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by T. J. Bass

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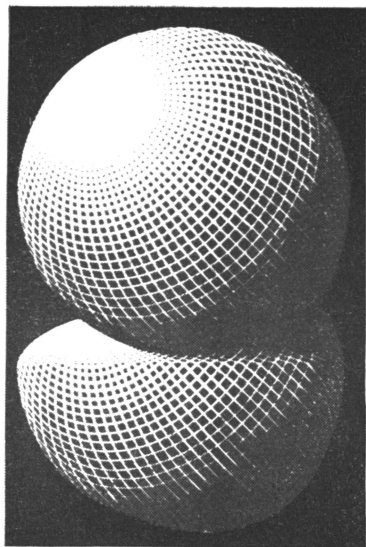
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Cover by CHAFFEE from THE LAST TRUE GOD

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### STARSWINGER

THE creatures shown above are Moonworms caught by the artist in the act of making moon craters. The Moonworms' tremendously powerful tails propel them through the lunar crust—as shown—and out into space, where they head for Earth as flying saucers.

You had better believe it—whatever else you might hear. For *IF* is the magazine of Alternatives.

The artist is Dr. Donald H. Menzel, Smithsonian Scientist, Paine Professor of Astronomy at Harvard and former Director of

the Harvard Observatory. He, together with an equally prominent Russian, Frenchman and Dutchman, is at this very moment—July, 1969—in Moscow, naming for posterity the craters on the far side of the moon.

Dr. Menzel chairs the International Astronomical Union's (I.A.U.) four-man *Working Group on Nomenclature*. The other members are Professors B. Levin (Russia), Marcel Minnaert (Holland) and Audoin Dollfus (France), who is president of the I.A.U.'s *Commission 17—The*

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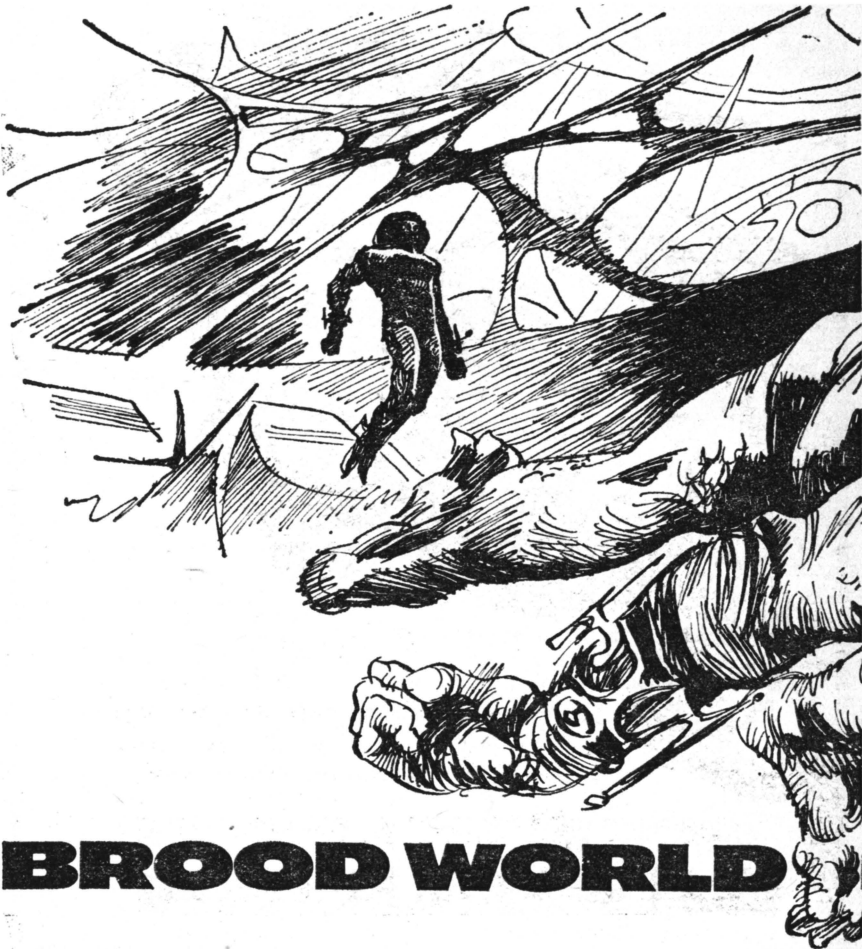
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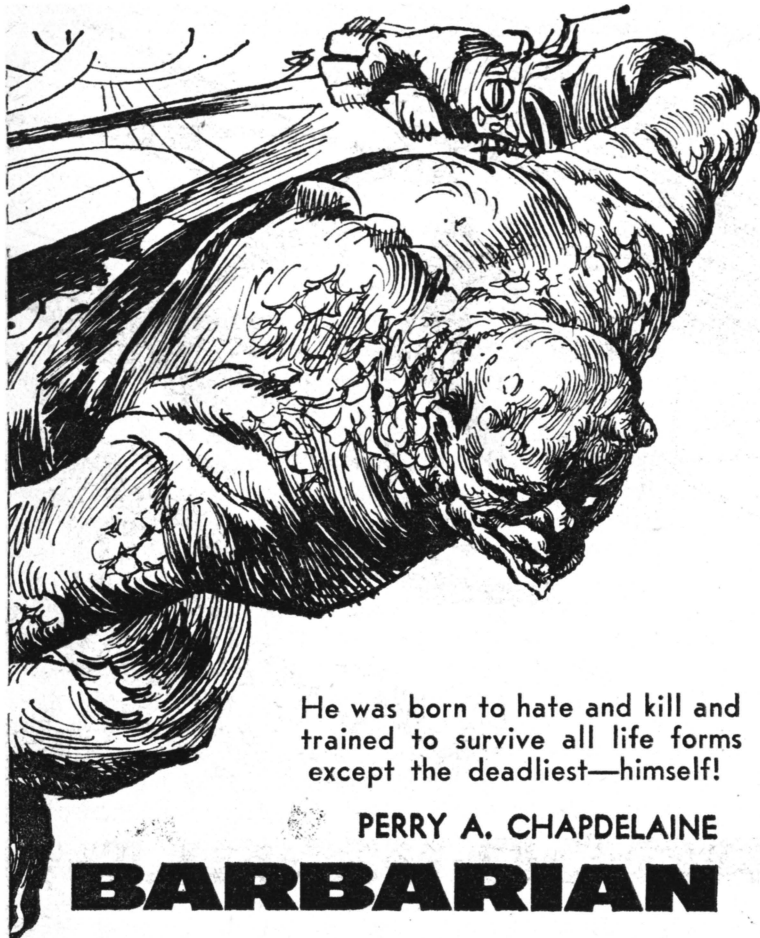
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# BROOD WORLD

**S**AND, fear, blood and gawkers—the trivia of a thousand arenas on a thousand planets in a thousand ages. I am an athlete of great proportions, strength and skill—one who kills by order of the gawkers or my master, whichever calls first—and I am one soon to be killed.

She came yesterday on the day of the games after I had neatly decapitated the former champion of the Sabre worlds by means of wrist pressors only. Declared the season's Grand Champion, head garlanded with red-brandy vines, chest proudly extended against chest band, I swaggered



He was born to hate and kill and trained to survive all life forms except the deadliest—himself!

PERRY A. CHAPDELAINÉ

# BARBARIAN

away from the game's space on wrist pressors only, as if to say, *Look at me, you weaklings. I have bested your best. Now who is master and who is slave?*

Their sun of a thousand yellow rays beat down on my back as I pushed my way across the game's space into the lower ramp to my

cage, expecting there to relax with wine, song and the caress of the opposite sex as, I suppose, has been done by my kind for ages past.

Then she came. The lights burned brightly as the crowd surged past our flux cages. The public was not satisfied with the

death, pain and sadism of the arena, but demanded that my cage—all our cages—be kept open to public gathering. Like my cell-mates I was a freakish one-G animal, trained by means of gravity-like pressor and tractor beams to tear and hew at others.

She walked with her father. He, merely a seven-tenths-G animal, was human and shaped like myself. He had a strong smile, cropped gray hair and rugged features set-off by sunken eyes, a bulbous nose and bright, straight teeth. Oh God! How I hated that animal—that all-powerful, all-great leader of the Sabre planets. Trevic Strenger and his family walked in public gathering to view *me*, this season's Grand Champion, in my "natural" habitat!

First came the retinue of sycophants and guards. Cloaked in tight plastic of weblon to nullify pressor and tractor rays, they stationed themselves to one side of my cage, holding the crowded path open for the dictator Strenger and his family.

I threw my wine outward to vent my disgust and anger, helplessly watching as it struck the surrounding magnetic field, to be sucked inward and downward instantaneously as the powerful field latched onto minute iron particles in the liquid.

They didn't yield an inch nor did they acknowledge my act by even a twitch of the mouth—ex-

cept Trevic Strenger. He passed his hand back to his beautiful wife and gently tugged her forward so as not to miss the show, just as he did the night I was taken, five years ago, on my rocky planet.

I CAME from an unusual brood and, had I known then what I now know, even their fleetest hunters would have gone back to the ship empty. My brood cell—brothers, sisters, mother and father—had left me for the day. I tossed rocks at the passing pack animals below our cave, not aware of the hunters swooping over me, preparing to entangle me in their rays and beams. I spat at Trevic with the thought, and he pulled his head back to laugh, just as he had the day I was brought, bound and struggling before him.

Oh, I was more than a barbarian from the Planet of Rocks. I was an educated barbarian, for their pleasure would not be enough unless they knew that inside of each gladiator lay a trapped, cunning and scheming modern mind—a mind equal perhaps even to their own in knowledge, yet trapped by their science and their orders to fight on a barbaric level of their choice. I spat again when I thought of their educators and how facts were poured into my animal brain day and night, indiscriminate facts.



Did you know that a man named Plato once said, "Know thyself?"

I spat again in honor of such useless information.

His wife's face strained at her husband's sadistic laughter and I imagined that she disapproved. Then I vowed some day to kill Trevic Strenger with my own bare hands. I watched the daughter.

She pushed through the crowd and I saw perfection. I had known many other women, slave women thrown to us along with victory wines and victory songs. I had seen none with the grace, the litheness, the color, the shadows of this one. Daughter of a mad king and a radiant slave-queen, she was—and her eyes seemed to glow with a kind of empathy for me I had never before known outside of the brood chamber.

I opened my gnarled fists, dropping my cups, and sprang to the field's side. My chest band pulsed with heat as its magnetic field fought against the lines of force. I strained my body mightily to bring it closer to her side until only inches separated us and my metal chest-belt glowed cherry red from hysteresis.

Across those billions of lines of flux sprang the stronger invisible rays of my love. Her blue eyes met my gray ones and mine clung while the world dissolved around us. Though worlds of differing customs and a powerful kingdom lay between us, I vowed

to reach her as deeply and strongly as I had just vowed to kill her father.

**W**OULD PATRICIA STRENGER respond to me? Could a barbaric brood-world creature reach her more refined heart? Though doubt assailed my thoughts, I clung to my twin emotions of hate for her father and my new-born love for her.

"Barbarian," he said, "You must come to terms with your simple emotions. In you lie only the pure emotions—hate, love, anger—not any refined, civilized, subtle and complex ones."

Snarling, I threw my drinking vessel at him, only to see it stop in mid-air, then retreat backward from the invisible wall. He did not even laugh at my anger.

"Our people crave heroes," he continued evenly. "You may be a great one. With gladiator success come civilized opportunities which would normally be denied one of your kind. You may soon see complete freedom, then complete citizenship with all the rights and privileges of a Sabre citizen. Shall we drop this silly feud now?"

Hate boiled in me like a hidden volcano and I did not answer.

Trevic Strenger paused silently to watch my heaving chest, then added: "After all, barbarian, had it not been you who was captured, another from your brood world

would now be standing where you are—another would now be offered full education, citizenship and opportunity for world-wide adulation.”

I could not control my emotions. So complete was my hatred for this man who had torn me from brood-home that my whole muscular body convulsed as I spat directly at his face.

Without change of tone in his voice he said, “Tomorrow I will introduce you to Urut of Ewit, a two-point-five-G champion.”

I sneered, as I had yet to learn of either Ewit or Urut of Ewit and therefore lacked comprehension of his plans for the morrow.

Trevic narrowed his browless eyes to watch as he bored in with his varied rapier-like pieces of knowledge, “Urut can crush rocks on your planet between his two hands. On his world a day lasts seven of yours. A day’s work to him means seven times twenty-four or one hundred and sixty-eight of your hours. Can you fight him even one of his days, Grand Champion?”

I knew the answer. Urut’s skin would be as tough as rock, his stamina far beyond any normal one-G human’s bounds, and his strength would be like ordinary muscle taut against the pressure of invariant hydraulic presses. I would most surely die tomorrow. I knew it and Trevic Strenger

knew it. But I spat again in barbaric defiance.

## II

I AWOKE in the morning to the sounds of tractor and pressor duels around me and knew I had overslept on this, my last day. According to my educated brain, thousands of years before a certain B. Franklin had said, *Early to bed and early to rise will make a man healthy, wealthy and wise.*

I paused briefly in disgust at giving thought to such revolting associations. Why had not my mind been permitted to remain that of a normal brood-world barbarian?

I bound my two pressor beams to my wrists and my two tractor beams to my ankles and gyrated my body through the endless contortions of tension and counter-tension so necessary to the modern gladiator.

I pulled my leg muscles to their limit of endurance, slowly but surely overcoming the tractor-versus-tractor configuration. Then, and so rapidly that the eye would be unable to follow, I twisted my body muscles to push pressor against pressor until, biceps bulging, I heard the faint clink of wrist plate against wrist plate, signifying I had once again overcome the hidden power of my death machinery.

Only then did I eat lightly, my

good nature returning slowly as I felt a sense of well-being.

Again I passed my body through every one of the hard-learned exercises designed to test to the utmost one muscle against another, passing through the last just as the aurora at the side of my cage indicated that I was to move out into the arena.

To avoid death from chest-band pressure, as my cell slowly contracted around me, I moved forward, following the energy glow. There, under the beat of their merciless sun, was the open arena, its sand, its hate-driven gawkers, its blood of the past and psychic blood yet to flow.

Pushing my way toward the ellipsoid's nearest focus, I then squinted to see the squat hulk of Urut of Ewit at the far end.

The crowd of blood-mongers surrounding our large cage, except at floor level, howled on my entry. Knowing I was the handicapped, they screamed for Urut's blood which, could I but arrange it, would be most happily furnished them—for it was his blood or mine.

Almost I felt sorry for that hulk—short, broad of torso, leg and arm; flat-headed with parrot-like lips; humanoid of form and lizard-hided of skin.

**M**Y SURVIVAL was at stake and my mind swiveled back to life and death calculations. He

had the sun. Trevic Strenger would have seen to that. He had more. As strong as I was, my muscles were but one-G trained. As quick as I was, he would act faster. Very probably I would not find any weak spot in his natural armor, whereas to him I was but an anthropomorphic jellyfish.

In a gladiator's daze I calculated my survival paths overlong—already he was swimming toward me with tractors and pressors working together.

No sooner had I tensed to meet his first attack than he was beyond me, already rebounding from the magnetic wall.

I pushed both tractors outward at the widest angle of my legs, unconsciously reaching for the bedrock which I knew to exist there. Both arms were folded against my chest band to place pressors in their firmest position. He struck like a ten-ton boulder rolling down the mountainside. My muscle-banded legs vibrated with the pressure and my reserves soon evaporated.

His right tractor could reach around to the side of my head to hold while his left reached to my right side and I knew scant instants stood between me and decapitation.

More in instinctive desperation than for any reason I switched pressors down low and slipped my body under his. He rocketed overhead to slam mightily against

the far side of the arena's shield, chest band glowing red, while I twisted around from back to belly on the sand floor.

Still no strategy came to my mind. Can a pygmy subdue the elephant? Can the ant topple the pedestrian? Can a simple one-G human resist for long the heavy-planet man under one-G conditions?

I concentrated every bit of thought and will on my survival. Brute force against inhuman force was my only strategy.

He sliced through the air again and I dodged. He brought both legs into play to cut me in two and I again dodged. He tried the ploy of alternating leg tractors and arm pressors and I eluded him. Not until he sat above me in the overhead tractor-lock position did my strategy bloom. Though only tiny moments of time were involved, my thoughts ran as follows.

*Why can I dodge this lightning-like man so easily? How is it he misuses his speed so much? Could it be that he is unused to fighting in a one-G environment—that this is his first experience on such a light world? If so, his timing must be too fast and I am not really eluding him. He misses me and then I dodge.*

USING tractors, pressors, fingers and toes, I crawled excruciatingly slowly across the bot-

tom until his tractors caught bedrock below and I could slide out from under.

He jabbed down with pressors but this time I was ready. I kicked my tractors into his squat belly and followed behind his moving arms with my own pressors. He somersaulted then and pinwheeled before catching himself.

Now I had the trick. Every time he moved I swung either tractor or pressor, catching his motion from behind and enforcing it. I used his own strength and speed against him until finally, during one complex maneuver where his tractors reinforced his pressor movement, I doubly reinforced his action with my pressors and tractors and his two arms snapped.

The gawkers screamed and howled for blood but I had other ideas. Already exhausted, I doubted my ability to penetrate his thick hide, though he lay helpless. More important to me than his destruction were the death of another and the love of a third.

Urut floated around and around on tractors, frantically twisting his body to redirect his dangling arms and their pressors. I shot forward and spoke for the first time.

"Urut. Cooperate with me and live to fight another day."

In a high, squeaking voice he warily asked, "What is it you want?"

"I want out of this cage and



you can help. What they do to me outside and where I go should be of no concern to anyone but me—and no one will suspect your help in what will follow.”

“What do I do?”

“I am going to use both pressors and tractors to propel myself through the cage. Only if I go very quickly will my chest band remain sufficiently cool for me to survive. I am going to place myself within range of your tractors and with their help, and the quickness of your legs, I can crash through. Will you do this Urut?”

“But you will die if we are not quick enough. Why should you place yourself within my control when you have already won?”

“Urut, my friend, you and I have no quarrel. We have never had. We fight only to survive—now let us help each other live. I want freedom and revenge. You want your life. Why should we not bargain?”

**T**HE crowd began the death chant.

“Blood—blood! Kill the hulk! Kill the hulk—”

I could tell from their frenzy that soon something must be done or their passion would be on all of us. Urut could also sense it. The idea of mutual help was not yet fully integrated in his mind but he nodded.

“May your mud-nest be pleasing!”

I swung to the other side of the arena to begin my plan.

From hundreds of previous fights I knew every inch of arena bedrock and I used the knowledge to advantage. I flung wrist pressors at each point behind me and ankle tractors ahead of me, accelerating swiftly in line with Urut. The crowd hushed and Urut patiently moved his hulk into position for the throw.

I swung past his body swiftly. More swiftly still he lashed onto me with both tractors webbed together. I felt the fringe of their beams pass my arms, then my head and thick neck absorbed the pull and I was flung up to and against the magnetic shield surrounding us.

My chest band glowed and part of my body tried to wrench itself backward—but still onward and through I passed. I flew over the heads of those in the first tiers, then plowed into the next ranks.

Heads popped; chest, arm and leg bones snapped. I arose amidst the gore of dead and dying gawkers. Their hush changed to screams. Pandemonium reigned.

A small number in the crowd rushed to the exits but the majority stood shouting, “Champion! Champion! Champion!”

Over and over again their acknowledgment echoed—like the beating of surf on the rocky shores—until my very bones vibrated with the chant. Never

before had one escaped the magnetic arena and the crowd was wild with enthusiasm.

I should have trusted to my judgment of their emotion. My next move was utterly foolish. I swung out to reach for Trevic Strenger, hoping to crush his thin neck between my pressors. Above and below and all around me flew his weblon-encased protectors.

High over me were the platforms of heavy rays, while on each side were the smaller hand weapons—but I had agility, speed and coordination far beyond those of any group of Strenger guards. I had one tactic which would catch them by surprise. My muscles were trained to use beams but my mind was trained to use muscles. With those I bowled over the first group, tumbling weapon and guard onto the tiers below.

### III

**F**IGHTING one-G animals in an open environment and with full knowledge of their beams and rays, I was more than a match for them all. But no matter how I hacked and hewed, how cleverly I spilled their heavy weapons, I still could not reach Strenger. I can see him—yet in my memory, sitting back, watching with faint amusement as I tossed his guards here and there like feathers—only to find more guards taking their places.

The gawkers shrieked with pleasure over this new form of entertainment and I turned and ran, dashing up beyond the seat rims, finding space between the roof and two structural pressor beams to squeeze my bulky body through.

Outside the arena I fell several hundred feet before my rays caught bedrock below and I could twist myself across the pylons and roadways of this ungodly civilization to search for the city's end and silent peace.

Behind me, perhaps a mile away, the guards boiled out from the arena area and I swept down low below their sight level. Another mile and another and another—when would the city end?

Then little by little trees, parks and farms replaced city blocks, until only farm land and tall mountains lay ahead. That first night I slept in peace among the wild foothills of this strange world, free for the first time since being taken from my brood world. In my dreams lived the face of Strenger—but also in my dreams was the sad, melancholy face of Patricia and my body longed for both in their proper place.

The morning sun no longer seemed so hot and sultry. The air seemed fresher and the planet, even with its strange flora and fauna, appeared friendly. I speared a small carnivore with

a tractor beam, drank fresh water and ate the raw meat, then washed and rested while I thought.

Were I to go back to the city my large bulk would easily identify me as the Champion. My muscles would be impossible to hide in this civilization.

Farmers I knew about because of my helter-skelter education—I knew, for example, that some Sabre planet genius had called farmers stewards of the state. Could I trust the farmer not to turn me in for one of Strenger's high rewards? I thought not.

Though I searched my brain for other informative tidbits on this society, I concluded that only the mountains and hills would hide me.

**I** REMOVED my tractors and pressors, fastening them to my chest band by means of twisted fibers, then unhesitatingly I strode off toward the snow-capped mountains ahead.

Day followed day and night followed night. I easily speared game with tractor or pressor while I followed the animal trails from elevation to elevation. My body stayed in trim and my hate gradually oozed outward as my path came closer to the appearance of rocky plateaus similar to my brood world—all, that is, except the tiny, reserved corner of my emotions which repeated my need over and over.

*Kill Strenger.*

The rocky path wound upward and I trod closer to the snowy peaks, my body now covered with animal skins for warmth. Slowly the rock turned to snow, then snow to mixed snow and ice, glazing white while I moved onward and upward, never hurrying, never slowing.

Miles of ice were crossed and only once did I have to pull myself from a deep crevice by means of a tractor beam. Finally the downslope snow line was reached on the mountain's other side. I stepped with relief into familiar rocky plateaus, fully expecting a similar leisurely pace downward. Then it happened.

It was Strenger again. I was caught. His men dropped the cage neatly over my body and turned the field on high. He came from behind the rocks with his bold smile and just looked, hands folded against his chest.

"The gawkers now love you, barbarian, and we can still make a truce. Come, I invite you to bury your hatred. You are one of the greatest of our world's champions—over all time—and it saddens me, your waste. By popular demand I can now release you from gladiator status to become a free citizen. But how can I permit a hate-driven barbarian to roam free among us?"

I showed my feeling by emitting a low growl. I clenched my fists,

imagining his thick neck in my hands.

Trevic beckoned his retainers to lower the cage. He found a convenient rock upon which to sit while he pleaded his case again with me.

"Know this, barbarian. Your use of tractor and pressor beams can be traced wherever you go on the Sabre planets. Even so, you have no further need for them, no matter what your decision."

He motioned with his finger and my cage began to tighten until my chest band squeezed me from all directions. Weblon-encased tools drove through my shield and skillfully cut my beams from my chest band, after which the cage was restored in size.

"Your chest band is made of the world's strongest metal. It cannot be removed without special scientific tools. Wherever you wear it, you are subject to immediate seizure and capture. Do you still wish these marks of the gladiator?"

My tongue finally loosed.

I spoke in an angry voice, "You tore me from my brood-world without my permission, mad king, and I shall one day kill you!"

Unable to reason with me further, he beckoned his men forward. My cage was lifted by weblon devices and I continued my trans-mountain flight as his captive.

THEY towed me farther into the mountains, disregarding any inconvenience inertia might make to my caged body. My chest band glowed again and again as my body bounced off the cage's sides.

Perhaps fifty miles inward, we followed another rocky path down to the valley of our destination. Below us, laid out in neat geometrical array, were the energy cages of thousands of humans.

Walking like tiny bugs between each cage were the weblon-protected guards who passed out either food or water or else the whip—whichever seemed most appropriate for the moment.

A scrap of random information forced its way into my conscious mind—forced, I suppose, by the association of the antlike men far below. Only a century ago someone named G. Harcel had said "Men are tiny bugs once they have seen their souls."

Could any information be more useless at a time like this?

High on one side were the mine tailings, glistening red from the evening sun. Immediately behind those tailings stood the factory, puffing out streamers of noxious gases which, I eventually learned, represented part of the physical and chemical wastes resulting from separating weblon metal from the ores found deep in the planet's crust.



My cage was tugged next to a larger one. The aurora along the side, signifying an opening in my cage, burned brightly and I hurried across into the larger. Trevic Strenger paid his last respects then.

“Enjoy your new lessons, barbarian. When you have learned more, find a way to contact me. Perhaps we may yet be friends.”

He walked away and I flung myself furiously at my magnetic shield.

My routine was simple. Each day, every day, I was chained to a row of ten other prisoners who walked two miles along the valley floor and three miles downward on sloping shafts to our work area. Here alternating tractor-pressor beams were given to us, each a model considered too large for a single human to support.

Two of us would hold the mining tool, aiming it at the green streak of weblon metal running throughout the enormous, partly natural and partly man-made caverns. The alternating tractor-pressor forces acted swiftly on the cavern walls, grinding all but the impervious weblon metal to thin mono-molecular layers.

Follow-up crews sucked up the dust-mixed metal and transported it back to the surface, where further chemical and physical processes separated the pure weblon metal from the mono-

molecular dust layers. Large ships transported the purified weblon to other industrial locations for treatment into forms and shapes for use wherever beam neutrality was required.

IT WAS obvious from the beginning that I was different from the others. Most were political prisoners with only puny muscles. Most were gregarious creatures, friendly with one another, some counting days until their release while others were hopelessly resigned to making the best of a lifetime under lock and chain.

Though I was as sociable as anyone on my brood world, here I snarled and spat until, like one with a great scabrous disease, I was avoided by all.

Enemies were easy to make. The chip on my shoulder was as big as a sturdy oak, balanced precariously and waiting patiently for anyone to tip its trunk toward the ground.

It took only one or two short tussles for my strength, agility and training to show.

We were fed in line and normally the distance between my chained figure and others in my line was the maximum length of chain between us. One day a particularly fast, aggressive person bumped against my broad body in his eagerness to get nourishment. I swung around snarling, grabbed his neck between my

giant paws and began to squeeze the life from him.

Only the whips of the guards and the combined pulls of other prisoners dragged me from his body while life still throbbed in him.

Another day my reflexes were sufficiently quick to grab the whip from a guard as he swung its tip toward me. I turned the whip around and nearly lacerated the guard to death before others could stop me.

That was the day all of them, prisoners and guards alike, combined positive efforts against me. That I was not only asocial but beyond the restraints of any ordinary prison had now become obvious.

In the first attempt at my life one of the heavy tractor-pressor beam generators was tipped on me from a height of about fifteen feet. Fortunately my gladiator-honed senses caught the movement and I easily side-stepped and safely evaded what seemed to me was the generator's slow fall. I didn't catch on then.

The next time a small, wiry prisoner pushed his body against mine in such a way that I tumbled backward into the yawning black chasm below us. I twisted and caught the edge of the chasm's rim and quickly drew myself upward.

Already the guards had moved my attacker beyond reach, passing

him quickly to the surface to become part of a different and unreachable work crew. It was then I began to suspect.

ONE day the guards left our work crew. All became quiet and I looked up from my work to see every eye staring at me. Some had grasped rocks and stones while others grabbed the neck chains lying nearby. Slowly the group closed in on me, eyes glazed and muscles taut.

I moved swiftly to my gladiator's stance and waited quietly. Every sense on the alert, I could place every one of the nine around me. How little they knew of my training. None had access to gladiator power-beams and I was now faced with a purely two-dimensional problem.

The rocks came first and I easily dodged them. Then, in quick resolve, all nine swooped in toward me. I rushed through the circle, grabbing the nearest one holding the chain. Lifting him from the ground I flailed the group, though the chain was still held by two others. Those poor misguided point-seven-G fools had no concept of a gladiator's training and strength.

I flailed until it seemed that none survived. But two had climbed above me during the melee to redirect the mining beam at my body.

I am quick and well coor-

minated but even I could not move as fast as their fingers on the machine's switch.

Quite probably the alternating tractor-pressor beam had never been used on human flesh around these prisoners before. They certainly had no knowledge of the effect of the beams when used this way. I stood my ground and let the waves of current ripple through my body, neither resisting nor helping the flow of alternate tugs and pulls, and my gladiator-trained body as well as my water-based tissue withstood the strains well. Every piece of metal I wore—including my hated chest band and the newly attached neck band—disintegrated into mono-molecular powder as fine as any created in the weblon mines. I was truly free of their hated instruments of capture now.

I leaped to the machine's top and from there crushed my attackers' heads like eggshells. Now only I, the mining machine and the solitude of the caverns remained in this branch of the tunnel. I wondered how long I had before the guards returned?

Behind me lay certain capture. Directly ahead of me lay granitic rock, but to my side lay the deep, perhaps more dangerous chasm. What choice did I have?

I picked up the mining tool and chain, using the latter to tie the tool to my back. Then slowly, using trained fingers and toes, I

picked my way down the steep crevice's side, using the slightest of indentations along the wall to support my own two hundred pounds and the additional two hundred on my back.

Down I crawled. Down until my fingers and toes were sore beyond description—down until I reached the first ledge. Here I rested, conserving my strength for the next lap downward. Again and yet again I traveled downward, resting from ledge to ledge, sometimes finding one only when it seemed that my last reserves of strength had been reached. Would I never reach the bottom?

**I** DROPPED pebbles down the long, dark, silent tube, hearing only the sibilance of air sweeping around its path—never hearing splash or bounce of its final strike. It was then I paused to consider.

It was highly doubtful that I could go up again and going farther down seemed useless. Now was the time to unlimber my mining instrument.

Then I pointed the alternating tractor-pressor inward against the chasm's wall and powdered my way forward. The first layer powdered at my feet and swept outward into the chasm below. Soon I was scrabbling with hands and knees to force the dust backward behind me. Fortunately the mono-molecular layers filled less space than their more com-

plex forms and air from the chasm swept in behind me as the stone ahead powdered to the floor.

Mile after mile I bored ahead. When tired, I rested. Then I bored again for miles. Days passed. Even my gladiator's physique suffered from lack of nourishment. My body became sluggish, my mind tormented by memories of the sneering laughter and red-spurting throat of Trevic Strenger and by the graceful body and full lips of his daughter. The latter vision filled my mind to overflowing until my muscles responded.

I pressed on, even forgetting which way was up and which down and distrusting my fatigued senses for knowledge of either direction.

Dust filled my mouth, my eyes, my ears and, it seemed, even my mind, until I could go no farther. With one last effort at survival I shoved my poundage and my machine against the wall, lurched forward. Under sudden acceleration both the machine and my body fell outward and down as the thin wall between my tunnel and the opening broke through.

My body revolved around and around. Centrifugal force flung my arms and legs outward as I plunged through a narrow fissure.

I strained my back, neck and belly muscles to bring my turning to a stop but did not succeed. Light glimmered several hundred feet below and my frustrated mind

focused on it until my spinning made it appear a whole galaxy of light particles swinging around me in tighter and tighter circles. My mind let go.

My back and head hit the water first. To this day, I am unaware of the extent of the true damage done to me in the fall.

## V

**H**ow long did I lie there? Weeks? Days? Minutes? No one will ever know. I do know that hundreds of thousands of scraps of their educative process passed through my mind, only one of which I remembered on regaining consciousness.

“‘The time has come,’ the Walrus said, ‘to talk of many things: Of shoes—and ships—and sealing wax—Of cabbages—and kings—’”

Could any thought have been more out of place and foolish or less useful?

On returning to consciousness, I found my body to be whole and undamaged but bruised terribly. Water was washing over me. Some trickled into my open mouth and some laved my nose and ears, trailing my hair downstream like fine wires extended.

My right arm lay under me, touching the rocky stream bed below. My left arm lay partially submerged, the hand resting on a shallow bank.



My legs were upstream, resting on rock. My eyes were pasted shut by the dust around their rims. Soon I became aware of the mining tool's soft hum and the gentle tugging and pulling of my flesh under its influence.

I waved my right hand around in a circle and felt the broken chain with which I had attached the mining tool to my chest. I scraped mud from my swollen eyes, opened them and found I could see. Phosphorescent particles emitted sufficient photons for me to view my surroundings dimly. The mining instrument was on and pointed steadily in my direction.

I drank until my shrunken belly was fully distended, then lay back to rest and to sleep peacefully under the gentle vibration and hum of the tractor-pressor beam. Probably never before in history had a human being been subjected so long to the rapid alternate pull and push of the tractor-pressor beam. Would its effect be harmful? I didn't know.

When I awoke I crawled again to the stream, taking my fill. Below me I could see the shining shapes of water creatures, among them the unmistakably welcome shape of a fish. I struck with my right hand and grabbed the unwary creature tightly. Its cold flesh furnished my first nourishment in what seemed like months but may have been only days.

**A** GAIN I slept, then ate and slept again. Later I walked over to my mining instrument and turned it off.

I felt light-headed, but oddly healthy and not in the least tired. I attributed this to the effect of poisons manufactured by my own system under unusual stress and at the time had no idea of the damage done to my body. I could have acted no differently under the conditions. Suffice it to say that I felt unusually alert and full of a sense of well-being, though attributing all of these characteristics to normal results of excessive stress.

I began my long walk along the stream hopefully toward light, air and freedom, packing the mining instrument on my back once more. The walls of the stream bed became narrower. Soon they reached a point where my broad shoulders could no longer squeeze through. My way forward was finally halted by granite blocks.

With almost a swagger of confidence, certainly more than the moment warranted, I unlimbered the tractor-pressor and blasted my way out.

**T** HE ship waited for me at my exit point. Of course—use of tractor or pressor beams anywhere on the planet could be easily followed by Strenger and his men.

I turned too late to reenter my cavern retreat. A rock bounded from my head and I fell forward to lie unconscious once again.

When I gained consciousness, my feet were trussed together, my arms tied behind my back and my head ached. I was in a cabin. Two gnarled men sat in front of me, alternately eating and gawking. Was I back in the arena? Were these my new keepers?

I strained at the bonds on my hands and feet but the ties were stronger than I. I humped my body to a sitting position and looked at my two captors, hatred washing through me in waves.

"Pretty, ain't he?" the one on my left said to the other.

"Needs a bath though. Think we could oblige him?"

Both stopped eating. One tied a drag rope to my legs and hauled me outside the cabin to a nearby spring. My flesh was torn and bleeding from the sharp rocks and sticks over which I was dragged and my head was still dizzy from the blow on my head but I uttered no complaint.

They pulled the rope end over an overhanging rock until I was dangling upside down over the water, my head scant inches from its surface. I took a deep breath, expecting the worst. It came. I was dunked under water seven or eight times, probably saved from drowning only by my one-G physique and high lung capacity.



I was dragged back into the cabin, trussed up against the post and forgotten for the time being.

THEY finished their dinner, checked various instruments lying around the cabin, then turned back to me. The older one—gray-haired and with a stubble-covered chin—was the first to speak directly to me.

"You might as well tell us why you were snooping around our private weblon mine. It's your only chance of saving your life."

My mind, now quite confused, failed to function as quickly as it might have under gladiator conditions. I said nothing.



The one with black hair and coal-black eyes bent his bulk over me and said, "If you are a government agent we will let you go free on another planet. It's

to your advantage to tell us the truth."

I coughed some water from my burning lungs and said, "I am a gladiator. I have no name."

"All gladiators have names," the first one said. "Besides, what would a gladiator be doing using pressor-tractor equipment in these mountains? Come on, fellow—if you value your life—tell us the truth."

I strained every muscle of my body to burst the bonds. At last my body sagged. I knew a spasm of futility before I lost consciousness again.

I came to inside their ship. The interior was pure luxury and there I learned how the gawkers had searched for me in vain. I was one of the most popular heroes of all Sabre history—my life was public property and not even Trevic Strenger, dictator over all, would dare to violate it openly.

But no trace of me was found until my mining equipment had been sensed by these law-violating miners near their illegal mine.

I was kept bound inside their ship while they checked and double-checked my now clean-shaven features with pictures taken during my gladiator days. Convinced I was truly the escaped Grand Champion, they struck my bonds, not knowing how close they were to true death at the moment.

I soon learned that everywhere I was loved by the people. But I felt certain that I would still be unsafe anywhere on a planet ruled by Trevic Strenger and his type.

I STAYED with the mining ship, hoping to get back to my brood world one day. But how could I flee when my two goals of hate and love were here? Not only would deserting them be unnatural to my brood training—it was unnatural to the 'unusual state of my biology, still deeply hidden from my conscious processes.

Still, in violation of every instinct, I left civilization behind to flee toward the Planet of Rocks of my birth. Seven long light-years lay ahead, meaning months of travel. Hundreds of thousands of strange worlds would be silently, unknowingly passed as we sped onward. How many contained brood worlds? How many had produced two-and-a-half-G monstrosities like Urut of Ewit? How many contained Patricia Strengers or Trevic Strengers? How many had educated barbarian champions and how many even held the humanoid form?

The days passed slowly. I became acquainted with the two outlaws. An objective study of their patterns of behavior gave me a certain recognition of their finer shadings of emotions. All three of us were outside the law but these two still subscribed to certain ethics and species-assisting patterns of behavior—much as each of the brood helps another for the sake of survival of the whole.

Unlike the brood, they had days

when their minds were dominated by mixtures of pure emotions. They certainly exhibited pure forms of overt anger and calm complacency but they also showed fine shadings of moroseness and languor. I began to recognize emotional subtleties and, for the first time, began to question my pure hatred response to Trevic Strenger. Was he really as bad as I had projected or did he, too, have comprehensible feelings and behavior-motives mixed into his treatment of me?

