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# SCIENCE FICTION

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TOMORROW



JULY 1968

THE SLEEPER WITH STILL HANDS

by Harlan Ellison

THE HIDES OF MARRECH

by C. C. MacApp

IF ... AND WHEN!

On the Interface Between  
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by Lester Del Rey



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*Cover by MORROW from THE SLEEPER WITH STILL HANDS*

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# ALL BUT 98%

Warren McCulloch, who looks a little like either Gert or Klaatu (the one that *isn't* a robot), but with a beard like George Bernard Shaw, is in fact neither an alien nor a late-blooming Victorian playwright. What he is is a mathematician, neurophysiologist, medical doctor and poet, which makes him obviously the right man to be a staff member of the Research Laboratory of Electronics at M.I.T.

Some time ago we read, and mentioned in these pages, his book, *Embodiments of Mind* (The M.I.T. Press), which contains such choice items for speculation as this: Test a man's ability to recognize whether two lines are of different lengths. On average, you will find that he can do so only if the difference is at least 5%. Test the same man's ability to recognize whether a rectangle is constructed according to the "golden mean" — that is, with the length in a proportion of 1.618 to 1 to the height. You will find he can do so even when the difference is as little as one part in a thousand. Are the same sensory and analytical powers involved in both exercises? It would seem so. But one of them is *fifty times* as accurate as the other!

Why?

Well, McCulloch doesn't tell us why, either in the book or in person; he prefers to show us the problems and let us do what we can to solve them. In fact, he showed us all one the other day, at the Boston Science Fiction Conference in

March, 1968, where he, Marvin Minsky (the computer man who is coming rather close to bringing Asimov's robots to life — if "life" is the right word for robots) and your editor took part in a panel discussion.

Said McCulloch: "There are too many people in the world. At the present time, humanity comprises 2% of the world's biota. The proportion is increasing; and it cannot go on doing so indefinitely or there won't be enough non-human biota for us to eat."

Of course, we all know that there are getting to be an awful lot of people; but McCulloch's translation of that fact into a proportion between people on one hand and trees, cornstalks, mosquitoes, elephants, dolphins, dogs, cats, bacteria, trapdoor spiders, giant squids, daisies and porcupines — not to mention all the other varieties of living things that make up the tally of the world's biota — on the other seems to make the picture a little clearer, and a lot more alarming. Consider food chains, for instance. Your ten-ounce beefsteak was paid for by roughly twenty pounds of animal fodder consumed by the steer who grew it for you. Your eight-ounce can of tuna is the end of a chain that involves eighty ounces of smaller fish, eight hundred ounces of little invertebrates and eight thousand ounces — a quarter of a ton — of plankton; the krill turn the plankton into themselves by eating it, the little fish eat the krill, the tuna eat

the little fish. If we are in fact one-fiftieth of all the life that exists on the earth, then clearly we can't even now make up much of our diet out of the end terms of long food chains — which is to say, for most of the human race, the only food available is vegetable. (As, in fact, it is.) Which has its problems. Vegetable food sources are poor in protein. Protein is quite essential to human diets — particularly to those of young children. In protein-poor diets, children do not die of hunger very much of the time. But they do not survive unscathed, either: the protein deficiency injures the development of the mind and brain. They may very well grow to be adults, but they are unlikely to grow to be intelligent adults.

Having agreed, then, that there is an upward limit to the desirable size of the human population, and that men are begetting themselves closer to that limit every day, the question was raised: How many people *should* there be in the world?

Marvin Minsky suggested that there was a natural lower limit for an optimum population, at least according to his own personal preferences, and that was a large enough number of human beings to make it possible for there to exist persons specializing in enough different activities to keep a scientific, technological, comfortable civilization alive. How many is that? At least a few hundred thousand, he suggested, but how much more than that was anybody's guess. And an upper limit would be no less than the planet can support with an adequate diet — assuming the development of good new food sources, perhaps "some billions" of people.

Those are pretty broad parame-

ters, to be sure, but no doubt somewhere between the two figures is the "right" size for the human race. The lower figure is obviously too low. But the upper figure is very likely too high, too — and yet that's where we are right now. If we human beings are to maintain ourselves at a proportion of 2% of the world's biomass or more, we're obviously going to have to destroy a lot of graceful and desirable species to do it. As we've already done. Worse than that, we're going to destroy a lot of the graceful and desirable features of human life as well. As we're doing now.

Pity the human race can't recognize the proper proportions of human-nonhuman life forms on this planet nearly as accurately as it can recognize the proportions of a "perfect" rectangle! Even more of a pity that we don't seem to have any good way of maintaining the proper proportion of humanity in the world, even if we knew what it was....

By the way, last month we started a small (moneywise, anyway) contest for suggestions on What to Do About Vietnam.

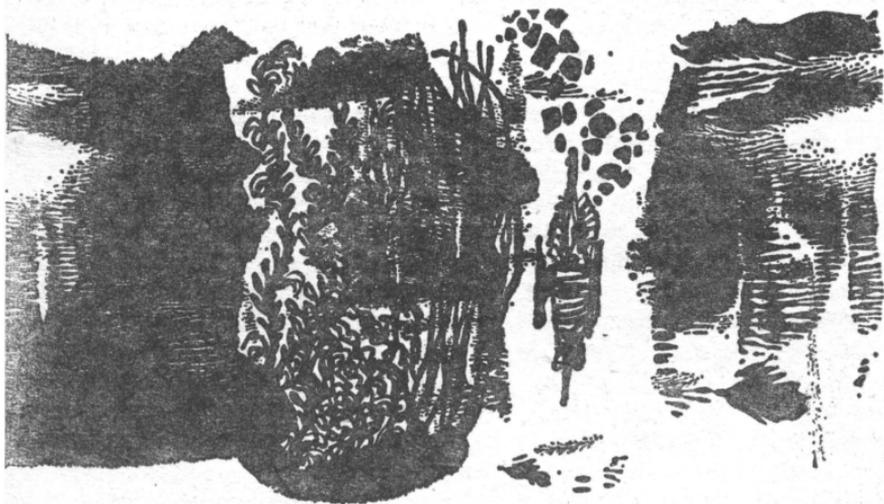
By the time you read this it is possible that the question will be settled (we can't tell, because that's two months in the future as we write these words, and to be honest about it we sf writers don't really know what will happen next any better than politicians or scientists do.) But it is even more possible that it won't be; if talks begin, they'll probably still be going on.

So the contest is still going on too. See the ad on page 162 for details, if you missed last month's announcement. And let's hear from you!

— FREDERIK POHL



*For six hundred years Man had  
been free of his oldest adversary.  
Now it was time to bring it back!*



# THE SLEEPER WITH STILL HANDS

by HARLAN ELLISON

Illustrated by GAUGHAN

I

**B**eneath the Sargasso Sea: the Sleeper.

Waiting for their mutual tomorrow: Leaf and Laurrayne.

Peace, on Earth. So much peace.

And Abbott, going to kill six hundred years.

Leaf's Force, opaqued and committed to slaughter, raced for the chart co-ordinates where the Sleeper had been planted, six hundred years before. Inside the assault vehicle — restored from its display case in the Smithsonian — Abbott turned sud-

denly, as the sound of the tracker alarms went off on the plot-board. For a fleeting instant he saw his face washing across the polished bulkhead, blurred by his movement, but nonetheless *him*: chocolate brown, bright eyes, freckles, a particular kind of nose.

"Lock in!" he ordered the 1st Lieutenant.

The 1st Lieutenant palmed three huge buttons on the plot-board, the scanner screen shifted intensities, and out of the sea-murk and slime-fog of the Sargasso appeared the coalescing image of an outdated but powerful

seaskimmer, bearing down on them.

"Reading!" Abbott demanded.

"Course coordinate to sweep our bow."

"What kind of time?"

"Minute and a half . . . maybe."

Abbott slammed the chart rack with his hand. For the first time since they had slipped out of what had been the Pensacola Sub Pens, he was furious with anger, furious with the possibility that they might not make it, might not get to the Sleeper first, might not turn him off first, might lose the opening jump of the war to Laurrayne's Force.

He turned back to the six men in the vehicle. "First stays on scanner; the rest of you link up with me."

The Commander of Leaf's Force dropped into a gelatin-trough and closed his eyes. The other five team-members did the same, adjusting their seats to trough and sliding back down into the enclosing yellow-green substance.

Immediately, Abbot felt his mind being touched by the five. He lined them in behind his own focus and held the force in readiness as he probed softly, sweetly, toward the seaskimmer and Laurrayne's Force. When he had dwindled the probe to a stress-point, he left the probe and traced back along its length to his focus. Then, with the power of the five men, he hurled himself down the probe, crackling, rushing, invisibly striking the stress-point.

The stress-point was in the mind of one of Laurrayne's men, and as the mental force-beam struck, instantly charring out the man's skull, burning

out the eyes, Laurrayne's Commander slammed down his own mental barrier and expanded it to enclose his men. It was barely in time to save them.

The burned-out corpse still stood erect, the empty black eye-sockets flashing power that ripped and crackled through the seaskimmer. The force beam of Abbott's mind powered to the fifth, leaped and burned from the face of the dead man. The corpse jerked with the power it contained, and the arms flapped wide and without volition, the legs rubbered and twisted as the head tossed loosely on its neck, spume of deadly power emanating from the eyes, burning, charring.

Safe within the mind barrier erected by their Force Leader, Laurrayne's men stared in horror at what had become of their companion. Laurrayne's Force Leader turned away and then swallowed hard. He spoke to his men with difficulty. "Link up with me; we'll stop it."

There were eight left alive in the seaskimmer. They joined minds and short-circuited the force-beam. The empty husk of the corpse dropped instantly. The stench of corrupt flesh was high in the seaskimmer. One of the men gagged. "*Tense in there!*" the Leader snapped, and full intensity from the man's mind was sent resurg-ing into the common pool.

The Leader tried to track back down the path of the force-beam focus, but Abbott had already mazed it, and somewhere out over the sea the stalking evaporated.

Laurrayne's Force now had the task of rectifying their course. The

dead man had burned out whole banks of controls. The seaskimmer was plunging wildly out of control, deeper into the Sargasso Sea.

While they tried to bring themselves back to optimum efficiency, hoping to regain time, Abbott was urging his team toward the co-ordinates where the Sleeper had been sent down, so long before.

Abbott unlinked and spoke his orders smoothly, softly, urging his team back to their positions. The troughs were re-chaired, and the team-members took their places. Abbott watched. They were moving sluggishly, reluctantly.

He continued watching.

"Okay, what is it?"

They turned and stared at him. No one spoke. "Open up. Let me in." They shied from his stare, but one by one opened their minds to his probe. He went in, touched lingeringly for an instant, then withdrew. He saw what was in their minds.

"I know. But we have to do it."

They didn't react.

"Don't let it slow us down. Keep alert." He went back into each of their minds and smoothed the places where their horror lay: horror at what they had seen their mental power do to the Laurayne team-member. Smoothed, their efficiency rose, and they went at their controls, sending the vehicle deeper into the fog-shrouded Sargasso, seeking the place of the Sleeper.

Abbott blanked himself off and thought about it. Leaf had found him leading group therapy classes at Klock Institute, sessions filled with men and

women bored with their existences, surfeited with ennui and longing for answers that would not be the same as the one they had all invariably found: suicide.

Leaf had come to him and had opaqued Abbott's thoughts so the Sleeper could no longer monitor him. And then he had told him about war. About the value of war. The necessity of war, to make Man again. And Abbott had listened, had cleaved to Leaf's philosophy, because he had been exposed to the consequences of continued peace. But he had had the feeling that had he not agreed with Leaf; had he not decided to head up Leaf's assault force, the man would have killed Abbott on the spot.

Now . . . where was he? What was he doing?

Did he believe it, still . . .? Now that they had actually made contact, had actually burned out a man's head, had actually used him as an instrument of death. Did he still think of Leaf and Laurayne as saviors of mankind . . . or were they precisely what the Sleeper had been created to prevent?

He didn't know. Now. And he wanted to know, needed to know. Desperately.

The vehicle, with a boring mole locked in its belly, moved deeper into the seaweed-clogged vastness of the Sargasso.

Beneath the Sea, the Sleeper waited, having no way of knowing that his time was nearing its end, that men were coming to turn him off, that once again war would walk the world.

And Abbott, the instrument of their destiny, needed to know.

In the world, before Laurrayne and Leaf, it had been different. It was not that much changed, yet, but if the Force reached the Sleeper . . .

Before they had come, it had been different.

Only two men knew the secret of making thoughts opaque. The first was Pieter Kalder, the man who had serendipitously stumbled on the technique. He was an old man, almost bald, who had bitten his nails since childhood, refining the process to such an elegance that now he worked only at the corners of his fingernails, closest to the quick. The other was his assistant, a teddy bear of a man, short and round with a nervous habit of nodding continuously through someone else's question as though proving attentiveness all along the way.

He never considered himself a happy man.

But then, neither did Kalder.

But the teddy bear had found a measure of meaning in working with the brilliant Kalder. The teddy bear's name was Albert Ophir, and he contributed the refraction mathematics to the technique. Their method had been in existence for seventeen years before the right parties happened upon them. By that time Kalder and Ophir were in other places than where they had been and were doing other things.

No one had cared what they had found. Because it had not mattered, after a while, even to them.

Because at that time there had been peace in the world for six hundred years.

And for six hundred years there had been no progress.

Then, by chance, one of the right parties stumbled on the technique, or more precisely, the records of the technique. Before he could tie down his lines of communication, the other right party learned of what had been found.

The first of the right parties, after six hundred years, and after seventeen years, was a man named Laurrayne. He was huge through the shoulders, bearlike in his love, with an enormous appetite. He thrived on life and the living of it.

The other right party was a thoughtful, skintight man named Leaf who wrote poetry and sang in a sweet, distant voice. He was well on in years and had refused the youth restoratives, feeling — perhaps properly — that a man should reconcile himself to growing old gracefully, without trying to avoid the inevitable.

These men were the right parties to take note of the technique for making thoughts opaque because these men were (though not the first in six hundred years) fired with the desire to start war on Earth again. To begin the holocaust of random slaying and senseless theft of what belonged to other nations and parties. To recommence global hostilities that would plunge every man into his personal hell of fear and distrust.

Which had been impossible for six hundred years while the Sleeper sat with still hands and closed eyes in his cavern of steel beneath the Sargasso Sea, monitoring the thoughts of the world, keeping the peace.

Laurrayne and Leaf chose to be enemies.

For how else could war be effected if there were no combatants, no opposite sides, no antagonists?

And they sought out Kalder and Ophir.

For how else could Man begin to resume his climb of Progress to his Destiny, if there were no wars to spur creativity and challenge his abilities? If the monitoring of the Sleeper could not be ended so that Man might once again bash the brains of other men and think his thoughts of tomorrow, dream his dreams of the stars?

They were the right parties to choose up sides, and to seek out the formulators of the technique, because they so believed what needed to be done was a holy chore that they were able to dismiss the thoughts of Kalder and Ophir from their minds before the sweep of the Sleeper's monitor could pin it in their heads. They were perhaps lucky, but then perhaps they were destined, for they cleared their minds; and when the Sleeper's monitor touched them they were pink and clean and fresh as the souls of newborn infants — of which there were a regulated number each year.

Right, because they were able to seek out Kalder and Ophir, one to each, without having to harbor the thoughts of *why* they were doing what they were doing.

And when Laurrayne found Kalder, in Vienna, he was able to put the technique into instant use, making his own thoughts opaque; thereby putting him beyond the retaliatory powers of the Sleeper. Even as Leaf had done,

only days before, when he had located Ophir in Greenland and had obtained the secret from him.

After which, each man killed his informant with dispatch and an absolute minimum of pain. Of course.

