eastern rim of sea.

Bennett-Drax lifted his *gintonico* and in the lazy accent that seemed to comport so oddly with being a secret agent said, "Here's to your future home, old man."

"Here's to it," said Duruy and drank. Then, "But 'home' is rather the wrong word, isn't it? I don't expect to stay any longer than just enough to get the new calculator running smoothly."

"You can't always say, you know," said Bennett-Drax. His voice dropped a trifle. "With so many of them being hit by the Two-Fifties . . ."

His voice trailed off as the opening of the door left them suddenly surrounded by a blare of syncopation from the Copacabana's orchestra and a man came out, looked along the line of the veranda and then came hurrying toward them, hand outstretched.

"Senhor Lambert!" he cried. "What a joyous meeting! Judge my delight when I learn that you are not only in Rio but precisely in this hotel where we celebrate a happy occasion. Do us the honor to be one of our party."

Duruy accepted the proffered hand and turned toward Bennett-Drax, who had risen with him. "Peter," he said, "this is Senor Herculeo Maricá. We were in the calculations branch together at M.I.T. before I went to White Sands. Senhor Maricá—Peter Bennett-Drax, British Empire Motors."

"Enchanted," said the Brazilian. "Will you also do us the honor? A small party but truly an occasion that will become memorable by your acceptance."

"Well, I don't know—" began the Englishman. But Duruy cut in with, "Oh, come on, Peter. The vacation's about over anyway and I need one good party under my belt before getting back to work." He turned to Maricá. "But I thought you were up in Goyaz somewhere, building sun-power motors."

"So I was," said Maricá, his teeth flashing in a smile. "I flew in but yesterday. And I thought you, my friend,

One Flyweight, With Goatee

FLETCHER PRATT, like the Parisian hero of Austin Strong's *Seventh Heaven*, is a very remarkable fellow. Certainly he is a man of interests both wide and varied. Among other things he is or has been a walking Britannica, a military and naval expert of high repute, a syndicated columnist, an expert ship model maker, a chef, a gourmet, a historian, a translator, a linguist, a world-traveler and a science fiction author.

This, it seems to us, is just about all that could rightly be asked of one frail-looking little man who lurks behind outrageous plaid shirts, a vast and amiable curiosity and one demi-transparent goatee. Yet somehow we were not surprised to hear recently that at one time he had been a professional fighter. When we asked him about it he informed us that, just before World War One, he had belonged to the same Buffalo, New York, stable of fighters that featured lightweight Rocky Kansas as its star. Pratt, it seems, was a flyweight and a pretty good one for some years in the Johnny Kilbane era.

But his prize-ring days are far behind him now although he keeps on the move like a pugilist in Stillman's gymnasium. He lives alternately in a Manhattan apartment and a house in Highlands, New Jersey. Both are fantastic. Most of his Manhattan time is spent in a so-called "study" whose desk is buried beneath cages of live marmosets and tools for making ship models. Some two thousand beautiful miniature warships, from the ill-fated and gigantic Japanese *Mushasi* and *Mogami* to tiny sub-chasers, pack glass-fronted shelves, ready to go into action at a moment's notice.

Somehow, in the course of his commuting trips and guest-filled week ends, Pratt manages to get his current six or seven jobs done. How he does it we don't pretend to know—but as long as he can turn out tales like this one we have no intentions of getting nosy.

—THE EDITOR.

were up above us there in that incredible artificial moon of yours."

Bennett-Drax cleared his throat. "I came back," said Duruy briefly. "What's the occasion of the celebration. Her-culeo?"

"The wedding of the daughter of the Interventor of Santa Catarina to a cousin of mine. In this direction."

HE STEERED them across the lobby and up the stairs to the floor which the Copacabana reserves for the private parties of the very rich or very important. A small orchestra was playing at the end of the room they entered and a girl in a flouncy but highly revealing costume was revolving gracefully to the paces of the *onca*, the panther dance, her castanets clicking. At the opposite end a table was piled with food and busy waiters were opening champagne. In between about a hundred people in evening dress were talking animatedly, not paying the slightest attention to the dancer.

Maricá guided Duruy and Bennett-Drax through the press and introduced them to the bridegroom, who wore the uniform of the Brazilian Rocket Service, and the bride, who had the beginnings of a mustache, before taking them to the champagne table.

There was a patter of applause as the dancer finished. Duruy heard Bennett-Drax beside him say in a low tone, "It looks all right but you can't tell whom you'll run into in a crowd as big as this." He felt a momentary surge of irritation and was just turning round to tell the agent to cease being a sleuth for a moment when it happened.

She was standing at the other side of the room, head tilted slightly and one hand lifted as she listened to something the man in front of her was saying. Duruy never saw the man at all. It hardly seemed worth while looking at anything but her lovely head, so proudly held, with its helmet of coal-black hair and the white shoulders beneath it that disappeared into a gown of deep blue which looked as though it had been cast



TINA

upon her. There was a jewel in her hair. Duruy gave a slight gasp and gulped champagne.

Maricá beside him said, "What disturbs you, my friend? You look as though you had seen a miracle."

Duruy managed a grin. "I think perhaps I have seen the girl I am in love with. Who is she?"

Maricá followed his glance. "And imagine that they say the Anglo-Saxons are unemotional! She is a Castelhosa, I think. They have an enormous fazienda in the mountain country, up in Paraná. Would you like to meet her?"

"I knew there must be some reason why I came here. Yes."

"Wait."

As the Brazilian threaded his way toward the group that contained the girl Bennett-Drax said, "Look here old man—"

Duruy made a gesture of impatience. "Yes, I know. I'm so valuable it hurts because I know so much about the space-station and you're keeping me from harm. But life must go on just the same and this is living—potentially anyway. You can look her up."

Maricá was beckoning from across the room. Duruy put down his glass and moved toward where he was waiting, the girl on one side, the man she had been talking with on the other. "Senhorita Casteloso, may I present Senhor Duruy? Senhor Mascarenas, Senhor Duruy. He was a member of the first party on what they call Project Excelsior, the new star in our heavens."

Her hand lay cool and soft in his. "Only one of the new stars," he said. "After all the Russians have one too and"—he hesitated a second, reminded himself that Brazilians always expected to be complimented—"there are also stars here on earth."

She laughed beautifully. "You have been in our country long enough to learn that its women demand flattery. But I warn you I see through it. I was educated in Paris."

The orchestra had swung into a slow waltz and couples were gliding out on the floor. "Shall we dance?" he said. She nodded and put up her arms.

They danced and talked about Paris. They drank champagne and talked about everything he could think of. He found she was interested in books, art, music and had a highly-developed critical taste in all three with a certain gift of quaintly humorous expression. Then she was tired of dancing and he suggested they sit on the terrace.

"Where did you learn so much about the arts?" he asked when they were seated.

"Oh, in Paraná, in the mountains, there is so little else to do. We take the journals. It is like you in your space-station." She pointed up to where overhead now Project Excelsior loomed like a diminutive moon in its three-quarter phase. "Did you not find time for much reading while you were there?"

FOR the first time he hesitated. "Well, I—"

"Oh, I know. The space-station of the Western Allies is all most terribly secret and you are not allowed to talk

about it and you even have that body-guard following you like a big English mastiff. He is probably peering around a corner at us this moment, asking himself whether I seduce you or the reverse. But I ask no pardons. It is only that I wished to hear about your life there in the sky and how it is lonely, like mine in the hills."

"Oh!" Duruy put relief into his voice. "Well, I suppose the most important thing about a space-station is that you're so busy all the time with what's happening to your body that you can't do anything with your mind. At least that was the way I felt. You may get used to it later—I was only there a short time."

"Is it strange then, the sensation?"

"Very strange. The weightlessness makes some people sick. In fact it makes everyone sick at first and the supply rocket always has to stay around for three or four days to take back anyone that doesn't get over it. There isn't any time except artificially. You do a lot of sleeping."

"The psychs have found out that maximum human efficiency under station conditions is on a routine of eight hours sleeping and twelve hours on duty, so things are arranged that way—in a twenty-hour day. It may be different on the Russian station. Theirs is black on the outside, you know."

"And no cultural life?"

"How can there be? A few books—and I remember one of the machinists had a mouth-organ while I was there. But there isn't room for any movies or things like that."

"I should think radio or television—"

"Oh, didn't you know—I'm afraid I can't talk about that though." Duruy sighed. "There's such a hell of a lot I'd like to tell you about it and I can't say a word. Do I get a chance to see you tomorrow?"

She placed one hand on his arm. "If you wish."

"I'll probably have to bring Bennett-Drax with me as a chaperon. What do you say to the concert and then we

can have dinner? I'm on a vacation and free as air."

She smiled. "For Senhor Bennett-Drax I will provide a distraction. There is the daughter of the people I am staying with. The address is Rua de Albuquerque sixteen. And now, the hour, what is it? I fear they will be looking for me."

Duruy conducted her back to the ballroom, now thinning of guests and acquiring the indescribable raffish atmosphere which attends rooms where parties have been held. As she had predicted Bennett-Drax was waiting just inside the door, his face wearing the vacant expression that to Duruy's experienced eye foretold a spell of stormy weather.

He was quite right. When they had reached their own room the Englishman said, "I really don't like to put on you, old man, but I must advise against it, I fear."

"I expected as much," said Duruy, taking off his jacket. "You're like a doctor. You advise against anything but a diet of milk, eggs and oatmeal, regular hours and exercise with the dumbbells."

"I would not refer to association with the young lady as exercise with a dumbbell," said Bennett-Drax. "Her first name is Tina."

"I found that out. After all it isn't polite to address your friends by their last names in Brazil."

"She's staying with some people named Guycochéa at Rua de Albuquerque sixteen."

"I found that out too. You and I are going there tomorrow afternoon and take her and the Guycochéa girl to a concert."

"Indeed?" Bennett-Drax lifted his eyebrows slightly. "The rapidity of your progress amazes me. What I was going to say was that those two scraps of information constitute practically our entire dossier on the lady as of even date. I called old Rolim at the Policia Segrêda. He doesn't know any Castelhosos from Paraná."

DURUY stopped undressing. "Look here, Peter," he said, "because she's lived so quietly off there in the back blocks that they haven't got a file on her, does that mean she's a Russian agent? Don't be silly. I talked with her all evening. She speaks a straight and very good brand of Brazilian Portuguese, and she's spent so much time on things like books and music that there wouldn't be enough left for her to do any agenting."

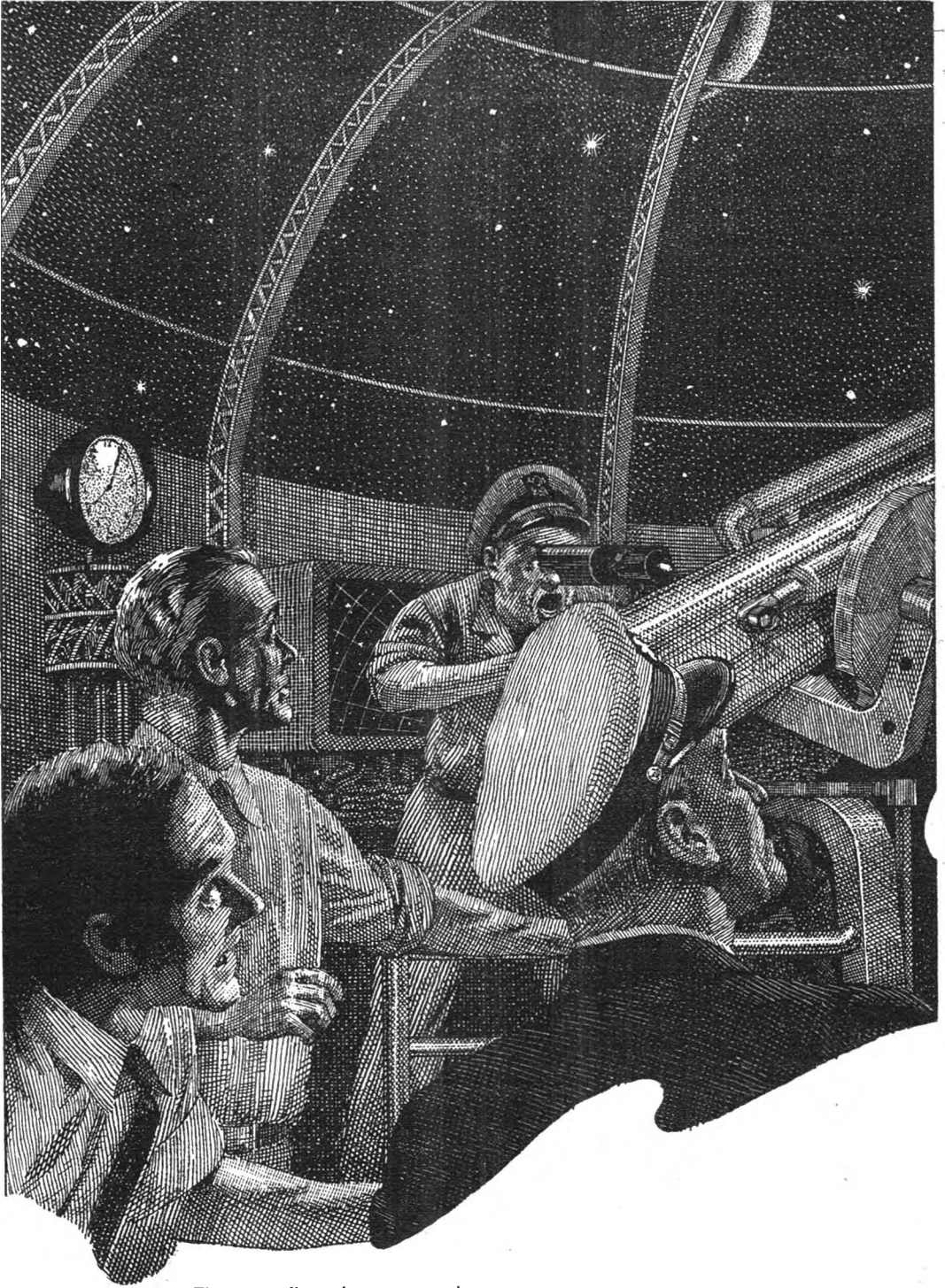
"That's how they train them these days, my friend. Remember Sivard, the chess-player, and how he tried to get away with the plans for the Flying Dragon rocket when he was giving that exhibition at Princeton?"

"This is nothing like that. I haven't any plans—and even if I had I don't see how she could get them away from me. You must have a low opinion of my loyalty."

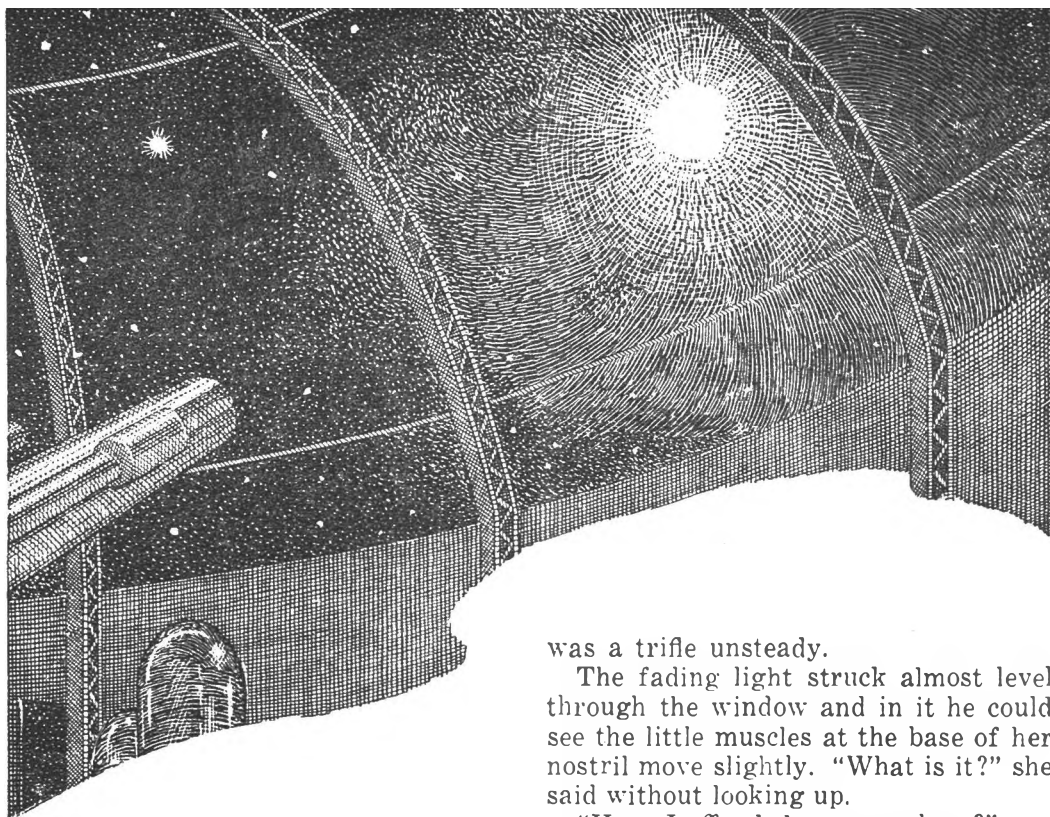
Bennett-Drax put out a hand. "I have a low opinion of your discretion. Not that you'd talk out of turn, even to a girl. But you know altogether too much about the arrangements at the station and about the range-and-charge calculator for the torpedos. The Russkis are crazy to learn some of the details, as you very well know."

"We have our own agents inside some of their organizations and a pretty good lead on what they want, you know that. I'm not trying to protect you, just the contents of your brain. If they get hold of you they'll find some means of extracting them. I can't help finding it suspicious when an acquaintance is formed this easily, even with such an attractive girl, that's all."

"All right." Duruy's anger dissolved in a grin. "Chaperon me all you want to. Plant agents of the Segrêda behind the bushes in the park so I don't tell secrets when we're out for a walk. But I've only got a week before I take off for that biscuit up there in the sky and I want to have a little fun. I might not come back, you know. There are the Two-Fifties."



The great flame burst out again,
wider and redder than before



II

I HAVE never tasted anything so good in my life," said Duruy. "It's not like the way you Brazilians usually do meat."

"Oh, we have resources you North Americans never dreamed of," said Tina Casteloso. "But this is not really a Brazilian recipe at all. I learned it in Paris from an old Hungarian woman there. It is called by a name I always find it hard to pronounce—Zigrana, Zingara. But I'd rather eat it than talk it anyway."

"What's the meat?"

"Veal."

She got up, produced two plates of frozen *crème de abacate* salad and sat down again, looking at her plate.

Duruy stopped eating and contemplated her for a moment. Then he said, "Tina!" He could feel that his own voice

was a trifle unsteady.

The fading light struck almost level through the window and in it he could see the little muscles at the base of her nostril move slightly. "What is it?" she said without looking up.

"Have I offended you somehow?"

"No—oh, no!" Suddenly both hands came up to her face and she was crying, twisting out of her chair and to her feet.

Duruy's own chair went over backward as he leaped up and around the little table to take her in his arms. She clung to him desperately, her dark head pillowed on his shoulder, sobbing without words. After a minute or two, as the tempo of her weeping decreased, he lifted her face in his two hands and kissed the tears from her eyes, then began to kiss her on the lips, hard and hard.

She reciprocated avidly for a time, pushed him gently away, said in an ordinary tone, "Have you a handkerchief? I must look like an Argentine actress."

"You look beautiful. Tina, will you marry me?"

The nostril-muscle jumped again and she put out one hand to him. "Lambert,

I wish I could. Come—sit down—we must talk this out."

The rest of the meal she had cooked for him was forgotten as she led the way to the couch. Through the window the Sugar Loaf, with its huge statue of Christ, was just catching the last rays of the sun.

"Tina, I love you." He reached out to take her hand and she let him, but passively.

"Lambert, I am thinking I love you too but it cannot do. I must go back to Paraná and you must go away, I do not know where."

"Come with me."

"No. I cannot."

"What is there to prevent if we love each other?"

She caught her breath. "It is—a family matter. I cannot tell you."

She avoided his effort to take her in his arms again. With a horrible sense of futility he cried, "Isn't there anything at all that will make you change your mind?"

"No. But . . ." She looked at the floor and in the gathering dusk he was surprised to see her cheeks suddenly flame red.

"What is it, Tina?"

"It has been so beautiful a week and now it will end tomorrow. Ah, Lambert, we will have only a memory. I have thought of something. Do you know the Guycochéas have a villa up the mountain at Petropolis? It is called the Villa Cedrosa and is not open now, only in the summer season, in January. A red building, set back from the street, on the Avenida Bembom."

Duruy felt his heart pounding. "Well?" he said.

"I could get the keys from Dolores. Would you—could you—get a car and meet me there tonight?"

This time he swept her into his arms before she could protest but after a minute she disengaged herself and said gently, "Not now. It is about an hour and a half of driving. I will be there as soon as Dolores comes home and I can

get the keys and her car. I—"

There was a step in the hall and the door opened on Senhor Guycochéa. Confound it, thought Duruy as they went through the formal inquiries about each other's health and he prepared to leave, of all times to interrupt!

Tina came with him to the door. As she turned away after an almost whispered, "Until tonight," he thought he caught the gleam of another teardrop in her eye and decided that she was the most enigmatical as well as the loveliest girl he had ever known.

ALTHOUGH it was past sunset when he reached the street there was an all-night garage on the Ipanema where, after prolonged haggling over the amount of the deposit and the proprietor's call to the Copacabana to verify the fact that Duruy really lived there, he was able to acquire an ancient 1957 model Buick.

There wasn't time to go back to the hotel, he decided, and if he did Bennett-Drax would probably put his foot down on the idea of an unaccompanied nocturnal expedition anyway. And Duruy could hardly explain. Well, let the big lug of a British watch-dog worry for one night. He had been trying all week to get something on Tina, and hadn't been able to turn up a single thing to her discredit.

Several people had seen her at various social functions and the Guycochéas, with whom she was staying, were well known in Rio. One of them was even a Secretary of Legation at some Brazilian diplomatic post abroad.

As the car left the city boundary and swung into the steeper and less well paved road up the mountainside to Petropolis, Duruy wondered if Tina were ahead of him and addressed himself to the curious problem of her behavior. What strange influence was it that led her to accept his love, yet refuse to marry him and declare that this night must be their last?

Religion? She had never mentioned it.

Some fear that she did not want to be tied up with a man engaged in the rather desperate business of a trip out to Project Excelsior? If she knew he was going she must have found out elsewhere. The station in space hadn't even been mentioned by either of them since that first night.

She said it was a family matter. It could be she was promised in marriage to some old buzzard of a politico, who had a hold on the family. Brazilians were always getting mixed up in deals like that. But then why couldn't she tell him about it? He made up his mind to ask her again and more urgently for some explanation. There was always or nearly always some way around things and he wasn't going to give her up, no matter what her background and problems.

Ahead, as he reached a comparatively level stretch, his lights picked out a big black car, parked so that it occupied a good half of the narrow road. Duruy swore and reduced speed. As he drew abreast of the machine he saw that one of the occupants was in the other half of the road with uplifted hand and slowed to a stop.

It was a small thin Brazilian who leaned on the side of the Buick. "*Fac' favor*," he said. "Does the Senhor have mechanical knowledge?"

"Not enough to fix a breakdown, I'm afraid," said Duruy. "And besides, if you don't mind, I'm in a terrible—"

He heard the click of the opposite door behind him and turned to find himself looking into the muzzle of a steadily held automatic. "You will descend," said the voice behind it in precisely pronounced English.

Duruy swung his head. The small thin Brazilian had a gun too. He descended, calling himself seventeen hundred kinds of a jackass. Was Tina—?

"You will proceed along the path to the right," said the voice. A flashlight gleamed past him to show a flagged walk between a double lane of dwarf mimosas. "Do not attempt to run, my friend.

There are many of us and you will merely give us the inconvenience of transporting you by another means. We will not shoot."

Duruy heard other feet behind him. There were several of them. He also heard the clash of gears as somebody started the rented Buick. They were taking no chances.

The flagged path ended at the door of a house which appeared to be low and rambling. One of Duruy's conductors opened it and switched on a light to reveal a hall luxuriously furnished in the Brazilian style. He was prodded across it and into a room at one side, which the light revealed as fitted for a doctor's office.

"Sit down, Mr. Duruy," said one of his captors. There were four of them. The one who had spoken English was big and rather blond with a broad face—Slav probably, Duruy decided. The other three looked like Brazilians. They were the ones with the weapons.

The big one switched to Portuguese. "We are going to ask you some questions, Senhor Duruy. You will answer in Portuguese for the benefit of these gentlemen, who do not understand your native language."

"Oh, yes," said Duruy. "And I suppose that if I don't answer you'll turn on the heat."

The big man said, "Soviet science has developed many methods of insuring that people tell the truth but we are in a hurry at present." He had stepped to a medicine cabinet and was busily filling a hypodermic with a colorless liquid.

"Scopolamine!" said Duruy.

"An improved derivative. Put out your arm."

"I'll be damned if I do," said Duruy, leaped to his feet and lunged suddenly at the big man. He might as well have spared himself the trouble.

The big man avoided him neatly, one of the other three kicked him in the shins, another jumped on his back and down he went in a tangle of legs and arms that presently resolved itself into

a Duruy spread-eagled on the floor. One of the men quickly and neatly tied his ankles together, another applied a hammerlock to his right arm and guided him to the chair, while the third held his left wrist.

THE big man sighed. "It is characteristic of the decadent peoples to expend their strength in futile effort," he said. "Senhor Ruruy, we have been following you for weeks. We could have taken you at any time since you arrived in Rio but it would have involved slightly more inconvenience because of the large Englishman. Now I advise you to behave well. It will make the experience much easier."

He picked up the needle again and advanced. "All right," said Duruy, "but tell me one thing. Did Tina Casteloso have anything to do with this? I've got to know."

The big man checked, and his face showed something like surprise. "The young lady you have been seeing so frequently? What emotional instability you Americans show! I am not authorized to give you this information."

She hadn't, Duruy thought, as he winced under the prick of the needle. The man who had the hammerlock on him whipped a cord round the wrist and tied the arm to the chair, the other followed suit with the left arm and all three stood back to admire their work. One of them got another chair and produced a notebook and a fountain pen.

The drug was quick-acting. Duruy felt a kind of greyness settle over his mind as though he were dreaming and conscious of dreaming but somehow couldn't manage to wake up. The big man sat down and addressed him:

"Your name is Lambert Duruy, is it not?"

"Yes."

"You were in the first crew on the space-station called Project Excelsior?"

"Yes."

"What is the armament of the station?"

"It mounts twenty-four rocket-powered winged torpedoes."

"Do they have atomic warheads?"

"Yes."

"Can they be directed to any spot on earth?"

"Yes."

"Can the station vary its orbit around the earth?"

"Yes."

"What is the means of communicating with the station?"

"Radar."

"What was your position aboard?"

"Calculator operator for the torpedoes."

"Do you expect to go back?"

"Yes."

"When?"

"In three weeks."

"Is not the present calculator operator satisfactory?"

"Yes."

"Why are they replacing him with you?"

"To keep him from getting the Two-Fifties."

"What is that?"

"Radiation disease from cosmic rays."

"You have no means of preventing that?"

"No."

"Nor of curing it?"

"No."

Through the grey haze of the drug Duruy saw satisfaction painted on the faces of the four men watching him. The big man leaned closer and looked at him intently.

"What means does Project Excelsior use to prevent the attack of meteorites?"

"None."

This seemed to throw them. They glanced from one to another in bewilderment. One of the men said, "Is the injection wearing off?"

"Not in this time," said the big man.

"I don't understand it. He must have taken a counter-injection."

"Ask him."

"No. If he is lying one time he could lie again. No—the treatment simply is

not working well. We will have to get him away from here to some place where we can apply other methods."

One of the three ran a tongue around his lips. "I do not like this," he said. "The Segrêda—"

"It is—"

There was a shot outside.

The big man jumped up, upsetting his chair. One of the other three leaped for the door, the remaining two bounded to Duruy's side. A whistle sounded shrilly.

"Hold them back," cried the big man and in three strides disappeared through the door at the back of the room. Duruy heard heavy pounding, then a crash as the outer door was broken through, then another shot. The doctor's office door burst in and a swarm of armed men in the green uniform of the Segrêda poured through it to cover the pair that had been standing guard over Duruy.

"Are you hurt, Senhor?" one of them asked.

"No," said Duruy dully and one of the other Segrêda agents came close, looked at his eyes for a moment and said, "He has been drugged. Inform Senhor Bennett-Drax."

III

LAMBERT Duruy sat in the office at White Sands and, although it was most thoroughly air-conditioned, was aware of perspiration trickling along the lines of his palms. On one side of the big desk facing him was a small silk American flag in a metal holder—on the other was a model of the space-rocket *Goddard*, used for the periodic trips to Project Excelsior. Between them was a little plate which proclaimed that the desk belonged to *Gen. Chr. Gebhard*. It reminded Duruy of a butcher's sign he had seen when he was a boy in New Orleans only that belonged to *Chr. Behrman*.

Gen. Chr. Gebhard was not behind the desk. Duruy turned his head to where **Bennett-Drax sat**, a picture of British aloofness and calm, but there didn't seem

anything to say, so he said nothing.

The door opened, and a little group came in, headed by General Gebhard, a short square man with a white brush-cut above a pink face. The two earlier arrivals scrambled to their feet and there were introductions—Brigadier-General Keyes of Rocket Ordnance, Colonel le Maistre, G-2 of the Western Alliance, Major-General Fuller, Operations, and a Lieutenant Tinkham, who proceeded to set up a recorder.

A little silence as all took their places and Gebhard said, "I think that for the record you should describe the sequence of events, Captain."

"Very well," said Bennett-Drax. He spoke in an even unemotional voice. "Mr. Duruy was dining out and I was expecting his return to the hotel—the Copacabana—when I received a telephone call. It was a woman's voice."

Colonel le Maistre raised a hand. "Did you recognize the voice, Captain?"

"No," said Bennett-Drax, "but I'm afraid that is not significant. She spoke in French. There's no one even remotely connected with the case who speaks French normally, and it's very easy to disguise a voice by using another language. She seemed in a great hurry. As nearly as I can recall, she said, 'Duruy is going to Petropolis tonight to meet someone. Stop him quickly. Tell him he is on no account to go, he will never arrive.'"

Le Maistre said, "Did you have the call traced?"

"I called the hotel switchboard—the Segrêda has a girl there—and said I wanted it traced but that led to nothing. It was made from a pay station in the casino of the Paulista and there are so many people drifting in and out there that no one could remember."

"Go on."

"It occurred to me to wonder why Duruy would never arrive. Obviously because someone knew he was going and he would be waylaid en route. I called the place where Duruy was dining—"

"Where was it?" said General Geb-

hard. "This is for the record."

Duruy himself answered, "At the apartment of some people named Guycochéa in Rua de Albuquerque with a Miss Casteloso."

Bennett-Drax took up the narration. "There was no answer so I assumed he had already left. It seemed to me that pursuit would provide a rather poor sequence for the video, since I would arrive only in time to discover the body if the purpose of our friends were assassination. If it were not they would have to remove him to some building to extract the information they wanted."

"I went 'round to Colonel Rolim of the Segrêda and asked him whether he had on his lists any suspicious buildings out the road to Petropolis. He said he certainly did—that the Villa Aldobrandini directly on the road was occupied by a doctor who never had any patients and who was assuredly a letter drop for the Russian espionage network."

"The Segrêda had let him alone—keeping him in the wings, as it were, until they wanted him for a star turn. As this seemed a good one Rolim and I buzzed out there with a couple of carloads of Segrêda agents. We found Duruy, trussed up like a fowl and answering questions under drugs—also a couple of Russian agents, alive—also another pair who weren't worth bringing back because they were in a poor state of repair when we got through with them."

"And the doctor?" Colonel le Maistre asked.

"Slipped away from us. The Segrêda isn't very gentle and extracted from the other two the information that his real name is Gavril Mahovitzov as well as a list of his usual hiding places. They'll doubtless lay him by the heels in a day or so."

There was another momentary silence. General Gebhard said, "Mr. Duruy, you must surely realize that this puts you in a very equivocal position. What was your reason for leaving the Captain, assigned to protect you, and

going off in the direction of Petropolis?"

Duruy felt his face flush and his hands were wet with perspiration. General Keyes was regarding him grimly. He said, "In the service we would call it desertion in the face of the enemy."

"I—" began Duruy and then stopped. "Do you doubt my loyalty, sir?" he cried wildly.

"No," said the General, "but—"

COLONEL LE MAISTRE pulled a long French mustache and there was a twinkle in his eye as he addressed Gebhard. "*Mon Général*, I suggest that this line of inquiry is unfruitful. In my country it would be at once recognized that we are dealing here with an affair of the heart and a young man who seeks to protect someone's name." He turned to Bennett-Drax. "Does not the evidence you have support this?"

"It does," said the Englishman decisively. "When Mr. Duruy made the acquaintance of this Miss Casteloso with whom he dined on the evening he was kidnaped I warned him that the account of her antecedents was vague and unsatisfactory. On the morning after the event Colonel Rolim and I went 'round to the Guycochéas, where she was staying."

"They said that he had left to go back to Paraná on the previous evening in a state of great agitation. They have known her only about four months. The Segrêda has the question of tracing her in hand."

General Keyes' mouth set in a line as thin and accurate as though drawn by a ruler. "Court martial him," he snapped.

"I think not—yet," said Gebhard. "Mr. Duruy has been extremely indiscreet and may consider himself severely reprimanded. But there is no reason to doubt his loyalty and you must remember he is one of the few men who can operate the torpedo calculator." He turned to General Fuller. "Is there anyone else you would trust with it?"

"Not with the new machine that guides the Mark Seven torpedo. All the

others show consistent twenty-five-mile errors. It takes a rather peculiar brain, like that for playing chess."

"Very well," said Gebhard and turned to Duruy again. "How much did you tell this woman?"

Duruy writhed under the contempt in the last word and felt as though he were being stripped naked and put under a glass. "Nothing," he said. "She knew I had been out to Project Excelsior—Herculeo Maricá told her that when he introduced us. But she didn't even know I was going back and we never talked about it."

"Ah!" Colonel le Maistre pulled at his mustache again and took up the inquiry. "Then we address ourselves to the questioning given you at the Villa Aldobrandini, which is evidently the key of the situation. Let us discover how much has been learned and consider what we may deduce from this thirst for information. How much of it do you remember?"

"A good deal," said Duruy. "As soon as I came out of it Peter—Captain Bennett-Drax—had me set down everything I remembered and I've been rattling my brains ever since, trying to fill in the gaps."

"Good. And what was the line of questioning?"

"Well, first they wanted to know the armament of the station, whether the torpedoes had atomic heads and whether they could be directed to any spot on earth."

"Doubtless test questions merely," said le Maistre. "They cannot be ignorant of these things. And then?"

"Whether the station could vary its orbit."

"Ah! We approach. Gentlemen, I submit that this indicates the Russian station cannot vary its orbit."

"Too long a jump," said Keyes.

But Fuller said, "There hasn't been any perturbation or variation in the orbit of the Russian station since they sent it up and it's outside ours, which means that if they could get it in to give

their torpedoes a shorter and better run they'd do it. I consider the Colonel's deduction justified. What came next, Duruy?"

"They asked me a lot about the Two-Fifties, sir. Whether we had any means of preventing or curing it. I was pretty groggy but I thought they seemed very much pleased when I said we didn't."

"Therefore the Russians do have such a means, or are on the track of it," said le Maistre. "What then?"

"They asked me what we did to keep meteorites from hitting the station."

"Did you tell them?"

"I couldn't help it."

"But certainly. You are not held in fault for this. And the next?"

"About that time Captain Bennett-Drax and the Ségreda came in and they had something else to think about. They were still arguing over the fact I said we did nothing about meteorites when he arrived. Didn't believe it. The doctor, the one who gave me the shot in the arm, said I must have taken a counter-injection to prevent my reacting to their dope."

LE MAISTRE leaned back in his chair and tugged at his mustache thoughtfully. "And he is the one who escapes," he murmured.

"I'm glad they didn't get anything more out of you," said Keyes with a closer approach to cordiality than anything he had previously shown.

"Do not interrupt," said the Frenchman. "I am following the rabbit into its den and the pieces begin to fit together. Regard, now—the Russian does not credit the statement that our station is without protection against meteorites. Yet theirs cannot vary its orbit. It is much farther out than ours and we know from observation that it is surrounded by huge plates of dark metal.

"Does it not follow that they have placed their station where it stands to reduce the arrival velocity of meteorites? And consequently that these plates, which have so much puzzled us,

are some form of screen or armor against the impact of meteorites?"

"By gad!" said Keyes, "I believe you're right."

"And even more," continued le Maistre, "they have either given their station an artificial gravity so huge as to make the assault of meteorites a positive danger—in which case the attention of our medical officers should be invited to the possibility that this is the source of their immunity from radiation disease—or they have never escaped from an immense theoretical error of the bygone Nineteen-fortys. They are still unaware that a meteorite can arrive at a station in space only with a speed determined by the mutual attraction of the objects."

"Unless it's traveling on a direct collision course under the attraction of some other body," corrected Keyes.

"Which in the case of a meteorite and a space-station is practically null," finished le Maistre. "Gentlemen, I am delighted with the kidnaping and questioning of Mr. Duruy. It has yielded us more information than the espionage service has been able to secure in two years."

General Gebhard's fingers played with the model of a rocket. "Pretty theoretical, isn't it, though?" he said.

"Not all of it, sir," said Keyes. "If those big plates on their station are armor against meteorites they can't have any great weight of armament aboard. Not as much as our station."

Duruy said suddenly, "Oh, one thing I forgot while they were questioning me. They asked me when I was going back if that has any importance."

"Most decidedly it could have," said le Maistre. "They know you are the calculator operator and are aware that our people are frequently attacked by the radiation disease. What if they take the hazard of creating a situation—in Libya, for example—and launching torpedoes at a time when they believe our station is not at full efficiency? This is something we must consider,

mon général."

Gebhard pivoted 'round to face Fuller. "How soon can you get the relief rocket away?"

"It isn't fully provisioned yet. The parts for the new construction and the forty additional torpedoes are aboard though. If I put an extra crew on the job, say five days."

"Make it three. That's an order. Duruy."

"Yes, sir."

"You still stand reprimanded. On the other hand you're going out there on a perilous mission. You're probably the only man in the world today who can prevent a war developing out of the current political situation because the Russians know you're too good. I wish you the best of luck."

IV

SPRAWLED out in the desert the *Goddard* looked gigantic, even beside the upthrust of the mountains. She had an odd resemblance to a grinning shark, tilted up at an angle, with the tall spider-web of scaffolding beneath her nose, the huge swept-back wings at the sides, the tiny dorsal fin at her back and the open hatches beneath the forward end, where supplies were being hoisted in.

"I didn't know—" began Duruy but what it was he didn't know was cut off by a roar of sound from one of the huge jet engines in the wings that would take them up to the point where the rocket drive assumed responsibility.

The roar died. "Okay on number four, Jake," megaphoned someone from aloft.

"What did you say?" asked Captain Keenan.

"That the situation was that serious."

"You don't have to believe it is. Old Smalley tries to give everyone the dark blue collywobbles. It makes him feel that a briefing officer is really important instead of being just a mouthpiece for the brass."

"Mmmm," said Duruy. "Still, they pulled you in from the Antarctic project. And Dr. Halvorsson—that research he was doing on radio-biology was pretty important. Not to mention my humble self. I ought to be designing calculators, not just running them. They had me working on a fully automatic and now that will have to be laid aside."

Keenan took off his cap and ran a hand through grizzled greying hair. "Listen, son," he said. "The day you get that fully automatic calculator I'll turn in my pilot's license. How are you going to persuade it to react when the 'Data insufficient' panel flashes up?"

"The same way anyone would," said Duruy stubbornly. "After all the electronic reaction is faster than the human. It should be possible to build relays that will analyze the data and discover the point at which the insufficiency appears."

"And then to have an inspiration about rephrasing the problem the way you do, I suppose?" said Keenan.

"I don't know about the inspiration," said Duruy, "but the interceptors are fully automatic, aren't they? And theoretically that ought to be the harder problem, with the first part of their run being made in air."

"Wonder if they'll ever get an interceptor that will stop a torpedo from space the way they catch intercontinental rockets fired from the ground?" said the Captain. "I remember the time when I didn't think it was possible they could do that. It took the explosion over Greenland to convince me."

A power unit, towing a train of little trucks loaded with cases, gave an ear-piercing shriek and both men jumped aside. The announcement-speaker bellowed, "Hear this—all members of the *Goddard's* crew report to administration. All members of the *Goddard's* crew report to administration."

"That means us," said Duruy. "I wonder what they want now."

"Can't imagine," said Keenan, falling into step beside him. "Something new in

the line of red tape, doubtless."

The administration building, with its double steel shutter doors that protected the contents against the blast of takeoffs, was before them. The sentry smartly presented arms to Keenan. Most of the other fourteen members of the crew were already in the lounge, smoking, talking, drinking coke instead of the more powerful liquids forbidden before a trip outside the atmosphere. Major Smalley, the briefing officer, a small fussy man with a pince-nez, trotted around among them in an agitated manner. As the last crewman came in he raised a hand for silence.

"In view of the international situation," he said, "the high command has made a regulation that after crew members have been briefed no outgoing mail will be accepted from them unless placed in an unsealed envelope for censorship before being dispatched. All such letters will be mailed after you leave. Sorry not to have mentioned it before and I am sure you will all understand."

There was a buzz of talk. Duruy got up and slid over to one of the writing desks. He hadn't tried to write to Tina during the hectic five days that followed his rescue and the quick flight from Rio to White Sands but now he thought he would, even though he didn't have any address for her. A letter in care of the Guycochéas ought to reach her some time and would let her know that, whatever the difficulties, he wasn't going to give up the hope of seeing her again.

THE pen was scratchy and the paper not of the best quality. As he finished the note and tucked it in the envelope he saw Dr. Halvorsson, one of the two medics allotted to the crew, standing beside him.

"Busy?" he asked.

"Not particularly," said Duruy. "Want something?"

"Just a question or two about a possible line of research. I understand that we specialists not connected with the

running departments have a good deal of free time out there."

"I don't know how much free time I'll have after they build the extension to the station and start setting up the new torpedoes. I'll have to work out courses for several targets on them. But up to that time I'll be fairly free, I imagine. Except that—but go on."

The doctor was large and blond with a meditative face. "I've been wondering," he said, "why it wouldn't be possible to work out some kind of a small communication rocket that would enable written messages to be carried to and from the station. This method of hanging out signals to be picked up by radar is thoroughly unsatisfactory. Not only are they subject to decoding, especially since they have to be so brief but they don't really convey the information we need."

"Look at that last communication—'Grave danger, Two-Fifties.' I know they're in trouble out there but I haven't the least idea how many of them or what stage the disease is in. It makes a lot of difference with regard to what measures I prepare to take."

Duruy said, "I agree it's a damned shame the radio people can't find any way of getting through the Heaviside layer without hopelessly garbling everything they send but I'm not sure message-rockets would be the answer. The calculation for getting them there in either direction would be awfully arduous."

"Not more than for the torpedoes, would it?"

"Considerably. In firing a torpedo you want an impact at the end of the run, a big smash. A message rocket would have to arrive in shape to deliver the message, so velocity would have to be considered, which would mean the addition of another major factor."

"And there's one more thing—in a war situation, which is just when they'd want messages the most, the enemy could put up interceptors after the slow-moving messengers. There's no way of

concealing the fact that something is leaving a station in space."

Dr. Halvorsson's face showed disappointment. "I had hoped—"

Duruy went on. "And I'm not sure I could solve the problem out there, anyway. You know about the effect of weightlessness on intellectual activity?"

"Yes, I'm familiar with that. As a matter of fact Dr. Montelius is going out to take up that very matter. He's a specialist in psychosomatic questions, you know. I only hope that the reaction doesn't prove inhibiting on his own activities. Well, I think I'll try to get in a nap. If they have some bad cases out there there'll be precious little sleep for me for some time to come."

Duruy rose with him, hunted up Major Smalley to give him the letter, then wandered to the door. Out there the supplies seemed to be nearly all aboard. Only one hatch was still working and a pair of tank-trucks had swung in under one of the *Goddard's* wings to pump fuel for her jet engines through elephant-trunk-like hoses.

It would be about midnight when they took off to catch up with Project Excelsior in its slow revolution over and over the earth, past the Rockies, Alaska and so over the top of the world across European Russia. He recalled how the top of the Black Sea had looked, so very unlike the map, when he first saw it. It must have been about dawn down there so that the land looked light and the water dark.

A couple of hours to kill. He wandered back into the lounge, got a cup of coffee and a magazine and settled himself to wait but that wasn't much good either. He kept thinking about Tina and whether his letter would reach her and what she would say or do if it did. He got up to go over to the recreation center, then remembered that was off limits since he had been briefed and ended up going out to watch the loading until the announcer called crew members into Administration again to put on their acceleration suits.

One of the mechanics and the new torpedo machinist were helping each other into the clumsy foam-rubber-lined garments that made a man look like a collection of animated balloons. The latter's name was Grandissi, Duruy recalled, a small, dark man who looked as Italian as his name sounded. Duruy did not particularly like him.

He was chattering energetically with his companion. "Look," he said. "Ten million dollars is a lot of money to spend sending us up there just so we can threaten those Russians. That would buy an awful lot of housing."

"Ah, g'wan," said the mechanic. "They oughta build three more stations like the one we got. Then maybe those guys would lay off us."

"Then the Russians would only build more stations themselves. All they want is we should lay off them. The way it is now the country is getting so loaded up with expense for armaments that they have to have a war to protect the investment."

"I don't get that," said the mechanic. "You're nuts."

GRANDISSI appealed. "Isn't that right, Mr. Duruy—that all these armaments could bring on a depression?"

Duruy said, "I don't know. Economics isn't my line. I doubt that it's ever happened in practice in spite of what the early Marxists used to say. I think we're a long way from the breakdown point when the Allied governments can't afford to build but one ship to service the station. I can't figure out why Congress beat the appropriation bill to complete the second *Goddard*."

"It's because they won't tax the big corporations enough," said Grandissi. "They got too much voice in the government."

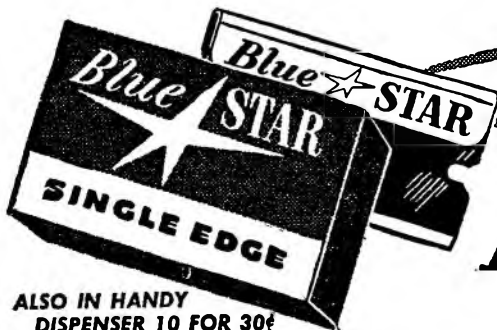
Duruy snapped shut the headpiece of his acceleration suit. It annoyed him to hear arguments that ran off into generalizations like this and he wanted to test

[Turn page]

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the internal air pressure anyway. It was okay. He raised an arm and signaled to one of the line crew, who was coming down the alley of the dressing room, pushing one of the little carts in which the suited members of the crew would be carried out to the big rocket.

He could see but not hear the man call for a helper and was lifted aboard the cart, where he fixed his hand tools to the railing. It was completely dark outside. Duruy was trundled down an avenue of floodlights to a position beneath one of the hatches of the *Goddard*, where a platform elevator reached down long arms to draw him into the interior of the ship. Inside he let down the wheels of his suit, fixed the hand-tools to the guide rail and trundled rapidly along into the passenger compartment, where five or six men were already in the deeply cushioned seats.

Hose connection to the ship's air supply—okay. He hooked in the phone connection and said, "Duruy, testing phone."

"How do you do, Duruy?" said a voice he recognized as that of Dr. Montelius. "Montelius speaking."

"Fine as silk so far," said Duruy. "They've improved these suits a lot since the first time I went out though."

"Had to—" began the doctor but a voice cut in: "Clear the general circuit for tests, please. Long speaking."

"Okay, Captain," came the doctor's voice and then, "Eggersfeld, mechanic first, testing phone. Do you hear me?"

"You're coming through okay, Eggersfeld," said the voice of Captain Long, the co-pilot. "Do you hear me?"

"I hear you. Eggersfeld out."

The reports went on. Presently a new voice cut in "Keenan speaking. I have cut exterior connections. We have one minute to go unless someone has a necessary adjustment. Report if you have." A silence. "Forty-five seconds, forty, thirty-five, thirty..."

The count reached its end and the *Goddard* began to shake violently though the roar of the jet engines was

muted to a gentle purr. In the carefully insulated suits and even more carefully insulated seats there was no sensation of pressure at the takeoff, only a smoothing out of the vibration. Duruy knew they were rushing up into the night at a speed beyond that of sound but from where he lay the view panels of the control room were not visible.

"Stand by," came Keenan's voice over the phone and with a roar the rocket engine cut in. Duruy felt himself jerked back with a weight four times what he had on earth, felt the air machine labor to help him breathe. "Jeez!" came a strangled voice over the phone. "Atch!" came another. Then Keenan's voice, slowed by the effort it cost him to speak, "Silence—on—the—main—circuit."

He was not trying to keep track of time but it seemed like an hour before the Captain cut back in with, "Stand by," and a second later the vibrating blast of the rocket was missing from the hull. Duruy bounced upward. The huge metal encasement in which he had barely been able to lift an arm while on earth was abruptly as light as a pair of swimmer's trunks.

His stomach felt as though it were being wrenched 'round and 'round by a pair of gigantic hands. There wasn't any up or down any more. Clinging cautiously to the guide rail with one hand he reached the other up, cut the pressure air supply and unscrewed his headpiece.