One day I noted the outlaws' deep concern for one dial on the ship's panel. Daily the dial's indicator swung upward and daily other instruments were checked and rechecked against it. Presently I read their concern—patrols were on our path. A whole fleet crawled toward us, closing in slowly.

There are no maneuvers that can deceive a determined fleet. Our only hope lay in an act of some god who, out of the goodness of his being and the emptiness of space, would reach outward and hand us some device or means by which to escape.

To make matters worse, I had no place to stand and make the fight mine, using my gladiator's training. I felt trapped like an animal and could almost feel civilization's magnetic cages crush through my bones again. My chest, where I had worn the metal band of servitude, had healed and

was covered with keloids. I wanted no more slavery.

One slim hope remained to me. My captors searched the directory for any kind of planet with breathable air. Then they began long-range perturbation analysis of surrounding stars, hoping to spot planets within range.

One bright yellow sun on our pathway seemed to offer hope and they quickly adjusted our route slightly to pass near its planets. We swung inward in a giant cycloidal loop, and an automatic analysis assured us that one planet, fourth from center, had breathable, oxidizing air.

But now our range was within the patrol's striking power and their beams reached out for hundreds of thousands of miles to vibrate our craft ceaselessly.

Though weakened structurally, we recklessly approached the planet's atmosphere, dropping swiftly into its density to skip and skip again as the craft was buffeted by the force of its own passage. Now weakened further and red from heat, it plunged at even sharper angles until its tail section broke off and our front portion spun uncontrolled toward the water below.

## VI

**T**HE miners must surely have been killed in the plunge. At the time I attributed my sur-

vival to my gladiator's training and my powerful physique. I had bunched my muscles together and dived out the ship an instant before it splashed.

I hit hard, maybe as hard as Urut had hit me. Maybe a little harder—I don't know. In any case my body sustained the shock and I swam to the surface, spotting land perhaps ten miles away. Toward this I swam and just before sundown reached the sandy beach where I lay in exhausted stupor.

The jungle ahead of me was unrecognizable. Whether fern or animal, flora or fauna, I could not tell. Only experience would show.

Food was my immediate concern. Next came shelter and water. I rose, rather unnaturally recovered, and strode confidently into the strange organic configurations ahead.

Suddenly my emotional complex dropped from open elation and overwhelming optimism to complete apathy. Death would have seemed a pleasant release. Striving always with my gladiator's training and the stubbornness born of brood world, I consciously searched everywhere without success—no recognizable cause was creating my emotional void.

Down the scale of emotions my feelings plummeted—and slowly and silently the fibrous matting

of the jungle undulated toward me. It was white with streaks of gray running through it and gave the appearance of some broad-patterned, supine foliage which moved like a leech. Who could tell what it really was? I wanted to back away but my apathy was too deep. I stood in an abandonment of despair, even squatting so the slimy thing could more easily flow up my body.

My apathy was dense—as dense as thick glue—and the thing nearly covered my back. I squatted lower to let it cover more of me, then felt its acid trickle over my skin. Apathy prevailed—nonetheless, under the stimulus of pain, my gladiator's instinct snapped my body erect and my hands and feet flung the horrible thing from me.

Acid had etched the skin all over my back, neck, arms and shoulders. Just as suddenly as the skin had been destroyed my body began its preconditioned, rapid repairs, though at the time I was too busy to give the phenomenon thought.

**I** WAS not yet safe, however. The thing flowed toward me as before and my apathy was as leaden as before. Why should I move when all of life seemed so useless, so hopeless? W. Shakespeare did not quite say it, but my mind, sunken in depths beyond conscious control and mired in the

facts of the educators, paraphrased it as: "O mighty barbarian—dost thou lie low? Are all thy conquests, glories, triumphs, spoils, shrunk to this little measure?"

I will say this about the paraphrase—at least there was some relation between its semantics and my condition of the moment, though there was little else to recommend it.

Yet my fighting instinct had been aroused and at another level of my being I exploringly fought back. First I strove for excitement and the adrenalin lift which accompanies it. Then I strove to force enthusiasm into the cellular portions of my body—to no avail. Whatever force the thing had, my manufactured enthusiasm was not the answer.

I let my body freely wage swift endocrine war as my emotions tore from cheerfulness through antagonism, overt anger, covert anger, resentment, fear, grief and apathy. Nothing manufactured by my body for my body helped.

As the thing crawled closer I switched my endocrine war outward against the whole world of loops and snakelike whorls around me, raging within my soul but nonetheless subtly spouting torrents of emotion outward through some unseen orifice of my stilled body.

It was when I again hit the apathy band that the thing stilled.

Each time my body broadcast apathy, it retreated a little farther. My body had instinctively found the key to survival on this planet. The thing's emotional load lifted from my body. Again I felt lighthearted and full of a sense of health, though I still poured tons of black apathy at the crawling thing now scurrying away so rapidly.

I turned back to the tangle of organic misshapes and little by little ferreted out its secrets. The ropy black serpent-like form dangling from above responded to fear. The flapping fan-like objects responded to overt anger and the other dangers responded to other emotions either singly or in combination.

**N**O SINGLE entity could easily be identified as food, but now that I was learning to walk through the jungle by casting my emotions externally here and there, I followed the first stream upward with hopes of learning what was edible and what was not. Clearly the acid and base-forming entities were inedible. Time after time I succumbed to all their emotional complexities, learning only after their acidic or basic sting to fling them off and redirect my emotions outward. Time after time, my skin rapidly healed itself.

Order began to appear from the chaos surrounding me. I

watched the slinker root, a slob of jellylike flesh that looked like a weathered tree-root from my Planet of the Rocks, as it flushed out its quarry, a small blob of milksac covered with horny projections.

Using almost pure fear, its emotion swept outward to cover growths of pink and purple velvety layers of some vertical materials. From the bottom of this growth the milksac animals—if that's what they were—rushed directly toward the jellylike growth.

There they were easily held until the chemical base dissolved their vital layers, after which they were absorbed into the attacker's system.

For lack of better hunch, I followed the next jellylike sack. It captured a victim. I tore it away from its grasp, using my hands for the act of tearing and my emotions for the act of neutralizing the strange beast.

I placed the juices of the injured beast on my tongue and found them sweet—but some poisons are sweet. I didn't know the difference but my body did—or so I thought at the time.

I chewed and swallowed and stayed healthy. Looking back on the experience now, I wonder. Did my body adapt to the alien food or did my instinct determine what was food and what was not?

I ate my way across thousands

of miles of outrageous growths and forms as I traveled from coast to coast across one great continent. Occasionally I hid from search ships—the Patrol would not rest until our bodies were discovered, I reasoned. I left no daily trail by use of tractor or pressor beam and my human body could hide among the fibrous, gelatinous, oozing, slinking, stinking mess around me.

I crossed two mountain ranges, walking high above the life-plateau, living for weeks on air, water, fat and determination. Lonely pools of water were to be found at these higher levels.

**T**HE longer I survived in that emotional jungle the more grip I had on my own emotions—until I could instantly turn up the emotion of hate against Trevic Strenger or the passion and hunger of love for his daughter.

I soon was aware of his ships less often and rightly assumed their surveillance of the planet to be more or less precautionary and automatic.

Now I wanted the ships down, but only under my own terms. The problem was to attract their attention in order to make them a bit suspicious—but not overly so—and to trap the trappers.

Fire is common to most planets—but during a year's survival on this one, I had never



seen a conflagration. I assumed that the patrol would also have observed this obvious fact. Could I make the unnatural happen by natural means?

The unnatural did happen but in a different way. I found a large piece of metal with fused pieces and burned spots. Either our ship or another had caused this piece to be flung across the continent where it burned and fused on entry into the atmosphere; but whatever the true case, I had the part I needed to attract Strenger's persistent watchers.

Above the organic line, which is also above the rain line, are mountains, thin dry air and pools of water resting in bowls of rock lined with streaks of nearly pure lead. No weather or natural disturbance occurs at these heights or does so only occasionally. The pools are remnants of another era in the planet's ecology.

Before placing my plan into action, I had much work ahead and hoped my body was equal to its task. First, I found the pool nearest to the organic growth line. The pool I chose featured rocks jutting overhead. From one of these overhangs I tossed in more stones until the pile below the water's level was nearly to its surface.

I then lowered a large organic membrane to this new rock level under the surface, folding it into a kind of loosely formed bag with

its corners and sides above water. I tied the corners together loosely and tied the other end to a rock overhead.

Within the newly separated layer of water I slowly lowered the spaceship's metal part, keeping one end high above the rock projection and lowering the other end to the bottom of the water-filled bag.

I tied another piece of organic rope to the top of the metal structure and looped its end to a rock some seven feet back from the water's edge. Then, carefully, I pulled on the metal, bending it farther and farther until it just touched a streak of partially oxidized lead jutting from the banks of the pool. Again and again I pulled the metal until I was in absolute control of its motion and could touch the lead streak with the ease of long practice.

**T**HE next day I drove hundreds of organic entities ahead of me, using only the apathy band, for I had learned that this emotion was associated with acid-bearing life. Up the rocks they tumbled and rolled, gyrated, squirmed and crawled until the pool was reached.

When the pool was made sufficiently acid by these monsters, I went after the base-bearing kind, using covert hostility for the drive, and I also drove them into the pool without qualms. There the

the bases partially neutralized the acids, forming a serviceable electrolyte.

How many beasts of which kind should I drive to create the huge battery I wanted? I did not know. Neither did I know about the permeability of the membrane sectioning off some liquid from the rest, nor the difference in electrolytic potential between the streaks of partially oxidized lead crawling along the pond's basin and the unknown metal now jutting above the pond's surface. With so many unknowns I could only try—perhaps to fail and try again.

After rest I pulled the metal down to the lead streak by means of the attached rope and was rewarded by observing a weak spark as the gap nearly closed. I returned to the herding of more creatures. Night came and the following day and I still herded creatures to the pond, testing the spark size with every new batch.

I hoped that the spark of light could be seen from a spaceship at night—or at least that the electro-magnetic waves radiating from the source would alert the patrolling monitors. I had not figured on the quick response which actually occurred.

I was driving my last batch of creatures ahead when the ship came. I crouched behind the rocks to watch when the rays hit and I was stuck rigid to the spot.

Through instruments of science or intellect, possibly both, they had outwitted me again. I was incapable of moving a muscle.

The ship I had seen was the decoy. Another one had landed somewhat earlier to trap me.

## VII

**T**HERE were two of them, one on either side of me, and they held me fast with heavy portable pressors. I strained with every bit of muscle tissue to no useful end.

All around me the life I had driven from the jungle below boiled in confusion and from that movement came my idea. I summoned my energy and emoted apathy, driving the group toward one of the men. He faltered, then fell under the onslaught. The other also slumped. The pressors slipped from me and I ran to each man in turn. One pressor I threw into the acid pond. The second I focused on the ship, wedging it between two rocks.

I turned to the fallen men. One was encrusted with an acid which had eaten deeply. Almost dead, he would be of no help to me. The other was visibly shaken. I ran my own emotional output back up and down the scale several times until I could key into his basic confusion, then brought him up to a comfortable emotional level.

"How many are in the ship?" I quietly asked.

"Three. But who are you? What are you doing alone on this surrealistic planet?"

Now it's strange, but up to that point I had not thought of myself as a name. On the planet of my birth I was just one of the brood and could easily be identified by smell or appearance. On the Sabre planet I was known as barbarian or Champion or Grand Champion. Here on an alien planet, under an alien sun, I was again being asked a most fundamental question whose answer I could not give.

"Are you on regular patrol around this planet?" I asked.

"Yes."

"What are your duties?"

"We are to observe and report any slightest irregularity in shape or phenomenon or behavior over the whole planet's surface."

"How long has your patrol had the planet under surveillance?"

"Better than a year. Ever since outlaws were seen to approach the planet."

I moved the patrolman closer to the pressor beam so that I could more quickly reach its controls if I needed to.

"What did you expect to find here?" I asked.

"None of us knows. We merely take orders. We sighted the pond's heat activity by auto-infrared surveillance and watched you at

work. It was then we laid our trap to capture you and find out what was happening."

"Are you a follower of the gladiators?" I asked.

"Who isn't?" he replied. He looked up expectantly.

"Then you are familiar with the disappearance of your Grand Champion over a year and a half ago?"

HE LOOKED me over from top to bottom before answering, then said excitedly, "Why, I believe you are he. Yes—you must be—"

His emotions bounced from my artificially maintained level to his interest and sincerity.

"If you are indeed the Grand Champion of a year ago—you should know that your status is that of a free man. After your successful fight with Urut of Ewit and your escape from the arena you were declared free by the enthusiasm and will of all the people. How did you get here?"

At one time I might have snarled and growled at this representative of their civilization. Now my mind froze as my conscious portion became aware of my own lack of emotional response to him. I listened politely and rationally to his talk. My mind, though, buzzed with consternation. Was I wrong to hate Trevic Strenger so? Was their

world really all bad? Would I have been better off on the Planet of the Rocks, chasing rock wolves and fighting with others of the brood?

Then, against all the instincts which make up a brood world barbarian, I freed the man and docilely followed him to his ship.

The way back to Sabre planet was filled with wining and dining in the best of the patrol tradition. Word went out that the Grand Champion had survived shipwreck on a horribly inimical planet, and space for parsecs around was charged with the news.

My fame had spread—and my prowess increased. I had been the Greatest of Grand Champions and had so been declared on official gladiator roles. And only Trevic Strenger knew my true status but even he was not certain how I had come to be found on the forlorn Planet of Emotion.

## VIII

**W**E WERE like two giant computers battling one another. Trevic Strenger knew that every move I made might lead inevitably to his death—for I still meant to keep my vow. I knew that anything he did might cause my destruction directly or indirectly. He held the power, the education and the experience.

I was the Great Grand Cham-

pion, beloved of the people and not entirely unused to facing the thought of daily danger. Urut of Ewit was now champion, for no ordinary one-G humanoid had been able to withstand his stamina, strength and speed once he had grown experienced in one-G conditions. Between Urut and myself the people gawked as only gawkers can.

When I entered the gladiator stands, the gawkers stood and cheered for fifteen minutes. On the other side, far away from my grasping hands, Trevic Strenger sat surrounded by his sycophants and guards. Did I still wish him ill? I genuinely did not know. I knew only that I meant to kill him.

Urut entered and the crowd applauded with enthusiasm. Today was his show as well as mine. Then Trevic began his clever move against me. He arose, stilled the crowd, announced that it was only fitting that the newest and best of champions, Urut of Ewit, be challenged by the world's Great Grand Champion.

As he knew it would, the idea caught the gawkers' imagination and they howled their approval. I was committed before my barbaric wits could form a defensive reply.

Only by sustaining the people's good will could I be safe from Trevic and he had cleverly made use of the situation. I had to

fight. I flung off my civilized accouterments and leaped into the arena, no longer bound by chest band, free to enter and leave whenever I wished.

I caught the tractor and pressor beams, tying them quickly to my ankles and wrists, and waited for Urut to move. He looked at me sadly from his heavy-lidded eyes and parrot-shaped mouth and I knew he had no desire for what he felt was sure to come.

**H**is first blow, with pressor, was light and I knew he was pulling his attack. As any other one-G gladiator would be, I was clumsy, slow and weak compared to Urut. I was also out of training. At any time he could have decapitated me or ripped my body to shreds, for his timing was perfect.

For purpose of show, I'm sure, he let me cartwheel him several times and the gawkers thought my response would soon build in duration and quality. I knew and he knew that we were mismatched and that he had the advantage. Survival on the Planet of Emotion had taught me that emotion, too, can be a club if only one knows how to generate it. I had much practice and while Urut had his will with me—now under tractor lock, then under pressor throw—I sought the key to the emotions in his humanoid bulk.

My endocrine system worked rapidly, generating pure emotions from apathy to grief, resentment to fear, boredom to happiness. None worked. I then tried combinations as I had learned to do on the Planet of Emotions. Once I saw Urut falter briefly and pause to stare from glazed eyes. I thought then I had the key but lost the combination.

My powerful physique was tiring fast. Urut had pressors on opposite sides of my body and tractors at right angles, on opposite sides. I was being simultaneously squeezed and pulled on different body sections. I could almost feel cartilage tear and muscle tissues pop.

The gawkers were yelling for blood as I continued my search.

I caught the emotional combination to his alien form and Urut paused again briefly. I drove my emotional wedge in and he faltered. He stumbled and fell to his chest as I slowly rose from the sand, giving every appearance of pushing back on pressors and pulling back from tractors still clinging to me.

The gawkers screamed.

As my body strengthened, my emotional output rose and Urut twitched in agony. I have no idea what the emotional content meant to his way of life; but it was a powerful antidote to his physical superiority.

By the time I reached his side,

my body was fully recovered and, using every ounce of my two hundred pounds of muscle, I might have been able to decapitate him. I looked to the crowd and asked their pleasure and I thanked the great brood-God that nearly all screamed for his release.

The gawkers yelled, stamped their feet and clapped their hands together. For them the solution had the appeal of a well-laid plot. How else could they have both their Great Grand Champion and the newest Champion to carry on with their future entertainment?

**T**HE day of Strenger's trap ended and I rested in my public-donated apartment that was lined with trophies of my earlier slave-status wins. Now, I thought, it was my turn against Strenger. My plan took form.

During my planning stages and the impasse to follow the faulty educative process to which I had been subjected caused A. Zlinsky's phrase to repeat through my mind. It ran: "To the wise go words!" A meaningless utterance. I tried to suppress it. It wouldn't go away, so I found myself trying to rationalize it. I did need a true and honest education to compete with Strenger—maybe that was what Zlinsky's silly quotation meant. I don't know. But eventually it led me directly to more efficient and better organized educators.

The habit pattern my mind had developed of tracing all knowledge through quotations or simulated quotations whenever possible was disturbing. My new educators explained that I would slowly lose the habit with time if I made a conscious effort to do so and that it arose from faulty use of the educator when I was a gladiator trainee.

Time passed. I became more acclimated to civilized behavior patterns. My emotional control was nearly perfect and I could more easily read the emotional patterns of others. Were it not for my vow against Strenger's life, I might have learned to enjoy my new free status.

When I was invited to attend the annual fealty procession and to serve as one of many state showpieces for public consumption, I could not help but suspect that Trevic Strenger's next trap was ready. My own plan was shelved and I prepared myself to look for any opening, regardless of cost to myself.

**S**INCE our procession was to approach Trevic Strenger's seat within a matter of feet, I knew our day of confrontation had come and that I was being baited. He couldn't know of my new ability to manipulate emotion, with which I would trap trapper.

I took his challenge. On each

leg and arm I attached secret pressor and tractor beams and joined the grand procession. Behind the others, I slowly approached his position to give my symbol of fealty to the state. I could sense Trevic's muscles tighten as I approached him. His emotions became snarled and bent by covert hostility.

I grabbed his emotions by means of my new talents and twisted them down through grief and apathy. Downward they went until his face became placid, his arms and neck muscles relaxed and his whole stance presented a hopelessness.

Only one person stood between Trevic and me and that one quickly left, urged on by another emotional impulse from my hulking body.

I faced Strenger as if he and I were alone in the world. His eyes seemed to plead and I scorned him, for what power could this emotional invalid have over me?

And then I knew that my hate for him was over and I dropped my long vow of hate and vengeance.

Suddenly the floor dropped from under me. Instantly my reflexes snapped on tractors and pressors and I curved my body into the best stance to slow my fall.

Slow it would not! Somewhere above me automatics caught and

sheared off my powers. No matter how I scrambled and twisted my body, the machinery kept up with my efforts, seeming to anticipate every one of my merely human emotions.

The fall was not far. I landed catlike on all fours and bounded up to my feet again. Automatic machinery continued to nullify my pressors and tractors and steel bars surrounded me. Light came from the walls outside my new steel cage.

I heard a door open in the outside wall and then Trevic Strenger's careful tread. He did not smile; neither did he frown. I reached forward with my emotions to engulf him in apathy again but he spoke quickly.

"Turn off your machinery, barbarian. Throw out your tractor and pressor beams, too. I expected you to try for my life again and, as you can see, your attempt has not and cannot succeed. Face up to the fact that your machine-built education is only veneer-deep, your emotional control is uncivilized and your continuous attempts to kill me are more barbaric than our gladiator's arena. At least, there you know the rules."

I THREW the pressor and tractors outward but remained silent. "That's better," he said. "At least you are intelligent enough

to know when you are captured. That's more than I could say for you when I first caught you on your Planet of the Rocks. You fought until exhaustion then. Why not now?"

I remained quiet but watchful. I read less emotional hatred in his voice and actions than before, perhaps because I projected less of my own thoughts into the situation.

"I don't know what mutational talent you used to control my emotions to such a deep apathy before I triggered your fall into this chamber," he continued, "but I can assure you, you are here to stay until this senseless hatred of me is gone or—as is most likely from your stubborn character—you die of old age. Which shall it be?"

Unbidden to my mind came Farragut's thought, "Damn the torpedoes! Go ahead!" I pushed it below my conscious level and spoke to Trevic for the first time since his capture of me.

"I thought to kill you upstairs but then realized its futility just before your trap door opened. My hate has burned itself out."

He smiled and I noted how pleasant the smile was—not at all malevolent as I had believed for so long.

"How can I believe your statement now?" he asked.

"You have urged me to accept the civilization you represent.

What guarantee do I have that it consists of the advantages you have told me about?"

"Try it," he said instantly.

"Then try me," I also said instantly.

He laughed at my answer and seemed to consider my request quite seriously. He reflected only minutes, however, then bravely motioned to his retainers.

"Free him."

The bars around me rose and I faced Trevic Strenger, separated by only feet. I could easily have killed him at that moment.

## IX

YEARS had passed since Trevic's momentous decision to free me. Sitting at the helm of this tiny empire known as the Sabre planets I looked back with nostalgia at my innocent entrance into its society.

Man had gone to the stars and returned, gone again. And those remaining at home had formed a weakened gene reservoir. Noting this state of affairs, man had returned the gladiator games to his home planet and then had forcibly invited back the barbaric and the humanoid—any mutational sports or freaks bearing new and untested genes were brought to Earth as gladiators.

Here in the arena of strength, agility, intelligence and courage the long screening took place—its



purpose to find new blood for the human race. Those freed, like myself, were the backbone of humanity's new drive outward and inward. Slowly man returned his genetic protoplasm to an honored, aggressive, survival status.

I'll not forget the day of my final release from both the steel cell and my own inward-driven emotions. Trevic Strenger stood before me, bravely waiting for me to call his bluff—to kill him suddenly or to accept his offer for civilized peace. He waited. Then suddenly he tore off his shirt and I could see the thickened keloids around his chest where his gladiator band had once burned into him.

Patricia Strenger, hair now grayed, skin wrinkled, figure long gone, sat by my side. She crushed my hand in thoughtful empathy as I looked down on the newcomer from far beyond the

Sabre planets. His hatred of me was volatile and could have exploded at any moment, were it a gaseous compound.

I could have dulled the edge of his emotions with my own freakish control over external emotions, of course, but this would also crush his spirit. Who knew? Perhaps the young barbarian below me would be my replacement. I smiled at the thought, all the time knowing that he would interpret my brief flicker as a sneering grin of hatred.

To my mind came unbidden phrases from quotes of our ancient past and I had finally learned to reconcile my thoughts to their contents. J. Christ had said, "And ye shall know the truth, and the truth shall make you free."

I signaled to have the snarling barbarian thrown into our ship and prepared myself for our long trek home. ●

# AND SO SAY ALL OF US

BRUCE McALLISTER



FA was even better than ESP if it could be controlled...

ROBERT sat up slowly and cautiously on his bed in the white, quiet room. Like a membrane on the infinitely clean skeleton of his immediate universe the rumped sheet relaxed across his legs, curving maternally around the mattress corners like the wings of a great albino bat. Shifting his eyes from side to side

with nervous prudence, Robert held himself still for an hour, then two, and three—he jumped in surprise when air happened to whistle through his own nostrils. Under the flaccid marble of his brow, morning thoughts continued to swarm from his two personalities. But he was always calm, so his walls were smooth, *sans* pads.

“Oh, I’ve been here a long time, and, oh, I haven’t moved in a long long time. I’d like to move, to straighten that wrinkle on this bed—grab that fly right out of this room’s sky. But let me tell you, if I started to do either of those things, Dad would warn me not to. It’s as simple as that. Dad’s always around and he knows what I shouldn’t do, and he tells me.

“Oh, if I stretched my arm and touched the fly, Dad would stretch his arm from wherever he is and touch my face. And the power of Dad’s slapping hand would be like my hand squashing that fly.

“That woman with the tray of food—she calls herself a nurse and tells me that I’m in a hospital—but I must be at home if Dad’s voice is here as it is all the time. See the tray and the nurse? I’d call to her right now but Dad would hear me and smack me.

“Dad lets me eat breakfast, lunch and dinner. So I’m stretching out my hand and touching the tray. Dad lets me chew, too, and swallow, which I’m doing.

“There is also pie on the tray. It smells good and—”

*No, Bobby! That pie is sweet, bad for you, for your teeth. Bad for your veins, bad for your mind. I’ve told you a thousand times—eat to live, don’t live to eat. It says so in the Bible and*

*Benjamin Franklin, great man of the United States of America, said so, too. No pie. Tell pie goodbye.*

“Goodbye, pie. See, Dad knows what I shouldn’t eat and he tells me what not to eat. If I had licked one bit of that lemon pie I would have blood on my nose now or bruised red cheeks or purple eyes like those Dad always gives me when I do bad things.”

**Y**OU ask me again what it was like back then. Before Robert. Mainly I was young, a researcher for *Decade*. I wrote my bit for the magazine but I was basically as unaware as anyone else in the nation. Do you really think my memory is worth anything? Okay, but it’s your ear that will suffer.

**P** for Parapsychology and Petrocelle. Let’s begin with the doctor, since he is credited—or blamed—for starting it all.

Dr. Sebastian Petrocelle led the invasion of the mental hospitals in 1997. As a persecuted member of the Defense Department he had the right and the obligation to do just that. In fact, it had been one of his own colleagues—the lone mystic found in the department—who had discovered that the mentally ill seemed to possess awesome powers in pre-cognition (called ESPerception), and telekinesis (ESConception), telepathy (both ESP and ESC) et para-cetera.

When the initial report on the

significant correlations was at last released, psychologists, psychiatrists and psychoanalysts around the world arose, wide-eyed and bushy-brained, seized the problem by the throat and wrote the equivalent of five thousand volumes of *War and Peace* in just one month after the discovery. Older doctors of the psyche who were reluctant to accept the fact of extrasensory perception and conception (ESPC) did miss the the boat and failed to adorn themselves with all those doctorate degrees that went up for grabs because of the giant litter of possible thesis topics sired by the Discovery.

Doctors willing to admit the existence of ESPC—with, of course, a scientist's self-assurance that *extrasensory* merely involved some yet undiscovered sense that had its own easily comprehensible laws of order—embraced the crucial question: "Is the presence of extrasensory perception and conception in the metally ill the *result* or the *cause* of the mental illnesses?"

Of the five thousand rambling nonfictive books written to answer that question, one thousand responded: "Illness is the cause."

One thousand claimed: "Illness is the result."

The remaining three thousand concluded in faddish anti-Black Box manner, "The two cannot be considered independently—no

clear-cut cause-effect relationship is evident."

Dr. Petrocelle did eventually read one of the five thousand Great World Articles written on the ESPC-mental illness subject. That article happened to be the prototype of all of them and had been written by a colleague. Consistent with Petrocelle's usual MO, his perusal of the article came twelve months after he led the invasion of the mental hospitals, twelve months after his grandiose *faux pas* with Robert Johnson. Petrocelle, having spilt the Defense Department's milk, was in a rest home when he finally got around to reading it.

**I**N THE beginning, Petrocelle's sole concern was for the power potential in the ESPC-mental illness correlation.

"Power for progress," he was known to say, "and progress in competition with the Enemy—who hasn't always been the enemy but happens to be now."

Dr. Petrocelle received easy finance for his search for the power potential simply because his usual skepticism about parapsychology and other occult fields was well known. His was also a skepticism recognized, respected, and matched by the feelings of men who doled Defense Department coin.

"If our Dr. Petrocelle really sees something in this mental illness-mental power stuff, then

there must be something to it.”

Little did they know that was understatement. As it was, Dr. Petrocelle was grasping for straws and could not truly chance being skeptical. His career in the Defense Department was at stake.

When questioned about the rather nebulous nature of parapsychology and his search for ESPC-fertile minds, Dr. Petrocelle said, “We are encouraged.” This meant that he and his colleagues hadn’t contributed significantly to National Defense for more than five years, that they feared, therefore, admissions of anything but optimism and that for personal survival’s sake Petrocelle *et al.* were willing to try anything that verged on being science.

As typical of frantic government antics, a machine was somehow thrown together, constructed to test roughly for the presence of what the public now was terming “mind power.” Petrocelle and associates chose, instead, to call this power FA—for *fortiter animae*—a feeble incorporation of an overly romantic Latin phrase for adding dignity to their work—while at the same time they refrained from entering the Greek nomenclature tradition out of fear that a failure on their part would taint that wonderful medical language.

The machine was called an electroFAgraph.

Dr. Petrocelle was encouraged

as soon as his electroFAgraph discovered a Breton State mental patient with a sizzling FA potential. At first Petrocelle remained uncertain about the degree of the power latent in the discovered patient—but his uncertainty soon vanished when the final shock treatment prescribed for the patient brought the poor man abruptly from his mental and physical immobility. Unfortunately the shock therapy only gave the patient motion—he still remained quite insane. A policeman had to shoot him to death when he used his FA to puncture a ten-foot hole in the hospital wall, hoping to escape.

The officer shot him because, in the lawman’s own words, “He just wouldn’t stop coming.” And everyone did admit that the man in blue couldn’t have handled the FA maniac with his bare hands.

Before the bullet punctured a much smaller but equally formidable hole in his belly, the FA wielder spoke his not-soon-to-be-forgotten words: “I must get away!”

Everyone assumed this was a reference to hospital confinement.

The policeman was not the sort of man who usually shot at mental patients. The variable factor this time was that all the plaster flying from the hospital wall reminded him of a grade-B movie he had once seen, called *Earth versus the Mind Master*—a film that had of-

ferred a hot scene where a policeman was lucky enough to shoot the first seven-foot mind master that landed on Earth—lucky because after that incident no human being was in any mental condition to shoot at anything.

After the accidental execution of his prodigy Petrocelle grew cautious and more scientific. He snapped into action, brought more men to his side—allegedly for recording, experimenting, and learning but actually for verbal support of the doctor in case the FA venture didn't progress fast enough for the government's taste.

At Adaja State mental hospital Dr. Petrocelle and the FA machine discovered a second patient. His electroFAgraph sizzled in a nostalgically similar way to the late Breton State patient's.

“SO YOU'VE given me the clinical report on Robert,” Professor Stapleton said. “But I don't understand how you're going to cure his schizophrenia with my machine and on top of that get him to work for the government with his FA when he is cured. I'm a professor, Dr. Petrocelle, not a doctor or a government mind.”

“I know that, Stapleton. But you do know that machine of yours, and that's all the reason I want you here.”

Stapleton nodded doubtfully.

“What we're going to do,” Dr.

Petrocelle continued, patting the teaching machine, “is crawl inside Robert's mind. Instead of teaching a sleeping student with your influential voice, you're going to crawl inside Robert's mind and you're going to convince both sides of his mind—the father and son halves that render his whole being immobile and his FA only potential. Convince them that they should work together. Tell him that they agreed on things once upon a time and they should agree again forever. Robert will interpret your voice, Stapleton, as another father-voice, and his Bobby-son-voice will fuse with the critical father-voice he's created for himself. Then when you pull out of his mind, you'll leave the father and son reconciled, happy together, and Robert will be able to move again and to utilize his FA. When he's of one mind once more—pardon the expression—he'll be in our hands. What we must do is tell him that those disc-shaped wireless electrodes for the teaching machine are really just hearing aides so he can hear his father better—Bobby will put them on and give us no trouble. He's never heard of a teaching machine and its apparatus before. Besides, he seems to be subnormal in intelligence.”

“How do you expect to get him to use his FA for the government? He might use it for

himself to become a criminal, you know. That's what everyone has predicted for a situation like this."

"In the morass of words in that report you're holding, it says Robert is both very religious and very patriotic—as his real father was. Unfortunately for Robert's mental state—but fortunately for our goals—his father was also very strict. The patriotism, religious devotion and also the disciplinarianism of the father-voice in Robert's mind will induce in the boy a fear of being unpatriotic—among other things. We should have no problems."

Stapleton looked a little pained, a little dubious. Dr. Petrocelle decided immediately on verbal anesthesia, his special talent.

**P**ETROCELLE began: "Robert—motherless since he was seven—has always had a problem. His father was a paragon of discipline, matched only by the Inquisition with its brutality-for-a-higher-morality's-sake. When very young, Robert grew accustomed to having his father criticize his every move with fiery words and physical abuse. Robert withdrew into himself, ceasing to function in any social way, barely eating, because even hidden in his own mind he could not escape the voice of his father. He's not autistic or catatonic, technically, but he's in a bad way. The habituation to criticism demanded that Robert

fashion for himself a paternal gargoye for his mind's shoulder. The father-voice is very real to Robert, though it is only a manifestation of his own generalized guilt feelings and conditioning. Unfortunately, or fortunately—we haven't yet decided which—Robert isn't very smart.

"There was a certain method to Robert's father's disciplinary madness but Robert, very young and not too intelligent, couldn't discern it. Robert concluded subconsciously that his father in an ideal state would criticize everything a son did. So the father-voice now attacks most every one of Robert's motions or verbalizations. His survival instinct—to put it simply—forces Robert to believe his father wouldn't criticize a son's eating of the barest essentials—but sometimes the boy does nearly starve to death. Sometimes, though very infrequently, as when he is waking, he'll speak words that express his omnipresent fear of his omnipotent and seemingly omnisagacious father."

Ears numb, Professor Stapleton muttered, "Dear God."

"So," Petrocelle concluded, his voice bursting from its monotone, "I want you, Stapleton, to get father and son together. Have a man to man talk with father and son. Okay?"

**R**OBERT blinked and shifted on the bed. His tailbone was feeling all tingly numb and he shifted again, then looked at his hands slowly. His temples were adorned with disc-like attachments.

"Oh, I want to bite my fingernail. Bite it with my teeth until it comes off like a crescent moon. But, oh, I know I shouldn't, so I'll be good and think of other things. The sun is nice through the window. But it makes my nose itch and I want to scratch it."

*Bob, my son, scratching your nose is crass. It's bad manners. You could infect your nose, get it all red and puffy and look all diseased, too. You wouldn't want that would you? If you scratch your nose, you'll look like some urchin that hasn't had any up-bringing, so—*

**BOBBY! ROBERT! BOB!**

"What is that? Someone calling me. And it's not Dad."

*If someone's calling you, Bobby, don't listen! Don't just listen to any voice you hear. You can't always believe everything you hear. Listen to your father. Don't—*

**BOBBY! BOBBY'S FATHER! BOBBY AND BOBBY'S DAD, YOU SHOULD NOT BE QUARRELING.**

A new voice was telling him things.

*Don't listen to the voice!*

**YOU ARE YOUR FATHER'S SON, BOBBY. YOU ARE OF THE SAME**

**BLOOD. YOUR FATHER LOVES YOU, EVEN WHEN HE HITS YOU. BUT HE WON'T HIT YOU ANY MORE OR SCREAM AT YOU ANY MORE, WILL YOU, BOBBY'S FATHER? YOU ARE FATHER AND SON AND MUST ACT AND THINK IT. YOU MUST DO WHAT YOU WANT TO DO, BOBBY—YOUR FATHER REALLY WANTS YOU TO DO WHAT YOU WANT. YOU ARE HIS SON, HE IS YOUR FATHER. YOURS IS THE GREATEST RELATIONSHIP IN THE WORLD—YOU MUST WORK TOGETHER, GET THINGS DONE TOGETHER.**

"Should I answer the voice? I think I'll answer the voice."

*"No! The voice is of evil.*

*"Why is the voice evil?"*

**I'M NOT A VOICE OF EVIL. I AM THE VOICE OF GOOD, THE SPIRIT OF GOODNESS OF FATHER AND SON.**

"So the voice is good, Dad?"

*I don't know, Bob. The voice could be good or bad.*

"Should I move from the bed to open the window to let cool air in while I listen to the new voice, which told me to do as I want?"

**YES, OPEN THE WINDOW, BOB. YOUR FATHER WANTS YOU TO OPEN THE WINDOW, TO DO WHATEVER YOU WANT. YOU ARE STRONG AND A GOOD BOY, AND YOU HAVE A GREAT POWER TO HELP PEOPLE AND MAKE YOURSELF HAPPY BY DOING WHAT YOU WANT. OPEN THE WINDOW, IF YOU WANT TO.**

"Should I open the window?"



DO WHAT YOU WANT, BOBBY.

*Yes, I guess you should do just exactly what you want to do, Bobby.*

**D**R. PETROCELLE was excited. "Stapleton, did you see the way he finally decided to open that window? The crash of that window was a sound for sore ears. And he didn't even touch it. He just sat on his bed and finally let go of his will to open that window, so hard that it actually slammed open. What FA!"

"Yes, I saw it and heard it, too." Stapleton was uncomfortable in the presence of the doctor's enthusiasm. He also felt guilty. "I'm glad we got out of his mind, though. A boy, just like a man, has a right to certain privacy of mind."

"Certainly, certainly. Robert will be working for us now." Suddenly Petrocelle's enthusiasm waned slightly and he said, "I do wish you had said something to him about working for the nation, using his power for his country."

"I told him he had the power to help others."

"Yes, I know, but you should have said something about the nation. Well, anyway, he's patriotic—his father was very patriotic. Robert's been talking to everyone all morning—all the orderlies and doctors—so we'll be able to make our point about his country easily enough."

**R**OBERT smiled, said "hello" loudly to himself and stretched, keeping eyes proudly on the window. The sheets felt cool and he stroked them hard for the first time ever.