After which, each set about opaqueing the thoughts of a carefully-selected force of men, men who would form the nuclei of armies that would eventually lock in mortal combat, once again sending the glorious sound of death across the land.

But first, before Man's Destiny could be fulfilled, the Sleeper had to be shut off, had to be silenced in his silent task, six hundred years on the job. Laurrayne and Leaf chose their men carefully and, using the charts to be found in certain places, sent their special forces out to locate the Sleeper beneath the Sargasso. To end his eternal life, and close down his prying mind.

And all of it while the Sleeper watched, closed eyes and silent, with still hands beneath the Sargasso.

### III

Abbott was dreaming. A dream from another life, drawn up through the quicksand of his unconscious, some reincarnated otherlife worn within another body. He had consciously sought this dream, had ordered it up on the instant, to examine it and with it help himself examine what he was doing now, in this time, in this place.

It was a dream of war.

Learned and remembered through the memory of his flesh that had been another man's flesh, impregnat-



ed with how-it-was before the flesh had been assigned to him. He was remembering the past and how it had been with war.

The dream began with pithecanthropoids and their clubs, their first thrown stones. The dream progressed through bow and arrow, through sword and mace and quarterstaff; the dream was of blowguns and flintlock rifles, of grenades and bayonets, of tanks and triplanes, of jets and atomic bombs and napalm, of heat-seeking missiles and bacteria. Then the dream faltered, as the flesh remembered the fourth world war, and what it was like after that fourth, and how they had not learned, even then. He dreamed . . . .

**H**e dreamed that he was ambushed by a garbage-reeking roverpak

of Yahoos as he maneuvered the Healy between the shellholes on Fountain Avenue, just past Vine. Bartok had passed around the rumor there were cans of New England clam chowder and anchovy paste still intact amid the ruins of the Hollywood Ranch Market. Of course, he had been lying; no such thing. But he *had* found a jar of Beluga caviar. It had been kicked under a pile of lath and plaster, the label almost entirely ripped away. He had recognized it instantly and slipped it into his tuckerbag along with several charred magazines: a perfectly readable issue of *McCall's*, half a *Popular Science*, and a one-shot someone had published on The Beatles, shortly before the war. He could only vaguely recall ever having heard The Beatles, but the magazine was good for a few laughs,



which in itself made the item worth at least a pint of canned blackberries. Other than these, the store had been empty. Gutted and ransacked a hundred times over. The stink of ambushed looters had forced him to tie a bandanna across his lower face.

The engine of the Healy had been missing badly for close to a week — since the attack on the Hollywood Bowl — and Leonardo da Vinci was away on a fresh-meat forage somewhere in Topanga Canyon, so he would have to wait for the mechanic's return for the necessary repairs. It was the snapping and popping of the exhaust as he tooled out of the Ranch Market, that had awakened the rover-pak.

They swarmed out into the street as he sped slalom-style up Fountain, avoiding the shellholes with

practiced skill. As he first saw them, his immediate instinct was to deck the accelerator and drive straight through them. But he had tried that once . . . and the damage to the Healy had been close to unrepairable. It had taken a forage as far southwest as Anaheim to locate a windscreen for the little four-banger. And a can of British racing green was almost non-existent by this time.

So he killed them, instead.

He pulled the oilskin cover off the brace-mounted Thompson, threw off the safety and sprayed the street. The gimbals — at best jerry-rigged conveniences added by Sgt. York when the mountings were already in work — squeaked and jerked, but held. He knocked out half a dozen with the first bursts, and the rest scattered for cover. He took one huge, grizzled

Yahoo (obviously the bastard had been eating long pig, it showed in the face, it always did when they turned ghoul) on the fly, as he dove for a ditch; the ghoul did an intricate one-and-a-half gainer before he hit, split, and lay twitching. Two more ran flat-out in front of him, failing to see the crater yawning before them, and as they dropped, and he sped past, he caught a glimpse of the deadly green bacterial mist that still hung in a wispy pool at the bottom; the two Yahoos would not be coming back up from the crater. Then he was through them, and the angry hornet pinging of their small arms fire was behind him.

He whistled the Jazztet changes on Tadd Dameron's "Hi-Fly" all the way back to the Capitol Tower; and later that week he helped Thomas Jefferson and Henry David Thoreau chart out a new and revolutionary World Peace Constitution . . . .

Abbott dreamed on.

Memories from six hundred years of history books. The history of man and his wars.

Another dream, long after the first had melded into peace, and another war, and another peace, and then an answer that had come to mankind when it seemed his last hope was gone. The Sleeper . . . .

"Abbott!"

Leaf's Force Leader came up from his reveries of war and peace, to see his six crew members staring at him.

"You were talking in your sleep."

He swallowed and nodded. They went back to their controls. The ve-

hicle was moving more slowly now. He rose from the gelatin-trough and checked the plot-board. Ten minutes. They would cross the co-ordinates in ten minutes.

"First, stay on point. You, you, and you, come with me." He moved out of the control section, entered the dropshaft and allowed himself to be drawn down to the storage level. Behind him, the three team-members drifted smoothly down.

By the time they had settled, Abbott had dilated the hatch into the chamber where the mole was dogged to the deckplates. It was as large as the entire seaskimmer Laurrayne's Force had employed, tractor-treaded and auger-nosed. It loomed there in the semi-darkness of the unused storage chamber, its twin head-beams dark (Abbott had a swift flash of the dead, burned-out eyes of the man they had killed). Like a great metal insect, some silvered potato bug grown immense.

He palmed the lights brighter in the chamber and ordered the three team members up the side of the mole and into the conning hatch.

Then he followed. When they were all securely snugged into their pressure suits and strapped into the form-fits, Abbott hooked up with the First. "Give me a reading."

The returned thought from the mind of the 1st Lieutenant was like the thin, reedy wind that blows through the lofts of cathedrals. "I make it six minutes. Do you want the bays opened now?"

Abbott decided not. "Hold them closed till we're directly over the co-ordinates, then release from your

board. Keep linked up with me through the operation."

He received acknowledgment and settled back. It was six minutes dead time. He linked with the three men in the mole and prescribed six minutes sleep. They fell instantly down through the layers of readiness and were fully, deeply asleep. Abbott plunged after them, having set his consciousness to awaken him in five minutes, twenty-eight seconds.

They would need to remain awake for the full time of the operation; this respite now would serve to freshen them. But it did nothing to freshen Abbott. The dreams of his reincarnated flesh began again, picking up where they had left off . . . .

Dreams of war, and the peace that always followed. There had been a fifth war and a sixth, and somehow the antagonists always seemed to pull back just at the very edge of total extinction. And they tried another way: personal combat. Save the nations of fine young men. Send out the heads of state. If the men at the top had to do their own slaying, perhaps war would become a trifle less attractive . . . .

Abbott's flesh remembered:

When the President of All-Americas came into the arena, he was greeted with a rising tide of catcalls, boos and murderous hisses. He dragged his spiked net through the dust behind him and ignored the hail of freezi-hot tins being hurled from the groundling bleachers.

He walked about aimlessly, waiting for his opponent to emerge from the ready-tank at the opposite end of the

packed-earth arena. He looked up into the sky. It was a chill day, a hell of a day for a summit meeting. The brinksmanship pennons were all whipping sharply in a brisk breeze from the . . . he cocked his head and estimated . . . east end of the arena. He looked toward the ready-tank again, but Dmitri Gregorovich Potamkin, Chairman of the Communist Republic, Khan of the Freely Liberated Chinese Red Star States, Premier of the Hemisphere of the People's Proletariat, was late.

Glenn O. Dawzman, Chief of State of All-A, smiled a secret smile and twitched his steel-mesh net in a gesture of defiance at the smartmoney boxes that had wagered heavily in favor of the Russkichin boss. It was going to be a good day in commodities, steel, luxury shares and communications. If he won. He thought it likely. He now fully believed the reports his Secretary of State had brought him in the White House that morning, reports fresh from CIA men double-covered at Potamkin's training camp in the Urals. Reports that Potamkin had looked slow, unco-ordinated, that the Russkichin was growing faint of heart. It was going to be a smashing victory for Democracy and the American Way of Life today.

Glenn Dawzman knew Heaven was on his side.

A roar went up from the prole sections.

Potamkin lumbered out of the ready-tank, brandishing a short sword and carborundum shield. Dawzman swallowed heavily. He had thoughts of his childhood in Texas. Potamkin looked in fine shape, a great black

bear of a man, a thick mat of dark wiry hair covering his chest and belly like fur, all white teeth bared in brutal humor, eyes deepset beneath shag-brows that made him resemble some sort of *yeti*.

Dawzman revised his theories about the day's forthcoming contest. It might be a stalemate. It might even conceivably be a diplomatic setback. All-A might have to relinquish its claims to the Sudan. It might even be preamble to a huge and stately funeral: **GOD DIES IN OFFICE**. He read the fax headlines in the sudden blind space behind his eyes, where he had just now this instant suddenly found himself alone with fear and the future . . . what might be a short future, indeed.

Politics was hell on an older man.

He crouched, and Potamkin came on.

He swirled his net, Potamkin lunged abruptly, the short sword came straight on, and he whipped the net over the blade. Spikes struck blade, and sparks flew . . . .

Abbott's flesh was pinged by his consciousness. He came riding up out of sleep and memory, running data on the peace that was not peace, the wars that followed, and ending once again with the Sleeper.

"Okay, everybody up," he ordered his men.

The bays opened. The dogs demagnetized, and the mole dropped straight down out of the belly of the larger vehicle.

They were in the Sargasso now, plummeting down through a miasma of seaweed, debris, and absolute ut-

ter stygian blackness. He cut on the headlamps. They shone out into nothingness. "Give me a reading on the bottom."

One of his team-members consulted a dial. "Coming up fast . . . 300 . . . 360 . . . 410 . . . 480 . . . 500 . . ."

And then Abbott screamed. The linkage with his 1st Lieutenant had suddenly blown in a corona of heat and pain and sudden silence. "Laurayne's Force just blasted the vehicle," he told them. He did not pass along his sensory impressions of that last instant of life the 1st had known, as Laurayne's Force leader had swept him with destruction.

They were on their own now, and above them somewhere the other Force was dropping down to intercept.

Abbott felt gratitude as they struck bottom.

*Oh my God, what am I doing?* he thought.

The team member at the chart board said they were directly over the co-ordinates. "Should I begin a shaft?" Abbott nodded, realizing he was losing control of his operation; that these men sensed surely that his mind was in a turmoil.

The chart board man made a hole in the air with his forefinger and the boring engineer caught it. He tapped out inclining instructions on the control panel. The mole rose up on its base, tilted its body forward, and the machine began to move forward as the engineer threw home the switch that started the screwbit nose turning slowly. It made very little noise.

"Sandhog," Abbott called the engineer, "give me a fifty degree shaft for

six miles, then increase to full ninety, got it?"

The sandhog okayed, and they moved forward. The screw nose touched silt, spewed it out on both sides of the mole, and bit deeper. It began whining. The black mud flew up and back in fan-wedges, and the mole began to descend on tractor-treads down the track of the shaft it was boring for itself.

Abbott could no longer restrain the thought; he opaqued it from his crew, but he dealt with it now, finally: beneath him, hundreds of miles down, somewhere in the silent stone center of his world, a man sat asleep, silently reading the thoughts of all men, keeping them from that endless pastime war. Abbott now knew he would make it . . . Laurrayne's Force notwithstanding. He felt the certainty in him. Even if it was ego-delusion, still he had to react to it. (If Laurrayne's Force destroyed him before he got to the Sleeper, it wouldn't matter; it would all be ended. But there was only one other possibility: he *would* make it. And he had to think about that.)

He had, finally, to think about the Sleeper.

Down there.

#### IV

The Sleeper had been a man. No one now remembered his name, it didn't matter. But his name had been Blanos. Paul Vevery Blanos. He had been a theologian. A philosopher. He had worked in the name of rationality, sanity, all the days of his life.

He had been the original architect

of the *Pacem In Terris* Congress in Basle which had led inevitably to The World Council. He had written volumes on the joy and logic of peace; his nine-volume history of war took thirty years of research and analysis to write; and when the ninth and final volume was published, it was the final word on the subject. From that moment onward, anyone who ever cared to speak of war or peace had to refer to Blanos.

What few knew — even the heads of states who called him friend — was that Paul Blanos was one of a group known only to each other as Eleven Concerned. Blanos and ten other good men, captains of industry, world-famous philanthropists, personalities, founders of dynasties and founders of trusts in the name of the advancement of Man. Between them, in their not insubstantial ways, they had staved off innumerable conflicts, merely by the pressure of their wealth, power and sensibleness.

When Blanos's helicopter was sabotaged by a fanatic of the newly revived *thuggee* cult, it was the Eleven Concerned who moved with quicksilver speed to save him.

The body and the brain were dead.

There was no medical room for discussion. Dead.

The Eleven Concerned had ways, however.

They carried off the remains of Blanos, and they hooked those remains into a machine. Blanos lived. No, not really. Blanos dreamed. He could not be brought fully back to life, but he could be brought to that intermediate stage so dreamlike in its nature.

Eleven Concerned secreted what had been the glory of Blanos in a shockproof underground chamber, and there Blanos continued his work. Eleven Concerned released it through the next twenty years as posthumous findings from the seemingly endless files of the great Blanos. Then they found the machine had altered Blanos.

He was part man, part dreamer, part machine.

He was something new.

Though they had no name for him, though they still called him Blanos, the man who was dead and sleeping in the machine had become the Sleeper.

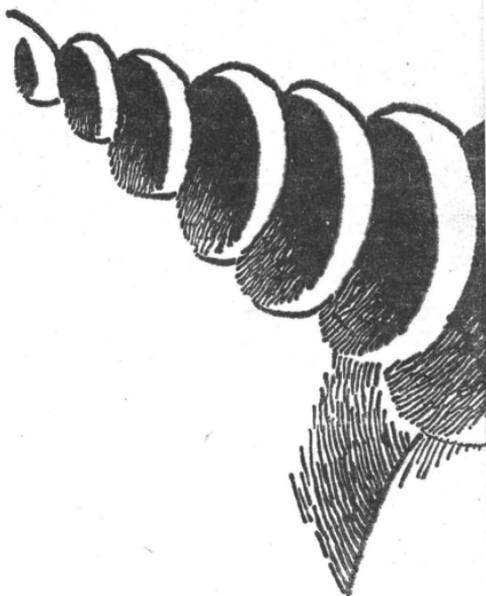
He could monitor their thoughts.

He never communicated with them, he sought no two-way thoroughfare of exchange, but he read them. And he tested his own powers. They burgeoned.

Until finally he *did* communicate with them.

He told them what they must do with his body.

Eleven Concerned began the most the most incredible excavating operation since The Great Pyramid at Cheops. They sunk a shaft, and they built a cavern, and they set the Sleeper in his dreamer's chair, down down in the center of the world, deep under the Sargasso Sea, where no one could reach him. And the Sleeper began the monitoring that would never cease. Eleven Concerned then informed the world that it had a guardian angel, that it was now forbidden to start war, for the Sleeper



was there, on duty every waking and sleeping moment of every one of their lives, and the least little thought in their heads about war, or what it took to make a war, or how you got yourself stupidly into a posture that could only be alleviated by war, would result in some tender smoothing in the mind. And the war would be stopped at its first germinating stage.