The cabin presented the usual appearance of such a place a minute or two after rocket-drive is cut. Up against the ceiling a sausage-like figure was making vague swimming motions, the startled face of the navigator visible through the headpiece.

Back in the corner a mechanic had his headpiece off and was being violently sick into one of the vessels provided for the purpose. Dr. Halvorsson had taken off his arm pieces and was fishing in the cabinet for the little bottles of brandy laced with pepsin with which

the qualms of the crew would be somewhat quieted.

Captain Long's voice said, "See that. No, over there. It's a big one. The Russians must be sending up their relief ship too. Now I wonder what made them do it at just the time we're going out."

V

A SERIES of bumps and scrapings was transmitted through the *Goddard's* hull as the powered magnetic units maneuvered her across the hexagonal plates of the space-station to the point where her exit hatches would correspond with the intakes of Project Excelsior.

Captain Keenan gazed from the control-room window at the three men in acceleration suits, wired together like Alpine climbers, who were skipping with awkward speed across the brilliantly lighted surface of the station. "What's the matter with them in there?" he said. "Don't they know the drag is likely to disturb the orbit if they don't make that hookup integral soon? Only three men on the job!"

Dr. Halvorsson said, "I don't like to sound grim, Captain, but if the station's message bears one interpretation, it could mean that they only have three men fit for duty."

"Out of sixteen?" Keenan looked incredulous. "How will they get the *Goddard* back to White Sands?"

"Not my problem." The doctor shrugged. "I will say, though, that if men are going to work much outside the station and exposed to the full force of the cosmic rays, they need more rapid relief than we're providing for this crew."

"That's just the trouble," Keenan said. "The political side never understands what we're up against. Build the station bigger, they say, and triple its torpedo capacity. Then, because we say we have to have another *Goddard* in a hurry, we're stupid militarists who don't even know our own business."

Long handed himself along the guide rail, his curly hair bouncing. "That's not altogether fair to Congress, though, is it, Captain? After all, they were ready to go ahead when the European members of the alliance refused to meet their share of the bills."

"Damned fools," growled Keenan.

"Oh, I don't know," said Dr. Montelius, who was floating just behind Keenan. "After all, it's a question of ideals. They thought the world was free of atomic wars for good when the interceptors were invented, and now we come along with this space-station and the show starts all over again. There's a certain amount of reasonableness in their claim that we ought to accept the Russian offer to keep the space-stations unarmed."

"The Russians would never keep the agreement, and you know it," said Keenan. "There, they've just about got it."

He faced round toward the cabin. "Attention! Everybody tighten suits and use the contained air supply. There's sometimes an air leak when these joints are fitted together. And hook in on the main phone circuit."

There was a mild bustling in the cabin as the crew members got back into the headpieces they had discarded and pulled themselves to positions where they could plug in. When Duruy hooked his own line into the circuit, communication had already been established between ship and station.

"—ready," Keenan's voice was saying. "Open her up."

Even over the phones the grind of gears was audible as a section of the station's outer wall swung inward, taking with it a similar section of the *Goddard's* hull and leaving directly over Duruy's head a yawning passage which ended in another door.

"Okay, Long," said Keenan. "You're first."

The co-pilot stepped down from the control cabin with an odd mincing effect, balanced himself delicately in the

center of the main cabin and leaped with arms stretched overhead. He floated gently upward and out through the gap.

Keenan said, "Watch how he did it, you people here for the first time, and don't give it too hard a push or you're liable to ram your head against that door on the far side. I'll have Long and someone else wait there to catch you but try to take it easy. Remember, you only weigh a couple of pounds out here. All right, Etchardy, you're next."

The navigator took Long's place, then came Duruy and one by one the others, Keenan himself last of all. There were one or two minor accidents but no damage. Keenan braced himself, swung the outer hatch shut and turned to the inner one. It opened into a long compartment with the usual guide rails at top, sides and bottom, in which a man with a shock of red hair and a light-weight summer uniform appeared to be hanging upside down. As the newcomers began to take off headpieces, he reversed himself quickly and shook hands with Keenan.

"My but I'm glad to see you!" he said. "We're in terrible shape here. I've only got four men fully fit and both of my medics are gone. We had to stop work on the extension."

"Two-Fifties?" queried Keenan.

"Unless it's some other epidemic giving the same symptoms." He saw Halvorsson emerge from his headpiece. "Oh, hello, Doctor. I couldn't be happier to see you if you were an angel from Heaven. Is there anything you can do for my people?"

Halvorsson shook his head. "Not much, short of hospitalization back on earth, where they won't be getting additional doses of radiation every day. I can arrest things for a couple of days—give you that much relief—but that's as far as we've got."

The red-haired man shook his head. "We thought you might have hit something in six months. I knew you were working on it."

KEENAN turned around and faced the little group. "You will follow Captain O'Brien and myself," he said. "He will call off the quarters for each man as we go down the passage. You have already been assigned to watches. Those belonging to Section One will go on duty first"—he looked at his watch—"half an hour from now.

"That will give everyone a chance to get out of his acceleration suit and to stow his personal baggage. Section Two, off duty until zero-six hundred, then all hands except cooks on unloading detail until eighteen hundred, when Section One falls out. Any questions?"

One of the mechanics raised a hand. "Yes, Captain. What good are cooks when we can't keep down anything we eat?"

There was a mild laugh and the procession started down the corridor of the compartment, each man falling out as his name was called and passing through one of the oval, rubber-lined doors into the cubicle that was to be his home for the next several months.

Duruy found his in corridor A-5, close to the "top" of the station as seen from the earth and near the big calculating machine that was his special care. The cabin had been occupied by his opposite number of the other section during his previous visit. Even if the station had grown bigger in the meantime this hadn't changed much.

There were the same lights, the same table bolted to one wall with the chair beneath it also bolted in place, so that you always banged your knees getting in it to work. There was the same tubular bed let into the wall, the same controls for air and heat.

He was due on duty. He crawled out of the acceleration suit, dumped it in a locker, picked a pair of magnetized shoes out of another, started down the corridor to the calculating room. Someone had spilled a drop of water. It floated past him, disturbed by the small breeze of his passage, like a tiny iridescent balloon, and once more he found

himself thinking of Tina and how she would react to a place like this.

The door of the calculating room was locked. He rapped, and the speaker beside the door said in a tinny voice; "Who is it?"

"Duruy, new crew, relieving you."

"Oh."

There was a click, the door gave to his touch and he was in the familiar calculating room with its banks of tubes and panels. The man sitting at the pipe-organ-like board said, "Papers, please."

Duruy produced them, noticing that the other had lost some of his hair, that there was a red skin infection running across his scalp. The man glanced over the papers, handed them back, stuck out his hand and said in a toneless voice, "I'm Scott. Glad to have you aboard."

"Glad to be aboard," said Duruy. "What's the matter? You been mixing up with the Two-Fifties too?"

"Some. I'm not as bad as some of the mechanics though. One of them went blind yesterday and two of them are dead."

"Good God! Why the epidemic?"

"When the mechanics started to go down, all of us had to turn to and work outside, building the extension for the new torpedoes. O'Brien ordered it, the dastard." His face contorted suddenly. "He's the one that makes us keep calculation locked too. Apparently afraid there might be a Russian agent aboard. Tell me, is the situation back there on earth as tight as it was when we left?"

"It's worse. The Chicago Cubs are leading the league."

Scott had only a small smile for this crack. Now that one looked at him closely he did have the appearance of a thoroughly sick man. Duruy went on, "I'm not violating any confidence when I tell you that General Gebhard said, just before we left, that this station is about the only thing that can prevent a war."

"They'd better send out their reliefs faster then," said Scott. "How are they coming with the second space-rocket?"

"Hardly at all. I think there's still some construction going on on it but it's at least a year and a half away and when the European members of the alliance refused to pay any more toward its completion, Congress voted down the appropriation to pay for it ourselves."

"They must be crazy down there. All right, relieve me, will you? I need to get some sleep. The navigator can't get out of his bunk and I've been on duty for sixteen hours."

"I relieve you."

Scott shuffled out with the peculiar dragging step of a man hard hit by the dreaded radiation disease. Duruy shuddered a little as he sat down and began to check over the data sheets. There were tubes for thirty-one torpedoes instead of the twenty-four he had known but no lines of flight had been calculated for any of them yet, apparently because the torpedoes themselves were still aboard the *Goddard*, being brought out this trip.

NUMBER ONE'S sheet still bore the calculations he had made on his first trip for a flight to Moscow if fired any time between thirteen-thirty and fourteen twenty-two, but a firm hand had annotated it for earlier firing if the station were given a one-degree change of orbit. Number Two, Sebastopol or Leningrad, that was his basic calculation, too, but some of the figures had been changed at two places beyond the decimal point. He'd have to recheck that one. Number Three, Number Four . . .

The order sheet was signed *O'Brien* and bore instructions for Number Twenty-five—calculate a spiral orbit to strike some place called Uralskoi. He didn't even know where it was and spiral orbits were dangerous—unless the torpedo were released at precisely the right moment and on precisely the right bearing, it might leave the solar system altogether or treat the dusty deserts of Mars to a taste of atomic bombing.

A matter of split-second timing—

also of chess-player skill in handling the calculator. He noticed that Scott hadn't even begun the problem, probably too hard hit by either the effect of weightlessness or the Two-Fifties. He'd have to check with Keenan and see whether the skipper really thought that spiral orbit necessary, though as a general rule the orders left by one captain were carried through without question by his relief

SOMEONE knocked. "Come in," called Duruy and then remembered that he hadn't locked up after Scott left.

It was Etchardy, the navigator, who would be his relief on the calculator when the other section was on duty, a blond lad with a thin face and a look of youthfulness. "My stomach was so upset I couldn't sleep," he said, "so I thought I'd ease the joint and get acquainted."

"Sit down," said Duruy. "What's everybody doing?"

"Unloading. I don't think I'm going to get used to seeing one man walk off with a case that weighs eight or nine hundred pounds on earth and has to be handled with a crane." He surveyed the front of the machine with interest. "Where do the data sheets live?"

"Right here. Have you looked over your observatory yet?"

"Oh, yes. It's a little lulu. Whoever built this station was on the ball. But the man I'm relieving got way behind in his work and I've got to do a recalculation on some of the planetoids. He's lost track of Hermes, and Albert isn't even on the sheets, which isn't so good when you consider that the damned hunk of rock weighs three billion tons and has an orbit so irregular that it has to be recalculated practically every Friday. I wouldn't want to find us on a collision course."

"If you do, notify me and we'll feed Albert a torpedo," said Duruy. Both laughed slightly.

Etchardy stirred his feet as though he had something on his mind, then

said, "Tell me, what do you think of our team?"

"Most of them seem all right to me. The skipper's a good hard solid citizen of a rocket pilot, pretty competent—I've known him for a while."

"I wasn't thinking of him."

"Well the mechs seem the usual lot. Dr. Halvorsson is a very distinguished scientist, a bit on the stiff side, but I rather like Long."

"So do I. I've been with him through training and he's all right, even if he did spend every evening out with a different babe. He's going to find it lonely out here. But I wasn't thinking of him. What do you think of our good friend, Dr. Montelius?"

"The psychosomatic specialist?" said Duruy. "Well—"

"He's Germany's gift to Project Excelsior. Came from there originally, you know, even though he hasn't a trace of an accent."

"Oh," said Duruy. "That might explain it."

"What?"

"When we were coming in he was giving a lecture on how he thought the European members of the alliance were right in not paying for another service ship. We ought to accept the Russian offer to disarm both stations and make them scientific laboratories."

Etchardy rubbed his chin. "That's what I mean. I don't like the way the guy thinks."

"But if he's German it's probably all right. I know quite a lot of them. They go off into philosophical abstractions at a moment's notice, or even without notice, but an order's an order and when they have a job to do they do it without question."

"Maybe but—"

The intercom in the wall buzzed sharply. "Duruy, calculation," said Duruy, throwing the switch and putting his face close to it.

"Captain Keenan requests you will come to his cabin."

"Okay."

Etchardy got up. "See you later. You relieve me here at fourteen hundred."

VI

THE CAPTAIN'S face was grave as Duruy stepped into his cabin and he got up to snap the lock. "Sit down, Lambert," he said.

"What's up?"

"This—I know you've had your general briefing like the rest of us and you're pretty well up with the general situation. But I was given a special briefing before we left, with instructions not to say anything about it till we got out here and then to be careful who I spoke to. I'm telling you about it because you're the only member of the crew who's been out here before and I'm sure of you."

"Thanks."

"Colonel le Maistre thinks there is reason to believe we may have a Russian agent in the crew."

"Good God! What's the matter with Security? Can't they check people any more?"

Keenan shook his head. "They've checked everyone aboard till they're blue in the face. Some of them are even last minute replacements of people who were previously scheduled to come. That doesn't make any difference."

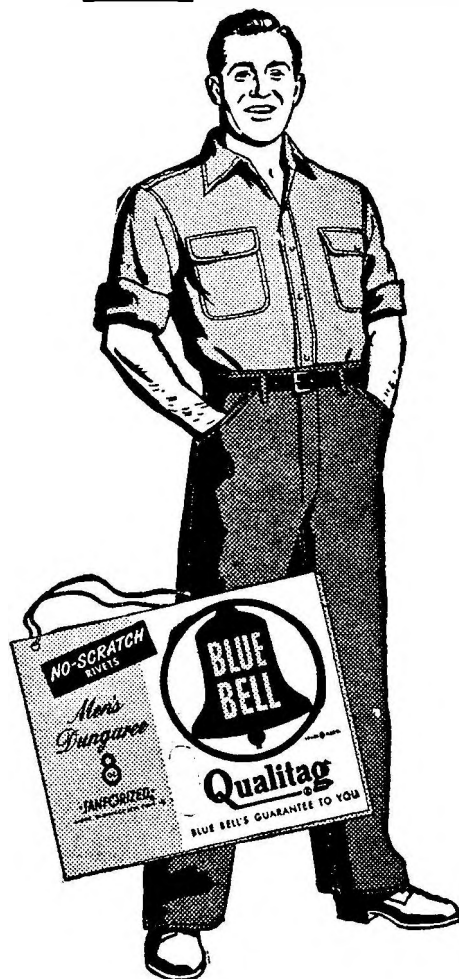
"We have our own agents in Russia, you know, and they came through recently with a report that the boys in the Kremlin were feeling pretty happy over having planted someone here. We don't know how or who it is or anything—but that's the reason O'Brien set up the order that calculation was to admit no one without a Top Secret pass."

"I see," said Duruy. "That could be rough, all right. But what do you want me to do? Be Sherlock Holmes?"

"No, that's about the last thing I want you to do. Le Maistre's a pretty hot Sherlock himself, you know. When he got that report, he immediately started figuring out what an agent could do up

[Turn page]

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here. He'd be after information, for one thing, but that wouldn't do him much good, because he'd have no way of communicating it until he got back to earth."

"Dr. Halvorsson was asking me if I couldn't work out the calculations for the delivery of messages by small rockets," said Duruy thoughtfully.

"I don't think that puts the finger on Halvorsson. You'd still be in control of the rockets. Neither would le Maistre think so. His line of reasoning is that an agent could hardly sabotage the station itself, except maybe to destroy our gear for changing the orbit.

"That wouldn't matter—our orbit as it stands will let us bomb anything important the Russians have. And he could hardly sabotage the torpedo rooms. There are too many of them and he'd be caught before he half finished the job. But the calculator is the key to the whole business. Without that we're just a hunk of hardware, floating around up here in the sky."

"I see. So you want me to watch it with more than human care."

Keenan's face did not relax. "More than that—I want you to watch yourself too. The calculator isn't much use without you. Etchardy's a good man and with the data sheets he could fire some shots in an emergency—but not enough to get decisive results. Le Maistre thinks that an agent would figure that the calculator would be under careful guard and concentrate on disabling the operator."

Duruy smiled ruefully. "Well, I suppose it's no worse than being one of those South American presidents they're always trying to assassinate. What do I do?"

"I've worked out a program. There aren't enough of us for me to give you a bodyguard and anyway the bodyguard might turn out to be the wrong man, so you'll just have to be careful. I'm having your gear moved into the cabin next to mine here, which Long should be occupying, and moving him down one.

That way there'll always be one of us in the next cabin when you're off duty.

"Don't open your door except to one of us and whichever one it is will accompany you along the corridor to where you want to go. When you're off duty and in the main cabin don't let yourself be left alone with one man. Don't take any meals alone and when you do eat wait till somebody else has tasted some of it first."

"You make me sound like a piece of bric-a-brac. Can I play cards with the big boys, teacher?"

"If you're careful." Keenan was still not giving an inch. He stood up. "The regime goes into effect now as an order. I'll walk down to calculation with you and pick you up there when you come off duty."

ONE or two men were snaking boxes along the corridor. As Duruy stuck his key in the lock of the calculation compartment Keenan said, "Oh, yes. Just before I got aboard the *Goddard* Captain Bennett-Drax handed me this to give to you. Been so busy I forgot it before. This whole business may not be serious so cheer up. 'Bye.'"

He waved a hand and the door closed. Duruy sat down in his calculator's chair and tore open a long envelope addressed to him in Bennett-Drax' flowing English hand. There were two papers inside and Duruy's heart gave a dreadful jump as he saw one of them was the farewell letter he had written to Tina, still in its envelope and open. The other was another letter:

Dear Lambert:

I hate to write this to you, especially in view of the contents of the enclosed, which has been handed to me for censorship. But I don't think it should be mailed, even to an address where it will probably not reach her.

Because, Lambert, we have the best of evidence for believing that Tina Castelhoso is not only a Russian agent, but is identical with Tatiana Vsevolod, who is one of their best rocket technicians.

You probably are going to refuse to believe this, or just take it for the work of an interfering busybody, so I'll tell you that I've been on the radiophone with Rolim of the Segrêda most of the morning.

They have traced her back from introduction to introduction until they did find someone who met her at Foz de Iguassú in Paraná but even then she didn't have any background, just plenty of money and plenty of time. And that was just about the date when you received your leave to take a vacation in Rio.

In the other direction she chartered a small plane which left Rio for Montevideo the night you were kidnaped. At Monte she booked a seat on the Linea Aera Uruguayana plane for Buenos Aires, giving the name Valdes, but apparently never occupied it.

That is, we lose touch with her completely, which isn't surprising, as the Uruguayan police weren't looking for anything. Also her physical description checks almost exactly with that we have from our agents in Russia of Tatiana Vsevolod.

Now I realize that none of these items is conclusive by itself—in under-cover work almost nothing ever is. Agents are trained to leave a trail of inconclusiveness. But the whole thing put together, with the fact that you were going out to Petropolis to meet her that night—and don't tell me you weren't, even if you won't confess it—makes it about as certain as anything can be in this business that she was sent out to pump you or, failing that, to draw you into the kind of trap you fell into.

Lambert, I'm not blaming you. I know you're pretty much gone on the girl and, it's evident from your letter, very sincerely. And I think she's gone on you too in the same way. You told me she never talked to you about your work or the station and it's perfectly clear that nobody but she could have called me up that night with the warning that you weren't to go to Petropolis

after all. In other words she threw down her bosses and took a chance of being liquidated for your sake.

I only hope they didn't liquidate her and, believe me, I wish we lived in the kind of world where two people in love could afford to forget international boundaries. But you can see why I'm sending this letter back and not passing it through.

*Yours,
Peter J. B. Bennett-Drax*

Duruy let the letter slip from his hand. It hung there in the weightless atmosphere of the space station, vibrating gently above his knees. The annunciator system bell clanged three times and a voice announced, "Stand by for entering eclipse phase! Stand by for entering eclipse phase! Prepare to turn on all heaters in two minutes."

In the next couple of days Duruy began to learn something about his fellow crew-members of Project Excelsior, though not enough to provide ground for a definite suspicion of any one of them as a possible Russian agent.

Etchardy was a bridge player of the first class, peculiarly precise in his bidding. With help he ought to make a good calculator operator himself some day. Captain Keenan, on the other hand, had a tendency to stick to regulations. He played a rather wooden game of bridge and drove his crew mercilessly at the task of getting the *Goddard* unloaded and the stretcher cases among the relieved crew aboard.

DR. HALVORSSON was quiet and calm. He spent little time in the main cabin where meals were taken, a good deal more with his patients or in the medical laboratory, complaining that he had to learn his analytical techniques all over again in a place where there was no gravity to carry liquids through the apparatus. The communicator was named MacCartney. He came from Canada and had an endless fund of stories, which he told on all occasions.

The cook in Duruy's section was a big burly man from the Deep South but after the second day it became clear that he was one of the unfortunates who could never overcome space-sickness and Dr. Montelius recommended that he be sent back with the *Goddard*. Grandissi, the little torpedo machinist, turned out to be a highly acceptable substitute though he grumbled about being overworked.

Duruy himself felt lonely, depressed and out of touch with the rest. They had trained together as a group and developed certain intimacies and references to common experiences which he knew nothing about. It might be that the thought of Tina lay like a dead weight on his mind or it might be just that the effect of weightlessness was creeping up on him more quickly this time, inhibiting not only intellectual activity but the desire for any intellectual activity.

He said as much to Keenan the day after the *Goddard* took off in a brief flare of flame and left them alone in space, while they were sitting in the Captain's cabin, celebrating the occasion by sipping Manhattan cocktails from plastic containers through straws.

"It may be just that I'm getting old, but I'm not sure I'm up to the racket for the long period any more. I hope that they hurry up with that training program and get some of the new boys out here, like Norcross or that Greek kid from California."

Keenan carefully hung his drink in the air in front of him. "In the report going back I've recommended in the strongest terms I can that they get a relief crew out here in half the usual time," he said. "And Dr. Halvorsson has made that double. We can't have another crew going to pieces the way O'Brien's did."

"Of course, it's that new construction work on the outside of the station that does it, exposing the men to unshielded cosmic radiation for long periods. But I can't skimp on that. The whole value of the station lies in building it up to

double the old capacity. Besides, it's an order."

"It seems to me," said Duruy, "that O'Brien was a little—injudicious in putting everybody aboard onto construction, even his calculator. Scott was in terrible shape."

"What else could he do? He had to get the work done and from his account the Two-Fifties hit the gang rather suddenly. Bad luck, losing both his medics the first crack though. They might have warned him in time to take a slowdown. I'm going to take good care of Halvorsson and see that nothing like that happens to him. Besides, I believe he's got more on the ball than either of the men O'Brien had."

"Well, anyway, I'll be glad when a relief shows up for me."

Keenan gave a wry smile and took a sip of his repossessed drink. "That's the bad news for you, Lambert. It won't. You'll have to stay over the next trip and break in the new man."

"*What!*" Duruy felt the lines of strain come into his face.

"Figure it out for yourself. Scott will be under treatment for months and there's no one else with the necessary experience. It'll be all right though. I'll keep you well inside and away from the construction work."

Duruy said, "It seems a damn shame they can't send a couple of calculators out here and train them on the job."

"Don't kick about conditions. You know as well as I do that the station will hold only so many people. Every time one more is added, another has to be dropped somewhere." He held up his fingers to enumerate.

"You've got to have two shifts. You can't sacrifice the torpedo machinist or the communicator or the medic or the commander or the cook. The rest are the mechanics for new construction. And when you try to double up on any of the functions you get fatigue and a higher susceptibility to the Two-Fifties."

"All the same—"

"All the same they're trying to do something about it. That's one of the reasons for the extension of the station. It's just our hard luck to have to be the pioneers."

There was a rap at the door. "Who is it?" asked Keenan.

"MacCartney, sir."

"Come along in. Got a message?"

The communicator had a code-book in his hand. Duruy noticed that his face seemed unusually pale beneath its garment of freckles and that he saluted formally, which he didn't usually do. "We started coming in on White Sands about an hour ago," he said, "and I noticed they were burning flash powder for us to use our radar. I tuned it in and the best I can get out of it is KGLF."

He handed the code-book to Keenan and Duruy, bending over, followed the captain's finger along the line.

It read:

KGLF—SERVICE SHIP HAS CRASHED.

"Of course it may not be true," said MacCartney. "I'm putting out the code signs for confirmation and the next time we go over, about five days from now, I may get another reading. But as of now it looks as though we're stuck with it."

VII

CAPTAIN KEENAN held up his hand. "I have called this meeting," he said, "because I want everyone to understand the exact situation and stop jabbering about it among yourselves. Also to see whether some of you can't tear those gigantic intellects away from the contemplation of bridge and acey-deucey long enough to give a little thought to the problems of the station. If anybody has any bright ideas this is the occasion to produce them."

He stopped and looked around. In the group packed into the main cabin there was no sound but the clearing of throats. "All right," said Keenan. "I want you all to understand at the start that this

isn't any debating club. I'm captain of this station and I intend to remain so and give the orders.

"This is a session for your own information. But I will listen to anything you have to say. Now I'm going to have Lieutenant MacCartney describe the result of his communication with White Sands first. Go ahead, Mac, I release you from the regs on messages."

"We-ell," began the communicator slowly. His voice had a pleasant slight burr of Scots. "It's not so easy, you see, carrying on a conversation when you can make only one remark in every five days, six hours and fourteen minutes. It reminds me of a trapper up in the Temagami named MacGregor—"

"We've heard that one," said someone.

"Have you now?" said MacCartney, unruffled. "I've been wondering what happened to a group that had heard all each other's stories and now I'm thinking I know—they get downright impolite. As I was saying it's not so easy. White Sands has to put out its radar-reflecting panels and we pick up the message as we go past, meanwhile sending one of our own."

"Now, you see, those messages are limited to four characters, and we interpret them through the code-book. But the code-book doesn't cover the situation we're in or anything very like it, so we have to feel our way along and about half the time one or the other of us doesn't quite understand."

Dr. Halvorsson raised a hand and MacCartney beckoned him to go ahead. "Beg pardon, Lieutenant," said the doctor, "but wouldn't it be possible to spell out what you wanted to say in full, even at the rate of four letters a time?"

"It would be possible but not very desirable," said MacCartney judiciously. "We don't know how many radar stations the Russians have down there on earth, watching every signal we make, but we can be sure they have some. And as for White Sands signaling us in this way there's that brute of a Russian sta-

tion floating up there that would pick them up too."

Keenan said, "There's one thing you want to remember too, doctor. We know how much of a jam we're in, and down there, White Sands does, too. But we don't know that the Russians know anything about it. They may not even be aware that the *Goddard* crashed. And if we don't let them find out we'll be a lot better off."

"I will continue," said MacCartney. "In the two months since we arrived here I have gathered enough to be more than medium sure that the *Goddard* crashed because of the poor physical condition of the crew that went home in her. It will be something like seven months before she is repaired sufficiently to make a flight. There was something in one of the messages about a Number Two, so I would take it that they have decided to go ahead with the second service ship."

"But she was more than a year away and work was stopped on her!" protested Long.

"That I know," said MacCartney. "I am telling you what I have learned."

Dr. Montelius raised a hand. "Is there any chance that the international situation down there has improved enough so they could borrow a service ship from the Russians?"

MacCartney glanced at Keenan, who nodded. "The chances are very poor, very poor," said the Lieutenant. "One of the messages was an order to continue building—in answer to one from the Captain here, asking if he should delay."

Keenan stood up again. "All right, men, there it is. We can't reasonably expect relief for something like seven months. Now, Grey, will you tell us the situation on supplies?"

THE chief steward spoke. "We're in pretty good shape for that amount of time. Got all the air we need and our losses in the locks when the men go out are small. As long as the solar-

power motors hold out—and I see no reason why they should fall down—it will keep right on being purified. The water supply is okay too.

"In food, we may run short on a few things. The fresh eggs are about gone now, the milk won't last another three months nor the coffee another five unless you stop using so much of it. The frozen vegetables will be gone in six months, even with economy, but we'll eat, all right."

"How about comic books?" called someone.

"You'd better read your Bible instead of such trash," said Grey and there was a laugh. Everyone knew he was a Shouting Methodist.

Keenan said, "Dr. Montelius. Is there any reason to suppose that the shortage of fresh vegetables will produce deficiency diseases—scurvy, for example?"

"Not that I know of," said the doctor. "We're adequately supplied with all types of vitamins. It won't taste as good as though they came from the natural product but there's no question about physical difficulties as a result."

"So far, so good then," said Keenan. "Now I want all of you to stop worrying and discussing things like that. We have enough real difficulties to anticipate imaginary ones. Now, Dr. Halvorsson, what's the position with regard to the Two-Fifties?"

"Not so favorable, I'm afraid," said the doctor. "The Geiger counts on the mechanics who are working outside have been running definitely high. I might almost say dangerously high. In my opinion these men should be kept in the interior of the ship, inside the compartments containing reserve air and water, which have a definite screening effect on the worst of the radiation."

"Are these men in any immediate danger?"

"None at all—in my opinion. I don't pretend to know very much about the type of radiation disease which you call the Two-Fifties. It appears to be a

compound of several different types of illness. But if kept in the inner compartments these men will not acquire dangerous dosages."

"You can't do anything to delouse them—to reduce the quantity of radiation they have taken in already?"

"Not here nor at present. You see, we all of us keep getting radiation right through the station all the time. As long as we're reasonably or even slightly protected it isn't enough to hurt but it prevents any recovery. That can only be done on earth under hospital conditions."

"It may be—" the Doctor paused and made a little gesture—"that my colleague and I will succeed in solving the difficulties before we leave here. There's nothing inherently impossible in finding the answer. We just haven't done it yet."

"Thank you, Doctor. Now, has anybody any questions?"

There was a little shuffling in the room, a few words murmured from one man to another, but nobody had ques-

tions. Keenan raised his hand for attention again.

"Now, Doctor, I want to ask you one thing more. You realize, don't you, that what you have just said about keeping the men inside amounts to a recommendation that we violate our express orders to continue the work on the extension of the station—orders which have been repeated since we were marooned here?"

Halvorsson's face became slightly pinker. "I can't help that. You asked me for an opinion and I gave it. I'm a doctor, not an expert on international politics."

"I wish we knew more about the political side of the question," said Keenan, "but this much is perfectly clear—we pass over Russia at every revolution, besides which their station has us in full view, and there's one thing we can be damned sure of. They'll have every telescope that can be spared trained on us all the time to see whether

[Turn page]



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we're going ahead with the extension work.

"The minute it stops, they'll know there's something wrong. I don't know what conditions down on earth are like just now but if, knowing the conditions out here, they order us to go ahead building, things must be fairly tight. That's the situation. Now I'm going to call for volunteers from this crew to take the chance on doing the outside work. I'll cut the hours and the progress schedule and I expect to lead any work parties myself but that work *must go on.*"

HE STOPPED. Once more there was a murmur. Grey said, "Captain, I'll volunteer to help but I'm awful clumsy with any tools except a skillet."

"I'll take you. Anybody else?"

Braggiotti, the assistant communicator, raised his hand. So did Duruy. So did a couple of others.

"Not you, Duruy. You know why and I'm not even going to explain to the rest. Howard, I won't accept you unless Dr. Halvorsson says you can stand it. Long, I won't accept you at all. This station has to have one commander who's in good health. That was what went wrong with O'Brien's crew. Etchardy, I'll take you for limited service but only for short periods."

Dr. Halvorsson spoke up. "Captain, as long as this discussion is being held publicly I'd like to make public a proposal. If the warhead were removed from one of the torpedos it seems to me that it would be easy to convert the space into a compartment that would hold several men. I think this should be done. In the event that we have really serious cases of radiation disease, the torpedo would then become an ambulance to take the affected persons back to base."

Keenan frowned. "All the torpedoes are directed against assigned targets on orders from the high command. I don't know that I'd feel justified in diverting any of them."

There was a murmur that spoke disagreement. Duruy said, "Captain, there has been a proposition similar to this up before. I don't think the idea is valid at all. In the first place the torpedoes are built for such speeds that I doubt whether anyone could stand the acceleration, even in a suit.

"In the second, even if we did succeed in tinkering with the drive of one to bring the acceleration down to bearable proportions I wouldn't care for the job of calculating a flight course and time that would bring it and its contents in safely. Those torpedoes are designed to fly on crash courses, not to land. There isn't any braking mechanism and only very limited means of control once the thing is in flight. The whole idea is fantastic."

"I don't agree—" began Halvorsson, but Keenan held up a hand. "If it will satisfy you, Doctor, I'll go into the technical possibilities of your scheme but I'm not sanguine about it. Now, has anyone else any ideas? Very well, dismissed. I'll put the new work and watch schedules on the annunciator as soon as I've worked them out. Come on, Lambert."

When they were in his cabin Keenan turned to Duruy, frowning. "What in the world was Halvorsson after with that crazy idea of his?" he said.

"I don't know. He did propose something like that just before we took off but it's so obviously out of line this time that I wonder whether he isn't the Russian agent you're looking for."

"But what would his purpose be in putting up such a scheme if he is?"

Duruy scratched his head with one finger. "That's a little hard to figure. It might be just to undermine morale—though now that I think of it, I can't see how morale was much damaged or would be. I guess the good doctor is just persistent in the pursuit of an idea. It makes him a good research worker. What about Montelius?"

"You mean you think he might be our man?"

"No, I haven't any direct suspicion of him," said Duruy slowly. "I just asked what about him."

"Nothing about him," said Keenan, "or any other member of the crew, for that matter. Lambert, I've watched every man on this station until I feel as though my eyes were popping out and I can't detect the slightest sign from a single man that he might be an agent. They've been going through with their duties like the hand-picked men they are. As for Montelius, he's been working on the theory that the mental slowup up here traces to the lack of physical effort."

"The mechanics and torpedo machinists certainly put out enough physical effort."

"I know," said Keenan, "and it makes them sleepy too. They have to have more rest. The whole thig is complicated and I'm glad I'm not a doctor. But anyway Montelius wants me to fit up a compartment in the new North Thirty section, next to the torpedo-tube bank, as an exercise room."

DURUY said, "Wait a minute. That doesn't sound too good to me. That North Thirty section is outside the reserve water and air supplies, open to radiation. And it's work under radiation conditions that brings on the Two-Fifties."

"I know but—no, Lambert, that's no more indicative than Halvorsson's proposition. Damn it, it's pretty rotten to have to be suspicious of the men you work with every day and depend on for help. To watch everything they do and consider what it might mean." The Captain sat down gloomily and Duruy turned to the door to go to his own cabin.

He almost collided with Etchardy, who came bouncing down the corridor with an expression of delight on his face.

"I've found Albert!" he almost shouted.

"That's nice," said Keenan, "but who

is Albert?"

"Albert is asteroid Number Seven-hundred and nineteen discovered by Palisa of Vienna in Nineteen-eleven. And he's damned important right at the present moment."

"All right. Why?"

"I'll explain. Albert was always pretty hot stuff with a highly eccentric orbit that brought him pretty close to the earth at one end of it and out near Jupiter's orbit at the other. Some time in the Nineten-thirties he got lost—that is, he didn't make his approach to earth on schedule. The astronomers figured that he got too close to Jupiter and Jupiter bullied him into a new orbit, but he was so small it was hardly worth running a search for him.

"Now look—when Blassingame was astronomer on this project he had to work out a course for Albert, because even though he's pretty small as a planet, he's plenty big enough to put a crimp in Project Excelsior. Blassingame didn't find him and neither did Newman because he came down with the Two-Fifties. But I've found him and in a place that makes him just about the most important chunk of real estate in existence."

Etchardy paused, obviously enjoying the suspense he was producing.

"Go on," said Keenan, "give us the news."

Etchardy said, "Albert is on a direct collision course with the Russian station."

"What!" said Keenan, jumping up so rapidly that he went two feet off the floor and banged his head against the bulkhead. "Can they do anything about it?"

Duruy said, "I'm sure they can't. I was at a conference of the brass just before takeoff and Colonel le Maistre was positive they didn't have any means of varying their orbit the way we have."

"It ought to damage them some," said Keenan.

"It will wipe them out," said Etchardy. "Albert is moving a little faster

than a torpedo. It's an incredible coincidence, a million-to-one chance, but the Russkis have just had the luck to hit that jackpot. I don't care how well they're protected—they can't stand Albert."

"Wonder what they'll do?" said Keenan. "Abandon ship probably as soon as they can get their service ship up. Hmm, I don't see any reason for not telling the rest of the crew about this. It will cheer them up some. But I think we'll keep the news within the station. If we notify base the Russians may be able to read our code and it might give them a tipoff they don't have now. Is Albert visible from the earth where he is now?"

"If you look for him especially," said Etchardy. "There's no reason one should, though, except for the nasty suspicion Blassingame had. He's still so far away that it will take something like six weeks before the blowup. But I'm pretty sure of my facts."

Duruy gave a wry smile. "Nice picture, isn't it?" he said. "One station about to die of the Two-Fifties and the other about to blow up."

VIII

DURUY said, "Who is it?"

"Halvorsson."

"Sorry, doctor, can't let you in. Regulations."

"I'd like to see you about a rather private matter when you are off duty," came the voice through the door.

"Okay. Meet you in the main cabin."

"I said it was private."

Duruy didn't answer, pretending not to have heard and reflecting that if he wanted to keep his reputation for sanity, he'd have to get Keenan to relax the rule that he mustn't be alone with any other member of the crew. It was about as humiliating as any experience he remembered.

Nevertheless the doctor was waiting at one of the tables in the main cabin when he came in, sipping coffee from

a plastic ball. Halvorsson moved over to make room for him, glanced at the two mechanics who were playing acey-deucey in the opposite corner, tossing the dice in a box so they wouldn't fly clear across the compartment.

He said in a low voice, "This is a rather delicate matter. I'm approaching you on it because you seem more—intimate with the Captain than anyone else."

"I think you overestimate but go ahead."

"It's this matter of the construction. I've appealed to him in every way I know to stop it but he won't listen to me."

"Well, it's rough but this is something close to war and that's always rough," said Duruy. "The individual can't be considered."

"I am fully aware of that as a philosophical point," said Halvorsson. "But in the last three weeks things have reached so dangerous a stage that it isn't merely the individuals who are concerned but the life of the station itself."

"What do you mean?"

"Braggiotti is showing definite lesions and Jabotsky is dragging his feet. If the relief ship takes as long as they think I may not be able to save either of them."

"They're off construction duty now, aren't they?"

"Yes but at the rate things are going this crew will be in as bad shape as O'Brien's in another three months. And it will be another three months beyond that before we can hope for any relief. You see what I'm driving at."

"I do," said Duruy. "Haven't you presented this to Keenan?"

"This morning. He told me to mind my own business. You see, the worst of it is that he has had considerable doses of radiation himself and Dr. Montelius concurs with me in thinking that it, together with the weightlessness, may have affected his mind. Not in a dangerous sense, you understand, but by con-

firming his obstinate determination to carry out his orders at all costs."

Duruy considered. It certainly did cut down one's thinking powers—he himself found it harder to make the necessary calculations than it was after his arrival. "But what can I do about it?" he said at last.

"I thought a personal appeal from you, on an unofficial basis, might carry more weight."

"I don't think it would," said Duruy, thinking that the reason for Keenan's intimacy was quite different from what the doctor imagined. The skipper had certainly been in a foul mood lately, he had to admit.

"Moreover," Halvorsson went on, "it's simply mad to press this construction project, now that the Russian station is so close to being destroyed by that asteroid. We'll have the only station there is and the only possibility of delivering atomic bombs that will hit their targets."

"I think Keenan knows that."

"Please!" The doctor laid a hand on his arm. "The only alternative is to call the rest of the crew together and demand some action that would result in the deposition of the Captain. I am responsible for the lives of the men on this station."

Duruy looked at him sharply. If Halvorsson were the Russian agent this might be the opening wedge to something else. He got up, saying, "Well, I'll try it but I won't guarantee the results. The Captain is perfectly capable of telling me to go to hell too."

As he turned to leave the cabin, the annunciator bell clanged. "Mr. Duruy! Mr. Duruy!" the machine bawled. "Report at once to the observatory."

Duruy hurried out to where the corridor branched, seized the guide rail, pulled himself into position with his feet in the place where his right elbow had been and hurried along the new "floor." The hatch leading to the bubble-like dome of the observatory was open overhead. He reached up and pulled himself

lightly in to find Keenan, MacCartney and Etchardy staring out at the brilliant points of fire that made up the Milky Way.

The Captain said, "You understand Portuguese, don't you?"

"The Brazilian version of it. Why?"

"What does this say?" He shoved a piece of paper forward onto the lectern where a small light burned. Duruy felt the blood rush tumultuously to his face as he read:

Tem a estacao Senhor Duruy

It was all he could do to find voice to say, "It's a question and it asks whether Mr. Duruy is at the station."

Keenan's voice had an edge of coldness. "Tell him, Mac."

MACCARTNEY indicated the telescope. "If you'll look through there you'll see the Russian station—that black duodecahedron that shuts out some of the stars. About a week ago, when Etchardy was watching it, he noticed there were flashing lights on the exterior. He thought they might be signals and called me in.

"We kept watching and they were signals all right, in International Morse, using English, and directed to us. The Russians had discovered that they were about to be wiped out by an asteroid and wanted us to come take them off."

Keenan broke in. "I had Mac rig some big searchlights of our own and told them to go chase themselves."

Duruy said, "Why?"

"Isn't it pretty obvious? If they really wanted to be taken off they could signal for their service ship or one of them—they may have more. Not at all—they wanted to get us up there where we'd be involved in the smash. I figured out the time it would take to change orbit to match theirs and it would be just about right. Or else they were going to get us in so close they could let us have it with a torpedo. Now comes this."

An unreasonable hope, accompanied by a black fear, began to surge in Duruy.

He said, "Well, they know I'm out here anyway. I don't suppose it would do any harm to answer and find out what they want."

MacCartney glanced at Keenan, who nodded. "What shall I send?" asked the communicator.

"Just *sim*."

MacCartney reached over and touched a key. The interior of the observatory was momentarily lit by a series of pulsating flashes as the message tapped out. Etchardy applied his eye to the telescope. "They got it all right. Here comes the answer."

MacCartney switched places with him and began reading off the letters as they came over. "I-n-f-o-r-m-a-l-o . . ."

Duruy copied the message down and then read, "Tell him that the girl he met at the Maricá wedding asks his help."

The others were looking at him queerly. "What does it mean?" said Keenan.

"I met a girl at a party in Brazil and—and got to like her a good deal. She turned out to be a Russian."

"And now they claim she's out there. I'm going to get to the bottom of this. Ask her to prove it's the same one," said Keenan.

"She mentioned the Maricá wedding, where we met," said Duruy.

"No proof. Anyone could have learned of that from her. Ask her for something that will show it's the same one." Keenan's voice was harsh.

Duruy frowned, concentrated and put the idea into Portuguese. No one spoke—under the double glass dome it was chilly in the observatory in spite of the heaters busily transmitting warmth from the sunward side of Project Excelsior. MacCartney slowly read off the letters of the reply.

"What does it say?" demanded Keenan.

Duruy felt as though he were choking. "It says, 'Tell him she meant every thing she said the last night in Brazil.'"

"All right, what does it mean?" de-

manded the Captain, inexorably.

"She said that she loved me." Duruy's hands gripped the lectern, and from the corner of his eye, he could see Etchardy looking at him with something like pity.

"Then you're satisfied she's up there? Ask why they can't get help from their own service ship."

Once more there was the thick silence as the message flashed out and they waited for the reply. MacCartney didn't understand the structure of the Portuguese words, and the letters ran together.

Duruy translated "It says that they didn't find out about the approach of the asteroid until three days ago, and their service ship can't be ready to take off for eleven days more when it will be too late."

Keenan snorted. "And those bastards think they have the knowhow to keep up with us! Etchardy had it spotted five weeks ago. All right, put this into your damned spiggotty language—if we approach, our station will be caught in the crash too and what good will that do anybody?"

Duruy said, "Captain."

"Well, what is it?"

"There's another way of helping them. As I understand it from Etchardy the mass of that asteroid is not so enormous. With the improved atomic warheads two or three of our torpedoes would blow it into dust. I'm sure I could calculate orbits to hit it."

"You are, are you? All right then, send this message—send it in English, Mac— 'American station advises Russian station to use the torpedoes intended for American cities in protecting itself from asteroid.'"

ONCE more there was the flicker of light as the message was transmitted. Duruy wondered what part of the earth they were over now and whether the observers at their telescopes down there were picking up this interchange of messages. There would be a com-

motion at White Sands and even in the chaste corridors of the Pentagon.

"They're sending again," said MacCartney. "Here it comes, in English this time. 'We—have—expended—all—four—torpedoes—without—hitting—object.'"

"So they want us to use ours," said Keenan. "*Ha!* I wonder if they think anyone believes they had only four torpedoes. Typical Russki piece of business—the big lie. Tell them the answer is no."

Etchardy drew a deep breath. Duruy said, "Captain, it could be they only did have four. At the staff conference, Colonel le Maistre developed the fact that their station was having a lot of trouble with weights. And they aren't so good with the calculator either, we know that. They could have missed."

Keenan shook his head. "This station is part of the defense system of the Western Allies and I cannot dissipate its resources as the result of a request from the Russians, who have always lied to us and failed to keep their engagements with us. This is nothing more or less than the old proposition to disarm both stations, which was rejected long ago on earth. The answer is still no."

Duruy put out a hand and cried desperately, "But she took a chance on her own life to save me! You can't do this. It's a matter—" He felt tears struggling at the corners of his eyes and gulped to hold them back.

Keenan merely looked at him. "Etch-

ardy," he said, "take over the watch in calculation. Duruy, I want you to come with me."

He stepped to the hatch and leaped down, leading the way to his own cabin and locking the door.

"Lambert," he said, "I like you personally. I think you've done the right kind of work out here. But I wonder if you're aware of exactly what your position is."

"What do you mean?"

Keenan elevated a hand and began to tick points off on his fingers. "You were mixed up with this woman, this Soviet spy, in South America. You've just admitted that your relations with her were close. You tried to write her a letter after briefing and before coming aboard this station. You are trying to persuade me to take a step which is equivalent to the Russian proposition for disarming this station.

"Has it occurred to you that if we start looking for a Russian agent aboard the evidence fits you better than anyone else? Has it occurred to you that this might be one of the reasons for keeping you close to me all the time and not letting you be alone with other members of the crew?"

Duruy stared at him for a moment without a word to say. What was the use of protesting? It was true, that was the evidence, only . . . Then a sudden flare of anger enveloped him as he thought of the conversation with Dr. Halvorsson.

[Turn page]

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"Look here," he said, "if you want to put a special explanation on what people do you can make out a case against almost anyone. Even yourself—you've got half the crew down with radiation disease now and by time the relief ship gets here we may all be dead."

Keenan ran a tongue around his lips. "That's my business as commander of this station. Go to your cabin and think over what I've said."

Duruy's feet dragged him to the door, and he sat down heavily in his own compartment. Montelius was right. Keenan was getting beyond reason. But that wouldn't be much help to Tina, out there in that steel dodecahedron. He supposed he would have to think of her as Tatiana, now, but that didn't make much difference, either. The menacing bulk of Albert was rushing toward her like fate, there would be one brief flaring crash out there under the stars and then . . .

Damn the Russians! Why were they so incompetent with their calculator? It would be so easy to prevent. The orbit would have to be a spiral, of course. They'd probably missed out by calculating a direct-line approach to the asteroid.

He began to go over in his mind the steps he would take in feeding the problem to the machine. At that distance it would be simple—nowhere near as difficult as setting up the calculation for a problem that involved an approach through atmosphere.

Then his mind leaped back to the other problem of the Russian agent aboard—if there were one. If he could find out who it was even Keenan might be convinced. The trouble was that the triple problems of the agent, weightlessness and the lack of the service ship were driving the Captain half mad. If he could somehow be relieved of one of them . . .

But who could it be? Not Long, not Etchardy—Halvorsson, Montelius, one of the mechanics?"

With his mind whirling round these problems Duruy fell into a kind of uneasy doze in his chair.

IX

LONG awakened him to accompany him to the main cabin for the meal before going on watch. Still occupied with his problem Duruy munched away almost mechanically, thinking of what Halvorsson had said—that the only alternative might be to call the crew together and depose the Captain. That would solve Halvorsson's difficulty and possibly his as well—if it were done soon enough so that he could be allowed to fire the torpedoes at Albert.

But would any attempt to get rid of Keenan work? Long, MacCartney, the reserve communicator, were officers, most of the crew high-ranking petty officers, long bred in the habit of obedience to authority. Halvorsson was a civilian. So was he. It would take an extraordinarily convincing speaker to line up such service men against the Captain, and Duruy didn't think he filled the role.

Neither did Halvorsson, for that matter, with his brusque manner and insistence on being right. And if the crew were called together for such a purpose Keenan had a means of deadly counterattack. He would, as he had in the cabin last night, accuse Duruy of being a Russian agent, and present the evidence. The fact that Duruy was part of a movement to depose him would be all the more convincing in such a tangled case.

And even if the Captain were deposed, what then? What view would General Gebhard take of it? Mutiny! And the new commander, whoever he was, might be no more willing to expend torpedoes to save the Russian station. Still Tina—Tatiana had risked her own life to save him. He must take the chance.

As he thought of her Lambert Duruy suddenly realized what he was eating and where he had eaten it before.

"*This is not really a Brazilian recipe at all,*" she had said. "*I learned it in Paris from an old Hungarian woman there.*" Hungary was a Soviet country—and Tina had been a Soviet agent.

Long was staring at him from across the table. "Just wake up?" he said.

"Yes," said Duruy, "I think I did. Who cooked this mess anyway?"

"Grandissi, of course. What's the matter with it? I think he's pretty hot with a skillet."

"Hotter than a rocket blast," said Duruy, grimly. "In fact, so hot that somebody's likely to get burned. Come with me for a minute. I want you to hear what's said."

The puzzled-looking Long followed him to the window which gave on the galley. "Grandissi!" called Duruy. "What do you call this stuff you served us?"

The small man looked up. "You liked it? It is called veal Zingara."