"Oh, that window went up with quite a noise, didn't it?"

*Yes, Bob, it did.*

"The voice was right. I've got quite a power now."

*Yes, a good power, Bob.*

"I wish, dear Dad, that I knew what the voice came for, where it came from, what it was. It was like a ghost—far-away sounding. But it made sense. Father and son. I love you, Dad, like a son should love his father."

*And I love you too, son. The ghost voice was good to come and talk and be with us—to make us understand what we should do, what you should do with your power. Whatever you want to do, isn't that right, Bob?*

*Whatever you want, right?*

"Of course. I just wish I knew where the voice came from, what it was. I liked the voice. I'd like it to come back, you know."

*I'd like it to come back too, Bob. We both want it to come back and be with us. It made us feel good, didn't it, Bob?*

"Yes, it sure did. Maybe if we listened hard we could hear it again. Can you hear it?"

*I don't know.*

*"I think I can hear it, barely."*

*I think I can hear it. We both*

*love it and we want it to come back. I think I can hear it.*

*"We can hear it."*

*Yes, I think we can hear it.*

CAN YOU HEAR ME? I'VE COME BACK TO BE WITH YOU. THE THREE OF US NOW. CAN YOU HEAR ME?

"Yes, we can hear you. But who are you, why are you here?"

*"Yes, why are you here?"*

LET ME THINK. I AM HERE. WHO AM I? WHY AM I HERE? LET ME THINK.

"I will think about you, too."

*Both of us, father and son, will think about you and why you're here and who you are.*

ALL THREE OF US WILL THINK ABOUT ME—ME, THE GHOST VOICE, THE GOOD VOICE THAT COMES TO FATHER AND SON AND SHOWS THE SON HE HAS A GREAT POWER TO HELP PEOPLE. LET US THINK.

AS SOON as Stapleton and Petrocelle left Robert's room, the boy shut the door and began staring through the window at the sky. Four steps from the door outside, Petrocelle stopped the professor.

He asked, "What was he talking about? The ghost voice is back? I didn't even get a chance to talk to him about it—he just kept talking so damn cryptically about the ghost voice."

Stapleton was angry. "He has imagined the teaching machine's

voice—my voice—has returned. We have compounded now his schizophrenia. He has three voices in his head now."

"Calm down. Nothing at all is wrong." Petrocelle looked him in the eye. "He has the power and nothing is going to change that, because he's happy now—he's found an out, a way out of his frustration and misery from the critical father-voice. And he likes his FA power. The father-voice is all for that power now, too. The ghost voice he's imagined won't harm him. Now all we've got to do is talk to him about working for the defense of this nation."

"Can't we just leave him alone with himself—with his new selves—for awhile. He looks so damn tired. He's gone through a great change."

"We'll give him a night by himself and talk to him in the morning. Government dragons will be breathing down my neck if I don't get Robert moving on something productive soon. Ah, when they see him open windows as he can, kill flies as he can—"

Petrocelle was ecstatic. Stapleton mumbled.

HOSPITAL nurses, guards, local police and, without a doubt, CIA, FBI and other representatives were scurrying around the hospital. It took Stapleton thirty minutes to find Dr. Petrocelle.

The doctor was leaning over a desk telephone in the main hospital office, his face a dirty-sheet color and his eyes twitching with dark thoughts.

"Robert's gone," Petrocelle said, the words slipping from limp lips.

Stapleton sighed, shrugging his shoulders. "What did you expect? He was a boy on the move."

"We didn't even get to talk about the nation and the country's defense plans for the next ten years. His power was to be the main focus."

"He's a boy and he's just discovered a kind father and a new voice inside his head. Did you really think he'd stay inside the hospital when there's a whole world outside he can voyage through—and when there's his power, a great big toy he can play with?"

"Good Lord, Stapleton—he's a patriotic boy, isn't he? He wouldn't harm his own country, would he? His power is so great—"

"No, I don't think he'll hurt us. Tom Sawyer pranks at worst. Not unless you tried to stop him from going where he wants to. I'll think he'll be back soon. Even back to this place. You can talk with him then about the nation's defense. He's not going to wreck anything—don't worry. At least you can be confident he won't go over to the other side." Staple-

ton allowed a little sarcasm to show. "His fine religious and patriotic upbringing—or should I say conditioning—has made sure of that."

The professor left the doctor and returned to his teaching machine, which was crated and ready for the move back to the university. He was smiling and chuckling—for fear of crying.

LIKE the yellow eye of a cyclops, the sun blinked overhead and Robert continued walking peacefully along the path.

"I am the Son and I have the power to help people. There are six billion people on this earth and all of them have hurts in six billion different ways. I am the Son, with power. I have the power of good and I discovered who the ghost-voice is."

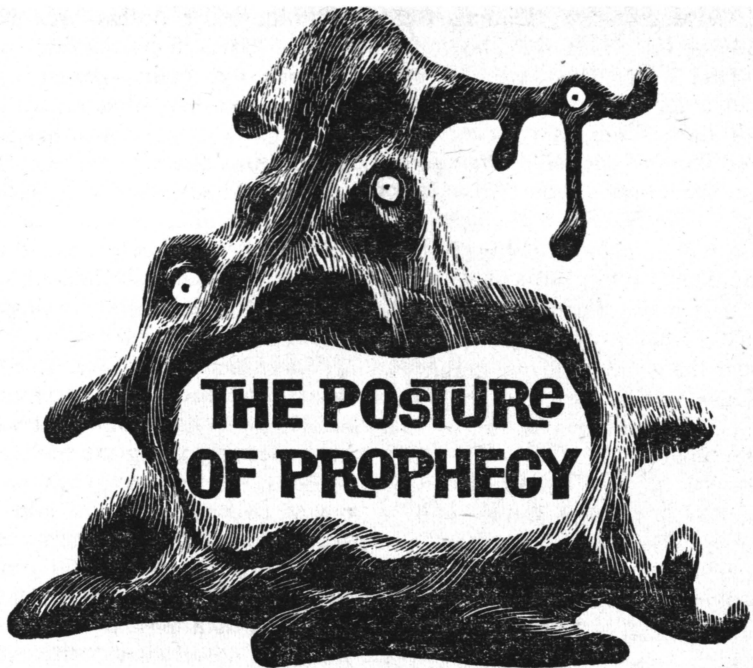
*And you discovered who you really are, Son. We know now who the ghost-voice is and who I am.*

AND YOU, FATHER OF THE SON, DISCOVERED WHO YOU REALLY ARE. I AM THE GHOST AND WE ARE ONE AND THE SON HAS THE POWER. WE HOLY THREE.

"I am moving and I am not going to stop moving until I can hear not just two but six billion voices. Until those six billion on this earth can hear my three voices."

*Our three voices.*

OUR THREE VOICES



CHELSEA QUINN YARBRO

Every birth helps to define  
the shape of things to come!

“OH, NEGATIVE, negative, negative, Qyi Nine-eight-five.” Jfaa 296 extruded the quarter-inch pseudopod of Admonition along the frozen ground. “Why, it is quite impossible. How could there be life there? How could it survive?”

Qyi 985 drew himself from his flat Security to an Indignant six

inches. “They may have evolved differently. They could be a different life form altogether.”

In the posture of Amused Tolerance: “How many life forms can there be? It has been proven sufficiently that our present form and mass are the optimum in adaptability and convenience as well as efficiency. We can alter

our shape at will, adapting to all conditions."

"This is very true."

"Even in this best of all possible forms," Jfaa 296 hurried on as he noticed Qyi 985 taking on the crenelations of the Adversary form, "how could we expect to live under the conditions of Thwth? The sky burns daily and twice as long. Being so close to the Primary, there are sharp differences from the light to full shadow. The constant change from true brightness to the dark contrast would be dizzying. And, affirmative, maddening. And, as if the heat of the day were not enough, if some poor life form got caught in the shadow—which is twice as long as ours—the drop of temperature would probably kill him on the spot."

"Perhaps they migrate to keep in the light. After all, the planet is smaller than Xhamllitt."

"That does not signify. The mass is different."

"All right. But certainly they have evolved in another form."

"Qyi Nine-eight-five, please negate that posture of Challenge. What other form could possibly survive? They would have to be formless such as we. They would require three sexes. And we have the advantage of a planet that revolves at a civilized pace so that we are never long without light. And we are at a respectable distance from the Primary."

"In our studies there has been some debate about bodies with some type of framework."

"Framework?" Incredulity.

"Tpri Seven-seven-one has suggested the possibility."

"Ah." A twist of Recognition.

"Tpri Seven-seven-one is the only Colleague who is doing creative and important thinking today. All the others are lost in a tangle of academics."

At this, Jfaa 296 extruded a second pseudopod and pulled himself to the full extent of Righteous Indignation.

"And how could such a— a monster move? How would he keep his body from being crushed? Negative. That is the most ridiculous part of this life-on-Thwth nonsense."

"Then how do you explain the signals that have been picked up here?"

"There must be many strange effects from radiation so close to the Primary. I think we can safely dismiss those as random atmospheric conditions."

"But there was pattern and repetition to them."

"There is pattern in your mass fluctuation. There is repetition in the paths of our moons. There is regularity in our orbit."

"It's just that—" Qyi 985 began to slide into Confusion. "It sounded so reasonable the way Tpri Seven-seven-one explained it."

“Naturally,” Jfaa 296 went on, gathering himself into Maximum Paternal. “Tpri Seven-seven-one is a genius. But even genius can err. I commend his gift. I applaud his creative thinking. However, I leave it to those of us who have been instructed in the ways of logic to evaluate the worth of his work.”

“How?”

Jfaa 296 assumed a pose of Confidence. “We are better prepared. Ours is not the privilege of genius but the responsibility of knowledge.”

“And you are convinced it is not possible?”

“How can it be? Let us assume the pragmatic approach. The planet Thwth is only three from the Primary—far too close for survival. The atmosphere is a poisonous mass of nitrogen and oxygen with several other trace gases. It has vast seas of liquid ice formed of an oxygen-hydrogen compound and ambient vapors of this are always evident. Any natives would either boil or drown.”

Qyi 985 was reluctant to concede the point.

“Must they?”

“Then consider the satellite. They’ve just the one—and that is so large that it must pull the seas around so violently that there are daily floods everywhere.”

Qyi 985 Acquiesced.

“Or take the radiation. I shud-

der at the amount any poor inhabitant of Thwth would have to contend with. Why, under such bombardment there might be a dozen different species on the planet, assuming for the moment that life could exist at all. Think of the confusion that would cause. Imagine the problems in ecology. If you find just one other life form difficult to postulate—then what do you propose for the variety that would necessarily be part of that postulate?”

“I’ll admit I hadn’t considered that.”

“There could be as many as twenty sub-species. Nature is an orderly process as is demonstrated time and time again. There is a reason for all things. How could you find reason in the chaos that twenty different—different, Qyi Nine-eight-five—species would cause?”

Jfaa 296 propelled himself forward in Emphasis.

“Negative reaction. I am without defense.”

And Qyi 985 flowed into Defeat.

“There, there. You have been given the chance to understand and have done beautifully. But such an idea, when you look at it in the cool light of reason, defies that reason. It is disciplined minds, such as mine and yours, that will turn genius such as Tpri Seven-seven-one’s into the solid fact our science demands.”

"Should I denounce him, do you think?"

"Negative. Of course not. Why, if it weren't for him you would never have given a moment's thought to the possibility of extra-Xhamllitt life."

"True enough," said Qyi 985, looking a trifle Recovered.

"You see, you have learned from this experience. There's no point in behaving like Pgf d Three-twenty and his lot. They have been insisting that Tpri Seven-seven-one be banned from teaching because he has caused so much upset among the young."

"Well," Qyi 985 allowed, "there has been a little trouble."

"But that unrest has turned many of you to deeper study than my generation has ever attempted."

In the posture of Embarrassed Acceptance of Praise, Qyi 985 asked cautiously, "Do you think Pgf d Three-twenty will succeed?"

"I doubt it." Jfaa 296 assumed Contemplation and Wisdom. "As long as I am in charge of teaching the young on this planet nothing can go wrong."

Qyi 985 adjusted his ocular stalks and gazed rapturously at the horizon.

"Even from an esthetic point of view, how could they live without the beauty of our rings? Think how dull their sky must be with just the one moon. Even if anything could live there, it

would have to be a dull, soulless thing. Obviously nothing there could have intelligence. Or art."

"Now you're thinking. You are intelligently considering things that Tpri Seven-seven-one has overlooked in his enthusiasm."

"Yet you must admit that his speculations are interesting."

Jfaa 296 jerked happily into Indulgent Humor, continuing, "They're absolutely fascinating. But such ideas belong to that cult of Xhamllii who espouse the idea of interplanetary travel."

"I confess," Qyi 985 admitted cautiously, "that I have read some of their scrivings. Not recently," he amended hastily.

"Ah, well, we all did in our youth, I suppose. Even I did. The scrivings were not nearly so sophisticated then but, still and all, delightful entertainment for the immature mind."

Jfaa 296 adjusted his body to allow the forming of a small Dent of Nostalgia. Qyi 985 adjusted himself to Acknowledgment.

"They probably prompted me to consider a scientific career. They certainly increased my curiosity."

"Uhm?" the older Jfaa 296 rumbled. "For that matter, those foolish scrivings got me started."

"But I'm beginning to realize how impossible it all is."

"That, my dear Qyi Nine-eight-five, is the trouble with growing up."

They rubbed Nostalgia Dents and hummed in the Companionship that a commonly mispent youth imparts.

**I**T IS perhaps unfortunate that, just at the time of Jfaa 296's logical triumph, Earth launched its first manned Saturn probe which would make Jfaa 296 eat his words—even if he had to form teeth to do it.

The day was a glorious one for Earth. The thirty-month probe was the first joint United States-Soviet Union project. The ship was crewed by one person from each of the two participating countries.

As they passed beyond Mars, the captain, a thirty-three-year-old Marine test pilot from Boulder, Colorado, turned to his navigator-crew, a stunning brunette from Kazan with a command of English only slightly less dazzling than her smile.

"You're what?" he asked.

"I'm pregnant."

"Are you sure?"

She nodded triumphantly.

"So much for those fusty old men back on Earth who said it couldn't be done. We've been in space for three months and I'm going to have a baby."

Quite a bit later, extracting themselves from a complicated free-fall embrace, he asked her what—according to her feminine

intuition—she thought the baby was going to be.

"Oh, I don't care," she said, turning lazily in his arms, "so long as it's healthy."

As far as it went she was to get her wish. But *it* was perhaps an unluckily accurate word. Just two months out from Earth when *it* was little more than a few dividing cells, a random submicroscopic particle that was blundering through the mother's body had subtly altered the order of *its* incipient skeletal structure. Fortunately the radiation bombarding the ship's fragile hull had played havoc with her blood or she would never have been able to nurse *it*.

Even Qyi 985 would have been Outraged with the proud father's comment a few months later as he admired his wife's swollen abdomen.

"There's no life on Saturn now but we're sure as hell gonna start some."

His tone would have been considerably more apprehensive if he could have foreseen the quasi-tentacled, twenty-pound mass of amorphous flesh he was to cut from her dying body as they crossed Jupiter's orbit.

For Jfaa 296 was correct about Thwthian life in one particular. Unprotected from radiation by Earth's atmosphere, unhampered by gravity, the child—or whatever *it* was in her womb—lived.

And grew. ●





# ROBOT 678

E. CLAYTON McCARTY

**Both the man and the robot were old—and getting hard to take!**

**R**OBOT 678 had become a bit creaky about the joints during his long service with old Moondust Curtis. You could hear Six-seven-eight when he started from the kitchen. You could tell when he crossed the patio and detoured by the swimming pool. You knew exactly when he stepped on the carpeting of the hall.

No matter where you stood in the Big House you could follow his progress. The right knee joint emitted a distinctive creak. The left knee joint countered with a nerve-scraping screech pitched at about twelve thousand cycles. The elbow joints made a two-tone harmony as they swung, the left a diminished third based upon a

slightly off-tune middle C, the right an augmented third based upon A-flat below middle C. Syllabicated, they produced a sort of rhythmic *hoowah-hoowoh, hoowah-hoowoh* in the tempo of human arms swinging back and forth in contra-motion to the walking feet. As he approached, you also became aware of a constant low-key whirr of machinery deep within his chest—an uneven pulsating drone containing two alternating notes sounding like *brewer-rumph, brewer-rumph*.

Old Man Curtis called him Cappy. In a dog-eared, Martian-humming-fly-bespeckled, real Venusian-dreamer-juice-stained Catalogue, one that Moondust kept around somewhere in the Big House, Cappy was listed as R (for robot) 678.

Included in the programming of his memory circuits was the manufacturer's own sneaky little scheme. If, by some chance, you asked Cappy what you should call him, Cappy was triggered to answer, "I am Robot General Utility Servant, model R-Six-Seven-Eight. A duplicate of me may be purchased from any agency of Happy Home Helpers, Incorporated, a licensed aitch-aitch-aitch representative on every inhabited world—or contact by space beam, code: Happy, Earthside twenty-dash-bee-two-six-dash-ten-four."

Robot 678 could not state that

this commercial was no longer valid. Happy Home Helpers, Inc., had allowed itself to stagnate during the forty years of his existence and had finally succumbed to younger and more competitive producers of servants whose soft, cosmetically perfect skin glowed with the pink of health and with a warm mockery of human life—and whose voices were capable of quarter-tone modulations in a range of three octaves. That information, obviously, was not in his circuits. So do men and machines lose touch with accelerating streams of evolution after they are tossed willy-nilly into its eddies.

The catalogue had smelled of fresh printer's ink when Robot 678 came to live with Moondust. From its pages, gleaming with virginal purity, not yet stained by Venusian dreamer juice nor speckled with excreta of the Martian humming fly, Moondust and his young Earthside bride had chosen R678 during the first year of their marriage, in the first month after Moon's promotion to Assistant Administrator of Luna and after becoming certain that she would present her husband with an heir.

An optimistic joy surrounded R678 until a husky son was born—who, in his journey from womb to world, killed his mother, thereby severing the zest for living from his father.

The baby was then shipped Earthside to the care of an aunt. Young Curtis stepped out of his promising career to wall off grief in a forty-year search for that fabled end of the rainbow, with R678 faithfully clumping along. Moondust prowled the interlands of Luna like any of the swarm of other dust rats, hunting for the big strike each of them hoped to find. But unlike most of the moonbusters, perhaps because he did not care, Moon found his Eldorado—several of them—first on Luna and then, as those planets opened up, on Mars and Venus. And finally in a deposit of strangely glowing jewels out in the asteroid belt—which made his fortune one of the fabulous treasure accumulations of all time.

For forty years R678 prowled the silences at the expanding edges of man's domain in space, faithfully following his master. There were interludes during which Moondust would walk into some frontier saloon and sit morosely at a table with bottle and glass. Labels on the bottles changed through decades but their contents produced similar results. Robot 678 stood unmoving behind Moon's chair. When the final glass tipped and spilled under fumbling fingers he picked up his comatose master and carried him to whatever lodgings had been engaged. There he stood quietly at Moondust's bedside

through the remainder of the night. And when the alcoholic sleep broke, he massaged his man and injected him with restoratives.

Then inevitably Moondust would say, "Cappy, I'm getting mighty restless again. Let's you and me take out."

The whirr within Cappy's breast would become more pronounced as the proper response was searched from his memory banks. A couple of seconds later Cappy would answer, "As you wish, sir." And within hours they would be off into space, following the beckoning phantoms of a galaxy's buried treasure.

Some time in their forty-first year, Moondust was out on a large asteroid, setting a small fission device to blast his way into some rock that looked promising. There was a premature explosion. It blew him clear but both his legs were mangled. Cappy applied bandages from remembered instructions stored during similar but less critical accidents. He then picked up his master in metalloy arms and strode off over the restricted horizon to their ship.

By a miracle they made it through the vast darkneses between the stars to Marsport, where the major space hospital was located. But both of Moon's legs had to come off.

That was when grafting of limbs was still a rather uncertain surgical problem and the doctors

considered Curtis too old to take the risk. Of course there would be a set of clever artificial legs for him but Moondust saw the face of the coin chance had tossed—no more long lonely jaunts to the outer reaches, no more adventure-filled hours to keep a lid over grieving memories of his sweet young bride, memories as pain-filled as that hour when the birth cry of an arriving heir and the death cry of his mother had stirred the sterile hospital air simultaneously.

When news of his double amputation was chunked at him Moondust—still drunk from anesthetic—mumbled, “Hear that, Cappy? I’m going to be a dad-blasted split-Venusian shummox-shucking invalid. You’re fixing to have to tote me around like a baby. Can those old scrap metal bones of yours take it? Or do I have you carted to the dump and buy some beautied-up imitation of a busty blonde amazon to do the job?”

Speaking above the rising volume of noises in Cappy’s chest, the surgeon said heartily, “It is not as bad as that, Mr. Curtis. Prosthetics are almost as flexible as their human counterparts nowadays. You’ll walk with hardly a limp.”

“Peglegs,” snorted Moondust.

By this time R678 had found what seemed an appropriate answer to Moon’s question. His

speaker sizzled and his reply came in the statement form of the two inflections which had been built into his vocal mechanism. “I shall require more data to understand imitation of a busty blonde amazon, sir, before I can reach a conclusive answer.”

Moon snapped, “Oh, go lay an egg, you pile of junk tin.”

Cappy answered, “I have not been programmed for that particular operation.”

Moon shouted, “Don’t you answer me back, you iron-headed goony bird!”

And the doctor said, “Pshaw now, Mister Curtis, don’t let a little thing like those legs upset you. You’ll hardly feel them.”

“You bet your life I won’t,” Moon snorted. “There won’t be any nerves or flesh or blood in the damned things.”

However, Moondust wobbled out of the hospital after a convalescence remarkably short, his mind in the dark blue area of the soul’s spectrum. He moaned peevishly, “I can’t get the hang of these crazy metalloy legs, Cappy. They aren’t going to carry me over anything rougher than a plasticon walkway. I’m nothing but a half-man now.”

The nearest appropriate answer Cappy could find in his memory systems was, “That is undoubtedly true, sir.”

And Moondust squalled, “You don’t have to rub it in, you pea-

brained assembly-line welded conglomeration—”

Moon tacked to port and headed for the joy district, grimly determined to drown himself in Venusian dreamer juice. R678 clumped along beside him, making the evening air melodious with his *eek-hoowah-hoowoh brewer-rumph, yiku hoowah-hoowoh brewer-rumph*—sweet harmonies of his joints and his continuing life processes.

But Moondust discovered that dreamer juice would neither kill him nor hold back memory demons, no matter how protracted the binge. He came to that point where he could not think of the stuff without gagging.

Then, after he had spent an hour staring through liquor-fuzzed eyes at a full glass, trying to coax inner reflexes out of their determination to eject the bubbling blood-colored liquid the moment it reached them, he growled, “Blast your dod-rotted selenium soul, Cappy. Why don’t you stop me from making an ass of myself?”

Through the familiar prelude of all the whirring *brewer-rumph* and crackling speaker Cappy quickly answered, “You have set a problem which is impossible for me to solve, sir.”

He picked up the wilting Moondust and walked out of the joy joint.

IT WAS an old prospecting partner and friend, Jim Stanton—now a government commissioner of something or other in the Department of Planetary Expansion—who had a remedy. The visiphone in Moondust’s lodgings chimed and Jim’s homely face came up on the screen.

“I’ve been off planet and only just now heard about the accident. How’s the invalid?”

“Sick,” Moondust moaned. “There’s no prospecting left for me. I’m just a piece of a man, a planet-bound jail bird. I’m headed for the crazy house.”

“Want a job to keep your mind off your troubles?” Jim asked.

Moon shouted, “I couldn’t stomach being a fancy-pants diddling around an office.”

“Well, let me think about it anyway, you old dust rat,” Stanton shot back at him. “And in the meantime be careful not to bite yourself and die of hydrophobia.”

And before Saturday noon (Earthside Greenwich), Commissioner Jim Stanton had his old friend and the faithful 678 on a government star cruiser, headed out of the solar system. Moon had been invested with the title of Administrator, member of the sparse band of governors of Earth’s expanded frontiers.

The planet entrusted to Moondust was almost literally at the end of time—a humid world, fresh

from an era when the shallow seas completely covering its surface had once been shoved cataclysmically into more confined beds by new mountain ranges and young continents. The cruiser plunked Administrator Curtis and R678 down on the only explored area. It was a triangular patch of fifty thousand or so square miles, fenced on its north by a two-hundred-mile lava dike which still steamed, and on each side by two huge rivers that rolled along, mightier than Earth's Mississippi, toward a restless plankton-cluttered ocean.

It was a beautiful spot if you liked the swamps and bayous of Louisiana, the moss-covered oaks of Mississippi and East Texas and the chiggers and moccasins and alligators of the whole Deep South, Earthside.

Newly appointed Administrator Curtis looked at the land he would govern, sucked in heavy pollen-scented air, and crooned to his faithful servant, "Cappy, we're home. I could just shut my eyes and imagine I was a little shaver waiting for my papy and mammy to come back from New Orleans, driving their spanking pair of matched blacks proud and happy and Old Uncle Tom setting in the back of the surrey, grinning like a slice of brown watermelon with white seeds. Cappy, just smell this air. I'm almost expecting to hear a steamboat whistling around the river bend any minute.

And listen to all the little bugs scritchng in the woods."

R678 whirred a moment, then answered, "The olfactory impressions cannot be recorded. I shall keep a sensor trained upon the river bend. I am attempting to classify and record all vibration patterns of the scritchng bugs, sir."

Administrator Curtis tore into his new job with all the excitement of a kid with a handful of lightning bugs. The work was not monumetal in its demands. Planet Sol Type Series XX-201, Sector 711, was in a sense being kept on ice against the time when the fecundity of man should require its broad living room. Exploration and development of its unknown lands could proceed at a leisurely pace, in fact was not proceeding at all during the present decade, and Moondust there had no E. and D. men around underfoot to bother him.

It was a toss-up whether the native inhabitants of the explored area should be classified as pre-stone age or post-ape age. They had to be handled like a band of educated chimps in a space lab. They possessed a language which seemed as substantial as swamp shine, consisting of clicks, grunts, growls and gurgles, accompanied by elaborate charades and posturings and an ever-present grin.

The key to their communication

had not yet been deciphered but there was a faded female with thick glasses and a Bryn Mawr air who spent her days among them with recorders and psychological gadgets, trying to break the code. Moondust found that she was quartered in Administration House, as was the balance of his staff, which consisted of a nervous, allergy-afflicted clerk of male persuasion and a Venusian cook who was neither, or both or either, whichever way you looked at the problem and whatever phase of the life cycle was uppermost. These formed the total non-native population of XX-201.

Patchy surveys had shown the huge unexplored areas of XX-201 to contain another type of primitive dweller, designated by some E. and D. man on the discovery crew as a Noddy. Nothing was known about the race, except that its members seemed to be able to change their shapes—revised thus from conclusions of the first contacts which had noted a dozen different species. The Noddies smelled like skunk cabbages after a rain.

This facility for changing shape was discovered by the only investigator in E. and D. to return alive from its second expedition across the big rivers. Later, other vaguely noted characteristics, not too clearly substantiated, filtered into the lore surrounding this sel-

dom-seen unique species. Members evidently mated as some Earth animals did. As her labor time approached, the female ate her mate. Each female ran to the hilltops at rutting season and howled until a band of males answered. The strongest and fastest got her. On moonlit nights, inhabitants of the explored triangle could hear packs of young studs in screaming pursuit of females in heat. And when the chase circled to the river bank, a more grisly sound sometimes lifted above the banshee howls—the slurp of tribal jaws signifying that one of the pursuers had injured himself and was being devoured by his comrades. The species was listed as dangerous.

Fortunately, for some reason as yet undiscovered, Noddies could not seem to cross water, a trait which probably saved the little settlement between XX-201's big rivers, for no means had yet been found to kill them. The one surviving E. and D. member of that second expedition had written in his notes that both laser and explosive projectiles just passed through a Noddy—any portion of its body that was struck simply dissolved around the penetrating force and flowed with the balance of the creature's bulk into some new form. His was the only authentic account. No one else who might have gotten close enough to a Noddy to testify to

this report had ever returned from across the river.

The tame natives in Moondust's little triangular province, two small tribes, performed as laborers for the settlement, mechanically and zestfully, like trained dogs in a circus. You blew a horn at sunrise and they sprinted from their grass and mud huts and raced for the corkroll fields. There they followed the same pattern day after day, tirelessly, with all the verve of a blind mule plodding a circle around a sugar cane grinder back in the Old South, Earthside, circa eighteen hundred something—cultivating corkroll, which actually rather resembled Earthside cane, except that its sap was dried and powdered and shipped to Earth pharmaceutical companies to form the basic ingredient of a miracle drug which had added almost a hundred years to man's life.

And the natives' quick fingers and steadily chomping jaws were much more effective than any insecticide that could be devised for the tender corkroll plants.

At sundown you blew the horn once more and they scattered, like chickens running from a hawk, into the woods to hunt swamp fleas and crack them to suck out their juices, or to paddle down under the black bayou waters, scrounging for frogs and snails and snakes to pop into their mouths. Nobody from Cultural

Affairs Department, Earthside, had yet been able to interest them in setting a formal table.

These far from arduous duties thus left Administrator Curtis with plenty of time to stroll out to the hickory grove that shaded the hog hollow—except that the hickories were scaly-barked Bronta trees bearing iron-hard seeds in a chestnut type burr which at ripening time squirted them out with the range and velocity of shotgun pellets. And the hogs were non-existent—the place merely bore a resemblance to the old home hollow. Moondust strolled there or sat upon the dewy grass in perpetual June-time weather and floated back on memory's drift.

R678 stood patiently behind Moondust, recording in his memory circuits every word the old man spoke and every sniff he took of the balmy air, offering a shoulder to support him when moist midday heat drove him indoors. Cappy fanned him through the steaming afternoon, woke him from his nap when the hour came to blow the horn and send native plantation hands scampering off on their frenetic food hunt. It was like putting raw whiskey away in charred oak barrels. Moondust mellowed.

**T**HE mellowing first assumed the form of an attempt to duplicate his by now exaggerated memories of the old plantation.



He took 678 out where a long grassy slope tilted toward the river and said, "Cappy, pry into this blasted thick skull of mine and get a clear picture of just what I've been dreaming about. Then design me a real honest-to-goodness Louisiana plantation house that'll fit right on top of that knob."

The robot replied, "As you wish, sir." It adjusted sensors to make contact with the master's head.

Moondust said, "Now I'll just sit down right here and fix my eyeballs on the river and I'll say to myself 'Good old Mississippi.' I'll start thinking about that house so hard you won't have any trouble catching just what I want. And mind you, Cappy, don't make one little smidgin of that house any different from the way I'm seeing it in my mind or I'll build a bonfire and melt you down to a cinder. I want me a real old mansion."

"As you wish, sir," answered 678.

And silence settled while Moondust concentrated and Cappy recorded brain waves—silence except for the *brewer-rumph* in Cappy's chest and the chittering of a million insects and the ululation of a Screaming Slug Eater and the moaning of several macaw-like flying things, the sizzling of swamp worms, plash of river and whisper of breezes.

Construction presented no problem. Moon's limitless fortune brought space freighter, contractors, architects and an army of robot artisans to XX-201. The problems arose from a temperamental melee which blew up between the highly paid architects and Administrator Curtis over his insistence that 678's plans be executed down to their last detail, exactly as drawn.

Violent tantrums got the architects nowhere, nor did derision. There was no way for them to ease their ulcers by walking off the job. When you're stuck on a distant planet, you're stuck. So a rambunctious compromise resulted after 678, on command, had brought them all tenderly, two at a time, one under each arm, and set them gently in a row of chairs facing Moon. So the mansion took form.

It had the wide wind-swept porches and tall white columns, the gracious entrance hall and sweeping staircase of ante-bellum plantation showplaces. But sentimental remembrances of one's childhood are apt to become confused with more recent impressions over a half-century span. Beyond the great stairway came Moorish arches, Byzantine incrustations, Japanese prayer lanterns, Chinese pagoda, Spanish patio, moon-base dome and a Hollywood swimming pool, all tied together.

Then the space freighter lifted, taking with it the artisans and architects, leaving behind to keep Administrator Curtis company only the female Bryn Mawr type, the male allergic clerk and the uncommitted Venusian cook.

The next phase of mellowing in the charred wood of the barrel settled upon Moondust. He rubbed his hands together, snapped his fingers and said, "By Gadfry, Cappy, we're alone again."

R678's circuits buzzed a bit.

He eventually replied, "The definition of alone must be altered, sir, or some other descriptive symbol used."

"Now just you don't bother your tin head about that, Cappy. What I'm after is for you to tote me a rocking chair out on this veranda and fetch me a big tall cold julep."

R678's speaker rumbled, "As you wish, sir."

And he went *Eek hoowah-hoowoh brewer-rumph, yiku hoowah-hoowoh brewer-rumph* to the kitchen.

Administrator Curtis found that only a smidgin of imagination was required to transport him back to the old home place to rock on a shady porch of the Big House, with scented breezes stirring stray locks of white hair and a julep ever waiting at his elbow.

Although the imitation skin of 678 was not black, its texture and hue of weathered chamois did

fit the picture to some degree. And the robot could mix a julep worthy of its prototypes, with ingredients much more exotic than its ancestors, including a sprig of plueil, which was not only more tangy than mint but left one in a heavenly state of euphoria.

The cicadas and lightning bugs were missing and the coughing snort of XX-201's swamp lizards bore no real resemblance to that full-throated roar of the good old green bullfrog giants of Mississippi's river bottoms. And no haunting harmonies drifted from cabins of the field hands. But heavy flower-scented air drifted thickly after sundown and one could dream quite effectively with eyes closed, so that the thick, three-foot fronds of Bronta trees did not destroy images of oaks and magnolias hanging over oleanders and calycanthus—that is, unless a flock of rock chickens happened to be foraging in the area. Their nasty chuckles and cat-calls, as well as a certain post-digestive habit, could destroy any reverie.

Then Moondust went through another mellowing stage.

One twilight redolently damp with dew upon the meadow and a scent of mud grass heavier than a dowager's cosmetics and the rock chicken flocks far enough away so that their lewd noises could be ignored, Old Man Curtis suddenly said, "Cappy, I've got a son somewhere in this far-flung

gaggle of stars and I bet he's feeling plumb low because his pappy never did right by him. We're just fixing to find that little boy and make up to him for racing around this here galaxy petting up our own sorry feelings and letting him get spoiled by some female relation. Go get me Henry Rutenhauser."

R678 *EEK-YIKUED* over to Administration House to fetch the allergic clerk. So Henry, under instructions, poured a bucketful of Moondust's wealth into the pockets of a detective agency. The dicks were efficient. They found the son's grave, the son's widow and his twins, a boy and a girl.

"That's no more than I deserve for neglecting the poor boy," Moon moaned to the clerk. And to the robot he said, "If you ever get any kids, Cappy, don't you be a dod-swizzled fool like me and let them get away from you."

Through a slightly uneven *brewer-rumph* Cappy stated, "The R Six-seven-eight model was not designed with the ability to reproduce, sir."

"Don't tell me things I already know, you dag-nabbed rusty junk pile," growled his master. "I was talking to myself. Reckon the best way to make it up to my poor dead boy is to bring his pretty young widow and his two babies here to live with me." He turned to the clerk. "Henry, you get busy on that little old thing."

It would have done no good to remind Moondust then that inexorable time had probably helped the young widow to skate toward forty and that the twins must be babies of at least nine summers. In his mellow role of plantation colonel, with a rosy filter censoring any rays that might have played white light over his imaginative excursions, Moon was destined to wait and receive such news with shock when a starship's shuttle dropped the little family off on XX-201.

The widow turned out to be a pale-eyed blonde instead of Moondust's romanticized picture of a small dark-haired beauty scarcely out of her teens, whose brown eyes glowed with warm sentiment—his own portrait unconsciously influenced by age-misted memories of the only other woman in his life. But Moon could adjust. The widow's sharp-nosed appearance he could blame on no one but her ancestors. Marking her with the name Teena was the fault of her parents. Moon had too little experience with civilized ways to determine whether Teena's silvered yellow hair was the product of genes or industrial chemistry. But the children had the look of his dead son, even though they were older than he pictured.

They sidled toward him, responding to nudging from Teena. The girl curtsied; the boy

offered his hand. And both said politely, "How do you do, Grandfather?" And their mother followed them and touched her lips briefly to Moon's wrinkled cheek.

Then they all looked at each other until Moon gestured toward the landscape and said, "Well, how do you like it?"

Teena stared at the terrain. "There isn't much here, is there?" And the children asked, "Where's the city?"

Moondust explained that this was an undeveloped planet but very comfortable and full of great promise for the future. Teena assured him that she didn't mind, that she and the children were deeply indebted to Grandfather.

"We'll miss the stimulation and conveniences of city life but pleasure costs too much for a widow with only a few credits in the bank. I wouldn't care for myself but I want good things for the children. We can't thank you enough for asking us to come live with you."

The twins' butterfly minds had darted to things more interesting than politenesses. Jill tugged hard at her grandfather and pointed to 678.

Bill cried, "That's a funny robot—"

Jill asked, "Does it belong to you?" "Why doesn't its face look like a face?" Bill finished.

"That's Cappy," Curtis told

them and put a hand on the robot's metal shoulder. "These are Billy and Jill, Cappy. And Teena, I want you and Cappy to be acquainted. He'll take real good care of you all. Cappy and I have been friends for years."

The twins went into a fit of giggles at the rising *brewer-rumph*. as 678 spoke in his statement inflection, "I have been instructed to serve Billy and Jill and Madam faithfully."

Teena said, "It's certainly an old relic. I suppose on worlds like this you can't find anything better."

Billy added, "Back on Earth robots look like people."

Jill giggled.

"And they don't talk funny."

A rousing welcome banquet awaited the new family of Administrator Curtis. No shining carriages discharged southern belles and courtly gentlemen at the portico but the company did its best to make up this lack by animation. Henry Rutenhauser was there, well shaven, with allergy under temporary control and two new jokes picked off the space waves. The Bryn Mawr type lent dignity with discourses upon the aspirated whistle and nose-damped hoot of the natives. Officers of a freighter, down for their midseason consignments of powdered corkroll, were glad of an opportunity for dining on un-concentrated food.