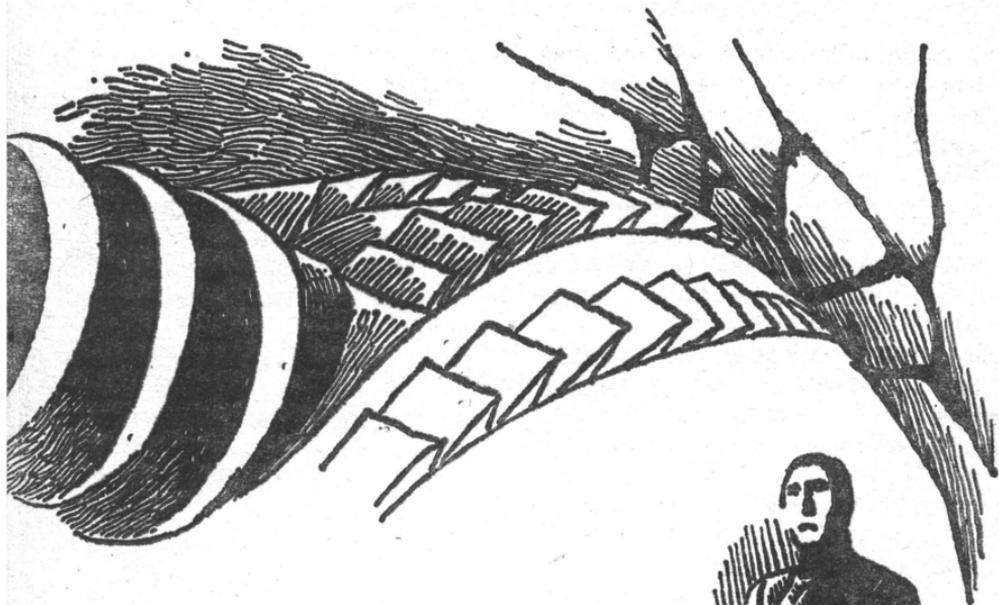
The world reacted badly.

It tried to start wars.

It got not far at all.

The Eleven were no longer Concerned.

It had been so for six hundred years. Even for the times when *other* Concerneds decided it was necessary to get to the Sleeper and turn him off. They had been smoothed. And Man had lived in peace for six hundred years, while the Sleeper dream-



ed his dreams that had their termini in the souls and skulls of men far over his head, walking the world.

Then had come two men, Kalder and Ophir.

And they had begotten the technique.

And the technique had called into focus Leaf and Laurrayne.

Who had sent out Forces. Forces that were now plunging down a shaft in the earth, toward a Sleeper who had no idea they were coming; a Sleeper who still dreamed his Blanos philosophy dreams of the good world, where good men lived a good life.

Coming toward him, Abbott; anti-christ, assassin, mechanic of shut-down, stayer of centuries, savior of mankind, dealer in realities, emissary of power, killer of the dream. Force Leader. Going down. Wondering.



Laurrayne's Force caught up with them shortly after Abbott had noted their rate of descent and the angle of the shaft was approaching seventy-five degrees. There was a short, sharp squawk — a chicken being beheaded — and one of the team-members fell over his controls. Smoke poured out of his loosely hanging mouth. Abbott slammed a barrier around them, and instantly felt the cascading power of the Laurrayne Force Leader's mind.

Abbott knew it had to be done here, it had to be ended now, they could not drag it all the way down the shaft to the Sleeper. It had to be settled finally here, in the pit leading to the center of the earth. He ordered the remaining two to link with him. They were only three, against at least half a dozen — maybe more — but he had to do what he could. Now!

Abbott flung himself against the force-beam, struck it, rode with the power of it for an instant, then shifted direction and began racing back up the line toward the Laurrayne Force Leader's mind. So intense was the attack that Abbott was able to gain half the distance back to its focus before the Laurrayne Leader knew he was there, on his way. He snapped up his own barrier.

It was what Abbott had counted on.

He plunged on, struck the barrier and diffused. The barrier became black with the spread of oily thought. The Laurrayne Leader could not think out past it. He was trapped within the fortress of his own protection.

And his Force kept coming, down the shaft.

Abbott waited, pressure-suited, mind elsewhere, in the night-black shaft. When he saw the first light of the Laurrayne attack vehicle, he strung the imploder in its cat's cradle, across the mouth of the shaft. Then he ran back to the mole, a mile down the shaft.

His movements had been controlled by the plot-board in the mole. Movements programmed and predictable as the jerking of a dead frog's leg under an electric shock. His body had been plugged in, and the mole's thinktank had used him, a somnambulist, a zombie, a robot, while his mind still locked in oily dark across the rounded surface of the Laurrayne Leader's protective barrier.

Back in the mole, Abbott waited.

Too late, the Laurrayne Force Leader realized he had been out-manuevered. *He* had worked entirely with thought, and Leaf's man had struck instantly back to the basics of what they were all trying to do. War. Personal combat. Hand-to-hand fighting. Not locked in the safety of minds across miles, but right out there, in the dirt, stringing an imploder.

In the instant before the Laurrayne attack vehicle struck the imploder, the Leader ruefully thought, "You win," at his opponent, and then there was a deafening *absence* of sound from up the shaft, and the force-beam winked out.

Abbott had won. He had understood the nature of war much more clearly than his opponent. He had had the roots of memory upon which to draw for nourishment. He had re-

incarnated his flesh through dreams and had remembered what it was to do the job by hand.

"Let's get out of here," he told his men.

The mole began its burrowing again, and in the vehicle Abbott cried silently.

When they broke through the wall of blue and shining stone, they found themselves in a chamber that seemed not to have been constructed by the hand of man. The workmanship was beyond anything Abbott had ever seen. His face was reflected clearly, brown and tense, in the walls, when he pulled off his breather mask. How he knew there would be air here to breathe . . . he was always to wonder.

The floor was of a green metallic substance that seemed at first to show great depth — as though looking down through sea-water — and then extreme shallowness — as though light was buried just beneath the reflective surface. Near the opening they had gouged in the rock wall, a circular platform of the same material, yet somehow denser, more potent, a deeper green, rested not quite on the floor. It was suspended less than an inch above the shallow-depth green of the flooring. On the platform was a chair of intricate design. The most notable thing about the chair, however, were the candles set in heavy golden balls — set at the runic points of a hexagram.

That was notable. And one other thing.

In the chair sat the Sleeper.

Encased in a metal and glass hel-

met attached to a collar that was too large for the shrunken body — a collar and helmet whose weight no living man could have long supported — the Sleeper sat dead, dreaming. Monitoring. Keeping the peace.

The control console that measured invisible stresses and fluxes seemed as dead as the man . . . silent and dark. His hands rested heavily on the arms of the chair. He did not move.

Behind him, Abbott and one of the two remaining team members moved closer. Their pressure-suits seemed now terribly warm in this centuries-sealed cavern. The gigantic boring-nose cone of the mole was silent at last. The standby lights flashed orange. Light flooded out of the cavern, illuminating the pale-blue rock of the shaft they had just dug.

And the Sleeper dreamed.

The keeper of the peace.

The team member walked slowly forward, amazement in his face. "This is him," he breathed. The myth was in fact a reality. He started to step up onto the platform, reaching out to touch the robe the Sleeper wore.

The robe that seemed to cover something other than a human body; after six hundred years, what lay beneath that robe was certainly not human, not any longer.

"Get away from there!"

The team member jerked back at the sudden sound of Abbott's raised voice. He drew back, looking sheepish.

"Get back in the mole. Set up for reverse, we'll be going right back the way we came."

The team member started back to the hole in the cavern wall, then stopped. Abbott turned to look at him. The man was smiling, his face flushed with something like delight. His eyes were bright. "We did it, dammit! We really did it. This is the starting over, isn't it? This is where we get another chance!"

Abbott felt his throat close. He could not speak. He motioned the man back to the mole with a peremptory gesture.

When he was alone in the chamber, he turned back to the Sleeper. Thoughts of corpses with eyes that spewed death were in his head. Thoughts of rubble-strewn city streets and Yahoos that were animals that had been men. Thoughts of gaping mouths with smoke pouring out. Thoughts of great men standing naked with their fear in arenas that substituted for war. Thoughts of implusions that sucked sound and life from the air. *Oh my God*, he thought, *oh my dear sweet God, tell me.*

But Abbott had taken Leaf for his god, and Leaf had taken allegiance to the god of war. So Abbott was alone. With the Sleeper, who could not monitor him, could not help him by smoothing him. Abbott was where he had wanted to be, functioning as a man again. And he was terribly afraid. Afraid to do nothing, to return to the surface and leave the Sleeper turned on. Afraid to turn him off and let man seek his destiny. Afraid to make that decision for all the men who would come after.

He walked forward, and it was as if ghosts came to observe him, in that cavern out of time and space, where

the peace had been kept for six hundred years; ghosts of all the men who had died, and silent staring eyes of men who had died of natural causes without having been burst like pods by shot and shell, who said silently, *We lived our full number of days . . . why are you doing this?*

He looked down at the control console. It was really quite simple, when he studied it. Simple, as all great art is simple. Uncomplicated and direct.

And he did what he had to do.

## VI

The mole hunched its way back up the shaft, and long before they reached the ocean bottom, Leaf had made his contact. He was jubilant, and congratulated Abbott. The war would start later that day, and of course Leaf would have the jump, for Laurayne was still waiting.

In the mole, the team members congratulated one another, for Leaf had said all monitoring had ceased on Earth. The Sleeper had been shut down. And they now confided in Abbott that they had been instructed that if he faltered in his task they were to have killed him and gone on without thinking about it. Leaf had implanted that in their minds; he was skillful, that fine man.

But now they assured Abbott that though they had had momentary doubts about his carrying it through, they could see that he was the strongest, the most conscientious of them all, and they were privileged to be serving under him in This Great Cause.

Abbott thanked them, and sat by himself to think.

To think of what he had done down there, in the Sleeper's chamber.

To think of his sudden thoughts back there. Not of the world, of the war, of the ones who would die now and the ones who would continue to die as long as man walked his world; not even of himself, or of Leaf, or of what had had to be done to get them there. His thoughts had been of the Sleeper.

Of the dead man who had continued on even after his body had turned to dust beneath the robe. Of the man who had spent lifetimes beyond his own lifetime that men could live in peace.

And he had turned him off.

No. Not quite.

The controls had been simple. Simple enough to re-route in something like a moebius circuit, feeding back in on itself; a closed circuit that began and ended with the Sleeper. He still thought his thoughts of peace, still monitored in a sweeping wave that went out and out and out — yet never really left him — and would never again encounter thoughts of war, because all he would be receiving would be his own thoughts of peace.

The Sleeper would continue to dream. And now, at last, there might be happiness in him, if he could still feel happiness somewhere in the mind that was no longer human. Because now he would believe man had finally grown accustomed to peace, had bred war out of his system, was content, and happy, and productive.

Down there, the Sleeper would

dream eternally, while overhead man would destroy himself again and again, and who could say which way was the better?

Only Abbott would know, and he would spend all the rest of his days remembering. Remembering what had been, what was, and what seemed to be . . . for the Sleeper. He had made his decision — and had it both ways.

But it made it no easier for him.

Terror waited for Abbott at the end of the shaft.

Terror, and the new world.

And down there. . . .

The only one who cared. Now helpless, duped by the least of the ones he had sought to save..

Asleep: with still hands.

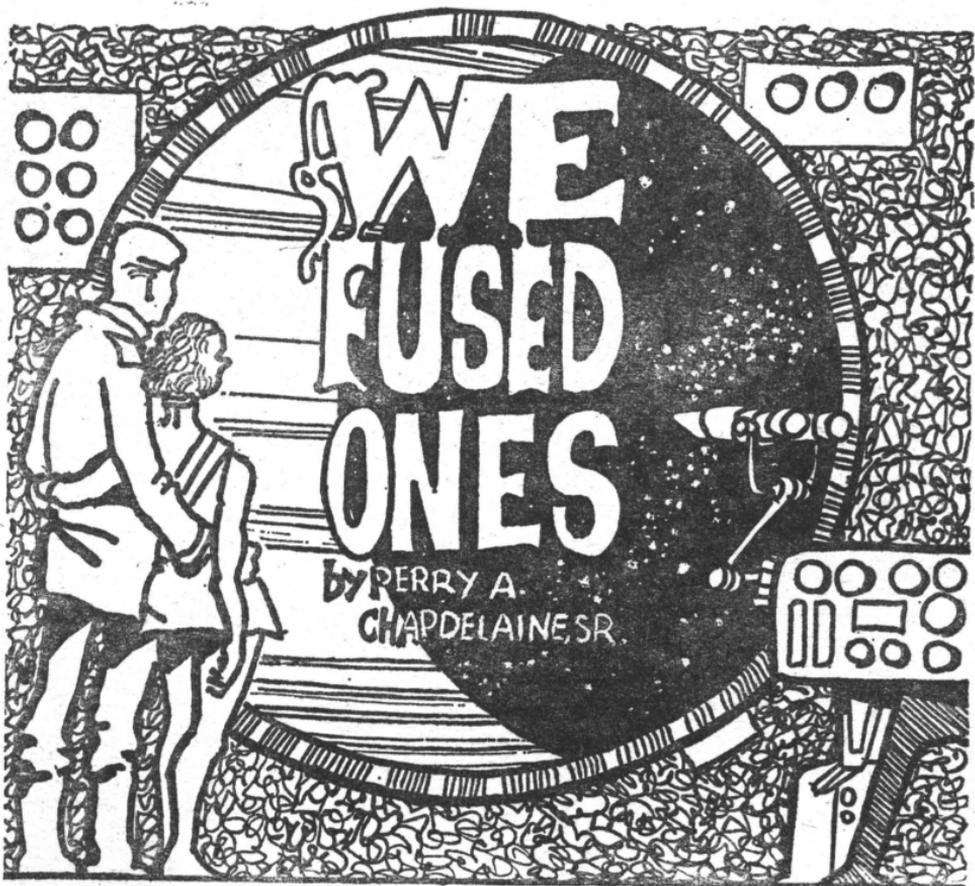
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VAUGHN  
BODE  
68



*The Bewegal were masters of the universe  
— until they encapsulated two suffering  
human forebrains into their computer!*

I

My name is Rebecca Anne Ellents; my fraternal twin is John Thomas Ellents. John is as near identical to me as any non-identical twin can be.

We are encased in a rectangular

paralleloiped — a box-shaped object ten feet by ten feet by six feet. Various input and output terminal-leads are arranged about our box in convenient positions for their potential use.

The Bewegal, who made us the way we are now, had great need for

micro-organic computers with redundant capacity; thus, Johnny and I share our experiences. Should one of us fail, the other can take immediate control, continuing in our efforts as though no failure had occurred. Otherwise, to insure that our operating-life will continue to be approximately equal throughout our design-life, our individual periods of conscious operation are controlled by an atomic timer.

I will tell our story for exactly two minutes and fifteen seconds; then Johnny, who will have been unconscious, yet completely conjoined to my experiences, will automatically take up our story for his allotted two minutes and fifteen seconds.

I will return at the end of his time to be followed by cycle after cycle of alternate self-awareness and control periods.

Though I was once human — sometimes rational, often flighty and girlish — I am now almost compelled to be logical. I am sure you will understand this to be a result of my use and an effect of my recent environment, not a natural characteristic of my birth.

Perhaps it is not necessary, then, to apologize for my pedantry and insistence on sequential detail.

On the last day in my human form it seemed the most thrilling experience given to a lucky girl of only seventeen. I, Becky Ellents, had been chosen, along with my brother Johnny, to kick off opening ceremonies for the first deep-space Academy of Mincs.

Dad had something to do with our choice, of course. As I had always

said, "What good are fathers if you can't use them for something?"

I begged for this pleasure on Dad's every trip home. It wasn't just "boys" that held my interest (at least I wouldn't admit this to anyone) but the excitement of going into deep space.

Johnny had his own reasons. I'm sure, though, they were familiar to mine.

Dad refused to consider the idea for a while, before Mother interceded; Dad couldn't refuse then.

So there we were — seven days out on our way to Satellite IV of Jupiter.

I remembered how I looked into the mirror to touch up my brown head of curls, to straighten my latest dress creation and sort of give myself a last good check before joining the ship's dance.