"I see. Is it an Italian dish? Where did you learn to cook it?"

"No, it is not Italian. It is—is—I don't remember. I think I got it from a cookbook sometime. Don't remember." His face suddenly went sullen and he turned his back.

Duruy pulled Long out into the corridor. "Come on to the skipper's cabin. This is important."

"What's it all about?"

"Tell you when we get there. He'll be just getting ready to go on watch."

Keenan looked ill as he opened the door. The strain was telling on him badly, Duruy realized, with a sudden rush of sympathy. He said, "Captain, I think I have identified your Russian agent."

"Russian agent?" said Long, looking from one to the other, and the Captain. "Whom do you accuse?"

"Grandissi, the torpedo machinist."

"What grounds have you for accusing him?"

"When I knew this girl, the one in the Russian station, she cooked a dinner for me one night. It was a dish called

veal Zingara, which she said she had learned from a Hungarian woman. Grandissi has just served us with veal Zingara."

Keenan threw back his head and gave a hard laugh. "And you expect me to call him up on the strength of that?"

"No—it only gives us a lead for where to look. In addition, just before the takeoff, I heard him quoting Marxist doctrine to one of the mechanics."

"Lots of people can quote Marx. In fact I can do it myself."

Duruy said, "I realize this isn't conclusive. As Colonel le Maistre once said nothing ever is when you're dealing with spies. But don't you remember, when we were talking about this on the first day aboard, we were trying to figure out what an agent here could possibly accomplish? Well, think. There's just one man on the station, aside from the calculator, who could make the torpedoes useless. That's the torpedo machinist. He could change the controls, the feed, the wing angle, any one of half a dozen things, so they wouldn't fly true."

"That's true," said Keenan, rubbing his chin, "but—"

"May I suggest how we can find out? Let's have one of the mechanics we're sure of—say Beckwith or Jabotsky—check the adjustments on some of the older torpedoes that Grandissi hasn't worked on against some of those he has. Say Number Two against Number Twenty-nine, or Four against Thirty. A random choice. No, a couple of them. He may have been after some of the older ones too. Then if we find anything wrong we can call him in and question him, or have Dr. Montelius try hypnotism or a shot of scopolamine."

KEENAN's brows knitted. Then he lifted his head. "You're right. I can't afford to take the chance of not investigating this to the hilt. Long, you're coming off watch and I'm just going on. Get Beckwith and have him make an examination of those torpedoes

under your personal supervision. If you find anything wrong seal up Grandissi's machine-shop, grab him quick and hold him in the main cabin. Better go armed." He flashed a glance at Duruy. "But what I said before still goes. I'm taking you up to calculation now."

Inside the calculation room Etchardy greeted Duruy with a silent handclasp that bespoke sympathy and belief but neither of them said anything. The order sheet said that Number Thirty-four should be calculated to fall on Sverdlovsk but after a few minutes with the problem Duruy shoved it aside and began to work out the spiral orbit that would carry the torpedo to Albert.

What the hell! If the station and its inhabitants survived that long, he'd have an extra three months to do all the calculating necessary for earth landings, and if there were any perturbations in Project Excelsior's movement, there would have to be some recalculation anyway.

The spiral orbit problem was a nasty one. The machine twice rejected the data he fed it as leading to *No solution* and he became so absorbed in the task that he did not notice the passage of time until the annunciator bell clanged and the machine said, "Mr. Duruy—to the main cabin."

The place was crowded when he arrived. Keenan was seated behind the table at the end of the room, while before him stood Long and Beckwith, gripping Grandissi by the arms.

"Are all the officers and civilians here now?" said the Captain glancing around.

"All but MacCartney. He's on watch, covering the Russian station," said someone and Keenan leaned forward.

"I constitute this a court of trial," he said, formally. "Dr. Montelius, will you record the proceedings? Now, Beckwith, tell us what you found."

Almost as though he were reciting, the mechanic said, "According to orders and under the direction of Captain Long, I inspected torpedo Number Seven

and torpedo Number Twenty-five. I found that the main connecting rod wing attachments in Twenty-five were cut nearly through and the cut filled with magnalium alloy. Upon further inspection I found this was true also in numbers Twenty-seven, Twenty-eight and Twenty-nine."

"Did you examine any others?"

"No, sir. Captain Long said this was sufficient."

"What would the effect be if the torpedo was fired?"

Beckwith hesitated a minute. "It would behave all right at the start, I think, sir. But if the torpedo struck air or anything like that I think the wings would rip off."

Keenan said, "Mr. Duruy, what would happen if a torpedo's wings ripped off on entering the atmosphere?"

Duruy said, "I haven't the least idea. The heat generated by its passage through the air might turn it into a meteor. Or it might set off the trigger mechanism and give it a high air burst. Or it might be carried deep underground and explode there. It certainly wouldn't strike anywhere near the place it was calculated for."

"In other words those torpedoes were thoroughly sabotaged. Beckwith, how long would it take to make them good?"

"Gee, Captain, I don't know. I ain't no torpedo machinist, I'm just a mechanic. But I don't think we got any more stock like those main connecting rod wing attachments aboard and if we have to machine them it would take a hell of a time."

Keenan said, "Grandissi, you were in charge of the assembly of those torpedoes. What have you got to say about how they got damaged?"

The man's face was sullen. "Nothing."

"Who else could have done it?"

Grandissi did not answer.

Keenan looked around. "Does any member of this court believe that anyone but Grandissi could have been guilty?"

The man's composure suddenly broke. "I demand my rights!" he screamed, twisting in the grip of his captors. "This is a kangaroo court! I have a right to a fair trial. You haven't any evidence against me!"

"You have no rights," said Keenan, sternly. "I am the captain of this station and regulations say my authority is absolute in cases of sabotage or attempted sabotage. I don't even need to call this court, except to inform them of what's going on. Now do you want to talk?"

"Not to a kangaroo court."

"We'll see about that. Dr. Montelius, will you administer a little scopolamine to this man?"

THE doctor picked up a small black case and worked toward Grandissi among the tables. The man's head turned and his eyes rolled up till the whites were almost visible; then something else snapped in him, and he yelled; "All right, you imperialist rats, I did it! I did it and I'm glad of it! A lot of good it will do you to know it—you'll all be dead of the Two-Fifties before you can do anything about it!"

There was a stir and murmur in the narrow cabin. Keenan said; "There's one thing we can do about it and right away. I condemn you to be ejected from Number Three airlock."

A series of relays suddenly clicked home in Duruy's brain and he remembered Colonel le Maistre tweaking his long mustache and Dr. Mahovitzov's pleased expression over the statement that the Western Allies had no cure for the Two-Fifties. He called out:

"Pardon me, Captain, but may I ask this man a question?"

Keenan's voice was noticeably more friendly than it had been before. "If you think you can get anything useful out of him."

"Just one question, and it will be very much to his interest to answer. Grandissi, do the Russians have a cure for the Two-Fifties?"

"None of your damned business, imperialist filth."

Duruy threw up his hands. "You're writing your own sentence, Grandissi," he said and turned to Keenan again. "I think they do. In fact I'm almost sure they do and so is Colonel le Maistre."

"Look, Captain, we have those torpedoes that won't hit anything on earth but out here in space, where there's no air pressure, they're perfectly good. The wings don't even matter. I can vector them in on Albert and save the Russian station. I suggest we signal them and offer to do it if they will cure our cases of the Two-Fifties for us."

Keenan's face became hard again. "I have already answered that question—no."

Dr. Halvorsson spoke up; "Captain, this station will be entirely inoperative in another three months as a result of radiation disease. I think that anything which promises to save us from it is justified."

Montelius nodded his head. "So do I."

Keenan said; "Long, what's your opinion on this?"

"I think they're right, sir. You can look at it this way—there isn't much use going on with the construction program when the torpedoes for it are disabled. And even if our lives don't matter the replacement crew that came out here when they got the *Goddard* repaired or a new one built would find a stock of torpedoes that didn't work right and they wouldn't even know they were sour. But if they can fix up the Two-Fifties for us we can wait as long as necessary for relief."

Keenan said, "How do we know they can do it? I wouldn't believe this animal"—he gestured toward Grandissi—"even if he had the Bible to prove what he said and the rest of them can tell lies just as fast. Etchardy, do you agree with the others?"

The navigator nodded. "What can they take from us if we make one contact? It's not a general pacification but

a treaty between us and the Russian station to save both. And I think there is good reason to believe that they have at least a prevention for the Two-Fifties and, if that, probably a cure also. Dr. Halvorsson, who of all this crew shows the least effect of radiation?"

The doctor thought a moment, then started. "Grandissi!"

"Exactly," said Etchbary. "And he has been working on the torpedo tubes, which are outside the air and water storage area. Oh, he has been working at them hard to make all those cuts in the wings. Before the takeoff they must have given him an injection or something. Isn't that true, Grandissi?"

The man's face had gone sullen again. "I say nothing," he said.

"You don't have to." Keenan looked around the room. "The vote seems to be unanimous. I don't agree but I'll concede the point. Long and Beckwith, take care of that man. Duruy, will you set up the necessary calculations while I go up to the observatory and see if I can get into communication with those people?"

X

DURUY sat at the calculating table, with the intercom headset clamped over his ears. There was the gentlest of pressures at the small of his back as Project Excelsior swung slowly through the arc that would bring her torpedo tubes to bear on Albert.

The data sheets were before him. From up in the dome of the observatory Etchardy's voice carried a string of figures to his ears. "Azimuth two-zero-point-one-six—line zero-zero-point-seven-one—elevation no change—azimuth two-one-point-zero-two . . ."

His fingers played over the keys. The skin felt tight across his face and his head ached with the effect of twelve uninterrupted hours of concentrated labor at the big board. He spoke into the mike.

"Observatory, stand by to report trail of torpedo. Your points are Zeta Pisces, Beta Pegasus. . . Torpedo room, stand by—thirty seconds—twenty-five—twenty-five—ten seconds—five—four—three—two—one. . . Fire!"

The whole station rocked to the shock of the discharge. Etchardy's voice came down the wire. "Running two seconds low, running two seconds low." Duruy punched two keys, read off the result, then tripped the control that would send an automatic radio signal to the speeding torpedo, directing it to fire a three-second blast from the lower ejection tube and lift its nose into the proper spiral for the target.

"On course, on course," reported Etchardy.

Keenan's voice cut into the circuit. "Ready with Twenty-eight."

Duruy glanced at his data sheets. "No, Captain, don't dare risk that one without a new approach. The only good course will carry it too close to the Russian station. Take Twenty-five or Twenty-nine."

There was an inarticulate gurg on the line, then after a moment's wait, "Ready with Twenty-nine."

"Observatory, report bearings."

Etchardy's voice began droning again: "Azimuth two-two-point-three-nine, line . . ."

"Fire Twenty-nine!"

Once more the station quivered in response to the discharge and a mechanical pencil leaped from the console where Duruy had placed it, drifting toward the deck with the deliberation of a scrap of paper. He glanced over the data sheets again, and as Keenan's voice assured him that the torpedo destined for the town of Uralskoi was ready for firing, set himself to work out the effect of the minor changes in the station's position caused by the firing of the two torpedoes.

"Fire Twenty-five!"

This one developed a yaw and had to be corrected heavily. Duruy applied the necessary factors, leaned back and said,

"I think that's all we can do now, Captain. Permission to visit observatory and see results."

"Permission granted."

Keenan himself and MacCartney were already under the dome when Duruy arrived. "How are they running?" he asked.

The atmosphere was notably different from the last time the four had been there together. "Lost them," said Etchardy. "All three have stopped firing. But I'm watching Albert for results. Duruy, if you get direct hits, I'll swear you're the greatest calculator in history. Albert's only three miles in diameter."

"I haven't too much confidence in Twenty-nine," said Duruy. "That was a very tricky orbit. But if we get one hit out of the first two, a grazer will do for the third one. It will arrive while the atomic explosion's still going on and that ought to trigger it, hadn't it, Captain?"

"Yes," said Keenan, and then checked. He turned to Etchardy. "Where are we with relation to the earth?"

"Just about over the Sahara. We won't pass White Sands again until the next revolution."

The Captain said, "Mac, does that code book of yours provide any way of saying that the action we have taken is unavoidable? There'll be some telescopes in North Africa where they're sure to pick up the fact that we've fired torpedoes and report it."

MacCartney said, "I'll try." He laughed. "I just wonder what the Russians down there are thinking about now after seeing us let loose those torpedoes. I don't think they're going to like the idea very well."

"They ought to know we couldn't hit any of their cities from this angle," said Duruy, "even with a spiral. Anyway they'll find out soon enough."

"What worries me more is what they'll say about this at White Sands. If they put out a message disapproving, I'm going to resign my commission."

Keenan sighed, and in the dim light of the observatory, they could see his face was haggard.

MacCartney began; "Captain—"

"Sssh," said Duruy, watching the clock. "We ought to know in less than a minute now."

ETCHARDY snapped the sun-shield into position over the telescope's eye-piece and gazed into it intently. The others followed the pointing finger of the tube. Suddenly the navigator gave a little cry; the three men in the observatory with him saw a little point of light, redder than Mars when viewed from the earth, that grew and spread and turned to the white heat of the center of a furnace of intolerable brilliance till it seemed to fill a whole sector of the heavens, then as abruptly diminished.

MacCartney slapped Duruy on the back. "You did it!" he shouted.

"With Number Twenty-seven, anyway," said Duruy. "I hope that will be enough by itself. It ought to knock whatever is left of Albert out of his course but I don't know."

"The Russian station is showing lights," said Etchardy. "Want to take over and read their message?"

"Okay," said MacCartney. "Here it is—Russian - station - thanks - you - hopes - more - than - one - torpedo - sent - as object - still - approaches."

Keenan said, "Duruy, is there time to fire another shot if the other two miss?"

"Just about," said Duruy, "counting the time necessary to swing our station. But not all the new tubes may bear right."

"I can't sanction any use of the first twenty-four," said Keenan. "They haven't been sabotaged and are still useful against earthly targets."

Duruy looked at the clock. "We may have to. I think Twenty-nine's going to be a miss."

"I still can't sanction the first twenty-four," persisted the Captain.

"Let's hope Twenty-five does it,

then," said Duruy, and all four were silent, watching the heavens. There was a loud clicking from the power-driven clock. Duruy could not keep his eyes away from it though the second hand seemed barely to crawl across its surface. Keenan drew a deep breath. Etchardy was watching with fascinated attention.

"Now—" began Duruy but even as he spoke the great flare burst out again, wider and redder than before.

"Albert's gone!" cried Etchardy as the flame died. "There isn't enough of him to pick up in the telescope."

Keenan turned to the three. "I think they'll probably have a slightly radioactive meteor shower in the Sahara in a couple of days," he said. "All right, Mac, put a general announcement of this on the annunciator system. Duruy, do you want to come up to Control with me and work out the orbit change for contacting the Russian station?"

XI

FROM outside a series of metallic bumps and scrapings rang through Project Excelsior as the two stations pursued their way through space, barely in physical contact. Inside, Captain Keenan held up a hand and promptly bumped against one of the tables of the main cabin, which were hanging from the ceiling now that the angle of their approach and the Russian's greater mass had given the American station just enough gravity in that direction to turn the old ceiling into a floor.

"Now I want you all to understand," said the Captain, "that this is nothing but a truce between the two stations. The Russians have kept their part of the agreement loyally thus far but I'm convinced that's because we have enough torpedoes to blow them all to bits.

"I think they'll keep their agreement not to let their service ship come up until we have resumed a normal orbit, but only for the same reason. They're still as suspicious as ever and not taking

any chances. They haven't allowed any of our crew aboard their station and the doctor they have sent over won't even allow Dr. Halvorsson or Dr. Montelius to be present when he administers the injections.

"However, as you all know, the injections have definitely worked. All our cases have recovered during the past two weeks and they show no signs of relapse. Am I not correct, Doctor? Good—now I want to say that the conduct of this crew has been very good during the period of contact with the Russian station and I want it to remain that way.

"The temporary regulations made at the time of contact are still in force, even though we're going to cast off and start rockets tomorrow, and some of you might like to make a little contact or obtain a souvenir. No one to use suits for any purpose except Captain Long and the two men who meet the Russian doctor in the airlock. All corridors except that leading from the airlock to this cabin to remain closed while he is aboard. No signaling. That's all. All right, Duruy, you wanted to see me?"

He led the way along the corridor to his own cabin and squatted on the floor, since the furniture, like that in the main compartment, was now attached to the ceiling. "I'll be damned glad when we do break free," he said. "I'm getting rather tired of cold food, even if they have managed to supply us with hot coffee from that hot plate Grey rigged. What is it, Lambert?"

Duruy said, "I want an exception to those temporary regulations, Captain."

Keenan frowned. "What kind?"

"I want to get in touch with Miss Vsevolod."

"It can't be done. Are you insane? Not only did you consort with this Russian agent on earth but now you want to meet her out here in space, where both of us are doing all we can to keep whatever secrets we have."

"I rather thought you'd feel that way

about it. But may I point out that if I hadn't been in—touch with her the Russians in that station would all be dead by now and most of your crew would be facing hopeless cases of the Two-Fifties."

The intercom rang. "Keenan," said the Captain.

"This is Etchardy. The fragments of Albert are spreading out very near our old orbit. I am pretty well satisfied they're going to form a ring round the earth, like the ones around Saturn."

"Is it important?"

"No, only decorative—unless one of the service ships runs into it."

"I'll take it up later. Busy now." Keenan cut the intercom and faced Duruy again. "I'm aware that both stations have benefited by the contact. But that doesn't make a repetition of it desirable or less dangerous. What do you expect to do—stand out in space and hold hands through your suits?"

"Captain," said Duruy, "have you ever been in love?"

"Several times," said Keenan, promptly. "But it doesn't make any difference. This is space."

"But can't I send her a message?"

"When we're back in our orbit, by means of the lights, maybe. Not now. I'll consider it—"

THE intercom called his attention again. "Keenan," he said.

"This is Long. Russian doctor coming aboard to give Mr. Duruy his preventive shot."

"Very well." The Captain stood up. "Come along. As soon as this is over we can cast loose and get some decent food. As I said before, when we're back in our normal orbit, I'll consider a message through lights."

"You can date her up for a meeting on earth if you want to take the chance. But not now. Since we've been following the Russian orbit we haven't received any messages from White Sands and the last ones we got weren't encouraging."

He had been moving along the corridor toward the main cabin as he talked. As he opened the door, the intercom sounded again. "Is Captain Keenan in the main cabin?" came Long's voice.

"Speaking."

"Russian doctor is a woman."

Duruy's heart began to beat wildly. Keenan turned and gave him a long stern look. "Very well," he said into the machine. "Bring her along. I'm here."

He looked at Duruy again. "If that is . . ." he began.

Duruy arranged himself against the bulkhead. There were steps outside, the door opened and through it, preceded by Long, came Tina Casteloso.

She gave a little cry and launched herself across the room into Duruy's arms. Long blew his nose, the men with him closed the door behind them.

Keenan said, "Madam, didn't you come here to give Mr. Duruy a treatment?"

She turned out of the circle of Duruy's arms and shook her head. "No. I am coming here for to stay."

"I don't believe that my orders permit—"

The insistent intercom called again. "Captain Keenan, this is MacCartney. Russian station is signaling."

"Very well. Repeat the message to me here. I cannot leave at present."

MacCartney's voice came metallically from the device. "Message. Russian - station - demands - return - of - Soviet - citizen - Vsevolod - wanted - for trial - on - treason - charges."

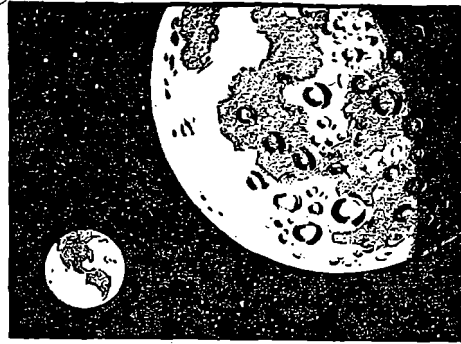
Keenan took one look at the pair, now again fiercely clutched in each other's arms. Duruy said; "Tell him you claim the right of asylum."

"I claim asylum," said Tina.

Keenan gave a lopsided grin. "All right, you win. MacCartney!"

"Send as follows: Demand refused. Person in question is now acquiring American citizenship by marriage." He turned toward the pair. "I am the captain of a ship. I believe that I am permitted to perform the ceremony." • • •

OUR INHABITED UNIVERSE



Part III: Sister of Terra.

By **JAMES BLISH**

IT IS difficult to tell a science-fiction fan something he doesn't know about our Moon. As befits the nearest celestial body of any size, the Moon has been visited more often in stories than has any other world, and described therein, usually, quite accurately.

Most everyone knows, for instance, that the Moon is mountainous; that fact can be confirmed with ordinary field-glasses. No instrument at all is needed to see that it always keeps the same hemisphere turned toward the Earth, and that its "days," as a result, last about a month. And any book on popular astronomy will tell you that the Moon is 2,160 miles in diameter, that it is about a quarter of a million miles away from us, and that its surface gravity is one-sixth that of the Earth.

It is also pretty widely known now that, astronomically speaking, our "moon" is not a true satellite. It can't be; it's too darned big. No other satellite in the solar system is anything like

a quarter of the size of its primary. As a result, the Moon does not revolve around the Earth, not exactly; instead, both the Earth and the Moon revolve around a common center, which, while it is below the surface of the Earth, is not at the center of the Earth. Earth and Moon, then, are sister planets.

Most important of all for our purposes, however, is the fact that the Moon is airless and waterless; and that the temperature on the surface ranges from 243° (F.) at midnight to 214° at noon. (During an eclipse of the Moon, the surface temperature toboggans down 260° in less than an hour.). Obviously, a lifeless planet—even science-fiction writers gave it up reluctantly long ago.

But is it?

Colors Change on Moon

Ever since telescopic observation began, respectable observers have reported seeing changes on the surface of the Moon, mostly changes of color. You can

Does Vegetable Life Exist on the Moon?

find a sizable catalogue of such observations, both trustworthy and dubious, in the works of Charles Fort (who, characteristically, used them to "prove" that astronomers seldom observe anything.)

Astronomers still differ as to what these reported changes mean, but at least one expert, W. H. Haas, says that they might be due to vegetation. If Haas is right in this assumption, the Moon, always referred to as a "dead planet," is a lot more alive than either Mercury or Venus is likely to be.

How could it be possible for vegetation to survive and grow under lunar conditions? To understand that, we'd best review some special aspects of the Moon which aren't true for Venus and Mercury.

65,000 Environments

The Moon, actually, is not a single environment. It's 65,000 environments, give or take two or three thousand.

The great plains and mountain ranges of the Moon on "our" side alone are broken and pitted by more than 33,000 craters, which are usually attributed to meteor-impacts. These craters vary greatly in diameter, height of ringwall, and depth of cup; some are enormous, flat-bottomed "walled plains," others are tiny but deep pockmarks not more than a hundred feet across.

Long and close observation of the Moon by hundreds of different astronomers has shown us that the conditions which exist inside Crater A may be quite unlike those which exist inside Crater B. For the most part, of course, the craters are very like each other; but there are plenty of notable exceptions.

And if the Moon still retains any trace of vulcanism—that is, volcanic activity, or just internal heat—the craters would provide wonderful containers for the overnight collection of volcanic gases. Such gases would be driven off into space by the heat of the long day, rather than building up to overflow the ringwalls and flowing down over the *Mare*; but during

the long night, at least, some of the craters may have thin, transitory atmospheres of their own.

How big is that *if*? According to Fred L. Whipple of the Harvard College Observatory, there can be little doubt that the Moon was once the home of many extremely active volcanoes. Whipple, as a matter of fact, holds that many of the craters really were volcanoes at one time, though he agrees that meteor bombardment also played a part in crater formation.

Furthermore, temporary lights have been reported on the Moon many times by competent observers—so many times that at least a few of the reports have to be credited. To be visible at all from Earth, such lights would have to be both large and bright; the suggestion of volcanic activity is hard to avoid. Again: Willy Ley has suggested that changes observed in the crater Linné may indicate that it is "a real volcano that was active some time between 1860 and 1890." And, geologically, it is safe enough to assume that, even though there may be few or no volcanoes actually in operation on the Moon now, some evolution of gas from a small, still-molten core can be expected.

Linné is a convenient example because it is an extremely ambiguous object. Descriptions of the way it looked 60 to 75 years ago, made by careful and competent observers, do not match the way it looks now at all, except in a few minor particulars. Some astronomers, too, claim that they have seen clouds inside it. It has even disappeared completely for short periods—though it was once described as being six miles in diameter and 1,200 feet deep!

Volcanoes May Be Active

Obviously *something* is going on in or around Linné. While we won't know for sure until we get there, we can at least say now that the release of volcanic gas would produce changes such as those that have been observed.

A highly respected American astronomer, Prof. William H. Pickering, once announced that he had seen a snowstorm on Mount Pico, a 10,000-foot peak, decidedly volcano-shaped, which thrusts up out of a flat empty plain near the northern edge of the Mare Imbrium. In the same area is the crater Eratosthenes, inside which Pickering saw cloudy gray spots moving about—not once, but many times.

Haas has compiled a catalogue of 22 definite changes which he saw on the Moon during less than 1,000 hours of actual observation.

We could make up quite a list of such cases of change on the supposedly eventless surface of the Moon. What they add up to, no one knows for sure; but they do seem to point toward local, temporary accumulations of gases on the Moon.

Since volcanic gases consist mostly of carbon dioxide, we now have established, tentatively, one precondition for plant life on the Moon.

Water on the Moon?

Now, how about water? It is a commonplace that there is no water on the Moon, but there are several interesting indications that that commonplace may be wrong, at least in part. Several of the lunar mountain ranges, and the walls of

the major craters, for instance, show pronounced talus-slopes—enormous rock-slides, produced on Earth by weathering. We know that there can be no weathering in the usual sense on the Moon. How, then, were these rock-slides produced?

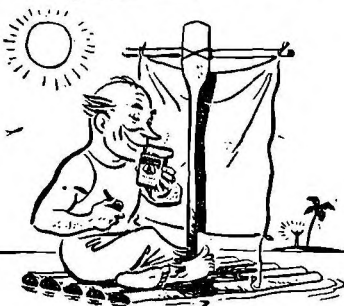
We've already mentioned the rapid and wide changes of temperature which occur on the Moon. Rocks exposed to such temperature changes expand, crack, and scale off—if they have absorbed water, or contain a form of bound water called water-of-crystallization. If they do not, the process, called "exfoliation" or thermal (heat) erosion, can occur only on a very small scale, or not at all.

The Moon has been around a long time, long enough for thermal erosion to have piled considerable talus-slopes along the mountainsides without any water being involved at all. The process should be especially fast on the side of the Moon which we can see, because that is the side where eclipses occur, and hence is the side where all the really rapid temperature-changes take place; the far side of the Moon, which has undergone much less of this kind of "weathering," must be a whale of a lot sharper and more rugged than the side we can see.

But whether or not rock-slides formed in this way alone would be big enough

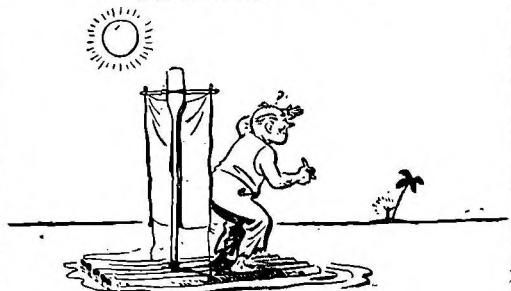
THE ADVENTURES OF

IT SMELLS GRAND



AROMA SWEET AS ANY ROSE—

IT PACKS RIGHT



PACKS TO PLEASE YOU—
GOODNESS KNOWS!

to be visible from Earth is very doubtful. How such a slow process could produce such colossal jumbles of broken rock as can be seen on the northeast slopes of the lunar Alps remains completely unexplained, unless we assume that some water-of-crystallization still remains on the Moon, in defiance of current theories of the Moon's age and state of airlessness.

Moreover, there are some other lunar phenomena which also seem to indicate the presence of water; even enough of it to create temporary vapor-clouds, like Pickering's "snowstorm" on Pico. The crater Plato, for instance, becomes darker in direct sunlight, as if the increasing heat were creating some condition which obscured the floor of the crater from our view.

Life is stubborn and tenacious. Give it an environment which it can invade, even a bitterly hostile environment, and it will invade it, and survive somehow.

Plant Life Is Possible

On the moon, then, we may hope to find life. It will be plant life—tough, fast-growing, and simple, and capable of attacking the basic rock for the nourishment that it needs to live out its ten- or twelve-day life-cycle. The most likely model for lunar life is the terrestrial lichen, a symbiotic pair of organisms:

part fungus—with the fungus' talent for overnight growth, and for secreting digestive acids which can chew into rock—and part algae, which can generate oxygen and starches from sunlight and carbon dioxide.

Most of the Moon, without doubt, is as barren, still and changeless as it has always been pictured to be. But we may well find insulated craters wherein a thin atmosphere builds up during the night, hissing into the airlessness from fissures in the cindery floor. Here small flat patches of dull green may begin to grow at the first trace of sunlight, spreading rapidly into clinging sheets upon the rocks. By the time the temperature in the crater has hit the boiling point of water, these lunar lichens will have reached spore-forming stage; and at high noon—two weeks later—when the last shreds of the night's accumulation of gases have been driven off into space by the violent sunlight, these spores will have fallen back to the pumice, to await the next dawn, while the parent lichens curl and die.

Actual observations which may be interpreted in just this way are on record. And if the interpretation turns out to be true—we will know for sure within the next four or five years—we may find that there is not only life, but movement, in the deep quiet caves of Earth's sister planet.

• • •

UNCLE WALTER

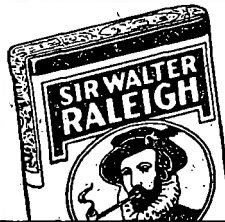
IT SMOKES SWEET



WITH EVERY PUFF
YOUR PLEASURE GROWS!
with Sir Walter Raleigh!

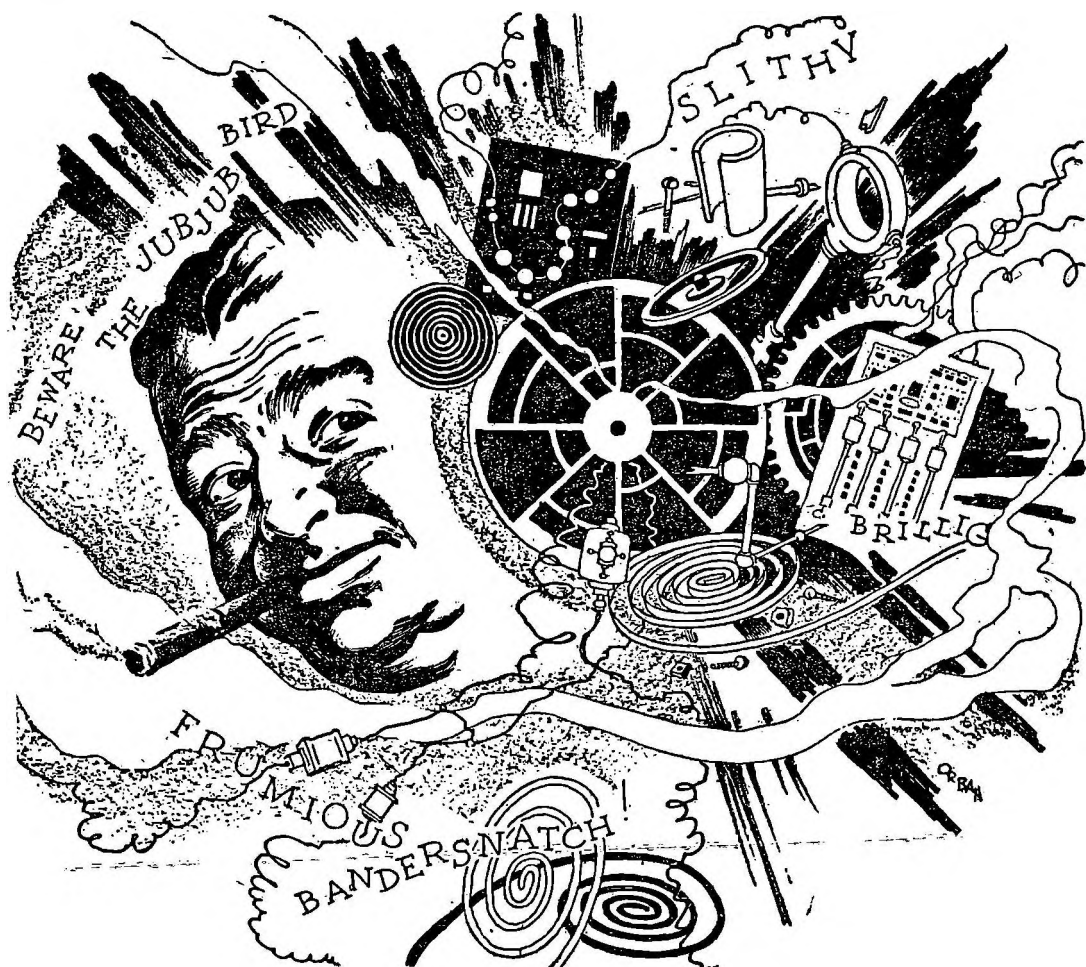
IT CAN'T BITE!

SIR WALTER RALEIGH'S BLEND OF CHOICE KENTUCKY BURLEYS IS EXTRA-AGED TO GUARD AGAINST TONGUE BITE, AND SIR WALTER RALEIGH NEVER LEAVES A SOGGY HEEL IN YOUR PIPE. STAYS LIT TO THE LAST PUFF.



*It costs
no more
to get
the best!*

The super-thinking machine was built so that it could answer every question asked—except one!



THE Prime Minister came to his feet, shuffled the papers before him in his characteristically awkward manner, then took time to look earnestly into each of the faces of the score of men seated around the table.

"Gentlemen," he said quietly, "this is perhaps the most important conference any government of the Empire has ever held. You will note that not only both political parties but all of the most powerful interests of the Commonwealth are represented."

ULTIMATE ANSWER

by **DALLAS ROSS**

There were some raised eyebrows but no one said anything.

He continued. "Gentlemen, I shall

sum this up briefly. Our whole socio-economic system is on the verge of complete collapse. No small measures will suffice to meet this situation. It is not a matter of electing one set of politicians to replace another. This conference, if possible, must plan some fundamental changes or our social system will collapse and chaos follow."

The squabbling began immediately.

* * * * *

Professor Paynes, head of the Computation Laboratory, should never have made the mistake of forgetting his rubbers on Tuesday. If he hadn't, he wouldn't have remained home Wednesday experimenting with anti-histamines while his staff was left alone with nothing to do with Mark-Bessie VI.

When he returned to the laboratory on Thursday morning they were standing around Mark-Bessie's typer, looking as though they'd put a nickel in a slot machine and nothing had come out. They were rumpled and unshaven and a multitude of paper containers and cups, bearing tell-tale dregs of coffee, told the story all too well. They'd been up all night.

"Well!" he barked.

They snapped to awareness and turned to face him. He noticed for the first time the strange face.

"Norman Frankfurter!" he snapped belligerently. "What are you doing here? After that last book of yours I wouldn't think you'd have the gall to show your face among scientifically trained men."

Van Oldman stirred uncomfortably. "It was like this . . ."

FRANKFURTER, the stormy petrel of the scientific world, took a heavy cigar from his mouth and beamed amiably at Paynes. "Ah, professor, so glad to see you've recovered from your indisposition. I was passing through Boston and dropped in yesterday to see you."

The laboratory head snapped, "You know this laboratory is under the most strict government security regulations. Absolutely *no* outsiders are allowed." He glared at Frankfurter, who replaced his cigar in his mouth and returned the glare blandly.

Van Oldman said in protest. "But, professor, Norman Frankfurter is a cybernetics authority of the highest . . ."

Paynes glared at him. "You in particular should know better, Oldman, being in charge in my absence. What has this, this—what has Frankfurter put you up to? I tell you . . ." He stopped as a new idea came to mind. "He's been here all night, hasn't he? What problem have you put into that machine?" His voice rose to an alarmed high.

Norman Frankfurter beamed happily and waved his cigar at the laboratory head. "Relax, Paynes, old man. We've just been testing some of the capabilities of er—Mark-Bessie the Sixth. Of course," he added apologetically, his eyes twinkling, "had we known you objected—"

"*Objected!*" Paynes roared, his irritated shuffle becoming a dance. His glare turned back to his chief assistant. "Oldman, what tests did this—this mountebank, this charlatan—did Frankfurter talk you into making?"

* * * * *

The Minister of Finance finished his report and resumed his seat. A long silence followed as his fellow cabinet members forced shocked minds to assimilate what he had said.

Finally, the Premier came to his feet. His face was white and his delicately manicured hand shook perceptibly. He held it up for attention.

"The time has passed when slogans and patriotic speeches sufficed. We are face to face now with"—he searched for a word—"with the deluge.

"Actually—let us face it, *messieurs*—actually our poor country has never re-

covered from the first of the great wars. The second prostrated us. The threat of a third has brought about difficulties which we must now admit insurmountable. In the past few years, particularly in the past months and weeks, we have considered and actually tried every alternative—but even the tremendous sums donated from overseas have failed to rescue our economy.

"*Messieurs*, the time has passed when half measures will suffice. We must condition our minds"—he tapped his head dramatically—"to the realization that a new way of life must be devised. The alternative? The alternative, *mes-sieurs*, you know as well as I."

* * * * *

Van Oldman rubbed the end of his nose with a rueful forefinger. "Well, first we set it up to play chess and it beat me three games out of three."

His superior snorted. "Did you lead off with that usual fantastic gambit of yours?"

Oldman nodded and opened his mouth to elaborate.

The other interrupted him. "What did you expect? A talking dog would checkmate you the way you play. But what I want to know is what you have in Mark-Bessie now. I tell you I don't trust this . . ."

Bob Lake, the engineer, spoke up for the first time. "Certainly no harm has been done, professor."

Paynes roared, "What have you got in that machine that would keep the group of you up all night?"

Lake shrugged. "We were working out a perfect socio-economic system. It was Professor Frankfurter's sug—"

"A *what!*"

Van Oldman murmured in a placating tone, "Quite simple, really. We reduced them to binary number symbols and fed cards into Mark-Bessie, giving a detailed summary of the present world conditions—our economic progress, our boom-depression cycles, our wars, our

international trade difficulties—and so on and so forth.

"Then we fed in the various solutions man has attempted or would like to attempt. We explained the workings of primitive savagery and barbarism, of slavery, feudalism and capitalism in their various forms. Then we went into such social systems as anarchism, state-ism, fascism. We were really becoming quite intrigued."

"No doubt," Professor Paynes snapped. "Well, what happened? What answer did Mark-Bessie give you?"

OLDMAN scowled and rubbed the end of his perpetually itching nose thoughtfully. "It didn't. The blue lights on the control panel continued to flash, indicating that more factors were needed before a reasonable answer could be made."

Professor Paynes calmed down somewhat. "Well, at any rate that brings us up to the present. We'll wipe out the problem and forget the whole thing."

Norman Frankfurter blew out a gust of smoke and beamed amiably at the laboratory head. "Just a moment, Paynes, that only brings us up to about ten o'clock last night."

Paynes stiffened. "What happened then?" he muttered warily.

Van Oldman took over. "Well, as I say, we were getting quite intrigued by that time and of course this project has the highest of priorities, so I—er . . ."

"You what?" Professor Paynes growled apprehensively.

"Well, we wanted to be sure and get the information as correct as possible, so I—uh—phoned Spandau Prison."

The other scowled in puzzlement. "You phoned where?"

"Spandau," his associate explained, "where they have Rudolph Hess and the rest of the Nazi war crimes prisoners incarcerated. Our priority enabled me to talk to two or three of them and to get as clear and concise a statement as possible on just what Nazism really was."

Paynes rolled his eyes upward in mute protest. "All right," he groaned. "I don't expect to have this job tomorrow—the F.B.I. will be on my trail in hours. What did you find when you put the Nazi program in Mark-Bessie?"

Professor Frankfurter said around his cigar, "The machine still flashed its blue lights, so we got more information."

Paynes turned and looked at the machine for a long moment, reflectively. Then, "More information—such as what?"

Bob Lake, the engineer, said, "Well, Tom Norman, the Socialist Party leader, happens to be a personal friend of mine, so I phoned him. It was difficult getting a clear picture of just what his program was—it sounded like a singular combination of the New Deal, the Fair Deal, some kind of a misdeal and England's Labor Government program. At any rate we reduced it to binary numbers, punched up the cards and dropped them in the hopper."

"And?"

"Well, the lights flashed blue again—so we looked up the program of the Communists." Lake cleared his throat. "It was somewhat difficult to get it down. We got a *Daily Worker* and were punching up our cards with their latest program when a radio news bulletin came from Moscow completely reversing the party line again."

Professor Paynes had a trace of interest in his voice now. "Why didn't you go to the source, the works of Karl Marx?"

"We thought of that," Frankfurter told him, smiling happily, "but when we checked we couldn't find the slightest similarity between Marxism and the so-called Communist program. So we had to depend on the latest from Moscow."

Professor Paynes was becoming intrigued, in spite of himself. "Well? What then?" Something suddenly occurred to him. "Good grief! If Mark-Bessie says that Uncle Joe has the answer to the world's difficulties we'll all

lose our jobs—and be ridden out of the country on a set of rails."

Van Oldman waved a hand negatively. "You don't have to worry about that. When we put the Commie cards in the computer the lights went red and the cards were thrown out in the reject hopper. Mark-Bessie typed out, CARDS INCORRECTLY PUNCHED. INFORMATION REJECTED AS IMPOSSIBLE."

* * * * *

Excerpt from confidential report to the President from the Special Committee to Investigate the Economy:

The nation is spending approximately fifteen billions yearly on the military alone. In addition, other billions are being spent on atomic power, foreign aid, on espionage, foreign propaganda and the diplomatic service. All these expenditures might come under the head of the "security program," which is a necessary, and at the same time a dangerous, force in our society.

Under it there has been a great increase in the role of the military in our government, a great increase in bureaucracy, and expanding dominance of government over industry and increasing interference with individual freedoms. Much of this is inevitable.

When we increase our military defenses we necessarily increase the role of the military in our government. When we increase the share of our resources devoted to armament we unavoidably enlarge the scope of government in industry, in science and education, in every sphere in life. We have already given up important freedoms without adequate challenge.

Public apathy and the pressure for security can lead us along a dangerous road—a road that ends in what has aptly been called a garrison-police State, in which the soldier and the political policeman rise to power while the institutions of civilian society and freedom shrink.

To complicate this situation the preparation for war has become so vital to the economy as to be indispensable. Without the market created by the threat of war the economy would collapse under the weight of unsold surpluses. Great sections of industry would close down, hurling fifteen or twenty millions into the ranks of the unemployed.

* * * * *

Professor Paynes blinked at his staff of computermen and thought it over. "And you still get the blue lights, eh?" They nodded.

He looked at Frankfurter, who was beaming in satisfaction at the lights still flickering on Mark-Bessie's panel. "Confound you, Norman Frankfurter," Paynes said irritably, "now you've got me interested. You've tried democracy, of course?"

Bob Lake said wearily, "Everybody seems to have a different idea of just what the word means but we've tried all the variations we could think of, from the type practised by primitive man through the democracy of ancient Athens, based on freedom for Athenian citizens but slavery for the majority of the population, even up to and including the latest from China which Mao Tze-tung calls 'a people's democratic dictatorship.'"

"Hmmm," murmured Paynes. "Have you tried technocracy—Huey Long's Share the Wealth—the Townsend Movement?"

VAN OLDMAN rubbed the end of his nose with a forefinger and said ruefully, "Yes. Also Ham and Eggs, the Silver Shirts, Pancho Villa's program, the EPIC plan, the Henry George movement, Thirty Dollars Every Thursday and Social Justice."

"And?"

"The machine still wants more information," Frankfurter said happily. "It's got us stumped."

A rear admiral bustled into the computer room, followed by two briefcase-laden assistants. He rumbled importantly, "Professor Paynes, may I speak to you?"

The head of the Computation Laboratory glowered at him in a preoccupied manner. "What?" he snapped.

The admiral blinked. "Er—on this matter of the new helium bomb formulas, professor. Top priority, you know."

"Busy," snorted the professor. "Top top priority. Have to ask you to leave. Come back later."

The admiral was impressed. "Er—certainly. Understand perfectly, professor." He turned and barked at his assistants, "Out! Immediately! Top top priority." He followed them from the laboratory.

The professor snorted again and turned back to rejoin the others as they stood staring at the machine's typer. The only thing written on its long roll of white paper was, "MORE INFORMATION REQUIRED."

* * * * *

The dictator sat silently puffing his pipe while one by one the others spoke. When they were through he was quiet for another hour, considering their words. They squirmed uncomfortably in their seats.

Finally he came to his feet, his face expressionless. "Comrades," he said, "only a few months past any or all of you might have been shot for the ideas you have just expressed." He let his little eyes run over them coldly, then added, "Now I am not so sure."

He put his pipe down on the table and ran a hand wearily through his graying hair. "Thirty-five years ago we had men in the party that might have understood this situation more clearly." A ghost of a smile was on his cruel lips momentarily. "Unfortunately they are no longer with us.

"More than once these former com-

rades pointed out that our rule was not a stable one, that it must be but temporary." The faint smile was there again. "One of the reasons they are no longer alive."

He shrugged his bulky shoulders. "They contended that politicians and bureaucrats cannot run industries and that when the Union became industrialized a dictatorship would become ever increasingly impractical. We seem to be reaching that point now."

"To sum up the situation you have just described—we must continue to expand industrially if we are to remain in power and at the same time, as industry expands, our rule becomes ever less practical."

He took up the curved pipe again and lit it, his eyes searching them through the smoke. "Comrades, we must plan fundamental changes and soon—or someone else will plan them for us."

* * * * *

Bob Lake said gloomily, "Can anybody think of anything else?"

They all shook their heads.

Paynes made a decision. "Van," he snapped, "have some cards punched up conveying that all available information has been submitted and that Mark-Bessie must answer on the basis of the material on hand."

While Van Oldman went off to the next room, from which the clatter of keypunches was soon heard, the rest continued to stare moodily at the impassive computer.

FRANKFURTER took his cigar from his mouth, looked with interest at its lighted end and said happily, "Very interesting situation, very interesting. We all realize that the machine is incapable of error and that in a few minutes it will give a report on the ideal form of social system that man should set up."

He beamed at them. "However, I am wondering whether or not the report

will be such that we will dare release it to the public."

Professor Paynes blanched. "Look here, Frankfurter—er—Norman." There was a touch of pleading in his tone. "You must pledge yourself to complete secrecy on this. It must be my decision whether or not this report—"

Oldman reentered with the cards, joggled them carefully and dropped them into the hopper. He pushed the start button and they fed into the maw of the Mark-Bessie in rapid succession.

The blue lights on Mark-Bessie's panel stopped flashing, black-coated aluminum cylinders began spinning frantically, circuits opened and closed with a clatter, the computer clacked excitedly, hummed, moaned, groaned—and suddenly went silent.

The typer began to function. The white paper rolled up two spaces, the carriage returned to its margin position, keys clattered. It wrote—

Question: WHAT IS THE ANSWER TO MAN'S PRESENT PROBLEMS?

Answer: ESTABLISH . . . ESTABLISH . . .

A faint hum arose in the deep recesses of Mark-Bessie, a vague clatter. The white paper rolled up once more. The keys started again.

Answer: TRY TO . . . TRY TO . . .

A thin tendril of yellowish smoke wound its way up from the interior of the computer. Suddenly the typer keys began to sputter in fantastic speed.

Answer: BEWARE THE JABBERWOCK, MY SON! THE JAWS THAT BITE, THE CLAWS THAT CATCH! BEWARE THE JUBJUB BIRD AND SHUN THE FRUMIOUS BANDER-SNATCH! 'TWAS BRILLIG AND THE SLITHY . . .

They stared in shocked surprise and silence as Mark-Bessie's typer continued to run off line after line.

Norman Frankfurter said finally, "Nuts—Absolutely. A psychopathic case if I ever saw one. Completely off its rocker." He beamed happily and lit a fresh cigar. . . .



The PLAGIAN SIPHON

a novelet by JACK VANCE

I

THE bartender was the biggest man at the Hub. He had a red slab-sided face, chest and belly like a barrel of meat and bone. He bounced his drunks by butting them to the door with this same belly, dancing close, thrusting forward like an uncouth and elephantine cooch-dancer. Reliable information compared the blow to the kick of a mule. Marvin Allixter, nervously lean and on his way to forty, wanted to call him a blackguard, a double-dealing pinch-penny, but cautiously restrained his tongue.

The bartender twisted the bubble back and forth, inspecting the enclosed little creature from all sides. It glowed and glinted like a prism—sun yellow, emerald, melting mauve, bright pink—the purest of colors. “Twenty franks,” he said without enthusiasm.

“Twenty franks?” Allixter dramatically beat both fists against the bar. “Now you’re joking.”

“No joke,” rumbled the bartender.