All stuffed themselves with beaten biscuits from real Earthside wheat flour and the Venusian cook had whomped up a reasonable facsimile of southern fried chicken from a scaly flying creature called by the natives a swsss, accompanied by patting of midriffs and flapping of arms. Crystals impregnated with ancient Stephen Foster melodies disgorged home-sick sweetness through the stereo horns and 678 *EEK-YIKUED* through butler routines acceptably.

## II

THE trouble between the twin's mother and 678 barely waited twenty-four hours later before erupting. Curtis heard Teena shrieking in the Spanish patio. He clumped back there as fast as his prosthetics would carry him and found his robot backing toward the Hollywood pool while the blonde daughter-in-law threw chair cushions and julep glasses and end tables at the metal man.

"Get away from me, you thing! You nightmare! I can't stand that squeaking of yours. Get out!"

Henry Rutenhauser held her hand, trying to comfort Teena.

He led her to a lounge, crooning, "There now. Don't let it upset you. I can't understand why the Administrator keeps a nightmare like that but some men get a

little batty with age, you know?" Moon dust whispered, "Cappy, you'd better go on out front." And to the clerk he said with exaggerated mildness, "Henry, I'm not batty enough to forget there's an office full of manifests to work up so that freighter can lift off on time. Maybe you'd better go."

Henry went—fast.

Moon limped to his daughter-in-law and sat beside her.

"You don't need to be so upset with Cappy. Just tell him what you want and he'll do it."

She dabbed her eyes. "He's like a scarecrow. He grates on my nerves. When I try to take a nap that thing's squeaks wake me up. I'm a sensitive person. I can't stand shrill noises."

"You just keep remembering Cappy has a heart of gold," Moon said.

"That blank face makes me ill," Teena said.

"You'll get used to him," Moon said firmly.

Teena waited, "With all your money—I can't understand why you don't junk the monster and buy some of the new miracle robots."

"Why, I couldn't do that. Cappy's like a big brother to me. Why, I'd die before I did anything to hurt Cappy's feelings. You wouldn't want me to put Cappy out of his own house, would you?"

Teena ran out sniffing.

Only a week after this Moon-dust found Teena in his special rocking chair on the north veranda. She gave her pouting smile and started to rise, sighing mar-tirishly.

Moon protested: "Now don't you get up."

He eased himself down on the porch and leaned against a pillar to enjoy harp sounds a breeze played in Bronta fronds, the bubbling, whistling, far-off chit-chat of natives in the corkroll fields and the calls of fauna in the swamp lands as they gaily gobbled each other for lunch.

Moondust waved a languid paw and yawned. "Listen to all those little things. Makes the air downright peaceable."

The forced smile again touched Teena, with a pucker to her underlip that Curtis decided must have made her look sort of cute in the first bloom of girlhood.

*And that's when my son courted her. . .*

He could imagine how his boy might have found her intriguing and blamed himself anew for not sticking by his boy to educate him about women.

But Teena's voice was fretful. "It's lonely here. We had lots of people around us all the time back on Earth to keep life exciting. And visiscreens to pass the time. Even if we were so poor we didn't know where the next meal was coming from."

"You're hankering to go back there?"

"Oh, no. I'll endure any kind of hardship to make life easy for my children." She stopped rocking and puckered her lip again. "Maybe if we had some servants that looked like real people and talked like them I wouldn't be so lonesome."

"Oh, we don't need extra help, Missy," the old man answered amiably. "Cappy can take care of all of us." He watched clouds cover his daughter-in-law's face and twist her mouth and shook his head sadly. "I'm sorry you've taken out a hate on Cappy. I want the mother of my boy's children to be happy."

"Then get servants that look like people and talk like people."

"That kind are a mighty far piece from this planet and we won't be having another ship touch down until Spring."

"Henry says there are some down in the warehouse."

"You been talking to my clerk about this?"

She pouted. "Henry's very understanding. But he has his work and he can't be around all the time to talk to."

Moon muttered, "He'd better not."

"Henry says there's a whole retinue of house servants in their original boxes stored there. All we have to do is activate them. He says they are the latest models.



You can't tell them from real people, even when you touch them."

Moon sighed. "Well, Missy, I reckon it would be more peaceful for us all to give in to you. I'll just mosey down and set Henry to breaking those boxes open this afternoon."

"And then we could get rid

of that horrible-looking old robot that follows you around."

"Get rid of Cappy? No, ma'am. Cappy's my friend. Cappy's saved my life more times than you have fingers and toes."

She started to sniffle. "I won't endure it. He scares me. I can't eat for watching him."

Moon shook his head sadly.

"I'm sorry, Missy. I couldn't look Cappy in the eye if I was thinking of doing him in. He's got a right to live, same as you and I."

"But he's just a robot. He's not a person."

Moon said positively, "No, ma'am."

"That imitation skin is full of moth-eaten patches. It disgusts me."

"Then you'll just have to look somewhere else."

Teena had sense enough to recognize the determination in Moondust's voice. She took her pouting elsewhere and hunted up Henry Rutenhauser for consolation.

Put Eve into an Eden and she does not need an apple or a serpent. A squeaky robot and an allergic clerk will do.

Together, Teena and Henry planned a strategic campaign. After the new servants had been on the job a few days, Teena began hinting, finally asking Moon outright, "Don't you just love the way our new servants keep the house?"

And Henry added casually at other times, "Good thing we had a retinue of robot house servants in stock, sir. They're remarkably efficient. It's a joy to watch them work."

And Teena, as if in afterthought: "They're so efficient that they leave absolutely nothing for that mouldy old robot to do.

And they talk like real people."

"That's right nice," Moon told her the first few times. "Cappy don't mind letting your pretty dolls do the housekeeping. Cappy deserves to take life easy. He's got old and creaky like he is by keeping me out of trouble, and any man that's done his duty in this galaxy ought to have a long easy-going old age. You keep your dolls out of Cappy's way and off my veranda so I won't have to listen to their jabbering and they can work all they want to."

Then Eve chose her Adam. Moondust heard it from the children first.

"We're going to have a new father," Jill burred.

Teena admitted that she and Henry had decided upon marriage.

Old Moondust complained to 678 at the edge of the corkroll fields where he felt safe from inquisitive ears. "Cappy, I just can't make out what she sees in that nose-blowing diddler after being married to my son. Can you? But I also can't figure out what kind of a prize my boy thought she was."

From the midst of the *brewer-rumph* exertion 678 replied, "More data required before an answer to your question can be formulated."

"I didn't ask any questions, you blasted chatterbox. I just remarked to myself that if your squeaking sends her into a tizzy, then



I don't see how Henry's eternal sniffing wouldn't give her a con-  
 noption fit."

"Squeaks and sniffs are not  
 synonymous," Cappy answered.

Moon dust behaved like the in-  
 dulgent, plueil-mellowed southern  
 colonel he had built in imagina-  
 tion. He gave the bride away and  
 stirred up the gayest wedding  
 supper that could be arranged  
 with one guest, Bryn Mawr type.  
 The marriage was performed via  
 the space beam by the Space  
 Academy chaplain far off on  
 Mars, and the groom moved into  
 Teena's quarters in the Big House.

And Henry began to expand,  
 gradually changing his manner of  
 addressing Administrator Curtis,  
 abandoning the subservient "sir"  
 for a patronizing "grandfather."

Moon enlightened him quickly  
 on that point. "I am not your  
 grandpappy and I never hope to  
 be. Let's straighten out our little  
 old relationship in a big hurry,  
 Henry."

The clerk said, with a lift of  
 an eyebrow, "Happy to oblige  
 you. I assumed that using  
 'grandfather' would make things  
 less confusing for the children.  
 I had forgotten that you might  
 be a little bit sensitive about your  
 age."

"It's not the age, Henry Ru-  
 tenhauser. It's your claiming to  
 be related in a way you just don't  
 have any dag-swizzled right to  
 be."

NOTWITHSTANDING the atti-  
 tude of the parents, 678 was  
 no anathema to the children. They  
 were constantly with the robot,  
 each holding tightly to a metalloy  
 hand from which the imitation  
 skin was shredding. Under Cap-  
 py's guidance they explored the  
 plantation, chattering like Martian  
 Jabber Birds. Out in the corkroll  
 fields they giggled at the  
 monkeylike movements of natives  
 and Jill hid her face against the  
 robot's hard side each time she  
 saw workers snatch wriggling,  
 many-legged black things from the  
 plants and pop them into their  
 mouths.

Where the last grassy slope slid  
 toward the swamp the children  
 tugged hard, trying to coax the  
 stubborn metal man farther into  
 black tunnels of fernlike thickets  
 where vines writhed when touched  
 and made soft plopping noises.

"I want to find out what's doing  
 that zing sound," Billy urged.

"It is forbidden to take you  
 into the swamp," Cappy's state-  
 ment inflection rattled over the  
*brewer-rumph*. "The zing is the  
 feeding song of a sizzling swamp  
 worm."

"I want to see it."

And Jill begged, "Come on,  
 Cappy."

"The sting of the swamp worm  
 is fatal. We shall go to the Big  
 House instead."

Their feeble fingers could not break the robot's iron grip, gentle though it was. They went to the Big House, fussing like two flies stuck to a piece of tanglefoot.

"Let's go for a boat ride on the river then," Billy pleaded.

"It is forbidden to take you on the river," rumbled Six Seven Eight's speaker.

They soon found Administrator Curtis in his porch rocker.

"Why can't we have a boat ride?" the twins asked together. "Please, Grandfather?"

Moondust shook his head. "The current could sweep you too close to the other bank and Noddies hang from tree limbs out over the water, waiting for things to float past."

"What the devil is a Noddy, Grandfather?" And Jill chimed in with, "Are they animals?"

"Nobody's sure what they are," the old man muttered. "You don't know whether they're around or what they're going to look like until one of the dad-blasted thingumbobs starts for you."

"Oh!" Jill cried, big-eyed, and Billy asked, "Do they eat you?"

Moondust said, "Reckon they do. Many's the field hand that's swum too far under water looking for water worms and come up right under a tree limb hanging low over the river, right in the claws of a Noddy that was there waiting for him. The Noddies drag them off into those mountains

across the river—and that's the last you ever see of the native fools."

Billy had a logical mind, keen for a nine-year-old. "Why don't those Noddies swim over here and kill people on this side of the river?"

"Because their constitutions can't stand soaking in water."

"What's constitutions?" asked Jill.

"It's their innards," Moon replied.

"What do Noddies look like?" Billy asked.

"Like almost anything they take a notion to. Sometimes it's a rock; like as not one could be aping a tree stump—or anything."

Billy was the skeptic. "Aw, how could a rock or a bush hurt you?"

"Trouble is, they don't stay that way, Billy. When you blunder against one, all of a sudden it gets big and round and arms like those of an octopus come out and grab you."

Billy said, "Aw—"

But he was impressed.

The children turned back to 678. He had become their friend, their confidant, their story-teller. Forty years of Moondust's gusty tales were imprinted on his memory circuits, an inexhaustible store of colorful adventure related verbatim in the vigorous language of his master.

It needed only Jill's plea, "Tell us another story, Cappy."

Oscillation of the *brewer-rumph* would intensify, the speaker which formed a round "O" where a mouth belonged would crackle and Cappy would begin, always a new yarn: "I remember one scary time when I got stuck on a mile-wide hunk of magnetite sizzling around an orbit out in the Betelgeuse sector—"

Or the story would take another track: "There used to be an old joy joint out in the Red Hills settlement on Mars where dust rats like me could get about every kind of entertainment a fellow could think of. An old witch by the name of Luna Maggie kept the blasted shack. I was sitting there fixing to kill my first liter of dreamer juice when this here dad-blastedandshummox-shucking Venusian went right into a change of gender. The frummel-gnitting chittler was neutral when it came in, but young ones don't have enough experience to feel one of those dag-nabbed transformations coming on in time to get off by themselves. And the dad-burned cycle turned out to be female and I was the first male her eyes turned on. And there I was, with the blasted thingamabob coming straight for me—"

Which brought Teena frothing to Moon. "You've got a stop that filthy mouthed old robot from telling stories to the twins."

And Moon would say sadly, "Cappy, we've got to remember

we're in civilized company now and watch how we talk."

And the robot's speaker would sizzle and an answer finally come: "All data filed in my circuits define this as a remote, primitive planet, sir."

"This is the last straw," Teena raged. "I won't have that machine corrupting my children."

She stamped into the house and Moon said sadly, "Cappy, we just don't seem to be able to keep out of the doghouse."

The robot answered, "The meaning of doghouse is obscure, sir."

R678 disappeared that night. Moondust Curtis went to sleep in his high-ceilinged bedroom whose broad windows looked past white columns across the sloping Bronta-dotted lawn to the moon-silvered river. Spicy scent of cork-roll blossoms drifted into the room. Bronta-fronds rattled like dry bones in a soft southern breeze. An occasional *yiku* or an *EEK* punctuated the tropic night murmur. Moon's eyes closed and his senses vaguely notified his somnambulant brain that Cappy stood in his accustomed place at the bedside, unsleeping and watchful over his master's health and safety.

Middle of the night ululations of a Noddy pack coursing a breeding female disturbed Moon only slightly. Some other type of confusion touched him during the

dark hours but he fuzzily equated it with a wild dream whose tentacles clutched him.

Moon dust awoke to sun in his eyes and a rude racket of rock chickens somewhere in the rose garden.

"Shut those things up, Cappy," he muttered, then became aware that no *eek* or *yiku* answered. Moon sat up in bed growling, "Cappy, are you getting deaf?"

He saw only emptiness where 678 usually stood. Precariously balancing on the edge of his bed, Moon laboriously adjusted his artificial limbs and pulled on his clothes, rattling the windows meanwhile with frantic bellows for the absent servant.

He stomped downstairs, teetering and swaying like a swimmer in a riptide. Teena was the first person to meet him.

"Where's Cappy?" he roared.

Her pale eyes opened round and wide.

"I really don't know."

Moon staggered off down the warehouse path, yelping, "Cappy—" with one breath and, "Henry—" with the next.

Henry tried to make a joke of it. "Never can tell what will happen to junk piles like that robot. Maybe a circuit burned out and the thing's gone AWOL—could be headed for the other side of the planet." He saw the look in Moon's eyes and suddenly assumed an aggrieved tone. "If I

took time off my job down here to keep track of that worn-out old machine you'd flay the hide off my back."

"That just might happen anyhow if you and that woman have done anything to Cappy."

"I don't enjoy knowing that when something goes wrong around here I will automatically be accused of being responsible," the clerk muttered.

His words were strong but Henry's voice held an undertone of the born underling's self-pity.

Halfway to the Big House, Moon dust met the twins.

"Why can't you go after Cappy?" they begged. "Please? He'll die. The Noddies are after him."

Jill was crying. "Will the Noddies eat him up?"

"Mother says he won't ever come back," Billy gulped.

Moon roared to silence the breathless stabbing of their words. "Here now— Be quiet. Who told you the Noddies have Cappy?"

Bill stood straight and accusing. "Mother. She says you made him work too hard and that's why he ran away. And you can't bring him back because your legs won't stand going. There's nobody to find him."

Moon stomped off to say the harsh things he was thinking to the twins' mother. She had prudently hidden herself. Not until midafternoon did her wailing advertise her.

"I can't find the twins. What have you done with my children?" She pointed an accusing finger at Moon.

Moon stomped away as fast as his metal legs would allow him, a fearful certainty in his mind. No special talent was needed to trace them to the river bank. A severed rope which had moored a rowboat told the rest as clearly as if a note had been left behind. The twins were across in the unexplored country of the Noddies, hunting for their robot friend.

"You did this," Moon stormed at Teena. "You told them that Cappy went across the river. You've killed those children."

Incoherently, between sobs, Teena repeated, "I couldn't think of anything else to tell them. I didn't know they would run away. I didn't know—"

"And you and Henry did something to Cappy, between you. I can't go after those children without Cappy to help me walk. What did you do with Cappy? Quick, while there's time."

Teena cried, "I don't know."

"All right. Stand there and lie and let your babies die."

Teena wrung her hands helplessly a moment, then moaned, "I made Henry dump the robot into the bayou."

Henry joined them, saying, "I'm responsible."

"Show me where," Moon yelped.

"I don't know where," the clerk answered, frightened into a falsetto by Moon's ferocity. "I let a bunch of natives do the job."

The old man let out a bellow that shook the Bronta trees and headed for the river, striding with an awkward up and down motion on his artificial limbs. "I'm going across by myself," he called back. "Any minute those poor kids might meet up with one of those thingamabobs. You find Cappy and git a new power pack in him and send him after me or I'll tear you to pieces when I get back."

Moondust had a rowboat in the water when he heard the Bryn Mawr female calling. "You can't go alone."

"Don't bother me," he roared and slipped the oars into the pins.

"I'm going with you."

"I haven't got time to take care of any female," he snapped.

"I've got two eyes and a shoulder you can lean on," she answered, frosty and impatient.

Moon had the blades dug deep by this time and pulled hard. He looked up in time to see the lady pull up her skirts and jump. She landed hard, thumping on to the stern thwart. The boat took some water.

Moon roared.

"It won't do you any good to use that kind of language," she said firmly. "You need help and I am the only other human being

on this planet who isn't a sniveling idiot, so kindly continue your rowing."

The current rapidly whirled them out.

She guided the old man, carefully scanning the opposite bank for a safe place to land, a spot with reasonable chance of being free from any wandering Noddy.

The skiff's bottom soon scraped mud and Moon handed her an oar.

"Now you hold this boat against the bank while I climb out," he told her.

Thumping, catching one metal foot under a thwart, he managed to scramble over the bow and crawl up the muddy slope, turning first to give the boat a hearty shove that sent it swirling out into swift river current. "I can't have you along taking chances on getting killed," he yelled. "Now get on home and make those two crazy people find Cappy and start him after me. I don't want any dead females bothering my conscience."

She was scrambling to her knees, screaming, "That was most unkind of you." And she grabbed the oars and worried the boat around, trying to pull awkwardly back toward Moon.

"You turn back across that river," he called and entered the dense thicket without giving her opportunity to reply.

#### IV

**H**UMIDITY pressed upon him like huge balls of damp cotton, soaking his skin with hot perspiration, weighing upon his breath so that it seemed almost viscous to his nostrils. And thorn-studded branches tore at the old man. Underfoot there was no kindness for artificial limbs that could not feel and telegraph back to Moon's brain the sudden upthrust of rock, tangle of vine or unseen softness of a swampy spot.

Moon stumbled, fell, crawled, pulled himself erect, stumbled and fought each forward inch, calling at intervals the twins' names. No echo came back through deadness of jungle-confined air. On Moon's own side of the river there would have been vocal responses to the noise of his progress: the snort and hiss from a giant lizard, grunts, squeals, hasty stirring of retreating animal feet. But here nothing moved—nothing but the slow gyrations of a strangler vine caught his eye and not even vagrant whispers of heat-stirred air touched Moon's eardrums. The forest lay dead. Moon's calls died barely beyond his lips, absorbed by heavy foliage. And scattered, worried thoughts of the Noddies stared from subliminal corners of his mind—no animal species could survive the voraciousness of Noddy appetites, not even the

weaker Noddies. There was no living being on this side of the river except Noddies. Moon knew he limped toward certain death. He knew the twins were already dead—yet he hoped for a miracle.

When eventually steep incline and dense river forest gave way suddenly to scraggly brush and wide expanse of grassland, Moon just stood there completely spent, breathless, eyes unfocused for several moments. In the clearing's center one lone lichen-covered lava block stood man-high, a good place to lean and recover strength. But before moving to it, Moon turned a slow circle, a wary search for the possibility that a wandering Noddy might be close. He drew a breath of relief and out of the corner of his eyes caught a stirring.

He froze, afraid to move. Slowly he shifted his gaze and saw the thing. What had seemed a rock half covered with scraggly moss was beginning to dissolve—not dissolve, his mind amended, but flow—or like the trick camera work of Tri-D screens, a second image superimposed itself over another and with increasing speed was blanking out the rock outlines.

Ragged moss became a mass of coarse hair. Yellow and green patches of lichenlike growth gathered into warty scales. Rock planes relaxed into a knobby body that suddenly rose upon two

heavy legs. A single yellow eye with the glaze of an agate glared from under the thatch of tangled hair and a mouth cracked open beneath, a horrible maw—narrow, almost pointed arch of teeth, three rows above, three below. A big shark-like mouth in a head nearly as large as the whole body.

Moon was quick. He shot even as the false rock had begun its metamorphosis. He could see the passage of the projectile through the Noddy, its body substance flexing and rolling like a bow-wave curling from the prow of a swiftly moving boat and like a wave, subsiding again into the mass from which it had risen. There was no second shot. Change came too fast. Even as a mouth formed over the rock-like first image, tentacles whipped out and Moon found himself in their tight curls.

The Noddy moved with him, bounding high over bushes, growing in stature as it raced away. Moon could hear breath snore in its single wrinkled nostril. He could hear a peculiar bubbling, like a chuckle, deep in the Noddy's throat, as if it laughed in ecstatic anticipation. And he could smell the beast—a filthy carrion scent.

They whipped through a Bronta forest, then out on a barren slope. The Noddy headed up its steep surface, leaping over crevices and over crumpled up-thrusting dikes

of heat-puddled lava. Moon's captor topped the ridge. An ancient crater lay below. The Noddy screamed and answering howls rose from the crater floor.

Jumping, sliding, the Noddy flipped in a corkscrew course around the volcanic throat and raced across the jagged bottom toward basalt cliffs. There the tentacle coils unwound suddenly and Moon slammed upon pitted rock and rolled against the blackened wall.

He sat up, painfully scratched. More of the frightful beings faced him, each with a single glazed eye focused unwinkingly upon Moon. Sudden silence let his heart sound like a drum in Moon's ears.

Then he heard a low sobbing coming from around the edge of a buttress leaning from the crater wall. For a moment he thought it to be a variation upon the Noddy's ululations. Then a human voice spoke—Billy, shaky but trying to comfort a crying Jill.

"Billy—" called Moon, and the twins ran into his arms. He turned to shield them but the frightful apparitions stared and made no menacing gesture toward their prisoners.

The Noddies gathered in a group perhaps thirty feet away. They squatted in a semicircle and watched, tentacles at rest. It seemed they waited for something.

The waiting was not long. Some time before Moondust could sense

any sound the Noddies rose from their squat and turned to face the opposite crater wall. And several breaths later, more of their tribe appeared high on the rim. They screamed and held high a human body. It could be no other than the Bryn Mawr female.

"Stubborn woman," Moon thought.

The Noddies bounded in a circular sidehill slant toward the crater bottom. Their comrades at the bottom began a weird prolonged scream and were soon answered. Sound rose and reverberated on the crater walls throughout the descent, until the climbers leaped over the last barrier of brush and tossed their burden in a rolling tumble toward Moon.

The old man was able to place himself as a buffer between the Bryn Mawr female and the jagged rock wall but the collision sent him tumbling.

She helped him up, saying with wry coolness, "We're in something of a pickle."

Moon scarcely heard. "That hard metal in my legs hurt you?"

She said, "Not as much as the rock would have."

The Noddies squatted again, all but one. It moved in a swaying short-step dance from one end of their line to the other. Then the thing faced them and its enormous mouth opened. The other Noddies opened their mouths in unison.



The leader snapped his shut, and the triple row of sharp teeth clicked unpleasantly. The Noddy line clicked teeth in response. Then, one at a time, each imitated the steps of the leader.

"Interesting," said the Bryn Mawr person. "I would think this is some kind of ritual preparation for dining."

She scribbled in her notebook.

"Won't do you any good to write in that book," Moon told her. "We're done for."

"I am aware of that. I am aware also that the human being often muddles his way out of utterly hopeless situations. I shall conceal my notebook in some crevice at the last moment and hope it will be found and a bit more information added to man's store."

Moon said suddenly, "You're quite a lady."

The corners of her mouth crinkled.

The Noddy dance became more complicated now, their line swaying in hop-step toward the captives.

Frenzy crept into the ceremony. Noddies' breathing quickened, snoring loudly through single nostrils. Only a few feet separated the monsters from their captives now. A low wail added itself to the clash of teeth.

A new sound sifted through the cacophony: "*Eek hoowah-hoowoh brewer-rumph, yiku*

*hoowah-hoowoh brewer-rumph.*"

Moon roared, "Cappy!"

The children were crying, "Cappy—here's Cappy—"

Loose rock rattled down the crater wall and Robot 678 followed; sliding the last dozen feet to thump with a clattering of metal.

"Get us out of this mess, you damned tin can," Moon yelled.

R678's speaker sizzled and his flat tones answered, "It will be necessary to furnish more data re the meaning of 'mess,' sir."

Before Moon could reply the Noddies began their last rush, jaws wide, a moaning sound of anticipation in their throats. Cappy turned and moved out to meet them, arms flailing. The pack swarmed upon him, four of the stinking creatures at once. They sprang, jaws crunching upon the robot's arms and legs. Cappy went down.

Four Noddy voices screamed in waves of ascending yells. They backed away from the robot, howling. Tentacles writhed toward mouths. There was blood on the gaping jaws, a thick greenish purple. Pieces of broken teeth fell from the mouths. A fifth Noddy plunged upon the prostrate robot and clamped its jaws on a waving leg. Its scream rose above the other four and it stood, tentacles reaching into its mouth.

Moon yelled, "Go to it, Cappy—break their jaws!"

But the Noddies backed away from 678. They passed him, ignoring the kicking legs, moving more warily now toward the other captives. The Bryn Mawr person turned to hug the children closer and cover them with her body. Moon stood between them and the advancing tribe, knowing this was the end.

The old man hobbled out to meet the fright things. He picked up a rock large enough to crush a skull and brought it down hard on the leading Noddy's head. The rock twisted and curved off, shunted by the strange yielding flesh of the Noddy.

Every bit of Moon's strength had been in the blow. He followed the rock to the ground, rolling on his back, helpless, legs waving in the air. And the Noddies were upon him, great jaws clamping down on those thrashing limbs.

And they screamed and backed away, spitting out broken teeth.

"My legs—my legs—" Moon called out. "They broke their jaws on these damned imitation legs!"

Moon rolled over and thrust a leg at the nearest Noddy. It backed away, howling. "Come on, Cappy!" Moon shouted. "Bust some more teeth!"

R678 clanked to his feet and stomped toward the Noddies. The Bryn Mawr female helped Moon to his feet and the humans faced the howling aborigines. Humans

stepped forward and the Noddies edged backward.

"Run, you frummel-gnitting chittlers," Moondust taunted. He staggered after them, ripping off every colorful piece of vocabulary he knew. And suddenly the monsters broke, whirled toward the crater's opposite wall and up its steep side in ten-foot leaps. Their howling could be heard long after the things disappeared over the rim.

IT WAS dawn before Henry and Teena heard an old familiar *eek hoowah-hoowoh brewer-rumph, yiku hoowah-hoowoh brewer-rumph* and saw against the growing gray of river fog the tall awkward form of 678 clumping along, Moondust sitting comfortably in the crook of one arm; the other hand holding the little fingers of Jill, with Billy grasping her right hand, and the Bryn Mawr person striding alongside.

And the last mellowing stage crept over Moon. He found himself thinking of her as a companion—with Teena, the allergic clerk and the uncommitted Venusian cook banished to Administration house. But those who waited were aware of nothing but *eek hoowah-hoowoh brewer-rumph, yiku hoowah-hoowoh brewer-rumph*. What went on in Moon's mind sprang at them much later, like a Noddy. ●



T. J. BASS

His mission was to seed the stars with life. The question was—whose?

**Z**ULIANI caught Levy's kick on the forearm and felt the ulna crack. Levy, last year's Champion, pressed the attack and forced Zuliani back—out of the Ring. Twice Zuliani reentered, splinting the bone fragments with powerful tendons and marshaling autonomies to suppress the pain.

But each time Lévy's murderous attack drove him out. He lost the point and retired to the clinic.

The bored paramed had an ulnar pin ready to insert. He quickly swabbed Zuliani's elbow and stabbed the skin. Zuliani put his mind elsewhere as the drill moved the long pin down the medullary space of the broken bone, splinting the fragments from the inside.

"Forty minutes," announced a sibilant voice from Zuliani's belt.

He closed his eyes and cautiously relaxed his autonomies. Pain appeared, delineating the fracture lines around the pin in his left forearm. Lesser soft-tissue traumas went unnoticed by his cerebral cortex. Tears welled up momentarily. Then, as the nerve endings dulled, he slept. The paramed covered him with a blanket and quietly tidied up his surgical tray for the afternoon Games.

Robert Zuliani the Sixth (sixth generation colonist from Earth) had just lost in Procyon's Semifinals, bested by the bulky Negro, Lévy. In less than an hour they both would reenter the Ring to face new opponents: Lévy fighting for a First Place, Zuliani for Third. Meanwhile they rested, while recharging their neurones. Zuliani's belt soothed him with his favorite gladiator music, the low notes slightly distorted by its resonance limitations.

The music stopped. "Five minutes," announced the belt.

Zuliani sat up, wincing at the arm pain. He concentrated. The pain diminished. He reasoned that his next opponent would probably have essentially the same number of injuries, having faced the same number of Ring encounters, so his own pinned ulna shouldn't be too much of a handicap. Stoically he walked out to face Jones—young, sinewy and a genetic Amerind.

LEAVING the clinic's astringent odors, Zuliani returned to the Ring and the ominous smell of death—blood and urine spilled by the decerebrate losers. Jones approached stiff-legged. Much of his racial pigmentation was now masked by layers of protective—as well as rather anonymous—syntheskin. Zuliani hoped the limp indicated a serious knee injury, such as a rewired patella. (It took more than self-hypnosis to get a weight-bearing joint's function back.)

Their telemetered cardiograms ticked off a hundred regular beats and the paramed nodded them into the thirty-yard-diameter Ring. Jones's limp vanished as he circled warily. Sparring, they assessed each other's reaction times. Feinting and blocking, they quickly burned up what little nervous reserve they had been hoarding for this final match.

Jones, a serious businessman, directed a growing mining operation. He considered The Games an avocation; tomorrow he'd be back exploiting the planet's mineral resources. His strength and enthusiasm had carried him this far, but to him it was still just a game.

On the other hand, Zuliani was a born competitor. He had literally been bred for the Ring, his parents being selected for their winning qualities. The cybernetic belt he wore marked him as one of the Competitor genetic lines. His parents had "won" and his entire lifetime had been spent in preparation. The belt had raised him, setting his habits and providing for his essentials. He had been honed for the Games.

In their stumbling they found themselves grappling awkwardly. Zuliani locked his grip around Jones's waist and wrenched him off his feet. Jones threw his arms out wide and chopped viciously at Zuliani's straining neck—bruising the soft tissues under the angle of the jaw and depolarizing the nerves in the carotid sinus. Zuliani's heart stopped.

Zuliani felt a dull flop in his chest as his heart squeezed out its last beat, marking the beginning of the loud silence of asystole. Terror showed on his face but his mind schemed. He still had almost a minute to win the point. His grip tightened to

the sound of a wet popping in Jones's spine, until cerebral anoxia tipped him over.

His telemetered cardiac arrest brought the resuscitator team to oxygenate his convulsing body. Jones limped from the Ring. The team worked. Zuliani's encephalogram hardly missed a spike but his cardiogram remained isoelectric. The clock ran.

Suddenly the team jumped back, as if they had just roped and tied a calf. Zuliani's heart was beating again and the point was still to be won. The paramed counted out a hundred systoles and waved Jones back into the Ring. Zuliani's gaze cleared. He rolled over into a crouch—alert.

Zuliani's neck and shoulder muscles bunched and twitched. Jones stood there for a moment, evaluating the killer he faced, while his own aches and pains welled up against him. Zuliani's last bear-hug had momentarily displaced several vertebrae and had polarized his lumbar autonomies—nerves he relied upon to mask the pain impulses from his legs injuries. His gait became stiff-legged in spite of his concentration. He backed out of the ring. Zuliani pounced—feinting—psychologically driving his opponent back from the edge of the ring.

Jones weighed his chances in the ring against the immediate relief of the pain medication. Fourth place was good enough

for a hobby. He had his family, his job—and another chance next year. Opting for fourth, Jones reclined on the floor, leaving Zuliani standing alone.

**T**HIRD place in The Games. It seemed to satisfy the belt. But it didn't satisfy Zuliani.

A year earlier he had placed tenth in the planetwide Long Run. Now he would travel to the equator and train for next year's thirty-hour Swim. He'd probably not even make the top ten in that event. A fine Competitor he was turning out to be.

He stopped in front of a public dispenser, ignoring the credit card slot. A rivet-sized optic pickup on his belt focused. His index finger moved down the list of choices, pausing at a stringy protein, a semiliquid carbohydrate and a small, sticky fat. Each time his finger stopped, his belt spoke silently to the machine, and the food item dropped into the chute.

"Thanks, belt," he said, eating. "Y'welcome."

**T**HE year in the Tropics went smoothly for Zuliani. His belt—in contact with several of the alert cybernetic off-shore buoys—led him to ample ocean edibles. His ab-iron and spear supplied protein, while machine-cultivated flora supplied carbohydrates. He seldom had to resort to the dispensers.

He fathered an eight-pound baby girl and placed seventh in the Long Swim. Jones placed fifty-fourth, and Levy—lacking an adequate amount of subcutaneous fat—dragged himself in after the "medal positions" were closed.

"That's another medal for us," congratulated his belt as he crawled up on the twin-hulled "cat" after his swim.

"But no first places," he gasped, glancing at the six exhausted humans who had arrived before him.

"You've medaled straight through. Your profile may be the current highest," reassured the belt.

His profile proved the highest and the celebration lasted three days. Overindulgence—considered a vice by everyone of the competitors—brought little joy to Zuliani. But he mingled easily with the celebrants, accepting their accolades. His profile did entitle his new daughter to a ceremonial genetic belt of the type he wore through life; and this gladdened him. It assured her of status in life—a Competitor. After her belt was awarded he bowed out, taking one of the single-seaters to a mountain retreat.

**T**HE hovercraft slipped quietly out of the cloud layer and hung for a moment above the damp fir trees. Its headlights flickered about, searching. Then,

deep among the trees, a small, rustic cabin blinked back; and the craft landed. A fireplace came to life as the cabin's circuits awoke. Wisp of resin-scented smoke curled out of the conglomerate chimney. The hovercraft's class VII brain ruminated a moment and then roused its sleeping cargo.

"Up, Zuliani. You're here."

Blinking, he stumbled from the craft and shuffled up the path, allowing most of his mind and body to enjoy the languid state of half-sleep. Sullen softwoods crowded out of the night mists. The cool mountain air went unnoticed as he pictured the soft bed that awaited him. The craft's directional speaker focused soft music on his receding back.

"Zuliani?" came the questioning voice of a female in the darkness over his right shoulder.

Turning, he peripherally saw a shadowy form.

"Kick, kick, kick!" shouted his belt.

Instantly he bent over at the waist and drove his right heel out hard. A bright flash warmed the air and the acrid stench of singed moss filled his olfactory bulbs. He saw a Bodkin III hand-laser tumble into the moist pine needles and heard the sound of his assailant thrashing in the brush. He crouched, silent. A small flame flickered up in the moss and then went out. The assailant's movements stopped.

"Thanks, belt," he whispered.

"Y'welcome," said the belt.

Belatedly, bright lights from the cabin illuminated the low, white clouds, bringing bright high-noon visibility.

"We're alone," reassured the belt.

He stood up and walked to the still form of his assailant. A female. Her abdominal muscles were still twitching, but no breath moved through her open mouth. He felt no pulse. Between her breasts he saw his brown-stained heel print. The sternum was depressed and made gritty sounds when he palpated it. Fractured. And probably displaced into the mediastinum, cutting off venous blood flow back to the heart. He grabbed both of her wrists and jerked them over her head, levering the bone fragments up.

Her heart fluttered and began to beat as soon as the pressure was taken off the large veins. She gasped several times, mouthing like a dry fish. Her face pinked up.

She looked to be about his age, mid-twenties. A stranger. Not unattractive. Dressed in a thermal suit and boots. Empty holster. A small back pack.

"Assassin," said his belt in a matter-of-fact tone.

He raised his eyebrows. "How can you tell?"

"Her cold, businesslike expression as she squeezed the trig-

ger. Her finger was already starting to tighten as you turned. No question about it. She was just going to kill you. Fry you on the spot—no questions asked,” answered the belt.

HER eyes opened wide—bright, screaming sclerae. Her face tightened into a grimace exposing regular, white teeth. Growling and clawing for his throat, she tried to leap up, only to invite another thrust against her already damaged breast bone. She went down in a heap, and he resuscitated her by pressing her elbows up over her head.

“Relax! Take it easy or I’ll turn you off again,” he warned.

Her eyes opened. This time they appeared glassy and failed to focus. The last anoxic episode must have scrambled her memory a bit, he thought.

He tightened the straps of her back pack to splint her rib cage. Then he carried her into the cabin where he quickly taped her shoulders back with a heavy figure-eight bandage. Then her breathing became easier. She lay still, watching him as he deactivated the Bodkin III. Leaving his belt to watch her, Zuliani crawled wearily into the other bunk and slept soundly.

“Visitors,” announced the belt.

The prisoner opened her eyes but remained still. Zuliani sat up. He heard footsteps approaching

the cabin. The door opened and four uniformed young men stepped quickly inside. They carried hand weapons. An older soldier, thick of neck and wrist, remained outside. He beckoned for Zuliani to join him.

“Colonel Budd. We’re Alien Security,” the older soldier said as he shook Zuliani’s hand firmly.

“Alien?” repeated Zuliani blankly.

“Your prisoner,” began the colonel. “Oh, I keep forgetting how naive some of you Competitors are. You were almost killed by an off-worlder last night. She—or it—is from another planet. Another star system altogether. Your capturing it was a break for us. Gives us a hostage as well as a specimen for study.”

Zuliani glanced back inside. He knew of life on other planets—his ancestors had come from one, Earth. But other planets held man. Humans, not aliens.

“But we’ve never heard of —” began the belt.

The colonel glanced down at the four-inch wide belt—featureless except for a few small rivets—audio membranes and microcircuits hidden in its eighth-of-an-inch thinness.