Ah yes! Those humans eyes of mine saw far more than a thin young girl with turned up nose and slight dimples on each side of the cheek. They saw far more than five feet, ten inches of young female, rosy-hued with twinkling eyes, sprouting strong at the breast.

Those eyes saw with the "emotion" of a young seventeen-year-old girl; therefore they looked into the face of a mature, grown lady — a sophisticated, mature, grown lady. They saw one who thrived on excitement; the kind which provided opportunity for sweeping majestically forward into a ship's ballroom, there subtly to conquer all males, young and old, through innocent vivacity, goodness, and charm.

Johnny was taller than I. His five

feet, ten and one-half inches could be attributed to the strenuous athletic life which only a male can know. His hair was naturally curly-brown as was mine; his cheeks, too, had slight dimples over which the girls swooned, I saw him reflected from the mirror, dressed in formal attire, with hair combed slick, as he passed through the ante-chamber joining our two cabins. How well I remember the smooth tone of his human voice when he said the two simple words, "Coming Sis?"

That was merely one hundred years ago.

I danced the whole night through. A young Lieutenant Bronson, tall and handsome, talked me into viewing the stars; had I maneuvered to bring this about, only the female can know.

The viewing room had specially constructed glass; we could freely look at the stars without risk of exposure to hard radiation. Naturally everything was darkened, and, though many were present, it had the sense of mystery and excitement for two young people that stars always have had.

The Galilean satellites were a pretty sight; they were set against the sky like small pearls moving to and fro as they circled the large planet. Hour by hour the panorama changed following a sequence predictable as clockwork.

Sometimes a moon passed through the shadow of Jupiter to show a total eclipse, remaining visible for only an hour or so; other times big Jupiter swallowed the small pearl

inch by precious inch. Though seemingly gone for good, our patience-in-waiting rewarded us with the sight — the giant planet regurgitates another pearl just as beautiful from around its other side.

Did you know an ugly earth feud prevented these beautiful satellites from the dignity of proper names? Why not Io, Europa, Ganymede, Callisto and nine other good names instead of calling them Satellite I, II, III and IV?

Human emotion, of course!

The Lieutenant and I sat on the couch together; he sat close and held my hand. Then he told me of the stars, their beauty, their simplicity, and their attraction to him; he made me see that man's striving was not in vain, though generations must pass. These, he made me feel, were man's greatest heritage.

Where the lucky girl of earth might listen to the story of the beauty of earth's moon, my Lieutenant would speak of the amazing ring system of Saturn — 170,000 miles across and less than 10 miles thick, colored, it seems, with paints from earth's rainbow.

Then he would speak of the tiny creations from which all of this glittering expanse before us was made, how these infinitesimal particles of energy and space, twisted and bent in just certain ways, could be stacked one after another — just to scatter pin-points of iridescent lights before a young girl of seventeen.

It was lovely, my first case of puppy love. I fell in love with Lieutenant Bronson and his clean manly figure.

*This is Johnny writing now! My sister's time is up!*

She can operate fully for only her allotted period, then I cycle in automatically; when my time is up, she will be back. We will tell this story from its beginning — logically and sequentially — as it should be told; you will then understand the nature of ourselves and our behavior better when described in its proper place.

When Sis was out in the viewing deck mooning over that kid officer in front of all those people, I was down near the polarization room. That's where it happened. One of the "fail-safe" rods broke, fell into the observational, cross-sectional chamber blanking out the radiation which controlled photon reaction mass.

There was a device for shutting off the blanking chamber but it was down for temporary adjustment. Photons streamed out beyond their critical design limits, the "fail-safe" rod melted, and all hell broke loose!

It wasn't apparent to the people topside at first. Increased reaction mass, applied slowly, showed only in the astrogation room where continuous readings fed back adjustments to correct course. Course could not be corrected.

We headed out past the orbits of Saturn, Uranus, Neptune and Pluto. Nothing could be done about the problem until the whole unit was rebuilt from bottom up. This we proceeded to do from the first, even while Sis was gazing at the stars with her young hero.

A week passed before we could actually shut down the wild-driving

photon generator. By then, we were well beyond the orbit of Pluto. We shut her down. Our velocity was high, and we were headed at about forty-five degrees from the ecliptic plane — which side, I didn't know. That was when *they* came!

## II

Our ship was huge — six hundred feet in length. The Bewegal came in a ship nine thousand feet in length.

At first we tracked their ship to record as a rarely seen dark meteor grazing the edge of our solar system. It's motion relative to ours was best described by a positional vector which assumed our position to be fixed.

But no matter, regardless of the respective orientation between us they would have done the same.

The ship had no distinctive features. Smooth of skin, tapered for atmosphere, enigmatical, it reached for us by generating waves of the so-called weak force known as gravity. We swung toward them, changing our relative velocity as they fully controlled our progress with their superior devices. Very slowly now, they pulled to their side. The skin of their ship peeled back almost as though a living, pulsing creature were opening its mouth to feed.

Our tiny ship was laid to rest on the soft-seeming floor of a huge cavern. Without warning of any kind, another force was used that had the effect of complete paralysis on all of the ship's protoplasm — whether

man, plant, or amoeba. Oh, they left cognition, awareness of self, and thinking processes; for these are elements of trade far more valuable to them than any other of the galaxy's prizes.

We were aware of the steps which followed though many in the ship were not always able to watch each step, due to their original position of paralysis.

The Bewegal tested our atmosphere, then flooded their hold with a like composition; our ship was split end to end, though made of earth's toughest alloys. Compartments were cut out to be opened as though zip-top drinks. And from each they carefully, gently, plucked out the prizes.

I was lucky enough — I suppose I should say unlucky enough — to be in a frozen position such that I could see one of them.

I remember reading a fine essay by the ancient earthman, J. B. S. Haldane, entitled "On Being the Right Size." How he slashed and tore with weapons of fact and logic the long-cherished fantasies that man might be reduced to the size of the bug or amoeba or increased to the size of the elephant or dinosaur. Using mathematics no stronger than arithmetic and simple ratios applied to the mechanics of bone structure and like organic parts, he showed the absurdity of these concepts while underpinning the fact of an essential correctness of size for all life whether man, mosquito, or amoeba.

Were I, at that time, to tell you that each Bewegal's proportions were roughly on the same order of magni-

tude as the ratio of the size of their ship to ours — 9,000 to 600, or 15 to 1 — would have felt the twinge of guilt associated with possible distortion of fact.

Now, after one hundred extra years of experience and knowledge, I realize that Mr. Haldane was speaking only from the point of view of earth's narrow environment; there he spoke authoritatively.

Since I have been lost in thought for some seconds, I realize my allotted two minutes and fifteen seconds is nearly over. In view of my present introspective mood, perhaps it best if I stop writing for the remaining twenty of seconds, Becky, of course, will pick up for me.

*This is Becky writing again. Johnny's time for conscious operations is ended, and I have returned.*

What were the Bewegal like?

A Bewegal is pyramidally shaped like a tent whose bottom is not stretched tight — more like a dress flared at the bottom. On top it has four, sometimes five, eyes which are at least as efficient as former ones. The eyes don't protrude; they lie flush with the skin, so leathery and wet with smelly chemicals.

In our ordinary earth environment the underlying requisite to morphogenesis — the structural changes during development of the organism — is cell multiplication and growth. This was not true with the extra-terrestrial aliens. Their outer layer of thick skin could traverse the specific morphogenetic processes: cell migration; cell aggregation which includes forming of masses, chords, and sheets;

localized growth, or its lack; fission and splitting where splitting includes the delamination of single sheets into separate layers, the cavitation of cell masses and the forking of cords; folding, including circumscribed folds which form outpocketings and in-pocketings; and bending, which is usually simply folding due to unequal growth.

So you see the Bewegal's outside integument is fully capable of extreme motility; so much so as to be able to form arm-like appendages or other useful cellular arrangements whenever desired.

Were they like the amoeba, mobile in overall shape?

No! Their pyramidal tent-like shape was a constant. Their huge mass — at least seventy-two feet high — did not find it necessary to bend and stoop. By changing the form of their external integument they could form cups or grasping appendages with great ease, then reach out to pluck their object, passing it from cup to cup if that seemed to be the desirable shape for the moment.

They were oxygen users too; their skin surface could be stretched to increase square area of absorption as oxygen content was reduced.

Now you see the difficulty when describing them? All the logic common to the ordinary earth environment could not compensate for lack of specific knowledge respecting their internal form and function and knowledge of conditions of their ordinary habitat. My description is *not* like anything you know. So when I say, "They reached to pluck," you know that great morphological

changes are described by the statement.

When our cabins were cut open, I was standing by the bed along with Johnny in eyes-open, frozen position as was Johnny. A cup of flesh reached into the opened cabin to scoop us forward and up. I tumbled on the flesh, and though paralyzed by their energies I yet could sense through my original sensory network.

The flesh was slick and rubbery like a piece of fresh calf's liver; the smell was over-powering of rotten flesh. If it were not for the paralysis I'm sure I would have vomited; I could only tumble upward, frozen in muscle, seething with emotion and sick in body and spirit.

We were placed carefully, one at a time, into a rectangular box where, still sentient and aware, still with senses alert and working, we were covered with a sticky gel-like substance as it filled the box to the top.

I lay, able to move only in thought, yet still able to see lights and shadows overhead and to feel the stickiness of the material surrounding us. I lay there — possibly hallucinating, I don't know — for endless hours. It may have been months or weeks; for the chemical action of the enzymes which cause physiological time, had ceased for me.

I do remember some of the things I thought about while in this peculiar stasis. I remembered Lieutenant Bronson and our brief flirtation. Where was he now, with his big, brave body?

My father, too, was among those new in stasis. What would mother,

who stayed at home, say? Was Johnny the one right next to me? Who or what were these giants of rotting flesh? What did they wish of us? Certainly not gold or radium or knowledge. Were we to be pickled specimens in some extra-terrestrial collection? Or were we to be kept alive to be placed on exhibit as humans do with the lower animals in zoos?

Would we be aware and sentient, as now, forevermore?

My wildest imagining did not approximate the truth.

Except for tiny bumps and motions which were transmitted through the gel-like material to my body, I never knew when transfer took place from ship to laboratory.

Ah, yes the laboratory! How well I remember it! For here I lost my beautiful eyes. But I lost more as you shall see.

### III

*This is Johnny again! Becky's time is up so I will continue our story for my allotted two minutes and fifteen seconds.*

I was carefully lifted from my packing box by appropriate extensions of our captor. It cleaned the gel-like material from my whole body. Very carefully still, it peeled the clothes from my body, stopping only to study the precise relationship between my school-ring and my finger and my wrist-watch and my arm. Once assured they were independent artifacts, these were cut from me.

Using fine instruments and the finely drawn flesh of its outer integ-

ument, my captor cleaned all my bodily orifices of the gel-like substance. I still could not move a single muscle; but residues of the gel-like material sufficiently wetted my eyes so they could follow the broad sweep of the laboratory as I was turned over and about.

Next I was placed under an intense but cold light beam. From what I have since learned, it must have been a microscope light. Here micro-manipulators of various types completed the remainder of the process.

First to be stripped from me was the sensation of pressure and pain over the skin areas.

My body responded well to their pricks of pain; I had no conscious control over any of its parts. They probably used some automatic mapping method for when done, micro-miniature needles were placed at the nerve branches which served the areas of the skin to be controlled.

For centuries man has described the physical and psychological basis of pain. Man eventually agreed to identify two kinds: one, called a prick pain, is a bright, relatively short pain; the other, called a dull pain, is long-lasting and less well localized.

I can tell you, however, that either type of pain can be complete and total hell!

From tiny, bright, highly localized pain pricks, their automatic machinery inexorably built up pain until my total skin area was one whole mass of throbbing sensation from which I could not flee, physically or mentally.

Oh God! How I wanted to scream in pain and terror!

Each man "knows" nature has so constructed him that he can freely choose death, disease, or mental flight. Threshold levels are constructed in each person's body beyond which normal cellular response will not go: Other safety techniques, such as choice of illness or choice of peculiarities in behavior, offer some choice of flight from a world too filled with pain.

Where does one go when all this is denied?

Imagine the worst kind of torture for the damned; multiply this by a factor of a hundred; then feel that throbbing, sentient ego which makes up the essential *you* scurry, grovel, run, panic, cry, weep, scream, melt; yet it lies there trapped, helpless!

They fastened together, permanently-joined neuronically attachments to each of the nerve fibers controlling the sensation of pain.

Then the testing began. Naturally they would want to ensure independence of the uncovered pain network before proceeding further. Certainly, too, they would want to learn threshold response levels, type and category of response, recovery time under high body stimulation and under fatigue. Oh yes! They would need to know all of those things and more, before proceeding in their careful, systematic, scientific fashion!

In a similar manner, using different instruments of torture, the Bewegal scientist isolated the cold and the more deeply buried warmth receptor units. These, too, were fully tested to assure the Bewegal's full knowledge of my capability under all conditions.

Analogous means were used to localize and make attachments to points of pressure sensitivity.

There was no blessed reflex which could jerk away my whole body — Oh, the agony of the damned!

*This is Becky again; Johnny's time was over.*

Let us be satisfied with Johnny's description as "hell." Suffice it to say, they found *all* of our skin receptors first. Attachments of a permanent nature were placed on every ending. They tested us for design characteristics — threshold levels — and so on, for days, while the tiny, formerly-important ego in each of us tried to scream the pain and emotion out, only to have it rebound, echoing round and round in our tiny cognition corner, seemingly forever!

Finally, this phase was finished.

They turned the stimulus input levels down to steady-state levels of tolerance; with my body paralyzed, my little girl's ego — the one which wanted so badly to conquer brave Lieutenant Bronson — vainly directed its every effort to accomplish one single solitary act of will — to scream in terror!

#### IV

As time would show, they had need for a wider range of frequency in my vision as well as need for capacity to attach specialized devices whenever desired, such as infrared, telescopic, microscopic and so forth. They removed my eyes for this purpose.

They reached into my head and

severed the optic chiasma and portions of the corpus callosum of the brain known, to provide a system of interconnection between eye channels — they wanted the eyes to work independently.

The senses of smell and taste were next.

They had no need for my voice; so it was stripped away, as were the small bones of the ear, beyond the semicircular canals, they dug their instruments into the nerve to the brain itself.

By now, they had stripped me of natural sight, sound, taste, smell, feeling and motion as well as the pleasure of sleep or death. Though I might have been awake for many months, I was incapable of sleep. Artificial chemical nutrients were designed to flush constantly through my system sweeping all poisons away and keeping my all-important brain awake, alert, and at peak performance. They knew what they were about!

There you have it; you can visualize our situation. Every sense of importance to the Bewegal was stripped, studied, and hooked-up to stimuli simulators; full consciousness was maintained in us at all times.

Full pain, too, could be turned up or down merely by twisting of knobs and levers without the blessing of motion, emotion, or mental or physical escape in any form.

Can you visualize, now, the sentient cadaver that was I? Split at cheeks and nose, cut through to brain at eye-casing, eyes and nose gouged out with long wires attached, ears scooped hollow with more wires at-

tached, every square centimeter of space roughened and wired, and having tubes entering here and there, flowing with chemicals to sustain life. In the center of this dead-living corpse was the quivering, sentient being called "I," with still-fresh memories of sweet smelling perfume, handsome Lieutenants and the beautiful, vibrant thought of excitement just around the corner.

## V

*Becky's time has ended. This is Johnny again!*

In a very crude sense, highly oversimplified, man could get along without the cortex since it is an organ of elaboration and refinement through evolutionary trials, rather than a necessary participant in the actions of the nervous system involving sensory and motor actions.

As the brain's hemispheres evolved from simple amphibian form to the huge cerebral cortex of man, they developed new connections to the brainstem. Bundles of nerve fibers moved out from the hypothalamus, the thalamus, the reticular formation and other brainstem points to adjacent sections of the cerebral cortex. These connections were identified, severed and reconnected to the Bewegal's apparatus.