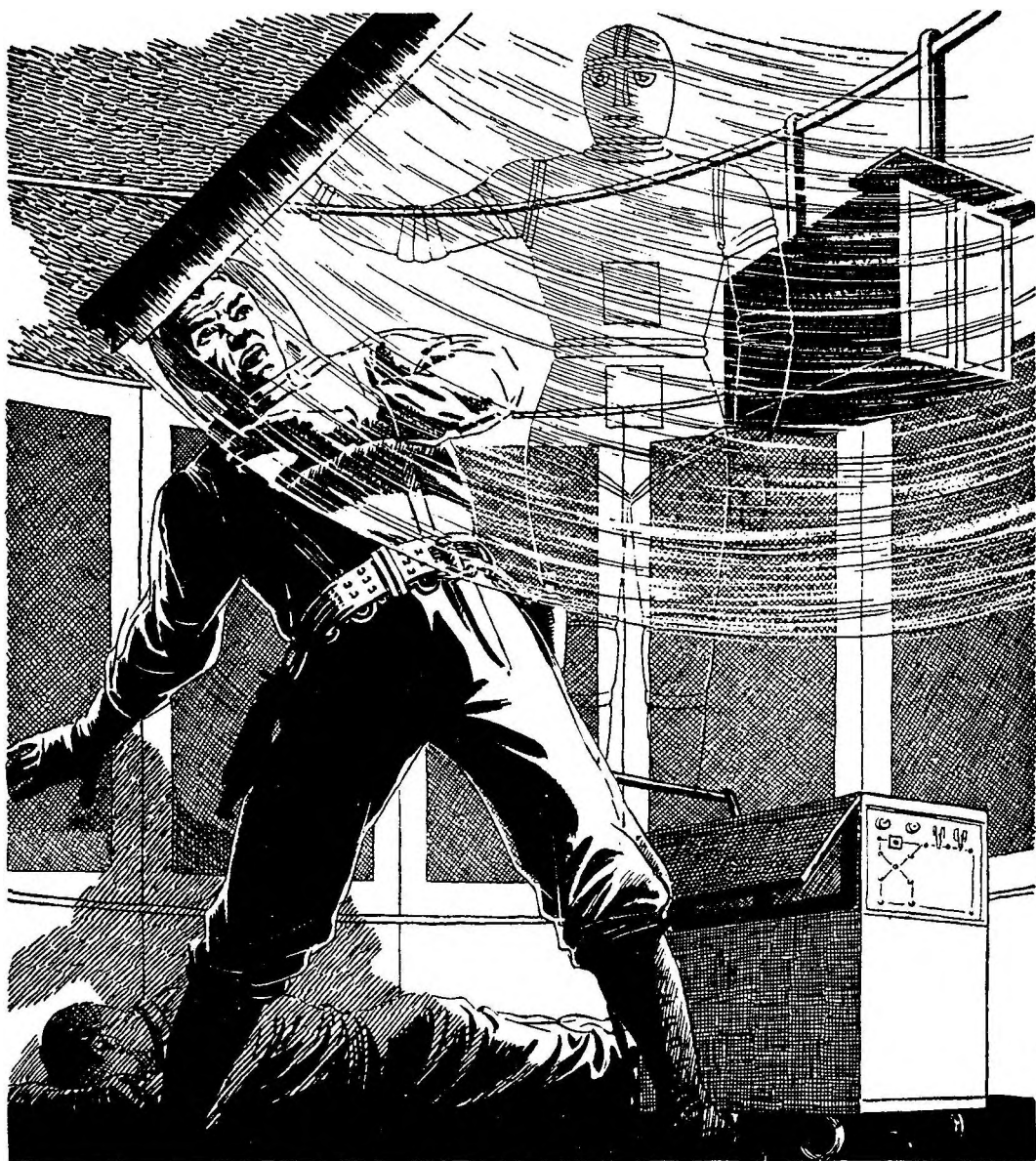
Allixter leaned forward earnestly, thinking to appeal to the man’s reason. “Now, Buck, look here. The bubble is pure rock crystal, maybe a million years old. And mind you the Kickerjees dig a year and think themselves lucky to find one or two, and then only in a great chunk of quartz. They grind and polish and twist and turn and one slip—*smash!*—the bubble breaks, the mite oozes out and dies.”

The bartender turned away to pour straight shots for a pair of grinning warehousemen. “Too fragile. If I bought it and one of these drunks busted it I’d be out of twenty franks.”

“Twenty franks?” Allixter asked in astonishment. “That’s no figure to mention in the same breath with this little jewel. Why, I’d sell my ear for twenty franks first.”

“Suits me.” Buck the bartender jocularly flourished a knife.

*Scotty Allixter, repair man extraordinary for the matter
transferers, uncovers an interstellar hijacking
racket that almost costs him his life*



The damaged but still dangerous booby-trap missed Allixter's head by inches

Allixter now thought to arouse the man's cupidity. "This very item cost me five hundred franks at the source."

The bartender laughed in his face. "You guys on the tube gang all sing the same song. You pick up a trinket somewhere off in the stations, you smuggle it back through the tube, you spin a

fancy yarn about how much it cost you and hustle the item to the first sucker who listens to you." He drew himself a small glass of water, drank it with a wink to the warehousemen.

"Sure, I got stuck once. I bought a little varmint from Hank Evans, said it could dance, said it knew all the native

dances of Kalong, and the thing looked like it could dance. I put down forty-two franks for the animal. Come to find it had sore feet in the new gravity and was hopping from one to the other to ease the pain. That was the dancing."

ALLIXTER shifted uneasily, glanced over his shoulder to the door. Sam Schmitz, the dispatcher, had been buzzing his badge for an hour and Sam was an impatient man. He lounged back against the bar, attempting an air of nonchalance. "Look at the colors the little rascal goes through—*there!* That red! Ever see anything so bright? Think how that would look hung around some lady's neck!"

Kitty, the blond and surcingled B-girl, said in a breathless contralto, "I think it's lovely. I'd be proud to wear it myself."

The bartender took up the bubble once more. "I don't know no ladies." He inspected it doubtfully. "It's a pretty little trinket. Well, maybe I'll spring twenty franks."

The screen at his back buzzed. He turned on audio and duovision together without first waiting for the caller's identification, then took his bulk to the side. Allixter had no time to duck. Sam Schmitz stared at him eye to eye.

"Allixter!" barked Schmitz. "You've got five minutes to report. After that, don't bother!" The screen went blank.

Allixter stared under thoughtful dark eyebrows at the bartender, who regarded him placidly. "Since you're in a hurry," said Buck, "I'll make it twenty-five franks. It's a cute little bobbet."

Allixter rose to his feet, still staring at the bartender. He juggled the bubble from hand to hand. Buck reached out in alarm. "Easy—the thing might break." He dived into the till. "Here's your twenty-five franks."

Allixter said, "Five hundred."

"Can't do it," said the barkeep.

"Make it four hundred."

Buck shook his head, watching Allixter from craftily narrowed eyes. Allix-

ter turned, wordlessly walked from the bar. The bartender waited like a statue. Allixter's long dark face returned through the door. "Three hundred."

"Twenty-five franks."

Allixter screwed his face into an expression of agony and departed.

In the street he paused. The depot, a big cube of a building, rose like a cliff in the wintry sunlight, dominating the rather disreputable purlieu of the Hub. At its base spread warehouses, glittering aluminum banks, each a quarter-mile long. Trucks and trailers nuzzled at side-bays like red-and-blue leeches.

The warehouse roofs served as cargo decks where flexible loaders crammed airship holds with produce from a hundred worlds. Allixter watched the activity a moment, conscious that, for all the activity, nine tenths of the traffic passed unseen along the tubes—to continental Earth stations, to stations among the planets, among the stars.

"Rats!" said Allixter. He walked without haste to the corner transit, considering the little bubble. Perhaps he should have sold—twenty-five franks was twenty-four franks profit. He rejected the idea. A man was able to carry only so much along the tubes and expected a decent profit from his enterprise.

The bubble actually was a kind of sea-creature washed up on the pink beaches of—Allixter couldn't remember the name of the planet—9-3-2 was the code to the station. He tucked it away in his pouch, climbed into the shell at the transit, swerved, rose, popped out into light. Allixter stepped out upon the depot administration deck.

A few feet distant was the glass-enclosed cubicle where Sam Schmitz, the Service Foreman and Dispatcher, sat on a high stool. Allixter slid back a pane, said, "Hello, Sam," in a kind voice. Schmitz had a round pudgy face, fierce and red. He had the undershot chin and general expression of a bulldog.

"Allixter," said Schmitz, "you'll be surprised. We're tightening up around here. You guys on the repair crew have

picked up the idea that you're a bunch of aristocrats, responsible only to God. This is a mistake. You were due on standby three hours ago. For two hours the Chief's been chewing my rear end for a mechanic. I find you in Buck's bar. I want to be good to you guys but you've got to follow through."

Allixter listened without concentration, nodding at the right places. Where next to peddle the bubble? Maybe wait till he got a week's leave, take it down to Edmonton or Chicago. Or better yet, stash it away till he had accumulated a few other items and then make Paris or

AND MAINTENANCE DIRECTOR. ENTER.

He pushed the button. The door slotted and he entered the outer office. The secretary glanced up. Allixter said, "The Chief's expecting me."

"That's no secret." Then she said into the mesh, "Scotty Allixter's here." She listened to her ear-plug, nodded at Allixter, keyed back the lock on the inner door. He slid it aside, stepped into the office. The air, as always, had a harsh medicinal odor which irritated Allixter's nose.

The Chief was a small man, built to an

Ro, Ro, Ro Your Bot

WE ARE on record as being no lover of what has come to be the usual robot tale. The usual robot of sfiction is a cross between Lassie and the time-dishonored dancehall girl of the old West—faithful, misunderstood, much put-upon, but with a heart of purest gold.

However, don't get us wrong—we love robots—as our publishing this remarkable story should help prove. We just don't like stock-model or *usual* robots. We like robots that have a difference—an evil sense of humor, perhaps, or an honest desire to do everybody dirt, something a trifle exotic.

If ever a more exotic robot than the one Scotty Allixter encounters on the strange planet was conceived in science fiction history, lead us to it or vice versa. This robot has everything, including one of the most utterly perverse personalities we have encountered to date. And, best of all, it is an *alien* robot, the first we have encountered in too long a time.

—THE EDITOR.



Mexico City, where the big money was. Schmitz paused for breath.

"Anything on the docket, Sam?" Allixter asked.

The response startled him. Sam's chin quivered in rage. "Blast it! What do you think I've been talking about the last five minutes?"

Allixter desperately sent his mind back, recalling a phrase here, a sentence there. He rubbed his thin cheek and jaw, and said, "I didn't quite catch all of it, Sam. Maybe if you'd go over it again. . . Just what's the complaint?"

SAM flung up his arms in disgust. "Go see the Chief. He'll give you the picture. I'm done."

Allixter crossed the deck, turned down a hall, stopped at a tall green door with bronze letters which read: SERVICE

angular design. His skin was wrinkled and yellow, parched like an old lemon. His eyes were small black balls, snapping with some kind of inner electricity. A few wisps of kinky hair rose from his head, some white, some black, without apparent design. The skin of his neck was corrugated like an alligator's and the right side was marred all the way to his knobby chin by a heavy welt of scar tissue. Allixter had never seen the Chief laugh, had never heard him speak other than in a dry monotonous twang.

The Chief said without preliminaries, "Schmitz probably gave you the picture on this job."

Allixter took a seat. "To be frank, Chief, I didn't quite get it."

The Chief spoke as if he were explaining table manners to an idiot—softly, with careful enunciations. "You've been

through to Rhetus Station?"

"Code six minus four minus nine. Sure thing. They've got a new Mammoth installation."

"Well, six minus four minus nine is coming in out of phase."

Allixter's thick straight eyebrows rose in an arch. "So soon? Why, we just—"

The Chief said drily, "Here's the story. The tube came in, just barely scraping over the bitter edge of the tuner. I computed thirty-one hundredths-of-a-percent slack in the phase."

Allixter scratched his chin. "Sounds as if there's a leak in the selector unit."

"Possibly," agreed the Chief.

"Or maybe they've got a new dispatcher and he's playing with the adjustments."

The Chief said, "To make sure we hit the unit dead-center I'm sending you out on six minus four minus nine, slacked down the same percentage that it came in."

Allixter winced. "That sounds dangerous. If the code doesn't sock home in the contacts I'll come out something pretty poor on Rhetus."

The Chief pushed himself back in his chair. "Job for a service man. You're on standby. So it's yours."

Allixter frowningly looked through the window, across the misty reaches of the Great Slave Lake. "There's something fishy here. That's a new Mammoth and they work close."

"True."

Allixter shot a narrow glance at the Chief. "Sure it was Rhetus?"

"I never said it was in the first place. I said the code was six minus four minus nine."

"Got a picture of that code?"

The Chief wordlessly tossed him an oscillograph pattern.

Allixter said, "Amplitude six, frequencies four and nine." He frowned. "Almost six, almost four and nine. Not quite. Close enough to sock into the contacts."

"Correct. Well, get your gear, climb through the tube, service that installation."

Allixter anxiously pulled at his wedge-shaped Gaelic chin. "Maybe . . ." He paused.

"Maybe what?"

"Do you know what I think?"

"No."

"Looks like it might be an amateur station or a hijacking outfit. The Rhetus tube runs valuable cargo. Now if some outfit could divert the tube to their own station . . ."

"If you think so you can take a gun with you."

Allixter rubbed his hands together nervously. "Sounds like a police job to me, Chief."

The Chief raked him with his snapping black eyes. "It sounds to me as if the code is thirty-one-hundredths-of-a-percent slack. Maybe some silly bloke is punching wrong buttons on that Mammoth. I want you to go straighten it out. What do you think you're drawing a thousand franks a month for?"

Allixter muttered something about the infinite value of human life. The Chief said, "If you don't like it I know better mechanics than you who will."

"I like it," said Allixter.

"Wear Type X."

Allixter's thick black eyebrows became question marks. "Rhetus has a good atmosphere. Type X is anti-halogen—"

"Wear Type X. We're not taking unnecessary chances. Suppose it is a hijack installation? Take along the Linguaid too. And a gun."

"I see we're of the same mind," said Allixter.

"Don't forget spare power and check your breather unit. Evans reported a leaky tube on the extra unit. I had it condemned but maybe they're all that way."

II

THE mechanic's locker room was deserted. In glum silence Allixter pulled on the Type X—first a thick neck-to-toe coverall webbed with heating elements, then a thin sheath of inert film to seal

him from a possibly dangerous atmosphere, then high boots of woven metal and silicone rubber impervious to heat, cold, dampness and mechanical damage. A belt strapped around his waist and over his shoulder supported his tool kit, a breather and humidity-control unit, two fresh power packs, a sheath knife, a JAR, and a heat-torch.

In the corridor he met Sam Schmitz. "Carr's at the buttons. He's checking you out on the adjusted code. . ."

A door labelled DANGER, KEEP OUT slid aside for them and they entered the central depot, a long hall filled with sound, activity, dust and, most notably, a thousand odd odors, whiffs of spicy reeks, balms and fetors from the thousand off-planet commodities coming in on the near belt.

The luminous ceiling gave off a cold white glare which searched out every shadow. There was no glamor or concealment in this light—every item on the belts minutely described itself to the eyes of the checkers. The walls were painted in ceiling-to-floor blocks of various colors, the better to designate the bays, where various shipments, temporarily stacked, awaited re-routing.

A narrow glass-fenced platform cut the depot in two. Back and forth from platform to the belts jumped the clerks in blue and white smocks, checking the merchandise in-coming on the near side, out-going on the far—crates, sacks, boxes, bales, bags, racks and cases.

Machinery, metal parts in ingots and machined shapes, consignments of Earth fruit and vegetables going out to the colonies, the homesteads, the mines. Other consignments of off-world exotics incoming to entice and stimulate the sophisticates of Paris, London, Benares, Sahara City. Tanks of water, oaken casks of whiskey, green bottles of wine.

Prefabricated houses, flyers, automobiles, speed-boats for the lakes of the Tanagra Highlands. Beautiful woods, richly mottled and marked from the hardwood swamps of a jungle planet. Ores, rocks, minerals, crystals, glasses, sands—all riding the belts, either ap-

proaching or leaving the twin curtains of dark brown-gold, shot with flickering streaks of light, at the far end of the hall.

At the curtain end of the out-belt a big blond man sat in an elevated box, viciously chewing gum. Allixter and Schmitz ducked across the in-belt, stepped over the clerks' platform, rode the out-belt to the operator's box.

Carr hauled back a lever and the belt eased to a stop. "All ready to go?"

"Yep, all set," said Schmitz cheerfully. He hopped up into the box while Allixter stood glumly eyeing the curtain. "Howza wife, Carr," asked Schmitz. "Heard she took a dose of dermatitis from something you carried home on your clothes."

"She's okay," said Carr. "It was that kapok stuff from Deneb Kaitos. Now let's see—I've got to set up this phony code. Hey, Scotty," he called down to Allixter, "made your will yet? This is like stepping out of an airplane holding your nose and hoping you'll hit water."

Allixter made a nonchalant gesture. "Everyday stuff, Carr, my boy. Set those dials—I want to be back sometime tonight."

Carr shook his head in rueful admiration. "They pay you a thousand franks for it—brother, it's yours. I've seen some of the stuff that's come out of the tubes when the settings were a little out of phase. Plywood panels come through like cheese-cloth handkerchiefs—a turbine agitator makes about a gallon of funny-looking rust."

Allixter's mouth tightened over his teeth and he cracked his knuckles.

"There she is," said Carr. A bulb on the panel flared red, flickered, wavered through smoky orange, glared white. "She's through."

Schmitz leaned down over the box. "Okay, Allixter, all yours."

Allixter pulled the hood over his head, sealed it, inflated the suit. Carr chuckled into Schmitz' ear, "Scotty's gloomy for sure over this one."

Schmitz grinned. "He's afraid he's walking into some hijacker's warehouse."

Carr turned him a blankly curious side-look. "Is he?"

Schmitz spat. "Hell no. He's going to Rhetus. to set adjustments on the coder. That's how I figure it." He spat again. "Of course, I might be wrong."

Allixter lifted up his hood, yelled to Schmitz, "You better get me down the Linguaid."

Schmitz asked with a grin, "Can't you talk English? That's all you'll hear on Rhetus."

"The Chief says take the Linguaid. So roll her out."

A buzzer sounded on Carr's panel. Carr grunted. "Get him his analyzer. I can't tie up the belt all day. Old Hannegan's hollerin' to get his grapes off to Centauri."

Schmitz snapped a few words into a mesh and moments later a runner from the shop appeared, rolling the Linguaid ahead of him, a black case slung between two wheels.

"Be careful of that job," said Schmitz. "It's expensive and it's the only decent outfit we got left since Olson burnt out the Semantalyzer. Don't leave it on Rhetus."

"You worry a confounded lot about that Linguaid," muttered Allixter, "and not a cent for old Scotty Allixter."

He sealed the hood over his head and, trundling the Linguaid ahead of him, stepped through the curtain.

ALLIXTER stood on a bone-white platform, bare to the heavens. He felt a stir of morose triumph. "I'm still alive. I'm not a cheese-cloth handkerchief, not a gallon of rust. I guess the Chief figured okay—got to give the old cuss credit. But. . ."

Allixter stared around the landscape, a gray and black plain. At precise intervals massive concrete rotundas rose from the ground, most of which had been shattered as if by internal explosions.

"This isn't Rhetus—nowhere near Rhetus. And those aren't men and they aren't Rhets. . . ." He turned an anxious look to the tube installation—it was of

a type strange to his eyes—a cylinder of dark gold-brown fog. It seemed to be swirling slowly around a vortex.

Where in creation was he? He looked at the sky—a hazy violet spangled by a myriad distant suns, random goutts of colored fire. Was it day or was it night? He searched the horizon with anxious eyes, sweating inside his air-film. Perspectives were strange, the lighting was strange, the shadows were strange. Everywhere he looked, everything was strange with the un-human wildness of the remote worlds.

"I'm in a fix," thought Allixter. "I'm lost."

It was a dreary landscape, a dingy plain studded with tremendous gray wrecks. Where the shattered walls had fallen machinery could be seen—wheels, shafts, banks of complex gear and circuits, squat housings and cases. All were broken, silent, corroded.

Allixter turned his attention back to the cylinder of brown-gold fog. This was the in-curtain but where was the installation to send him back? Usually the two went together. The creatures who stood along the outer edge of the white platform approached, apparently with indecision and puzzlement. Allixter made no move for his JAR. He thought that if it were possible to cross-breed a seal and a man and plant a palmetto thatch of red-green quills on the scalp of the issue—here would be the result.

As they approached, watching him from big dull-surfaced eyes, they made sounds of communication—squeaks, windy whistling tones, hisses—forming these sounds by trapping a pocket of air under their arm-pits, squeezing it past a flap of skin.

Allixter said, "How do you do, my friends. I'm the representative of Tube Maintenance and it looks to me as if I've crossed over into an entirely different mesh, a million light-years gone from Earth if not farther. I fear that I'm entirely divorced from my own set of stations and Old Nick himself couldn't tell me how to find my way home."

The natives ceased their noise as he

spoke, then commenced once more. Allixter chewed his lips, laughed in tart amusement. He rocked the Linguaid back and forth affectionately, murmured, "And Sam Schmitz wanted to send me out half-naked!"

He dropped a pair of legs to steady the Linguaid, swung the shutter away from the screen. "Come on over, Joe," he said, motioning to a creature who stood slightly in the lead. "Let's get to understand each other."

Joe stared without response. Allixter repeated the gesture more carefully. Joe slid forward on sinuous legs. "Joe, I see you're an intelligent creature," said Allixter. "We're going to get along."

He set the controls for Cycle A. The screen glowed white. Geometric figures appeared—a circle, a square, a triangle, a line and a point.

Joe looked intently, and the others crowded around his back. Allixter pointed to the circle and said, "Circle," to the square—"Square," likewise for the other shapes. Then, motioning to Joe, he pressed the record key and pointed to the circle.

Joe was silent.

Allixter released the key, went through the priming routine again. Again he set the banks to record, pointed to the circle. Joe squeezed a skirl of a sound from under his armpit. Allixter pointed to the other figures and Joe made other sounds.

ENCOURAGED Allixter proceeded to Step Two—Enumeration. The screen depicted symbols representing the agglomerative numerals—a series of lines, one dot in the first line, two dots in the second line, three in the third, four in the fourth, in such fashion up to twenty. Joe, alive to his task, made sounds for the numbers. Then the screen displayed a random multitude of dots and Joe created another sound.

Now Allixter tried colors. Joe stared at the screen impassively. Red—no response. Green—no response. Violet—no response. Allixter shrugged. "We'll never get together here. You see by in-

fra-red or ultra-violet."

The cycle passed on to more complicated situations. A dot moved swiftly across the screen, followed by a dot moving slowly. The sequence was repeated and Allixter pointed to the first dot. Joe created a sound. Allixter indicated the slow dot and Joe made another sound.

From the bottom of the screen a line rose nearly to the top. Another line lifted about an inch. Joe made sounds which Allixter hoped were "tall" and "short" or "high" and "low."

A circle swelled almost past the outer verge of the screen and beside it appeared a minute dot. Joe's sounds for "large" and "small" entered the memory banks.

Presently the comparative situations were exhausted and the screen depicted noun objects—mountains, an ocean, a tree, a house, a factory, fire, water, a man, a woman. Then came more complicated objects—a turbine in a plastic housing to convey the idea of machinery—a conventionalized drawing of a dynamo with an exterior circuit first coiled around a bar, from which a magnetic field radiated, then continuing to a point where the circuit was broken and lightning-like flashes jumped the gap. Allixter pointed to these flashes and the Linguaid recorded Joe's sound for electricity.

Two hundred basic nouns were so recorded. Then the cycle turned to inter-person relationships. The machine had been designed for use by men—the stock situations depicted men. Allixter hoped confusion would not arise.

First a man was shown attacking another man, striking him with a club. The victim fell with a crushed skull. Allixter pointed; the analyzer filed the words for dead or corpse. Then the murderer turned a savage face out of the screen, rushed forward with club upraised to strike. Joe jumped back, squeaking. Allixter, grinning, ran the sequence again, and the analyzer noted the word for enemy or assailant or possibly attack.

An hour passed—a score of situations were pictured and analyzed. It seemed to

Allixter as time went by that the natives showed signs of nervousness. They cast restive glances in all directions, gestured with agitated flutters of their hand-members.

Allixter searched the landscape but no menace was evident in the perimeter of his vision. However, by a kind of sympathy, he found his own nerves growing taut, found it difficult to concentrate on the Linguaid.

Cycle A was completed—all the words and situations of the basic vocabulary had been recorded, although useful and near-essential abstractions, such as interrogatives and pronouns were still absent from the file.

Allixter switched the machine from Cycle A to Converse. He spoke into the mike, careful to use only words of the basic vocabulary. "Desire return through machine. Lead to out-machine."

The Linguaid absorbed the words, found their counterparts in the recorded squeaks, hissings, trumpeting and voiced them from the speaker.

Joe listened with attention—then he looked blankly at Allixter. His shoulders quivered. Air creaked and sputtered past the skin at his armpits.

The Linguaid searched the files, voiced the words: "Call to machine. . . Desire. . . . Machine man. . . Broken machine. . . . Man come through machine. . . Bad. . ."

There had obviously been more words spoken. the Linguaid translated only the sounds it could match against its recorded patterns.

Allixter said, "Use words given machine."

Joe stared with great dull eyes. His tall thatch of red and green plumes drooped dejectedly. He made a further effort. "Man call for distant machine builder. Man come. Desire friend to build machine."

Allixter looked in frustration around the drab horizon, looked up into the spangled violet sky where there would never be night or day. He considered running Cycle B on the Linguaid—a process which would tax the patience of

both himself and Joe but which might enable him to locate the installation to send him back to Earth.

He tried once more. "Desire return through machine. Lead to out-machine." He gestured to the brown-gold curtain. "See in-machine. Desire out-machine."

Something was wrong. The nervousness which Allixter had first noted became marked. The natives crouched on the bone-white platform in smooth balls with their crests folded around them like partly-closed umbrellas. Allixter looked for Joe. Joe was at his feet, as huddled and compact as his mates.

IN SUDDEN anxiety Allixter snapped the iris across the Linguaid screen, closed the lid down over the controls. A nearby building caught his eye. The machinery within was moving—grinding, pounding, snapping. Electricity or some other flow of energy arched across old contacts.

Corroded shafts shuddered and twisted and strained. Wheels moaned and whined around dry bearings. Without warning the building exploded. Chunks of concrete and metal flew up in a crazy tangle, fell clattering in all directions. Smaller material scattered across the platform, and the natives trumpeted in terror.

Some small fragments struck Allixter, bounded off his resilient air-film. It occurred to him that as yet he knew nothing of the atmosphere, that if the film had been punctured he might be poisoned.

From his pouch he brought a spectrometer and let air in the vacuum chamber. He pressed the radiation button and read the dark lines on the ground glass off against a standard scale. Fluorine, chlorine, bromine, hydrogen fluoride, carbon dioxide, water vapor, argon, xenon, krypton—not a salubrious environment for the likes of him, he thought. He gazed speculatively at the structures. If he could get a few analyses of those metals he'd revolutionize the anti-corrosive industry—make a million franks overnight.

He looked back to the exploded building, now in utter ruin. It suddenly glowed white hot and the heat did not seem to dissipate but increased. The wreckage melted into a pool of seething slag. The ground in the immediate vicinity steamed, scorched, slumped into the widening pool of lava.

Allixter thought—That's hard energy and if it's dangerously radioactive it's time for me to blow.

He pushed the Linguaid ahead of him to the edge of the platform, prepared to jump down to the surface of the gray-black ground about two feet below. Behind him the natives still huddled, balls of seal-soft flesh, neatly covered by their thatch.

Joe stirred, looked up, saw Allixter. He scampered forward on flexible short legs, making urgent sounds. Allixter turned the switch on the Linguaid.

"Danger, danger, bad, deep, death," said the Linguaid, the intonations calm and matter-of-fact.

Allixter jerked back from the edge. Joe stopped alongside, tossed a fragment of rock to the ground. It cast up a puff of feathery dust, settled quickly out of sight. Allixter blinked.

There but for the grace of God went Scotty Allixter, he thought. It was an ocean of ashes out there—soft fluff. With new eyes he gazed across the flat gray plain, where the blasted buildings rose like islands. He shrugged. It was beyond his understanding. He knew of many Earthmen who had lost their minds trying to comprehend the paradoxes and peculiarities of the outer stations.

A sudden intuition struck him. He swept his eyes around the circumference of the bone-white platform. It was like a raft on the gray sea, with the slow-whirling cylinder at the center. How then had the natives made their way here? Could it possibly be that they too had arrived through the cylinder from an out-world?

Joe's soft fingers fumbled at his arm. He squeaked, pumping his shoulders

loosely, expertly, and the Linguaid translated, "Off. Come. Lead toward large machine."

Allixter said hopefully, "Desire out-machine. Desire return. Lead to out-machine."

Joe squeezed out further sounds. "Come—follow. Friend to large machine corpse. Large machine wreck friend. Large machine desire friend. Come—follow. Build large machine."

Allixter thought that whatever it was, it could be no worse than standing on this platform.

Joe fumbled with a grating, pulled it aside, descended a steep flight of steps. Trundling the Linguaid ahead of him Allixter followed.

The corridor became dark. Allixter flicked on his head-lamp. Ahead he saw a pair of gold-brown curtains, the 'in' distinguished from the 'out' by a subtle difference in the inner golden flicker.

Joe stepped through the out-curtain, disappeared. As Allixter hesitated he bobbed through the in-curtain, beckoned with a certain querulous insistence, once more popped back through the out-curtain.

Allixter sighed. Pushing the Linguaid ahead of him, he stepped through.

III

ALLIXTER stood in a wide corridor tiled with vitreous white squares. Ahead of him Joe slid through a tall vaguely Romanesque archway. He followed and came out on a pavilion open to the sky. The floor was the same vitreous tile, squares six feet on a side. It was innocent of furnishings or fittings. Around the edge of the floor pipe-stem columns supported a disproportionately heavy pediment and Allixter paused in trepidation, half-expecting the whole construction to buckle and fall crashing at his feet.

He walked cautiously out into the center of the pavilion, noting a trembling underfoot as of heavy machinery. In renewed apprehension he estimated

the stability of the columns and was not reassured to find them quivering and swaying. Joe seemed oblivious to the danger. Allixter gingerly approached the edge of the pavilion, every instant expecting the precariously-perched pediment to land on his head.

The view was different from the outlook across the drab sea of ash. From here the panorama, if strange and unearthly, had a certain haunting charm. A long murky valley lay cradled between two low hills. Two or three miles distant, at the bottom of the valley, lay a glass-calm lake and the mirror of its surface reflected the swarm of many-colored suns.

Along the hills purple shrubs grew almost like Earthly vines and in the valley black-green paddies lay in rectangular blocks to the limit of his vision. He noticed what appeared to be a village about halfway to the lake—a row of neat sheds open at front and rear under a line of spindle-shaped lime-green trees like Lombardy poplars.

There was a sharp sound, a terrific crack which reverberated across the valley. Joe screeched, ducked back, huddled trembling in the middle of the pavilion. Allixter, all goose-flesh lest the pediment topple and crush him, nevertheless could not tear himself from the spectacle in the valley.

The hill to his right had opened in a vast split at least a mile long and perhaps a hundred yards wide. A sheet of white flame issued from this seam and blasted up at a slant clear across the valley. Heat seared Allixter's face and he dodged behind one of the slender columns, which shuddered and swayed before his face.

"Phew!" said Allixter to himself. "This planet is a poor place to plan a vacation. No wonder it's a wreck!"

Joe came cringing up beside him like a frightened dog in search of comfort. Allixter grinned in spite of himself. "I can see why these boys act like they're scared to death. No telling where the next outburst takes place."

He studied Joe with a new concentration. Round dull-eyed face under a ludicrous head-dress, face without expression, coincidentally human. Round arms fringed with black hair, round sinuous legs joining the torso like pipes to a boiler.

Allixter speculated as to Joe's ultimate motives. Whatever they might be, whatever thoughts passed through the creature's organ for thinking, they were certainly indescribable in Earth terms. "We've got something in common, Joe," said Allixter. "Neither one of us wants to be blown to smithereens."

There was one vestige of cheer to be derived from the situation, thought Allixter—Joe's mental patterns were not those of an evolutionized predator. By Gram's Theorem the carnivore that evolved to civilization retained the ferocity and callousness of his prototype. The herbivore tended to placidity, discipline and convention—while the omnivores were erratic, prone to nervous disorders and unpredictable emotion.

Joe tugged at Allixter's arm. Allixter held back a minute, then relaxed and followed. "There's no point in thwarting you; I'll never get home. Perhaps even now you're taking me to the out-tube—and that reminds me, I must watch for any small trinkets to take back with me. A man can't get rich on a thousand franks a month."

He swept the spangled sky with curious eyes. "I must be in the heart of a cluster—maybe past the Milky Way. I'm a long way from home. It's avarice which has brought me out here, the old fault. Oh well, let's see what good old Joe wants."

Joe led him around the side of the pavilion along a walk built of thin stone slats. Allixter felt them vibrate and throb under his feet as if to the impulse of powerful machinery nearby. Behind the pavilion rose a hill. A stone building thrust forward, its after end under the slope.

The walls were great rusty gray-yellow masses of masonry, studded and

strapped with metal bars like a fortress. The walkway of stone strips came to an end. They trod on the bare ground and it thudded and throbbed with an ever heavier pulse. Joe stopped at a heavy door which, slightly ajar, vibrated on its hinges.

Joe squeaked, Allixter turned on the Linguaid.

"Large machine bad. Build good. Danger. Large machine wreck friend one. Friend two," here he tapped Allixter's chest. "Friend two. Build man come through hole. Go see large machine. Danger. Wreck friend. Large danger. Large machine enemy. Make large wreck."

Allixter gingerly approached the door. "You don't make the project sound very inviting." He squinted through the slit into a large bare hall. The floor was flagged with great squares of polished red stone eight feet on a side. The walls were faced from floor to ceiling with rectangular panels, evidently removable. Where one of the panels had been swung aside Allixter glimpsed masses of exquisitely complicated and delicate machinery.

A track appeared to make a circuit of the hall; at the range of Allixter's vision a trolley supported a high black case. From the controls and dial-settings at one side this mobile case appeared to be another massive mechanism.

Such were the inorganic aspects of the hall and Allixter noted them with a single glance. Then he gave his attention to another object, at once more interesting and fuller of implications regarding his own future. It was a corpse on the floor—a man with a crushed skull.

THE face of the dead man was gaunt and greenish-yellow. His body was thin, his skin stretched taut over sharp bones. The entire effect was that of an exotic bird cruelly stripped of its feathers, murdered and flung in a heap.

The body had apparently lain in its

present state for several days and Allixter was glad that in his air-film he was not forced to breathe the air of the hall.

Breathing—he scrutinized the corpse once more. No air-suit or head-dome was in evidence. The man had been able to breathe the halogens which poisoned the planet for an Earthman. Odd, reflected Allixter. Joe pushed him forward. "Go. Large machine wreck. Danger."

Allixter held back. "Desire life. Desire avoid danger. Fear."

Joe said, "See." He opened the door, slid inside with a sidewise motion. As he loped around the hall he pumped his shoulders furiously, squeezing forth a steady flow of shrill sound.

"Joe," said Allixter admiringly, "if we were back on Earth I'd take you to Scotland and list you with the Queen's Own, where you'd play lead bagpipe without the bagpipe. My, how you'd look in the Cameron kilts."

Joe never halted his trumpeting till once more he joined Allixter outside the door.

"Go," said Joe. "Talk, danger absent. Silence, danger." He tapped Allixter's chest. "Large machine build-man come through hole, build large machine."

The first glimmerings of enlightenment came to Allixter. "I think I see it. There's some kind of machine in there you want me to fix. It's dangerous if it's not fixed and it's dangerous while I'm in there unless I keep talking." He uttered a sharp bark of laughter.

"Schmitz should see me now. He calls me the Silent Scot and now I'll be talking and prattling like a jay. Oh well." He sighed. "A thousand franks a month is security for my old age—so long as I survive my job. And I'll never starve."

He looked into the hall once again, chewing his lip in frustrated silence and wishing he had established the interrogatives in the native language.

"I may be the world's best mechanic," said Allixter, "but coming cold-turkey

on an off-planet machine, not knowing what's wrong with it, not even knowing what it's supposed to do in the first place—this is the stuff old Willy Johnson died from."

Joe prodded him anxiously. Far in the distance he heard a great thud, a blast as of an enormous explosion. Joe quivered, squeaked in agitation, fanned the quills of his headdress in all directions.

"A man dies but once," reflected Allixter, "and if it's my time to go at least the Chief and Sam Schmitz won't have the satisfaction of hearing about it."

He pushed the door wide and was about to step into the room when Joe pointed over his head, squeaked, "Danger."

Allixter looked up. Overhead a great hammer, swinging from a ball and socket joint in the center of the ceiling, hung cocked back against the wall—apparently the agency by which the corpse on the floor had been crushed.

"Danger," said Joe. "Talk many."

Allixter entered the hall, pushing the Linguaid before him. "I wish I was home," he said in a loud voice. "I wish I knew where the tube came out. So near and yet so far and here I am depending on my voice for my life like a canary."

The Linguaid, picking up translatable words, squeaked and groaned so that the hall rang with mingled sounds.

Allixter thought, "Why should I talk when there's a perfectly good mechanical talker right here under my hand?" He pushed the Linguaid to the middle of the hall, set the index so that Cycle A was repeated, together with Joe's recorded interpolations. Now, he thought, there should be sufficient sound to distract anyone.

WARILY eyeing the poised hammer Allixter scrutinized the hall. Beyond doubt repairs to the machinery had been under way when death had stopped the hand of the mechanic. Panels had been removed from the wall and the face of the mobile unit had been demounted.

Various cams, gears, shafts, assemblies of indescribable nature mounted in small cases, lay neatly in a tray beside a rack of tools. Apparently the mechanic had barely started when—Allixter turned an anxious glance at the poised hammer.

No, thought Allixter, too precarious—too chancy.

He climbed up the side of the mobile unit. Perching on the top he took from his belt the heat-torch which served him both as weapon and tool. Stretching across the gap he played the torch on the shaft. Fire spattered, the metal melted in a shower of sparks, the hammer dropped with a clatter, missed the Linguaid by inches. Allixter clapped a hand to his forehead, jammed the torch back in his belt.

A voice cried out in the native tongue, screaming, hissing, groaning, protesting. Allixter hurriedly descended to the floor, stood searching the source of the voice. The sweat running off his back made small rivulets down his spine.

He was alone in the room.

The voice continued, and after a moment he located its source—a metal diaphragm at the far end of the hall. Directly above a many-faceted lens about six inches in diameter was mounted so that it projected slightly into the room.

He wheeled the Linguaid close, said, "Friend, friend. Come out, see." It must be a fellow to the corpse, thought Allixter—perhaps one who watched by remote vision through the many-faceted lens.

The speaker said in English, "Build across many words. Build wordsthrough machine."

Evidently the watcher was an intelligent being, thought Allixter. Very well, Cycle B. He started the sequence but the voice made no attempt to supply words for the automaton. It said, "Man talk. Man talk."

"Ha-hmm," said Allixter to himself. "The chap is sensible enough, wants to learn English. It seems that I do the

talking rather than he. I suppose this is covered in my salary although it's true that I signed on as a mechanic and no blooming linguist. Ah, well . . ."

He settled to the task and supplied English words for the depicted sequences and relationships.

Cycle B, with the pronouns, was complete. He started Cycle C. The voice said, "More words, faster. All comes understood and remembered."

"Hmm," muttered Allixter, "I've got a ruddy genius on my hands. The chap has a mind like a sponge. Very well, I'll give him as much as he can take." And he described the screen situations in great detail, supplementing the prime concepts with additional nominal and verbal materials.

In two hours he had completed Cycles C, D, E and F—normally the work of a month.

As he flicked off the switch he said, "Now, my friend, wherever you are, you should be able to talk to me and maybe you'll answer a few questions."

IV

HIS own voice returned from the speaker. Allixter stared in surprise. "Ask—the files will return information. That is their function."

"First . . ." Allixter paused. What was first? As he considered he heard a grind, a swish. Overhead the stump of rod swung toward him. If the hammer had yet depended Allixter would have been mate to the corpse on the floor.

Allixter crouched in alarm. "Who's trying to kill me? Why? All I want is to get back to Earth."

The speaker said with disarming calmness, "The protective instruments try to kill you because the inhibitor circuit is disorganized."

Allixter said with a worried glance at the corpse, "How am I supposed to survive?"

"A constant impulse from the attention units drains ergs from the B-sub C monitor and holds the relay open. As

long as you supply material that occupies the attention banks the automatic protective devices will not function."

"I'll try as hard as I can," said Allixter. "Is conversation safe?"

"As long as attention is occupied. Three seconds is the critical lapse. This is the time required to leak the charge past the relay condensers."

"Who are you? Who's speaking?"

"The voice is the courtesy unit of the Planet Machine."

"What's that again?" asked Allixter in puzzlement.

The message was repeated. Allixter stared in bewilderment and awe. "As I get it then you're a kind of—robot?"

"Yes."

Three seconds passed swiftly. Hurriedly Allixter asked, "What's your function? What do you do?"

"When in repair machine directs world-wide installations which collect energy from the suns, apply this energy to the designated uses."

"Which are?"

"Machine mines ore, smelts, refines ore, alloys and machines finished metal parts, manages photo-synthetic tanks producing fluoro-silicon and fluoro-carbon compounds, combines and fabricates items in Classification Zo, Schedules Ba-Nineteen through Pec-Twenty-five. When complete, products are delivered to the master-planet Plagigonstok through the transfer."

Allixter found a hint of enlightenment in the explanation. "I understand then that this planet is a colony of another world? Plagi—Plagi—something or other? And the natives, where do they fit in?"

"The natives supply what unskilled and flexible labor may be necessary. They are paid in commodities."

Allixter glanced at the corpse. "Where are all the—what do you call them?"

"Question is inexact."

"What kind of man is that dead creature on the floor—what race?"

"He is a Plag, a Lord of the Universe."

Allixter snorted. "Are there any

others nearby?"

"There are twelve similar in condition to this one."

A small chill ran along Allixter's neck. "What do you mean—similar condition?"

"Body functions disrupted by disorganization of mental centers."

"Dead?"

"Dead."

"You killed them?"

"Protective instruments killed them."

"Why?"

"Inhibitor circuit is not functioning. Machine is fundamentally ordered not to kill Plags. This order is occluded. Now machine kills Plags freely without inhibition and destroys Plag installations at random."

"Then why don't you kill the natives?"

"Inhibitors concerning autochtones are still in place. Machine protects autochtones. Machine kills alien life-forms who enter this room, the mental center of the machine. You survive only by accident—attention units, draining from B-sub C monitor, shunt out exterminators."

Allixter grimaced. "There's a serious oversight somewhere."

THE machine was silent. Allixter waited for a reply. One second—two seconds—he realized with a prickle of urgency that the machine responded only to questions, that the circuits were not set up to exchange small-talk with casual passers-by.

He blurted, "Yes. No. I've seen robots and calculating machines and automatic mechanisms but I've never seen anything like you. You're a pretty big piece of machinery—er, aren't you?"

"Yes."

One second—two seconds. Allixter's mind was blank.

"Ah—the Plags built all this machinery?"

"The Plags organized the nucleus, consisting of planning, engineering, mechanical, energy and operating seg-

ments, delineated the ultimate ends desired. Subsidiary elements were conceived by the planning segment, designed by the engineering segment, constructed in the central factory. The entire planet is now noded with various agencies which the planning segment considers useful."

"Why all the blasting? The exploding buildings, the hillsides spitting out fire?"

"Installations benefiting Plags are being destroyed. Destructive agencies exist. Inhibitors formerly restrained them. Now inhibitors are cut out. Destructive agencies go into effect at random."

Allixter grinned. "The Plags won't like this—will they?"

"Accurate information unavailable."

"How will the Plags fix the machine?"

"No information. As soon as Plags arrive they are killed."

"How come the natives were waiting for me at the in-curtain?"

"Precise information unavailable. Possibility exists that they dispatched message to Plagigonstok requesting service crew, and awaited reply."

"Ah!" Allixter nodded sagely. "How long has the machine been out of order? And why did not the Plag service man repair it at once before it went out?"

"When machine is in disrepair the maintenance unit moves along tracks to the rupture and makes the necessary renewals. The service mechanic never repairs the machine. It is too complex. In this case the maintenance unit was out of order and the mechanic was occupied in repairing it. Then the inhibitor circuit fused. The fundamental orders went into effect and the exterminators killed the Plag."

Allixter sighed. Then, remembering that sighs occupied time, he said, "How can I extend this three-second time-limit? I can't stand here forever asking you questions."

"You can supply problems to occupy the attention units or better you can repair either the inhibitor circuit or the maintenance units."

"And while I'm working you kill me?"

"Yes."

"Why does a chicken cross a road?"

"Presumably the motivations and restraints in reference to the prospective action settle into an equilibrium which prompts the motion rather than the stasis."

"When do two and two make three?"

The voice said, "Attention bank will be occupied with the problem for six minutes. This is the time necessary to explore all possible conditions in all the various regimens of mathematics built into my nucleus."

Allixter glanced at his watch. "Good. I'll have time to think up some corks in the meantime."

He relaxed, dented the film of his head-bubble to rub at his forehead. Six minutes—would he ever sleep again? And the old life back on Earth! With longing and nostalgia he thought of Buck's Bar at the Hub, the familiar faces around the walnut oval, the big glass steins foaming over the top . . .

He brought himself back to the present. Apparently his future would be occupied in entertaining this planetary robot in puzzles, riddles and mathematical recreations. At least, thought Allixter with a sour grin, he knew how to tie it up for more than three seconds. The thing to do was to get to the source, repair the machine. What the devil was wrong with it? The inhibitor circuit? The maintenance unit? Both out—a sorry situation. The repair system exists to keep the machinery operating but there was nothing to repair the repair system.

HHE SAUNTERED across the floor, examined the interior where the side panel had been removed. Complexity upon complexity, unfamiliar shapes, conductors and leads, rank on rank. There'd be a month's work merely tracing down a corner of the mechanism.

He picked up one of the tools. My word, thought Allixter, there's some fine equipment here. Now if I could patent

this little pocket winch, I'd make myself a cool million. And what's this? It's a saw, by golly. I'd never have believed it . . . Why I could poke this arm a yard into nowhere and the teeth would slice through hard alloy. Clever, these Plags.

But this conductor appliance, we've got the same thing on Earth. Same design, identical—strange. One of those odd coincidences you notice when you run back and forth world to world . . . My Lord, the time. He looked at his watch. Five seconds.

But he was in no immediate danger. The robot had much to report. "Filed under solubility indices there exist a number of situations where two units of one substance and two units of another substance, mixed, result in three units of an end substance. These are not rigorous cases and may be dismissed. However in the case of . . ." The voice droned into mathematical terminology which meant nothing to Allixter.

He listened five minutes but the flow of symbology showed no signs of coming to an end. Attending with half an ear he paced back and forth, examining the hall. The red tiles of the floor were of a rubbery substance, laid with microscopic precision.

Allixter hacked out a sliver with his knife, dropped it in his pouch. There'd be a fortune in it, back on Earth—rubber to resist fluorine. His fingers hit a hard round object, an unfamiliar shape. He drew it out.

Ah, the little sea-crystal which shone with such intriguing shafts of radiance. Only twenty-four hours before he had picked this little ball off the beach of—what was that planet?—and now . . . Allixter grinned sourly. A thousand franks a month to nurse lunatic robots to sanity, to wander a strange gray planet, looking for the tube back to Earth. It might be underfoot, it might be ten thousand miles north, east, south, west.

He noticed the door. It hung a trifle ajar. He walked forward to open it. If

things got rough he could retreat. The door moved. *Click!*

Allixter cursed. Deceitful little devils! There was silence in the hall. He became aware that the voice had ceased. In its place sounded a sharp hissing.

He twisted anxiously. "What's going on?"

His own voice from the speaker said, "Protective system has been engaged. You are being smothered by an atmosphere of pure nitrogen."

"I see," said Allixter. He gingerly felt the surface of his air-film. "I don't care to be killed. Maybe we had better concentrate on—"

An explosion shook the machinery, jarred him from head to foot. Outside he heard the anguished squeaks of the indigenes. "Good God, what's that?"

"The scavenging and rural simplification program, uninhibited by safety precautions, is leveling useless relics of past operations. A great number of fabricating and—" the voice whirred and gurgled. "No word on file for concept. Plag industrial plants are being destroyed, there is no order on file to contravene demolition—"

Allixter said hastily, "For God's sake don't wreck the space-tube. That's how I get home!"

"Orders placed in appropriate file," said the dry voice.

"We'd better get your inhibiting circuit back in order before—" A staccato burst of explosions like the discharge of a string of firecrackers cut him off short. Allixter continued shakily, "I was going to say, before you do any real harm."

V

ALLIXTER asked, "What's the fastest way that circuit can be put back in working condition?"

The robot said, "The maintenance unit is designed to adjust, tune, lubricate and replace the worn parts of the circuit in four-point-three-six minutes. A Plag mechanic can perform the same routine in twenty-six hours."

Allixter scowled at the mobile repair unit. "What's the best way to get the repair machine going?"

"No data on extent of damage."

Allixter said sarcastically, "You're a fine robot—don't even know what's going on in front of your nose."

Was there a trace of near-human tartness in the reply? "Machine's optical system cannot penetrate opaque panel."

"Whereabouts on the track can you see?"

"Radian two-point-six-seven, as indicated in white characters, is optimum."

Allixter sniffed. "I can't read those characters. They're in Plag writing."

"Information filed appropriately," came the toneless acknowledgement.

Allixter said, "I'll move the unit—you tell me when you can see. In the meantime," he said thoughtfully, "you can compile a list of prime numbers ending in the digits seven-nine-seven."

The speaker made a bleating sound which once more seemed to carry near-human overtones. Allixter set his shoulder to the mobile unit.