“You’re not supposed to be here. This is classified,” said the colonel. He motioned for one of his aides. The belt loosened itself and was carried silently into the cabin.



The colonel waited until they were alone and continued: "She's a Dreg. A non-human. Subhuman. Her race lives out in the Rim of our galaxy. They have some sort of a bizarre relationship with their machines—use them for reproduction and everything. This is the first time I've ever seen one of them away from its machine. I'm half afraid it'll self-destruct or something."

They were interrupted by a squad of parameds carrying a stretcher into the cabin. The number of soldiers in the area seemed to be increasing. Zuliani stared.

"But she doesn't look much different—"

"Oh, she's one of them, all right. Easy to spot. Full of wires and transmitters. Show up on the scope like one of our self-contained communicator booths," said the colonel.

The Dreg was carried out, her willow frame strapped firmly to the stretcher. Armed guards glanced warily about. They filed down the trail and into a large personnel carrier. Other military hovercraft were scattered about the valley at treetop level.

"Zuliani, you might as well return to the base with us," suggested Colonel Budd. The silent guard formed up behind them, giving Zuliani little choice in the matter. The belt made the trip in one of the lesser vehicles. Its

optic pickup cleared and it eyed the Dreg's back pack and Bodkin III suspiciously.

The morning sun burned the mists out of the little valley. As the troops left, silence returned. In a few minutes the cabin's circuits had returned to standby.

AS THEY lifted off, Zuliani noticed the Dreg's face go white. She started to retch. He motioned for one of the parameds to help and they hastily unbuckled her shoulder strap. She sat up and vomited copiously. Her sternum gave an audible crunch with each effort. Then she collapsed back onto the stretcher, breathing weakly.

Comfortable in the colonel's cabin, Zuliani and Budd watched the Dreg on the viewscreen. Her straps had been loosened and the parameds—mostly young and conscious—quickly busied themselves around the now trembling female form.

"Lucky for you that we arrived in time. No telling what they would have tried next," said the colonel.

"How did you know?" asked Zuliani.

"Your class sevens reported up through channels. Of course they didn't know the significance of it—not knowing about the Dregs. But when it reached the class threes, we were then notified," answered Budd.

Budd explained that the Dreg spaceship had appeared in the Procyon system about thirty years ago, carrying human genetic material. The suspended sperm, eggs, embryos and fetuses had been part of the cargo of one of Earth's Implant Starships—the one bound Out Galaxy to Andromeda. Neither the genetic material nor the Implant Starship had been damaged and the Dregs continued to maintain that their intentions were peaceful—until this attack on Zuliani.

"If they are so peaceful—why did they stop our ancestor's starship in the first place?" asked Zuliani.

"They don't want man to leave this galaxy. Oh, it is more complicated than that. But their view of mankind is some sort of a naked anthropoid cluttering up planets with his babies and civilized garbage. Their machine-run planets are supposed to be long on flowers and philosophy and short on men. Those Dregs! They worship natural beauty—open space—unspoiled, virgin planets. They shudder at our random approach to our ecology—violence, madness and disease. After we 'contaminate' a star system they find it no longer suitable for meditation. The way we're going they fear that only the other galaxies will have a chance to remain pure and unspoiled. Their machines are

powerful and they control the Rim. They can probably keep us here—unless we want to go to war. And the politicians don't want that," said Budd.

"But they are still holding our spaceship," said Zuliani belligerently. "Isn't that an act of war?"

The colonel shrugged. "They're too clever for that. They say that they'll return the ship, or—they'll let it continue its journey as a scout ship. One human can go."

ZULIANI raised his eyebrows. "One human—no sexual reproduction."

"Right."

"And the other Earth life forms: the plants and animals in suspension?"

"Intact."

"The Tattering apparatus?"

"Intact. With mechanical embryogenesis the scout could make genetic carbon copies of himself from any of his diploid, somatic cells. Theoretically he could put armies all over Andromeda—each surrounded by an Earth biosphere of plants and animals," said Colonel Budd.

Zuliani thought for a minute or two. The Tattering apparatus—standard equipment in most starships—provided efficient genetic copying. A single cell from a carrot, frog or a man could be embryonated into a new individual. All that was required was a class VI computer, a

greenhouse life-support system and time. Gestation by that method took no longer than when triggered sexually.

When Professor Tatter had succeeded in producing the first human being in his prototype machine he had said something about "predictable genetic copying" and an "improved race of man." Obviously the Dregs had a similar attitude toward a monogenetic, Tattered race of humans. Being all of one sex they'd be dependent on the mechanical asexual reproduction. Not much danger of "contaminating" a planet. The technology required to support the Tattering apparatus was infinitely greater than the requirements of a pregnant human female.

Colonel Budd continued: "The Dregs have no fear of a machine-dependent mankind. We'd be like them. They'd probably consider us a higher form of life—like themselves—and they could deal with us as equals."

At their destination the personnel carrier landed immediately while the lesser craft stacked themselves in the sky to await instructions. The Dreg—apparently asleep—was rushed into a low-profile blockhouse under heavy guard. Colonel Budd and Zuliani strolled more leisurely towards a tall glass-and-plastic-tower. Everyone they passed wore a large I.D. badge. Heavy

gates and doors buzzed open and shut as they passed. Zuliani began to get apprehensive. The reason for his presence became clearer as the guards casually nodded him through the gates—him with nothing more than his face to identify him.

Obviously he was more than the object of an attempted assassination. He was to be the Andromeda scout.

ZULIANI felt ridiculous in the foil and ceramic costume. Designed to lull the Dregs, this comic "space-scout suit" had been embellished with gaudy boots, gauntlets, helmet and even with extremely unsophisticated electronic gewgaws. Even his belt, which contained a class VI brain, had been disguised with a scabbard and small tool kits. The captive mended while the colonel negotiated.

The Dreg ship sat exactly where it had appeared thirty years before, a human force field covering it. The military base which had grown up around it controlled the aliens' contacts with the planet. Communications and visitors were monitored. On the other hand, the Dregs seemed eager to have themselves and their ship's gear examined. Their machines appeared competent but not overly bright. Children were born on the ship, whose quarters provided room for about a hun-

dred adults. They aged rapidly, but none seemed to be over the age of thirty.

Negotiations went along very, very smoothly. Dreg command soon apologized for the actions of the assassin—claimed she acted as an individual, and offered to have her executed when she was released. The colonel demurred. The captive remained in her cell.

The Dregs agreed to free the *Andromeda* starship. They would accept Zuliani as the scout and transport him out to their Rim territory with their own ship.

ZULIANI sat by the captive's bunk, his helmet balanced on his knee. A delicate chain tethered her right ankle to a ring in the wall. Her guileless conversations truly fascinated him. Evidently the Dregs never learned to lie. Or they couldn't. Or—and the possibility worried him—they were the best liars in the universe.

She sat up and began brushing her hair whenever he visited. The crackle of the static electricity seemed to relax her. Perhaps it helped drown out whatever bugging devices were built into herself or the room.

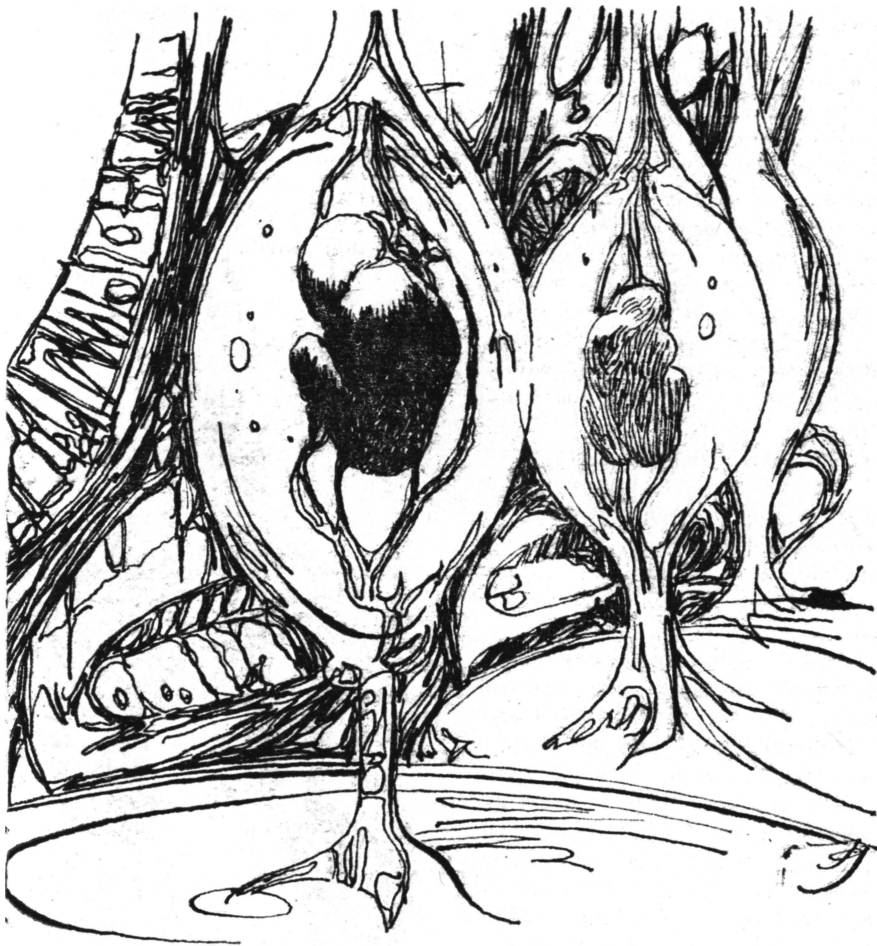
"Glad to see you haven't left."

"Because when I do go it'll mark the end of your way of life?" he said, picking up the conversation where they had left off the previous morning.

She continued to brush. Her



arms still moved stiffly, as her clavicles and pectoralis muscles were tender from her injury. She had been born on this planet and so was probably younger than he. Her Meck-angel—the machine she



grew up with—had mentioned Zuliani's competition record when the colonel had announced his winning the High Profile award. Her eyes reflected her hatred.

"You still dislike us humans,"

he began. "But we're treating you well."

"Only because it serves your purposes," she said. "You'd kill me in a minute if you could benefit from it."

He started to object mildly.

She continued: "I know you're going to say it was my gun up in the mountains. But the fact that I failed to kill you points out the differences in our cultures. We Sybiots—or Dregs, as you call us—are very peaceful. From an ordered, peaceful planet. We have no competition for survival—no famine, war or disease. We don't waste nature's resources. We just improve our minds and bodies. And—and—" she searched for words.

"And are happy" he supplied.

"We're really no match for you—killers—carnivores. You who actually are trained to kill. That's repulsive," she said.

Zuliani leaned into the conversation.

"You call us killers and shudder. Aren't you competing with us for Andromeda? Weren't you planning to kill for your aims?"

"Not at all," she answered. "We're not going to colonize Andromeda. We seldom have the need to add a new planet to our federation. We just don't want to see you humans rushing out there while you're still a young, ignorant race. You'll spoil it. Waste the resources and clutter it up with your—civilization."

"But later it will be okay?" he asked.

"Certainly. When you have evolved into a more conservative race—such as our own.

Then perhaps we can explore together—with our machines."

"But you don't want me to go now—as a scout?" he said.

Her voice became sullen. "You're no scout. You're a Competitor. Suffering or waste doesn't bother you. You'll try to go out there and populate the next galaxy just because it is there. You don't want to save anything for the future races."

They stared silently at each other for a moment. Then Zuliani shrugged and left. Their conversations were always the same.

## II

COLONEL BUDD took Zuliani through the mockup of the alien craft.

"I'd swear that their machines are getting simpler each year. Here is their astrogation center. See how all the star maps are projected from the Rim and again from the Hub. They don't seem to favor any one Arm more than another. Makes it hard for us to evaluate which zones they actually control.

"Their suspension apparatus is quite similar to ours—graded hypothermia, oxygen squeeze and hypertonics. Similarities in life support are obvious. Their physiology is almost identical to ours. But here is where the problems come in—bulkheads," said the colonel.

Zuliani palpated the mock-up walls—three and four feet of smooth-surfaced dividers between the ship's compartments.

"Our engineers tell us there is no reason for much of the space these walls take up. In some sections you could squeeze whole extra rooms into the damn walls. I'm suspicious—but I can't very well go cutting into their ship without their permission," said the colonel.

Zuliani shrugged again. After talking to the captive he'd accept almost any explanation for the unused space taken up by wall width—probably part of Dreg religion—to save some space for the future generations.

**T**HE next day Zuliani met one of the Dreg's machines—supposedly the Meck-angel which had raised the captive female assailant. It stood four feet high—a small head and body on soft, bulky treads. It had two arms, two eyes and a mandible-like mouth that clicked when it talked.

"Click, click. You Zuliani? You scout?" it asked awkwardly.

Zuliani fingered the hilt of a new broadsword that hung by his left side. A bright red cape draped his left shoulder, contrasting sharply with the silver sheen of his ceramic and foil costume.

"Me scout," he said.

His belt winced.

The force fields were shut down and the Meck-angel led Zuliani, the colonel and his entourage into the belly of the alien starship. A half a dozen Dregs of assorted sizes and body colors were installing a suspension tank for the scout. It was hard to believe that they were all genetic carbon copies—but by means of hormone management, their bodies had been molded—pituitary hormones for size, and gonadal hormones for sexual characteristics. Body paints added to the variety.

Two large male Dregs helped the parameds hook up the fifty-liter container of suspension fluids. The tank's membranes would use the alien's life-support fluids for the gas exchange.

"Click, click. What are in these small tanks?" asked the Meck-angel.

The paramed moved his index finger across the row of transparent bottles connected to the pump by a web of tubes.

"Induction sedatives. Energy concentrate. And also rewarming sedatives—" There was one bottle left.

"And—click, click, click?"

"And adrenal steroids to buffer his system against the shock," said the paramed.

Zuliani glanced at the controls. The low temperature readings frightened him a little. But he knew that the alien faster-than-light drive involved powerful

fields. Stress lines would polarize any living cell that was not frozen solid. He was not afraid of the hazards themselves—he simply preferred to be awake when he faced them.

But he would have to sleep through this one.

**B**ACK in the briefing room an aide asked for Zuliani's belt and took it out of the room.

"You are leaving tonight. The medic here is going to give you a run-down on this transparent mannequin, pointing out the latest data we have on the Dregs' personal circuitry. These small transducers in the skull may be used to communicate directly to the cerebral cortex. This could give the appearance of mental telepathy. The energy converters are here in the large leg muscles. Autonomics are heavily wired for monitoring—should be able to control pain and emotions better than you. And remember—the Meck-angel may very well be in charge, not the biological humanoid," said Colonel Budd.

As the medic began to outline the circuits, Zuliani wondered where they had gotten such detailed information. He hoped it hadn't come from a dissection. But then he caught himself—after all, these were aliens he was thinking about.

"Now about the Dregs'

genetics," the medic continued.

"They have an uneven number of chromosomes. This explains their dependence on machines for their reproduction. The nuclear material is decidedly human—just a minor error here," he said, pointing to the karyogram. "This then matches up as two X chromosomes—the larger ones. And this tiny one looks like a Y. We've decided that the best interpretation is an XXY anomaly. They are unable to make haploid sex cells—no eggs or sperms. But—by exposing the embryo to high levels of estrogen—they can cause the female organs to develop fairly normally. And a high testosterone level would give them a passable male body. But they're sterile."

Zuliani glanced up. "An extra chromosome?"

"Yes. They have forty-seven. Normal humans have forty-six—forty-four somatic and two sex."

Sterile, thought Zuliani—remembering the definitely male and female Dregs he had seen.

"Isn't there something that can be done to correct it? If there is just one extra chromosome?" asked Zuliani.

The medic smiled and continued that line of thought.

"Why don't we just pick out the extra one—leaving a normal cell? In theory it sounds fine. Actually there is a human genetic



defect like that XXY—it's the Klinefelter's syndrome. By removing an X it leaves an XY pair (normal male)—and by removing the Y it leaves an XX pair (female). Research biologists working with cell cultures from these patients have been successful in removing the chromosomes many times. They have to do it under phase microscopy as the living cell goes into metaphase at the beginning of cell division (when the chromosomes can be seen best). But so far—nothing. Going through the nuclear membranes with a hook is not the best way to get a good cell division. There are molecular and ionic forces at work, dividing up the genetic material. And sticking anything into the cell just wrecks everything. Maybe some day," answered the medic.

It looked easy on paper. Oh, well. Zuliani glanced at the colonel.

"Now Zuliani, we want to give you a posthypnotic suggestion. Something important to you and the human race—for when you arrive at the starship. You'll be traveling in the Dregs' ship, so there is no way we can communicate with you without their knowing. Just put yourself in a trance and the hypnotists will take over from there."

Zuliani snapped his mind out of his body, using the same techniques that protected him

from pain during the Games. When he woke up he was on the Implant Starship leaving the Galaxy for Andromeda.

### III

"How do you feel?" asked the high-pitched voice. "Fine, belt," Zuliani answered, picking up his familiar companion.

"It was a rough trip. They brought you up to a light sleep several times and questioned you about your mission."

"Did they learn anything?" asked Zuliani.

He could remember nothing that would indicate that this was anything other than a scout mission. Perhaps the post-hypnotic suggestion would clarify everything—but so far he drew a blank. His mind was a vacuum after his self-induced trance.

His belt continued: "When they started probing your mind I got so worried that my anxiety circuits must have overheated. They detected me and took me away. I don't know what happened the rest of the trip. How is your memory? Any big voids?"

"No. I don't think so. I guess they are pretty refined with their erasing. Or else they didn't find anything worth erasing," said Zuliani. "How does the starship check out?"

"Fine," said the belt. "A servo

took me through the hull. Plenty of Earth genes are represented in the suspension tanks—plants, animals, even microorganisms. But no humans.”

“The Clicks and Dregs were that thorough? I’m the only human on board?” asked Zuliani.

“Yes.”

“Well, I wonder what the colonel had in mind.”

“All you need is a source of female genes. There isn’t any skin under your fingernails, is there?” asked the belt—half in jest.

“No.” Zuliani smiled. “But the cells would have to be alive and capable of division in our Tattering apparatus. No sense in searching for secret compartments in my sword or other gear either. Outside of suspension the Dreg’s faster-than-light drive would have killed any cytoplasmic units they might have carried.”

They rechecked the gear and his outlandish costume. Nothing. He began to notice a number of unexpected aches and pains as the rewarming drugs wore off, so he settled down in his control couch to rest—and think.

“Message from the Dregs,” announced the ship.

“I’ll take it here,” he said and turned toward the viewscreen.

“Click, click. Have a nice scouting trip. Don’t forget to send your message torpedo back to Procyon. We wouldn’t want them to worry.”

“Can we answer that?” asked Zuliani.

“Probably,” replied the ship. “We’re still under light-speed one. But there is no need to. If we send the torpedo they’ll detect its trail through their system.”

Zuliani considered not sending it. That would upset the military and raise doubts about the Dregs’ good intentions. Perhaps it would lay the groundwork for a future space war. Well, he’d send it. Play by the rules and see what happens.

After the ship filled the torpedo’s memory banks he added a postscript with some of his suspicions and sent it back.

ZULIANI floated in the Tattering section while the machine harvested his buffy coat for cell cultures. About half a pint of his blood went through the separator, which removed his white blood cells. The red cells and plasma were transfused back. The buffy layer—a light yellow-white mixture of plasma and white cells—was suspended for future embryogenesis. About three ounces a day were harvested.

He tried to be cheerful. “We can start a monogenetic line and build a civilization that rivals the Dregs,” he said.

“Unfortunately that isn’t possible,” said the starship. “A cell line can not replicate indefinitely. After about fifty or a hundred

doublings the cell line dies out of old age. Each nucleus seems to have a molecular clock that ticks off the cell divisions. When an organism uses up its ticks—it dies. Sexual reproduction is needed to make a new organism with a new clock.”

He looked at the ship's optic pickup.

“But how do the Dregs manage? he asked.

“A hundred doublings, more or less, still gives you billions of individual cells. By using three-fourths of the doublings to make cell cultures they've grown a massive supply of genetic units. But that leaves only one-fourth of the doublings for each individual's life span—and you probably noticed that all the Dregs were under thirty. That is about a fourth of the usual human life span. However, there is evidence that they are getting to the end of their material. The Clicks will soon have to adopt a few humans or go on working without biological units for pets,” said the ship.

Zuliani doubted that many humans would accept the Clicks on the same terms the Dregs had. But then, the Dregs were quite sterile and had no alternative.

“**M**ESSAGE coming in.”  
“Click, click, Symbiot,” said the Meck-angel over the viewscreen.

The appellation depressed Zuliani, but that was what he had become—a symbiot. A human alone in intergalactic space, away from his species and dependent on machines for asexual reproduction.

Then the alien machine shucked its angular jaw. Its voice lost its metallic quality as a featureless, egg-shaped “head” drifted up from the silent husk of its robot facade.

“Go on to the next galaxy and explore. Live with your machines, Symbiot. But go knowing that you failed to deceive us. We removed your uterus and ovaries, so you can't contaminate Andromeda with your primitive race,” said the alien.

Zuliani didn't understand.

The message continued: “Foolish, Our technicians knew that your steroid treatment was a protective cover for a graft, but female sex organs were so obvious! But a hermaphroditic space scout would be your race's answer to the problem we have offered—reflecting the ingenuousness of a race that has been in space only a few centuries—”

The message became fragmented as their acceleration carried them up into light-speed and the cone of blackness blotted out the center of the screen.

Zuliani palpated his abdomen. Syntheskin still covered his body, sprayed on to protect him from

friction during his suspension. A tender spot below the umbilicus? Masked by the generalized aches and pains of rewarming and hidden under the syntheskin, he found the small incision in his lower abdomen. So that was it! The colonel must have bungled the posthypnotic suggestion, but he could imagine what it had been. Fill the sperm banks first—since the same body can't produce both eggs and sperm at the same time. Then with a heavy dose of estrogens he could bring the infantile uterus and ovaries to maturity in a few years to provide the eggs. Basic biology. Almost too basic. The Clicks had discovered it and thwarted him. Mankind would have to wait a while longer before it could go Out Galaxy.

Depressed, he went back into suspension to wait out the long trip.

**M**ANY years later the starship orbited a likely looking star in the Rim of Andromeda. There were two planets to choose from, both Earthlike. The Tattering systems activated. Mobile surface units were put on both planets to compare the environments. The nearer planet finally was selected and Zuliani was rewarmed.

His memory was intact and he was still depressed by his defeat at the hands of the Clicks. Then a cold fear dampened his axillae

and bleached out his adrenals. The Tattering apparatus contained males and females—fetuses of all sizes and colors.

"That is a Click trick—hormones, dye. What am I on? A Click ship?" he asked.

His belt reassured him: "This isn't a Click ship. I would know. Take me to the Tattering controls."

He studied the controls. His belt's optic pickup focused on the readouts.

"No overriding hormone controls here. Those fetuses are developing with their own hormones and genes," said the belt.

"But those were my cells. I'm not a mosaic. I'm just one individual," he protested.

The starship activated a viewscreen in front of them and projected the standard list of 1,034 genetic types of Earth humans.

"These red arrows indicate the genetic types we have already identified in the incubators. Red dots are probables—yellow dots are possibles. Apparently your bloodstream was filled with the Rainbow Mix of white cells just prior to suspension. With an umbrella of steroids to prevent rejection most of the cells survived and are now producing daughter cells. You have acquired mosaicism," said the ship.

"What will that do to me?" he asked apprehensively.

"Nothing. We'll harvest buffy coat for a couple weeks and then stop the steroids. After that, your own antibodies will clean your system of any foreign cells," said the ship.

Zuliani smiled. The Rainbow Mix—designed for suspension-storage in the Tattering apparatus—but evidently capable of setting up a limited kind of "housekeeping" in the vascular spaces of his spleen, lymph nodes and marrow. He'd get rid of them before they got a good hold on his marrow. He didn't want them to reject him. But meanwhile, they represented mankind.

**T**HE human race had come to Andromeda in the body of Zuliani. Now it was poised on the rim of that Galaxy—poised and ready to pounce—spreading

babies, the picnic litter of civilization throughout the star systems.

Zuliani walked from the cornfield into the Meck nursery, brushing pollen from his shoulders. As he waded among the smiling faces, distributing pats and words of encouragement, he reflected on their rainbow skin colors: reds, whites, browns, yellows. Outwitting the Dregs with mosaicism had been easy, for the Dregs were really a clone race—monogenetic. Single genetic pattern and single antigenic pattern. Their cells and organs were freely interchangeable between individuals. But, because the transplanted tissue lost its donor identity in the Dregs they had no way of detecting it—therefore they couldn't even understand the theory of human mosaicism.

And therefore humanity would soon own another galaxy. ●

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## WORLDS OF TOMORROW

Watch for the big Fall Issue!



# THE LAST TRUE GOD

PHILIP ST. JOHN

**K** EIR SOTH lifted his eyes wearily from the tattered fragment of a book he was trying to read as he heard the gritty cycle of the airlock. He sighed and rose to his feet to stare through the left vision port at the alien landscape beyond the ship.

Melok was a harsh world. Even at sunset it showed no softening of the raw desert that ran directly to the ugly brick towers of the city to Keir's right. The sky was dull with a thin overcast of dust and haze. Three miles away most of the red sun was hidden by

**Superstition rests on  
error. Religion worships  
the truth. Between  
must lie—confusion!**

the immense pyramid that was the native temple. Already there was a yellow wash of light glowing from an opening in the fane.

Por Dain came into the control room to stand beside him. The scientist was older than Keir and slightly shorter but they might have been brothers from their looks. Both were normally dark of complexion and abnormally lean and sharp of features. Por Dain had removed his protective garment but sand and grit still clung to the creases around his eyes. Fatigue from the double gravity of Melok showed in the droop of his shoulders.

"Five thousand light-years of searching space in this can," he muttered. "Then, less than thirty parsecs from home we find—this. By Earth, I'm tired of all these superstitious savages and their tin god!"

Keir Soth winced at the oath, reaching out to touch the tiny emblem that represented a hemisphere of lost Earth. He was not, of course, superstitious. But childhood habits were hard to break.

Por Dain snorted. "Can't you get it through your head there's no truth to the legend, Keir? How could any planet wrap itself in a silver haze and then just disappear—supposedly into some mystic higher dimension—to leave its colonies stranded? Tommyrot!"

"But we found the picture of just such a happening on that world in the third quadrant," the captain protested.

"A world that had been barren of human life for at least twenty thousand years," Por Dain reminded him. "Do you think our legend would have lasted that long?"

Keir Soth shook his head reluctantly. There were legends of some great war in the heavens that had blasted civilizations back some fifteen hundred years—and those were probably true. There was even evidence that Melok itself might have been the enemy world, since it had been rendered almost lethally radioactive at the same time. Its atmosphere still contained more radiation than Keir found comfortable to think of. But a legend older than twenty millennia. . . ?

And there were other puzzles. If men had been colonizing worlds so long ago, why were there no ancient and advanced worlds? Did every planet rise to spew out colonies and then die in some new holocaust of war with those colonies? Was life so stupid?

**L**YSSA the Novitiate came into the cabin then, bringing broth and platters of rations for them. She was quite typical of her kind—blond as no other women were, slight, resembling a porcelain doll. The girls who served Earth were carefully bred to look alike.

Surprisingly, Por Dain made room for her on his seat. The old agnostic usually avoided her, bitter at the law forcing all ships to carry at least one Novitiate. She smiled her usual pleasant and empty smile at him as she began the evening invocation in the ancient speech.

*"F I forgethee Ozine. . ."*

"She did fine today," Por Dain admitted when he saw Keir's questioning look. "She talked that high priest Shaggoth into letting her up by that Earth-damned tin god of theirs and she planted three pickups."

She made the circle of Earth but the blasphemy didn't seem to bother her.

"Shaggoth calls it the last true god," Lyssa said.

She had been uncomplaining throughout the voyage. After finding the pieces of books on the ancient planet, she had even begun teaching them the ancient tongue. That had proved fortunate, since the natives of Melok also used it for their ritual and Shaggoth spoke it enough like Lyssa's version to be understood. She'd

proved helpful enough on the voyage. Besides, men needed a woman on a long trip.

Why Shaggoth seemed to accept her was another puzzle about this dratted world. He had been rough enough on Por and Kier, forbidding them to come within three hundred feet of his fane. And he had refused to let even the girl see his sacred books, though he made no secret of their existence. The scholars back on Homeworld would give a dozen fortunes for the legends of any alien world, too!

It was dark outside—except for the red light of Melok's four visible moons—when Por Dain finished his food and stood up to try the tricky outside receptors. The old man's hands shook with fatigue as he tuned them. Then he grunted with pleasure and surprise. He had been tinkering with the receptors for weeks—and now at last one seemed to be working properly. It showed the inside of the temple clearly. Shaggoth was fussing about with bits of wire, making happy sounds. The high priest was a dark, hairy man, grotesquely short and ugly. There was something indecent about his expression and his chuckling.

Then the focus cleared for depth. For the first time, the two men saw the god worshiped on Melok.

"A robot!" Kier exclaimed. "A robot like the legends in the books



from the ruined planet.”

Por Dain nodded slowly. “Looks like it. I knew it was metal—yet how can it be? Metal would have gone to pieces by now. It must be some kind of statue shaped of tin and made to look like the robots their legends described. These savages are worshipping a machine.”

IT WAS an ancient piece in any event. Dust and grime had been polished from it but there was an unmistakable patina of centuries. It was vaguely manlike, though its face gained the touch of nobility without any definite features.

“Maybe it is the wreck of a real robot,” Por decided. “If the ancients before the bombing here had some of our alloys—it could be. Now there’s religion for you, Keir. A race of men blindly worshipping something they made for a servant.”

Lyssa touched the Earth emblem but her smile remained unchanged. She no longer protested Por’s remarks. Instead she pointed to Shaggoth, who was blowing out the torch and turning down the gas mantles.

“He’s coming here,” she said.

In that she was right. The pickup showed him moving across the sand toward them, badly distorted but recognizable.

Por had turned the gain up enough to see by the dim temple

lights. He caught Kier’s attention and began tracing the thing Shaggoth had been working on.

It was a weirdly wired mess of coils and blocks of some kind, seemingly directed toward their ship. Por pointed out where the wires led from it and were either stuck on the robot body or somehow plugged in.

“Must be a mockup of some machine from the legends,” Kier guessed. “Ritual magic—similarity principle. But does he think some kind of god power is still generated in that creature?”

“There’s always power in the god,” Lyssa informed them. “Shaggoth has bragged of it. He makes miracle fires with it.”

Any power in those batteries had been dead for millennia, Kier realized. But a clever priest could fake something to convince his followers.

“Maybe he’s coming here to warn us he’s making big medicine and we’re in his power,” Por guessed.

Lyssa shook her head, her smile deepening slightly. “He’s coming to see me. He asked me today. I think he wants to be converted to the blessed lost-Earth faith.”

“You’re not going out, Lyssa,” Kier told her sharply. “And you’re not letting him in.” He flipped a toggle to cut in the hull pickups. Around the ship were some fifty partly concealed figures waiting patiently, as they had waited every

night. "That's an order, Lyssa. Stay away from the airlock until morning."

She nodded faintly, then more firmly at his expression. "All right," she agreed softly, though her smile was almost gone. "Good night, then. I'll sleep now."

They heard her sounds of final prayers and the faint noise of her body sinking into the hammock in her tiny room. After a while Por Dain also retired.

**K**IER sat watching the high priest. Shaggoth reached the ship and knocked softly. Then he squatted down in the sand, motionless and patient. Kier waited but nothing else happened. And finally he released his control seat and sank onto it. The last sounds he heard were the heavy breathing of Por Dain and Lyssa's faintly adenoidal snores.

A heavy hand on his shoulder shook him back to consciousness. Por Dain stood over him, scowling and swearing.

"She's gone! The Earth-damned crusading little fool—she pulled a sneak and they're all gone."

Kier snapped out of his stupor. By the clock, six hours of the long Melok night had passed since he fell asleep. He saw that the outside hull pickups were on, showing no sign of the natives or of Shaggoth.

"We've got to get out and res-

cue her," he muttered thickly, reaching for the caffeine tablets.

"No chance. Holy Earth, look at them!"

Por Dain had turned the pickups toward the temple and the distorted one showed an enormous crowd of Melok natives streaming from the city and mounting toward their fane.

Then the one good pickup caught Shaggoth as the priest moved into view. Gas jets were now casting a half-light over the temple, and the priest was again busy with his wired contraption.

"Damn him," Por growled. "He isn't as ignorant as I thought. That savage is tuning a circuit, looks like. Ah!"

As he spoke, the contraption seemed to come to life. A blue glow ran over the coils and turned white. It seemed to spread like a spark climbing a Jacob's ladder. Then it was a faint glow of spherical shape that stretched and grew too thin to see.

Then acolytes appeared, bearing Lyssa. She was trussed firmly but seemed unharmed. She made no sound but her smile was gone. Her eyes, wide and round with fear, were centered on Shaggoth.

A chanting began as the acolytes laid her on a stone block before their last true god. Shaggoth approached her, holding two wands from which wires led to the robot's body.

**K**EIR SOTH found himself blaspheming heavily as he reached for the weapons in a drawer of the control panel.

But Por Dain held him back. "Don't be a fool, Captain. It's a bluff. He wants us to come out to rescue her. That's his whole plan. Then he'll have the ship. There must be a horde of the savages waiting below the hull where we can't pick them up."

"Then we'll take the ship there."

"No." Anger mingled with reluctant respect in Por Dain's expression. "I recognize that field he's generating now from the layout of parts. We've got one like it on Homeworld—only no bigger than a pea yet at maximum. You can't get through. It would damp the engines half a mile before we reached the pyramid."

No wonder the priest had refused to let them see the ancient books. He must have a technical library there—and somehow the old faker comprehended what was in them, however little he used them for the good of his followers.

Shaggoth was staring directly into the pickup, as if aware that they could see him. Now he brought the wands into contact with Lyssa's body, smiling thickly as she screamed.

Keir began warming the engines. "I'll take the ship in as close as we dare," he said. "Then

we get out and kill as many as we can trying to reach her."

Por Dain began loading the weapons as the engines warmed.

Again Shaggoth brought the insulated wands against the Novitiate's body. Her muscles tensed in a wild spasm but the savage chant rose to cover any cries she made.

The ship was just beginning to respond, rising sluggishly. Keir grinned thinly, hoping a horde of Melok natives were caught under that pressure field. The ship couldn't yet operate well but power was building up.

Again Melok brought down the wands. And this time the chant quieted.

"Help me—" Hers was a cry that should have torn the heart from a brazen idol. "For the love of Earth, help me—"

And help came.

**T**HE robot figure moved. A metal arm swung down to tear the wires free from its body. Slowly, ponderously, the figure straightened. There was a creaking sound as the limbs moved, and dirt and scale chipped away. Then it was erect.

In two strides the metal figure had caught the frozen priest and broken him like a thin stick across one knee. Shaggoth was flung back into the mob of screaming, fleeing worshippers.

For a moment the robot halted,

staring toward Lyssa. It sank to one knee. Shaggoth was flung gesture of some kind. A bass voice sounded over the pickup, using an oddly pure-sounding form of the ancient tongue.

“Saintly One, I—”

The words cut off as the robot bent closer. Then something like a sigh came from it. It stood up quietly, moving to snap the bindings away from Lyssa’s limbs. She lay limp. The metal arms reached under her to lift her.

The robot turned then, facing away from the pickup for a long minute, its head up as if listening. Again there was a sigh.

“The field is too strong,” the even bass voice said in the ancient tongue. The figure turned, searching until it located the pickup.

“I go by another way,” the robot said slowly and carefully. “Your lady is safe but you who are in the ship must wait until I appear again.”

It turned quickly toward the throne on which it had sat. A foot reached out to kick the massive structure aside, while a hand made a pass through the air. Almost instantly, an opening appeared in what had seemed solid rock. The robot stepped into it, carrying the Novitiate, and disappeared. Immediately after it was gone the rock closed tightly. A small explosion seemed to take place inside.

Keir had the ship up but now there was no place to go. “Wait until he appears where?” he asked bitterly. “Or until he can get safely hidden away with her in some hole in the ground?”

“Try cruising slowly toward the pyramid,” Por Dain suggested. “Maybe there’s a secret shaft out to the bottom and he’ll show up there.”

“He’d better.”

**B**EFORE the ship was in full motion, however, they saw the robot again. This time he was only a dot on their screen until Por raised the magnification of the hull pickup. He stood three miles from the pyramid on a narrow ledge of the most ancient of the brick structures. Lyssa was still unconscious in his arms. Somehow he had traveled that distance in less than five minutes. Now he stood staring into space, as if listening to a voice from the stars.

Then his head dropped. “So long?” he asked. “Fifteen hundred years from the radiation that paralyzed my mind until the right words could waken me?” He sighed again and seemed to listen once more. He nodded slightly and turned to face the ship. From the receiver of the now useless temple pickup a softer and warmer voice spoke, using standard Homeworld speech. “Bring your

ship close to me and open your airlock. I will leap across. And do not fear. I shall be the Watcher for Homeworld now, since these people have forfeited all right to one."

Keir Soth manipulated the ship very delicately across the small distance while Por Dain went down to the airlock. It was tricky maneuvering but Keir had time enough to see a series of small explosions running like a mole's trail from the pyramid across the desert to the big brick building. Whatever secret way the robot had known was destroyed now.

The metal figure leaped when the ship was fifty feet away. Keir flinched and held his breath. Then he heard the lock cycling to full space closure and the robot came into the control room, with Lyssa conscious and smiling her pleasant and empty smile beside him. Por Dain stood in the doorway as the robot glanced around at the controls.

"I have brought the few books from here that you can use," the robot said, pointing to a small sack Por Dain was holding. "There is no need to wait here longer."

He slipped confidently into the captain's chair, reaching for the controls. With unerring accuracy he plotted the course toward Homeworld and the ship began its gradual acceleration into the red sky and toward space.