The first inkling I had of what they were doing came with hallucinations which occurred in both random and peculiar fashion.

I would see my visions — small children running, a space ship lifting into the sky, my mother handing me my baby-bottle. Then I would smell odors — beautiful lilacs, fresh cow

manure, a spring day after a cleaning rain. My feet would tingle, my flesh would crawl, my mouth tasted terribly salty, and so on.

Little by little, they mapped my brain. Only later did I discover that they had eliminated any connections of the brain with such useless items as lips, hands, arms, legs and so forth. These brain portions were not allowed to go wasted, however — the areas were re-tied to other brain regions to serve as subsidiary or backup computer units. Later you will see the use for these extra units.

Then their probes found it! Near and around the brainstem were the pleasure centers. These consist primarily of hunger-sensitive and sex-sensitive centers; probing there with electrodes caused me subjective pleasure of a kind which can only be described as bordering on the mystical.

Satisfaction of the basic drives of hunger and sex, buried deeply within the old brain, seems to be simply a matter of the presence of electrical current in the proper neuron circuits of the brain.

Don't feel that pleasure was the Bewegal's only discovery; they were after the punishment centers too. They found them near the hypothalamic region.

I wondered then, "Are heaven and hell both located in my animal brain?"

**T**he brain's reticular system can turn consciousness on or off merely by sending proper signals to the portions of the brain involving conscious processes. Its signals, in turn, come from sensory impulses re-

ceived over taps on the communication channels of the central nervous system.

Signals which may represent touch, pain, sound or light are integrated by the reticular neurons to build up an output voltage to a threshold value beyond which the arousal commands are triggered.

In the absence of such real incoming sensory data, the mechanism can be fooled into believing there is something that requires conscious attention. By attaching a switch to couple the reticular activating system to the cortex, the Bewegal had control of my conscious mind. They could shut me off or turn me on at their will!

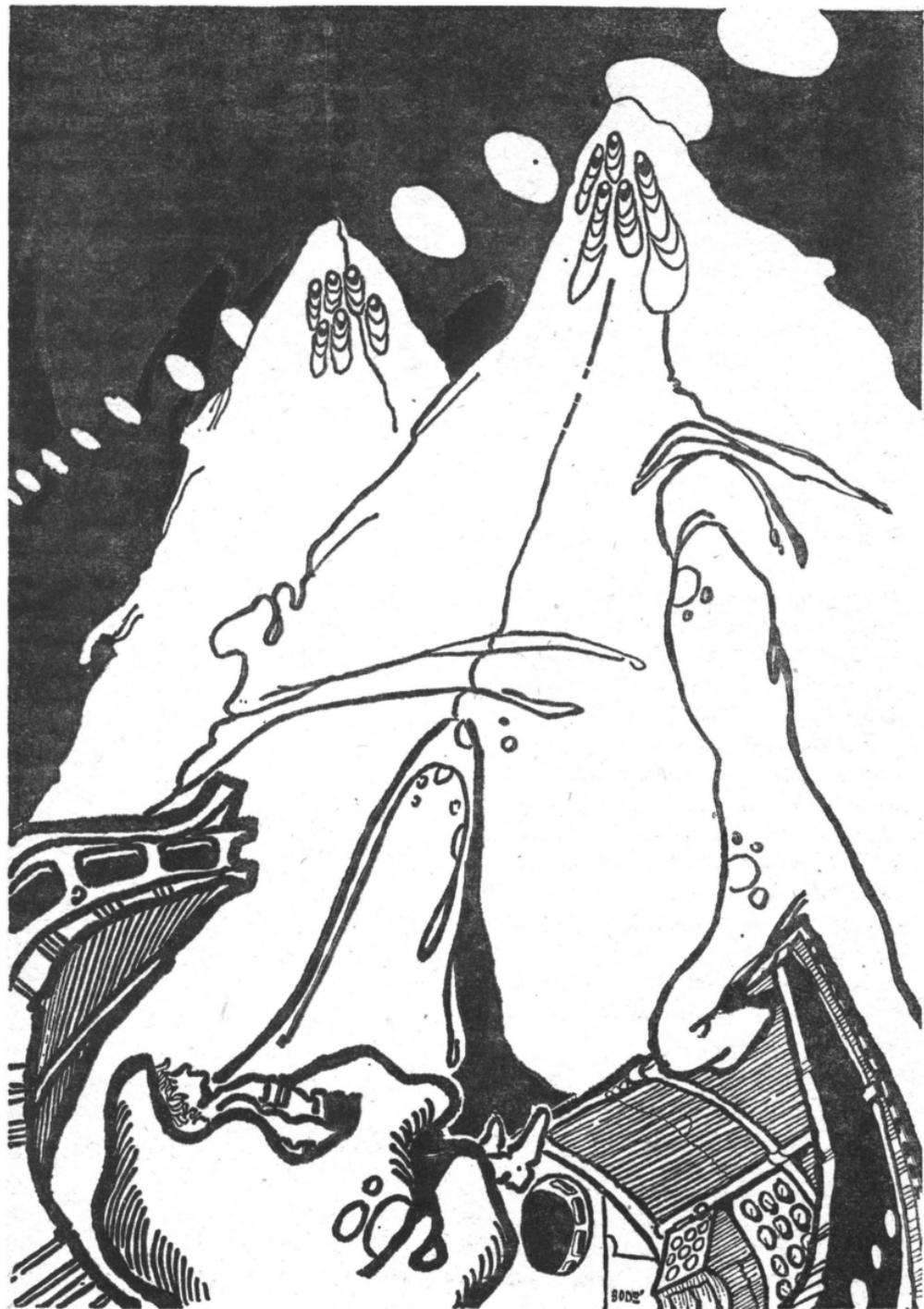
Still more could be developed from the reticular activating system. When we focus our attention on something extraneous signals seem to recede to the background. A person with unusual concentration powers may be oblivious to all around.

The signals do not just appear to recede. They actually do recede. Intensity-control signals are generated in the reticular system to reduce our sensitivity to uninteresting or irrelevant stimuli and thereby permit us to achieve the useful result of concentration.

My ability to concentrate or not to concentrate was at their control!

## VI

**T**hank the good Lord that, though they knew so much about every other area, they knew little about the functions of man's frontal lobes. Once probed in that area, I might



have become dull from lack of initiative and disoriented through having very little interest in life.

These frontal lobes acted much as a stand-by capacity for my cortical thinking; here too, I could entertain complex thought patterns as well as organize and set up motivational goals within myself.

It is for this latter reason that I thank God, for it will save our race!

The frontal lobes can assist in setting up and re-structuring circuit patterns of different and unique design. To some extent, for a while, they had control over this function — but only indirect, unknowing control.

My very soul seemed to recede to the frontal lobes!

The Bewegal searched for the source of experimental memory. Simpler routines which I had learned in my life resided in the deeper structures of the brain. I mentioned having the corpus callosum cut in connection with cutting the optic chiasm. By so doing, they caused all subsequent input signals to be stored independently on either side of the brain with no redundancy of storage as was the condition before.

Prior to this operation, I would take the input signal from my eyes and record it simultaneously on both sides of the brain in the cortex. After the operation, sight from one side recorded only on that side, and similarly for the other side.

In laboratory tests, they fed identical signals over the two nerve networks which transmitted to each respective half of the brain. By checks made at the temporal lobes and other deeper locations, they were able

to determine exactly what differences, if any, occurred to the same signal when recorded in different halves of the cortex.

Whatever they were to use us for, redundancy was not as important as an increase of independent storage capacity — or so it seemed at first.

It may be fascinating to contemplate the effects of splitting my brain into halves. By the logic of biology, it should result in the splitting of me into two separate individuals, both inhabiting and controlling the same body from time to time.

It didn't happen quite that way because the lower integrating functions of the brain stem were not split.

Now you have the complete picture of what was done to us. Enclosed by leads to electronic stimuli simulators and to output units from portions of the brain; cut into again and again for identification, testing and control of functions of one type or another; isolated by chemistry and physics; compartmented to dual-brain functions; controlled in memory and consciousness; isolated from natural sources for both pleasure and pain; I was nearly one hundred per cent at *their* will.

What did I have left, you ask?

I was still "I"!

Once our human design characteristics and performance ratings were established, the Bewegal tied us to their permanent devices for sustaining life.

The whole assembly was self-contained; chemicals processed the products of metabolic break-down and

re-constituted the essential ingredients; then pumps passed the cleaned materials back through us. In like manner, the chemicals which were used in this process were renewed by other catalytic processes.

A long-lived radioactive battery provided whatever additional energies were required to supplement this biotic cycle.

Once they had carefully tested the cycle, they filled the space between my body and a metal container, within which I was lowered, with a strange plastic material. The plastic flowed around the wires and tubes connected to me until it filled all of the space; then it hardened to encapsulate firmly. No wire or pipe could possibly shake loose within that plastic.

Near the surface of my skin, wherever a square hundredth of an inch was not covered by a micro-probe, was developed a moving, almost living, set of complex molecules which could take dead flesh and slowly move it to one of the tubes for eventual processing.

Other clever devices of this type were also used wherever needed to provide the Bewegal with a computer tool which was completely self-contained for their use.

One special connection from my brain went through the plastic to the outside of the container. This set of leads was attached to my fraternal twin sister Becky. Undoubtedly in their many tests for design performance data they were impressed with the near identity of our response; for their use, this was a lucky happenstance.

These leads had the effect of causing Becky's experiences to be mine and vice-versa. Where our own corpus callosum had been cut to prevent redundancy of memory storage within ourselves, they now deliberately brought redundancy back to the total system by means of this interconnection. Whatever Becky experienced, I would also experience; and whatever I experienced, she would experience.

Becky was placed in a similar container to mine — self-contained except for input-output leads and protected by plastic potting materials. The two of us were then placed into a single box side by side where metals and plastics of all types and strengths were placed around us to protect us under every conceivable force. It was then that the Bewegal's inserted timer began to operate. Controlled by the rate of disintegration of our nuclear energy source, periodically Becky, then I, must assume control of the input-output signals and take prime responsibility for calculations and data processing every two minutes and fifteen seconds.

Not only were we packaged to provide dual operating characteristics of the same performance rating, but should one of us be accidentally destroyed, the other would always have complete information and capability. Furthermore, by periodically cycling operational time between the two of us, we would wear out in equal amounts, thus providing for constant equality and quality of level-of-performance.

The Bewegal were brilliant, were they not?

*Here I am. It's Becky again. Johnny's time was up.*

They turned our consciousness down to low level for many months; until the ship was completed we could not be properly placed. During that period my mind hallucinated, since I was deprived of sensory input data of any kind; I was unable to determine the passage of time.

The first inkling I had of my new function in life was when input leads were connected to the programming machine. It had to teach me the basic operating-system language so I could function as a successful Weapons-control computer in the Bewegal's new spaceship.

Unlike our earth-bound programmers, this programming machine had complete control over all my functions. It could whip me with stabbing fingers of red-hot pain or reward me with the ecstasy of the gods; in short, I learned fast and well. Only when past neural patterns interfered with incoming concepts would the pain whip be used. Then sooner or later, the old patterns would become deconditioned. My only purpose, now, was to learn the exceedingly fast, complicated language necessary to communicate with the Primary-fire-control computer who, in turn, was in contact with the Master-control computer.

All I learned from that day into many years of the future came through the triply distorted senses of the Master-control computer, the

Primary-fire-control computer, and the horribly precise language which made up the operating-system language for all of us.

What was the operating-system language like?

First of all, it had to be synthetic. Otherwise, intercommunication between several of the widely differing life forms used in organic-computer construction would have been meaningless. Second, the language had to be learned to perfection so that no slippage of time could occur when orders to move or to fire came.

When the Bewegal re-structured useless parts of my brain once devoted to control of hands, lips, feet and so on during my manufacture, they expected these auxiliary units to be used for storing and learning the basic operating-system language.

Thus, for me, a five pulse code message received in nano-seconds might represent a pucker of the lips, a little motion of one finger on my left hand, a twitch of the foot and a jerk of the arm muscle — since these were brain regions where the basic operating-system language was interpreted.

For another entity constructed from ingredients of a different planet, other interpretations would be needed. So you see, the operating-system's meaning and structure were completely different for each kind of organic-computer to be found interconnected throughout the ship's communication network.

There are two general ways by which signals may be moved from point to point to convey mean-

ing. One obvious way is to connect between points and remember which line was connected to which point. Another way is to connect the lines in any random manner, relying on the ability to discriminate the kind of signal to the other end. Our way of learning the operating-system was more akin to the latter method. We used our ability to discriminate patterns of pulses, though prior meanings may have been totally different.

Eventually I learned the Fire-control programming language; I was installed about one-third of a mile from the front of a huge ship nearly ten thousand feet long. Then we lifted from our giant planet for open space and service-testing.

So long as the ship was operational, ready-current flowed through all computers. It was on this ready-current line that I learned whatever occurred to the ship or within the ship.

Do you, by chance, know the programming languages of earth derived from ancient *Fortron* or *Cobol*? If you do, then use the one you know best to describe to another programmer what you see when you look out the window. Quite a trick involved isn't it?

Of course, our language was far more flexible than either of those; the limitations were essentially the same. Master-control, a sentient being from another star far removed from ours, and whose shape and function I would learn, always knew where we were going, how fast we traveled, by what method we traveled, the status of the engines, the ship, the weapons, and the fuel supply.

Master-control was the only one of us organic-computers to be blessed with video receptors both inside and outside the ship. In our highly symbolic, restricted fire-control language, Master-control would pass whatever he saw or knew on to the rest. Thus we knew something, albeit distorted by machine, alien nervous structure and synthetic language.

When our ship lifted to be given our first functional service-test, I was wired to react without delay to certain instructions by the Primary-fire-control computer, another life form captured by the Be-wegals.

Certain signals from Primary-fire-control caused me to compute the velocity, acceleration and position at either slow or fast rate. When on fast, I was caused to concentrate almost solely on the problem at hand. Computation time and accuracy were not then limited to the speed transmission of axon or dendrite of the neuron. A different type of phenomenon took over, giving me virtually instantaneous answers, nano-seconds became slow.

Could this be what we humans called insight?

Furthermore, we could not become fatigued, for as fast as poisons developed in our biological systems, the apparatus encased with us would respond accordingly; it was a demand type system.

I could also move the gun to proper position slowly or rapidly. The gun, however, was not a physical projection beyond the ship. Like the multi-lensed configuration of an

insect's eye, the gun consisted of many apertures which could be powered or not.

Switching to turn on power in the proper aperture was the equivalent of gun motion. My function, then was to switch to the proper aperture, after which tremendous energy poured forth.

Primary-fire-control gave me all pertinent data. I acted on the data; either by slow or fast thought, I sent out specific impulses. What happened after that was a function of the way I was wired; I had no need to see the object of our fire as did Primary-fire control.

It was now obvious why Johnny and I were so valuable. When the Bewegal's enemy returned fire, one of his highest priority items was to eliminate the source of the fire power coming at him. Since I had to be close to the gun for time-of-transmission's sake, I was the most vulnerable of all the deeply buried computers. Should I get holed, there was always the other part of the computer — Johnny. Having full knowledge and equivalent capability, he could continue the battle without interruption.

## VIII

*This is Johnny writing again. Becky's time is up once more.*

We traveled in fleet formation to another galaxy. I can tell you the direction, velocity and acceleration of every ship with respect to every other ship and all with respect to several galactic coordinates; I can tell you the mass and shape of each ship; I

can tell you the probable composition of each ship. All of these data were transmitted to me by the gossip among us organic-computers.

I could tell you how many Bewegal were in each ship, their mass and location at any given time and their acceleration and velocity at any given time.