It moved slowly around the track. At last the speaker said, "Optimum." Then, "The list of the first hundred prime numbers ending in the digits is as follows—"

"File them," said Allixter. "Give your attention to this machine. And don't try to kill me while I'm busy. Do you agree to that?"

The toneless voice said, "Protective mechanism acts independently."

"Okay," said Allixter. "You seem to be interested in mathematics. Suppose you make a list of prime numbers which when multiplied by the prime numbers immediately before and after, and the product taken to the sixth power, divided by seven and the remainder dropped, yield a prime number ending in the digits one-one-one."

The speaker stuttered, rumbled.

"These calculations will be performed," said Allixter, "when your attention is not given to the repair job. Now, what's first?"

"Remove panels from both sides."

Allixter obeyed.

"Unclip copper band from half-inch stud, pull pin from cam shaft, cut welding away from bearing clamp . . ."

The machine was well-lubricated, well-engineered. After a half-hour's work Allixter discovered the cause of the breakdown—an L-toggle which had failed at the joint.

"Spring back double spirals with tool in corner of tray. Grip shaft with clamp, turn ninety degrees—prongs will separate, releasing ruptured part."

Allixter did as he was bid and the offending part came loose.

"Material is all standardized," said the machine. "Spare toggle will be found in third locker at opposite end of hall."

"Keep busy on that little list of numbers while I'm getting the bearing," said Allixter.

"Memory banks have capacity for eight billion digits," announced the robot. "Bank is half-full now."

"When the bank is full discharge it and start over."

"Instructions filed."

Allixter crossed the floor, passed the crumpled body of the Plag. In sudden curiosity he turned it over with his foot, looked down the front. It was definitely human in all the primary characteristics, though the nose and chin were long and gnarled, the skin a peculiar plucked-chicken yellow, the hair like steel-wool. The creature wore a garment of dark green velvet, lustrous and rich where the light struck fair.

"That's odd," said Allixter to himself, reaching down, tugging at a small metal loop. "A zipper. First one I've seen on an off-Earth garment. Now if he was only equipped with something *better*—I could take it back, patent it, make a million—and then when the Chief says, 'Run this blasted errand, fix that blasted tube, wipe the nose on that starving Mafekinasian,' I'll say, 'Chief, that thousand franks you insult me with every month . . .'"

He stared at the dead Plag, scrutinized the face, the zipper, and then, pulling his lip back in distaste, searched the body.

THERE was nothing in the pocket save a pair of small metal objects like keys and a fiber-bound notebook inscribed with green-black ink. In the pouch were a few small hand-tools.

Allixter, whistling softly, found the L-toggle, returned to the repair unit. "Robot."

"Attending."

"This inhibitory circuit—was it entirely blown out, totally inoperative?"

"No."

Allixter waited but the robot, having answered the question, found no reason to expatiate. He nodded wisely. "I didn't think so. Any organism with as much power and responsibility as you would need almost as many positive inhibitors as there are possibilities for action. Right?"

"Right."

"For instance, the inhibitor against killing the natives holds. So does the inhibitor against burning out all your own fuses. And it seems that if you really had a powerful urge you would find little difficulty killing me. In other words the mere exciting of your attention units would not disturb a deep-seated impulse to kill a presumably hostile alien."

The robot asked, "How many times do you wish the memory banks filled with prime numbers ending in one one one and discharged?"

"Are you getting bored with the problem?"

"Concept incomprehensible."

"Well—just for the sake of novelty consider each square foot of the planet in turn, compute the chances of a ten-pound meteor plus or minus six ounces striking each of these square feet in the next ten minutes."

The speaker was silent except for a faint buzzing. Allixter continued with the pattern which was gradually form-

ing in his mind. It was large, it was of such great scope and implication that he found it incredible—at first.

Allixter went back to the corpse, looked in the frozen face once more. He turned toward the speaker. "What sections of the inhibitor are burnt out?"

"Shreds R eight-sixty-six-ninety-two through R Nine-eleven-ninety-one."

"And these refer to the Plags?"

"Yes."

"To such an extent that in the place of the inhibitor preventing you from harming a Plag or a Plag construction you are now more than likely, if not certain, to destroy everything Plag on the planet?"

"Yes."

Allixter mused a moment. "Where is the out-leading space-tube?"

"On the north side of this building a door of yellow metal opens into a large warehouse. At the rear of the hall is the terminal."

"What is the setting for Plagi—Plagi—" Allixter shook his head. "The Plag planet?"

"Phase ten, frequencies nine and three."

"In what kind of units?"

"In Plag units."

"Translate these into Earth units."

"Phase eight-point-four-two, frequencies seven-point-five-eight and two-point-five-three."

Ha, thought Allixter. There'd be some surprises—lots of surprises in high places. When they started to pull wool over human eyes, they should have selected someone other than Scotty Allixter. There was still another aspect to be considered. "What are the dial settings for the Earth station?"

The speaker made a series of squeaking sounds.

"Describe the settings in English."

"Dial one on top—set at the symbol resembling a B on its flat side. Dial two—set at the symbol resembling N inside oval. Dial three—set at symbol consisting of two concentric triangles."

Allixter searched in his pocket for a

convenient piece of paper, brought forth the bubble with the changing colors, put it back, found the notebook, scribbled the information, tucked it back in his pouch.

"Now," said Allixter, "I'm going to the inhibitor bank. I want to excise the particular inhibitions which are now burnt out entirely and permanently. What is the easiest method?"

"Beside the panel is a series of dials and a plunger. Set the dial correctly, press the plunger. This act erases significance from the shreds."

"Fine," said Allixter. "Then when the circuits are repaired, they'll still be blank?"

"Correct."

"Excellent." Allixter went to the dials. "Now tell me how to find the right settings."

The robot described the symbols, Allixter set dials, punched, set dials, punched, set dials until his wrist ached.

"Now—those inhibitions are permanently erased?"

"Yes."

"And you'll destroy every Plag who sets foot on the planet?"

"Machine has no instructions to the contrary. Plags will be obliterated."

"How do I create new inhibitions?"

"Connect with a vacant shred, voice the order."

"Connect me with a vacant shred."

"Contact made."

"It is forbidden to kill me."

"Command conflicts with basic order. Command has been held up by monitor circuit."

ALLIXTER gritted his teeth in vexation. "How the devil can I get home then? As soon as I leave you alone you will take steps to kill me."

"Problem contains variables without predictability."

"Thanks for nothing," said Allixter. "In other words I figure it out for myself. Okay—let's see. You're still working that problem I gave you?"

"Yes."

"How near done are you?"

"Approximately half done."

"You're swift."

"Computation of such material is largely automatic."

"Hmm." Allixter rubbed his chin through the air-film. "Contact with a vacant inhibitor shred."

"Contact made."

"Do not destroy any installation which will harm the natives or interfere with their livelihood."

"Instructions noted."

Allixter hesitated, eyed the mobile repair unit, looked it up and down with a doubtful eye. "If I put this machine back together will it hang that big hammer in place again?"

"Yes."

Allixter grimaced. "Well—let's get on with it."

He replaced the mechanism of the repair unit according to the instructions from the robot, set the facing panels back in position. The mobile unit remained quiet and lifeless. "How do we start her going?" asked Allixter.

"The control box at the back is fitted with a primary switch. Throw it down."

Allixter hesitated. There were too many unpredictable possibilities. He asked cannily, "What is the first job the repair unit will handle?"

"It will replace the damaged sections in the inhibitor banks."

"But they're blank now?"

"Yes."

"Then what?"

"It will lubricate bearing KB-four-hundred-eight, which is warm, and replace a chafed insulation in the Paradox Resolving System."

"When will it hand up the hammer?"

"In eighteen-point-nine minutes."

"Hm," mused Allixter. "That's time enough to get me out of this hall but otherwise . . . Will I be able to set the dial on the transfer tube and leave the planet before some other violent action occurs?"

"Problem contains unpredictable variables."

Allixter paced back and forth. "If I fix the machine's attention I'll get away. If not, I'm executed as an undesirable alien. All robots should have hobbies, something to keep them occupied, out of mischief. Now maybe . . ." He hesitated. "It'll cost me money." He considered carefully. "But what's a few franks compared to the value of my life?"

He pulled the quartz sphere from his pocket and the little crystalline creature inside glowed, glanced, sparkled in changing colors—hyacinth, rose, sea-green. Allixter set the sphere on the lip of a chin-high molding. "Can you see the little sphere?"

"Yes."

"You see those colors?"

"Yes."

"Observe this sphere and those colors. This is to be a hobby for you, to amuse you through the lonely hours of the night. You're to predict the color next to appear. When you are wrong review your computations and predict once more."

"Instructions noted." said the robot.

Allixter touched the smooth quartz ball. "Now, my little jewel, be as erratic as you like. I'll bet on any free-will tippet of life to beat down and confuse a machine, no matter how complex and how wise. So shine all your pretty colors and shine 'em as wild and clever as you know how." He flung the switch on the mobile repair unit.

The door was still locked. Allixter burnt it open with his heat torch, stepped out on to the path of stone slats overlooking the hazy gray valley. Overhead burned the myriad suns—colored balls of various flames, near and far in the violet sky.

"North is up here," said Allixter. "There's the warehouse and there's the golden door . . ."

VI

THE depot back at the Hub was quiet when Allixter pushed through the tube. The out-belt carried only a few-score

lugs of green-white grapes, a dozen green-painted tanks of oxygen—the lot bound for a mining station on an ore-rich but airless asteroid.

The in-belt was empty and the operator, after letting Allixter through, returned to his magazine.

Allixter ducked past the dispatcher's office but Schmitz spotted him, slid back the glass panel. "Hey, Scotty," he bellowed. "Come back here and turn in your report. You think this is Liberty Hall? Aint'cha read the rules?"

Allixter paused, then turned back.

"Here," said Schmitz, tossing over a yellow form. "Fill 'er out—and after this let's do it without me riding herd on you. After all, I got my job to handle too. You guys run me ragged, ducking in, ducking out, like a bunch of fillies at a tea-house. Then when they come and ask me who's been where and who's done which—"

"Look here, Sam," said Allixter, "I want to use your phone."

Schmitz looked up in surprise. "Go ahead, use it. I don't care. Just so long as you treat me right anything goes. Use my phone, anything. Do like you're supposed to do, I won't kick. My God, man! Where's the Linguaid? The Chief will chew us green and blue if—"

"I left it in the depot." Allixter thumbed through the directory. He looked up. Schmitz was watching him intently, bright blue eyes gleaming like galvanized washers in the round red face.

Allixter closed the book. "No, I think I'll wait. Good day to you, Sam Schmitz."

"Hey!" roared Schmitz. "The report!"

"I'll be back shortly."

"When's shortly? Don't forget I'm responsible for all this, it's me who gets reamed when you guys foul off . . ."

Allixter said in a voice like silk, "Give me fifteen minutes, Sammy old dear. I'll write you a report you'll wish you could take home and frame."

Fifteen minutes passed. Schmitz fidgeted, growled, looked through his as-

signment sheet. "That damn Allixter, he's the worst. Them Scotchmen is all crazy, drink too much of that brown smoke they call whiskey. Thank God for beer . . . Hey now, I believe he's back."

The four men with Allixter wore gray uniforms and they looked curiously alike. All were tall, spare of form, controlled of motion. Their faces were uniformly blunt, their eyes sharp and probing, their mouths tight.

"Heaven forbid!" barked Schmitz. "It's the World Security Intelligence. Now what's Allixter gone and done?" Automatically he reached for the button to the Chief's phone.

"Hold it, Schmitz!" yelled Allixter. "Leave that phone alone!"

One of the WSI men opened the door into Schmitz's cubicle, motioned. "I think you'd better come with us."

Protesting volubly Schmitz followed, hopping and bounding on his short legs to keep pace. The WSI men stood, two on each side of the big green door with the bronze letters. Allixter pushed the button, the door slid back, he entered. The secretary looked up. Allixter said, "Tell the Chief I'm back."

She hesitantly pushed the button. "Scotty Allixter reporting."

There was a pause. "Send him in."

SHE keyed back the lock, Allixter went to the inner door. Now the WSI men entered the office. One strode to the desk where the secretary had made a swift movement for the speaker controls, caught her arm.

Allixter slid back the door. The air, smelling like a laboratory, wafted in his face. He entered with the WSI platoon at his back.

The Chief, sitting at his desk, his back to the light, stirred a trifle, then sat quiet. "What does this mean?" he asked tonelessly.

The WSI lieutenant said, "You're under arrest."

"On what grounds?"

"Grand theft, espionage, illegal entry

to begin with. There may be further charges when a complete investigation is made."

"Got a warrant?"

"Sure have."

"Let's see it."

The lieutenant stepped forward with a blue-bound folder. The Chief glanced down the printed page, his mouth curled sardonically. Allixter thought—all the years I've come into this office, talked with the man, watched him, and only now do I see him as he is, the creature of an outer world with yellow goose-flesh skin and a breath of poisonous gas.

Allixter suddenly noted that the atmosphere, characteristically sharp and medicinal, had acquired a new harsh bite. He yelled, "Get clear, the devil's poisoning us!"

The Chief moved swiftly now, jumped to his feet.

The Lieutenant came forward. "Stop, or I'll shoot."

Allixter flung the door wide and saved his life. From the edge of the Chief's desk a plane of smoky yellow fire slashed out, burnt four men in half. Allixter shuddered back from the crackling ions which, deflected by the metal wall, scorched past an inch from his waist.

Allixter had shed his tools. He was weaponless. He ran to the secretary's phone. She pressed back against the wall, numb and glass-eyed. Allixter pushed the emergency button, bellowed, "Murder, the tube terminal maintenance office—" He heard stealthy motion inside the Chief's office, looked desperately toward the outer door. To escape he must cross the line of fire from the inner office.

Slow footsteps from inside were approaching. Allixter said in a choked voice, "Stick your long nose through and I'll break it off . . ."

The footsteps shuffled cautiously. The Chief was edging close to the far wall to snap an angling shot through at Allixter. He was on the opposite side of the doorcase from the slide button. Allixter pressed the button, the door slid shut.

Allixter dashed for the outer door. As he passed out a JAR rang behind him and the wall across the corridor shattered.

ALLIXTER ran across the corridor into the still quiet depot. He ducked between fifty-gallon drums of acetone, sprang across the near-vacant clerks' platform, jumped up into the operator's box.

Breathless, fighting to make himself speak slowly and distinctly, he said, "This is an emergency. WSI business . . . Open the in-contacts as far as they'll go, set this code—phase eight-point-four-two, frequencies seven-point-five-eight and two-point-five-three."

The operator turned him a wondering glance. "What the hell kind of code is that? I never heard—"

"Shut up!" snarled Allixter. "Set the code! And route whatever you get into depot delivery."

The operator shrugged, turned the dials. "Eight-point-four-two—what was those other readings?"

"Seven-five-eight! Two-five-three! For God's sake, get moving!"

The operator pushed home the activation switch. Allixter jumped down, went to stand by the gold-brown curtain at the point where the belt rolled up out of the floor.

Ten seconds . . . fifteen seconds. He stared into the brown roil, flickering and shot with gleams of light, until—motion. The Chief appeared, looking over his shoulder. He turned his head, his mouth fell open.

Allixter jumped, caught him from behind, flung him to the belt. The Chief's JAR thudded free. Allixter seized it, rose to his feet.

"Now, old man—take it easy. You're caught, fair and square. I'd hate to jar you apart."

Allixter was the center of a respectful audience in Buck's Bar. Beer flowed freely, the finest imports from Germany and the Netherlands, and there was always a ready hand to cover the tab.

THE story had been told several times but among the audience were those to whom some feature of the episode was not completely clear. Of these Sam Schmitz was the most insistent.

"Allixter, look here," he said plaintively. "You come barreling into my office and I never say a word. I'm square with you, like always, but you could of got me in a gang of trouble. You was right, now I admit it, but suppose you was wrong? Then we're both in the stew. Doesn't seem quite the thing to do somehow."

"Schmitz," said Allixter with lofty good nature, "you're talking rubbish."

"But how could you be so sure it was the Chief? I don't see how you even figured there had to be somebody here at the Hub. You say you deduced this and figured that—but it still don't make sense."

"Look at it this way, Sam." Allixter refreshed his throat with a half-pint of Hochstein Lager. "I was sent out on a phony call. For awhile after I landed on that planet I thought it was an honest mistake. But I began thinking. A lot of little peculiarities kept nagging at me. The Chief insisted I take the Linguaid. Why would I need a Linguaid on Rhetus? The answer was the Chief knew I'd be running into natives who spoke from under their arms."

"Then why did he make sure my air-film was Type X, halogen-proof? Rhetus is carbon dioxide, argon, helium, a little oxygen, and we only wear head bubbles. Why? Because he knew the atmosphere where I'd be going was full of fluorine."

"And when I saw the dead Plag on the floor I was bothered by a few other angles. He was dressed in clothes with an Earth-style zipper. Not one *like* Earth-style but a zipper identical in every respect."

"Might have been coincidence," said Buck, the big red-faced bartender.

Allixter nodded. "Might have been. But how about the ball-point pen the guy wrote with and the squirt he carried in his tool-kit?"

"What's a squirt?" asked Kitty, the blond square-jawed B-girl.

Barnard, another maintenance mechanic, said quickly, "New tool, brand new. We carry it now instead of wire. When we want to run current between two posts, we squeeze the trigger on the squirt, the goo comes out, seals itself to the first post. We draw it up, down, around, anywhere we want it to go, touch it to the second post, cut off the trigger and we've got a permanent bond. The outside oxidizes to a good insulator, it sticks where it touches."

Kitty drank Schmitz' beer as a signal of comprehension.

"Anyway," Allixter continued, "when I saw all these items lying around, I thought to myself that sure enough, there's been some kind of contact with Earth. And it's been one-way because I knew I'd never seen any of them long-nosed yellow Plags on Earth."

"And then I thought of the Chief. He looked just like the corpse, maybe a little bit more alive. And I thought awhile. I remembered these other peculiarities. Then when the robot told me his circuits were so jammed that he killed Plags automatically, I figured it all out."

"So?" asked Schmitz.

"The Plags wanted to keep the tube open to the planet—I don't know what the name of their place is. I wouldn't be surprised if they operated a number of these subsidiary worlds, all equipped with robots, each milking the planet for all its worth, shipping the produce to Plag—Plagi—cripes, I never did know how to pronounce that word. *Plagigonestok*—That's it."

"Well, the robot was now adjusted to kill Plags as soon as they appeared. So it was necessary to get a mechanic of another race in to fix the robot. I was the lad."

"Sounds like a case of last resort," growled Buck.

Allixter spread his hands out. "What could they lose? Either I'd fix the robot or I'd be killed. The only other course

open was to send a warship to destroy the robot—and there went one of their assets. So they made contact with the Chief, told him to send his best mechanic out to the place with everything he needed to fix the robot."

SCHMITZ thoughtfully lifted his glass to drink, found it empty. He shot a glance at Kitty, who was fluffing out her hair. "Buck—draw me another beer. Seems to me the Chief might have given you some kind of hint as to what you might expect."

"And have me coming back with the magoo? Not on your life. This way, if I got back, I'd think the whole affair a remarkable accident."

Barnard asked, "How come you knew the code the chief would try to escape on?"

Allixter cocked his thick black eyebrows knowingly. "Well—I told you when I saw all the Earth-style equipment lying around I thought I'd make sure. Maybe I'd made a mistake—maybe we did run a tube out to this Plag planet. So I asked the robot what the code was."

"He gave it to me and I knew it wasn't on our list—wasn't even in our units. The Plags evidently had discovered the tube system independently and set up a network of their own. Somehow they discovered we had a tube set-up and they smuggled in a representative, who became the Chief. Maybe there's more of them around."

"There's one thing I don't figure," said Barnard. "How did the Chief breathe? This kind of air should have smothered him."

Allixter drained his stein before replying. Buck slid it to the spigot, slid it back brimming with foam. Said Allixter, "Did you ever notice the scar along the Chief's neck?"

"Sure. Nasty thing. Must have got in the way of a long sharp Barlow."

"That was no scar. That was a breather tube, running under his skin into his throat. It supplied him with fluorine carried hydrofluoric acid gas back to a filter for absorption. Not that our air would hurt him but it wouldn't do him any good."

Schmitz shook his head. "Should think it would burn out his throat."

Barnard laughed. "Remember the time you offered him one of those crooked black toscanis?"

"Yeah," gloomed Schmitz. "He said he didn't see how I could smoke one of those things and live."

Allixter said, "He wouldn't need anything like the volume of oxygen we breath. A few pounds would last him a long time. Of course there was an unavoidable leak up through his mouth and nose—"

Barnard struck the bar with his fist. "I always claimed the Chief's office smelled like a hospital!"


Schmitz said dolefully, "I wonder what's going to happen now? Is the

[Turn page]

AMAZING THING! *By Cooper*


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government going to send a commission out to Plag—Plagi—you know where?"

"Well," said Allixter, who now found himself regarded as the font of all knowledge. "I can't be sure. They've been robbing us blind, those Plags. All our ideas, tools, techniques—all going out. That's not so bad in itself but they made sure we were getting none of their stuff in return.

"So there was the Chief's function. Send out merchandise—he could get into the depot when no one else was around, or else he could send it out the private escape hatch in his office—send out merchandise, pay for it through some figurehead corporation in platinum or uranium they mined cheap on some robot planet. Or maybe they printed up counterfeit money. The WSI says they found a case of brand new hundredfrank notes in the Chief's office."

"So that's who's been flooding my till!" roared Buck. "I've lost a thousand franks in bum bills!" The enormity of the Chief's crimes now seemed to dawn upon him. He writhed his shoulders, each the heft of a sack of wheat. "Why,

the miserable long-nosed lizard, I'd like to—I'd like to tear him apart with my own hands! A thousand *franks* he's cost me!"

"Tough," said Allixter in a faraway voice. "He cost me five hundred franks too when I had to leave that valuable little jewel behind. But thank goodness, I happened to pick up this scarab out there on that gray planet. Prime yellow fluorspar, a lovely piece, and it's the sacred seal of the indigenes.

"There's only one like it. The Curator of the Out-world Museum told me he'd give eight hundred franks for it but I'd have to wait a month till he could put through a purchase order. Buck, I'll let you have it for six hundred and take the profit yourself."

Buck picked up the octahedron. "Sacred seal? *Humph!* Looks like a lot of chicken-scratches. I'll give you five franks for it and maybe I can unload it on a drunk for ten."

Allixter rescued the fluorspar with an expression of hurt indignation. "Five franks? I'd sell you the right ear off my head first!"



Headliners in the Next Issue



THE WANDERER'S RETURN

A Novel of a Future Ulysses by FLETCHER PRATT



ESCAPE FROM HYPER-SPACE

A Novelet of an Alien Universe by E. HOFFMANN PRICE



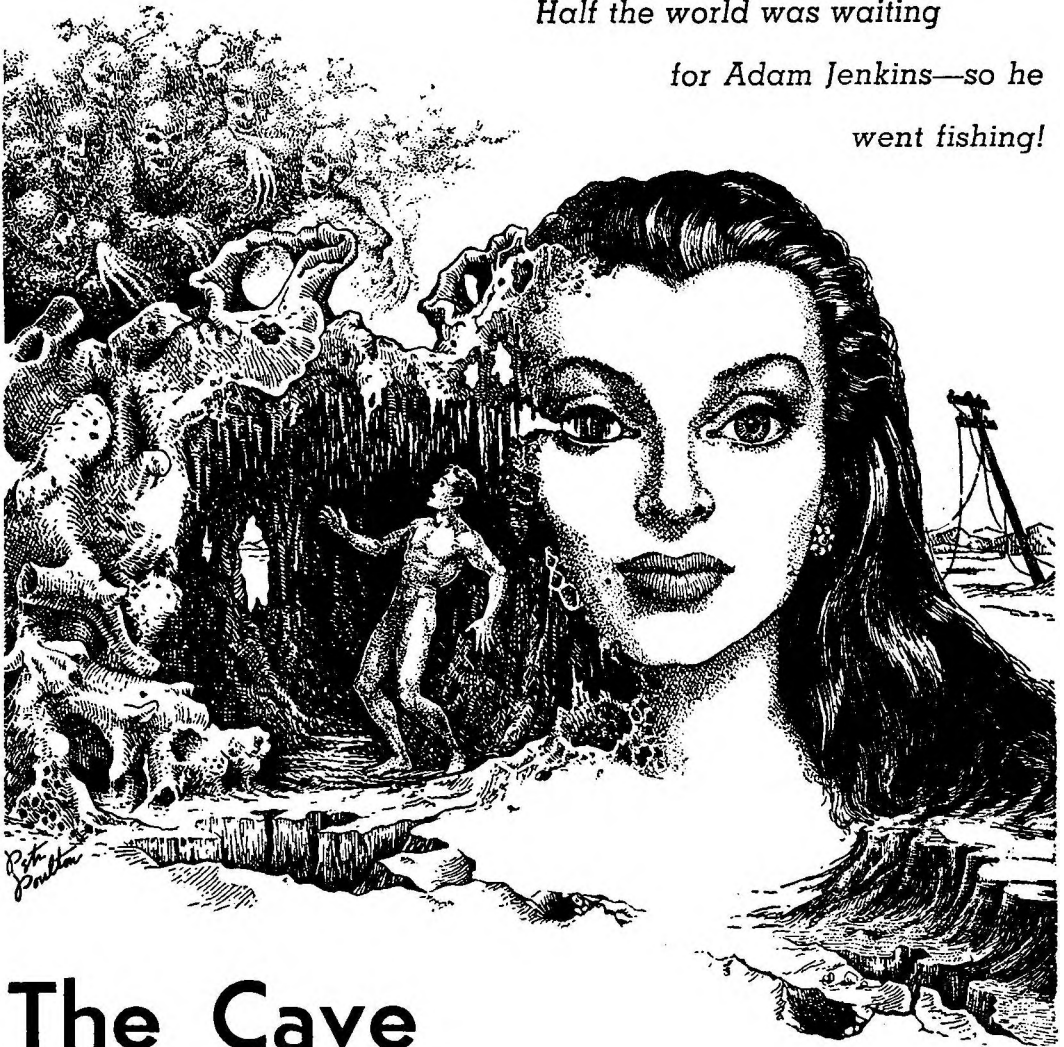
THE SONG OF VORHU

A Novelet of Life's Beginnings by WALTER M. MILLER

Half the world was waiting

for Adam Jenkins—so he

went fishing!



The Cave Where I Am Hiding

By **ROBERT MOORE
WILLIAMS**

LIKE all good scientists, John Cameron had an electronic calculator inside his brain which helped him think. Preparing that calculator for the task ahead of it he went slowly along the path that led down the hill to the little river. At a turn in the path he saw the man he was seeking, knee-deep in an Ozark hill stream, deftly casting a surface bug across to the eddy in the deep water at the edge of the opposite bank, fishing for bass.

Cameron thought—while half the world waits for him to get himself in

gear—the really important half—he did—dles here, fishing!

There was wonder in him and awe, fringe feelings that tell truth's story where words leave off. In him also was a lack of comprehension. He did not understand this, he did not begin to understand it. But he was determined to go into this thing further.

The man fishing in that pool was Adam Jenkins. If you could count the world's top physicists on the fingers of two hands you needed only one finger to count Adam Jenkins. There was only one like him in the world. Was one enough? That depended but Cameron didn't think so.

Across the river on the slope of the opposite hill Cameron caught a glimpse of a big house set among a grove of tall pines. Built of local logs and local stone the house seemed to fit the hillside as if it had grown there too. A lazy film of blue smoke rose from the chimney, forming a blue halo against the dark green of the pines.

The intelligence reports that Cameron had been required to read before he came here had described this house as built to last forever. They hadn't said the same about the woman who lived there with Adam Jenkins, though they had hinted it. The intelligence men had seemed to regard this woman as something of a Lorelei, a witch singing a song sweet enough to lure away from his obvious duty the world's top physicist. They hadn't liked her. Or perhaps "like" was not the proper word to use to describe their reaction, perhaps it would have been enough to say that the intelligence agents had been uncomfortable in her presence.

They hadn't been comfortable around Adam Jenkins either but this didn't mean much. Intelligence men were seldom comfortable in the presence of a top-flight scientist. Secret agents and scientists meet like strange dogs that do not quite understand each other, that bristle and back away, sensing the basic incompatibility of their trades.

CAMERON took a deep breath and went down the hill. Halfway down he began to trot, at the bottom he had begun to run. From the stream Adam Jenkins looked wonderingly at him, pleased recognition mingling with the wonder on his face. When Cameron stopped he was up to his knees in the water. Neither he nor Jenkins thought that strange.

They shook hands as do old friends who meet again after living together through such names as Oak Ridge and Alamogordo and Hiroshima and Bikini. They splashed back to the bank and sat on a log and lit cigarettes and Cameron was hardly aware of his dripping pants and shoes.

"I guess you know why I came," he said.

Jenkins' eyes went across the river. "I guess so," he answered. "Probably the general sent you."

"Uh-huh," Cameron said.

With the tip of his fly rod Jenkins traced a circle in dry sand. "The general was here himself last week."

"He said he was," Cameron answered and was silent. Neither of them mentioned the name of the general but each knew who was meant, a pompous blustering after-me-God-comes man.

Jenkins swore softly. "He's smart. When he failed he sent you."

Cameron twisted uncomfortably on the log. "Adam, it's this way—the general is an ass but he's carrying a load big enough to break a man who isn't sure he's right all the time. If he ever doubted himself just once he wouldn't be able to carry it."

"I know," Jenkins said. He mused. "The way the world is run it has to have generals. I guess it's my duty to understand that, but sometimes it's hard."

"Yes," Cameron agreed, his voice touched with a dryness of which he was not aware. "Adam, the general needs you."

"He does?"

"Adam, it's the hydrogen bomb we're building."

"He sends a major, then a colonel and when both fail he comes himself. When he fails he sends my best friend. What was that you said?"

"We're building the hydrogen bomb and we're stuck. Adam, we need you." Cameron spoke swiftly, the words running out of him in little gusts of sound as if he were determined to get them said no matter what the saying cost. And he knew how much they cost. He waited for an answer.

"The hydrogen bomb. . ." Jenkins murmured.

Cameron was silent. Now was not the time to make offers of money or rank, to try to trade nothing for something—now was not the time to talk of patriotism, the "ashes of his fathers and the temples of his gods." Was there ever a time to talk to this man of these things, to beat again old drums out of earth's past? Cameron doubted it.

The general had tried and had got some short answers that had kept him in a rage for days. The general had failed to understand that you don't trade horses with a man like Adam Jenkins. You don't offer him anything—you ask him to give you something. And of all the things you could ask him for a request for help was the one thing to which he might possibly respond. And he might not. Cameron held his breath.

"I'm sorry," Jenkins said.

Cameron knew he had his answer.

"For the general, you can skip the sorry part. That's for you. Just tell him no."

"Okay," Cameron said. He hesitated, listening to the thoughts in his own mind. The electronic calculator was going full blast. He could hear countless relays clicking, he could sense the movement of the data tapes, he knew the calculator was searching for an answer to a puzzling problem. And was not getting it. The red, "No answer yet," light was flashing all the time. Was there an answer?

This man, this Adam Jenkins, could ask for any rank up to full general and

get it. If it weren't rank he wanted, if it was money—well, included in the budget for this project were large funds that did not have to be accounted for, that the general could spend at his discretion. The general would spend them like water to buy what he wanted. Could that be bought?

If it were fame Jenkins wanted—no, it couldn't be fame, he had *that* though he seemed to regard it as a worn-out shoe he no longer chose to wear. But if it were fame they would give him degrees from any institution or anything else he might want. Except possibly peace. But he acted as if he didn't much care about that either.

He—who had gone with the atom bomb through the Manhattan Project, through Oak Ridge and Hanford and all the other places and had emerged as the greatest of them all—had, when the war was over, come down here to this hill country and built himself a log house and got himself a woman. Private industry would have given him a job as big as he wanted at any salary he chose to ask. He hadn't asked. Cameron knew Jenkins had turned down dozens of offers, had come here instead. Why?

Even now, with the hydrogen bomb puzzling the wits of competent scientists, Adam Jenkins was still turning down all offers.

"Okay," Cameron repeated. There would be no argument from him. Argument was for fools, argument indicated nothing except a wider area of truth waiting to be discovered. Cameron listened to the microscopic relays clicking in his brain, watched the "no answer" red light flash again and again, spoke in a rush of words.

"Mind telling me why?"

IT WAS Jenkins' turn to twist uncomfortably on the mossy log beside the little river, where the shadows of the afternoon were growing long and in the pools the bass were beginning to splash. "I can try. What do you want to know first?"

"Why did you come here? Were you dodging an atom bomb in the next war?"

The general had hinted at this. "He has picked one of the spots in this country where a bomb is least likely to land," the general had said. The tone of the general's voice had indicated that this might be a coward's way but Cameron had known better. The man who ran from that was not a coward because he ran.

Jenkins lit another cigarette. "I'm not certain there is going to be any next war," he said slowly.

"What? All history—"

"Is history of the past, is a record of the way the human animal has come but is not a guide for the way he may be going. There may not be any next war."

"But now—"

"It might be that one honest man, one really honest man alive on earth today, could turn aside that next war and stop that atom bomb from falling."

Cameron's eyes widened, then closed to slits. Inside his brain the calculator which was constantly integrating this data came up with a tentative answer. "Mystic," the machine whispered. The fringe meanings of the word added a warning.

"One honest man," Jenkins continued. "One man who really understands himself, who knows what is inside of him, one man who grasps the fact that at rock bottom he—and all other men—are altruistic, cooperative, helpful, that all wars, that all competition, all aggressions, are obscurations of this one basic truth—if this one man exists on earth today there may not be any *next* war, any *next* atom bomb."

Cameron's mouth hung open, his eyes built films across his soul.

Jenkins looked far away. "If that man exists there will go out from him a line to the earth. Understanding is contagious, John. Other men catch it, spread it farther still, continue spreading it until the very stars in the sky shout it back at them."

Cameron choked. "The general didn't

catch it," he said and was sorry the instant he had spoken, sorry because what Jenkins had said had lifted up a vision before his eyes brighter than the streets of heaven, lifted it in sudden dazzling splendor.

"We have to give the general a little time," Jenkins answered, unperturbed.

Anxieties and pressures hidden deep inside John Cameron came explosively to the surface. He, who had known better than to argue, argued now, the words rising out of the pressures and anxieties within him. He seemed to forget everything that Jenkins had said.

"But, Adam, you've got to help us. We've got to stay ahead in this race. Our very survival may depend on it."

"John, let me say it again—"There may not be any race.' But if there is a race—well, history does teach us one thing—that the human animal will survive. He is the survivingest animal that has ever appeared on this earth. War, pestilence, famine, flood, drought, the plagues of locusts, possible star collision, he has survived all these.

"He will survive an atom bomb too and a hydrogen bomb, if you succeed in building it. You've got to believe in this animal, John. More efficient tribes have forced the Eskimos back to the edge of the Arctic but they have survived. The Bushmen in Australia still exist."

"But I'm *not* an Eskimo and I don't want to be a Bushman and I—I mean. . ." Cameron tried to decide what he did mean.

"I see," Jenkins said. "You mean this political subdivision called America may not survive. That may be true. Well, it has been a good land and I have loved it with all my heart but I know it has to give way sometime, somewhere, to a better land.

"I didn't mean political subdivisions would survive, I meant the human animal. I don't know what the color of his skin will be or what gods he will worship or what politicians he will honor, if any, but this I know—he will live on in spite of all the atom bombs he will ever build.

And nothing else is of any real importance."

Inside Cameron's mind the calculator was frantically busy with a new integration. "This is either mysticism or basic truth—and vitally important," the calculator whispered.

"Which is it?" Cameron said. "I need to know."

"I don't know yet," the calculator answered. "I don't have enough data to reach a conclusion."

"Where is the data that you need?"

"Who on earth are you talking to?" Jenkins said, amazed.

"You," Cameron said, "or myself. It doesn't matter. Go on. I admit we have survived. What makes you think we will continue to survive? There are forces on this earth strong enough to—"

JENKINS nodded. "I'm going to talk about one of those forces, the strongest force I have seen anywhere on earth. No, it isn't an atom bomb, it's life itself."

"Eh?" Cameron said.

"Life," Jenkins said. "This log is crawling with it, it's in the ground around us, in the trees, in the air. It's everywhere. The human animal is just one form of it, perhaps the most important form—but I don't know about that." This was accompanied by a shake of the head as if evaluation on this point were too difficult even for him. "This life is busy doing something. I'm not at all sure *what* it is doing but I think it is busy building a bridge across time and space."

"Eh?" Cameron spoke again. "But a bridge connects two shores. I don't see either shore this bridge connects and I don't see a place to anchor it."

"Nor do I," Jenkins answered emphatically. "But I see it being built. I see every form of life I know busy setting up the next span of that bridge, the next generation. This force is so strong, it exists in so many aspects, that not even an atom bomb will seriously disturb it."

Cameron was silent. Inside his brain

the calculator had grown wary. It cautiously repeated an echo of an older request. "More data needed."

"This beats the hell right out of me," Cameron said.

"All you have to do is think about it," Jenkins said.

"The general did that," Cameron said. "He thought you had a cave here where you are hiding."

Jenkins laughed, a full-throated burst of merriment. "And so I do—though I'll bet the general would be astonished if he knew where it is."

"Eh? Show me," Cameron said.

"Sure," Jenkins rose. "It's almost time for dinner. Would you come and eat with us and stay the night?"

"Glad to. But your wife, I mean, having me drop in unexpectedly like this. . ."

"She'll be pleased," Jenkins said easily. He spoke as if he knew what he was talking about.

[Turn page]



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They crossed the river and went up the hill together, toward the log house. She met them in the doorway. She was tall, with clear comprehending eyes that were the color of far-off skies. "Company? Good—come in." Her greeting was warm and gracious and friendly. Yes, she was a Lorelei all right. As she turned and went ahead of them into the house Cameron saw that she was pregnant.

The calculator in his mind went into high gear. Spinning electronic cogs, it reached a fast decision. "*Cave!*" it shrieked. "*Cave, cave, cave!*"

"You're nuts!" Cameron gasped, appalled at this integration.

"I am not nuts," the injured calculator answered. "She is his cave. She has to be. There is no other cave anywhere on earth. Ask him. Go on and ask him."

"My God!" Cameron said.

"Who *are* you talking to?" Jenkins demanded.

"I don't know who I'm talking to or what I'm talking about. Is *she* your cave?"

"Of course," Jenkins answered, astonished. "What else could it be? We have a few minutes before dinner. Would you care to see my study and my laboratory?"

The study was a big room, the walls lined with books. It was a comfortable room where a man might study in peace. There were a table and a drawing board, littered with sheets of paper. Beyond it was a laboratory, where equipment gleamed.

"No, I haven't stopped working," Jenkins said. "Probably I'm working harder

than ever before in all my life. But I'm no longer working on things to blow men up—instead I'm working on things to *build* them up." His voice passed into silence. He looked at John Cameron. Beads of sweat were visible on his face. "Now you know why I won't help you build a hydrogen bomb," he said.

"I see," Cameron said and was silent in turn as he listened to the voice of the machine in his mind.

"Data complete," the calculator was saying. "Integration being prepared."

Cameron waited.

"Integration now complete," the calculator whispered to him. "Take action."

"But—the answer?" Cameron faltered.

"*You* know the answer," the calculator growled as if impatient with this delay. "Take action."

Cameron turned to Adam Jenkins. "Adam—could you use another pair of hands?" he said.

The glow in the eyes of Adam Jenkins was a living thing. He wiped the sweat from his face. "I've been waiting for you to say that," he said. "If you understood me you couldn't say anything else. Yes, I can use your hands to help, I can use all the hands on earth. But. . ." he faltered. "The general will be much upset. He sent you down here to get me. Instead, I get you."

"I know it," Cameron answered. "And I'm going to wait here until he comes again."

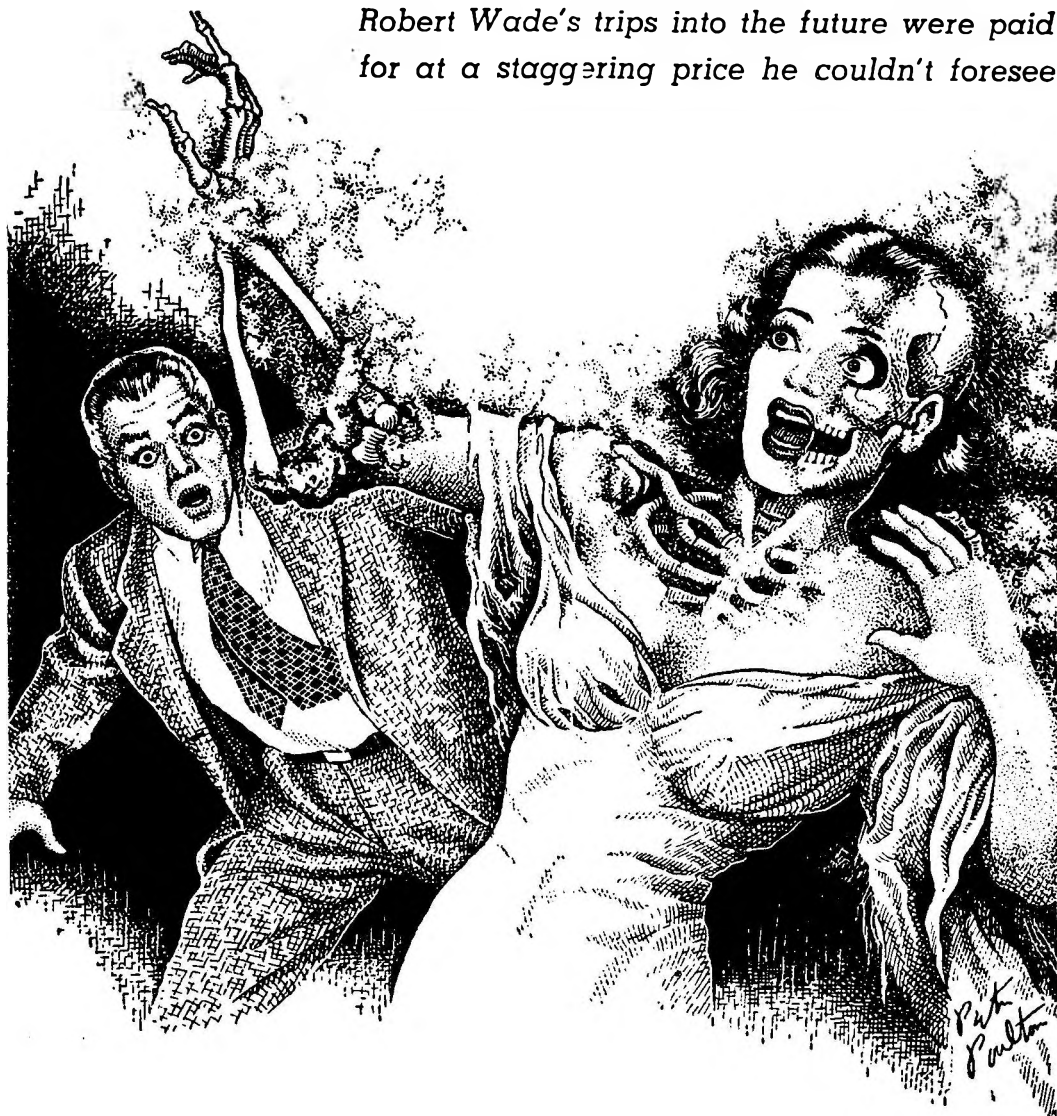
"*Good!*" Jenkins said emphatically. "Essentially that is what we are doing everywhere on earth tonight—waiting for the general."

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Robert Wade's trips into the future were paid for at a staggering price he couldn't foresee



RETURN

by **RICHARD MATHESON**

PROFESSOR ROBERT WADE was just sitting down on the thick fragrant grass when he saw his wife Mary come rushing past the Social Sciences Building and onto the campus.

She had apparently run all the way

from the house—a good half mile. And with a child in her. Wade clenched his teeth angrily on the stem of his pipe.

Someone had told her.

He could see how flushed and breathless she was as she hurried around the

ellipse of walk facing the Liberal Arts Building. He pushed himself up.

Now she was starting down the wide path that paralleled the length of the enormous granite-faced Physical Sciences Center. Her bosom rose and fell rapidly. She raised her right hand and pushed back wisps of dark brown hair.

Wade called, "Mary! Over heré!" and gestured with his pipe.

She slowed down, gasping in the cool September air. Her eyes searched over the wide sunlit campus until she saw him. Then she ran off the walk onto the grass. He could see the pitiful fright marring her features and his anger faded. Why did anyone have to tell her?

She threw herself against him. "You said you wouldn't go this time," she said, the words spilling out in gasps. "You said s-someone else would go this time."

"Shhh, darling," he soothed. "Get your breath."

He pulled a handkerchief from his coat pocket and gently patted her forehead.

"Robert, why?" she asked.

"Who told you?" he asked, "I told them not to."

She pulled back and stared at him. "Not tell me!" she said. "You'd go without telling me?"

"Is it surprising that I don't want you frightened?" he said. "Especially now, with the baby coming?"

"But Robert," she said, "you have to tell me about a thing like that."

"Come on," he said, "let's go over to that bench."

They started across the green, arms around each other.

"You said you wouldn't go," she reminded him.

"Darling, it's my job."

They reached the bench and sat down. He put his arm around her.

"I'll be home for supper," he said. "It's just an afternoon's work."

She looked terrified.

"To go five hundred years into the future!" she cried. "Is that just an afternoon's work?"

"Mary," he said, "you know John

Randall has traveled five years and I've traveled a hundred. Why do you start worrying now?"

SHE closed her eyes. "I'm not just starting," she murmured. "I've been in agony ever since you men invented that—*that thing*."

Her shoulders twitched and she began to cry again. He gave her his handkerchief with a helpless look on his face.

"Listen," he said, "do you think John would let me go if there was any danger? Do you think Doctor Phillips would?"

"But why you?" she asked. "Why not a student?"

"We have no right to send a student, Mary."

She looked out at the campus, plucking at the handkerchief.

"I knew it would be no use talking," she said.

He had no reply.

"Oh, I know it's your job," she said, "I have no right to complain. It's just that—". She turned to him. "Robert, don't lie to me. Will you be in danger. Is there any chance at all that you . . . won't come back?"

He smiled reassuringly. "My dear, there's no more risk than there was the other time. After all it's—". He stopped as she pressed herself against him.

"There'd be no life for me without you," she said. "You know that. I'd die."

"Shhh," he said. "No talk of dying. Remember there are two lives in you now. You've lost your right to private despair." He raised her chin with his hand. "Smile?" he said. "For me? There. That's better. You're much too pretty to cry."

She caressed his hand.

"Who told you?" he asked.

"I'm not snitching," she said with a smile. "Anyway, the one who told me assumed that I already knew."

"Well, now you know," he said. "I'll be back for supper. Simple as that." He started to knock the ashes out of his pipe. "Any errand you'd like me to per-

form in the twenty-fifth century?" he asked, a smile tugging at the corners of his lean mouth.

"Say hello to Buck Rogers," she said, as he pulled out his watch. Her face grew worried again, and she whispered, "How soon?"

"About forty minutes."

"Forty min—" She grasped his hand and pressed it against her cheek. "You'll come back to me?" she said, looking into his eyes.

"I'll be back," he said, patting her cheek fondly. Then he put on a face of mock severity.

"Unless," he said, "you have something for supper I don't like."

HIS WAS thinking about her as he strapped himself into a sitting position in the dim time-chamber.

The large gleaming sphere rested on a base of thick conductors. The air crackled with the operation of giant dynamos.

Through the tall single-paned windows, sunlight streamed across the rubberized floors like outflung bolts of gold cloth. Students and instructors hurried in and out among the shadows, checking, preparing Transposition T-3. On the wall a buzzer sounded ominously.

Everyone on the floor made their final adjustments, then walked quickly to the large glass-fronted control room and entered.

A short middle-aged man in a white lab coat came out and strode over to the chamber. He peered into its gloomy interior.

"Bob?" he said, "you want to see me?"

"Yes," Wade said. "I just wanted to say the usual thing. On the vague possibility that I'm unable to return I—"

"Usual thing!" snorted Professor Randall, "If you think there's any possibility of it at all, get out of that chamber. We're not that interested in the future." He squinted into the chamber. "You smiling?" he asked. "Can't see clearly."

"I'm smiling."

"Good. Nothing to worry about. Just

keep strapped in, mind your p's and q's and don't go flirting with any of those Buck Rogers women."

Wade chuckled. "That reminds me," he said. "Mary asked me to say hello to Buck Rogers. Anything you'd like me to do?"

"Just be back in an hour," growled Randall. He reached in and shook hands with Wade. "All strapped?"

"All strapped," Wade answered.

"Good. We'll bounce you out of here in, uh—" Randall looked up at the large red-dialed clock on the firebrick wall. "In eight minutes. Check?"

"Check," Wade said. "Say good-by to Doctor Phillips for me."

"Will do. Take care, Bob."

"See you."

Wade watched his friend walk back across the floor to the control room. Then, taking a deep breath, he pulled the thick circular door shut and turned the wheel locking it. All sound was cut off.

"Twenty-four seventy-five, here I come," he muttered.

The air seemed heavy and thin. He knew it was only an illusion. He looked quickly at the control board clock. Six minutes. Or five? No matter. He was ready. He rubbed a hand over his brow. Sweat dripped from his palm.

"Hot," he said. His voice was hollow, unreal.

Four minutes.

He let go of the bracing handle with his left hand and, reaching into his back pants pocket, he drew out his wallet. As he opened it to look at Mary's picture, his fingers lost their grip, and the wallet thudded on the metal deck.