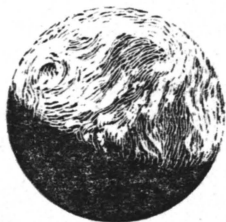
Keir Soth shook his head, benumbed by wonder. "How could Melok have lost any war if they could create robots like you?"

The Watcher looked back at the three humans and his voice was soft but filled with immense pride. "I was never created on Melok," he said. "I came from Earth!"

There was only the soft drone of the ship's engines as Lyssa and Keir Soth slipped to their knees, to be followed a moment later by a former agnostic, Por Dain. ●

# THE STORY OF OUR EARTH

Willy Ley



## 1. How Long Is the Past?

● News of the sudden untimely passing of Willy Ley has reached us just as we go to press. His death shocks the worlds of science and science fiction. He leaves an empty place in the hearts of his co-workers and friends, a place no other can fill—for Willy Ley was unique.

In his honor, and because of its interest and significance, we shall publish posthumously that portion of his new series with which he has supplied us. It concerns the Earth's geologic history, the emergence of life, and its fascinating evolution in multiple forms—including man.

ONCE upon a time much of North America was covered by glaciers. At an earlier time the central portion of the North American continent had been flooded—with “sea serpents” in the water and “flying dragons” overhead. And before that, luxurious but strange jungles grew in Pennsylvania, leaving coal seams behind. Before that there was a time when the land was devoid of life. And once upon a time the earth did not exist.

First question—what does “once upon a time” mean in years? In plain language—how old is the earth?

Who knew? For two centuries or so there was a traditional answer. Didn't it say in the margin of the Authorized Version of the Bible that the world had been created in 4004 B.C.? Most of the people who quoted the figure knew that it had been supplied by the Irish archbishop James Ussher (1581-1656), however very few knew how it had been established. What the good Ussher had done was to add up the genealogies given in the Old Testament but since the statements are often not very explicit quite a number of assumptions had to be made.

For that reason the Roman Catholic Church disapproved of the method. And Jews and German Lutherans said that rabbi Shemayah Hillel, a pupil of the High Rabbi Loew of Prague—he, who is said to have made the Golem—had done the same about a hundred years earlier and had done it better.

At any rate, Ussher and the Jewish calendar do not agree. According to the Jewish calendar, it is now 5730 years since Creation while according to Ussher it should be 5973.

Leaving theological thinking behind we can now progress to a man who thought that it should be possible to calculate the age of the earth. He was a French count who was in addition an excellent mathematician, who had translated the works of Sir Isaac

Newton into French and who was also an all-around naturalist, usually referred to as Buffon. His full name was Georges Louis Leclerc, Comte de Buffon and he lived from 1707 to 1788.

His reasoning was that the earth must have been a part of the sun at some time and after it had been split off the sun (by a glancing blow of a large comet, he thought) it naturally was hot. Now it was no longer hot, at least not at the surface. How long would it take a sphere of metals and rocks the size of the earth to cool off from "very hot" to the present temperature?

To find the answer he ordered a number of spheres made. They were all of the same size but of different materials—iron, brass, copper and various kinds of rocks. Next he had a number of wire holders prepared. The spheres rested in these, making minimum contact with anything but the atmosphere. After that he had a blacksmith heat all these spheres in his furnace, with orders to run the furnace as hot as he possibly could. When the spheres were hot they were placed in the wireholders and Buffon sat, watch in hand and waited for them to cool off. Every once in a while he would touch them, first with a gloved hand, then, when it seemed safe, with his fingers. Each time he wrote down how many minutes had elapsed. The

most important times were when his fingers could just stand the heat of the spheres and when he could not longer perceive a difference between the temperatures of the spheres and the temperature in the room.

Then he started calculating, trying to apply the cooling times he had found to a ball of rock the size of the earth. He found that the whole cooling period would amount to 74,832 years for the earth. About 25,000 years ago the earth had cooled off enough to be touched and Buffon assumed that life had appeared about then.

Any high school physics student of today can think of a number of flaws in the experiment. For example any temperature which did not even melt the metals obviously was not high enough. And the spheres were cooled by both radiation and convection, while a hot planet in space would cool off by radiation alone. But Buffon's experiment had its value as an attempt at actually measuring the age of the earth. And at least it showed that that age had to be expressed in tens of thousands of years.

**T**HE next attempt to calculate the age of the earth was not made until 1860. Geologists had been busy in the meantime. Austria, France, Germany and Russia had their share of

geologists during the early part of the nineteenth century but England and especially Scotland provided an unusually high number. Many of the latter were amateurs in the sense that they did not get paid for their geological explorations. But they were good amateurs. More by coincidence than for any other reason, many were churchmen.

They first established that some layers of rock were older than others. The rocks of Wales seemed to be especially old and came to be referred to as Cambrian, for *Cambria* is the Latin name of Wales. The famous chalk cliffs were indubitably younger than the rocks of Wales but older than certain layers of sandstone. A nice, simple theory was promulgated: the Primary Period was exemplified by the Cambrian, the Secondary Period by the chalk cliffs. The Tertiary Period was the time during which these sandstone layers had formed.

Unfortunately the simple theory did not hold up for long.

There was coal. Lots of coal—its formation must have covered a period of its own. Next some German geologists said that the Jura mountains of southwest Germany and Switzerland did not fit into the basic scheme—the theory had to be revamped, especially after Jurassic formations had been discovered in England, too. By a happy coincidence the



new scheme held six geological periods and, of course, the amateur geologists—remember that quite a considerable number of them were clergymen—thought this a fine agreement with the “days of creation” of Genesis. The new scheme looked as follows:

1. Laurentian Period—by definition the oldest
2. Cambrian Period—now the second oldest
3. Carboniferous Period—the time when the coal seams had been formed; the name comes from *carbo*, Latin for “coal”
4. Jurassic Period—after some discussion conceded to be older than the chalk cliffs
5. Cretaceous Period—the time the chalk cliffs were formed; the name comes from *creta*, Latin for “chalk”
6. Tertiary Period—the youngest of all, which kept its name even though it did not make any sense any more

Not much later the Russians started publishing papers that showed that the rocks in the Russian District of Perm did not fit into the scheme since these Permian rocks seemed to be older than the German Jurassic rocks but probably were not old enough to belong to the Carboniferous Period.

Whether there had been six or seven or even more geological periods was a minor question by

comparison to problem of how long it took for these periods to follow each other. Nobody mentioned the 4004 B.C. date anymore except in some rural areas where few people read and knowledge was word of mouth from generation to generation. But how much time had truly elapsed? The German physicist Hermann von Helmholtz (1821-1894) had established an upper limit based on the “fused” theory of the origin of the solar system by Immanuel Kant (1724-1804) and Pierre Simon, Marquis de Laplace (1749-1827).

Their ingenious theory assumed that the solar system had really begun as a diffuse cloud of cosmic dust and gases. This cosmic cloud was to contract slowly by the mutual gravitational attraction of the gas molecules and particles. As it contracted it grew hot, especially the central condensation that was to become the sun. The rapidly rotating sun was then supposed to have produced the planets one by one, by throwing off a ring of matter that had formed around its equator because of the fast rotation. The whole idea was discarded later but when von Helmholtz did his work no doubts had yet been uttered.

Hermann von Helmholtz approached the problem as systematically as possible. The sun shone and threw vast amounts of energy into space every mo-

ment. That energy had to come from somewhere and the only source Helmholtz could think off was contraction—a major part of the theory. This continued contraction because of the mutual attraction of the molecules meant that the sun was gaining density at every moment. Calculation said that after another 17 million years the sun would have contracted as much as it possibly could. Then it would radiate its heat away into space and would stop shining. But the geologists were not so much interested in the 17 million years of sunshine to come—they wanted to know what had gone before.

In the past the sun had been less dense and had, therefore, taken up a larger volume of space. Considering the rate of shrinkage that von Helmholtz had already calculated, the diameter of the sun must have been 186 million miles 50 million years ago. One hundred eighty six million miles is the diameter of the earth's orbit. This meant that the earth could not possibly be older than 50 million years. Actually it had to be younger—how much younger remained to be seen.

By 1890 the geologists had nine geological periods on their lists but their estimates of the duration of these periods were mainly guesswork. They had two clues. One of which was evolution—pretty generally accepted by

then—while the other was “rate of sedimentation.” All one could say definitely about evolution was that it must have taken a long time. Nobody could tell at what rate evolution progressed and it was doubtful even then that the rate was consistent. We now know that at some times in the geological past evolution proceeded at a surprisingly fast rate, while there seem to have been long periods during which the picture did not change much.

Nor was the rate of sedimentation more helpful.

Of course one could observe how much sand and mud a given river would deposit in a bay per year. One could establish how much of the yearly total had been deposited in late spring and how little in winter. Then, having found that the average was half an inch per year one could be quite close to the truth if one assumed that the half inch of sand and mud would make a layer of sandstone slightly less than a tenth of an inch in thickness by being compressed into stone. And it was then a question of elementary arithmetic to calculate how many years had been needed to deposit a 250-foot thickness of a sandstone layer. Unfortunately different rivers perform at different rates, depending on the rate of flow of the river as it fought its way to the sea—and also on the material along the course of

the river. Estimates of how much time was required to form a given deposit were simply estimates.

Moreover, if an area had been flooded and sediments had formed and it subsequently became dry land—only to be flooded again after some time, the number of years for that “some time” were not even an estimate but just a guess. Small wonder that different books by different and respected experts gave figures for the same phenomenon that had nothing in common, except for the fact that they represented vast ages compared to the human life span. Some time ago I found a beautiful example, two estimates of the age of the black slate in which a fossil reptile (*Ichthyosaurus*) occurs. It had been found off the British coast (Isle of Wight) and, in much larger quantity, in southwest Germany. One estimate was an age of two million years and the other was five or six million years. Now if one of these estimates had been about the British deposits and the other about the German deposits one might consider that the different localities somehow played a role. But both estimates referred to the German deposits in Swabia.

PEOPLE who were not geologists regarded even these figures with a mixture of alarm and contempt. A teacher of mine often related the story that he had taken

a course in ancient history at the University of Heidelberg during the last decade of the nineteenth century. The historian had told his students that chronology was fine back to early Greece, say 800 B.C. Of course Egypt, Assyria and Babylonia were older, though one could not say by how much.

“All in all,” my teacher quoted him as saying, “history will add up to about 6000 years and that is what we do now. Now if you should ask a geologist you’ll hear that he counts in millions but that has nothing to do with science any more.”

And at that time geologists were timid indeed. The total duration of all geological periods, they said, might add up to ten million years.

Interestingly enough, the discoveries that were to provide the answer were just being made at the time when my teacher’s history professor made his remarks about the “unscientific” behavior of the geologists. The discoveries were the ones that showed that an atom was not an indestructible and eternal super-tiny sphere of matter but something that had a structure, too.

One day in 1901 at McGill University in Montreal, Canada, a discussion took place that has been partly preserved. The two men involved were Sir Ernest Rutherford (1871-1937) and

Frederick Soddy (1877-1956), who was a graduate of Oxford and had just joined forces with Rutherford. They studied the long-known element thorium which gave off what was then called "emanation." First they found that that "emanation" did not come from thorium but from something else they called thorium-X. Then Soddy found that the emanation was a gas like argon—actually it was the radioactive gas radon which had not yet been discovered—and when he felt sure of the facts he said: "Rutherford, this is transmutation—the thorium is disintegrating and turning itself into an argon gas." Rutherford did not doubt the facts either, but answered: "For Mike's sake, Soddy, don't call it transmutation! They'll have our heads off as alchemists." So in their publication they spoke of "sub-atomic chemical change."

An American, Bertram Borden Boltwood (1870-1927) believed Rutherford and Soddy and after a year or so of work announced that the parent substance seemed to be uranium. Uranium became radium after an intermediate stage and radium, going through several other stages, finally became lead, which is no longer radioactive. It must be remarked here that all the early descriptions are somewhat vague and full of names one can't find in a handbook any

more, because the concept of an isotope was still in the future. Isotopes are different versions of the same element that are chemically the same—but their atoms have slightly different weights. Since this idea had not yet occurred to anybody the early researchers believed each time when they had discovered a new isotope that they had discovered a new element.

After Soddy had left Rutherford the latter acquired a new assistant: Otto Hahn (1879-1968), who was also interested in thorium and had discovered something which he called "radio-thorium." In Canada he discovered "meso-thorium" which then turned out to be a mixture of meso-thorium 1 and meso-thorium 2. (Actually they all were just various thorium isotopes.) Hahn thought that there was in addition a second line of "natural transmutation," beginning with thorium and also ending up as lead. Though he was an accomplished chemist he did not succeed in detecting any difference but still thought it prudent to speak of "radium-lead" and "thorium-lead."

**W**HILE these men still did not know about isotopes the very important concept of "half-life" had been evolved. Radioactive elements changed into other elements and that took time. But

one could not speak about the "life-time" of a radio-active element, for that would depend on the amount you had. A large sample naturally lasted longer than a small sample. However, one could, regardless of the size of the sample, say that after so and so much time half of it would have changed into something else—hence half-life. It was found fairly fast that there was no way of influencing the half-life of a naturally radio-active element. It was also found that the half-lives of different elements were of different lengths.

A few samples (modern figures) must be given here to show how it works. Element no. 85, astatine, of atomic weight 210, has a half-life of 8 hours and 30 minutes. Element no. 89, actinium, of atomic weight 227, has a half-life of 22 years. Element no. 84, polonium, of atomic weight 209, has a half-life of 103 years and element no. 88, radium, of atomic weight 226, has a half-life of 1620 years.

These short half-lives could be established after a few days, or months, of observation—I should add here that astatine was not yet known. But when it came to uranium of atomic weight 238 things were difficult—we now know that its half-life is 4500 million years. But once it became apparent that the half-life of uranium had to be expressed in

millions of years a clue to the age of the earth had been found. Look for uranium-bearing rocks. Check the percentage of uranium, then check on the percentages of other elements that are the "descendants" of uranium, mainly lead. And you know how old these rocks are. Early figures which we know now to be too small were that way because at the time the half-life of uranium had still been underestimated.

And that is why we know that those famous ichthyosaurs of Swabia enjoyed life not a million years ago or five million years ago—but 140 million years ago. Coal turned out to be about 300 million years old. But the chalk cliffs could boast an age of only about 70 million years.

In the meantime the geologists had rewritten their table of periods, going by their own evidence—the atomic scientists only added the proper age figures. The whole history of the earth, beginning with the first clear fossils, was subdivided into three eras. There was the Paleozoic Era that began 550 million years ago and lasted for 355 million years, comprising six geologic periods, named Cambrian, Ordovician, Silurian, Devonian, Lower Carboniferous (Mississippian in the U.S.A.), Upper Carboniferous (Pennsylvanian in the U.S.A.) Permian.

Then followed the Mesozoic

Era, beginning about 200 million years ago and lasting for 135-140 million years. It comprised only three geologic periods: Triassic, Jurassic and Cretaceous.

The newest is the Cenozoic Era which began 60 million years ago. It is equivalent to the old Tertiary period which still bears that name and which has been divided into half a dozen sub-periods called Paleocene, Eocene, Oligocene, Miocene and Pliocene. Then came one million years of Pleistocene, otherwise known as the Ice Age which ended 11,000 years ago. And the second half of that small remainder is what is called "history."

I said a while ago that the geologists wrote their own table and that the atomic scientists only added figures. That is correct for the periods since the time of the earliest fossils. Where the atomic scientists did add something was at the front end, so to speak. Everything older than the Cambrian period was logically called the Pre-Cambrian and its duration could not be guessed until dating by radioactivity proclaimed that some rocks had to be more than 3000 million years old.\*

The Pre-Cambrian was then split into Lower and Upper Pre-Cambrian and a duration of 650 million years was assigned to each. Subsequently this was increased to "750 million years or more" so that the beginning of the Lower Pre-Cambrian is now thought to have been 2000 million years in the past.

By that time the earth was fully formed, with a solid surface, with liquid water filling depressions and with an atmosphere. That atmosphere would not be to our liking—in fact it would kill us in about a minute—but it was an atmosphere.

How long it took for the earth to be formed by accretion of cosmic dust and gas is unknown, though the process is estimated to have taken around 3000 million years. What is important is that at some time during the Pre-Cambrian life originated. ●

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\* I never say "billion" because a billion is 1000 million only in the United States. Anywhere else beginning with Canada and Mexico, a billion is a million million. Hence I prefer to talk of thousands of million, if necessary. There are enough international misunderstandings as it is.

# Reading Room

LESTER DEL REY

FOR the past year one of the loudest literary controversies of science fiction has centered around a new novel by Norman Spinrad—one often encouraged by vigorous diatribes from Spinrad. Each step in its history was treated as a major disaster or triumph.

The publisher who had contracted for the book rejected it upon its completion. Nobody wanted it until it was finally serialized in the British *New Worlds*, where the postal service tried to suppress it. After that, naturally, the American publishers began bidding for it. Spinrad held out for a contract that would guarantee to preserve every word exactly as he wrote it. Then at

last we learned that art had triumphed; a contract was signed.

Now it is out in both soft-cover and hard-bound editions: *Bug Jack Barron* by Norman Spinrad (Avon, 95¢; Walker and Co., \$5.95). Now you can read it for yourself and you can determine whether—according to the Avon jacket copy—it should be damned as “depraved” or hailed as a work of genius. If you do, you may wonder what all the shouting was about.

Don't expect to be shocked if you've been reading many of the current best-sellers. Compared to Harold Robbins' *Carpetbaggers*, this will seem pretty tame. Aside from a heavy sprinkling of four-

(Continued on page 149)



## WHAT HAS GONE BEFORE

**BAT HARDIN** is a peace officer for New Woodstock, a small mobile artists' colony of trailers that is heading through Mexico toward South America. Many people live in such towns now, most living off their Negative Income Tax from the Welfare State, or Meritocracy. Bat feels he doesn't have enough "merit" for better work, since an Army test set his I.Q. at only 93.

Not all are poor, however. **DOCTOR BARNES** enjoys a chance to practice after his forced

retirement. And **DEAN ARMAN-RUDER** is an art dilettante who acts as mayor and is rich enough to keep a secretary named **NADINE PASKOW** and two servants, **MANUEL CHAVEZ** and his wife.

They stop for the night outside Linares. Bat and **FRED ZOG-**



# TOWNS MUST ROLL

*Mack Reynolds*



*BAUM*, who is a writer, go into Linares, where they sense surprising hostility. In a local bar they are forced into a fight. *Bat* escapes unhurt, but *Fred* develops a sudden severe headache.

Then *Bat* is forced to fight again when *JEFF SMITH*, an unreconstructed type of old-time

“southerner,” challenges *Fred* because the writer has been “bothering” *DIANA SWARD*, a pretty and talented young artist. *Jeff*’s biggest complaint is that *Fred* is a Negro and has no right to compete with him for *Diana*’s favors.

*Bat* reports to the town council,

*stressing the rising hostility from the local Mexicans. Then he takes off in his official car on a scouting trip to examine their route. On the way, he is stopped by an armed young Mexican who gives his name as JOSE. Bat is disarmed and blindfolded. He is taken to a place where someone named DON CAESAR, who talks like a polished gentleman, threatens like a wild bandit.*

*Don Caesar tells Bat that Mexico is being ruined by the relatively rich "Gringo" tourists who come in their mobile towns and turn the Mexican people into nothing but mendicants. Don Caesar heads a group sworn to stop this. If New Woodstock does not turn back to the United States, the town will be ambushed and everyone in it will be killed.*

*Bat is permitted to leave, but his gun and all-purpose phone are not returned to him. He goes back to report to the Town Council. Later, while they are discussing their best course, he finds his possessions returned to his car.*

*The Town Council calls a general meeting to decide what to do. And Bat starts to tell his story. But Jeff Smith interrupts to question whether there is anything to worry them. He points to Bat and ridicules the story of the threats. "It's all a damned lie," he claims.*

## VI

**T**HERE was another moment of shocked silence and then a muttering, then a jabbering.

Dean Armanruder rapped them to silence.

He looked at Jeff Smith, still standing, a defiant smirk on his face. The senior executive committee member said evenly, "Mr. Smith, you have either said too much or too little. Will you please elucidate?"

Jeff Smith was eager to do so. "For the first part of the story we have only the word of Hardin and Zogbaum—from whom we haven't as yet heard, though I assume he'll back his fellow bar-room brawler. They say they went into town and that the Mexicans started a fight. That's what they say. Evidently, the Linares chief of police sees it otherwise. The second part of the story has nothing to back it whatsoever. Mexico is a civilized country. Armed vigilantes don't attack peaceful tourists. What Hardin's purpose is, I wouldn't know. For some reason he evidently doesn't want to see New Woodstock continue to our destination, South America. He wants to turn back. Possibly he's afraid of the long trip ahead and would rather remain in the States where life is admittedly easier, especially for the town's peace officer."

The assembly buzzed again and Armanruder rapped for silence.

He looked at Bat Hardin and said, "Do you have anything to say to this, Mr. Hardin?"

"No," Bat said.

Armanruder looked back at Jeff Smith. "And what is your proposal, Mr. Smith?"

"I propose, first, that we go

on, as planned. And secondly that we depose this alarmist and elect a new police officer. I make it a motion."

There was silence for a moment.

Finally, Jim Blake said, "For the sake of bringing it to the vote, I'll second that motion. And I'll also vote for Bat Hardin being retained."

Armanruder said, "Motion has been moved and seconded. Bat Hardin to be dismissed as police officer of New Woodstock. Miss Paskov, are you tied into the computer for voting?"

"Yes, sir."

DEAN ARMANRUDER looked at the assembly. "To simplify, if there is no objection, cast your vote for either Mr. Smith or Mr. Hardin."

There was little hesitation. Each member of the assembly put his pocket phone to his mouth and cast his vote.

Nadine Paskov said dryly, "There were two votes for Mr. Smith."

A laugh tittered through the assembly.

Jeff Smith flushed angrily and sat down.

Bat Hardin, obviously, was gratified. He also wondered vaguely who had cast the second vote in favor of Smith, who had obviously voted for himself.

Armanruder was saying, "We have all, except two, evidently accepted the truthfulness of Mr. Hardin's story, that he was kid-

napped and the town threatened. How large an element has threatened us, we cannot say, but a threat has been made. Further comments before we put to a vote whether or not we retreat?"

Phil Terwilliger requested permission to speak.

He said, "It is all very well to be gung ho, to wish to press on into adventure. However, when my wife—who is already quite ill—and I voted to take this trip with the rest of the town, we did not expect to be bitten by snakes in Nicaragua, or buried by a landslide in Costa Rica, or. . ." His elderly voice went sarcastic. ". . . or even attacked by head-hunting Indians in Ecuador. We had been of the opinion that with the advent of the Pan American Highway it was quite possible these days to travel all the way to our destination in reasonable comfort and safety. However, if on our first day we are threatened by a body of armed men, then I think we have stuck our necks into something more than we had originally planned. I strongly urge that we turn back as a town. If you others vote to go on, then I, at least, will now disassociate myself from New Woodstock and return to the States to take up residence in some other mobile town or city."

There were others. They spoke in varying degrees of heat, indignation or fearfulness, some taking one side, some the other.

When it was finally put to the vote, four-fifths of the assembly were for going on. The remainder

refused to accept the decision of the majority and decided to return in a body to Texas. The returnees numbered approximately one hundred of the mobile homes, largely those owned by the more elderly and by those not really involved in the arts themselves but more or less hangers-on of the art colony.

THE question then became what to do with the community property such as the auxiliary vehicles and the town treasury, which was not overly large. The treasury was accumulated by a slight tax on all citizens of the town, or a community assessment if an emergency of more than usual magnitude developed.

Since the vote had gone so strongly for the element that wished to go on, it was decided that all auxiliaries remain with New Woodstock and that those who were returning be recompensed out of town funds for their share of what they left behind.

And the question then became, where were these funds to come from, since the treasury held no such amount?

This was solved by several of the more affluent town members such as Armanruder, Doctor Barnes and Jim Blake making a loan to the town which would be repaid as tax money came in. A small levy was also to be made, small enough not to be a strain even on citizens who existed solely on their Negative Income Tax, to help in the transaction.

Still another problem arose. Among those who were to return was the middle-aged Barbara Stevens, the competent nurse of Doc Barnes. He had two or three other practical nurses in the town, on whom he could call in emergency, but Miss Stevens was the only professional.

In all, the meeting of the assembly took several hours and Bat Hardin could see that they wouldn't be getting away that day. He didn't like it. He didn't like giving the vigilantes under Don Caesar the extra time to consolidate their forces and to prepare for whatever trouble they had in mind for New Woodstock.

However, there was nothing for it. Even after the assembly had adjourned, there was considerable to be completed in the breakaway of the hundred mobile homes that had decided to return to the States.

Bat headed in the direction of Sam Prager's home and repair shop.

He discovered Sam seated, sprawled rather, before his vehicles, in the same folding chair he had occupied at the assembly shortly before. He was scowling in thought.

Bat said, "Having second thoughts about going on?"

The other stirred. "No, not really. But I must say, I didn't expect to run into a hassle such as this so early in the game."

"Nor did I," Bat admitted. "I didn't know you were a Canadian, Sam—till you mentioned it."

"No particular reason to lean

on the fact. There's precious little difference between a Canadian such as myself and a Yankee such as you."

Bat had to laugh. "Calling me a Yankee is on the side of stretching a point. I'm getting called just about everything today, starting with Gringo this morning. But I'm somewhat surprised you're not with one of the Canadian mobile towns."

Sam shrugged. "Easier to get work in a Yank town. Not many of you have to work. You have Negative Income Tax. We haven't come to that yet in Canada. Knock on wood."

Bat looked at him. "You don't approve of NIT?"

"Nope. Makes bums of people. Man was created to make his bread by the sweat of his brow."

Bat nodded. "I think you're right. A man should work. Which brings us to the point. Did you finish repairing my phone?"

SAM stood up and turned toward the door of his combined home and shop. "Yeah. I had to put in an entire new unit, Bat. You going to pay for it, or should I bill the town?"

"Just to speed things up, I'll pay you. I'll take the bill to Armanruder later."

Bat Hardin followed the electronic repairman into his shop. Sam Prager had a licensed credit exchanger attached to his TV phone screen by reason of his trade. Bat Hardin put his pocket phone *cum* credit card on the screen and his thumbprint on the

square at the screen's side and looked at Sam.

Sam said, "That'll be twenty-three dollars and fifty cents."

Bat said into the screen, "Please credit to Sam Prager twenty-three dollars and fifty cents from my balance."

The screen said, "Transaction completed."

Bat took up his phone and returned it to his pocket. He said to Sam, "Do you have a gun?"

Sam said, "Well, yes. A carbine. I thought we'd possibly be running into deer country, wild pig and that sort of thing down in Central and South America."

"Does Edith drive?"

"Sure."

"I suggest that when we take off, you let her drive and you sit next to her with the carbine."

Sam hissed a low whistle. "You really expect trouble, don't you Bat?"

Bat didn't want to overly alarm the town. He said, "Not necessarily, but there's no harm in being ready. If anybody does take a shot at us, I'd like to see an *immediate* response big enough to set them back on their heels."

Bat started in the direction of Dean Armanruder's home, thinking about it. The instructions he had just given Sam Prager had come to him on the spur of the moment but the more he considered it, the more he liked the idea.

ARMANRUDER was standing before his mobile mansion talk-

ing to Doc Barnes. Bat came forward and said to Armanruder and the other member of the executive committee, "I think it might be a good idea if you'd give me carte blanche on organizing the line of march tomorrow."

"How's that, Hardin?" the former magnate said.

"Well, I've got a double motive. First, I think common sense dictates that we take off from Linares as ready for trouble as we can be, even though it may not materialize. We want no stragglers, for one thing. I'm of the opinion that if a mobile home breaks down between here and the Pan American Highway, which should be safe, it should be abandoned and its inhabitants taken up to go on with us."

Doc Barnes said slowly, "I doubt if many of our people would simply leave their homes right next to the highway, Bat."

Bat looked at him. "Doc, I feel so strongly that nobody should be left behind that I suggest that if it becomes necessary to abandon one of our homes, or even more, that the owners be recompensed out of New Woodstock town funds."

Dean Armanruder puffed his cheeks. "That becomes quite a drain on the treasury, Hardin. And it's already bare as a result of having to pay off the hundred homes that are turning back for their share of community property."

Bat said doggedly, "Under the circumstances, we can't let anyone fall behind. Our best

chance is to push on as fast as possible. If we stopped, up there in the hills, we'd be sitting ducks for any snipers, or whatever."

"Ummm. And you said you had a double motive?"

"Sir, usually when a mobile town moves, it proceeds more or less haphazardly. Sometimes, units lag behind for days. All right, I think that tomorrow New Woodstock should move in close order. Women driving, those men who possess guns sitting next to them, ready for action. I think we should drive almost bumper to bumper, looking for any trouble and damn ready for it if it materializes."

Doc Barnes muttered, "Sounds like a confounded military conveyoy."

Bat said softly, "It is."

Dean Armanruder was thinking about it.

Bat said, "I'd like to put this on the community phone. You see, I suspect we have a leak. Ordinarily, our community phone wouldn't be tapped by outsiders. But I suspect that anything that goes over it is forwarded to Don Caesar, or whoever. If so, then they'll pick up this move of ours and perhaps our very readiness will dissuade them."

Armanruder was quite obviously taken aback. "A leak? What in the world do you mean by that?"

"I mean that Don Caesar's men were tipped off that I was coming up that road this morning. On top of that, my pocket phone was taken from me by the kidnapers

but was sitting on my table when I returned. I doubt if a complete stranger to New Woodstock could have done it. He wouldn't have known where my home was and he would have been spotted wandering through the town, even if he did know."

**A**RMANRUDER said, "All right, all right. You're the police officer. So far as I am concerned, you can make any arrangement you wish pertaining to our so-called order of march tomorrow. Go into my office, if you wish, and use the desk phone there. You'll be more comfortable."

Bat nodded, and said, "One other thing. I suggest we make all preliminary arrangements for leaving tonight and that we roll at the first flush of dawn. These people confronting us—if they're confronting us—are not professional military. I doubt if they are very well organized. Civilians lack discipline. We might catch them unawares and be completely through the mountains while they're still comfortably in bed."

"Well, that sounds reasonable," Armanruder admitted. "Notify the town to that effect, Hardin."

Bat shook his head. "No. That wouldn't do. We'll have to pass that on by word of mouth, not put it on the air. That might tip them off, if they have some way of tapping our communications."

"How about this leak of yours?" Doc Barnes demanded. "If there is such a traitor among us, he'll let them know."

Bat nodded again. "Of course.

And, if so, then we'll know we've got a traitor and not just suspect it."

"You handle it, Hardin," Armanruder said.

Bat trudged to the major entrance of the Armanruder home and found the door open. He entered and headed for the office.

Nadine Paskov, in mini-shorts, but otherwise no advertisement for expansion of the textile industry, met him in the hall.

Suddenly, she put a hand on his arm. "Bat, is there really danger?"

He said carefully, "There probably isn't but the safe thing is to go ahead as though there is. The better prepared we are, the less danger there is."

"Do you think these people actually might shoot at us?"

Bat said carefully, "They might but I'm not really expecting it. We just want to tread carefully, Miss Paskov."

"Look, Bat, do you think I should go back with the others to Texas?"

He cocked his head slightly to one side. "Why didn't you?"

She took a breath. "It's the best job I could ever get."

"You could always go on NIT, if you couldn't get another."

"NIT, NIT! Poverty level, subsistence level income!"

He said, "Well, it's your decision, Miss Paskov. You can go back with the others, or on with us."

She said urgently, "Bat, you don't understand. He's written me into his will. I can't quit. But. . ."

**B**AT couldn't think of anything to say to that. He sidestepped her and continued on to the office. He sat down at Armanruder's desk and activated the TV phone and said into the screen, "New Woodstock, General Call."

And then: "Please hear this. This is Bat Hardin, your town police officer. With the concurrence of Mr. Armanruder, I strongly make the following suggestions. That all of us who are armed, ride with our weapons at hand. Women should drive, when possible. If fired upon en route, return as heavy a barrage as possible. Even if you do not see an immediate target, fire in the direction from which the attack came. I want as large a display of fire power as we can muster. Even if you have a weapon of no larger caliber than a twenty-two, have it at hand. If you have only a shotgun, load it with as heavy a load as you have, either slugs or buckshot would be best. If you do not have a weapon, try to borrow one from those among us who have more than one. We shall proceed with several of our younger single men in the lead vehicles. If we run into a roadblock, it shall be their duty to clear it, even under fire. We'll want volunteers for the lead vehicles. Please contact me. When we move, it will be bumper to bumper and no stragglers will be allowed. In case of breakdown, the mobile home involved must be abandoned and its occupants taken up by its neighbors. We'll try to send mechanics back for it from the

next Mexican city which has suitable garages. If the house is destroyed, the owner will later be recompensed from the town treasury. If there are any questions, please consult either me or Mr. Armanruder."

He sat there for a moment, thinking out further plans, then came to his feet and left. He didn't see Nadine Paskov on his way out which was all right with him. He hated to have someone as nervous as she in the convoy. Fear is contagious. They needed to keep their cool, especially if they actually did run into grief.

He walked over to Al Castro's house and found his deputy talking to Luke Robertson, standing in front of the mobile home. They cut short their conversation at his approach. He gave them a quick rundown on his plans and they nodded agreement.

Bat said to Al Castro, "I'm going to let you take my usual place in the column. I'll precede the town by about two kilometers. We'll be tuned into each other all the time. You do the same as everyone else, that is, let Pamela drive and you have your Gyro-jet pistol ready in your hand. Keep in continual touch with both me and Luke, here. Luke, you bring up the rear. Have young Tom Benton riding with you. My phone and Al's will be continually open to you—we'll be on a three-way hookup."

They were both nodding.

**H**E BIT his heavy lower lip and hesitated before adding,



"Boys, once we're under way, ignore anything from Mr. Armanruder or anybody else of the executive committee, until we get to the Pan American Highway. Once on the move, we are in command. There's no democracy in combat. If anything happens to me, you take over, Al."

He told them to spread the word about the early departure time.

Bat turned and headed for the nearby camper of Ferd Zogbaum. However, on the way he passed the mobile home of Diana Sward and found Ferd there idly talking with the feminine artist who was cleaning paint brushes.

They gave him the standard friendly greeting and he explained the plans for the following morning to them.

He turned to Ferd and said, "Ferd, you're cool when the bets are all down. I'd like you to take second place in the column behind Al Castro. If they hit us. . ."

Ferd said, "I don't have a gun, Bat."

"Oh." Bat Hardin rubbed the side of his face. "Well, there are a lot of homes in New Woodstock with more than one. Some of our people are hunting buffs. Seek one out and. . ."

Ferd Zogbaum's lips were white. "I'm not allowed to carry a gun."

Bat looked at him.

Ferd said, "I'm a felon, Bat."

## VII

"WHAT?" Diana Sward blurted.

He looked at her emptily. "I'm a paroled convict, Diana."

The three of them held a long silence.

Ferd sucked in air and made a face. "You still don't understand. I *can't* carry a gun. You see, I've got a bug planted in my skull."

That made no sense to either Di or Bat.

Ferd said, "I mean an electronic bug. Everything I say is monitored. If I have a gun, or if I get into violence, I get a splitting headache and have to report immediately to my parole officer—by TV phone, of course."

"Holy smokes," Bat said in protest.

"It's better than being in a prison cell, Bat. There have been some changes of recent years in penology that a lot of people don't know about. Today, most convicted offenders are not kept in prison. Even lifers, such as myself."

"Life?" Di said.

"Yes. I'm a three-time loser, Di. For the rest of my life I'll carry this bug. If I have a gun in my possession, or if I participate in violence, my head aches unbearably until I report. They have a continual cross on me, always know exactly where I am. They don't even care if I leave the country. If they wanted, they could drop me in my tracks, any place in the world. But at least I can carry on a reasonably normal life. It's not like the old days. Of course, if I wish to do certain things,

take a job, or get married, for instance, I have to report in. Then my parole officer decides if I can do it or not. A woman is warned that I'm a felon, a boss is also so informed." He added, wryly, "Few women wish to marry a felon, and few bosses want one to work for him. However, we're eligible for NIT."

Bat said, uncomfortably, "What are you... well, what were you sentenced for, Ferd?"

Ferd, his lips white again, said, "Are you asking me as a police officer?"

"Don't be an ass," Di said.

Bat said, "Of course not. As a friend."

"You have to ask me as a police officer, so I can explain later to my parole officer."

"What in the hell are you talking about?"

Ferd sucked in air. This was hard for him. "Everything I say is monitored. If I use certain words the computers report it to my parole officer and I have to have an explanation."

"All right," Bat said. "As town police officer, I ask, what were you given life for, Ferd?"

"Conspiracy to commit subversive acts against the government."

They both stared at him.

He shrugged. "You asked me. I told you. Shortly, I'll get a headache and have to report to my parole officer. They caught me three times. I was easy to catch. Anybody's easy to catch these days when you can't exist without a credit card and when

the computer data banks know everything about you that there is to know."

He clasped his hands suddenly to his head. "Damn it! It's starting," he muttered in agony. "I'll have to go."

**I**N THE very first flush of dawn, Bat Hardin took off in his police car. He wasn't pulling his mobile home. He had left it for Ferd Zogbaum to draw behind his camper. It would slow Ferd down but he'd be able to manage.

Bat and his deputies had been lining the town up for the past two hours and it was as ready to roll as it would ever be. There had been a great buzz of excitement but for some reason everybody had tended to speak in whispers.

He had both Al Castro and Luke Robertson on his car phone, the screen split so that both of their faces could be there at once.

He passed Linares. The town was dead at this hour of the morning. When he was two kilometers along the road he looked at Al Castro and said, "Okay, Al, let her roll."

They had agreed to attempt to keep at a one-hundred-kilometers-an-hour clip, if possible, and Bat Hardin remained at that speed. Light was coming on fast now and his head was continually in motion, peering to the right of the road, to the left, continually checking his rear-vision mirrors.

He kept in continual communication with Al Castro and Luke Robertson, checking their

speeds. Everything was going fine. All during the night, the town's mechanics had worked on the engines of any electro-steamers that were suspect of possible breakdown. Thus far, all was tight, no stragglers.