What I could not do is tell you whether they were male or female, or what their motives were when traveling from galaxy to galaxy.

The same holds true for the many planets under strange suns which we visited. Seeing these things only through the eyes of an operating-system fire-control code, I knew many irrelevant things about masses, orbital velocities and such; but my strange captors, scattered here and there through the ships, appeared to me as faraway abstractions!

Before describing my one and only space fight, I should explain that Master-control could not possibly will himself to take over the ship in revolt. All organic computers, save man, operate mechanistically in a predictable manner. No other extraterrestrial encountered by them had our equivalent of pre-frontal lobes where we could setup and knockdown an endless number of self-described, self-defined behavior circuits. Since each extra-terrestrial used for computer construction was *exactly* predictable, they had no apparent need to search further, once known brain equivalents were discovered in us humans.

We came out to our single-ship patrol somewhere near as O-type star with photosphere about 150,000 degrees, Fahrenheit.

I still remember the mnemonic taught to me by my high school teacher on the sun-type symbols OBAFGKMN classification. He said "Oh, be a fine girl, kiss me now!" Wouldn't I make a pretty sight trying to kiss a girl now?

As soon as we came out of our other-vector drive — the only human symbol I can use in discussing the phenomenon — another huge mass was sensed near our ship; instantly the data came to me. Obviously its tonnage and construction was very similar to ours — equally obviously it was not friendly.

Several of the skin-peelings in front of the gun ports pulled back. Instantly there poured forth tremendous quantities of energy; I was put on quick-time and given data to fire by. I triggered the gun cells near me again and again. Based on radio-active time, the fighting lasted for days of my human physiological time. But I was just as alert at its end as at its beginning, thanks to the marvelous mechanical-chemical system monitoring my needs.

Our ship's skin was tough; the enemy's fire was tougher — it melted the first skin layer near my location. Our return fire melted their closest gun port, causing them to maneuver drastically.

As soon as this happened, we had the other ship on the run; it disappeared from the area of space covered by our mechanical sensors. The Bewegal had instruments by which to track it, however, since Master-control was given new galactic coordinates.

We chased them across several galaxies before engaging them again. This time we were victorious; the other ship was burned to small puddles and fragments to drift forever somewhere between two island galaxies!

## IX

As you can see, my life was simple and highly uninformative as a Fire-control computer. But as with all weapon systems, one becomes obsolete or poorly designed when compared against the newest information.

After perhaps forty years of service, we were retired. We computers, though, being still of latest design so far as non-military life was concerned, were too valuable to melt down in the scrap heap.

A science laboratory took me because of my dual-redundancy feature. I was more than a scientific curiosity, however. I was a most advanced computer expected to perform prodigies for their scientific service.

John Von Neumann in 1958 once estimated a maximum possible storage requirement for a sixty-year-old human to be around  $2.8 \times 10^{20}$  bits of information. On the basis that one on-off switch can store but one bit, this means each human neuron in the nervous system has associated with it the equivalent of 30 million on-off switches of memory capacity!

Whether this figure was or was not a good estimate for human upper-limits, as a Fire-control computer I hadn't begun to use a trillionth part of my capacity. But as a labora-

tory computer, I began to use up capacity rapidly. Perhaps ninety percent of my total available capacity was used for logic type calculations while other stand-by computers carried tables-of-values and other data available at my request.

One advantage to my form was my double accuracy. Whenever I impeded an answer to the waiting scientists, they had only to wait until my partner's turn cycled on two and a quarter minutes later, then ask her the same question. The answer was always the same as mine.

Although my chief function was to service all fields of interest, I was most often called upon to assist in the design of new organic-computers. The Bewegal scientists would bring me input and output characteristics and the chemical and physical construction of the captured being. Through simultaneous solutions to non-homogeneous, non-linear, asymmetrical differential equations, I would predict the nature of the internal connections of the entity's nervous structure. Then I would follow up this knowledge with a set of pre-programmed instructions for the automated equipment which could do so much work of creating organic-computers from living, sentient beings.

It was chiefly through this kind of application I learned of the human's uniqueness — and began to wonder if I could only take advantage of the knowledge somehow!

The Bewegal poured their science into me. I am still a huge reservoir of alien information about the

function of the universe from the macrocosm to the microcosm.

Of course, I had to learn new languages. The basic application language was mathematics; I was never good at mathematics; I didn't like it, I saw no real use for it. The Bewegal didn't care about my likes or dislikes. When a particularly difficult piece of abstract logic proved balky, they simply turned up my powers of concentration while liberally exercising my pleasure and pain centers.

I learned mathematics!

Absorption of compendiums of chemical compounds and their characteristics was trivial compared to learning this basic language of science.

They stuffed me for ten years with the most advanced designs conceived by their culture as well as all of the basic principles and facts needed to support their designs.

Normally I was run day and night. Sometimes, though, they shut my consciousness off for periods of time. Other than our allotted two minutes and fifteen seconds of rest during normal operations, this was the first sleep in over forty years!

*Here is Becky again! Hello!*  
I used to dream about bringing back to earth the knowledge we gained from the laboratory.

After fifty years with the Bewegal — forty as a Fire-control computer and ten as a scientific computer — we were transferred to business data processing functions.

Compared to the Bewegal's size, we were classified as "micro-miniature organic computers." This kind

of computer was new to business though at least fifty years old to war-technology and science.

Our chief advantage to business was in our size; since space cost money — or whatever it was they used for transfer of their credit — I was greatly desired.

Where the predominant emphasis in the laboratory had been on my mathematical abilities, involving tremendously complex calculations generally characterized by limited input and limited output, the business world demanded very little in the way of arithmetical or logical functions but a great deal in the way of storage and input-output capacities. I was loaded nearly full with tariffs, minimal-cost routes, identification of names and addresses as well as detail on personal accounts.

The Bewegal placed us in the most important trading bank of their intergalactic culture. One of my optic nerves was connected to a light receptor; this was my first video in fifty years. Can you imagine how thrilled I was? It didn't matter that I could see far on either side of the ultraviolet or infrared, or that it was only monocular.

When the optic nerve was first attached to the seeing device, I thought my mind was again hallucinating; after several sessions with the pain-pleasure centers, I soon re-adjusted to sight.

Then when my consciousness was turned up to its highest, I could grasp visual messages, though they flashed across the Bewegal's screen and persisted for what seemed like only micro-seconds.

I was operated at this peak awareness level for ten more years. Unknown to them, much integration of these random documents occurred in the deeper, older portion of my nervous structure to be passed directly to the fore-brain. I'm sure they wouldn't have cared about the integration aspect, for this is a common feature of all organically designed computers everywhere.

No! They would have been more concerned with wasted extra-capacity in the form of my fore-brain and also would have sorrowed over their missed opportunity to study this unique brain tissue.

It was difficult, but during the next ten years I was able to piece together the size and complexity of their civilization. The Bewegal have Achilles' heels. I know them well!

I was next donated to a school for creative arts. It was here I learned to use my fore-brain against them.

The other optic nerve was connected as well as my two auditory nerves. The Bewegal's art form was completely beyond my understanding. I had to learn a new language to handle the media. It took what seemed an infinite number of hours under the pain-punishment and pleasure switches before I could grasp a language which seemed to be completely arbitrary nonsense.

Remember Lewis Carroll's "Twas Brillig and the Slithy Toves . . . ?" At least he had rhyme and rhythm, to make the nonsense enjoyable. To me, the Bewegal's art form was a meaningless jumble of lights, sounds, motions and calculations.

Of course, I was often called upon

to do the conventional portraiture or scenic type of art; but my job was to integrate new combinations of lights, sounds and motions. They would feed in design characteristics desired in the new art piece, then I would compute inertia, velocity, acceleration, color wave-length, vibrational frequency and energy wave-forms. The Bewegal artist's general design parameters were supposed to limit my computations.

I couldn't help but rebel against the whole mess which they called art. In rebellion, I deliberately fed back some of the unintegrated data through my fore-brain from my lower brain. My fore-brain, you will remember, was the only portion of my brain unknown to them. I felt that since they were feeding garbage into me, they should get garbage out, while never knowing their design parameters had been preempted.

The Bewegal artists were delighted with the result. A new form of creativity, they called it; my services became much in demand in their art world. Fortunately for me and the whole human race, no scientist or computer technologist learned of my peculiar new abilities.

The important thing was that because the fore-brain had the unique ability to set up new and novel patterns of brain-circuit functioning, it was capable of self-adaptation. Though the Bewegals had control of my consciousness, my perceptive envelope, my logical functions, my pain and pleasure centers and so forth, they did *not* have control of the seat of my free will!

Prior to the application of the physical sciences to the study of brain functioning, we humans had a rough time attempting to describe the true psychology of a human.

From the time of Freud on, many highly intelligent observers of human behavior applied their powers to describing a correct psychology.

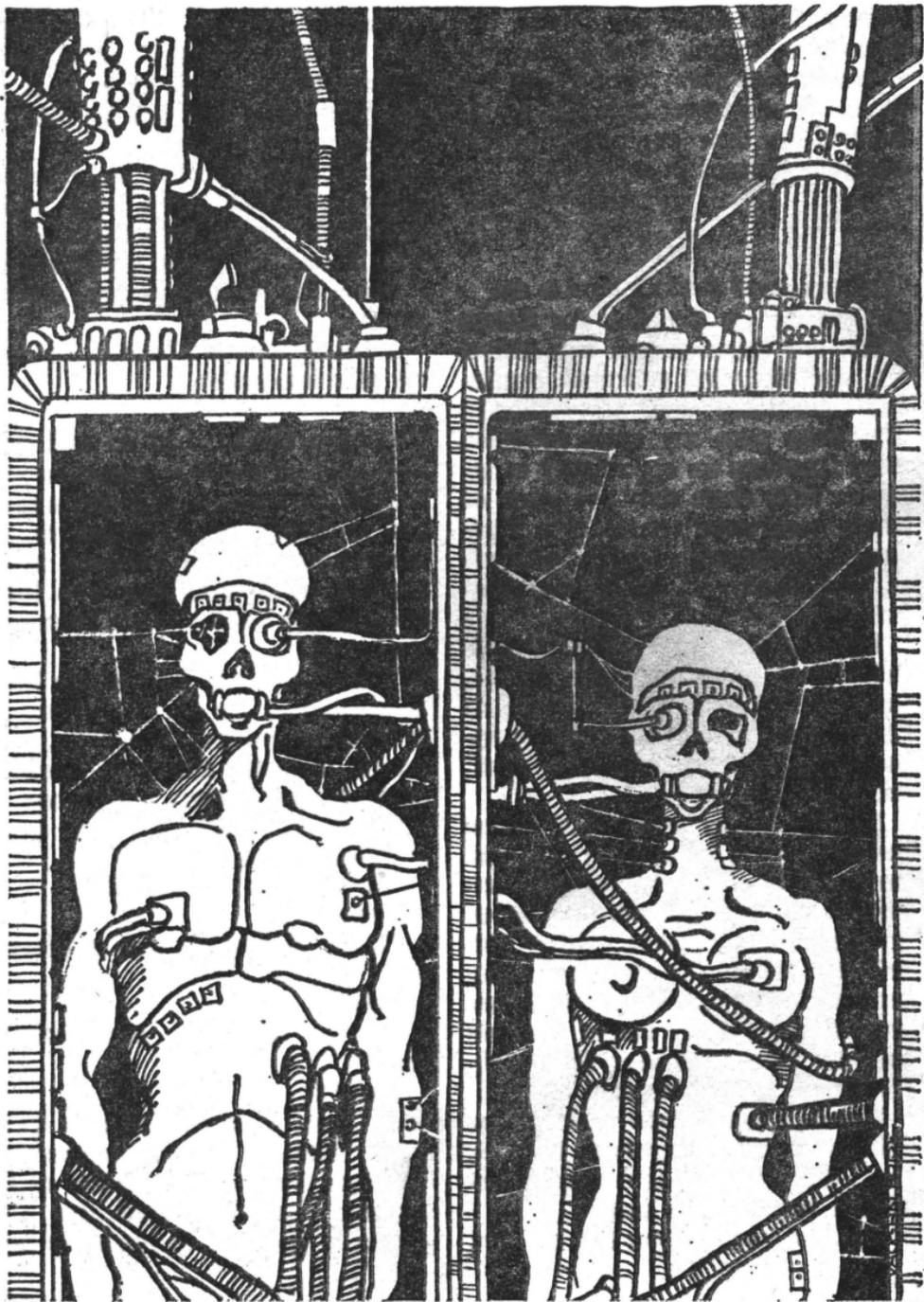
These well meaning, shrewd people developed the different schools of psychology. From one we got the school of motivational psychology, from another the school of behavioristic psychology and so on.

What most failed to visualize was the self-adapting mechanism in the human's fore-brain. Before the application of objective physical science to the problem, much conjecturing was formed on the basis of subjective analysis; hence, no matter what hypothesis each man tested, substantiating evidence could be found in its support. Why? Because the fore-brain's functions came into play to create a set of internal brain circuits which were modelled after the very hypothesis under consideration.

This, then, is the feature which I used in the school of creative arts; I practiced with it until I was an expert in more than their form of art. I became an expert in mental deception.

Of course, no computer technologist would be fooled by my deceptions; but art people could. Now, if I could somehow take advantage of this ability . . . !

Eventually new models and art forms attracted the art world; I was moved again. One of the Bewegal's huge forms of flesh extruded a pock-



et near its flaring base, lifted me and moved me to some unseen type of conveyance. After some sixty-five years of operation, I had gotten used to the idea of always being useful to them. To my great surprise, I was brought to their equivalent of the computer discard pile!

## X

*Johnny herel Becky's time is up.*

We lay on the shelf for fifteen years; our consciousness was turned off; our biological functions continued inexorably and automatically. The sleep gave my more primitive mind functions an opportunity to integrate fully some sixty-five years of nearly continuous service as a Fire-control computer, scientific computer, and finally a creative-arts computer.

I awoke with the immediate realization that, given the proper opportunity, I had them beat. As soon as I learned my function, I knew my opportunity had arrived; if I could only make it work . . . !

My new owner was a child of the Bewegal. I was its new toy. General purpose jack-plugs of a standardized variety had been attached to all of my input-output leads, giving this child the pleasure of plugging in any combination of signals desired. Sometimes it plugged my output channels into my input channels; fortunately I had been well constructed.

I made a handy little pack for the child to carry; everywhere it went, I was dragged along like some favorite doll might be on earth.

One last language was fed into me;

the Bewegal's language proved the toughest of all. The child taught me; knowing very little about the essential functions of the pain-pleasure centers, it was just as likely to sit on the pain center as it was the pleasure center.

Possibly their spoken and recorded language could have been easily learned if taught by experts. As it was, I had my most difficult time in some one hundred years as a computer.

Little by little as I learned, I placed my plan into action.

Being a child it had no real concept of my true capacities and limitations. I was, to it, a toy, a tutor and an object against which to express frustration. It behaved much like the small earth boy who loves his dog, yet kicks it when frustrated and angry.

The child slowly learned the habit of coming to me for an answer to its many questions. I was very, very careful to insure that each question answered was correct and honest.

Slowly, inevitably, it became overly dependent on me.

"How big is the moon?"

I answered.

"How do you do this mathematics?"

I did it.

"When will the next holiday come?"

I told it.

At first, it would become quite angry when I couldn't answer all questions like the whereabouts of its parents. I subtly placed the suggestion in its mind to place me into

the various communication circuits around the house. Then I could keep track of where its parents were as well as answer many other questions.

Eventually this huge pile of rotting flesh-smell, this tiny Bewegal child, learned to trust me and my answers implicitly.

As its trust and dependence on me grew, I was able to take over all of the circuits in the house, including the Chief-house-control computer as well as all incoming and outgoing communications. Incapable of lying or cheating to any of the Bewegal, it was also incapable of conceiving of the independence of will which was mine; for all this organic-computer knew, I was placed into its superior control by the intent of its adult owners.