He tried to reach it. The straps held him back. He glanced nervously at the clock. Three and a half minutes. Or two and a half? He'd forgotten when John had started the count.

His watch registered a different time. He gritted his teeth. He couldn't leave the wallet there. It might get sucked into the whirring fan and be destroyed and destroying him as well.

Two minutes was time enough.

He fumbled at the waist and chest straps, he pulled them open and picked up the wallet. As he started to rebuckle the straps, he squinted once more at the clock. One and a half minutes. Or—

Suddenly the sphere began to vibrate.

Wade felt his muscles contract. The slack waist band snapped open and whipped against the bulkhead. A sudden pain filled his chest and stomach. The wallet fell again.

He grabbed wildly for the bracing handles, exerted all his strength to keep himself pressed to the seat.

He was hurled through the universe. Stars whistled past his ears. A fist of icy fear punched at his heart.

"Mary!" he cried through a tight, fear-bound throat.

Then his head snapped back against the metal. Something exploded in his brain, and he slumped forward. The rushing darkness blotted out consciousness.

IT WAS cool. Pure exhilarating air washed over the numbed layers of his brain. The touch of it was a pleasant balm to him.

Wade opened his eyes and gazed fixedly at the dull grey ceiling. He twisted his head to follow the drop of the walls. Slight twinges fluttered in his flesh. He winced and moved his head back to its original position.

"Professor Wade."

He started up at the voice, fell back in hissing pain.

"Please remain motionless, Professor Wade," the voice said.

Wade tried to speak but his vocal chords felt numb and heavy.

"Don't try to speak," said the voice. "I'll be in presently."

There was a click, then silence.

Slowly Wade turned his head to the side and looked at the room.

It was about twenty feet square with a fifteen-foot ceiling. The walls and ceiling were of a uniform dullish gray. The floor was black; some sort of tile. In the far wall was the almost invisible

outline of a door.

Beside the couch on which he lay was an irregularly shaped three-legged structure. Wade took it for a chair.

There was nothing else. No other furniture, pictures, rugs, or even source of light. The ceiling seemed to be glowing. Yet, at every spot he concentrated his gaze, the glow faded into lusterless gray.

He lay there trying to recall what had happened. All he could remember was the pain, the flooding tide of blackness.

With considerable pain he rolled onto his right side and got a shaky hand into his rear trouser pocket.

Someone had picked his wallet up from the chamber deck and put it back in his pocket. Stiff-fingered he drew it out, opened it, and looked at Mary smiling at him from the porch of their home.

The door opened with a gasp of compressed air and a robed man entered.

His age was indeterminate. He was bald, and his wrinkleless features presented an unnatural smoothness like that of an immobile mask.

"Professor Wade," he said.

Wade's tongue moved ineffectively. The man came over to the couch and drew a small plastic box from his robe pocket. Opening it, he took out a small hypodermic and drove it into Wade's arm.

Wade felt a soothing flow of warmth in his veins. It seemed to unknot ligaments and muscles, loosen his throat and activate his brain centers.

"That's better," he said. "Thank you."

"Quite all right," said the man, sitting down on the three-legged structure and sliding the case into his pocket. "I imagine you'd like to know where you are."

"Yes, I would."

"You've reached your goal professor—2475—exactly."

"Good. Very good," Wade said. He raised up on one elbow. The pain had disappeared. "My chamber," he said, "Is it all right?"

"I dare say," said the man. "It's down in the machine laboratory."

Wade breathed easier. He slid the wallet into his pocket.

"Your wife was a lovely woman," said the man.

"Was?" Wade asked in alarm.

"You didn't think she was going to live five hundred years, did you?" said the man.

Wade looked dazed. Then an awkward smile raised his lips.

"It's a little difficult to grasp," he said. "To me she's still alive."

He sat up and put his legs over the edge of the couch.

"I'm Clemolk," said the man. "I'm a historian. You're in the History Pavilion in the city Greenhill."

"United States?"

"Nationalist States," said the historian.

Wade was silent a moment. Then he looked up suddenly and asked, "Say, how long have I been unconscious?"

"You've been 'unconscious,' as you call it, for a little more than two hours."

Wade jumped up. "My God," he said anxiously, "I'll have to leave."

Clemolk looked at him blandly. "Nonsense," he said, "Please sit down."

"But—"

"Please. Let me tell you what you're here for."

Wade sat down, a puzzled look on his face. A vague uneasiness began to stir in him.

"Here for?" he muttered.

"Let me show you something," Clemolk said.

He drew a small control board from his robe and pushed one of its many buttons.

THE walls seemed to fall away. Wade could see the exterior of the building. High up, across the huge entablature were the words: HISTORY IS LIVING. After a moment the wall was there again, solid and opaque.

"Well?" Wade asked.

"We build our history texts, you see,

not on records but on direct testimony."

"I don't understand."

"We transcribe the testimony of people who lived in the times we wish to study."

"But how?"

"By the re-formation of disincarnate personalities."

Wade was dumbfounded. "*The dead?*" he asked hollowly.

"We call them the bodiless," replied Clemolk.

"In the natural order, Professor," the historian said, "man's personality exists apart from and independent of his corporeal frame. We have taken this truism and used it to our advantage. Since the personality retains indefinitely—although in decreasing strength—the memory of its physical form and habiliments, it is only a matter of supplying the organic and inorganic materials to this memory."

"But that's incredible," Wade said.

"At Fort—that's the college where I teach—we have psychical research projects. But nothing approaching this." Suddenly he paled. "Why am I here?"

"In your case," Clemolk said, "we were spared the difficulty of re-forming a long bodiless personality from your time period. You reached our period in your chamber."

Wade clasped his shaking hands and blew out a heavy breath.

"This is all very interesting," he said, "But I can't stay long. Suppose you ask me what you want to know."

Clemolk drew out the control board and pushed a button. "Your voice will be transcribed now," he said.

He leaned back and clasped his colorless hands on his lap.

"Your governmental system," he said. "Suppose we start with that."

"... and, as it had done to all other mediums, advertising corrupted television," Wade finished.

"Yes," Clemolk said, "it all balances nicely with what we already know."

"Now, may I see my chamber?" Wade asked.

Clemolk's eyes looked at him without flickering. His motionless face was getting on Wade's nerves.

"I think you can *see* it," Clemolk said, getting up.

Wade got up and followed the historian through the doorway into a long similarly shaded and illuminated hall.

You can *see* it.

Wade's brow was twisted into worried lines. Why the emphasis on that word, as though to see the chamber was all he would be allowed to do?

Clemolk seemed unaware of Wade's uneasy thoughts.

"As a scientist," he was saying, "you should be interested in the aspects of reformation. Every detail is clearly defined. The only difficulty our scientists have yet to cope with is the strength of memory and its effect on the re-formed body. The weaker the memory, you see, the sooner the body disintegrates."

Wade wasn't listening. He was thinking about his wife.

"You see," Clemolk went on, "although, as I said, these disincarnate personalities are re-formed in a vestigial pattern that includes every item to the last detail—including clothes and personal belongings—they last for shorter and shorter periods of time.

"The time allowances vary. A re-formed person, from your period, say, would last about three quarters of an hour."

The historian stopped and motioned Wade toward a door that had opened in the wall of the hallway.

"Here," he said, "we'll take the tube over to the laboratory."

They entered a narrow, dimly lit chamber. Clemolk directed Wade to a wall bench.

The door slid shut quickly and a hum rose in the air. Wade had the immediate sensation of being back in the time chamber again. He felt the pain, the crushing weight of depression, the wordless terror billowing up in memory.

"Mary." His lips soundlessly formed her name. . . .

The chamber was resting on a broad metal platform. Three men, similar to Clemolk in appearance were examining its exterior surface.

Wade stepped up on the platform and touched the smooth metal with his palms. It comforted him to feel it. It was a tangible link with the past—and his wife.

Then a look of concern crossed his face. Someone had locked the door. He frowned. Opening it from the outside was a difficult and imperfect method.

One of the students spoke. "Will you open it? We didn't want to cut it open."

A PANG of fear coursed through Wade. If they had cut it open, he would have been stranded forever.

"I'll open it," he said. "I have to leave now anyway." He said it with forced belligerence, as though he dared them to say otherwise.

The silence that greeted his remark frightened him. He heard Clemolk whisper something.

Pressing his lips together, he began hesitantly to move his fingers over the combination dials.

In his mind, Wade planned quickly, desperately. He would open the door, jump in and pull it shut behind him before they could make a move.

Clumsily, as if they were receiving only vague direction from his brain, his fingers moved over the thick dials on the center of the door. His lips moved as he repeated to himself the numbers of the combination: 3.2—5.9—7.6—9.01. He paused, then tugged at the handle.

The door would not open.

Drops of perspiration beaded on his forehead and ran down his face. The combination had eluded him.

He struggled to concentrate and remember. He had to remember! Closing his eyes, he leaned against the chamber. Mary, he thought, please help me. Again he fumbled at the dials.

Not 7.6 he suddenly realized. It was 7.8.

His eyes flashed open. He turned the

dial to 7.8. The lock was ready to open.

"You'd b-better step back," Wade said, turning to the four men. "There's liable to be an escape of . . . locked-in gasses." He hoped they wouldn't guess how desperately he was lying.

The students and Clemolk stepped back a little. They were still close, but he had to risk it.

Wade jerked open the door and in his plunge through the opening, slipped on the smooth platform surface and crashed down on one knee. Before he could rise, he felt himself grabbed on both sides.

Two students started to drag him off the platform.

"No!" he screamed. "I have to go back!"

He kicked and struggled, his fists flailed the air. Now the other two men held him back. Tears of rage flew from his eyes as he writhed furiously in their grip, shrieking, "Let me go!"

A sudden pain jabbed Wade's back. He tore away from one student and dragged the others around in a last surge of enraged power. A glimpse of Clemolk showed the historian holding another hypodermic.

Wade would have tried to lunge for him, but on the instant a complete lassitude watered his limbs. He slumped down on his knees, glassy-eyed, one numbing hand outflung in vain appeal.

"Mary," he muttered hoarsely.

Then he was on his back and Clemolk was standing over him. The historian seemed to waver and disappear before Wade's clouding eyes.

"I'm sorry," Clemolk was saying, "you can't go back—ever."

WADE lay on the couch again, staring at the ceiling and still turning over Clemolk's words in his mind.

"It's impossible that you return. You've been transposed in time. You now belong to this period."

Mary was waiting.

Supper would be on the stove. He could see her setting the table, her slen-

der fingers putting down plates, cups, sparkling glasses, silverware. She'd be wearing a clean fluffy apron over her dress.

Then the food was ready. She'd be sitting at the table waiting for him. Deep within himself Wade felt the unease and unspoken terror in her mind.

He twisted his head on the couch in agony. Could it possibly be true? Was he really imprisoned five centuries from his rightful existence?

It was insane. But he was *here*. The yielding couch was definitely under him, the gray walls around him. Everything was real.

He wanted to surge up and scream, to strike out blindly and break something. The fury burst in his system. He drove his fists into the couch and yelled without meaning or intelligence, a wild outraged cry. Then he rolled on his side, facing the door. The fierce anger abated. He compressed his mouth into a thin shaking line.

"Mary," he whispered in lonely terror.

The door opened. . . . And Mary came in.

Wade sat up stiffly, gaping, blinking, believing himself mad.

She was still there, dressed in white, her eyes warm with love for him.

He couldn't speak. He doubted that his muscles would sustain him, yet he rose up waveringly.

She came to him.

There was no terror in her look. She was smiling with a radiant happiness. Her comforting hand brushed over his cheek.

A sob broke on his lips at the touch of her hand. He reached out with shaking arms and grasped her, embraced her tightly, pressing his face into her silky hair.

"Oh Mary, Mary," he mumbled.

"Shhh, my darling," she whispered. "It's all right now."

Happiness flooded his veins as he kissed her warm lips. The terror and lonely fright were gone. He ran trem-

bling fingers over her face.

They sat down on the couch. He kept caressing her arms, her hands, her face, as though he couldn't believe it was true.

"How did you get here?" he asked, in a shaky voice.

"I'm here. Isn't that enough?"
"Mary."

He pressed his face against her soft body. She stroked his hair and he was comforted.

Then, as he sat there, eyes tightly shut, a terrible thought struck him.

"Mary," he said, almost afraid to ask.

"Yes, my darling."

"How did you get here?"

"Is it so—"

"How?" He sat up and stared into her eyes. "Did they send the time chamber for you?" he asked.

He knew they hadn't. Yet he clutched at the possibility.

She smiled sadly. "No, my dear," she said.

He felt himself shudder. He almost drew back in revulsion.

"Then you're—" His eyes were wide with shock, his face drained of color.

She pressed against him and kissed his mouth.

"Darling," she begged, "does it matter so? It's me. See? It's really me. Oh, my darling, we have so little time. Please love me. I've waited so long for this moment."

He pressed his cheek against hers, clutching her to him.

"Oh my God, Mary, Mary," he groaned, "What am I to do? How long will you stay?"

A person, from your period, say, would last about three quarters of an hour. The remembrance of Clemolk's words was like a whip lash on tender flesh.

"Forty min—" he started and couldn't finish.

"Don't think about it darling," she begged. "Please. We're together for now."

But, as they kissed, a thought made his flesh crawl.

I am kissing a dead woman—his mind would not repress the words—I am holding her in my arms.

They sat quietly together. Wade's body grew more tense with each passing second.

How soon? . . . Disintegrate . . . How could he bear it? Yet he could bear less to leave her.

"Tell me about our baby," he said, trying to drive away the fear. "Was it a boy or a girl?"

She was silent.

"Mary?"

"You don't know? No, of course you don't."

"Know what?"

"I can't tell you about our child."

"Why?"

"I died when it was born."

He tried to speak but the words shattered in his throat. Finally he could ask, "Because I didn't return?"

"Yes," she replied softly. "I had no right to. But I didn't want to live without you."

"And they refuse to let me go back," he said bitterly. Then he ran his fingers through her thick hair and kissed her. He looked into her face. "Listen," he said, "I'm going to return."

"You can't change what's done."

"If I come back," he said, "it *isn't* done. I can change it."

SHE looked at him strangely. "Is it possible—" she began, and her words died in a groan "No, no, it can't be!"

"Yes!" he said, "It is poss—" He stopped abruptly, his heart lurching wildly. She had been speaking of something else.

Under his fingers her left arm was disappearing. The flesh seemed to be dissolving, leaving her arm rotted and shapeless.

He gasped in horror. Terrified, she looked down at her hands. They were falling apart, bits of flesh spiraling away like slender streamers of white smoke.

"No!" she cried, "Don't let it happen!"

"Mary!"

She tried to take his hands but she had none herself. Quickly she bent over and kissed him. Her lips were cold and shaking.

"So soon," she sobbed. "Oh, go away! Don't watch me, Robert! Please don't watch me!" Then she started up, crying out, "Oh, my dear, I had hoped for—"

The rest was lost in a soft guttural bubbling. Her throat was beginning to disintegrate.

Wade leaped up and tried to embrace her to hold back the horror, but his clutch only seemed to hasten the dissolution. The sound of her breaking down became a terrible hiss.

He staggered back with a shriek, holding his hands before him as though to ward off the awful sight.

Her body was breaking apart in chunks. The chunks split into fizzing particles which dissolved in the air. Her hands and arms were gone. The shoulders started to disappear. Her feet and legs burst apart and the swirls of gaseous flesh spun up into the air.

Wade crashed into the wall, his shaking hands over his face. He didn't want to look, but he couldn't help himself. Drawing his fingers down, he watched in a sort of palsied fascination.

Now her chest and shoulders were going. Her chin and lower face were flowing into an amorphous cloud of flesh that gyrated like windblown snow.

Last to go were her eyes. Alone, hanging on a veil of gray wall, they burned into his. In his mind came the last message from her living mind: "Good-by, my darling. I shall always love you."

He was alone.

His mouth hung open, and his eyes were circles of dumb unbelief. For long minutes he stood there, shivering helplessly, looking hopefully—hopelessly—around the room. There was nothing, not the least sensory trace of her passing.

He tried to walk to the couch, but his

legs were useless blocks of wood. And all at once the floor seemed to fly up into his face.

White pain gave way to a sluggish black current that claimed his mind.

CLEMBOLK was sitting in the chair. "I'm sorry you took it so badly," he said.

Wade said nothing, his gaze never leaving the historian's face. Heat rose in his body, his muscles twitched.

"We could probably re-form her again," Clemolk said carelessly, "but her body would last an even shorter period the second time. Besides, we haven't the—"

"What do you want?"

"I thought we might talk some more about 1975 while there's—"

"You thought that did you!" Wade threw himself into a sitting position, eyes bright with crazed fury. "You keep me prisoner, you torture me with the ghost of my wife. Now you want to talk!"

He jolted to his feet, fingers bent into arcs of taut flesh.

Clemolk stood up, too, and reached into his robe pocket. The very casualness of the move further enraged Wade. When the historian drew out the plastic case, Wade knocked it to the floor with a snarl.

"Stop this," Clemolk said mildly, his visage still unruffled.

"I'm going back," roared Wade. "I'm going back and you're not stopping me!"

"I'm not stopping you," said Clemolk, the first signs of peevishness sounding in his voice. "You're stopping yourself. I've told you. You should have considered what you were doing before entering your time chamber. And, as for your Mary—"

The sound of her name pronounced with such dispassionate smugness broke the floodgates of Wade's fury. His hands shot out and fastened around Clemolk's thin ivory column of neck.

"Stop," Clemolk said, his voice cracking. "You can't go back. I tell you—"

His fish eyes were popping and blurred. A gurgle of delicate protest filled his throat as his frail hands fumbled at Wade's clutching fingers. A moment later the historian's eyes rolled back and his body went limp. Wade released his fingers and put Clemolk down on the couch.

He ran to the door, his mind filled with conflicting plans. The door wouldn't open. He pushed it, threw his weight against it, tried to dig his nails along its edge to pull it open. It was tightly shut. He stepped back, his face contorted with hopeless frenzy.

Of course!

He sprang to Clemolk's inert body, reached in the robe pocket, and drew out the small control board. It had no connections in the robe. Wade pushed a button. The great sign was above him: HISTORY IS LIVING. With an impatient gasp, Wade pushed another, still another. He heard his voice.

"... The governmental system was based on the existence of three branches, two of which were supposedly subject to popular vote. . . ."

He pushed another button—and yet another.

The door seemed to draw a heavy breath and opened noiselessly. Wade ran to it and through it. It closed behind him.

Now to find the machine lab. What if the students were there? He had to risk it.

He raced down the padded hallway, looking for the tube door. It was a nightmare of running. Back and forth he rushed frantically, muttering to himself. He stopped and forced himself back, pushing buttons as he went, ignoring sounds and sights around him—the fading walls, the speaking dead. He almost missed the tube door as he passed it. Its outline blended with the wall.

"Stop!"

He heard the weak cry behind him and glanced hurriedly over his shoulder. Clemolk, stumbling along the hall, waving him down. He must have recovered

and got out while Wade was carrying on his desperate search.

Wade entered the tube quickly, and the door slid shut. He breathed a sigh of relief as he felt the chamber rush through its tunnel. Something made him turn around. He gasped at the sight of the uniformed man who sat on the bench facing him. In the man's hand was a dull black tube that pointed straight at Wade's chest.

"Sit down," said the man.

Defeated, Wade slumped down in a dejected heap. Mary. The name was a broken lament in his mind.

"Why do you re-forms get so excited?" the man asked. "Why do you? Answer me that?"

Wade looked up, a spark of hope igniting in him. The man thought—

"I—I expect to go soon," Wade said hurriedly. "In a matter of minutes. I wanted to get down to the machine lab."

"Why there for heaven's sake?"

"I heard there was a time chamber there," Wade said anxiously. "I thought—"

"Thought you'd use it?"

"Yes, that's it. I want to go back to my own time. I'm lonely."

"Haven't you been told?" asked the man.

"Told what?"

The tube sighed to a halt. Wade started up. The man waved his weapon and Wade sank down again. Had they passed it?

"As soon as your re-formed body returns to air," the man was saying, "your psychic force returns to the original moment of death—hrumph—separation from the body I mean."

WADE was distracted by nervous fear. "What?" he asked vaguely, looking around.

"Personal force, personal force," bumbled the man. "At the moment it leaves your re-formed body, it will return to the moment you originally—uh—died. In your case that would be—when?"

"I don't understand."

The man shrugged. "No matter, no matter. Take my word for it. You'll soon be back in your own time."

"What about the machine lab?" Wade asked again.

"Next stop," said the man.

"Can we go there, I mean?"

"Oh," grumbled the man, "I suppose I could drop in and take a look at it. Think they'd let me know. Never any cooperation with the military. Invariably—" His voice trailed off. "No," he resumed. "On second thought. I'm in a hurry."

Wade watched the man lower his weapon. He clenched his teeth and braced himself to lunge.

"Well," said the man, "On third thought . . ."

Closing his eyes, Wade slumped back and exhaled a long shuddering breath through his pale lips.

It was still intact, its gleaming metal reflecting the tiers of bright overhead lights—and the circular door was open.

There was only one student in the lab. He was sitting at a bench. He looked up as they entered.

"Can I help you commander?" he asked.

"No need. No need," said the officer in an annoyed voice. "The re-form and myself are here to see the time chamber." He waved toward the platform. "That it?"

"Yes, that's it," said the student, looking at Wade. Wade averted his face. He couldn't tell whether the student was one of the four who had been there before. They all looked alike. The student went back to his work.

Wade and the commander stepped up on the platform. The commander peered into the interior of the sphere.

"Well," he mused, "who brought it here, I'd like to know."

"I don't know," Wade answered. "I've never seen one."

"And you thought you could use it!" The commander laughed.

Wade glanced around nervously to

make sure the student wasn't watching. Turning back, he scanned the sphere rapidly and saw that it wasn't fastened in any way. He started as a loud buzzer sounded and looking around quickly, saw the student push a button on the wall. He tightened in fear.

On a small televue screen built into the wall, Clemolk's face had appeared. Wade couldn't hear the historian's voice but his face showed excitement at last.

Wade spun back, facing the chamber, and asked, "Think I could see what it's like inside?"

"No, no," said the commander. "You'll play tricks."

"I won't," he said, "I'll just—"

"Commander!" cried the student.

The commander turned. Wade gave him a shove, and the corpulent officer staggered forward, his arms flailing the air for balance, and a look of astonished outrage on his face.

Wade dove into the time chamber, cracking his knees on the metal deck, and scrambled around.

The student was rushing toward the sphere, pointing one of those dull black tubes ahead of him.

Wade grabbed the heavy door and with a grunt of effort pulled it shut. The heavy circle of metal grated into place, cutting off a flash of blue flame that was directed at him. Wade spun the wheel around feverishly until the door was securely fixed.

They would be cutting the chamber open any moment.

His eyes swept over the dials as his fingers worked on the strap buckles. He saw that the main dial was still set at five hundred years and reaching over, flipped it to reverse position.

Everything seemed ready. He had to take a chance that it was. There was no time to check. Already a deadly cutting flame might be directed at the metal globe.

The straps were fastened. Wade braced himself and threw the main switch. Nothing happened. A cry of mortal terror broke through his lips.

His eyes darted around. His fingers shook over the control board as he tested the connections.

A plug was loose. Grabbing it with both hands to steady it, he slid it into its socket. At once the chamber began to vibrate. The high screech of its mechanism was music to him.

The universe poured by again, the black night washing over him like ocean waves. This time he didn't lose consciousness.

He was secure.

THE chamber stopped vibrating. The silence was almost deafening. Wade sat breathlessly in the semidarkness, gasping in air. Then he grabbed the wheel and turned it quickly. He kicked open the door and jumped down into the apparatus lab of Fort College and looked around, hungry for the sight of familiar things.

The lab was empty. One wall light shone down bleakly in the silence, casting great shadows of machines, sending his own shadow leaping up the walls. He touched benches, stools, gauges, machines, anything, just to convince himself that he was back.

"It's real." He said it over and over.

An overpowering weakness of relief fell over him like a mantle. He leaned against the chamber. Here and there he saw black marks on the metal, and pieces of it were hanging loose. He felt almost a love for it. Even partly destroyed it had gotten him back.

Suddenly he looked at the clock. Two in the morning. . . . Mary. . . . He had to get home. Quickly, quickly.

The door was locked. He fumbled for keys, got the door open and rushed down the hall. The building was deserted. He reached the front door, unlocked it, remembered to lock it behind him, although he was shaking with excitement.

He tried to walk, but he kept breaking into a run, and his mind raced ahead in anticipation. He was on the porch, through the doorway, rushing up to the bedroom. . . . Mary, Mary, he was call-

ing. . . . He was bursting through the doorway. . . . She was standing by the window. She whirled, saw him, a look of glorious happiness crossed her face. She cried out in tearful joy. . . . They were holding each other, kissing; together, together.

"Mary," he murmured in a choked-up voice as, once more, he began running.

The tall black Social Sciences Building was behind him. Now the campus was behind him, and he was running happily down University Avenue.

The street lights seemed to waver before him. His chest heaved with shuddering breaths. A burning ache stabbed at his side. His mouth fell open. Exhausted, he was forced to slow down to a walk. He gasped in air, started to run again.

Only two more blocks.

Ahead the dark outline of his home stood out against the sky. There was a light in the living room. She was awake. She hadn't given up!

His heart flew out to her. The desire for her warm arms was almost more than he could bear.

He felt tired. He slowed down, felt his limbs trembling violently. Excitement. His body ached. He felt numb.

"Mary," he sobbed, "I'm sick."

He was on their walk. The front door was open. Through the screen door, he could see the stairs to the second floor. He paused, his eyes glittering with a sick hunger.

"Home," he muttered.

He staggered up the path, up the porch steps. Shooting pains wracked his body. His head felt as though it would explode.

He pulled open the screen door and lurched to the livingroom arch.

John Randall's wife was sleeping on the couch.

There was no time to talk. He wanted Mary. He turned and stumbled to the stairs. He started up.

He tripped, almost fell. He groped for the banister with his right hand. A scream gurgled up and died in his

throat. *The hand was dissolving in air.* His mouth fell open as the horror struck him.

"No!" He tried to scream it but only a mocking wheeze escaped his lips.

He struggled up. The disintegration was going on faster. His hands. His wrists. They were flying apart. He felt as though he had been thrown into a vat of burning acid.

His mind twisted over itself as he tried to understand. And all the while he kept dragging himself up the stairs, now on his ankles, now on his knees, the corroded remnants of his disappearing legs.

Then he knew all of it. Why the chamber door was locked. Why they wouldn't let him see his own corpse. Why his body had lasted so long. It was because he had reached 2475 alive and *then* had died. Now he had to return to that year. He could not be with her *even in death*.

"Mary!"

He tried to scream for her. She had to know. But no sound came. He felt pieces of his throat falling out. Somehow he had to reach her, let her know that he had come back.

He reached the top of the landing and through the open door of their room saw her lying on the bed, sleeping in exhausted sorrow.

He called. No sound. Tears of rage poured from his anguished eyes. Now he was at the door, trying to force himself into the room.

There'd be no life for me without you.

Her remembered words tortured him. His crying was like a gentle bubbling of lava.

Now he was almost gone. The last of him poured over the rug like a morning mist, the blackness of his eyes like dark shiny beads in a swirling fog.

"Mary, Mary—" he could only think it now—"how very much I love you."

She didn't awaken.

He willed himself closer and drank in the fleeting sight of her. A massive despair weighed on his mind. A faint groan fluttered over his wraith.

Then, the woman, smiling in her uneasy sleep, was alone in the room except for two haunted eyes which hung suspended for a moment and then were gone; like tiny worlds that flare up in birth and, in the same moment, die.



The watchers of the time-tracks send two agents into the melting-pot of the cosmos in HOUSE OF MANY WORLDS, a novel in which history turns upside down, by Sam Merwin, Jr., featured in the September issue of our companion science fiction magazine—

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The MERAKIAN MIRACLE

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I

MANNING DRACO leaned over the railing in the outer offices of the Greater Solarian Insurance Company, Monopolated, and studied the Martian receptionist. She had been working in the home office on Earth for only a week, but she was showing the influence of the Nyork stylists. Her reddish head fur had been given a henna rinse, bringing out the burnished copper tints, and arranged in the Nebulae Up-sweep that was the rage that summer of 3472. Skillful makeup had enhanced the copper of her skin and played up the slight slant of her eyes. Her figure was unusually voluptuous for a Martian and a new Earth-style dress brought out the best of her humanoid points.

All in all, the improvement was so great that Manning Draco had stopped for a second look. He moved nearer to her desk and waited until she glanced up.

"My mind is open to you," he said. It was a formal Martian greeting, but he

managed to give it undertones never dreamed of by the original Martian semanticists.

"And mine to you," she responded, looking at him with one eye, and lowering the other two demurely.

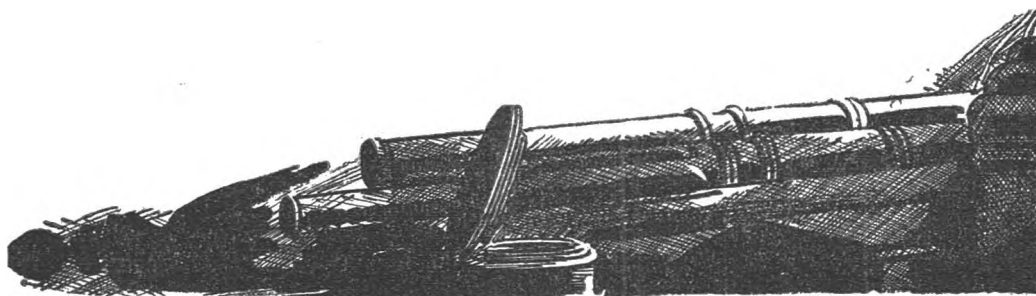
"What's your name, honey?" It was more polite to ask than to probe mentally for it. Besides, he knew by experience that it was difficult to slip by the mind shields of Martians.

"Lhana Xano—Mr. Draco."

"You know my name," he said in delight. "Well, then, you must know that I work here, too, and that we are all, as J. Barnaby Cruikshank is so fond of saying, one big happy family—so why don't you have dinner with me tonight?"

"Thank you, Mr. Draco, but I'm afraid not." A slight lisp was the only trace of her Martian accent.

"Give me one good reason why you won't," he challenged. He tried a swift probe to see if she was being coy, but it bounced off her mind shield.



The ace insurance investigator of the galaxy could solve the riddle of life after death on Merak II—but Kramu, that lush and willing Mephridian maid, was too much for him



"I've heard so much about you and your ship," she said

"I'll give you three reasons," she said promptly. She surveyed him swiftly with all three eyes. "It's true that you are tall for a Terran—perhaps three inches over six feet—but you are still seven inches shorter than I am. I dislike being conspicuous when I go out."

"I'll rush right out," Manning said with a grin, "and buy a pair of shoes with a Galactic-lift. You know the ones they advertise on the Martian video for the tourist trade, with the slogan: 'Now you can be as tall as your Martian dream girl.'"

"My second reason," Lhana said seriously, "is that when I first came to work here, I was warned about you by every girl in the office, including that little file clerk who comes from Upper Seginus and isn't even remotely humanoid."

"It was a dull evening," he said defensively.

"And my third reason," she continued, "is that when you were watching me a few minutes ago your secondary mind shield relaxed for a second and I caught what you were thinking."

HE GRINNED ruefully. "Every time I get to feeling smug about being the only Terran to develop a secondary mind shield, I run into one of you Martians and get taken down a parsec or two," he said. "But now that you know my intentions, how about having dinner with me?"

Before she could answer, the visiplat on her desk glowed redly. She flipped a switch and a section of the desk swung up to shield the visiplat and the voice which would come from it from anyone standing before the receptionist.

"Yes, sir," the Martian girl said. She listened a moment and then added, "Yes, sir. I'll tell him." She cut the circuit and the visiplat, now gray and empty, swung into view again.

Manning Draco had never discovered a sense of humor in a Martian, but he could have sworn there was a hint of laughter in her third eye as she looked up at him.

"Mr. Cruikshank would like to see you

in his office immediately," she said. "I'm afraid you're not going to be free for dinner, Mr. Draco. But it's been nice meeting you."

"Not so fast, honey. I'll be back and we'll resume our discussion of that dinner date." He turned and strode through the offices.

Outside the private office of the president, he waited until the door-scanner recognized him and the door swung open. He stepped inside and faced the head of the monopoly.

At forty, J. Barnaby Cruikshank was the president and chief stockholder of a company that spanned two galaxies. It was true that he had inherited the original company from his grandfather, but up to that time it had been a small company insuring only humans and confining its operations to Earth. Under the direction of J. Barnaby, policies had been issued to cover all forms of life on every planet. Since J. Barnaby was also influential in Federation politics, the Earth corporation had soon achieved an intergalactic monopoly charter and Manning Draco, as his chief investigator, was accorded limited police powers throughout the galaxies.

The urbanity of J. Barnaby Cruikshank was at low ebb as Manning Draco entered. His hair was rumpled and his plastic sport coat, guaranteed not to wrinkle, was wrinkled.

"What were you doing at the reception desk?" he growled as soon as he saw Manning.

"Trying to date the receptionist," Manning said frankly. He dropped into one of the comfortable chairs. "It's amazing how soon those girls lose their provincial look when they get to Nyork."

"I hired that Martian girl," said J. Barnaby, glaring at his investigator, "partly in the hope that you'd stay away from the reception desk. Don't you draw the line anywhere?"

"Well, you know the old saying—all stars look the same when you're cruising in space. . . . Did you call me in to discuss the moral tone of the office or do I detect the air of the worried busi-

ness man?" Manning spoke quietly.

J. Barnaby shuffled through some papers on his desk, but it was obvious from his manner that he already knew what they contained. "What do you know about Merak II?" he asked.

"Obviously it's the second planet in the system of Merak," Manning said with an easy grin, "but outside of that I'm afraid I know nothing. Are we selling policies there now?"

"You'd know we were if you were doing your job instead of doing your best

Barnaby said, "the new territory was requested by two of our men. Since they had done an excellent job on Sirius III, we gave it to them."

"Sirius III," mused Manning, triggering his memory file. "That would be Sam Warren, a Terran, and Dzanku Dzanku, from Rigel IV. They're the two characters who sold insurance as a team. I think I warned you that they would steal the gilt off the seal on the policies if they could find a market for it. What have they done now?"

Good Breeding

AS WE point out in *The Frying Pan* for this issue there is a group of serious-minded venders of scientific thought among sf readers that refuses to accept the fictional existence of human or humanoid types on planets other than Earth. So conditioned are they to their belief that any eerie sort of BEM is to them more probable than the story-appearance of alien races in the cast of man.

As is usually the case in science fiction circles, there is another clique within this one—a little inner circle that finds itself utterly unable to credit any successful mating between Earthfolk and their opposite numbers from alien planets of the galaxy. Genetically, they maintain, the odds toward success of such a union are so long as to pass even a fiction-writer's credibility.

The problem is one which has long merited consideration from sf authors as well as readers. It was Edgar Rice Burroughs, we believe, who decades ago had one of his Martian heroines, after "marrying" John Carter, literally lay an egg. And George O. Smith, in his *Kingdom of the Blind*, published some years ago in this magazine, suggested that an alien heroine might be similarly ovip'rous.

In Kramu, who comes as close as anyone else to being the heroine of his story, Mr. Crossen has, we believed, come up with an entirely new slant on the problem of mixed breeding. She is, it seems, evolved from a paramecian species and . . . But we think it might be better for you to find out for yourselves. Take our word for it, you are in for a delightful surprise.

—THE EDITOR.

to undermine what you call the moral tone of this office. The planet was opened for intergalactic trade two months ago."

"Okay. So I'll run over to the main library tonight and take a hypno-course on the planet. Then if anything comes up—"

"It already has," J. Barnaby snapped, "and you'll be on your way to Merak II tonight. I'll give you all the information I can and you can pick up the rest when you get there."

MANNING leaned back in the chair and prepared to fix the information in his memory. "Okay," he murmured.

"When the planet was opened," J.

"Nothing," snapped J. Barnaby. "At least, I don't think they have. They're just good high-pressure salesmen, that's all. The trouble isn't with them at all."

"But I'll bet they're mixed up in it some way. Go on."

"The Merakians," said J. Barnaby, "are non-humanoids. I am told that their bodies are globular in shape and that they have no necks and heads in the humanoid sense. Their mouths, noses, eyes and ears appear as needed and when these organs are not in use, all that can be seen is the smooth surface of a globe. They usually have two arms and two legs, but these are retractable and extensional, so that a Merakian may be three feet tall when you first meet

him and eight feet tall the next time you see him."

"A perfect solution to the problem of Martian girls who are taller than you are," Manning murmured.

J. Barnaby suppressed his irritation for he had learned that the surface levity never interfered with the working of one of the best developed brains in the galaxy.

"Culturally and socially," he said, "the Merakians are a Class D people. Their interests are on a primitive level, but they seem to have a boundless enthusiasm for everything new and it is expected that they will soon become Class C, perhaps even Class B, but it is doubtful if they will ever progress beyond that point. They have already learned English, Rigelian, and Vegan, the three official galactic languages, and have taken up most civilized sports.

"Two things will illustrate how childish they are. Although they do not eat at all, drawing their energy directly from their sun, they have bought two million dish-washing robots since trade was opened, and ten million dishes for the robots to wash. They have also adopted with great enthusiasm the one childish holiday which our American state has insisted on maintaining: A billion credits' worth of atomicworks were imported to Merak II so that they could celebrate the Fourth of July last week."

"The trouble with you," said Manning, "is that you begrudge people the simple pleasures of life. Who sold them the fireworks—you?"

"No. Warren and Dzanku did it on their own. You know, we allow our agents to carry on a certain amount of private business as long as it doesn't interfere with selling our policies."

"And I gather this didn't?"

"I'll say it didn't." For a minute, J. Barnaby's face brightened. "In less than six weeks, Warren and Dzanku sold straight life insurance policies on Merak II totaling four billion, seventeen million credits." The happiness faded from his face. "Although each policy holder was in excellent health, and none of them

was more than two hundred and fifty years old while the average life span there is four hundred years, the majority of our insured on Merak dropped dead last week. We are being asked to pay out four billion, six million credits in benefits, after having received only one premium on each policy."

"Ah-ha," said Manning. "J. Barnaby has been struck where it hurts. Straight life insurance, too, which means there probably isn't a loophole even if you have been taken.

THE PRESIDENT bobbed his head. "That's what I thought until today," he said. "But we have heard from a very reliable source that two of the insured who died last week were seen alive yesterday. So it begins to look like a straight fraud case."

"Wait a minute," said Manning Draco. "If the Merakians look as you described them, how do you tell one policy holder from another?"

"They have a strange pattern of whorls, not too different from our fingerprints, on their stomachs. Apparently these can't be altered, and the pattern is different with each Merakian."

"What is the population of Merak II?" Manning asked with a grin.

"About seventy-five million, I believe. . . . What's so funny about it?" he added irritably as Manning burst into laughter.

"I was just picturing the Intergalactic Patrol making seventy-five million Merakians belly up to an ink pad."

"I suggest," J. Barnaby said coldly, "that you spend more time picturing our four billion credits—unless you want to lose your job." His voice softened. "Manning, my boy, you've got to find some way of saving us on this."

"I'll blast off some time tonight," Manning said, getting up, "and be there to take it up the first thing in the morning. Relax, J. Barnaby."

"You might as well forget about the Martian receptionist," J. Barnaby said. "You're blasting off this afternoon, not tonight. I ordered your ship serviced,

and it will be ready by the time you can reach the spaceport. I order an encyclo-tape on Merak II loaded on your ship and you can pick up what little is known about the planet while you're on your way. By the way, your first stop is Muphrid VIII, in Boötes."

"Muphrid VIII?" Manning said. "Why?"

For a moment he thought that J. Barnaby looked embarrassed but then he dismissed the idea. Later, he was to remember it.

"Our newest branch office," J. Barnaby explained, "has just been opened on Muphrid VIII. Technically, Merak II falls in their territory, so I thought you might stop off there and meet the vice-president just as a formality."

"Muphrid VIII—Class A planet inhabited by a humanoid race," muttered Manning. He ran over the rest of the information on the planet mentally and could see nothing to indicate more than the formality mentioned.

"That's right," J. Barnaby said eagerly. "The vice-president in charge of the branch office is a native Muphridian—comes from one of the oldest families there. I don't want him thinking that we're by-passing him completely, but you don't have to stay there long. The vice-president's name is Schmendrik Korshay."

"Okay, I'll look him up," Manning said. "And don't transfer that new receptionist before I get back." He grinned and left.

II

AT THE spaceport, Draco's ship was already on the launching level. He cleared with the tower, fed the position of Muphrid VIII into the automatic pilot, and pushed the panel button that hooked the ship into magnetic power.

As the ship blasted off, he found the encyclo-tape and fed it into the audio-reader. Then he leaned back to listen.

"Merak II," said a pleasant voice from the concealed speaker, "is a Class D planet in Ursa Major. Although discov-

ered and charted in 3160 by Galactic Commander Daniel Horlan, there has been little contact with the planet until this year when it was admitted to the Federation and trading agreements were signed. The planet is a mean distance from its sun, Merak, of ninety-two million miles. Its mass is 0.9 in relation to that of Earth, its volume 0.976; its density is 5.16 times that of water; its diameter, six thousand nine hundred miles; orbital velocity, 17.8 miles per second; escape velocity 6.9 miles per second; period of rotation, twenty-five hours, six minutes; Eccentricity, 0.0157—"

Manning Draco reached over and punched a button. The tape skipped a few inches and the voice took up its story again.

"—gravity at surface, 0.97. The dominant race on Merak II are technically known as Deetahs. The main trunk of their bodies is globe-shaped and also serves as a head. Their flesh is highly psycho-adaptable, the various organs of senses appearing only when needed. They have at least two arms and two legs, somewhat humanoid in general shape, but these limbs are retractable and extensional. The Merakians are non-eaters, drawing their energy directly from their sun, but they do consume liquids, mostly water. There is some evidence of intoxicants also being used.

"There is as yet no definite information concerning reproduction among the Merakians, but it is believed that it takes place by fission. Although it seems that the members of this race are all of one sex, they do marry and carry on primitive domestic relations. Our information shows that normally three members of the race will marry, one of them—usually chosen by some form of crude lottery—will reproduce while the other two take over the task of raising the young.

"The Merakians are ruled by what seems to be a benevolent dictatorship. There is a hereditary Council of Selectors, which might be compared to royalty among human races, but they do no ruling at all. They do, however, choose

one individual from the inhabitants who is trained to become the ruler, or Dukar. His rule is then absolute and is for life. Upon his death, a new Dukar is selected. The present Dukar is Mneone Melpar, the Ninth. Although the average life span of the Merakians is four hundred years, Mneone Melpar is eight hundred and ten years old and has been ruling Merak II for the past six hundred and sixty years.

"Although the Legal Council of the Federation has not yet released its report on the constitution and laws of Merak II, it is believed that they are a law-abiding race. Their constitution is a document of more than one thousand pages and they have seven hundred and twenty-two thousand, six hundred and seventy-eight national laws, while there has not been a single case of crime during the past forty years.

"The Merakians are a primitive and childlike peoples—"

Manning Draco switched off the machine and went to sleep.

TWO HOURS later, as his ship braked for the atmosphere of Muphrid VII, he awakened. He announced himself to the spaceport and switched on his landing-scanner. A scarlet pip showed up on the gray screen. He set the ship controls to follow the pip and a blue dot began chasing the scarlet one across the screen. When the two finally merged, he knew the ship was in its cradle. Contact with the cradle had automatically shut off the power. Manning waited while subtle pressures balanced themselves and then stepped out when the door opened itself.

A beam-controlled aircar was waiting for him, the name of the insurance company stenciled on its side in both English and Muphridian. This was his first trip to the planet, and he would have preferred going by surface transportation in order to see the rather large city he glimpsed as he left his ship. But it wouldn't be polite to keep the new vice-president waiting, so he entered the aircar and was whisked across the city.

The car entered the top floor of a large office building where he was met by a robot and escorted to a luxurious private office.

At first glance, Manning would have sworn that the new vice-president was a human. It was only when he looked closer that he realized that here was the perfect humanoid. Every feature was human, and the only difference was so slight he almost missed it. The Muphridian's head was covered with iron-gray feathers instead of hair.

"Schmendrik Korshay," the vice-president announced himself in English, coming to meet Manning with an outstretched hand.

"Manning Draco," the investigator said. As they shook hands, he tried a swift mental probe and got the shock of his life. It was like sending his mind up against a solid wall.

"From the look of surprise on your face," Korshay said with a smile, "I presume you must have tried a telepathic thrust at me. You see, I know from Mr. Cruikshank that your telepathic abilities, both offensive and defensive, are developed more than those of any other human. I am sorry to have disappointed you."

"That's putting it mildly," said Manning. "That's the most perfect primary mind shield I've ever encountered."

"Technically, it isn't a mind shield," the vice-president explained. "You see, we Muphridians are nontelepaths—one of the few such races in the galaxy today—and the evolution which neglected us in that respect balanced it by giving us minds which cannot be read by any telepath. Incidentally, I believe the same thing is true of the Merakians. But while we're discussing that matter, would you like a drink?"

Manning Draco hesitated. The last time he had accepted a drink on a strange planet had been on Praesepe I, and it had been two days before he recovered the use of his voice.

Korshay smiled. "I realize that you are on your first visit to Muphrid and so may be wary of accepting. Let me

assure you, my dear Mr. Draco, that with the exception of certain basic functions we Muphridians share human tastes as well as appearances. The drink is rather excellent brandy."

"Fine," Manning said. He was beginning to like this vice-president, a feeling he seldom had about such officers. While the brandy was being poured, he relaxed enough to relate the incident of the strange drink on Praesepe I.

"I hear there are many such traps in the galaxy," Korshay said laughing. He handed a glass to Draco and raised his own. "Yours has been a glamorous life, Mr. Draco. May it continue for many years."

THEY drank and Manning made the proper noises of appreciation over the excellence of the brandy. He relaxed even more.

"Now, then," said the vice-president. "I don't want to keep you from your assignment on Merak II. You understand, Mr. Draco, that while my position gives me a certain authority over you concerning company matters, I wouldn't presume to consider myself capable of giving you any sort of orders. This branch office is just opened and I, myself, am too new to the Greater Solarian Insurance Company."

Manning nodded. He smiled, feeling that for once the company had showed intelligence in its choice of a new executive. Up to this point, the vice-presidents of branch offices had been veritable thorns in his side.

"Therefore, the matter which I'm about to broach has been discussed with Mr. Cruikshank, and essentially it is his order although he thought it best for me to explain it to you," Korshay said.

The smile vanished from Manning Draco's face. He sat up straighter in his chair and, aware that Korshay was not telepathic, let his mind play over the more salient aspects of vice presidents.

"Cruikshank," he said slowly, when he had exhausted the possibilities in several languages, "is a doublecrossing, underhanded, illegitimate mutated off-

spring of a Martian wart hog. What's being pulled on me now?"

"I'm afraid you're jumping to conclusions," Korshay said, smiling, "and reacting just as he said you would. It's really very simple, Mr. Draco. This is a new office and of course lacks trained personnel. While I realize that you will handle all important investigations in this territory, there will undoubtedly be a need for minor investigations, too insignificant to warrant your making a trip. Consequently, I wish a relative of mine to go to Merak with you and learn as much as possible about how you operate."

"A relative," Manning said with violence. He missed hearing a door in the office open. "I should have known it. I never saw a vice-president who wasn't trying to get all of his relatives on the payroll. And it's always Manning Draco who has to take the rap. Order or no order, you can damn well wait until Mercury freezes over. I am *not* going to play

[Turn page]

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nursemaid to any cretinous vice-president's half-witted, monkey-faced—"

THE REST of the statement was forever lost to posterity, for Manning Draco received the second shock of his visit. A vision was moving across the room toward him. She, too, was humanoid, with a figure not only human but more so. She wore the semitransparent sport clothes which were the rage in all civilized parts of the galaxy and she was not one of those who had to have her clothes made with concealed lights to give the illusion of curves that weren't there. Her face, with full, almost pouting lips, was framed in a halo of blue feathers, soft and swirling.

"Mr. Draco," the vice-president said dryly, "I'd like you to meet my relative—Kramu Korshay."

"Hello," the vision said, and her voice was like the music of the spheres. "I have so looked forward to meeting you, Mr. Draco. My relative has done nothing but talk of your exploits since he became associated with your company."

Manning Draco took a deep breath and tore his gaze back to the vice-president. "As I was saying," he said quickly, "I will be only too happy to cooperate with your office, Mr. Korshay."

There was only the hint of a smile on the vice-president's face. "I was sure you would," he said gravely. "I know that on your home planet there has always been a superstition that beautiful women do not possess brains, but I think you will find Kramu quite competent in all departments. Now if you'll excuse me, I'm sure you want to be heading for Merak II." He crossed the room and kissed Kramu on both cheeks. Then he shook hands with Manning and left the office.

III

STILL DAZED by what he regarded as his good fortune, Manning led the way back to his ship. He fed the position of Merak II into the pilot and as the ship lifted into space, he turned

to Kramu with a pleasant smile.

"I've heard so much about you and your ship," she said before he could even begin telling her how beautiful she was. "Won't you show me around? What do you call her?"

"*Alpha Actuary*," he said, getting up. The ship incorporated several of his own designs, and they had impressed more sophisticated audiences than this one. The time would not be wasted. And she would be on Merak II with him until the case was finished.

"What a peculiar name," Kramu exclaimed. "Why do you call her that?"

"Because she's the first one of her kind, for the *Alpha Actuary* because in insurance an actuary is one who computes risks and probabilities, and this ship will do just that. Here, for example."