At almost the exact spot where he had been halted the morning before, he came to a sudden halt. Leaning nonchalantly against a lone mesquite tree by the side of the road was the one they had called Jose. He seemed to be alone, nor was there any cover in the immediate vicinity which might have held others.

Bat said into the phone screen, "Al."

"Yeah."

"Slow down to about twenty-five. One of the jokers who picked me up yesterday is here."

"Okay."

His Gyro-jet carbine, which fired the very same 9mm rocket shell as the pistol which had been appropriated yesterday, was on the seat beside him but he left it there. The other had no weapon—in hand, at least.

Bat got out of the car and approached. Jose stood erect and looked at him scornfully.

"So, Gringo, you didn't bother to listen to our warning."

Bat said, "Some did. About a hundred of our homes turned back."

"It isn't enough. This is your last warning, Gringo. Turn back now and return to Texas or what will happen is your own fault."

Bat shook his head. "We have permission from the Mexican

authorities to enter and travel through Mexico." He added, "As you know, there are women and children and elderly people in this town."

"We did not ask them to come to our country," the other said flatly. "They too contribute to the corruption that you Gringos bring wherever you go."

**B**AT HARDIN, in a quick flow of motion, stepped closer and drove his left fist into the other's stomach. Jose, his eyes popping in agony, folded forward and Bat slugged him brutally in the jaw. The Mexican collapsed to the ground. Bat reached down and frisked him. The other was out cold.

Bat Hardin grunted satisfaction as he retrieved the Gyro-jet pistol which had been taken from him by the other the previous morning. He stuck it in his belt and returned to his car.

He said into the car phone, "Okay, Al, back to full speed. Ignore the seeming corpse at the side of the road, if he's still there when you go by. He's just unconscious."

They rolled on past the tiny town of Iturbide, also still asleep, only one or two sleepily shuffling locals on the streets.

Bat was doubly alert now and unconsciously chewing away at his lip. He said to Al and Luke, "That fellow knew we were coming."

Luke said, "How could he have, Bat?"

"Somebody told him."

There was no answer to that.

They were getting out of the mountains now, and Bat Hardin felt moderately happier. He hadn't liked being caught in the canyons, mountain crags to both sides that could have sheltered snipers. For that matter, an enemy who was knowledgeable about dynamite could have, with a comparatively small charge, set off an avalanche that might have buried a score of homes. And he might have done it in such a manner that the police would have had their work cut out finding evidence that the landslide had not been an act of God.

It was only forty-five kilometers to San Roberto and Bat realized that they were going to make it to the Pan American Highway without difficulty. If there was going to be an attack, it would already have taken place. The best spots for an ambush were all behind them. Don Caesar's vigilantes simply had failed to materialize.

It had been a bluff. A well acted out bluff, but a bluff. However, Bat didn't like it. Something didn't ring true. He had no doubt about the sincerity of Don Caesar, Jose and the others. They desperately wished to end the flood of mobile towns that were inundating their country. But what possibly could have been accomplished by the phony threat? Of course, a hundred homes had turned back but that wasn't a drop in the bucket. The vigilantes had achieved virtually nothing to end the flow of more

than twenty towns and cities a day coming over the border.

He put it from his mind.

**S**HORTLY, they came to the end of Route E-60 and entered the wide Pan American Highway at the town of San Roberto. Without halting, Bat Hardin turned left and headed south. He had, thus far, continued to remain a full two kilometers before the convoy but now he dropped speed until Al Castro caught up with him.

Bat said into the phone screen, "Okay, we can relax a bit now. However, still no stragglers. I want to put as much distance between us and Linares as we can."

"Righto," Al yawned. "I didn't really expect anything to happen anyway. We have something like four hundred men with guns in this town. You'd need a small army to take us."

Bat said, "The precautions didn't hurt us any." He flicked Al and Luke off his phone screen and dialed a road map of this vicinity and checked it. The Pan American Highway at this point wasn't automated so they'd have to remain on manual controls. That was all right with him.

He flicked the map off and said, "New Woodstock, Dean Armanruder."

Armanruder's face faded in. He was evidently sitting next to Nadine Paskov in his swank electro-steamer which drew one section of his mobile mansion. Bat knew that usually Manuel Chavez drove the other section and that his wife, Concha, drove the smaller mobile

home which was the living quarters of the two servants.

Dean Armanruder said testily, "See here, Hardin, the past hundred kilometers and more I've several times tried to get in touch with you to give instructions. I couldn't get you."

"Sorry, sir," Bat said. "I've had my screen on Al Castro and Luke Robertson continually so we'd be in instant touch if anything came up."

"Well, what did you call me for now?"

"I suggest we drive all the way through to San Luis Potosi and put as much space between us and our anti-American friends as we can. It's a fairly big city and

listed as having several sites. You could call ahead, to be sure, for reservations for our town."

"How far is it?"

"Three hundred and twenty kilometers."

"That's a pretty long drag."

"Yes, sir. And I suggest we not stop for lunch."

"It seems to me, Hardin, that you're taking over a good deal of the running of this town."

Bat sighed inwardly. "Not deliberately, Mr. Armanruder. But I'm the town cop and we were being threatened."

"Well, just remember that New Woodstock is governed by an executive committee elected by the citizens."



Bat said, but gently, "Whose decisions have to be passed upon by the assembly of all town members."

"Of course. Very well, Hardin, I'll put it to the vote, whether to press on all the way to San Luis Potosi and to skip stopping for lunch." His face faded.

Bat grunted. He sometimes wondered at his desire to hold down this job. What did he get out of it? Not even a bit of gratitude from such as Dean Armanruder, and the open dislike of such as Jeff Smith.

Which brought Smith to mind again and again he wondered who had voted for that worthy to take over Bat's office. But then he knew. Whoever the traitor was that had kept Don Caesar and his people informed on the movements of the town had also wanted Bat out and someone less competent in the crucial office of town police officer. That was an interesting thought.

**S**AN LUIS POTOSI was the most modern and progressive Mexican city they had as yet seen. Situated, as it was, on the Pan American Highway and the principle route from the States to Mexico City, it was well equipped with sites for mobile towns. In fact, they spread out far over the countryside and in area were actually larger than the city itself, though it would seem doubtful if all of the sites were ever completely occupied at one time.

There were three grades of sites, the smallest, ultra-luxurious

with a fine complement of stores, restaurants and even nightclubs and theatres. The least well equipped was by far the largest and intended for mobile towns and cities largely occupied by persons with no other income than their NIT. However, even the accommodations at this site must have seemed exotic to the average Mexican, if the complaints of Don Caesar and his men were to be taken literally.

Dean Armanruder had called ahead for reservations and been accepted, in spite of the fact that two other towns were at present already parked in San Luis Potosi—evidently, like New Woodstock, on their way through to points further south. Their town, art colony that it was, seldom took on the expense of renting space in sites of the more swank variety. Although some of New Woodstock's citizens were rather wealthy, a considerably larger element were on NIT and had to watch expenditures. Here, in San Luis Potosi, they drove to the cheapest site available.

Bat Hardin, as usual, parked near the administration building and before setting up his own home drifted about the town to check that all was well. Evidently it was. They'd had excellent luck all day with not a single breakdown. The town had kept well together, much more so than usual. New Woodstock's artists were apt to be a bit on the philosophical side and sometimes, on a long haul, the town might be stretched out several hundred

kilometers. In fact, often single units or small groups would drop behind for days. It made life a misery for the town policeman who would have preferred more cohesion.

Bat, sauntering along, passed Jeff Smith who was setting up his overly large home; overly large in view of its single occupant. Smith's mobile home was not as big as those of Armanruder, Blake or even Sam Prager's, although the Prager establishment included the workshop, of course.

Jeff Smith looked up at him "Vigilantes," he snorted.

Bat ignored him and went on. He was afraid that the southerner wasn't going to make out in New Woodstock. Actually, Bat was sorry. He couldn't like the man but Smith was the only musical composer the art colony had and could have been expected to break down sooner or later and present some of his work at community affairs.

All seemed in order—with everyone so tired from the strain of the day and the long drive that it was a matter of a quick evening meal and then to bed. Bat returned to his own home, and went through the motions of setting it up.

**H**E WENT inside and dialed himself a tequila sour on the automatic bar. He could use the drink; he'd been through a lot and gotten precious little sleep the last couple of nights.

Glass in hand, he slumped into the most comfortable chair and

automatically looked over at his small collection of books. But, the hell with it, he was too tired to read.

On his phone screen, he dialed the local road map again and checked. Queretaro was the next major city, two hundred and three kilometers to the south. That would probably be their next stop. It was far enough, in that they'd been pushing themselves for the past several days. They had made their decision to make the trek to South America while parked in the vicinity of New Orleans and had kept on the road since then. Some of the younger children, in particular, were getting tired. He supposed that they would take a several-day stop at Mexico City to rest up, make any repairs that had accumulated, shop for major items that might not be available in the smaller cities to the south, and allow time for those who had never seen the Mexican capital before to do some sightseeing. He checked. Oaxaca was a fairly good-sized town but otherwise the next major city to the south of Mexico City was Guatemala, in that country.

There was a knock on his door and he said, "Come on in."

It was Diana Sward.

She looked about the room and said, "Damn it, how is it that male bachelors are invariably neater than female ones? I'm ashamed of how my joint looks as compared to this."

Bat came to his feet. He said, "You're an artist: paint, brushes, sketching paper, canvases, paint-

ings. It's hard to expect that you could keep a mobile studio spotless."

She sighed and sank down onto the couch, without invitation, stretching her long shapely legs out before her.

He went over to the bar. "Drink?"

"Do you have whiskey?"

"No, you can't have whiskey."

"Why not?"

"Because you're in Mexico. Drink the local product. In Mexico, drink tequila, mescal or Kahlua."

"You're a hard man, Hardin. What's Kahlua?"

"A liqueur based on coffee and one of the best in the world."

"Sounds too sweet. What are you drinking?"

"A tequila sour."

"You talked me into it."

He dialed another tequila sour and took it over to her and then returned to his own chair.

They sipped for a moment in silence. Finally she said, "Remember that conversation we had about I.Q.?"

"Sure."

"I've been thinking about it. The question never occurred to me before—but is it desirable to breed for greater intelligence?"

HE SCOWLED at her. "How do you mean, Di?"

"Well, take greater height. Why is being a six-footer or taller desirable? Why is the average height of the Japanese, slightly over five feet, not just as good, or better? Certainly, in the old

days when men slugged it out with swords, or when they worked with a shovel or plow, physical size was desirable—but why now? We don't usually think of a man who weighs over two hundred as being in the best of shape, but we seem to have an absolute mania to be over six feet and to have a genius level I.Q. Why? Has it ever been indicated, not to say proven, that the man with an I.Q. of 150 is happier than one with an I.Q. of 100? The genius, as well as the moron, is a misfit in society. Do we want to be smarter or happier? If it is the pursuit of happiness that is our primary interest, then perhaps we should not seek, as a race, a high intelligence quotient."

Bat thought about it, for some reason slightly irritated. The subject was not a happy one with him. He said slowly, "Man is a thinking animal, Di. If it wasn't for our superior intelligence we never would have gotten out of the caves."

"All right. But what I meant is man has largely licked the problems he was confronted with in his infancy. We've defeated our animal enemies. We've conquered nature, at least to the extent where we can now satisfy all our needs in abundance. All right. Isn't it time we took stock and decided where we want to go from here? We've achieved the necessities of life, now shouldn't we resume the pursuit of real happiness?"

"Whatever that is," Bat said sourly. "Anyway, it's a great idea



that possibly the average person with an I.Q. of 100 is just as happy, or possibly happier, than one with 150. However, under the Meritocracy, I.Q. is what counts. And if you're ambitious and want to get ahead in our society you'd best have one in the upper brackets."

She set her glass down and leaned forward slightly. "That's what I mean. Maybe Ferd Zogbaum is correct. Maybe this Meritocracy of ours isn't the end of the line so far as social evolution is concerned, if there's ever an end."

Bat said impatiently, "It's true that in production today not *all* jobs require a high intelligence. There are various operations, the sensory-manipulative operations that are involved in handling a power shovel, for instance, which have no appreciable educational or intellectual requirements and which do not lend themselves to automatic processes. But the overwhelming majority of useful jobs today do require high I.Q. and there is simply little place for those who are not particularly bright, to put it bluntly."

"But there should be, that's the point I'm trying to make."

**B**AT made a gesture of impatience. "But the fact remains that there is no place for us in modern production. A fraction of the people can handle all of the jobs. Maybe it's not good for the rest of us to sit around idle, but there's no alternative."

She leaned forward still further,

her elbows on her knees and her voice very earnest.

"Then we've got to make some changes. Back before we licked the problems of production of abundance that was and had to be the main goal of the race. Food, clothing, shelter, medicine, education, recreation for all, in abundance. But now that we've gained the goals, let's stop a minute and look around. How about the arts, how about the handicrafts? Ours has become a synthetic world, why not devote these surplus energies of ours, devote the leisure time that hangs so heavily, to cultivating the old virtues? My grandfather mentions that when he was a boy, practically everybody played some musical instrument, there was a bandstand in every park and at least one band in every town, no matter how small. Women used to sew, knit, crochet, embroider, make quilts and so forth. Have you ever seen in a museum some of those homemade quilts and compared them with the mass produced things that we put on our beds today?"

Bat was chewing away on his lip. He said, "Some people already go into the arts. Yourself, for instance. But not everybody has talent. And most are too lazy, if they don't have to, to bother with doing ceramics, weaving cloth, quilting or whatever."

"Perhaps they are now, but that's our problem. We've got to educate our people to want to do them. Take cooking. Cooking has become automated—and it

tastes like it. Why, the person who could afford decent food a hundred years ago wouldn't have dreamed of eating the tasteless stuff that we down these days. Never has food been more beautifully packaged, been so adulterated, and tasted so poorly. And music. For all practical purposes, it's all canned. Sometimes I think that a few dozen musicians are turning out all the music for the country. How long has it been since you've seen a live musician? How long has it been since you've seen live theatre?"

"It doesn't make sense in this day for there to be live theatres, employing tens of thousands of actors, when a cast of twenty can entertain fifty million persons at once over TV."

"Like hell it doesn't," she said. "That's exactly the point I was trying to make. I'm beginning to suspect that Ferd is right. Our present society needs a little subverting. What time is it?" She brought her pocket phone from her jeans and dialed the time.

"Good Lord," she said. "Is it that late? I better be going. I assume we're off to a fairly early start in the morning."

Bat shrugged. "Not necessarily. We'll probably only go about two hundred kilometers." He stood to see her to the door.

**B**AT HARDIN had been right. New Woodstock was slow to get underway the following morning. It was almost eleven o'clock before they began to roll.

Dean Armanruder was impa-

tient with Bat but yielded to his demand that the town remain in tight convoy again this day.

Bat led the way down the Pan American Highway, about a kilometer in advance of the town proper. Al Castro—driving today rather than his wife Pamela—was in Bat's usual place immediately ahead of the column. Luke Robertson brought up the very rear.

All went without incident for the first 120 kilometers, then before him Bat spotted an official-looking car, with two uniformed men next to it. There was a crossroad and a barrier blocked the highway they were proceeding along. The sign on the barrier read *Desviación* and an arrow pointed to the right.

Bat pulled up and one of the uniformed Mexicans came over and touched the peak of his cap in an informal salute.

Bat said, "What's up?"

"*Desviación*," the other told him, then in passable English, "What you call a detour, Señor. The road is being worked upon ahead." He brought forth a road map from his hip pocket and traced on it with a finger. "It is not much difference in distance. You go over here toward Dolores Hidalgo and then turn south to San Miguel de Allende. Then you come out at Queretaro, here." He shrugged. "Actually, it is a much more beautiful drive than this one."

Bat shrugged too. "Okay," he said. The other turned and went back to the car.

The town was beginning to catch up with him. He raised Al Castro in his phone and said, "Slight detour. We turn right."

"Okay as she goes," Al yawned. "Hotter'n hell today. I hate heat." Al also hated cold, when it was cold and rain when it rained, as Bat Hardin recalled.

Bat flicked him off and proceeded.

He dialed the local road map and checked out the route of the detour. As the Mexican had said, it didn't lengthen their trip by very much. The road, of course, wasn't nearly as fine as the Pan American Highway, but it was adequate. There seemed to be no traffic whatsoever, which mildly surprised him. But then, of course, there weren't nearly the number of vehicles in Mexico that there were in the States and this was a by-way.

Before quite reaching the historic Dolores Hidalgo which, Bat vaguely recalled, was the town where the Mexican revolution against Spain had begun, the road turned south. Before him he could see mountains rising, but in this vicinity, although there were some hills and rises, the terrain was largely flat and covered with cactus and mesquite. Attractive enough, in sort of a wasteland way, but not exactly an area where one would build a home.

Suddenly his screen flicked on and Luke Robertson's face was there, his eyes wide. "Bat!" he yelled. "I'm under fire and. . ."

The screen blanked and Luke's face was replaced with an abstract

of meaningless flashing colors.

A barrage of screaming bullets ricocheted off the armor of Bat Hardin's converted police car. Across the fields, he could see large scurrying groups of men, running and firing, converging upon New Woodstock.

## VIII

HE BANGED the activating switch of his car TV phone and snapped into the screen, "Mexican Highway Police. Emergency!"

The screen still ran impossible color.

He slewed the car to the left, presenting the far side to the fire from the attackers. He grabbed his portable phone from his pocket, activated it and yelled, "Mexican Highway Police. Emergency! Emergency!"

But that screen too was a meaningless menage of streaks of moving color. Bat banged out the side of his car and, crouching, darted back to Al Castro's vehicle, now immediately behind him. Al was driving, Pamela seated next to him, her pudding face a lard gray and her eyes in shock. Al was firing over her through her window with his Gyro-jet pistol, his face wild with excitement.

Bat shouted, "Al! Your car phone! Does it work?"

The magazine of his deputy's gun was evidently now empty. Al slammed the phone on. The color was there again.

Bat groaned. "They've got

some kind of a scrambler on us. Al! Out over the fields! Lead them into a complete circle. Bumper to bumper! Take off!"

He ripped back to his own car and fetched his carbine.

Al Castro took out over the cactus-strewn field, bumping and bouncing, his mobile home careening every which way behind him.

Jake Benton, his eyes wide, was immediately behind Al. Bat yelled to him from the shelter of the rear of his police car.

"Follow Castro! Form a circle! Form a circle! Then get out and return the fire!"

Benton's mobile home, careening as wildly as Al Castro's before him, took out over the desolate field.

Sam Prager's vehicles were next. Bat yelled, "Auxiliaries to the middle! Form a second circle. Hospital and school in the center!"

Sam nodded, gripped his wheel fiercely and was out after the others.

Bat glared right and left. The attackers were largely in front on hills and knolls and too far off for really accurate fire, though they were closing in fast. However, occasionally slugs were still bouncing off the other side of his car. They seemed hitting from all directions and Luke's warning before the phones had gone out meant they were in the rear of the convoy as well.

He continued to yell orders as the homes went by. Out in the field, Al Castro, avoiding

mesquite trees but plowing right over all except the largest cactus plants, was making his circle.

Bat fished inside the car and located a fresh clip for his carbine. He fired and fired again, bellowing directions to the arriving cars.

When the hospital, one section of which was being driven by Doc Barnes himself, came up, Bat yelled, "The hospital and school to the very center. Women and kids into them! They've got the thickest walls, for soundproofing. Women and kids into school and hospital!"

Doc Barnes nodded grimly and took off after the others, his section of the hospital bobbing desperately behind.

AL CASTRO'S car and his drawn home were beginning to come up from the rear on the tail end of the last of the New Woodstock column. Even after the circle had been drawn, with Luke Robertson's vehicles at the closure, Al continued to circle, slowing down, getting as near bumper to bumper as possible.

Bat Hardin jumped back into his car and took after them. Luke Robertson slewed to one side to let him through. Bat drove to the center and popped out. All the auxiliaries had been drawn, as directed, in a smaller circle; within were hospital and school which a dozen men were setting up as rapidly as possible in the mounting confusion.

Bat yelled at the top of his

voice, "All with guns take positions behind your homes. All without, get shovels. Dig foxholes. All with more than one gun, turn them over to your neighbors. All women with children, into hospital or school. Lie down on the floors. All women under thirty-five without children, get guns or shovels. If you have no shovels, frying pans. Dig!"

Children were screaming, women calling and crying. Half of the town was running about in a hash of confusion. There were a dozen cases of hysteria.

Jeff Smith came up, under his arm a wicked high-velocity game rifle with a telescopic sight.

He looked around at the preparations Bat had ordered and which were now fully underway and said, "I understand you were in the Asian War. What was your rank?"

Bat looked at him. "First Lieutenant, when it ended."

Jeff Smith cocked his head a little. "You don't look the type that's been through OTS."

Bat said, impatiently, "I was battle commissioned during the Mekong Delta debacle."

Smith nodded. "I was at the delta, 8th Airborne. Was a Staff Sergeant. What are your orders. . .sir?"

Bat took a breath. "Move around the circle, locate what other veterans we have. Spot them strategically. Be sure they all have the best weapons we have, even if you have to confiscate them from the others. . .sergeant."

"Yes, sir." Jeff Smith turned

and, crouching, hurried in the direction of the perimeter.

Luke Robertson and Al Castro came in at a trot.

"Wow!" Al shouted, over the blast of shotguns, the snip of twenty-twos and other small caliber gunfire, the snap of sporting and converted surplus military rifles.

Bat rapped, "Al, get around the circle. Cut down on this fire. We'll be out of ammo in half an hour. Cut the fire down to men with longer range rifles and our best shots. Cut those god-damned shotguns out. They can't reach a fraction of the range those guys are at."

"Right, Bat." Al scooted away.

There was a whoosh of sound and beyond them a mesquite tree erupted in flame and explosion.

Bat winced. "Holy smokes," he protested. "A bazooka."

Luke said, pointing excitedly, "It came from over there on that knoll, Bat."

Bat Hardin was gnawing his lip in agitation. "That's an old model, probably far back as the Second War. God only knows where they got it. But it's out of range. Listen, Luke, go around and locate our best marksmen. They'll know who they are. Get our best long-range rifles into their hands, those with telescopic sights. Pin that bazooka down. If they get it within range, we're mincemeat."

Luke was off, crouching low as he left the semi-security of the inner circle of auxiliary vehicles.

Bat snarled. So they had been

jumped in a bad spot. Now he realized that detour had been a plant. Don Caesar's men had directed them out here. Now he realized why they hadn't been seeing other vehicles, cars and trucks along this lonely by-way. Somehow, the enemy had blocked off the road. Worse, in effect now, they were surrounded. Single men and small groups edging closer, darting in, scurrying around for cover. But the fire had fallen off. Evidently, the anti-American vigilantes hadn't expected this efficient a defense.

Bat's lips thinned back. "Come in and get us, you bastards," he muttered.

Two men went by with an improvised stretcher. Doc Barnes came hurrying out of the hospital and bent over the victim.

Bat called, "Is he bad?"

Barnes looked up. "It's Thompson. He's dead."

Bat closed his eyes in pain. Fred Thompson had the biggest family in New Woodstock. Five children.

Bat said to the two stretcher bearers, "Bury him immediately. We don't want any of our dead lying around where they can be seen. Bad for morale."

Little Chuck Benton came up excitedly. "Mr. Hardin, what should I do?"

Bat looked at him. The boy was eleven or twelve. He began to order him to the shelter of the school, then pulled up. He said, "Get a bucket of water and a dipper or cup, son. Go around to the men. Combat is dry work."

"Yes sir."

Crouching low, as Smith, Castro and Robertson before him, Bat left the shelter of the auxiliaries and scurried for the perimeter of mobile homes, his carbine in hand. He began touring, barking orders for more rapid digging of fox holes.

Art Clarke came hurrying up to him, an enormous and glinting gun in hand. Bat Hardin recognized it. He snapped, "Isn't that a Chinese Am-8? Where in the hell did you get it?"

Even in this excitement, Clarke seemed slightly embarrassed. He said, "War souvenir."

"Fully automatic? How many clips do you have for it?"

"Yeah. It's the Canton model. Two clips."

"How much spare ammo?"

"Possibly a hundred rounds."

Bat looked quickly around and yelled, "Milt Waterman! Over here."

The boy who usually drove the administration building when they were rolling came hustling up.

Bat rapped, "You two, get into that hole over there. Set that automatic rifle up. Milt, you keep the spare clip loaded. Art, you let loose a burst of fire from time to time. A longer burst than you'd expect from a gun that light. I want to make it look as though we've got a machine gun. Wait a minute. After you've let off a couple of bursts from this side, go to the direct opposite and do the same. Make it look as though we've got *two* machine guns. But go easy. Stretch out that ammo

as much as you can, understand?"

"Got it," Art Clarke said excitedly.

Bat walked on.

**D**IANA SWARD was sitting on the ground at the rear of her mobile studio. She had a sporting rifle in her hands and her elbows were on her knees as she periodically and with great coolness squeezed off a shot.

"Watch the ammunition," Bat told her, beginning to go by.

She hurried up at him, her eyes shining. "I think I nicked at least one. You know what this reminds me of? A wagon train, surrounded by Sitting Bull's braves."

"It is," he said grimly and hurried on. He heard a bee buzz past his head. That had been a close one.

He came to Dean Armanruder's mobile mansion. Armanruder, his back tight against the side of one of the sections, his face pasty, screamed at him.

"Do something!"

Bat looked at him. "What? We're doing all we can. They've got a scrambler around here, somewhere. We can't call for help."

"Surrender! Tell them we'll do anything! We've got money. Anything they want!" The older man was panting. "Tell them we'll do anything they say."

Bat Hardin shook his head as though in an attempt to clear it. Two more of the men without guns went by, carrying one of the hospital's stretchers, an inert form on it.

Jeff Smith was approaching from the direction opposite to the one in which Bat had been circling the perimeter.

Bat said, "Sergeant, you and Al Castro improvise a white flag.

He added sardonically, "My compliments to Don Caesar and ask him for his terms."

"Yes, sir." Crouching, Jeff Smith headed for the inner circle of auxiliaries.

Bat went on. He passed Ferd Zogbaum, who coolly and efficiently was digging a small trench. He had an army surplus entrenching tool. There were quite a few of the efficient compact tools in town, Bat knew.

Bat said, "Ferd, there's a scrambler on us. All electronic communication devices have been disrupted."

Ferd looked up, his face registering surprise.

Bat said, before going on, "I doubt if that bug of yours is operative."

Jeff Smith and Al Castro came hurrying up. Smith had a white pillowcase tacked onto a broom handle with thumbtacks.

The southerner said, "Any special instructions, Lieutenant?"

Bat shook his head. "Play it by ear. Tell them we'll go back. Tell them we pledge not to take any action against them, to the extent we can. Obviously, the Mexican authorities are going to get after them, but so far as we can, we'll avoid prosecuting. Promise anything. Armanruder offered money, but he's hysterical."

"Yes, sir," Jeff said.

THE two leaned their guns against a mobile home and stepped out into the open, the improvised white flag held high. For a moment, they stood there—obviously awaiting the impact of slugs before those out beyond could distinguish that they were seeking a conference.

Bat Hardin, his hands cupped to his mouth was yelling, "Hold fire, hold fire, everybody!"

The firing of the defenders fell off. So did that of the attackers.

Smith and Castro began to walk forward. Shortly, down from one of the nearer knolls came two others. Even at this distance, the hair of one showed gray.

"Don Caesar," Bat muttered. He turned and called to Ferd, "Make the rounds. Get Tom Benton to go with you. Round up all the ammo we have and take it into the enclosure of the auxiliaries and inventory it. Separate it into piles by caliber and gauge. Also inventory every gun we have, rifle, pistol, shotgun, by caliber and gauge. We've got to take rigid steps to conserve our munitions."

Dean Armanruder came up, still quaking, his eyes glaring. "What do you mean? What do you mean? We're surrendering."

Bat said grimly, "We hope we're surrendering but I doubt if we're going to be allowed to." He turned and called, "Keep digging. When you get your fox holes finished, you with shovels go on into the inner circle and start a new trench. If worse comes to worst, we'll make our last stand there."

Armanruder said shrilly, "Are you mad? We're surrendering. We'll do anything. I've got money! We can buy them off."

Bat said, "Mr. Armanruder, those men out there think they're fighting for their country, their culture, for their socioeconomic system, their women and even their religion. It makes quite a motive for fighting. On top of that, it hasn't been easy for them to organize this and put it over. They're not going to have a second chance and they know it. The Mexican authorities are going to land on them like a ton of bricks. They'll have to or Uncle Sam would take measures. So they've got to put this over this time. Their strategy is obvious. They're going to make an example of us so frightful that no American mobile homer would dream of coming to Mexico, and those already here are going to make a beeline for the border and never return."

"You're insane!"

"I hope so," Bat growled.

Several score of the men, guns in hand, had gathered around to watch after Smith and Castro, who had by now met the delegation from the other side.

Bat spoke softly. "We've got one thing in our favor. They've got to finish us quickly. Somehow they've blocked the road both in front and behind but they can't keep that up indefinitely. A police patrol or someone else will stumble on what's happening. If we can stick it out until morning, we'll have it made."



Art Clarke said, "Great—but when night comes they're going to bring that bazooka into range. Then we've had it."

Bat said, half angrily, "That'll be all, Clarke. They probably only have a few rounds for it. The thing's an antique. It's unlikely they've got more than a few charges."

**J**EFF SMITH and Al Castro were on their way back. All stood in silence, waiting.

The two reentered the perimeter of mobile homes. Both of their faces were strained.

Bat said, "Well?"

Jeff Smith looked him in the face. "They'll grant no terms. Wouldn't even allow the women and children to come out under a truce flag. The old one said it was less brutal in the long run to make this example so crushing a one that it would be done once and for all." Smith snorted disgust. "He sent his apologies, but said there was no alternative."

"So," Bat said. "A massacre." He turned to the assembled men. "Return to your positions. So long as they're at this distance, restrain your fire. Only veterans and our experienced marksmen with long-range rifles are to fire at all. Hold your small arms and shotguns up until they are at point blank range, which possibly won't come until tonight."

Dean Armanruder shrilled, "No. No, don't listen to him! Don't shoot back at them! We'll all surrender! We'll go out with

our hands up, in a body. They'll accept our surrender!"

"Like hell they will," Bat said. "Get back to your positions, men."

"Shut up, Hardin!" the former magnate yelled at him. "You're removed from your position as town police officer. I'm in command here!" He began going from group to group, yelling at the men, some of whom looked sheepish now.

Somebody grumbled, "Maybe he's right. If we all went out with our hands up..."

Jeff Smith looked at Bat.

Bat said, "Sergeant, put him under arrest and take him into the inner circle. Post a guard over him, one of the older men we can spare from the firing line. If he attempts further to destroy morale, shoot him."

Smith said, "Yes, sir." He turned and grabbed Armanruder by the arm and hustled him away, jerking at the restraint and protesting hysterically.

The vigilantes were firing again, beginning to edge in.

Bat began making the round once more, encouraging the marksmen, continually urging the conservation of all ammunition. "You'll get your chance soon enough," he snapped to those with short-range weapons.

He came to Ferd Zogbaum, who was seated nonchalantly in a foxhole, looking out over the field. He held a double-barrel shotgun in his hands, but wasn't firing it.

Bat said, "See you've got

yourself a gun." He began to go on.

But Ferd looked at him strangely and said, "Bat. I've got a funny feeling."

Bat Hardin stopped and looked at him.

Ferd looked out over the field again and said, "I've got a feeling that that scrambler, or whatever you called it, is awfully nearby. Well, say within a couple of hundred yards or so."

"How do you know?"

"I don't. I just have that feeling."

**B**AT went on again, crouching, going from one foxhole to the next.

He came to Sam Prager, who was crouched in a comfortably deep one-man entrenchment. Bat hunkered down on his heels and said, "Sam, tell me something about scramblers."

"Not much to tell," Sam said. "You wouldn't understand the workings unless you had some background in electronics."

"I haven't. How wide a range does one have?"

Sam scowled. "According to what kind it is. The military have some real doozies, blanket a wide, wide area."

"But would our pals out there be apt to have anything like that?"

Sam looked up into the sky, scowling still. "Well, no, now that you mention it. And they don't even have a helicopter."

"Why would they need one?"

"It'd give them more range. As it is, they've probably got it

mounted on some high spot out there."

"Do I understand you right? It's got to be within sight of the area it's blanking?"

"Well, more or less. Part of it has to be. The antenna."

"So out there, somewhere within sight, is our scrambler?"

"It's got to be."

Bat took a deep breath. "Isn't it portable? Can't they be moving it around?"

"I wouldn't think so. A scrambler's a pretty delicate mechanism, Bat. They'd have to get it all set up. If they had to move it, it would be off for the time of moving and until they got it rigged up again."

Bat got up. The firing was growing slowly more intense from the other side, falling off on the part of the defenders who were becoming increasingly conscious of their depleted store of ammunition. New Woodstock had not been proceeding with any idea at all of a need for large stocks of cartridges and shells. Some weapons had only a score or so rounds available, which was the reason that Bat had pooled their supply. It was now being doled out grudgingly to the best shots.

Bat Hardin again bent almost double as he scurried across the open space between the outer ring of vehicles and the inner. He sought out Jeff Smith, who was busy supervising the digging of the trench to mark their last stand, if it came to that.

Bat said, "Sergeant."

The southerner came over and

looked at him questioningly.

Bat pointed with his finger, swept it around the horizon. "According to Sam Prager the scrambler is somewhere out there in an elevated position. Probably on one of those knolls. We could make a sortie and destroy it."

"Yeah," the other one said disgustedly. "But which knoll?"

Bat called over to Luke Robertson. "Luke, locate us a couple of pair of the strongest binoculars in town." Then he turned back to Jeff Smith.

"It seems that it takes a bit of time to set a scrambler up. Very delicate. And if you want to keep it in action, you can't be moving it. It's got to sit there. Now our friend, Don Caesar, is no fool. He's figured out this raid to the last detail. He knows that our only chance is to get to that scrambler and wreck it. He also knows that we have some four hundred armed and desperate men on hand for a sortie. So what does he do?"

**S**MITH'S forehead was wrinkled. "I'm not following you, Lieutenant."

"If one of those knolls out there was more strongly defended than any other, what would you suspect?"

"That that's where the scrambler was."

"And if one knoll had no men around it at all. . ."

Smith got it of a sudden. "You mean the old bastard is trying to fox us by having that damn

thing stuck up somewhere with nobody at all in the vicinity?"

"It's worth thinking about."

Luke came up with the glasses and handed them to Smith and Bat. They began to scan the vicinity slowly, carefully.

Bat peered. "It would probably be one of the higher knolls, and one not too very far away. They planned this down to the last detail. They maneuvered us out into this field, knew exactly where we'd have to go. And that scrambler was all set up and waiting for us when we arrived."

Jeff Smith said, "There it is, Lieutenant." He pointed. "I can just barely make out an antenna, or whatever it is."

Bat Hardin directed his glasses. "You're right. Okay, Sergeant. It's you and me."

Smith looked at him. "Just the two of us? Wouldn't it make more sense if we took a hundred of the best men and headed for that knoll on the double?"

Bat shook his head. "My converted police car is the only armored vehicle in town and it's a two-seater. We have, in short, the equivalent of a tank. Can you operate an AM-8?"

"The Chinese automatic? Sure, why not?"

"Get Art Clarke's from him and both clips of ammo. I'll meet you at my car."

Jeff Smith took off and Bat Hardin called to Al Castro, "Al, let me have your gyro-jet pistol."

Al handed it over. Bat Hardin checked the magazine, jacked a 9mm rocket cartridge into the

barrel. He stuck the gun in his belt, then brought forth his own identical weapon and checked and loaded it. Then he went over to his car, located spare 9mm rocket shells and dropped them into his side pocket. He took up his carbine and filled the magazine to capacity.

Bat said, "Al, get together our best half dozen marksmen. That knoll out there looks as though nobody at all is around. There's nobody firing from the top or anything. However, I'll bet my left arm that they've got a sizable defending force behind it, keeping hidden. Jeff and I are going to need all the covering fire we can get."

"Got you," Al said, moving off.

A DOZEN of the men who had been digging now stood around, pop-eyed, at what Bat was planning.

Manuel Chavez, shovel in hand, said, "Mr. Hardin, for sure, you are not going out there into all that fire?"

"Somebody's got to go, or we'll unlikely see tomorrow," Bat growled. "Come on, Sergeant. The delta was never like this."

"Thank the good Lord," Jeff Smith muttered. "It was bad enough." He had Art Clarke's automatic rifle under his arm and was stuffing the spare magazine into a side pocket. He climbed into the seat next to Bat's driver position.

Smith looked out over the terrain. "You think you can make

it over that? You'd need at least a four wheel drive."

Bat grinned. "I've got secrets in this buggy." He dropped the conversion lever, activated the air cushion and the vehicle rose a foot from the ground. He recessed the wheels and yelled out the window, "Luke, get that crate of yours out of the way."

"I'll be damned—a little old hover-car," Smith said.

Bat nodded while Luke hurried to get his electro-steamer and mobile home out of the way so that the two volunteers could leave the perimeter.

Luke yelled, "Okay, Bat!"

The police car, now air-cushion borne, flowed ahead.

Immediately, slugs began to bounce off in screaming ricochet.

"Holy smokes," Bat bit out, "You'd think they were waiting for us. Keep your window up until we get on the scene. Bullet-proof glass. They'd have to have anti-tank shells to knock us off."

Smith said, "They don't need anti-tank shells. They've got that bazooka."

"Ummm," Bat said distastefully, beginning to zig and zag in evasive action. "But I've got a sneaking suspicion that the boys operating it aren't exactly crack shots. Who in the hell knows how to fire a bazooka accurately these days? It's one thing sitting pat and directing it at something as big as New Woodstock. But a small target on the move?"

"I hope you're right, Lieutenant," the other told him dryly.

The knoll was perhaps three

hundred yards away. Al's marksmen were going to have to be on their merit to do much in the way of covering. However, any fire at all was better than none, just so it didn't hit Bat or Jeff Smith.