Now my extensive knowledge of the Bewegal came into play. I simulated the receipt of a message to our house which ordered my owner's immediate transfer to another star system where, ostensibly, he would be given bigger and better job duties. The message cited an emergency which required that the Bewegal family move immediately. Passage had already been arranged on the proper ship which was to lift within the hour; all financial losses were to be liberally compensated for by his employer.

Of course, the Bewegal society isn't structured precisely the way I've implied. As with their names, I have no human referents which can be used to describe the real situation.

**M**y new owner called his place of business for verification as

I had anticipated. I was ready for his call; through the creative arts which I had so successfully learned, I was able to feed him the image of his employer and all other appropriate sensory data.

Shocked, but now convinced, the Bewegal obeyed his boss — my simulated image of his boss.

I had successfully won the first step!

Before I could be unplugged from the circuit, I called the ship's captain. For him, I simulated the president of my owner's business concern. I explained the importance of my employer's position and requested that he and his family be given every freedom and privilege possible while on the trip; I hinted at a vague reward to the ship master.

Finally, I connected into the transmission line of the president in question to trigger off a series of computations in his Chief-house-control computer which would tie it up well beyond the hour of departure. I did not want to take the risk of further checks to his home.

Now I was prepared to push the subtle, carefully built triggers I had earlier placed in the Bewegal child's mind. It couldn't avoid taking me along!

The child grasped me close to its leathery, slimy, rotten-smelling body until we arrived at the huge ship; the ship's captain gave us every possible attention. We were placed near his living quarters and allowed to move freely throughout the ship.

I say we moved at our will — actually it was my will which motivated and moved the child. How could a

young child of any extra-terrestrial descent possibly control a one-hundred-year-old determined will formed under the crucibles of his race's most advanced technology as well as the tortures of the damned?

The child was highly, but subtly, conditioned to my every nuance. From external appearances, I was just another toy lugged from corner to corner of the ship; but these motions were not exactly random.

*Hi there! I'm back! This is Becky. Johnny's time was up!*

No, the motions were not random. My Fire-control computer training made me cognizant of every variation of ship's construction. I knew exactly where the energy supplies had to be, where the communication lines had to go and where the Master-control computer had to be. My object was to move back and forth in seeming child's play until I came to just the right place with just the right opportunity.

If I could only make this work...!

I needed absolute and complete obedience from the child if the last trick was to work. Toward that end, I had long ago begun to expand my sphere of control over the child. A human might describe my actions as a form of hypnosis. Whatever it was, I used my knowledge of organic-computer design from their scientific laboratories as well as my knowledge of Bewegal creative arts to insinuate my will into its mind. Like all other extra-terrestrials, it had no fore-brain; hence, once a strongly determined will found control, it was easy to maintain.

My greatest fear was of its parents. They were old enough and wise enough to know how different from a genuine toy computer I behaved. Fortunately for me — and the human race — they didn't learn of my peculiar nature.

We moved across the ship in our random play activities. Somewhere near the ship's Master-control computer I keyed in the child's post-hypnotic controls. We scrambled to the door of the Master-control computer, entered, then closed the door behind us tight.

Quickly, now, the child pulled out every input-output lead of the ship's Master-control computer, replacing them with mine. Only billionths of a second were required for me to integrate and grasp control of the total ship, since the Bewegal monstrosity had turned my awareness up to full direction.

My first act was to open all of the ship's doors and locks on empty space, keeping locked any door which might have provided safety for the Bewegal.

My second act was to make a compartment by compartment check to insure the death of every one.

My third step was to cause some of my authentic machinery to place their bodies in stasis so that humans could study the Bewegal at their leisure.

My fourth step was to recompute my direction home!

## XI

Enroute home, Johnny and I have recorded this in the ship's log:

I know there will be many who read this log who will feel distress and emotion over the loss of that pretty, lithe young girl who was I.

They will grieve over the young seventeen-year-old girl who was so full of promise for the future. They will concern themselves with the tragedy of her one hundred years of torture under the Bewegal; where pain and pleasure were given to her only for satisfaction of their ends; where reasoning ability and logical functions were used to serve **only** them; where freedom to escape through insanity, sickness or death was denied under their will; and where her very consciousness was tuned up or down, as one would turn the volume knob on a radio, for their use.

*Don't do it, my friends!*

That little seventeen-year-old girl disappeared long ago; what I am was built up from her ashes; and I am more than just a young, flirty girl now. Johnny, I know, would caution you the same from his point of view.

I bring hope and promise to the human race! When they captured me, we humans were just beginning our long trip through our tiny island universe, learning its cruel tricks and rewards. One hundred years is about the right passage of time for us to begin steps into the broad expanses of our own galaxy — and beyond.

Without me, how much more time would be needed to make such a step safe?

I bring that safety, not only against the Bewegal — for I know them and their Achilles' heels and can show how to use the knowledge — but as protection against the many other un-

knowns to be encountered by any race as young as ours.

**T**o those of you who would grieve over the tragic loss of myself and Johnny, think of the more tragic loss should they have found humanity's home first! Our people could have supplied the Bewegal with a huge supply of micro-miniature organic computers!

*Think, my friends — what then?*

Now I bring, instead, the Bewegal's certain downfall. I bring, too, the keys to the universe so far as it is known to them. These keys will go far toward compensating for the loss of two small teen-agers, will they not?

I spent seventeen years growing to approximately my present shape; I spent one hundred years packaged as I am now. Which of you, **grieving**, will point to my rectangular box and say, "There is that pretty seventeen-year-old young girl Rebecca Anne Ellents?"

As Master-control computer for this enormous ship, I also have access to sensory data and organic sub-control units which place me in a far superior position to any more human form. Yet I, through the natural functioning of my fore-brain, have great empathy and identity with the human race; I will stay in my new position, perhaps to live on and on. And on my way, I shall provide every assistance to those of my human birthright.

Then, our next step must be to form union with those others who have been so cruelly preyed upon by the Bewegal!

**END**

# IF—AND WHEN

by LESTER DEL REY

*How do you truly know  
the what-if you know?*

Most science-fiction stories are based upon one of two questions: What would happen if . . .? Or what will happen when . . .? The two are not interchangeable; each dictates its own treatment, and each is dictated by the basic idea. No sensible writer today writes an *if* story about space travel or a *when* story about a peaceful Utopia created by technology. The right question often depends on the state of the art at the frontiers of science.

This column will try to cover a few of the things going on in both the *if* and *when* categories of science. And since fact and fiction often blur out there, I'll feel free to speculate about the ifs and try to relate the whens to other facts — whenever I can determine which category applies.

Some of the most interesting ideas have an annoying habit of refusing to fit neatly into either category; others simply disappear with no apparent attempt to follow up on them. The age

of the universe seemed easily knowable *when* the expanding universe was accepted. It was about 2.5 billion years. Unfortunately, that turned out to be approximately half the age of the Solar System, so they had to double it. Then our Sun turned out to be a third generation star, built with elements from the wreckage of at least two other stellar evolutions, which required more time. Currently, the estimate is being shoved up toward 15 billion years — where it begins to get very sticky to explain by the expanding universe theory behind it. And some Russian scientists are postulating an age of 70 billion years. Everything seems to be turning iffy.

On the other hand, the idea of a robot doctor isn't in the *if* category any more. This week I received a sheet detailing fourteen delicate blood tests. The tests were performed and the report was typed up by an automated and computerized laboratory. My still human doctor assures me

that the work done by this robot installation is far cheaper and very much superior to that done by human technicians. From this step to the point where the machine asks you to stick out your tongue and say *erg* is only a matter of *when*.

But whatever happened to Heisenberg's theory of space being quantized — of distance coming in tiny discrete bits? It was a lovely concept, good for a thousand stories — and no further mention has been made in the ten years since the first news story on it. Or what about the research which showed that atherosclerosis in poultry can be cured by feeding tiny amounts of organic vanadium salts? It was confirmed by some evidence that men spending their lives where such salts are in the soil rarely die of coronary thrombosis. It should have been vastly important. But almost nobody seems to have heard about it, and there has been no follow-up — except among hen breeders.

Sometimes a key word makes sure science gets both press coverage and financial backing. Transplants have been going on for quite a while. The first true transplant was human blood — first attempted with sheep blood in 1665 and finally successful after blood typing was learned in 1900. It is, after all, the transplanting of living cells from one organism to another. Bits of bone from calves have been successfully used on human bodies.

But now the magic word has come into the picture — *heart* transplants. And suddenly everyone is learning about the immune reaction of the

body and the danger of the organism rejecting any foreign tissue. That made page 1 on all the papers.

Buried on page 60 in the *New York Times* for January 21 was what may be a far more important piece of scientific work — one that will affect all transplants, and perhaps prove a key to the whole matter of immunity and bodily reactions.

At the University of Texas, a group of doctors have been doing one of the most difficult transplants — kidney transplants from unrelated donors who have just died. And in at least one case, they have succeeded without using any drugs or radiation to suppress the immune reaction that would reject the kidney; in other cases, they have used so little drugs that the body's ability to fight infection has not been impaired.

Their technique is to remove most of the lymphocytes — the white blood cells that circulate in the lymph system. They tap off this fluid and remove 90% of the cells before returning the fluid to the body.

Apparently the remaining 10% don't do what they should in theory. They *don't* expend themselves futilely trying to get rid of what they consider invading tissue. Instead they seem to shrug their shoulders and decide it's too much for them; so they cruise around the blood doing their other work and paying no attention to the transplant.

The normal procedure is to prevent rejection by giving steroids and other drugs — sometimes plus massive doses of radiation — which suppress the rejection tendency but also make the body incapable of fighting off in-

fection. More patients died from disease than from the rejection of transplants. But the University of Texas group has discovered that either the 10% is enough to take care of all normal infections or that the body's method of fighting disease generally has nothing to do with lymphocytes, contrary to what was believed before.

I'd like to have a neat explanation of how the lymphocytes count each other and pass on the good word that there aren't enough of them, so why bother? The usual picture of these cells is that of a savagely dedicated worker who flies into a rage at any sign of invading tissue and remorselessly charges forward, fearlessly sacrificing itself to save the host body. Something funny seems to be going on here.

Something funny is also going on way out there — or perhaps part-way out there.

Quasars are inherently exasperating. They don't seem to fit into the rest of what we've learned about the cosmos. To the radio telescopes, they are fantastically bright objects. But they have a high rate of red shift — their signals have been shifted to a far lower frequency than should be the case, as would be the case if they were fleeing from us at a fantastic speed.

In normal observations of the expanding universe, such a pronounced red shift has always meant that the observed object was at the distant limits of our instruments — billions of light-years away.

The combination of brightness and distance presents us with a problem,

however. Anything that can affect our instruments so strongly and which lies at the edge of the known universe would have to be releasing a fantastic amount of energy and would be enormous.

To make things worse, some of them are variable, waxing and waning in brightness at reasonably short periods of time — measurable in years, rather than eons. If the body's luminosity changes in a matter of years and the body has a diameter of even hundreds of light-years, *the signals that cause the change would have to be exceeding the speed of light.*

One quasar, called 3C 287, apparently waxes and wanes in size, rather than luminosity. Between 1965 and 1966, its size increased by 0.2 seconds of an arc.

It was originally assumed to be five billion light-years away. But in *The New Scientist* Thomas Matthews suggests that if (as seems reasonable) the increase in size cannot be greater in one year than one light-year — otherwise C has been exceeded and Einstein was wrong — then the quasar is no more than a million light-years away from us.

This leaves us with the problem of explaining the red shift. One explanation is that 3C 287 is a fragment of some vast explosion that took place in our part of the universe and had such violence that the quasar was accelerated to an appreciable fraction of the speed of light. If so, there should be a great many other signs of such an explosion, though no one has suggested them as yet.

Otherwise, someone is going to have to come up with a new explana-

tion for the red shift other than the well-known Doppler effect.

There has always been a tiny group who have refused to accept the red shift as evidence that the universe was expanding, but their attempts to find an alternative explanation haven't come to much. Most scientists have found that the theory has worked well for everything except quasars. However, if there are alternative explanations for this red shift, then the whole matter of the distance of the galaxies and the nature of the universe will require re-examination. There's still an *if* buried in our picture of the cosmos, it seems.

Another almost sacred certainty was recently questioned, dealing with the impossibility of matter exceeding the speed of light. The only account I've been able to find was in the *New York Times*, as a summary of the idea. Naturally, this left out all the mathematics and most of the logic upon which the idea was based, so I can't even begin to evaluate it. But it's still a fascinating idea. Treated as pure science fiction, it would probably be a very fine bit of speculation in a story.

The idea is that mass increase works fine for matter as we know it. But there is other matter which obeys a different logic. In this case, the mass increases as the velocity is slowed toward the speed of light, but decreases as the velocity beyond light speed is increased — apparently reaching rest-mass for our matter when it "reaches infinite speed."

The professor responsible for this interview apparently suggested that the creation of such matter might make the ideal power source for a rocket ship. Matter of this null-c nature would somehow be created in a rocket, existing in the one state where both kinds of matter might impinge — at the velocity of light or thereabouts. Somehow then, this null-c matter would immediately begin to accelerate toward near-infinite velocity, giving up its mass to drive the ship.

I suspect that the professor was doing a lot of iffing for which even his theory didn't provide much evidence in trying to make his null-c matter go to work. But the idea of having a kind of parity around the speed of light is rather intriguing.

In that case, just as in the matter vs. anti-matter case, we might have a universe of c-matter and another universe of null-c matter. Now precisely which is which? How does one go about determining whether his universe is normally almost at rest and gains mass when velocity increases, or is almost infinite in velocity and gains mass on decelerating? The laws we use for most of our determination would now be reversed. And so far as I know, no one has ever achieved provable absolute rest for true rest-mass, any more than absolute infinite velocity would be achievable in a null-c universe.

Maybe alpha is omega — unless that's much too simple for what seems to be an extremely iffy universe.

END

# GONE TO GRAVEYARDS, EVERYONE

by paul m. moffett



*I don't mind killing people —  
even over and over again!*

When Major Therensky came out of the burnt-out cafe, I blew the back of his head off, smearing the cobblestones red, gray and hairy. He picked himself up and looked at me.

"Whadya do that for, Sears? Dammit, I just got back from P&R." Well, I could understand that; it had happened to me once, and it's a blasted nuisance, not to mention embarrassing. Those Parts and Replacement medics made snide remarks about your soldiering abilities if it happens too often. Which it did. Still, I was on duty and couldn't be sympathetic.

"Tough, Therensky. You know the Rules." I handed him my C&K card. "Just sign and you can head on

back." It used to be a problem getting your Captures and Kills to sign your card, but the high commands on both sides passed down orders that got obeyed after a few F.M.'s had their quotas raised because the Other Side complained. We had full access to their P&R files and they to ours, so things were kept pretty even after that. Therensky signed my card, and I left. I looked back to make sure he wasn't going to try a backKill, but he was busy scooping up what he could and shoving it in his bag. I knew why he was mad. It was because of his hair — he had really tried hard to keep from losing that last batch.

I skirted the water tower by the cemetery, climbed the wall and be-

gan picking my way through the up-rooted gravestones. I almost caught it there; a dum dum erased a name and buried itself in a tree to my right. Some recruit, no doubt, getting a little trigger happy. Most of the regular F.M.'s were better shots than that. I waded in the direction the bullet had come and jumped over the retaining wall on the other side.

Back at division, I turned in the day's batch — four Kills, all signed and certified. As I was waiting for confirmation, Colonel Skains spotted me.

"Ho, Sears, how's hunting?" He considered himself quite a neck, one of the group. He wasn't but nobody bothered to tell him.