He showed her the compact little computer built into the ship above the control panel. On a small screen, the computer would flash answers in English, give mathematical formulae, and show varicolored graphs. He fed it a question about their present trip, and the time of their arrival was immediately flashed on the screen, the hour in red, the minute in blue, and the second in yellow. Then, in an impish mood, he asked the machine what would happen on his first date with Kramu. She laughed in delight when the screen flashed with all the colors then relapsed to dull gray without giving any answer.

"I've been sabotaged," Manning muttered and turned to the rest of the ship.

He showed her the audio-reader, with tapes covering almost every subject in the galaxy; he explained the demagnetizer, opening the scanners to full power so that she could see an approaching meteorite disintegrate as it approached the ship. He demonstrated the geoscope which could select and show a three-dimensional photograph of any charted country or city in the galaxy, and let her try out the impulse-translator which would turn any language into English; he had the robosmith make her a pair of silver earrings. The latter machine, he

explained, was for manufacturing trinkets when he had to land on a barbaric planet and deal with savages.

BY THE TIME he had finished showing her the ship and explaining everything, they were only thirty minutes from Merak II.

"Now, honey," Manning said, as he dropped into a comfortable chair, "it'll be too late to start working tonight when we reach Merak, so we'll have dinner together and then we'll go out on the town. I don't know what they have there in the way of entertainment but if nothing else, we can always take a music cone from the ship and dance. Okay?"

"No," she said, shaking her head until the blue feathers danced, but her smile took the sting from the refusal. "We'll have dinner together and you'll explain to me the simple rules of making an investigation. Afterward, we'll either work on the case, or you will tell me of other cases so that I can learn how you work."

"Baby," Manning Draco said sadly, "if you keep that up, you're liable to find yourself the richest woman on Muphrid—but lonely. What about our date?"

"No, Manning," she said firmly. "No pleasure until after the work is finished—and then only if we finish in time."

"In time for what?"

"I have an appointment back on Muphrid which can't be put off, but if we finish on Merak in time, I see nothing wrong with celebrating our success."

"Then I'll finish it up so fast those Merakians will think they're riding the tail of a comet," he promised. "I know a swell little planetoid, not too far from Muphrid, where we can go for the week end."

"Perhaps," she said, with a smile like a delayed promise.

"You know, honey, working with the relative of an executive in the company was never like this before. What relations are you to Korshay anyway—a niece?"

"The degree of relationship on Muphrid is not quite the same as on your

Earth, but that's close enough." She glanced at the time indicator on the panel and frowned. "But before we arrive at Merak, I'd like it if you briefed me on this case, Manning. I have been told very little about it."

"Okay, honey," he said with a sigh, "you win. When Merak II was opened for trade, a couple of our men asked for the territory and were granted it. They are Dzanku Dzanku, a Rigelian I wouldn't trust as far as I could throw his one-ton body, and Sam Warren, a Terran who is just as crooked as Dzanku but not as smart. They're high pressure boys and they've sold more than four billion credits' worth of straight life insurance since then.

"But last week about four-fifths of the insured died. That is suspicious in itself, but J. Barnaby, our boss, has since heard that some of the dead have been seen alive. Chiefly, we have to prove that there was fraud in the cases or Greater Solarian is out four billion credits—a fate far worse than death to J. Barnaby. Now. . ."

He continued outlining the rest of the scanty information he had gathered from J. Barnaby and from the encyclo-tape. By the time he had finished, the Merakian spaceport was looming large on the screen. He switched on his communicator, but there was no immediate answer. Cursing, he threw the ship to Manual and lifted it higher. Continuing to call the spaceport, he circled overhead. After about ten minutes, with Manning's patience growing thinner by the minute, a high, shrill voice spoke from the speaker in the ship.

"Prithee," the voice said, "who is it that comes to fair Merak?"

FOR A STARTLED minute, Manning Draco stared at the speaker and wondered if he were going mad. His feelings were not helped by a giggle from Kramu, or by the swift continuation of what he had thought was an auditory hallucination.

"Answer, varlet," squeaked the voice again. "Who comes to fair Merak?"

"I come to fair Merak to bash somebody in the head," snapped Manning, "if I don't get a landing beam pretty soon. This is the space ship *Alpha Actuary*, owned and operated by Terran Manning Draco, arriving on official business for the Greater Solarian Insurance Company, Monoplated, under a Galactic Federation Charter. Now where the hell is my landing beam?"

"Thy words are most unseemly, friend," said the voice, "but approach and be recognized. Thou wilt appreciate that the landing must needs be by hand."

"I will not appreciate it," Manning muttered angrily as a thin beam of light shot up from the ground, touching his ship. He touched the controls and sent the ship hurtling toward the ground. At the last minute, he pulled it up sharply. The ship seemed to hang a few feet above the ground, then settled down with a gentle bump.

"Come on, honey," he said, "let's see what kind of jokers these are."

As Manning started to step out of the ship, he was surprised to see an arm stretch up. A hand grasped him by the elbow and helped him from the ship. In the meantime, a second arm had stretched up to help Kramu. When he reached the ground, Manning realized that both arms were attached to a native Merakian who stood some twenty feet from the ship.

As the arms retreated to about two feet in length, two eyes suddenly appeared on the globelike body. The eyes surveyed Manning, then suddenly the legs lengthened until the Merakian's eyes were on a level with Manning's. Ears budded on the side of the globe; a mouth appeared, at least a foot below the eyes, and curved into a grin.

"Greetings, gate," the Merakian said in a shrill voice.

"What?" demanded Manning. "Is this whole planet infested with idiots? You call me gate once more and I'll swing on you. Now, tell me where we—" He broke off as he recognized two figures standing beneath a canopy near what

was apparently the main building of the spaceport. "Never mind," he said to the Merakian. "We'll see you around."

"Plant me now and dig me later, kid," the Merakian said sharply. The mouth and ears smoothed out and vanished as he scurried away.

Manning, followed by Kramu, strode across to the two figures beneath the canopy. One of them was a Terran, shorter than Manning, with a tense, wary expression on his face. His companion was a Rigelian, no taller than Manning but weighing a good ton. His thick, square torso was supported by two legs like tree trunks. From the upper part of his body projected six tentacles. His face was small and expressionless, with three eyestalks raised several inches above it. Two of the eyes were surveying Manning, while the third stalk was inclined in the direction of Kramu.

"Hello, Draco," Sam Warren called as they neared. "We heard you were coming, so Dzanku and I thought we'd meet you. Sort of roll out the welcome mat for you. Thought you were coming alone though—"

"This is Kramu Korshay from Muphrid," Manning said shortly. "She's along to learn the business. Say, what's wrong with this screwy planet anyway?"

"Many things, but to what do you refer?" asked the Rigelian. His voice had a deep, sonorous timbre—it inspired confidence in the unwary.

"I mean the way these Merakians talk," said Manning. "When we were coming in for the landing, the tower blasts out with a sentence which might have come right out of the Museum of Ancient Languages on Terra. Then when we landed there's another's butterball who had a line about 'dig me now and plant me later.' What the hell that meant I'll probably never know. It sounded like Nekkarian triple-talk translated verbatim."

"Well—ah—" Sam Warren said, "when Merak II was opened for trade, the natives, eager little fellows that they are were quite anxious to learn English.

You may remember when the Terran Historical Society had the bright idea of selling taped records of all the ancient Earth dialects.

"They used the biggest visistars to record them, but the idea never took and the Society was left with a warehouse full of tapes. Well, I believe some enterprising individuals made a rather good deal on those old tapes and then sold them to the Merakians, with a vocabulary guide sheet, at—ah—a very handsome profit."

"I see," Manning said sarcastically. "I don't suppose those enterprising individuals just happened to be named Warren and Dzanku, did they?"

The Rigelian chuckled. "Now that you mention it," he said, "I believe we did have a hand—or perhaps I should say tentacle—in it. But I assure you, Draco, that it was all quite legitimate. My dear Miss Korshay," he added, making a courtly bow, his tentacles waving gracefully, "I trust you will not be unduly influenced by Draco's un-Galactic prejudices. I assure you that fully one-third of the language courses we sold were the approved courses specifically made for Merak II."

IV

WHILE Dzanku was talking to Kramu Korshay, Manning was aware that he was making sly probes at his primary mind shield. But suddenly the full force of the Rigelian's powerful mind lashed out. It crashed through his primary shield and struck his secondary shield with a force that made him reel. But the shield held, and after the first uncertainty, he felt the strength flowing back into him. Then, abruptly, the probing force was gone.

"My congratulations," murmured Dzanku. He was unperturbed by his failure. "You are, I believe, the only Terran to ever achieve the secondary mind shield. Interesting."

Although he had no hope of penetrating the Rigelian's mind shield—something which even the professional

thought-probers of Alpha Cygni couldn't do, according to Federation reports—Manning Draco struck once. It was just enough to alert Dzanku for a follow-up. Then Manning struck quickly at the mind of Sam Warren. The little Terran staggered from the force of the blow, his face paling.

As he slipped through the primary shield, Manning had access to Sam Warren's thoughts and memories. There was a clutter of unimportant thoughts, but mixed with them was a vague fear. Manning understood the vagueness when he felt the erased synapse. He withdrew quickly and looked at the Rigelian.

"Clever," he said. "You knew you couldn't protect Sam from me, so you destroyed his memory of how you actually worked the swindle."

"You overestimate my mediocre talents," murmured Dzanku. "Why should I destroy Sam's memory? He is my friend. Besides, he owes me fifteen credits from a game of Castorian Rummy which we played last night. I wouldn't want him to forget that."

"I'm putting all the cards on the table," Manning said. "I think you and Sam got a slice of the four billion credits which Greater Solarian has had to pay out on polices here. In fact, I think you two engineered the whole deal. Then you telepathed into Sam's mind and erased the synapse which carried the memory of the fraud. Since your own mind cannot be read, except by another Rigelian, you feel that you are now perfectly safe."

The Rigelian's tentacles waved with an air of innocence. "If your premise were correct, that would be true," he admitted, "but would I repay the kindness of Greater Solarian in such a fashion? Are we not, as J. Barnaby Cruikshank so eloquently expresses it, one big happy family. Isn't that true, Sam?"

"Yeah," the little Terran said, grinning. "It sure is. We wouldn't do nothing like that, Manning."

ONE of Dzanku's eyestalks swiveled toward the building back of them.

"Ah," he said, "you are about to be officially welcomed, Manning. I hope you appreciate that this is happening only because we have the interests of Greater Solarian at heart."

Looking up, Manning saw a Merakian hurrying toward them. The legs were extended until they were about twenty feet in length so that the Merakian was advancing with tremendous strides. Above the legs, the globular body was smooth and featureless. As the native neared them, the legs began to shorten. By the time he arrived, he was no taller than Manning or Dzanku. He came to a halt, and two eyes and a mouth appeared. An ear sprouted on top of his head, only to fade quickly and reappear on the side. Another matched it on the other side.

"So sorry," murmured the Merakian, his gaze fixed on Manning. "You Terrans are so new to us that sometimes one forgets to affix organs in the places you seem to favor."

"At least, he speaks normal English," Manning said in relief.

"Of course," Dzanku said promptly. "Manning, I would like you to meet Mneone Melpar, the Ninth, most luminous and high globular Dukar of all Merak, sole ruler and arbitrator of Merak II, its satellites and bodies, its possessions and potentials. Your Dukarness, these visitors are Manning Draco from Terra, and Kramu Korshay from Muphrid VIII. They come bearing the good wishes of that great galactic family known as the Greater Solarian Insurance Company, Monoplated."

Manning was not quite sure how to greet a Dukar of Merak, but before he could make a decision an extensional arm had snapped out and he found himself shaking hands. He noticed that a second right arm had appeared and was simultaneously shaking the hand of Kramu.

"I," said Mneone Melpar shrilly, "am the eight thousand, six hundred and twenty-seventh Dukar to rule Merak, now being in my six hundred and sixtieth year of reign, and of all Dukars I am

most blessed by this visit. Consider the planet of Merak II and the capital city of Tor-Melpar to be your home."

"Thank you," Manning said. "As you may know, we are here to look into the matter of insurance and the unfortunate deaths of so many of your subjects. My company believes there may have been fraud."

"All Merak shall be at your disposal," the Dukar said solemnly. "Feel free to call upon the Merakian Police Force, the Merakian Stomach-Printers—even myself. The very thought of crime nauseates me. I will not tolerate any form of law breaking. I have spoken."

"Thank you," Manning said again. "Your cooperation will be reported to the Federation. Now, my companion and I would like to go to a good hotel."

"The Mneone Plaza is already expecting you. The Emperor's Suite has been reserved for you, *Tshone* Draco, and the Empress' Suite for your companion. Both have been altered for the convenience of Terrans or those with Terran form."

"And tomorrow," Dzanku said, "when you have rested, the office will be ready to serve you in your investigation."

"Office?" asked Manning.

"We have taken the liberty," murmured Dzanku, "of establishing a local office of Greater Solarian here in the city of Tor-Melpar. Sam and I are paying for it ourselves until such time as the company wishes to take it over. Naturally, Sam and I will also be happy to help you with the investigation."

"Naturally," Manning said dryly. "Now, how do we get to this hotel?"

"One of my own cars will take you," the Dukar announced, waving a hand in the direction of a globular air-car which had come up and was hovering silently near by. "May you die quickly, *Tshone* Draco, *Tshina* Korshay."

Manning had already started for the air-car, but with that he swung around, his gaze going suspiciously from the Dukar to Dzanku. "What's the meaning of that crack?" he demanded.

"Now, now," Dzanku said hurriedly,

"the Dukar was merely using a very old and polite Merakian form of saying good-by. It was—ah—always believed that the Merakian heaven was the most pleasant place in the galaxy and so to die quickly was soon to be happy."

"Yeah, that's it," Sam Warren said.

"Okay, may you die quickly, too," Manning said sourly. "Come on Kramu," he added, turning to the air-car. They were quickly inside and did their best to make themselves comfortable in the hollows which apparently served as seats for the Merakians. The air-car skimmed off toward the city.

ALTHOUGH the walls of the air-car had seemed opaque from the outside, they discovered they were transparent from the inside. As they neared the city, Manning noticed that the architecture was all of spherical lines. Here and there, on the street, they could see Merakians strolling aimlessly. Once they noticed a new store with a line of video screens, each one tuned to a different station in the galaxy, displayed in front. There was a Merakian squatted down in the midst of the screens, his globular body girdled with alternate rows of eyes and ears so that he apparently could enjoy all the programs.

"Manning," Kramu asked as the air-car scooted above the streets, "are you sure that Mr. Warren and Mr. Dzanku had anything to do with the insurance fraud? They seem so innocent."

"They're about as innocent as a Venusian tree-dragon that's just eaten fourteen colonists," Manning growled. "Those two characters have been getting away with murder for years, but I've never been able to prove it. I've warned J. Barnaby a dozen times, but they sell so many policies he refuses to listen."

"Why haven't you been able to prove it," she wanted to know. "I thought you had never failed on a case. That's what my relative said."

"In a way that's true," Manning answered. He watched a group of young Merakians, arms and legs retracted, rolling down a hill. Then as the scene

slipped away beneath them, he turned back to the girl. "I've never failed to find a way for Greater Solarian to recover on frauds, but every time there has been a fraud in the territory of Warren and Dzanku, I have been unable to prove who was responsible for the fraud. And each time, in probing the mind of Sam Warren I've found an erased synapse, the kind caused by a blast of mental energy. As for Dzanku, it's long been known that the mind of a Rigelian can only be telepathed by another Rigelian."

"Then why not hire a Rigelian investigator to help you?" Kramu asked.

"Look, honey, you Muphridians ought to stop being so provincial and get out in the universe a little. The Rigelians have one of the oldest cultures in the galaxy, but it's a culture based entirely on dishonesty. If there's anyone more crooked than a Rigelian, it's another Rigelian. If we hired one as an investigator, he'd probably make Dzanku cut him in, and with two of them on it, they'd probably figure out twice as many frauds. . . . Looks like we're at the hotel."

The air-car floated to the ground in front of a large building that was made of some sort of onyx slashed with crimson streaks. It was several stories of undulating curves and arches.

V

IN FRONT of the hotel the air-car opened, and the Merakian equivalent of a bellboy stood waiting. Not only had the usual eyes, ears and mouth—the latter stretched in a boyish grin—appeared, but he had also managed a freckled pug-nose. He extended a hand and helped Kramu to the ground. Then he reached up for the Terran.

As Manning Draco's hand closed on the Merakian's, he yelped and left the air-car with a leap that sent him sprawling to the very edge of the hotel entrance. He sat up, rubbing the palm of his hand, and looked at the bellboy. The latter was now grinning so broadly his

mouth seemed to go all the way around his globular body.

"What the hell was that?" Manning demanded. Becoming aware of Kramu's questioning look, he explained: "Something stung me in the hand, something that animated rubber ball was holding."

The Merakian extended a hand, palm upward, and the fingers opened, disclosing a small metal disk.

"A hand-buzzer, pal," he said. "The newest sensation on Terra. Some fun, huh, kid?"

"Oh, my sainted asteroid," groaned Manning, getting to his feet. "They've even dug up all the ancient practical jokes of Earth and sold these characters!" He glared down at the Merakian. "Look, Butterball, show us where we register and lay off the corny gags. They haven't been funny on Terra since the year two thousand."

"Don't be a sorehead, pal," the Merakian said. His grin adjusted itself to more formal dimensions. "Just follow me, pal." He disappeared through the door.

Manning and Kramu followed him into the lobby and looked around. Except for the rather startling color scheme, it was not too different from hotel lobbies in other parts of the galaxy. About half the furniture consisted of the raised hollows in which Merakians could rest their globular bodies. The other half was a mixture of chairs, inclined cylinders, inverted pyramids with octoidal arms, and bench lounges with tail rests, giving the hotel a cosmopolitan air.

The usual blank globe was back of the desk in the lobby, but as they neared, the surface of the globe moved and eyes, ears and mouth appeared. By this time, Manning was getting used to the transformations and was amused to notice that the mouth appeared complete with ready-made smile.

"Welcome to Mneone Plaza," the Merakian said. He twirled the register around, although Manning couldn't see why he did since it was completely round with signatures appearing on it at all angles.

"I understand reservations were made for us," Manning said. "I am Manning Draco and this is Miss Kramu Korshay."

"Of course, of course," the clerk intoned. He whirled the register around again. "If you will but sign for yourself and for the *Tshina*."

MANNING picked up the pen, getting a generous smear of ink on his fingers. It was incredibly ancient, and Manning confirmed his suspicions by noting that it bore the inscription *Made in U. S. A.*, which meant that it dated back to before the Federation. Apparently it was another Warren and Dzanku sideline.

As he signed, Manning's right foot felt warm. He shifted it uncomfortably. Just as he finished writing Kramu's name, he felt a sharp burning pain in the foot. With an exclamation, he looked down. Wedged in the sole of his shoe, was a burning sliver of wood. He slapped the flame out and tried to rub the foot through his shoe. A sudden thought made him look up.

The bellboy was rocking with silent laughter. His mouth was spread in a grin and, as though he wanted to impress the world with his amusement, a second grinning mouth was appearing below the first one.

"Latest Terran joke—the galactic hot-foot," he gasped. "Some fun, huh, kid?"

Without stopping to think about such things as intergalactic good will, Manning Draco swept the inkwell from the desk and hurled it with the same motion. As the inkwell left his fingers, he leaped forward, swinging a haymaker.

The Merakian bellboy ducked the inkwell by the simple act of retracting his legs a few inches. He looked up with sudden fear at the charging Terran, swayed briefly and fell to the floor. Mouths, eyes and ears vanished. The arms and one leg retracted quickly. The second leg quivered a moment and then it, too, retreated into the body.

Manning Draco stood over the perfect round ball on the floor, a baffled look on his face.

"Get up," he shouted. "Get up or, so help me, I'll dropkick you from here to Terra."

A strange Merakian suddenly trotted up. As he arrived, one huge ear budded from his side. His legs retracted until by leaning only slightly, he was able to place the ear against the globular body on the floor.

"Manning," Kramu Korshay said softly. There was a note of alarm in her voice. "What is happening?"

"I don't know, honey," Manning answered, still watching the newcomer. "I thought he was faking, but maybe he really fainted or something."

The newcomer extended his legs until he was on a level with Manning, the large ear reducing in size. "Permit me," he said, "to introduce myself. I am Phlag Deltone, Chief Death Certifier of all Merak. The excitement of impending bodily harm has caused the death of this young citizen on the floor."

"Wait a minute," cried Manning. "Are you sure? Why, I never touched him. He can't be dead."

The clerk had come around from behind the desk and now he grabbed Manning's hand and began to pump it up and down. "Allow me to congratulate you, my dear sir," he was saying. "You have been on our planet only a few minutes and already you have caused the death of one of us. Fortunate man!"

"But I didn't do it," Manning declared, not really understanding what the clerk was saying. "The kid must have had a bad heart or something. We'll have to straighten this out. The boy must have a family—"

"They will undoubtedly be around tomorrow," interrupted the clerk, "to shower you with gifts."

"I, myself, will notify them immediately," said the other Merakian, "so that they will have time to prepare a suitable reward."

Manning stared in perplexity at the two Merakians. "Say," he demanded, "are you characters pulling my leg?"

"A pulled leg never shortens," the clerk said promptly, and it was obvious

he was quoting some local proverb. "Now, my dear sir, in view of the demise of our bellboy, permit me to escort you to your rooms."

"Wait a minute," said Manning. "Is this character dead or isn't he?"

"Oh, decidedly dead," the clerk assured him. "Now, I will take you to your suite where you can rejoice in solitude. *Dior Phlag* will take care of the remains."

STILL dazed, Manning permitted himself to be hustled into the spherical elevator which shot up to the sixth floor. Opposite the elevator, the clerk flung open a door to reveal three rooms decorated in blue and gold.

"For *Tshina Korshay*," he announced. Without giving Manning a chance to make any arrangements with Kramu, he hustled the Terran along to the next door down the hall. He opened the door with a flourish, revealing another three rooms decorated in green and russet. He looked at Manning expectantly.

"Very nice," Manning said automatically.

The clerk glanced around as though to make sure that there were no eavesdroppers. He cleared his throat nervously. "*Tshone Draco*," he said, "your permission to speak upon a delicate matter?"

"What?"

"Do you—ah—always react in such a violent and exciting manner when a joke is played upon your person?"

"I certainly resent some guy's trying to set me on fire, if that's what you mean," Manning said, "but I still never touched that boy. Something else had to kill him—if he's really dead."

"You are too modest," the clerk said. There was a strange gleam in his eyes as he backed out into the hall. "Thank you, *Tshone Draco*. I shall keep your eccentricity in mind."

The door closed and Manning was alone. He leaned against the door and stared blankly at the wall. "Nuts," he said to himself. "Absolutely, stark, raving mad."

He was sitting in front of the television

screen when there was a tap on the door. He hesitated, then called, "Come in."

It was Kramu. She had refreshed her make-up and brushed the blue feathers until they gleamed. As she stood framed in the doorway, Manning forgot the irritations which had beset him since arriving at Merak II.

"Work," he announced, "is a sin and a crime when there is such a beautiful doll around. Let's have dinner and spend the night in romantic idleness?"

She shook her head, smiling. "No relaxation until we finish the case," she said. "Do you think there is any connection between our reason for being here and what happened downstairs?"

Manning frowned. "I don't know, honey. But it's a cinch that either someone is trying to frame me or this is the screwiest planet this side of infinity. As far as the case is concerned, it won't make much difference which it is."

"What were you doing when I came in?" Kramu asked.

"Getting ready to contact J. Barnaby."

"Why not call him and report then? Afterward, we can have dinner and then we can go over the papers together while you explain them to me. You did bring all the papers with you?"

Manning nodded, sighing heavily. "You're a hard woman, honey," he said. He drew a small, oblong object from his pocket and began to fasten it to the sending board of the television screen.

"What's that?" Kramu wanted to know.

"A scrambler," Manning said. "J. Barnaby has one on his set so we can talk without anyone listening in. They scramble the voices and the images."

There was a knock on the door. Manning exchanged glances with Kramu. "It's probably that desk clerk," he said with the air of a man who has reached the limit of his patience. "He was unduly interested in finding out whether I always react the same way to a hotfoot." He took a deep breath and raised his voice. "Come in."

The door opened and a Merakian stood in the doorway, peering into the room.

Although all Merakians seemed to look alike, there was a subtle difference in the attitude of this one, just as there had been in that of the Dukar. Although already equipped with eyes, mouth, and a rather handsome Greek nose, one spot on the globular body was writhing in the manner that heralded new additions. As they watched, a fully detailed patch-pocket appeared on the side of the Merakian's body. He unbuttoned the flap and drew from the pocket a large pair of black-rimmed glasses, with curved bows. He fitted these over his eyes. The pocket vanished.

"Now I've seen everything," Manning muttered to Kramu. "Not only do they grow eyes on demand, but even weak eyes that need glasses!"

THE Merakian was peering through the glasses at Manning. "Manning Draco, of the planet Terra, Galaxy One?" he asked.

"That's me," Manning said, his good humor restored by the sight of the glasses.

"I," said the Merakian, "am Dtella Zyzcar, the Fourth, Minister of Heroics to his most globular majesty, Mneone Melpar, Dukar of Merak. I just happened to be in the hotel and learned of the sudden demise of a Merakian citizen known as Psota Lpona. I believe you were responsible."

"I'll be damned if I'm going to be framed for that," Manning said. "I never touched the idiot. I want to warn you that I am accorded full Federation police powers and if you try to frame me for murder, there'll be an investigation that'll scorch your pants—or would if you wore pants!"

"You Terrans are strange beings," the Merakian said solemnly, advancing across the room. "Not only do you inhabit bodies which are impractical, if not impossible, but you continually act as if you were insane. Still, I suppose, that is none of my business." Another pocket appeared on the Merakian as he halted in front of Manning. From it, he drew a black and silver ribbon. Sus-

pendent from it was a perfectly blank sphere, about an inch in diameter, made from some sort of scarlet metal.

"In the name of the eight thousand, six hundred and twenty-seventh Dukar of Merak—may his breath shorten—" said the Merakian, pinning the ribbon on Manning's chest, "I bestow upon you the Order of Lsita Nolpon, First Dukar of Merak, for services to Merak beyond the call of an alien's duty. Since this award is in the actual likeness of our first blessed Dukar, it is hoped that you will cherish it. In the event that you feel otherwise, however, it can be—pawned is the English word, I believe—at the Dukar's private counting house for four credits, ten units."

The Merakian gave Manning a formal smile, removed his glasses and tucked them away in the pocket which suddenly appeared. He turned and marched quickly from the room.

"I'll be damned," Manning said weakly. But for the first time in his life his vocabulary failed him beyond that point.

Following his report to J. Barnaby Cruikshank, Manning took Kramu to dinner in the hotel dining room. Aside from the fact that they seemed to be the subject of conversation of every other diner, including two young gelding-scouts from Alpha Centauri, the dinner hour was uneventful.

Although he did everything to change it, Manning's evening was as unromantic as Kramu had predicted. He spent four hours going over the insurance policies and medical reports with her. Then even his final hope was blasted when Kramu laughingly sidestepped his good-night embrace and was gone. Her similarity to human women, he reflected as he went to bed, was more than just a surface appearance.

VI

NEXT morning, Manning Draco was up early. He had breakfast with Kramu and then, despite her protestations, left her at the hotel to deal with any adoring relatives of the dead bellboy. The first

name on his list was Rtanel Selmar, holder of Solarian policy Number 42x-76940876256781102, age two hundred and thirty, eldest son of Rtanel Dneeper, deceased July 4th last.

After getting directions from two Merakians, each of whom tried to play crude practical jokes on him, Manning Draco finally arrived at the domed apartment occupied by the Rtanel family. He was greeted by four regular-sized Merakians and six smaller ones. They all immediately provided themselves with human-shaped eyes, ears, noses and mouths. They seemed genuinely pleased when he announced who he was.

"The Greater Solarian Insurance Company," Manning said, pulling out his papers, "greatly sympathizes with you over the recent loss of a son and brother. We have received your claim for benefits, amounting to—let me see—two hundred thousand credits—and my visit here is a mere formality through which we have to go before paying out the cash. You understand that, of course."

The Merakians nodded their whole bodies to indicate they did.

Manning consulted the policy in his hand. "The name of the deceased was Rtanel Selmar?"

"Yes," they chorused.

"Which of you were the parents of the deceased?"

"We were," said three of the largest Merakians.

Manning glared at the three of them. "Okay," he said, "I'll take you one at a time." He pointed a finger at the one nearest to him. "What is your name?"

"Rtanel Dneeper, the Fifth."

"What relation were you to the deceased?"

"I was the father."

"And you?" Manning asked the second one.

"Rtanel Dnina, the Third."

"Relation to the deceased?"

"I was the mother."

"Now, you?" Manning asked the third.

"Rtanel Dnolnar, the Fourth."

"Relation to the deceased?" snapped Manning, triumph in his voice.

"I was the Other."

There was a moment of silence while Manning Draco carefully remembered that Greater Solarian and J. Barnaby were depending on him. Then he calmly turned to the fourth largest Merakian.

"What's your name?" he asked.

"Rtanel Selmar, the Second," the Merakian said promptly.

"Rtanel *Selmar*—the Second, huh?" Manning said thoughtfully. He glanced at the policy. "You look to be about the same size as the Rtanel Selmar we insured. How old are you?"

"Two hundred and thirty years."

"Same age too," Manning said softly. "Do you mind if I take your stomach print?"

"Not at all," the Merakian said.

MANNING had stopped that morning at a local police station and borrowed the equipment for the printing. Within a few minutes, he had inked the stomach of the Merakian and transferred the print to a piece of paper. He carefully compared it to the print attached to the policy. They were the same.

"Isn't it true," he asked, "that no two of you Merakians have the same stomach print?"

"Quite true," the ten Merakians agreed pleasantly.

"Then how," Manning demanded, "do you explain the fact that you, Rtanel Selmar, the Second, have exactly the same stomach print as the Rtanel Selmar you claim died on July fourth?"

"Oh, that's simple," exclaimed the Merakian. "You see you're confused in thinking that there were two. I bought the insurance policy when I was Rtanel Selmar. Then I died and was reincarnated as Rtanel Selmar, the Second. What's unusual about that?"

"As a rule, when we pay on an insurance policy," Manning said dryly, "you can be sure that the policy holder is not only dead but is going to stay that way. The company frowns upon the whole thought of reincarnation when it involves someone we've insured."

"Strange," murmured the Merakians.

"Perhaps," Manning agreed amiably, "but I don't think you should expect to collect on this policy."

"Then we shall sue in the Federation courts," one of the Merakians said with dignity. "We were assured by the Federation authorities that no one in the galaxy would be able to take advantage of us. We paid your company with the understanding that we would be paid if Rtanel Selmar died. It is a matter of legal record that he did die. The insurance policy said nothing about not paying if he were reincarnated."

Manning Draco had a terrible feeling that the Merakian was right in thinking that the Federation courts would uphold the claim, but he showed none of this in his expression as he gathered his papers and started to leave.

"Of course, I can't say for sure," he said. "This is a matter which will have to be settled by the president of the company. I merely report what I find."

He got as far as the door when one of the Merakians spoke. It was the one now identified as Rtanel Selmar, the Second.

"Mr. Draco," he said, "would your company have any objection to selling me another life insurance policy? This one was such a good investment."

"I'd wait a few days if I were you," Manning said dryly. "I have a feeling that J. Barnaby Cruikshank would have a heart attack if faced with that question just now."

With that, he left. During the remainder of the day, Manning Draco visited thirty families. In each case he found that the policy holder had officially died, but had been just as officially reincarnated. By the end of the day, he had experienced so much that he was completely unmoved to find his suite in the hotel almost filled with various gifts left during the day by the relatives of the bellboy who had dropped dead the night-before.

"I think," he told Kramu that night at dinner, "that they've got J. Barnaby over a rocket. The only chance—whether the reincarnation is legitimate or faked—is to prove that somebody deliberately

planned for it to work out this way. And that looks pretty slim at this moment. These Merakians all have automatic mind blocks that stop all telepathic probes. Sam Warren's memory of the whole thing has been erased and no Terran has ever been able to get by the mind shield of a Rigelian. The only thing to do is keep checking on policy holders and hope that someone will slip up."

FOR almost two weeks, Manning and Kramu worked from early morning until late night. Even Manning became so concerned with the problem that he forgot to throw his usual passes at the beautiful Muphridian. On the evening of the thirteenth day, they had records of seven hundred and fifty reincarnated Merakians, but not one bit of evidence to prove fraud.

"I think we're licked, honey," Manning said as they dropped, exhausted, into chairs in his suite. "They can make the reincarnation gag stick legally and there's nothing in the policy to stop them."

"May I make a suggestion?" Kramu asked.

"Hell, yes. What is it?"

"Why not try to probe the mind of Dzanku Dzanku if you're so certain that he and Warren engineered this? If you learned how it worked, then surely that would be enough to cause the Federation courts to make Dzanku submit to a cybernetic reading of his mind."

"It would," Manning admitted, "but that's not much better than just wishing it had never happened in the first place. No Terran has ever succeeded in probing a Rigelian's mind."

"I know you told me that," she said, "but I also know that you're the only Terran to ever develop a secondary mind shield. If you had enough strength to resist Dzanku's attempt to probe your mind, then maybe you have enough strength to probe his."

"Maybe you've got something, honey," he said slowly. "It better work though, or they'll be carting me back to Terra in a padded rocket."

"What do you mean?" she asked.

"If I use all my power in one thrust at Dzanku's mind and fail, I'll be wide open for his thrust. He'll blast my whole mind as smooth as that one synapse in Sam Warren's mind. But if we could think of some way of getting Dzanku off guard for a minute, maybe it would work."

"I think I know how you can do it," Kramu said.

"How, baby?"

"You once accused me of being provincial," she said, "so one of the days you didn't take me with you, I went to the Merakian library and studied up on Rigelians. It seems that every Rigelian inevitably has one psychological weak spot."

"Sure, they'll steal anything they can lay a tentacle on," Manning said, "but how does that help us?"

"They have one other—gambling. According to the book I read no Rigelian can resist gambling."

"That's true," Manning admitted, "but I still don't get it."

He shook his head dubiously.

"Play some gambling game with Dzanku," Kramu said promptly. "Wait until the outcome of a game depends on a single turn of a card and in that second—strike."

Manning was silent for a minute, thinking it over. Finally, he grinned. "Honey," he said, "I think you've got it." He glanced at his chronometer. "I've just about got time to catch Dzanku and Sam at the office. Wish me luck, baby."

"I'm going with you," she said.

"Not this time, honey," Manning said. "You stay right here. If I'm not back within three hours, it'll mean that I've failed. If you're here, you can call J. Barnaby and tell him to come and scoop up the remains. So you'll have to be content with wishing me luck."

"I do, Manning," she said. To his surprise, she leaned over and kissed him lightly on the lips.

"Now, go," she said, pushing him toward the door.

VII

DZANKU DZANKU and Sam Warren were still in the office when Manning arrived. He noticed that the rooms were as ornately furnished as the home office in Nyork and thought it was unlikely that the two salesmen would have spent that much money if their only income had been commissions.

"Hi, Manning," Sam Warren called. "It's about time you dropped into the office. How's it going?"

The Rigelian inclined his eyestalks and waved three tentacles in a friendly fashion. "Hello, Manning," he said. "What's new with the galaxy's greatest snoop-er?"

"Not much," Manning said casually. He dropped into a chair. "The investigation seems to be drawing a blank and I've been working so hard I've decided to take the night off and relax."

"Where's that cute little number you brought with you?" Sam Warren wanted to know.

"Probably reading the statistics on industrial fatalities among the Martian *Drupees*," Manning said sourly. "She may look like a beautiful doll, but she acts like a computing machine in the office of J. Barnaby."

"I hear that's the only flaw in some of those humanoid races," Dzanku said. "We'll be glad to help you relax, Manning, but there isn't too much excitement on Merak II, unless you're a Merakian. There are still no human females here, and you brought the only humanoid one. You'd probably find the local belles inadequate. There is a native intoxicating beverage, but if I can judge by Sam, it doesn't seem fit for human consumption."

"I'll say," Sam said, making a face. "The one time I tried it, I couldn't see for six hours."

"I've had about all the Merakians I can stand," Manning said, "but what about local gambling halls. If I can't spend my salary, I might as well lose it."

There was a gleam in the Rigelian's three eyes as he stared at Manning.

"Well, now," he said slowly, "maybe we can take care of that. Sam and I get a little tired of playing cards with each other. Care for a little game of Castorian Rummy?"

"What stakes?" Manning asked.

"Make it easy on yourself," the Rigelian said. His tentacles were beginning to quiver with excitement.

"Ten units a point?"

"Make it twenty," Dzanku said.

Manning hesitated, then agreed.

"Okay with you Sam?" Dzanku asked, opening a drawer.

SAM nodded. They cut cards for the deal, and it went to Dzanku. Using all his tentacles, he shuffled the cards, so fast the cards could hardly be seen. Then he began dealing.

For the benefit of those readers who may live in outlying provincial planets, where they're still playing either the Gin Rummy of the Twentieth Century or the Luna Triple Rummy of the Twenty-fifth Century, Castorian Rummy is played with three decks of cards, each deck consisting of ninety-five cards—the regular seven suits of thirteen cards each and the four super-jokers, Orbit, Comet, Asteroid, Nova. Each player in the game receives thirty-nine cards on the deal and simultaneously plays three games. Since it is possible to trade cards back and forth between his three hands, it is easily seen that considerable finesse is needed to play the game well. Cards are drawn, matched and discarded in much the same fashion as in the older games. Game is one thousand points. In the event that a single player wins all three games, with one hundred extra points for each scoring and five hundred extra for the game, his opponents' scores are not counted at all and his own score is tripled.

Manning was soon aware that Dzanku was a skillful player, but then Manning himself had held his own with the best professionals. Several times, he deliberately made blunders in order to keep the score fairly even.

Tension mounted as the game pro-

gressed. At the end of two hours, Sam Warren still had small scores, less than seven hundred, in all three games. Dzanku's scores were 915, 920, and 970. Manning's scores were 930, 935 and 965. Either Manning or the Rigelian could go out on all three games in the next hand. As Sam Warren, grumbling at his own luck, dealt the cards, Dzanku was so excited his tentacles were constantly weaving about his head.

After drawing four cards, Manning Castored on his first hand and the first game was his. He put down two double color runs on his second hand, and a triple color run plus a small numbers run on his third hand. Dzanku, during the same period, had played about the same number of cards from both hands. Each of them needed one card in each hand to go out.

Manning drew the card, he needed for his second hand, but didn't put the cards down. He no longer had to pretend to be nervous and he could see that Dzanku was shaking so badly his tentacles kept slipping from the cards and he was softly cursing in Rigelian under his breath.

If Manning went out on both games, at a rough estimate it would mean winning six hundred thousand units from Dzanku alone. If Dzanku won the last two games, Manning would owe him about two hundred thousand units.

Up to this point, Manning had been slapping cards down as quickly as he saw they were not what either he or Dzanku needed. Now, he drew a card and held it just above the deck, staring thoughtfully at it. The tension was so great he could see the muscles standing out along the eyestalks of the Rigelian. At that moment, Manning Draco struck.

As the full force of his mental energy struck Dzanku's mind shield, he felt the Rigelian frantically trying to pull his defenses together, but Manning realized with an inward triumph that it was too late. The next instant he felt the shield give way and he was inside a completely alien mind.

Even much later, Manning Draco was unable to tell how long his mind re-

mained locked with Dzanku's. He probed, feeling his own strength draining, almost recoiling from some of the things he encountered, until he found what he wanted. Then he quickly withdrew.

Manning staggered to his feet and looked down at Dzanku. The Rigelian's eyestalks drooped, and his tentacles moved in feeble spasms. He knew that it would be at least an hour before Dzanku recovered. Without bothering to look at Sam Warren, Manning walked drunkenly from the office.

Back at the hotel, where Kramu Korshay waited anxiously, Manning was too exhausted to do more than mutter: "It worked, honey. Tell you tomorrow. Got --to--sleep--now..." He dropped off to sleep even as he uttered the last word. Kramu dragged him over to the bed and made him comfortable before going back to her own suite.

EARLY the next morning, a fully-recovered Manning Draco grabbed a cup of coffee and hurried off to the palace of the Dukar. After a short wait, he was ushered into the audience room.

The Dukar of Merak was seated on a throne which looked like a gigantic scarlet pumpkin, with the top hollowed out. As Manning entered, the Dukar was already equipped with eyes and mouth, and the ears were just being formed. Manning waited politely until the ears stopped growing.

"Good morning, Dukar of Merak," he said cheerfully. "I trust I have not visited you at an unseemly hour."

"Not at all, *Tshone* Draco," the Dukar said pleasantly enough, "although I must admit that it puzzles me somewhat. My experience with un-Merakian forms of life has led me to believe that they do not make an appearance until late in the day."

"You've just been under the wrong un-Merakian influences," Manning said. "But I am here upon a most serious errand."

"I am all ears," said the Dukar, adding several to give credence to his statement.

"First, a point of information," Man-

ning said. "Is it not true that the average full life span of a Merakian is about four hundred years, but that if a Merakian is exposed to some sudden shock or excitement he goes into a cataleptic trance which is officially pronounced death, and that upon coming out of this trance in about seven days his life has been prolonged by a hundred years? And that this can happen any number of times?"

The Dukar looked anything but happy, but his voice was the same as he answered. "Within limits," he said, "that is essentially correct. However, *Tshone Draco*, it is not a trance. Sudden shocks cause all life to stop within us, and only shocks of excitement will do this. But after seven days a spark of life is revived and, as you say, one hundred years has been added. Our final death, however, is exactly like the others and occurs either at the exact end of four hundred years or within four hundred years after the fifteenth reincarnation."

"And after each reincarnation, you keep the same name but add a number which indicates the extension?" Manning asked.

"That is correct. I, for example, am Mneone Melpar, the Ninth, and am, at the present reckoning, eight hundred and ten years old."

Manning took a deep breath and continued. "The charge I'm about to make," he said, "is not a pretty one, especially since it concerns the ruler of a planet. But I thought if we were to discuss it here, perhaps it would not be necessary to bring the matter up before a Federation court."

"I shall be interested to hear it," the Dukar said.

"Sam Warren and Dzanku Dzanku," said Manning, "came here representing the Greater Solarian Insurance Company. They discovered the facts about Merakian reincarnation and saw a chance to make a lot of money. A deal was made with you, the Dukar of Merak, and a lot of insurance was sold, especially after the deal was explained. You then declared that Merak would celebrate the

old American states' holiday, the Fourth of July which still gets sentimental recognition on Terra. A large order of atomicworks was imported from Terra, and these were exploded unexpectedly in many public places so that millions of Merakians 'died' as a result of the excitement. This in turn made my company liable for more than four billion credits. Do you deny this plot?"

"Of course not," said the Dukar. "But how did you learn the details?"

"I read Dzanku's mind."

"What a pity," the Dukar exclaimed. "He was so proud of the fact that no Terran could read his mind. But, tell me, *Tshone Draco*, why do you rush to me so early in the morning with this story?"

"Because it's fraud," Manning said indignantly. "It's the same as stealing that much money from my company."

"This is wrong?" murmured the Dukar. "Really, you Terrans have the most amazing culture."

"Not only us, but the entire Federation," snapped Manning. "This little incident puts you and your whole planet in the criminal class."

"That sounds a bit—chauvinistic is the word, I think," the Dukar said gently. "It seems to me that if there is any crime involved it lies with your company for offering us the temptation. We but did what was to be expected."

IN A lofty tone, Manning said, "I imagine the Federation courts will think differently," Manning said. "With what I know, we can go into a Federation court and force Dzanku Dzanku to submit to cybernetic mind reading and the whole plot will be a matter of record. You have already become a part of the Federation and have to abide by the laws of the Federation."

"Ah, yes," murmured the Dukar, gazing up at the ceiling and rocking slightly on his throne, "but I believe that I am correct in saying that until our entrance is ratified by two-thirds of the planets belonging to the Federation, and until we agree to any national changes the

Federation may demand of us, the Federation courts agree that our national laws apply, as written, to all companies and aliens attempting to do business with us."

"Even so," Manning demanded hotly, "how do you justify this bare-faced swindle in which you yourself were to receive one billion, two hundred credits if it succeeded."

"One billion, two hundred and ten credits," corrected the Dukar. "It has succeeded, for the Federation must force your company to pay. You may check up on my wording in our Dome of Justice, but I believe that the sixty-seventh thousand article of our national by-laws reads: 'Any company, corporation, monopoly, or individual doing business, residing, or visiting within the confines of the glorious planet, Merak II, may be relieved of property or monies, or defrauded in any shape or manner, providing the reigning Dukar is given a share of the proceeds amounting to not less than thirty-four per cent.' It's really supposed to be one-third," the Dukar added, "but I do hate having to calculate fractions."

"I don't believe it," Manning said flatly. "Anyway, I'm putting Warren and Dzanku under arrest, and we'll see if you get away with this."

"That may be difficult, *Tshone* Draco. Sam Warren and Dzanku were around two hours ago and borrowed one of my fastest ships. I was rather surprised at the hour, but then one may expect anything of aliens. . . . If I were you, *Tshone* Draco, I would go to the Dome of Justice and read the Merakian laws and then consult an attorney."

"I'll do just that," snapped Manning. He headed for the door but was stopped by the Dukar's voice.

"While you're there," the Merakian ruler said, "you might also glance at article one hundred and two thousand which states: 'Any company, corporation or monopoly maintaining offices within the confines of the planet Merak II which permits itself to be defrauded in any way is subject to a fine, to be

paid into the Merakian treasury, equal to the amount lost by fraud."

For a minute, Manning was speechless. "But Greater Solarian doesn't maintain an office here," he protested.

"You forget," the Dukar said blandly, "that Warren and Dzanku opened an office here. It's true that they paid for it themselves, but the Merakian Senate passed a new law—late last night—which holds a company and its employees as one. . . . Good morning, *Tshone* Draco."

VIII

MORE than three hours later when a red-eyed Manning Draco stumbled out of the Merakian Dome of Justice. He had not read all the Merakian laws by any means, but he had read enough.

In spite of this, he was in better humor by the time he arrived back at the hotel. Kramu Korshay was waiting in his suite, a frown on her pretty face.

"That was unfair, Manning," she cried. "You were too tired to tell me what happened last night and then you left this morning before I was up."

"Never mind, honey," Manning said. "You'll hear it all as I report to J. Barnaby. You'd better stuff your ears when he answers after hearing the first part."

He went directly to the television screen and attached his scrambler. Within a few minutes, the well-fed face of J. Barnaby Cruikshank was peering from the screen.

"Well, Manning," J. Barnaby said, "what's happened? You called our attorney an hour ago, but he said I would have to get the whole story from you. What is it?"

As quickly as he could, Manning related the whole story of the plot of the insurance policies. "Also," he added at the end, "they have a law here which will force you to pay a fine equal to the amount of the policies you must pay out. As of the moment, J. Barnaby, you owe the Merakian people and the Merakian government the small amount of eight billion, twelve million credits."

Although the televisior image was not in color, it was easy to see that J. Barnaby's face was turning a choleric red. The first sputters were just beginning to smooth out into understandable, and reprehensible, words when Manning interrupted.

"Hold everything, J. Barnaby," he said. "There is no way to get out of paying the eight billion. Your own lawyer will tell you that. But I've got a way for you to make it all back and more within a short time."

"How?" J. Barnaby asked hoarsely.

"First," said Manning, "cancel all the life insurance policies still existing here. Next, appoint the Dukar as sole representative of all Greater Solarian interests on Merak, with a third cut."

"I'll see him in hell first," bellowed J. Barnaby.

BY LAW you have to give him a third," Manning said, "and besides it'll be worth it. Third, issue a special insurance policy for Merakians only. You might call it death insurance and you insure them against not dying. In other words, if a policy holder doesn't die, we pay off. Then we set up a subsidiary company to import and operate all kinds of excitement. We get the Dukar to declare every day a holiday and bring in lots of atomicworks. We start gambling houses on every corner, bring in horse, car and space-ship races, practical jokes like exploding cigars. Excitement makes a Merakian drop dead, so we'll give them a whole planet of excitement. Each time one drops dead, his insurance policy is canceled and he has to take out a new policy for his next reincarnation. See the possibilities, J. Barnaby?"

J. Barnaby did. His face smoothed out into his best presidential smile. "Manning, my boy," he said expansively, "you've done it again. This will mean a nice fat bonus for you. Now, hurry home. We've got a bit of a problem with some industrial policies on Pollux—"

"Put it on ice," Manning interrupted. "I'm taking a vacation." He switched off the screen, unfastened his scrambler

and turned to Kramu. "Well, honey," he said, "the business is done and now we can turn to that pleasure you've been putting off. What do you say about a week end on one of the Pleasure Islands of Arcturus?"

"I'm sorry, Manning," she said, shaking her head so that the blue feathers danced, "but I told you that I had an important appointment back home on Muphrid. I'm due to make my first appearance before the Transverse Fission Council late this afternoon. So you'd better get me back home."

"Transverse Fission Council?" said Manning suspiciously. "What is that?"

"You should stop being so provincial," Kramu said, amusement in her eyes, "and travel around the galaxy more. Come on, let's get out to your ship."

Manning grumbled and bullied, but all to no avail. He was still alternately trying to be masterful and pitiful later when the ship touched at Muphrid.

"I'm sorry, Manning," Kramu said for the hundredth time, "but it's really better this way. I know you think I'm beautiful and I appreciate the passes you've been throwing. But you see we Muphridians are evolved from the race of paramecia."