Bat kept the car at as high a speed as was consistent with the terrain and their air cushions, but they were doing fifty kilometers an hour at best. Occasional bullets continued to rain off their armor but thus far there had been no stirring of opponents on the knoll which was their destination. Bat began to wonder if he had guessed wrong. But no, it was more than a guess, the closer they got the more obvious was the antenna, stretching its evil feelers up into the sky, robbing them of contact with the outside world and succor.

**A**S THEY got nearer it became obvious that the car would never make it up to the summit.

Bat groaned, "These things are impossible on non-horizonal surfaces. They slip off in every direction except the one you want to go."

Jeff Smith bit out, "Get as far up as you can and then cover me. I'll make a run for it."

"Why not me?"

"Because you know how to drive this contraption and I don't."

"All right."

Just as they hit the bottom of the slope, a half dozen Mexicans materialized at the summit and began firing down at them.

Smith muttered, "Amateurs!" He activated the window, then steadied the Chinese automatic rifle on the sill and let loose a sweeping burst. Several went down, screaming pain; the others ducked for cover.

Jeff Smith was out of the car, gun in hand and zig-zagging up to the crest.

"Go it!" Bat yelled. He popped from the side of the car, both gyro-jet pistols in his hands.

Jeff Smith scrambled, slid, fell, was on his feet again. Up he went.

One of the Mexicans at the top got to his knees. He was holding some sort of automatic weapon with which Bat Hardin was unfamiliar. It stuttered and Jeff Smith fell off to the side.

Bat fired twice and brought the gunner down. He started up the hill after his companion. From the perimeter of mobile homes came a hail of supporting fire, sweeping the top of the small mesa.

Bat Hardin reached the other man. He jammed his pistols into his belt, swearing uncontrollably. "Bad?" he snapped, reaching down.

Jeff Smith groaned, "Yeah. Nailed me at least twice. Belly."

Bat hiked the other up over his shoulder, reached down and swept up the automatic and started staggering and stumbling down the hill.

A blow struck him in the right hip and he all but fell.

He continued on, stumbling. He could feel the blood running down his leg.

They got to the car, on Smith's side. Bat dumped him in and hurried around, limping and dragging his leg, to his own side. He lifted his right leg by grabbing hold of the cloth of his pants and swung it into the cab. He wedged himself in and pulled Smith to a position so that he could close the door on that side. He swerved the car and headed back. He would have liked to have made his own try for the crest but he doubted that his leg would allow him; and besides, Jeff Smith had to be gotten back to Doc Barnes.

Bullets were again caroming off the surface of the vehicle. They retraced their route. Twice, Bat Hardin recognized the whoosh and trail of bazooka rockets but he had been right; they were far off the mark. Whoever was on the old-time rocket launcher was no marksman.

Luke Robertson's vehicles were still drawn out of the way and Bat Hardin maneuvered through.

He yelled out the window. "Jeff's been hit. Where's Doc Barnes?"

Barnes came hurrying forward.

Jeff Smith, his face drained as death, looked over at Bat.

"Hey, man."

"Yeah?"

"Sorry about that. . .that. . ."

Doc Barnes wrenched open the door of the car on Smith's side and bent over him.

He looked up at Bat. "He's dead."

**B**AT HARDIN didn't say anything for the moment. Two

men were hauling Jeff Smith from the car, ridiculously gently in view of the fact that pain would never come to the small southerner again.

Bat said, "I've copped one too, Doc. See if you can patch me up a little."

"Get out of the car."

Bat shook his head. "Can't. If I do, I'll never be able to get back in, and I'm the only one who can drive this thing." He looked at Luke. "Somebody in here tipped them that we were coming in this vehicle. Find Nadine Paskov. Find out who voted against me in that hassle I had with Jeff." He added sourly, "She's probably under some bed, somewhere. I suspect whoever cast that vote against me is our traitor. If she refuses to tell you, for whatever reason, slap her around a little."

"Got it," Luke said. "What do I do if I find the traitor?"

Bat looked at him.

"Got it," Luke said and was off.

"Hold still, damn it," Doc Barnes snapped. "Let me get this bandage on. You need plasma."

"Oh, great," Bat said. "Have you got a pep pill instead?" He looked out over the crowd and called, "Ferd, you're next."

"Coming up," Ferd Zogbaum sang out, pushing his way through the assembled men. He caught up the automatic rifle that had fallen to the ground when the men had taken Smith's body out and scrambled into the bloody seat next to Bat.

Bat called, feeling himself already weaker, "There's an extra clip of ammo in Jeff's pocket."

Somebody brought it.

Bat Hardin activated the lift lever again and they started forward.

He explained as they went, "I can't get the car to the crest. You'll have to make it on foot. All hell is breaking loose there. Don Caesar is sending new men over as fast as they can make it to defend the point. They know damn well, now, that we know it's there and they've got to defend it." He felt his voice going weaker.

Next to him, Ferd Zogbaum was checking the clip in the gun. Jeff Smith had nearly emptied it. Ferd threw it and rammed home the spare full clip.

Bat said, weakly, "Where'd you get checked out on the Am-8?"

"I was in the big one, too."

They were approaching the knoll. From behind, the full barrage of all that New Woodstock could mount in the way of long-range rifles was firing over them, attempting to pin down any of the enemy forces on hand.

Bat ground to a halt. He pulled his two pistols out.

"Okay, Ferd, it's all yours."

Ferd was out of the car, automatic in hands and scurrying up the hill. A continual fire kicked up the dust around his feet but he miraculously remained erect. Bat, his eyes fogging, leaned out the window of the car and blasted away at anything else that moved.

The freelance writer achieved the top, fired in this direction and

that and finally immediately down as though toward his feet. He turned and began retracing his steps, running dangerously. He fell, rolled a score of feet, staggered back erect and came on again.

Suddenly, Ferd Zogbaum stopped dead in his tracks. The automatic rifle dropped from his hands. He grabbed his head desperately and began to waver.

"The bug!"

He staggered around, completely out of control of himself, moaning agony.

Bat, sagging weakly himself, flicked on his phone and stuttered, "Emergency, emergency. Mexican Police. Road Dolores Hidalgo, San Miguel de Allende. Emergency, emergency, emer..." And then the fog rolled in.

WHEN BAT HARDIN came conscious again, he was in the mobile clinic of Doc Barnes. He felt weak but his mind was alert. He looked about him. Ferd Zogbaum, unconscious, was in the next bed. It was a three-bed dormitory. The other bed was empty.

Doc Barnes came in followed by Diana Sward who was wearing a white nurse's smock. She was obviously a volunteer.

Barnes said, "You're awake. Good." He turned and looked down at Ferd Zogbaum.

Bat said, "How's Ferd?"

"He'll be all right. We're taking him in for some minor surgery now."

Bat said, "Listen, has he been

unconscious all this time?"

Doc Barnes looked at him impatiently over his shoulder. "Why, yes."

Bat said, "Look Doc, when you were in private practice what was your specialty?"

"Why, I was a surgeon."

"Brain surgeon?"

"No. I have done some brain surgery but it was not my specialty."

Bat took a deep breath. "Look, Doc. Ferd Zogbaum is going to die on your operating table."

Di Sward blurted, "Don't be an ass."

He ignored her. "Doc, Ferd has an electronic device planted in his skull. Can you take it out?"

Barnes stared at him.

Bat pursued. "He's a paroled convict. Life sentence. He saved us all. Look Doc. We took a lot of casualties in this fracas. All is confusion. He can die on your operating table. You can sign—whatever it is you doctors sign when a guy cashes in."

"I'm an ethical. . ."

"And you and everybody in New Woodstock owe your life to Ferd Zogbaum."

Doctor Barnes held a long silence. Finally he said, "What was he sentenced to life for? I have heard of this electronic bug before but it is the first in my experience. Is he a murderer?"

It was Di Sward who said heatedly, "He's an idealist! He has political objections to the present socioeconomic system in the States."

Doc Barnes looked at her

wryly. "You seem a bit partisan, Miss Sward. However, so am I. I don't know exactly what they are, but I too have reservations about our present socioeconomic system. You are sure that Zogbaum's, ah, crimes, are all of a political nature?"

"Yes!" Diana said firmly.

"Very well. Now the question becomes, if he, ah, dies on my operating table and I remove the electronic device from his skull, how does he continue to collect his NIT or otherwise support himself?"

Bat and Diana looked at each other blankly.

Diana Sward said finally, "I make a reasonable living with my painting. He can write under a pseudonym until he gets to the point where he is making better sales. We'll never return to the States."

Doc Barnes thought about it, disgust on his face. "Damn it," he said. "Why can't a doctor just carve them up, or slip them the necessary shots or pills?" He looked at Di. "Miss Sward, let's make the arrangements to get this operation rolling." He turned and left the room.

Diana Sward looked at Bat and said, "I think we've swung him. See you later, Bat."

"Yeah, see you later, Di," he said, looking after the woman he loved as she left the room.

#### Aftermath

**T**HE *Secretaria de Defensa Nacional* colonel said cour-



teously, "Your arrest was a technicality, of course. You are free to go at any time you wish, Señor Hardin. But after all, several of our citizens were killed, including Caesar Munoz and his son, Jose."

"And several of our own citizens," Bat Hardin said softly.

"Yes, including one that you killed yourselves, this Manuel Chavez."

"He was caught signaling Don Caesar's men," Bat said. "He tried to resist arrest and Mr. Robertson was forced to shoot him. Evidently, he had what amounted to a mania against his employer and against Americans in general."

The colonel gestured to the TV phone screen on his desk. "As I said, your arrest was a technicality; however, to double check on you, I secured your dossier from your National Data Banks. Your record, I am pleased to see, is impeccable."

Bat said, "I should congratulate you people on the speed with which you came to our assistance. I understand the helicopters were there in less than half an hour."

The colonel nodded. "You see, we were aware of Caesar Munoz's activities and his group was under observation. We knew they had desperate plans but weren't exactly sure what they were. Nevertheless, we had a sizable force on continual alert. Frankly, we were astonished at the magnitude of his attempt. Thank God he has failed."

Bat looked at him. "Are you

sure he has? What will happen when this affair hits the headlines?"

"It will not hit the headlines, Señor Hardin. The Mexican and United States governments are cooperating to suppress the account. We are aware of the problems brought on by the mobile towns, but Don Caesar's solution was not the correct one."

"What is the solution?"

The colonel shrugged in a Latin gesture. "Perhaps I do not know. Perhaps it is more rapid progress for Mexico so that we, in turn, become an affluent society." He laughed abruptly. "You would be surprised, Señor Hardin, how rapidly the spread of mobile homes is coming to our country. We already have several mobile resort towns, some of which cross periodically to the United States. And, to the south, Guatemala has recently complained of the large number of Mexican homes and trailers that are flooding that country."

Bat came to his feet. "I should be going. New Woodstock is scheduled to head south today. All repairs have been completed."

"Of course." The colonel stood too and extended his hand for a shake.

He said, "Would you mind answering one question, Señor Hardin?"

Bat looked at him.

The colonel said, "I went over the details of the whole unfortunate affair. I must say, I admired your measures."

"Thanks," Bat said.

"As a police officer myself, I find I am somewhat surprised that your talents are hidden away in such a small town as New Woodstock. Your war record is impressive." He gestured at Bat's dossier, still in the screen on his desk. "Have you never considered attending one of your American police schools and then securing a position in one of your larger cities?"

Bat said evenly, "I'm not eligible."

The colonel frowned puzzlement. "But why?"

"My I.Q. is inadequate."

"Inadequate! We do not use the same system here in Mexico but I was under the impression that an I.Q. of 132 was quite superior."

"My I.Q. is 93, Colonel."

Frowning still, the colonel looked down at the dossier. "It says here, 132. You seem to have made some mistake, Señor Hardin. One test shows 93, but the average is corrected to 132."

Bat Hardin stood silently for a long moment.

Finally, he said softly, "Al Castro can take over my job."

The colonel's eyebrows went up. "You are not continuing with the rest of your town to the south?"

"No. I'm returning to the States to find my level. Perhaps Ferd Zogbaum was correct and there are basic changes to be made in the Meritocracy, but, if so, they'll be made from the inside, not from without."

"I wish you luck, Señor Hardin," the colonel said. ●

## **THIS MONTH IN GALAXY**

### **THE WHITE KING'S WAR**

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### **STARHUNGER**

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### **WHEN THEY OPENLY WALK**

Fritz Leiber

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## READING ROOM

(Continued from page 113)

letter words and a few overt sex scenes, this is one of the least depraved books I can imagine.

In fact, in many ways this might be considered a wholesome and old-fashioned novel, despite the surface trimmings. The leading character is neither a weak anti-hero nor a pervert of any kind. In his own way, he's a strong man facing up to his problems as best he can and slowly solving his own ethical obligations in terms of his conscience. If the novel isn't inspirational, it's at least up-beat in the final analysis. Spinrad seems to accept the fact that evil is rather horrible and to come out in favor of decency.

THE novel concerns a power struggle between two men, with other groups doing some fighting from the sidelines. Jack Barron is a former radical activist who helped found a third party known as the S.J.C. Then he got into television by accident and has achieved success as a master of a television interview show known as *Bug Jack Barron*. With a hundred million viewers each week, he is intoxicated by his power to make or break almost any person or cause. Power has him in its grip and the old crusading spirit seems about to die in him.

As a result of a routine interview, he finds himself pitted

against the noted Benedict Howards. Howards has become the leader in operating freezers for the dead who hope to be revived later when medical science has learned a bit more. Each freezing requires a deposit of \$50,000 and there are a million frozen bodies so far. This gives Howards control of fifty billion dollars. He can buy Senators and thus he dominates the Democratic Party. He is now fighting to put through a bill to make his concern a legal monopoly in the frozen death field. Voting on the bill is due shortly and Barron's needling of him is dangerous to his success.

This soon develops into an all-out fight for dominance between the two men. Howards manages to enlist the help of Sara, the estranged but still beloved wife of Barron. He sends her back to Barron to persuade him to lay off. But when she finds evidence of the old crusader in Barron still, she again falls under his spell.

Meantime, the Republican Party recognizes it has no chance in the next election and seeks a coalition with the leader of the radical S.J.C. Lukas Greene, who controls the radicals, is the black governor of Mississippi and an old friend of Barron. Then at his prompting, the coalition offers nomination for the Presidency to Barron, since he seems the only one capable of fighting Howards' political control.

Howards counters with an offer of immortality. He has been using his funds to pay for research that will let him live forever, and success has just been achieved. He promises the treatment to Barron and Sara. Barron realizes there is a concealed price, though he has no idea of how horrible it is. He decides to force Howards' hand in hopes of learning what is behind the offer.

**T**HIS is an extremely strong situation around which to build drama. Throughout most of the book, Spinrad pulls it off, though he falters briefly in one episode. There Howards is confronted with an emotional accusation from a woman whose dying father can't afford freezing. Howards should have found some excuse for a noble gesture to win the viewer's sympathy; his failure to do so makes him seem too much of a patsy. If he can't handle this, how did he fight to the top in a tough world, anyhow?

Nevertheless, the first three-quarters of the book continues to build. Genuine passion and tension are developed during the several interview programs where Barron and Howards battle just below the awareness of the public. The elements of the struggle are made believable and the complexity of Barron's character is used with fine insight.

Then the last part of the book

runs into too many encounters where one character acts like a patsy. Barron puts himself in Howards' headquarters, doing so even though he knows Howard has something extremely unpleasant set up for him there. Sara's last gesture comes during an acid trip, not from her natural response to the situation; and Barron's decision is then made less from inner conviction than because of her act. Howards proves a pushover for the right nudge. His paranoia was established before. But for a hard man to crack so easily to pressure lets down much of the high-tension realism of the earlier parts.

There are a couple of minor but irritating flaws in the attitudes of the characters throughout, however. Spinrad's women are much less convincing than his men but usually this doesn't matter in this book. For example, it's a bit hard to accept their all being thrown into an orgiastic frenzy at the idea of a man wielding power. First it is the secretary, perhaps—but hardly both she and Sara. It's also surprising that nobody in the novel seems to have any doubt about immortality's being ultimately desirable at any price. History is full of men who gave up what they believed to be the immortality of their soul in heaven for a few years of power. And men still commit suicide, rejecting even their normal span.

Still, if Spinrad had thought out his final situations and the last encounter as well as he did the earlier developments, this would have been a splendid book. As it is, it adds up to an interesting one—and perhaps even a good one—but no more.

**I**T would never have been a great *science-fiction* novel, however. Despite the immortality trappings, this is simply no more science fiction than were some of Alan Drury's books. This is a mainstream novel with a few science-fiction touches.

The world of Jack Barron is basically the world of today. His studio scenes are true and convincing against my own experience with somewhat similar situations—but they are true for today. On the other hand, his black state capitol is described in more detail—but it doesn't feel lived in until it is filled in with scenes from today's ghetto streets. His New York City Bleeker Street is the one I traveled last Friday.

The technology is early space-age modern with only the fillip of discovering a new medical marvel. Pot and acid are legal, but with no social appreciable difference. The major political change is the radical third party centering around the blacks and the New Left—but we get only vague hints of other effects from racial and ideological upheavals.

Even the slang has remained what's happening in 1967, after twenty years, though nothing alters so fast as the current "in" jargon. Here we're faced with an uptight cat trying to dig that it's the nitty-gritty before he splits. It ain't groovy, man! Even if Barron learned the slang in Berkeley, this is 1987; he can't have avoided dropping old expressions and adding new ones.

It's a mainstream trick when the facts of a novel can't fit into the here-and-now to suppose the necessary extra elements and differences and lay things in a sort of timeless tomorrow. But in science fiction we like to have all this thought out in detail. It's the way the changes fit together to form a new and interesting future milieu that fascinates us with the future.

**A**S AN example, when Howards finds he's immortal, he must also realize that this only applies if no accident kills him. With his fixation on enduring forever, a science-fiction story would make sure he avoided risks. Yet he seems unaware of this as he flies to meet Barron. This is probably all right for mainstream readers who don't do much thinking about immortality; but science-fiction readers have seen too many other stories where such details are considered to overlook the inconsistency here.

In an article, Spinrad discussed a "new" method of punctuation that enabled him to make the reader go fast or slow as the writer chose. This, of course, is what normal punctuation does when handled properly. But the "new" method seemed to consist mostly of omitting commas. If it had any effect, it was only to slow the reading of all passages.

The style has also come up for considerable discussion. It is different from most science-fiction stories but it's hardly a great innovation. It often seems inadequately controlled, but it's within the normal variation of the inner-dialogue, stream-of-consciousness writing style for intensely subjective novels. Hume and others of the *Paris Review* clique were using it in a very similar way at least fifteen years ago. Again, while it may be odd in science fiction, it is well chosen for the mainstream.

This book shows a remarkable growth of Spinrad as a writer. His earlier work gave little evidence of the sustained passion so strong in the first part of this novel. It's a pity, therefore, that the manuscript didn't fall into the hands of a sympathetic but critical editor who could overcome the false notion that a writer's words are too precious to change. Artistic integrity only begins with doing one's best; it should go on to an eagerness to discover ways

of improving from anyone who can help and thus making sure that the result really is the best possible.

In the hands of an understanding editor this could have become a major mainstream novel. It would be a natural for the movies then and it would be no less interesting to the science-fiction audience.

THE history of *The Left Hand of Darkness* by Ursula K. LeGuin (Ace, 95¢) is different from that of Spinrad's book. There was absolutely no advance publicity. Nobody discussed the book before its release and Mrs. LeGuin has partaken in no provocative writing for the fan magazines. Apparently she simply wrote it and sent it in. Ace bought it and published it as one of the Science-Fiction Specials. Only the mouth-to-mouth advertising of contented readers began to bring it the attention it deserves.

This is a quietly passionate story about sex and love. But it is a different kind of "book about sex" from what the term implies. There isn't an overt scene of sex in the whole book or a word that anyone could object to. The sex here involves a race of human beings on another world where each individual is both male and female. The interest is then both psychological and sociological; it is the effect of such a development

that is studied, not the rutting and gratification of the individual's sexuality.

At a deeper level, is an examination of love that is not related to sexuality or romance. This is a love between individuals that can disregard maleness or femaleness. But it is none of the bland "love thy neighbor" stuff usually preached; this is a hard, real and active relationship.

Genly Ai is sent to Winter, a planet where the ice age is at its peak and where most of the land is covered by a great glacier. His job is to win the planet to acceptance of membership in a sort of interstellar union, for which he can offer no tangible rewards. He has only his wits and training to aid him. There is no invasion force behind him. If he dies or is killed another envoy will be sent later.

He finds the world broken into different nations. Karhide is a kingdom of village chiefs; rather loose and highly individualistic. Orgoreyn is a syndic, with almost every action governed from a central Committee. In both, there is something called shifgrethor, a conduct related to "face" saving but varying slightly from each other. Ai finds it difficult to understand, just as they have trouble understanding him.

**H**is cause is taken up by Estraven, a noble of Karhide.

As a result, Estraven is exiled to Orgoreyn. War is unknown on Winter, but the two countries are in the process of inventing it. Estraven hopes Ai's "union" will help prevent this. When Ai is interned in an Orgoreyn labor camp, Estraven rescues him.

They still cannot fully trust or understand each other but they must somehow reach Estraven's native section of Karhide to send out a message that will bring evidence to convince the king to accept the union. After that, the war can perhaps be stopped.

Their only escape from Orgoreyn lies across the great glacier in the middle of Winter. This means a trip of a thousand miles on foot, with only the supplies they can carry, through territory nearly as hostile as Earth's Antarctica. To make such a desperate trek, they must rely completely on each other, even though neither can yet fully trust his companion.

The story is centered around that trip and what happens to Estraven and Ai during it—two men completely unlike in birthworld, culture or even in their physical form.

It makes for a good adventure story but the book is far more than that. Every element is worked out in fine detail and then dovetailed skillfully into every other element. The background of Winter is a strange mixture of

the familiar and the alien. (I'm told this resembles *Islandia*; I wouldn't know nor care, since this is only one factor among many here.) Even the misty union of the stars in the distant background takes on importance and becomes a fascinating and novel concept.

When I finished the book, I put it down with affection and respect. And the next morning at

breakfast I picked it up to check one small detail at the beginning, only to read through the whole book again. It was even better the second time, too!

It's a difficult book to review. But unless a better one comes along this year—which I don't expect—I'll make my real review of it by nominating it next year for a Hugo. ●

## IN OUR FUTURE

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Piers Anthony returns with another Dr. Dillingham story.



# THE COSMIC PHILOSOPHY OF K. E. TSIOLKOVSKY

by Alexis N. Tsvetikov

THE POSTHUMOUS glory of Konstantin Eduardovich Tsiolkovsky (K.E.T.), the great Russian pioneer in rocketry, came to Western Europe and the U.S.A. only after the successful launching of the first Sputnik in a desert of the Middle Asia—that is, after October 4, 1957. The world now knows the astronautic works of K.E.T. He wrote and published in Kaluga, Russia. His projects and scientific articles concerned hydrodynamics and aerodynamics, works in cosmic biology (astrobiology, as he named it) and the theory of cosmic rockets. The most important and best known were his works in rocketry, which he began in 1878. His principal work, *Exploration of Space by Means of Reactive Apparatus*, was published for the first time in 1896.

I knew K.E.T. personally for a few years and I had a correspondence with him up to the end of his life in 1935, at the

age of 78. After the death of K.E.T., all his manuscripts were brought to Moscow and placed somewhere in the governmental archives. In the old K.E.T. house, Bol'shaya Korovinskaya, No. 3, Kaluga, a museum bearing his name was soon organized, filled with his personal things of lesser importance.

In articles about K.E.T., authors usually mention only his scientific-technical works and his science-fiction novels. However, there exists also a series of his brochures buried, perhaps forever, in the official archives. Rare samples of those works, I am sure, are still in possession of a few persons in Russia. Those are his philosophical works, regarded officially as anti-materialistic and therefore non-permissible. In spite of this, they are sometimes listed in his bibliography without comment. To the same category belongs also his correspondence—the letters received by

K.E.T. were confiscated by the same governmental office in Moscow.

K.E.T. started his philosophical writings in 1914. The first of this series was the booklet *Nirvana*, published in Kaluga.

OF JUST WHAT kind was the philosophy of K.E.T., always officially suppressed? It was mainly a kind of nature-philosophy directed toward the ontological and ethical problems. K.E.T. usually did not write about any religion, a subject considered outmoded and even dangerous officially. The ethics, evidently, he did not connect with any religious teaching.

"The ethical principles are the result of evolutionary processes only," he said.

The traces of this idea can be seen in his *The Scientific Ethics* and in the *Monism of the Universe*. Ethics, he thought, inevitably develop during the process of evolution of earthly and non-earthly intelligent beings. We do not need to fear the visits of non-earthly intelligent humanoids, who are older in their evolution than we are on our Earth. They have not yet appeared on our planet only because we are not prepared to meet them as friends and as the wise people. Such an appearance of other "intellectofers" would create panic in our society. We have first to send them out friendly signals and

let them know a little more about us. In his brochures, especially in *The Will of the Universe and the Unknown Intelligent Forces* (1928), K.E.T. mentioned two of the "meditative and inspiring illusions" he saw.

Generally, K.E.T. avoided any mystical speculations. However, he lived an inner life unknown to anyone else.

K.E.T. dreamed since his poor childhood about stars, interstellar flights, and later, about his rockets. There was nothing more beautiful, exalting or more important for him.

In his philosophy first came the cosmogonic and cosmonautic ideas. He did not think very much about such cardinal physico-metaphysical categories as Space and Time. They were for him just simple Newtonian realities, the media for floating of Energy and Matter in them. Being a good mathematician, he understood the ideas of Einstein. However, he felt intuitively something wrong in the Einsteinian idea of the limiting velocity of light; he denied also the Riemann-Einsteinian finiteness of the space curvature. He was inclined more to the Lobachevskian point of view: that space is curved; however, infinite. Even in the classical physics he fought against the teaching about Entropy, or the Thermal Death, of the Universe. He believed in the reversible processes in Nature,

"Science cannot avoid a strange path," K.E.T. had often said, "and sometimes such a path is more fruitful than the direct one."

K.E.T. was sure that most of the stars, their planets and the inhabitants of those planets are already in a later stage than our Sun, Earth, and ourselves. He wrote that the interstellar flights and colonization of distant worlds are the most common events in the Universe; only a few civilizations, such as ours, have not yet advanced to that stage. Because of colonization, many stellar systems, especially those around the center of our Galaxy, i.e., in the space beyond the constellation Scorpio, are possibly united already under one administration.

K.E.T. thought that extremely different forms of life might exist on other worlds, including living hydrogen. On the highest levels of evolution, he said, there can be also some bodiless, immaterial forms of life: islands of a pure mind or consciousness living in empty space. The union, the sum total of the whole world consciousness in the *Will and Cause of the Universe*. Such was his own religion, masked strongly by the concepts of naturalism.

Most of the dearest ideas of K.E.T. are described in his *Monism of the Universe*—a suppressed work which had gained, however, a great deal of un-

derground popularity. This small book ends with eight theses, almost each one beginning with the words, "*Razve mozhno somnyevat'sya . . .*", meaning "*Can one doubt . . .*" These "R.M.S." theses sum up the ideas of the booklet. I present here a translation of them:

"1. R.M.S. that the innumerable multitude of planets are illuminated by their suns?

"2. R.M.S. that on (at least) one of those planets life reached such might and perfection that we humans cannot imagine it. That might permit them (i.e., unearthly humanoids) to overcome the force of gravity and to colonize the Universe?

"3. As a result, there does exist the spreading of perfection and dominance of mind in the Cosmos.

"4. R.M.S. that this happened already infinitely long ago, and this is the normal and permanent state of the Universe? The spontaneous natural generation and evolution, with all its sufferings, is a rare exception.

"5. R.M.S. that the atoms take part in conscious life, when they reach the brain or its equivalent? They reflect the state of life, however, without any permanent impressions.

"6. R.M.S. that the world of matter is mixing up and periodically changing its forms; and the atom, an infinite number

of times after the immense intervals of time, takes part in the processes of life?

"7. R.M.S. that the period of the stay of the atom in inorganic matter passes as a deep swoon, and such time does not exist for the atom?"

"8. R.M.S. that all periods of life flow together into a single, permanent, conscious, beatific and infinite stream of life?"

Such were the "R.M.S." theses by K.E. Tsiolkovsky. Later he wrote an additional article in the *Monism of the Universe*— the Migration of the Atom, which bore the following thesis: Beside the insensible sojourn of atoms in the inorganic world, they have their hosts in the form of plants, animals and men. The animals, whose life is imperfect, meaningless, miserable, full with pain and suffering, must and will completely disappear in the future, and the atoms will wander only in the plants and humans. Life in the plant is almost equal to

non-existence, since it is insensible. The superior beings, and the humans in the future, like good gardeners, will weed out lower animal species, harmful bacteria and valueless plants, except for laboratory samples.

"Individuals die," K.E.T. said. "However, the total amount of living matter increases. We can imagine a spherical organism with the cycles of physiological processes closed completely in themselves. Such an organism will be immortal and photosynthetic (with some kind of chloro- or quauto-phyll in it) and it can develop even a higher consciousness. . ."

Such was a "strong wine made by K.E. Tsiolkovsky in Kaluga," as one of his correspondents said. K.E.T. planned to make some corrections in his *Monism of the Universe*, but did not find time to do so. The main problems of his life lay in astronautics, and his cosmic philosophy was an additional, however important, product of his broad and original mind. ●

(Continued from page 2)

*Moon*. Dr. Menzel was president of the parent body, *Commission 16—The Moon and the Planets*, when it was first formed in 1964.

These four men will decide—or will have decided by the time you read this—by what names future generations shall know the craters on the far side of the moon. Craters seen only—out of all Earth's billions—by the three astronauts of Apollo 10: Air Force Col. Thomas P. Stafford, Comdrs. Eugene A. Cernan and John W. Young of the Navy. The I.A.U. *Working Group's* choices will become official when approved by the entire body of the I.A.U.—2000 top astronomers representing every nation on Earth and supported by every government—when it meets in Brighton, England, in 1970.

By tradition most of the far-side craters will be named after deceased scientists. The Russians may have established another precedent, that of naming some moonmarks for memorable science-fiction writers, by calling one of "their" craters *Jules Verne*.

Dr. Menzel—besides being among Earth's leading astronomers—is an accomplished and recognized artist. His brilliantly executed Martians will appear in full and vibrant color on the cover of September *Galaxy*—*IF's* companion magazine. Others will be exhibited in early July—by re-

quest—at the International Scientific Conference in Liege, Belgium. Still others have long and quietly been collectors' items among top space scientists.

We plan to make enlarged color reproductions of *GALAXY'S* September cover Martians available to readers of *IF* and *GALAXY*. Those who wish to acquire original Martians may write to Dr. Menzel in care of either magazine. We are also hoping soon to arrange an exhibit of Menzel's Martians in New York City.

For whoever may question the role of science fiction in the molding of men and scientists—Dr. Menzel is a starswinger from far back. He put himself through graduate school at Princeton by writing science fiction stories and popular science articles for Hugo Gernsback.

*IF's* readers, and its editor, will undoubtedly be subjected to a good deal of moonwash regarding the nonexistence of Moonworms once our astronauts stand on Earth's sole satellite.

We, too, may give lip service to popular skepticism. But Dr. Menzel's blue eyes were incredibly clear and enormously candid as he told us about Moonworms—and he towers white-maned to the stars.

And *IF* is the magazine of infinite Alternatives.

—EDITOR

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# HUE and CRY

*Readers write—and wrong!*

---

Dear Editor:

You wouldn't believe the rumors rife with stress, plight and frantic speculation since the announcement that Someone had purchased *Galaxy* and *If*, and that our noble Pohl, around whom many s-f stars have gladly turned, was leaving. As contributor, reader and an officer of Science Fiction Writers of America, my apprehensions rise to the third power.

1. Will *Galaxy* and *If* continue to publish the broad spectrum of science fiction? Both tales of wonder and tales to ponder have coexisted until now. To my mind there should be no cut-and-dried definition of what *must* be science fiction, this form and no other! A good story, well written, is a good story! 2. Will *Galaxy* and *If* continue to introduce new authors—for competition is as important to the writer as it is stimulating for the reader—and furthermore swells the ranks of SFWA which encourages good writing in the field.

3. Can anything be done through the new owner about the sorry state of distribution? When our friends, relatives and fans try to buy copies on the newsstand and can't, it irketh and looseth prospective customers?

4. Will something be done about the typesetters who either do not read English or what they are setting and bolix up things until the astonished author squirms rapidly into the nearest "o" and pulls the circle out.

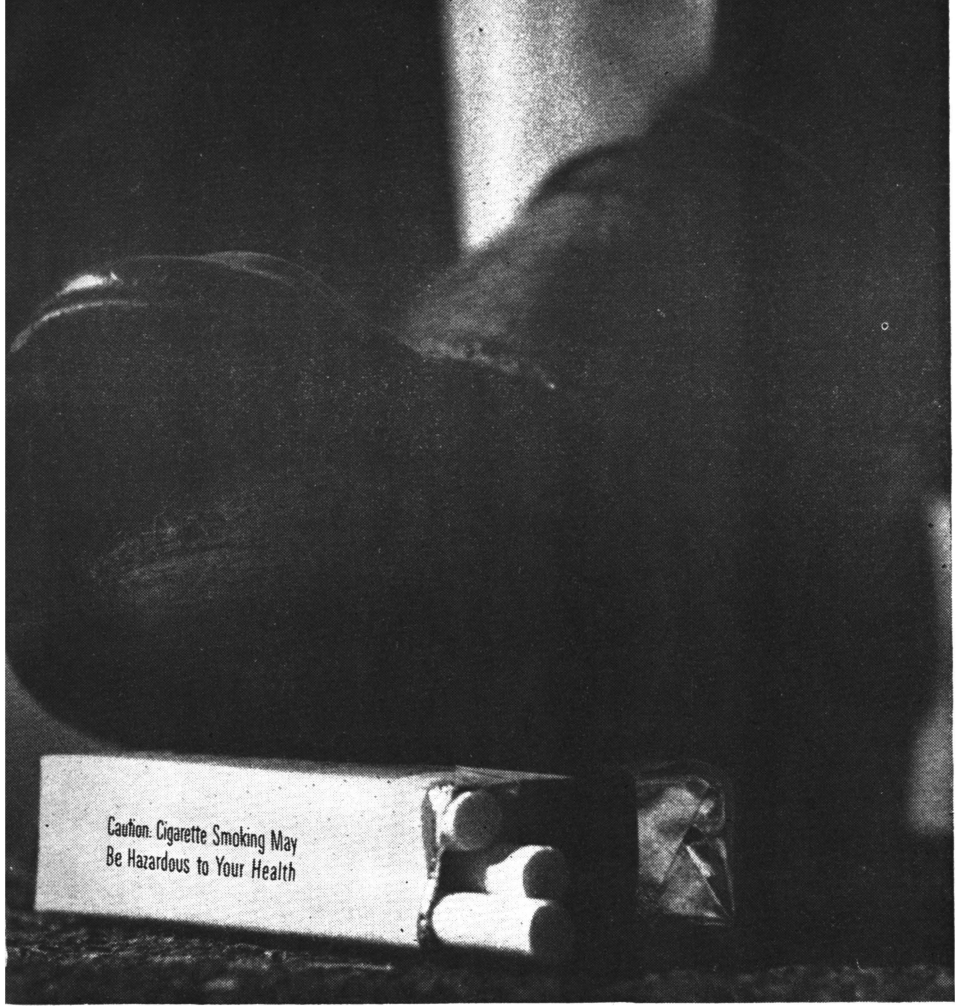
5. Most important of all, what kind of a guy is this new editor Ejler Jakobsson? He edited *Super Science* back when, but—despite my advanced years and silver hair—it was before my time. 6. How open to author-editor discussion is he? Must I follow his "line"? Is he apt to pull whole sections of my patiently-constructed and word-weighted stories without asking my permission? I am really a most tractable author and quite amenable to discussion, responding amiably to editorial suggestion, but preferring to be consulted!

7. Is there any truth to the horrible rumors that story payments will be reduced—which will definitely reduce the number of writers able to continue producing in the field? 8. Are other titles in the *Galaxy-If* combine to be resurrected? I hope this one is true because it will make everyone much happier with more good stories to write and read.

9. Will there still be provocative covers for which writers will produce new stories? 10. Will the features that enliven the magazines continue? 11. What is the editorial climate on "taboos"? 12. and . . . what will be so rare as a *Galaxy* in June?—Anne McCaffrey, Secretary, SFWA.

*Hi, Anne. By now we've met and share new secrets. To clear up the old, a resounding YES to your third power apprehensions 1—4 and 8—10. As to number 5—'twas not ere your time. Just something you missed. We all have these regrets. 6—your words shall be mine at usual or better rates. Please? 7—horrible rumors are untrue but have you taken a good look at reality lately? 11—what's taboo? 12—an IF this June.*

—JAKOBSSON



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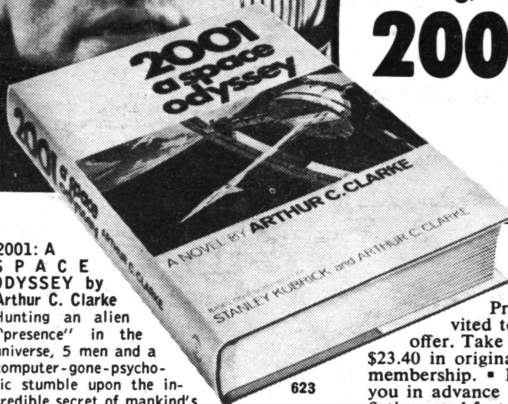
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Please accept my application for membership and rush me the 3 books whose numbers I have circled below. Bill me only \$1.00, plus shipping and handling, for all 3. Then, every month, send me the Club's free bulletin, "Things to Come", which describes coming selections. For each book I accept, I will pay only \$1.49, plus shipping and handling, unless I take an extra-value selection at a higher price. I need take only four books within the coming year and may resign at any time thereafter.  
**NO-RISK GUARANTEE:** If not delighted with my introductory package, I may return it in 10 days to cancel membership.

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600	606	610
616	618	619
622	623	627
632	633	643
644		

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If under 18, parent must sign here. (Offer good in U.S.A. only)

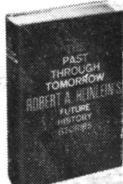


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