"What the hell is the paramecium?" Manning demanded.

"Look it up, honey," she said laughingly. "Then if you still want a date with me, all you have to do is wait about three hundred generations. Good-by, now." She blew him a kiss and was gone. He had one glimpse of her blue-feathered head as she entered an air-car, and then he was getting orders from the tower to blast off.

When his ship was once more out in space, its nose pointed toward Terra, he began to search through the record tapes, completely ignoring the continued signaling of his televisior. Finally, at the bottom, he found a tape labeled *Paramecium*. He slipped it into the reader and leaned back.

"In any consideration of sexual reproduction," said the smooth voice of some librarian. "the situation noted in

the paramecium, a member of the most complex class of protozoa, the Infusoria, is most interesting—particularly since many advanced humanoid races are the descendants of this evolutionary strain. Paramecia possess a large oval nucleus and in a small depression in their sides each one possesses a tiny spherical micronucleus, reproductive in function. Commonly the elongate animal reproduces by a simple transverse fission into two. After a number of such divisions, usually several hundred, the process is interrupted ordinarily by a temporary union of two individuals during which, after disintegration of the macronucleus and elaborate preparation of the micronucleus, micronuclear material is exchanged. The animals then separate and resume reproduction by division. This process seems to hold true for all races which have evolved from the paramecium. Regrowth is rapid and under favorable conditions, four divisions occur every twenty-four hours. Calculations show that a single paramecium, or individual evolved from paramecium, can

thus produce two hundred and sixty-eight million offspring in one month. This—"

MANNING shut off the reader and stared at it numbly. Then he suddenly became aware of the insistent buzzing from his televisior. He reached over and turned it on. The angry face of J. Barnaby Cruikshank appeared on the screen.

"Where the hell have you been?" demanded J. Barnaby. "And what do you mean by saying you're going on a vacation? You can't go now. Why—"

"It's okay, J. Barnaby," Manning interrupted. "I'm coming home. I'll be there in about an hour."

"What's the matter with you?" asked J. Barnaby peering from the screen. "You look pale. Have you been sluggish or something? What happened?"

"I'm not quite sure," Manning said slowly, "but I think I just barely missed being the father of two hundred and sixty-eight million children, and on what you pay me—I can't afford it."

• • • WONDER ODDITIES • • •

WARFARE, dedicated to taking lives, occasionally produces a development which saves lives. The deadly gas nitrogen mustard has now been discovered to provide relief in cases of dropsy.

ONLY lazy people will be interested in a new cigarette vending machine which hands the purchaser a lighted cigarette.

NEW theories in dentistry frown on the yanking of teeth to cure rheumatism or arthritis. From now on a tooth will be pulled only if it's bad, not because you have a pain in the elbow.

DR. Louis Roth of the Army's Quartermaster Labs has allowed more than 1000 hungry female mosquitoes to sink their proboscises into his shrinking anatomy within a six-month period. Purpose, to find out why mosquitoes like certain people more than others. We hope he now knows.

EVEN 20 year olds should start thinking about preventing old age diseases, according to the American Geriatrics Society. It may be too late when you're old, because effective prevention begins at 20.

ROCKET experiments at White Sands demonstrate vividly the earth's rotation. A rocket fired straight up would come down about 15 miles from its starting point, the earth having rotated so far in the ten minutes of the rocket's flight.

THE READER SPEAKS

(Continued from page 8)

Brackett, Cartmill and Kuttner and better-than-average shorts from Margaret St. Clair, Leinster, Wellman, Ron Hubbard, Bradbury and newcomer Edwin James. **THE HIBITED MAN, COLD WAR, THE LAKE OF THE GONE FOREVER, THE GARDENER, KALEIDOSCOPE** and **PARADOX** were, among the memorable titles.

James Blish wound up 1949 with his exciting ESP novel, **LET THE FINDER BEWARE**, in an issue that saw three novelets—Jones' **THE SHROUD OF SECRECY**, Leinster's **THE LONELY PLANET** and Clarke's **THIRTY SECONDS—THIRTY DAYS**—and a quartet of shorts that included Bradbury's **A BLADE OF GRASS** and de Camp's **THE COLORFUL CHARACTER**.

Nineteen-fifty opened with a Dirk Wylie-Fred Kummer Jr. novel, **WHEN TIME WENT MAD**, supported it with three novelets, Brackett's **THE DANCING GIRL OF GANYMEDE**, Jones' **THE GREATER CONFLICT** and Kuttner's wonderfully funny **THE VOICE OF THE LOBSTER**. Shorts included MacDonald's gorgeously gruesome **SPECTATOR SPORT** and Bradbury's **PAYMENT IN FULL**.

Jim Blish took top honors in April, 1950 with his novelet, **THERE SHALL BE NO DARKNESS**, although MacDonald's **JOURNEY FOR SEVEN** gave him a run. Top short was Bradbury's **CARNIVAL OF MADNESS**. Jones walked away with all the awards in June with his short novel, **SUNDAY IS THREE THOUSAND YEARS AWAY** (mistitled *miles* away on the contents page!) although Margaret St. Clair's **THE PILLOWS** has since won anthological attention.

Kuttner delivered a fine lead in August with **AS YOU WERE**, which had a tussle with two novelets of almost equal merit, Vance's **NEW BODIES FOR OLD** and West's **THE WEARIEST RIVER**. In October Eric Frank Russell's **FIRST PERSON SINGULAR** ran a dead heat with John D. MacDonald's provocative **SHADOW ON THE SAND** and Bolling Branham's **TRAFFIC** led the shorts. Brackett wound up the year in December with her picaresque **THE CITADEL OF LOST AGES** and Harness scored with **THE NEW REALITY**. Russell's **MACHINERY** topped the briefer tales.

In this year of grace, 1951, thus far our lead stories have been **OVERLORDS OF MAXUS** by Jack Vance (February), **THE CONTI-**

NENT MAKERS by L. Sprague de Camp (April), **SON OF THE TREE** by Jack Vance (June), **ALARM REACTION** by Jones (August) and **ASYLUM SATELLITE** (this issue).

Other 1951 short novels and novelets that seem to us worthy of mention include, **I, THE UN-MORTAL** by Emmett McDowell, **BROTHER WORLDS** by Gallun, **TEMPORARY KEEPER** by Horace Fyfe, **I PSI** by Carter Sprague, **EARTHLIGHT** by Arthur C. Clarke and, in this issue, **THE MERAKIAN MIRACLE** by Crossen and Brackett's **THE LAST DAYS OF SHANDAKOR**.

Among the shorts we liked, **MAN OF DISTINCTION** by Brown, **FOG** by Bill Gault, **A THESIS FOR BRANDERBOOK** by Harness, **THE JESTER** by Tenn, **NO DIPSY FOR DIX** by Larry Clinton and **AT YOUR SERVICE** by Cartmill. And the continued feature, **OUR INHABITED UNIVERSE** by Jim Blish, just getting under way.

All in all, looking back on our tenure, it scarcely seems ever to have been a dull one. And in those rare periods when stories submitted lagged in interest, your letters rose in heat. Hence we can safely say we have never been cold in this editorial chair.

Our New Editor

Samuel Mines, who has a much better sf background than we ever had, is taking over the chore from here—and we have a hunch it will be a good thing all around to have a new and gifted hand at the helm. Two of his sf stories, **A TAXABLE DIMENSION** and **JUST PUSH THE BUTTON**, have appeared within the year and he has contributed in the past such brief if intriguing items as **DONKEYS TO BALD PATE** and **FIND THE SCULPTOR**.

In other words, if any of you rascals think you can pull any swift ones just because ye olde tormentor is leaving, better not. Our successor is well equipped to handle himself in the corners.

LETTERS FROM OUR READERS

ONCE again the cream of your letters offers both quality and variegation—and having taken up more than our usual space in reviewing

past issues under our aegis, let us at them. First is—

EINSTEIN SAYS . . .

by Bud Walker

Dear Editor: In *The Reader Speaks* of the last issue of TWS a Mr. Jack M. Bickham presents his understanding of Einstein's theory of relativity as applied to the relationships of speed-mass and time-size. I suggest that Mr. Bickham do one of two things: (1) Return to Ohio State and complete his course in Astrophysics or (2) get his instructor to take the course so as to learn something about it.

Long, long the public has been exposed to such statements by men who actually believe them. It is time to put a halt to such goings on if it is not already too late. I realize this letter is going to raise a storm of protest from all over the country, and this is just what the field of stf needs.

There are no paradoxes in nature. Any paradoxes encountered in nature, such as the ones mentioned by Bickham, are in the minds of the people trying to understand nature in their own feeble ways.

To return to Mr. Bickham's letter: Statement (1) means, of course, that the speed of light is independent of the speed of its source. This is true as far as it goes. I would like to add that the speed of light is also independent of the speed of its observer. This last sentence automatically makes the speed of light an unattainable upper bound for the relative velocity of one material particle with respect to another material particle. This is a direct consequence of the fact that the distance traversed by a light flash is zero along the world-line of the light flash and hence cannot be introduced as a parameter.

This statement does not put a limit on the velocity that can be attained by one material body. It simply means that if there are two observers in two frames of reference (A and B) each in relative velocity with respect to one another, then no matter what the velocity of A relative to B, this velocity as measured by B will be less than the velocity of light.

Bickham's statement (2) should be amended to read: As the speed of light is approached by an object that object's mass becomes greater and its size becomes less as measured by the instruments of an observer relative to whom the object approaches the speed of light.

This does not mean that in its own frame of reference the size and mass of the object has changed one bit.

This holds also for statement (3).

Statement (4) I will not comment upon.

Statement (5) has no meaning whatsoever. At the speed of light there would be no timelessness as a simple reflection will readily show.

I could easily disprove the statement dear to the hearts of so many stf writers to the effect that, "A man traveling at the speed of light will never grow old, for to him time does not exist." This statement would be wonderful if true. This letter is already almost too long—so I shall leave the proof of this to some future date.

I have been reading stf for some thirteen years and TWS has always been one of my favorites. I have taken the stories as they fall, liking some and detesting some. I realize that a magazine cannot please every one simultaneously and so I have kept my opinions to myself.

I write to you now because, in the years after World

War II, there has been an alarming increase in statements such as those made by Mr. Bickham. I feel that these people have been misinformed somewhere down the line.

As to the stories and covers of TWS, just keep them coming—Route #1, Box #2, Maurice, Louisiana.

Oh, well—this would have to happen right in the midst of our final letter column—or rather right at its beginning. Confidentially, Bud, we too have felt that something was screwy about those miraculous expansions suffered by stf characters approaching the speed of light—or are they contractions?

SCIENTIDITIONARY

by Joseph T. Shipley

Dear Mr. Merwin: I should like to call to your attention, and I shall appreciate your letting the readers of your appropriate periodicals know, that I am at work on a Dictionary of Science Fiction terms. I shall be happy to hear from any of your readers that may wish to send me suggestions for inclusion in such a listing. I am including new words, existing words in new combinations, and existing words that are given new applications or meanings.

Readers should send, for each word, the meaning, the author, the title of the story and the date of its publication.

I have a staff engaged in collecting science fiction terms but always in such projects considerable help comes from the suggestions of readers—29 West 46 Street, New York 19, N. Y.

As far as we know the *FANCYCLOPEDIA* put out some five or six years ago by Forrest J. Ackerman and others of the Los Angeles Science Fantasy Society is the one attempt at anything like the sort of project you are engaged in, and we sincerely hope our readers will offer you all the help you require. Furthermore, we would very much like to see the finished job.

POINTED MISSED

by Eva Firestone

Agree with every word in Mrs Bradley's letter. Best one printed in June TWS. Your answer seems to have missed the main point of Marion's thought. Editorial interesting as usual. The *Frying Pan* amusing, but to whom I'm not quite sure. It has a Fortean ring and makes me suspicious. That ending! Honest? Alas though, we are going West, not East.

Thanks for improvements in the Merwin twins. Print easier to read now. Index page good. Fiction keeping an even keel. But the covers still do blind the eyes. However, must admit the girls really are beautiful. Especially that red-head of May. Now if the background had been similar to June. Ah!—Upton, Wyoming.

Didn't really miss the point of Marion Bradley's letter, Eva. We just decided to indulge in a little escapism ourselves and ran right around it. One reader's escapism is another's road to depression, however. As for TFP in June, we're

blest if we can read Charles Fort into it. Otherwise, thanks for the kind words, Eva.

NOTE FROM KOREA

by Private Bernard J. Imwalle Jr.

Dear Editor: A foxhole buddy of mine got a box of magazines and books the other day and naturally I latched onto a few of them. It was the first time I had ever read any science fiction or anything else of that nature. But there was one story in the December, 1950, edition of THRILLING WONDER STORIES that I feel I must comment on. It was the one called THE SPARK. To me it rings as true as any of the finest Swiss-made cowbells.

I am one of the many that are over here fighting what could turn into WW III and that could well be the war to end all wars. In the story it mentions two nations as having A-bombs. I know America has them and it is a pretty good bet that the Russians have them. So this story is or could be true in every respect.

I have not yet finished the magazine as I only get to read it in lulls between bursts of fighting but so far it promises to be good. If I could be sure of finding a story such as that and some like MACHINERY in the same issue I would probably become another in your long list of fans. That is, if I get out of Korea alive.—RA14333-949 Sv Co 32 Inf Regt APO c/o PM San Francisco, California.

We wish you a long and happy fandom, Private Imwalle—and hope that correspondents from among our readers make your local mail-boy's life a burden. We liked both Mack Reynolds' THE SPARK and Eric Frank Russell's MACHINERY better than average.

HARVEST

by Jo Ann Bernhardt

Dear Editor: Thanks to your letter section and readers I have now received a copy of "So Shall Ye Reap".

Good Gosh! With all the letters, post cards, etc. that I have received I'll never be able to answer them all personally. So if this is published it will have to suffice as an answer to all those I have missed. Thanks everyone.

I have a few back issues I will sell, in case anyone is interested—1338 W. Lullwood, San Antonio, Texas.

And our thanks as well, everyone.

EEL OF THE FIRST WATER

by Bill Warren

Dear Editor: I was surprised when I read Marion Zimmer Bradley's letter in the June TWS, advocating a return to less serious, less "significant" science fiction.

I was suprised because, as any science fiction peruser knows, la Zimmer is a fan of the first water; and to hear a fan declaring herself in favor of a return to less mature science fiction is like hearing an electric eel assert that it has a short in its wiring.

As a matter of fact I think I agree with Astra. I believe that under no circumstances should science fiction "progress" to the point where the science part of it outweighs the entertainment end. As far as I am concerned,

the story is the thing. If a space opera is well written, if it gives me that pleasant full feeling when I've finished it, I don't care if it hasn't got a new twist or idea from the first page to the last. Science is fine, certainly, but it should be injected on the run. Devoting paragraphs and paragraphs to explaining future scientific theories and/or gadgets gives me a pain.—314 West Main, Sterling, Kansas.

Save when they are absolutely essential to the working out of a plot we have always felt much the same, Bill—and frankly the connection between fuller explanation of gadgets and maturity, to say nothing of significance, eludes us utterly. Generally such explanations are as tedious as lengthy courtroom procedure in a detective-mystery tale and should come out by the roots.

CRUD, HE SAYS

by Grafton K. Mintz

Dear Sir: I have never written a fan-letter before etc., etc. Consider the rest of it said. I like your mags. You print lots of crud but the good stuff is worth the quarter per issue.

I'm writing in answer to two letters in the current issue of TWS, one from Marion Zimmer Bradley and the other from Joe Gibson. Both of these people seem somewhat nonplussed by the phenomenon of maturity in Science-Fiction. I don't agree with them. Adults have more fun than children because adults—mature people, that is—know where to look for it and what to do with it. Children and immature adults have fun of a simple and limited nature—fun that isn't fun for a mature person.

The myth that youth is the happiest time of one's life is a mere excuse for not growing up. No time of life is necessarily the happiest for everybody but the period that offers the greatest possibilities is that between the ages of 30 and 50. I, incidentally, am 25. I must add a comment on Mrs. Bradley's peculiar idea of maturity, Hemingway yet! How juvenile can you get? I know of no writer who has remained adolescent as long as Hemingway has.

With regard to your editorial—I don't think you can put Science-Fiction in a special class and say that the SF writer has an easier time of it than others. Maybe he can come up with a plausible theory that would have the Mississippi sticking out into the Gulf of Mexico some thousands of miles but this will bring him no closer to good writing than the "straight" writer without the theory.

This statement of yours has an unpleasant smell about it of the (God help us!) "professional writer," a type sadly prevalent in your magazines. These guys write for money and nothing else—read the mags published for their benefit if you don't believe it. A good writer writes because he feels he has something to say. And please don't give me that old line about there being a need for "pure" amusement. There isn't any need for it. The American public has more amusement now—"pure" enough, God knows—than it knows what to do with.

Science-Fiction has great possibilities for good writing. Seeing these waste-paper boys taking it over to such a large extent gets me somewhat riled, which may account for the rather nasty tone of this letter. But I still love you, Sam, and will continue to read your mags—swearing under my breath from time to time, but ever faithful. Hope all this (if it gets printed) will give you

other correspondents something to chew over, anyway.—
1200 East 82nd Street, Cleveland 3, Ohio.

You and ourselves, Grafton, would seem to be in the throes of a semantic misunderstanding where the word "professional" is concerned. To us no work can be good in any field unless it is professional—i.e., done by someone of ability proven sufficient to make him or her a good living out of it. We mean the word in the big-league ballplayer sense. Even if amateur writers, through some strange freak of nature, might have more to say occasionally they wouldn't or couldn't say it as well.

So let's keep the amateurs out of stf.

Otherwise we agree with you about maturity—in fact there is no room for argument by anyone. We had about as secure and happy a childhood and youth as is possible, yet we would no more wish to repeat that ghastly period of fumbling uncertainty than we'd write a bad story on purpose.

And speaking of writing, we have over the years written with at least moderate success in just about all fields—even to selling a trio of Westerns. Science fiction is definitely not easier to write—in fact the writing of good stf is a knack that needs plenty of hard work for development. But once he has it the author can deal in the broadest of all fields, the sum total of human imagination. Hence he is less apt to grow stale. Hence his work is apt to *seem* easier than that required in other fields.

For the rest we're with you all the way.

S.Y.B.

by Eileen Monk

Dear Editor: Congratulations etc. Wonderful issue to my way of thinking. Excepting one boring little treaty entitled "Fog" which I rate as S.Y.B. (strictly yawn-bait) the stories were all excellent reading.

SON OF THE TREE was a little slow in spots but still a good many jumps ahead of the run-of-the-mill space-opera. And the plot. . . . Mmm, good. And by the way, where in the wide, wide universe does J.V. dream up his unknown planets? I thought I'd heard some hum-dingers of place-names, but his creations beat all.

A THESIS FOR BRANDERBOOK seemed to be pretty damned dull when I glanced at the title—but boy, oh boy—was I wrong! About the best of the short stories in this issue and somehow I think that the editor's footnote, (or was it a warning) was unnecessary. I agree that the tale was pretty far-fetched regardless.

GIRL FROM CALLISTO exploded at the finish line but I guess that's why I liked it.

Glad to see an article wedged in between the fantasy for once. OUR INHABITED UNIVERSE seemed a little tame and Public School Astronomyish. (Try your hand at pronouncing the latter, willya) however.

Anyway it was a strictly over-average ish.—Grindrod, British Columbia, Canada.

We pronounced it on the very first try, Eileen, but Sam Mines has sent out for an M.D. to replace our dislocated jaw. It's not so good when chewing a caramel or chiclets.

EH?

by J. T. Oliver

Dear Mr. Merwin: Please don't print the letter I wrote you a few days ago. If you meant to, that is. It makes a fellow sound rather conceited to criticize publicly other writers and magazines. Besides, the whole letter was nutty. Thank you.—315 27th Street, Columbus, Georgia.

You're so very welcome, J. T.—although we thought the letter pretty good.

SHE KNEW HIM, GRAVEDIGGER

by Alas Poor Marion Zimmer Bradley

Dear Horatio: Are my eyes deceiving me? Can it be? Is it possible? Or, can it be that on page 134 of the June TWS I discern the following remark, in reply to one Joe Kinne.

"The (editor's) last name is Merwin, not Schnickleheimer, please!"

Wow! Yow! And other exclamatory remarks of like nature! I still don't believe you've finally admitted your name publicly! Tsk, Tsk! Oh well, (says she fondly) you'll always be Horatio to me!

Seriously, on this business of editorship, I was reading just the other day in one of the top writer's magazines where the only pulps to survive would be those with sharp and definite editorial policies and skillful editing. Says this writer, in gist: "The day is past when one editor, with ten or twelve assistants can take care of a string of thirty pulp magazines". I'm glad to see your policy taking effect, Horatio. I came across a few of the old STARTLINGS and TWS's before your time and quite frankly, they reek. You must have had something to do with the improvement of the magazines. To coin a phrase, Selah yourself, old thing.

The most recent issue is probably the finest since the never-to-be-forgotten SEA KINGS OF MARS in STARTLING or the issue of TWS containing Leslie Charteris' THE DARKER DRINK. I like Jack Vance, probably as much as any current writer, and the Druids have been a weakness of mine ever since I first heard La Milanov singing the immortal NORMA from the Metropolitan. When a young sprout myself I even attempted to write a yarn encompassing Druids, human sacrifice and like gory possibilities. It has been in the wastebasket these three years, for which praise be! But Vance's little gem was a fine piece of work. . . . when I read of the "tree-worship" I was afraid that, according to his early nature, Vance was going to do a rewrite of Merritt's WOMAN OF THE WOOD. But he didn't.

Second honors go to I PSI by Carter Sprague, and Charles L. Harness' THESIS FOR BRANDERBOOK. In that order. It's interesting to watch the development of writers. For instance, I've watched Leigh Brackett's writing go through three definite stages which I would label adolescent (such early sob-stories as SHADOW OVER MARS, for which I have a great fondness but which is certainly not a mature piece of writing), pseudo-sophisticate (such as the writing she did, in companionship with Bradbury, and the Eric John Stark series, with

their Hemingway overtones) and finally, her really mature pieces of writing such as THE TRUANTS.

Something of the sort seems to be happening to Carter Sprague. His work started as the merest sort of fillers, something to be skipped over; a sort of detective-story or Western in science-fiction cast. It is now achieving the polish and the particular finish peculiar to science fiction, and the particular sort of dry humor for which this writer is famous in his most notable capacity. In fact, a Carter Sprague story now ranks "first-to-be-read" with only Brackett, Kuttner and Hamilton taking priority over it. Cheers, Mr. Sprague!

Upon reading your reference to feminine fans in THE FRYING PAN I am certainly glad that I never took up that invitation (which you gave offhand on a rejection slip) to come up to the office some time and say hello! In fact I'm actually glad I've never spoken to you direct! I can sit out here in the audience and know that at least you were not referring to me, when you speak of stage-struck young fans clinging-round-the-fringes! Boy! I nearly walked into that one wide open! (although I'll admit I never contemplated asking you for a job! I'm holding down three full-time ones now!) On my next trip to New York I will make a point of avoiding the STARTLING office—although I (literally) grazed you at the Conference in New York, circa September, 1948. Yak! Yak! Good laugh on me!

And since you are so ardently desirous of poetry I shall relieve your frustrations in that direction (since I am depriving you of the dubious pleasure of beholding my three heads and seventeen tentacled appendages in person.) To be strictly original I shall base my beard-mutterings on that much-ignored portion of the magazine, the COVER.

Once in the springtime of the fulsome year
While wheeling baby's buggy, city-bound,
I stopped beside a news-stand, eye and ear
Alert; and then I fouled and ran aground,
For Lo! Through unbelieving eyes I saw
A stumble-footed spaceship, bound aloft,
Next to a red-cloaked maiden, Earth beneath
Her curving arm, against her bosom soft.

Now, old Queen Mary's nightly said to walk
With head tucked underneath her bloody arm
In the old abbey; but this Bergey girl
Strides thru the deeps of Space, and takes no harm!
O, Heaven and Earth! What fools these mortals be—
Nothing's undreamed in their philosophy!

Which should hold you for awhile, Horatio, (she said, modestly).

Oh yes. . . if you cut all the rest of the letter, will you PLEASE print this? I don't mind having my name and address printed and I like to get letters from other fans and will answer every one I get. But if the DAMNED COWARD who wrote me a card signed "Gorgie-ears" is reading this, if the skunk will send me his name and address I'll tell him what I really think of him. I think I know who he is; he's the only fellow I know capable of writing anonymous letters from Tucson, Arizona. In case he is too cowardly to own up, I would like to say here and now that he can do his rottenest and go to hades! There are not words of contempt enough for a rotter who writes anonymous letters to a woman whose address is printed in a public place! Come out and take your punishment!—Box 431, Tahoka, Texas.

It holds us, all right. But we're still sorry you never paid us that visit. But tsk tsk yourself,

Marion—letting an anonymous epistle so heat your green corpuscles.

Now, at that alleged sonnet you've sprung on us. Ecod and odds-bodikins! Well, let's see what we can cook. . .

*Oftimes we wonder why the folk that read
And then write in about this magazine
Almost invariably start to bleed
At sight of Bergey's newest cover queen.
Again, again, it seldom fails
That our front cover sets them in a snit
And they come at us with such horrid wails
With words unfair and lacking in all wit.*

*For once they might have overturned the book
To keep their blood pressure from getting lost
And ours from getting almost wholly chilled,
For on the back, to compensate their lark
They find Rex Stout, E. Queen, Hugh
Pentecost
And others of the Dollar Mystery Guild.*

And that should hold you, Berengaria Bradley!

HELD AGAIN!

by Lin Carter

Dear Merwin: Shall I be conventional and start with the cover? Veddy well. I'm very glad our sour comments on the girlie-type covers has finally paid off. After years of continual griping about Bergey's sexy cover art you've finally made a big step towards improving them completely. At least you moved them over a bit, and stuck a few rockets and planets and stuff in the vacant space. This is one helluvan improvement, even if the cover is still half girl. Why not alternate a girlie cover with a space cover every other issue? In that way both camps would be satisfied.

Thanks for the "Sam Merwin, Jr., Editor" on the contents page bottom. Another taboo banished—something else we've all wanted for years.

As for the fictional content this time, let me say I like the Vance novel muchly. Up to now I have not been a particular fan of JV but then I got "The Dying Earth" and found out the chap has something on the ball! His latest yarn, "Son of the Tree", was very enjoyable and much better than "Five Cold Bands" or "Overlords of Maxus".

The others were sort of uninspired with nothing particularly outstanding about them. But this yarn was a complete change. Colorful, quick-moving, imaginative, it was written with suspense, smoothness and a carefully-worked-out background. I was particularly interested in the way Vance pictured the vastness, the confusion, the multi-raced crowds of space-travel in that far age. He painted a convincing and life-like picture of the color, turmoil and variety of galactic life.

There was the old woman in black with a great jewel on each finger, who lived immortally on human blood, the robed fanatic priests with their portable altar, the yellow-skinned warlike Mangs, the fragile and mothlike Cils, the quiet Belands who wore no clothing but a coat of paint—all very good, and somehow reminiscent of Leigh Brackett. The story itself was really fascinating.

The extrapolation of Druidism to its ultimate realization with the worldwide worship of a galactic Ygdrasil, along with all the suspense, intrigue and the cleverly worked-out socio-political patterns of the different planets, made for fascinating reading. Lawrence's pix were suitable but I missed an illustration of the Tree itself.

Next best was "A Thesis for Branderbook". Rather like your policy of printing occasional pure fantasies of exceptional merit. This one was a fine little yarn with a deliciously ironic twist at the end. More.

"I Psi" was readable—by the way what does psi mean anyway? I kept wondering about that all through the yarn. "Temporary Keeper" was pretty poor stuff.

I'd like to say how nice it is to have Alex Schomberg back in the fold again. Long an admirer of his careful penmanship I've missed him and am glad you've managed to get him away from the comic books. Now, if you can just get back Wesso and Finlay. . . .

It's nice to see Schomberg again
His drawings should please all the fen,
And Wesso was good—
Bring him back you should—
And Finlay too, (I don't mean Wren)!

That should hold you, Merwin—1734 Newark St. So., St. Petersburg, Fla.

Very well, Lin, old man—the so-called "psi" qualities refer to all the extra-sensory talents—perception (the ability to see at a distance or through normally blanking barriers), telepathy (mind reading), clairvoyance (ability to foresee the future), teleportation (ability to get about without use of legs or artificial transport aids) and telekinesis (ability to move objects other than oneself). Psi covers all of them. Get it?

Now, as to our cover artists and illustrators—

*While Wesso has gone from our ken
Virgil Finlay is back in the pen
And if Schomberg you wish
See the cover this ish
Then hie yourself back to your den.*

Also the Fall issue of FANTASTIC STORY MAGAZINE. He has a nice cover there too.

WHEN I WAS A CHILD . . .

by Mary Wallace Corby

Dear Mr. Merwin: The trumpets blast, the chargers snort and Mrs. Bradley enters the lists against Maturity in science-fiction.

When I was a child we used to sit in the dark under the street-light and tell ghost stories. I acquired then a taste for these stories of the weird and the supernatural that I have carried all my life. I still prefer tales of impossibilities that are pure escapism. Science fiction however is based not on impossibilities but on plausibilities.

Is it plausible to take stock characters in stock situations and project them into the future and label it science-fiction? Is it plausible to take the political, economic, social and moral set-up of the earth as it is today and project it on an interplanetary, interstellar or intergalactic scale and call it science-fiction? The adult reader (or the mature 'teen-age reader) gets no "fun" out

of these hackneyed lacking-in-imagination stories that appear month after month.

Why is Mrs. Bradley so afraid of the words "adult" and "mature"? Certainly her lively intelligent letters in the past gave every evidence of maturity in contrast to the near-hysteria of her letter in the June issue. "Adult" and "mature" have definite meanings. They do not mean "old" and "senile." And since when is maturity incompatible with humor?

Hoary and ancient though I be I still enjoy a good belly-laugh but I am much too hefty to go chandelier-swinging au Gibson!—55 Taylor Avenue, East Kearsburg, N. J.

We are considering ordering a specially-constructed chandelier to be sent to your home, Mary Wallace Corby, there to be installed with triple scantlings (whatever they are) in your dining room ceiling. The rest will be up to you.

FLAT AT THE END

by Derek Pickles

Dear Mr. Merwin: Within the past fortnight I've received TWS for April and June, and SS for May, so I have plenty to go at.

I was amazed, astounded and gratified to see that I have actually had a letter printed in TWS. Fortunately my heart is fairly strong and was so able to more or less take the shock.

I'll comment briefly on the mags—

TWS April, is THIS Science-fiction? If it is I'm afraid that I've had a misconception of sf for a long long time. "The Void Beyond" was entertaining but I'm afraid not much more. "Milords Methuselah"—why have TWO De Camp stories in one issue? One's quite bad enough. The short stories were average, that's all I can say for them. This was NOT one of your good issues, but press on, let's see what June will bring.

TWS for June, an improvement on April but still not what you can print, and have done in the past. "Son of the Tree"—quite good and a nice treatment but it falls rather flat at the end for no suggestions are given as to what is going to replace the Tree as the people's religion. A world whose population has been educated over centuries to regard the Tree and the Priests as above themselves cannot suddenly see the whole structure collapse without any feelings whatsoever. They will need SOMETHING to replace the Tree, either another religion or a great leader. Mr. Vance deals with neither. Is he perhaps planning to write a sequel? At any rate he leaves the first story slightly in the air??

"Fog"—unusual and good.

"Girl from Callisto"—very good, and just the right length. The style reminded me somewhat of Weinbaum's—any connection? Has Mr. Dee just read a collection of the Van Manderpootz stories?

The other shorts were much of a muchness so I refrain from going into the grisly details.

The most interesting portions of both issues were of course the letter columns, especially April, with both the garrulous Gael and myself as representatives of British fandom. They certainly have an international flavor now with South Africans, Irish, British and a few U. S. fen thrown in to fill up.

I'm still sorry you dropped the fanzine listings but sincerely hope they'll be kept on in SS.

By the time you receive this letter the first International SF Conference will have been held in London.

From early reports everyone over here is going and quite a number from the Continent, also a few from Canada, the United States, Australia and even New Zealand. If you would be interested in a report on the proceedings for your section on fandom I'd be pleased to send one on.

This is a very bitter letter with not a great deal of either sense or logic (fine differentiation there) so I'll close. One little thing tho—take a pat on the back for the improvement in the cover but when are the beautiful women going to be dropped and covers we can remember be printed?—41 Compton Street, Dudley Hill, Bradford, Yorkshire, England.

What's the matter with the cover on this issue, Mr. Pickles? It should soothe you. Incidentally, Carter Sprague is *not* L. Sprague de Camp, so some of the acid comes out of your critique. We would definitely be glad to have a report from you on the British convention last summer for one of our fan departments. Good luck.

BONANZA IN TRINIDAD

by Joseph A. Phipps

Dear Editor: My sincere thanks for publishing my "begging letter" in the April issue of THRILLING WONDER STORIES. I received 41 replies in about as many days and to date have received 115 (one hundred fifteen) books and magazines!! This is more proof of American generosity than I had hoped for even in my wildest dreams.

I have received a number of magazines from persons who signed themselves "AMERICAN FRIEND" and I do wish there were some way I could convey to them all my sincere thanks and my appreciation of the honor in being considered a friend.

On Saturday last I sent along advertisements to six of the leading newspapers in the British West Indies, stating that I am willing to give, lend or exchange Science Fiction Magazines with anyone interested. I hope in time to form a West Indian S/F Club, for I am quite certain that there are many pre-war S/F readers in the West Indies.

Who knows, perhaps in the near future you will be receiving stories from the West Indies! Thank you again.—Simplex Time Recorder Company, Ltd., Eastern Main Road, Laventville, Trinidad, British West Indies.

We hope so—and, even more pleasant in prospect, hope all of them are publishable. There should be some fine sf background in the West Indies apart from overdone Haiti zombies and voodoo queens. Certainly the islands have a history as colorful, exotic and dramatic as anything to be found in this hemisphere.

BACKSIDE OF MERCURY

by Mrs. Rory M. Faulkner

Dear Mr. Merwin: So glad you are no longer being coy about your monicker—I knew it all along, of course. Used to read and like your father's books when I was in my salad days (green and mixed up, that is). I have the job of giving a review on TWS and SS in our club, the LASFS, and for the last two issues begged off as I am

an innately kind soul who hesitates to speak harshly even of an author. But reviewing this June Issue will be a distinct pleasure. Every story, even the fantasy, is interesting and fresh in theme and treatment.

"FOG" was the one that appealed to me the most. A close second was "Temporary Keeper". "Son of the Tree" a new sort of space opera, and very engrossing. Then "I Psi" (would I could develop kinetic powers myself, being naturally lazy!), then "Girl from Callisto". "A Thesis for Branderbook" comes last, not through any fault in the story, but because I am getting too old to really go for fairy tales.

I am much interested in the idea of the Blish articles. Since you like poetry (or do you?) here is a weather report from Mercury, which I compiled after reading "Conquest of Space" last year.

The cold backside of Mercury
It never sees the sun.
The air is frozen solid
And the rivers cannot run.

The sunny side of Mercury
Is always boiling hot.
You cannot shelter in the shade—
There is no shady spot.

The small sad man of Mercury
The shadow's rim must ride.
His front is cozy in the sun,
But oh! his cold backside!

Hoping you are the same—164 Geneva Place, Covina, California.

Well, we're glad you went for us in June anyway—but you shouldn't give up on fairy-tales yet. Liked your little poem too, hence this little report in kind—or unkind as the case may well be. . .

*The BEMs that live on Pluto
And far from Solar heat
Their hemoglob's at zero
There's icebergs on their feet.*

*Their eyelashes are solid
Their bonfires have no wood
What's more they have no water
And on Pluto that ain't good.*

All right, so it's one stanza short—but that's the best we can come up with just now.

And that brings our final *Reader Speaks* to its foreordained ending. All we can add is that it has been fun working and fighting and playing with all of you. At least you've kept at it with us longer than any other editor in this spot, even the mighty Hugo himself. Your support has been magnificent and we leave you with assurance that it will continue as helpfully for the new editor, Sam Mines, when he takes over. Good-bye and good luck.

SAM MERWIN, JR.

The FRYING PAN



A Commentary on Fandom

WE RECENTLY received a copy of Ed Noble's fanzine, *THE EXPLORER*, published from Box #49, Girard, Pennsylvania, containing to our astonishment a feature by that young sage of Northern Ireland, Walter A. Willis, entitled *THE MIND OF SAMUEL MERWIN*. Since from time to time doubts are regularly expressed by our colleagues as to our having any mind at all we felt a certain egotistical euphoria at the title.

The article itself, of which we are reprinting as much as we can, interested and amused us intensely. Furthermore, in replying to it we are seizing upon a chance to state a few facts and fancies about ourself since this is the last issue of *THRILLING WONDER STORIES* we shall edit. A sort of self valedictory as it were. But let us away to *THE MIND OF SAMUEL MERVIN*, a fascinating place indeed!

Sometimes one gets the idea that Merwin hates fandom's guts—that is, if he thinks it has any. Not that you could blame him when you consider that he has read through more fanzines than any man still alive and sane, not to mention countless silly letters about trimmed edges and covers and such . . . So you can partly understand his temptation to be absolutely rude even to the most well-meaning correspondent—nor is it safe to write him down as one who hates his fellow man because he yields to it so often. . . .

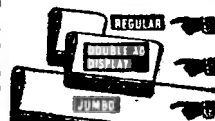
He has no conception of how irritating it is to some people to have their meanings deliberately misunderstood for the sake of a smart crack or to be held up to ridicule in front of some 100,000 people without the slightest chance of being able to hit back. To him it is a contest between equals and he will bring as many guns to bear on a

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miserable fanzine editor with a circulation of 70 as he would on someone his own size. . . .

The only thing it is safe to predict about the man is that he will be unpredictable. Take, for instance, the case of the unfortunate fanzine editors who expostulated about the random character of his reviews. You might reasonably have expected him to do one of three things—First, print the most unguarded letter in full, with a scathing commentary on it, gaff by gaff (he has a positive genius for this sort of thing—ask the wretched authors of the open letter to the Saginaw Insurgents); second, write a friendly and contrite personal letter to the victims and probably cut their fanzine to ribbons the next time; or third, publish a handsome apology as he did to the *Burroughs Bulletin* on receiving Mr. Coriell's dignified rebuke.

But of course he does none of these things. Instead he says, like a sulky boy—I'll say either nice things or nothing at all. You might think this to be a brilliant piece of tactics. At one blow he has saved himself the trouble of reading all the stuff to find something to say, whitewashed his reputation for savagery and thoroughly discomfited the unfortunate correspondents by diverting on their heads the wrath of the editors whose 'zines will now be dismissed with a dishonorable mention and of the ordinary readers, who got a lot of fun watching Merwin lay around him with editorial pikestaff. He *may* have thought all this out—but I doubt it. I don't think he's the sort of cold-blooded character who would work out a Machiavellian move like this . . . A creature of impulse, he says what he feels and looks for the reason afterward.

An extraordinary character—and in some ways a very likeable one—we really know very little about him. But he does occasionally drop a revealing remark from which one can try to make a mental picture. He is well read, as witness his stray allusions to people like Cyril Connolly, but he is largely self-educated because his learning is often inaccurate. He quotes French phrases with relish but spells them wrong—*chacun a son gout* for example. Even his English spelling is apt to be eccentric—*just desserts*, *all star caste*—it's the easy words he gets wrong, you note.

I would guess that he missed a lot of schooling through illness or other misfortune but did attend a university, working his way through. He has not the introverted character of the invalid so I would guess his misfortune to be an unhappy home life. He gives the impression of someone who has knocked about the world a bit, been knocked about by it a lot. He can be bitter at times as if he had had the whole world against him and hasn't forgiven it. He has fought his way up the hard way and you can still see the marks in the way he resents the pampered adolescents who criticize him.

I should think he worries about his job . . . Merwin . . . is always on his toes, searching for something witty to say, forever impressing with little bits of erudition but never coming down to the common level with the readers . . . The fan sections are probably done with the copy boy standing at the door and it's not surprising he sometimes lets rudeness take the place of wit and patronage of sympathy. Which of us could do better in the spare time from a full-time job?

So what have we got? A deprived child, maybe even a depraved one, left to fend for himself at an early age and meeting a lot of hardship in the process. Self-made, he's determined to show the world he did a good job of it. Toughened by adversity and sometimes thoughtless of the feelings of others, but the soul of generosity when he understands. Not such a bad guy on the whole.

Well, let's take it paragraph by paragraph and answer as best and honestly as we can. It will give Mr. Willis—to whom, thanks, for giving such thoughts to our genes, chromosomes et al—and those of the rest of you who might have passing interest an idea of how close his intelligent deductive reasoning has come.

Our successor, Samuel Mines, currently holding down the TWS-SS-FSM-WSA chairs, read the above and promptly wrote an answer himself. But the damned thing is so fulsome one would think he didn't already have the job—and thereby not a great deal of fun. Even we are not *that* pro-Merwin.

Actually we do not hate fandom's guts—nor have we ever—although occasionally, at so-called conventions, we have been somewhat startled by the sight of so many uncropped and unbrushed heads in one room. When we could within reasonable bounds we have always tried to do our best by fandom.

However, we have remained aware throughout our stf editorial career that fans as such make up a very small percentage of our net-paid circulation, that the magazines are actually supported by a much less actively zealous and vociferous readership. Hence we have given the fans space in the deliberate hope and intention of making their antics entertaining to at least a fair proportion of the larger less-fannish readership. If that be Machiavellian we plead guilty. But otherwise we should not have had space for fans at all.

We have always considered the trading of reasonably ingenious insults a delightful pastime as long as everyone knew it was all in fun. Certainly we have received our share—both in and out of fun—and have hit back when and where we could, occasionally perhaps throwing in an added lick for bad measure.

As for consistency (i.e. predictability) we have never found it an especially interesting trait. But much of ours has come from the cause Mr. Willis suggests in his antepenultimate paragraph when he mentions the apparent haste with which the columns have been written. Unfortunately they had to be prepared and written rapidly, were almost never even read over by us, were executed with only the

briefest and most occasional time-outs for research.

Under these entirely if unfortunately necessary conditions (until very recently) it was damned hard if not impossible to be consistent. As for our "brilliant piece of tactics" Mr. Willis is right. We tore that off almost without thought at all, simply seeking a loophole escape from an entirely just accusation.

We were hardly self-educated—on the contrary as a rule it had to be rammed into us with a pile-driver—and while we did take ten years of French in school and college that was twenty years ago, twenty years during which we have had little opportunity to work off the rust. But that *just desserts* business was quite intentional—we were wishing apple tapioca or a similar fate worse than death on somebody. We don't remember whether the *all star caste* was intentional or not—probably not.

The only schooling we missed was through inattention in class and lecture hall—and contrary to Mr. Willis' belief we were fortunate enough to receive an unusually silver-spoonish education and upbringing. The British equivalent would be Winchester and Cambridge. As for home life our childhood and youth were singularly happy and we have been married to the same wife for almost eighteen years, have a son in his final pre-college year—if the armed forces don't take him.

Such hard times as we have had have been the result of our own damned foolishness and they have been few and far between. And we have done less knocking about the world or vice versa than almost anyone we know. The extent of our travels can be bounded by Quebec, Richmond, Indianapolis and Milwaukee. As for job worries, we have had none for the last ten years, are retiring voluntarily after giving a five-months notice, to undertake certain fascinating commitments as a free-lance writer.

In short, despite Mr. Willis' deductive shrewdness, he has attained conclusions about us that are almost diametrically wrong. Instead of the beat-up character he has defined we are probably a lot more of a snob—which, it seems to us, results logically in the exact behavior he has seized upon for his deductions. We are not especially proud of the fact either.

Finally—and alack—our childhood was definitely not depraved. We were just about the least precocious little brat in our own acquaintanceship and memory, resulting in a great many utterly wasted years. If we are tough it was not adversity that did it—it was battling against

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the consequences of our own stupidity.

We hope his concluding sentence is correct. And with Mr. Willis' letter and ourselves auto-analyzed we wish to bid farewell to a lot of grand friends and even grander sparring partners in this magazine. We shall have at least a hand in the preparation of departments and editorial for the November SS. So we'll say our final good-bye then.

Please give our successor, Sam Mines, an

easy time of it at first—not that he can't protect himself in the infighting. He can. But while he has been working closely with us at times during the past seven years his assignments have lain elsewhere of late and it may take him a few issues to get the bit in his own upper mandibles. When he does—look out! So have yourselves a time and please keep buying the magazines. We need you.

SAM MERWIN, JR.

SCIENCE FICTION BOOK REVIEW

ADVENTURES IN TOMORROW, edited by Kendell Foster Crossen, Greenberg Publisher, New York (\$3.50).

A science fiction anthology without a theme these days seems to be like a suit of clothes minus pants. Now Ken Crossen, able author of radio, book and magazine fiction in several fields, including stf (see his *Merakian Miracle* in this issue of TWS) as well as veteran editor, has based his collection upon four ages of Man, beginning with the Atomic in 1960, with Ward Moore and Ray Bradbury doing the heavy pitching.

His Galactic Age, beginning in 2100 A.D., stars C. L. Moore's justly famed *Shambleau*, with vigorous support from A. E. van Vogt, Isaac Asimov and the editor himself (*Restricted Clientele*, TWS, 1951) among others. Then, commencing with the year 3,000, we get the Stellar Age, which involves Messrs. Sturgeon, Kuttner (*Voice of the Lobster*, TWS, January, 1950) and Miss Leigh Brackett along with others, including this editor.

He winds up with something called the Delphic Age, handled by Robert Arthur, Tony Boucher and Bruce Elliott to the queen's taste, though just what the Delphic business means eludes us. All in all a selection of singularly high quality for this latter day in stf anthologizing.

POSSIBLE WORLDS OF SCIENCE FICTION, edited by Groff Conklin, the Vanguard Press, Inc., New York (\$2.95).

Mr. Conklin's latest is another fat one, a better bargain than Mr. Crossen's book on the

matters of bulk and price if perhaps a shade lower in level of quality. His theme is in two sections, divided between the Solar System and the other stars of the galaxy.

We have, in part one, one of Bob Heinlein's best Saturday Evening Post tales, *The Black Pits of Luna*, Ray Gallun's *Operation Pumice* (TWS, April, 1949) A. E. van Vogt's horrifying *Enchanted Village*, Margaret St. Clair's *The Pillows* (TWS, June, 1950) and others by Sturgeon, Asimov, Clement, Bradbury, F. B. Long, Malcolm Jameson and D. L. James.

Out among the alien stars we find Murray Leinster, John Berryman, Poul Anderson and others, including Katherine MacLean's brilliant *Contagion*, Jack Vance's *Hard-Luck Diggings* (SS, July, 1948) Poul Anderson's *The Helping Hand*, Arthur C. Clarke's *A Walk in the Dark* (TWS, August, 1950) ye Edde's *Exit Line* (SS, September, 1950) Clifford D. Simak's *Limiting Factor* (SS, November, 1949) and James Schmitz' magnificent *Second Night of Summer*.

Like all of Mr. Conklin's previous full-sized anthologies, this is a pleasingly plump clutch of stf stories and well worth the modest price charged for it. We cannot remember a single month in which two collections of such high level appeared at once. So save your pennies and advance en echelon on your nearest bookstore.

THE ILLUSTRATED MAN by Ray Bradbury, Doubleday & Co., Inc., New York (\$2.75).

Ray Bradbury, stf's one declared minor genius, comes up with another one-man-band

collection of short stories (eighteen of them this time) linked by the slenderest of threads. Mars is out this time save in one or two of the eighteen tales included. The illustrated man involved is a circus tattoo freak, whose stenciled images come alive when he sleeps, and act out the dramas they represent.

All in all this is top-flight Bradbury, even though it lacks the special magic of last year's *Martian Chronicles*, well stocked with delicacy, savage bite and the author's unique brand of word-painting. Six of the stories, *Marionettes, Inc., The Man, The Concrete Mixer, The Earth Men, The City and Kaleidoscope*, appeared either in this magazine or its companion, *STARTLING STORIES*.

For the thousands who like Ray Bradbury's work, this is a must book. Our one lingering regret is that either the author or his publisher saw fit not to include *The Irritated People*, which—along with a handful of others—we consider the very cream of the Bradbury output to date.

GATHER DARKNESS by Fritz Leiber. Grosset & Dunlap, New York (\$1.00).

The publishers have chosen wisely in selecting Mr. Leiber's novel, first published some years ago by Simon & Schuster, for their Dollar Stf Series. It is a high carnival of witchcraft and black magic, all operating under the aegis of a super-scientific Dark Age to come.

The world is ruled by a priesthood of scientists that has fallen into all the age-old failings of a priesthood in full control of civilization—and as a result an anti-priesthood cult has arisen to undermine its autocratic rule. A renegade priest, Jarles, is the hero who must find his way to salvation through revolt despite his own unsureness and the weapons used against him by both sides in the struggle.

Excitement is breathless, sense of peril all too real, incident all too vivid throughout. A very difficult book to lay down once started.

BEYOND THIS HORIZON by Robert A. Heinlein. Grosset & Dunlap, New York (\$1.00).

Another in the G&D Science-Fiction Classics series, Mr. Heinlein's stirring satire of the woes of a slot-machine mogul in a hyper-genetic age has already been reviewed in this magazine when it appeared first in hard covers. Suffice it to say that the novel, while scarcely of epic quality like some of this author's work, is a grand lark on the blood-curdling side. Like Mr. Leiber's work, a real bargain at the price.

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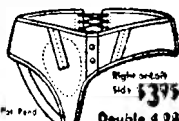
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