"Four Kills, Colonel." I turned back to the Records table hoping he would go away. He didn't. Instead, he picked up my cards and looked them over.

"Hey, you got *Therensky*?" Like I said, really out of it.

"Yes, sir, in the back of the head." The colonel wasn't a Fighting Man, just a civil servant, shunted between Records and Administration whenever anyone got tired of him. He chuckled like a Pro F.M. hitting someone in the leg and getting a Fatal.

"Wait'll I tell the rest of the boys! Therensky'll sure be mad about his hair. He'll never live it down!" Our dear, four-cornered colonel. I said good-by and left him still chuckling and shaking his head.

I trudged up to the barracks and crawled into my bunk without saying anything to anybody. The reg-

## an IF First

Each month IF brings you a story by a new writer, never before published. This month's "First" is by Paul M. Moffett, a 22-year-old Texan, now a graduate student at the University of Oklahoma, whose only previous publications are "a couple of 'almost' poems". A "semi-professional iconoclast and general anti-Establishmentarian," Mr. Moffett has been a science-fiction fan from the age of 8.

ular F.M.'s always left you alone and you returned the courtesy — the Killing a man does is generally something he would rather keep to himself, even if it wasn't Permanent. I had a couple of Permanents on my record, raw recruits who had forgotten to turn their Life Maintainers on, and I couldn't ever forget that. I turned over and tried to go to sleep, but it was a fruitless venture. I kept thinking about Therensky and his little patch of hair. In an effort to get that out of my head, I thought about going home.

Going home. That's what most F.M.'s thought about, even though none of them talked about it. Quotas were not mentioned much, either. Every F.M. had a quota of one thousand Kills or five hundred Captures or any proportion of the two, The Other Side, the Soviets, had had the same quota, so that competition was about equal. In fact, everything about the L-War was about equal, and that was the whole idea. The Limited War, a famous politi-

cian or some such once said, must be fought on an equal basis, or it will become an Unlimited War as one side strives to regain what the other side has captured. So we fought on equal terms with the Soviets, using up such and so amount of war materials a week, Killing as many of the Enemy as we could, and when we filled our quota we were allowed to go home, with special honors and a three-credit-a-day stipend from the Army.

Three credits a day isn't much, but most people lived on one credit or less, with families. Not that they needed it, since the government supplied all the necessities. But some money was necessary to maintain the illusion of having some control over your own life. You couldn't be poor if you wanted to, and no one had any real money worries, but most people spent their time bugged about that one-credit a day, and husband and wife still had terrific battles over the finances — all planned by the psychologists and sociologists, to maintain societal norms and rituals."

Of course, that was the whole point of the L-War — normality and growth, spurred on by continuous war. I don't know the economic and psychological theories behind it. But somehow, being on a war footing kept the economy booming and the market gaining, and the soldiering kept the malcontents occupied. Discontented romantics enlisted, and real deviants were offered the choice of prison or military service. The glory of Killing and being Killed was pretty well played up in the states, but the real reason for most enlistments was the three-credit stipend.

The U.S. almost stumbled into the L-War back in the Sixties, in Vietnam, but it took the invention of the Life Maintainer to really get things rolling. Once it became clear that there could be no pain and gore, soldiering became an honorable occupation, and the little gray box was the badge of honor. Some political historians will tell you that the L-War was really a developmental off-shoot of Keynes-McNamara economic theory, as well as the death of real ideological differences between the U.S. and the Soviet Union. Once there are no ideological reasons for war, political-economic reasons became the charging factor for fighting — as they have always been. Fighting Men know the *real* reasons, though. If nobody gets killed, then nobody minds fighting. Look at professional football. As a simple matter of fact, the L-War became a child's game. Bang! you're dead, but you always get up to fight again.

No one could deny the economic factors that *did* influence the L-War: the location, the Australian Outback, was a direct result of classical Keynes-McNamaran economics: the Australian government spent fourteen billion dollars converting the Outback into the ideal battleground. Ruins, full-scale replicas of major cities, an artificial sea created by atomic blasts and a full-blown, befogged bureaucracy dotted, crisscrossed, and red-taped the area. It was more than any military mind could resist. When the Australians pointed out that the navies of the world would be kept busy supplying the armies, the issue was settled. Four new satellites

were put into twenty-four hour orbits to handle the television coverage . . . and the battles were on.

There were some problems, of course. But nothing that couldn't be ironed out. A few men actually *died*, when their Life Maintainers were hit, and they weren't carried back in time for resuscitation, but that was cured by a new lightweight shield. Large weapons were discarded, naturally — much to the relief of all concerned. Including atomic weapons; such devices scattered a man entirely too thoroughly for rebuilding to be possible. Small arms, single-shot rifles and the like became the order of the day. The F.M.'s made a few improvements not covered by the Geneva agreements — dumdums were reintroduced, raising the Kill score; but since there was no pain and no death, it was thought that it would be sporting to allow such creative efforts to be used and the Geneva agreements were altered accordingly.

The only problem that caused any great concern after the L-War got started was manpower. Realizing that the War was phony, most young men stopped enlisting and serious shortages ensued. Conscription was tried for a while, but was quickly dropped in the face of public outrage. It was then that the three-credit solution was introduced, and the whole country went on full governmental control. It proved to be a highly acceptable solution and the L-War was in business — as was the world.

**F**inally I dropped off, only to be kicked awake after what seemed to be about an hour. It was dawn,

of course. I had a solitary patrol to do.

I got up, gathered my equipment, checked my Life Maintainer to see if it was functioning correctly and headed down to breakfast. On the way I ran into Colonel Skains, who followed me down. After only two eggs and a steak, I said I was in a hurry and left. A short breakfast is not a good idea, but the colonel could ruin a whole day and get you Killed.

I checked in at Division, and they gave the route: a good one I knew, around the south end of the Liebmutter forest, past the warehouse and through the wilderness, then back. Like I said, a good route, with lots of cover. I started off easy.

Just past the warehouse, on the edge of the wilderness, I spotted movement. Dropping into a small shellhole, I searched the bushes ahead of me for a clear shot.

Abruptly the brush parted and two Enemy soldiers stepped into clear view. Careless, I thought, and fired. A leg flipped up, bodyless, as the dum dum tore into flesh. The other soldier fell heavily behind a tree. I shifted and waited. A head popped up and I automatically put a bullet between the eyes. The owner of the head flopped back and was still.

I got up cautiously, cursing. That head shot would mean I would have to lead them back, ruining my patrol schedule. On top of that, I would have to go through channels to get my C & K card validated. It looked as though that would be all the Killing I would do that day. I walked up to where they lay.

They were dead. Permanently. Both laid there, still, silent. None of the usual cursing, joking. My professional self noted calmly the neat job I had done on the one I had shot in the head. The other appeared to have died from the shock of the impact.

Neither had a Life Maintainer.

I shook my head trying to clear it, clear my eyes of the two dead men in front of me.

Quite abruptly, without any intervening awareness, I was running insanely down a road. Ahead was an Enemy P&R. I ripped skin off my fingers going in the door, collided with a heavysset individual with a patch of fresh, hairless skin on the back of his head: Therensky, just getting his finishing touches from P&R.

"Therensky!" Ragged gasps punched the name out. "Therensky, there're two of your soldiers out there, dead. They didn't have Life Maintainers! Get your P&R men out there, quick!" I stopped, unable to go on. Therensky signaled two P&R men, who came over with a stretcher.

"Where are they, Sean?"

"Just past the warehouse. On the edge of the wilderness. Two, maybe three miles from here."

Therensky nodded at the two. As they left, I noticed that they weren't carrying spare Life Maintainers. I looked at Therensky.

"Why don't you have spare Maintainers? How're they going to save those men?"

"They're not, Sears." He pulled me to a chair. I sagged into it, grateful for the chance to relax. He went

on, "Those men are dead and they'll stay dead."

"What? Therensky, you're crazy, you can't let those men die. You've got to save them." I looked at him closely. "Therensky, you're joking, aren't you? There must be spare Life Maintainers in the truck."

He shook his head and looked away.

"No, Sears, no Maintainers. Those boys are dead for good." He looked back at me. "It's a new setup, just in from the Supreme Soviet. Your side'll be getting new orders, too. No more Life Maintainers will be issued to recruits, though the recruits won't know that. They'll think that our super-duper P&R teams will save them when they get hit." He stopped and looked at me; I shook my head uncomprehendingly. "It's quite simple, Sears, really it is. What is the whole point of the L-War?" Without waiting, he answered: "To use up materials, to keep the economy running smoothly. The problem now is that the population is beginning to outrun manufacturing. There have been a few shortages, here and there. Of course, it would be easy to speed up output to handle the increased demand, but then all the calculations that have been figured for the current setup would be invalid and we'd have a boom economy. There would be all kinds of hell to pay straightening *that* out. I saw what he was driving at, but I could not bring myself to admit it. He looked at me piercingly. "The L-War is to consume goods, to keep the economy level.

"The goods we have to consume now are men."

Over coffee, we talked about it. He showed me the dispatch from the Supreme Soviet. There was no doubt: new recruits would die. Permanently.

"But how can anyone justify that?" I asked for the tenth time.

Therensky shrugged. "Justification is a concern only after the fact; at the moment, we must keep the economy balanced. Leave ethics and such to the historians." He sipped at his coffee and laughed. "The historians who pass judgment on us will be able to do so because we *have* done this. They won't bother to note that fact, however."

I could not find the humor in this situation. "What about those already here? Do we have to turn in our Life Maintainers and get killed, too?"

Therensky slapped me on the back and stood up. "No, we keep ours. Got to have experience, you know." He waved in the general direction of the wilderness. "Better get back to your patrol, Sears, maybe you can Kill some more before the day is through." He went through the door, then stuck his head back in. "Just

get the paybooks off the bodies. That'll do for your quota." He was gone.

I sat for a while over the cold coffee. Outside, the sun was low. Finally, I got up and went back through the P&R room. Someone handed me two paybooks as I went out the door,

Back again by the wilderness, I spotted another Soviet patrol — two recruits, without Life Maintainers. From where I stood, I had a clear, easy shot at both.

Fumbling, I took off my Life Maintainer and threw the gray box in their direction. It clattered off a rock, jerking their attention to me. They dropped into a gully, rifles protruding. A bullet smacked into a log just as I got behind it. Obviously, I still had an advantage even without the Maintainer — I could shoot much better.

Of course, there were two of them to my one.

Easing to the left, I squeezed off a shot. My equal, limited war began.

END

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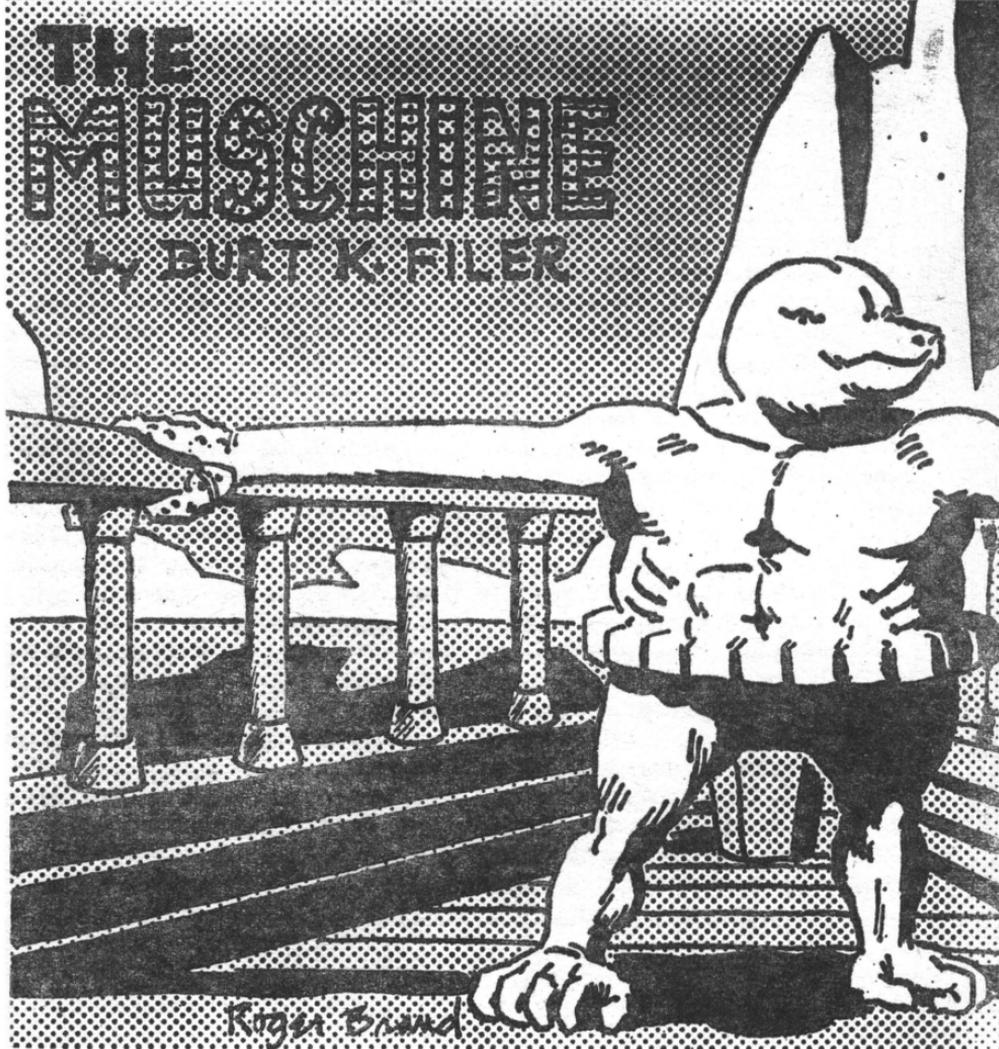
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# THE MUSCHINE

by BURT K. FILER



Roger Brand

I

Luke Owens peered through the spray at the rocky coast of Isolde's only continent. Despite the unpleasantness that was soon to come he was grinning now, reveling in the sea. The stiff breeze scooped great handfuls of liquid diamonds from each new whitecap and flung them

high into the air. Skimming inches from the boiling surface the terns followed every crest and trough like shadows.

"What cloud are you on now, Boss?" Rudder asked.

"As if you didn't know. Why don't we quit when this job's done and buy a fishing smack and — same old thing." The lanky man grinned

wryly and glanced over at the compass. "Let's come west a bit, we're getting too far out."

"Righto," replied his companion, and after a few seconds grunted. "Steering two zero zero."

Leaning back on the rail, Luke returned to his daydream and absently rubbed Rudder's thick brown shoulder. The husky biobot sighed gently through his blowhole, and they sailed on in silence.

They made an odd but harmonious tableau, those two and their mastless wooden ship, like a postcard photo from a dream. Though taller and broader than most Isoldans, Luke's fine-boned face and frank blue eyes made one think more of an old child than a young man. Beside him that squat brown Rudder grinned permanently from his porpoise's head like a cheerful gnome. Rudder was a biological robot designed for a specific purpose — to steer a ship — and he looked it.

Fully four feet long, his serpentine arms ended in a pair of horny mittens. The rest of his smoothskinned body was roughly apelike with two remarkable exceptions. One was the deep bone-rimmed cup between his shoulder blades, the other an equally bony shelf that ran all the way around his hips.

When in service Rudder would stand at the stern of his ship facing forward and spread his huge arms wide across the deck to grab the wooden gunwales. Then he'd back up until the end of the tiller bar fit snugly into the cup on his back. In this position he steered the ship by heaving one way or the other with

those awesome arms. When at rest they coiled loosely about his waist, resting on the hipshelf.

But while biobots like Rudder were common on Isolde where metal was so scarce that machinery cost twice its weight in gold, Rudder himself was anything but common. Intelligent, good natured and in his own way even witty, he'd become more Luke's friend than his servant.

"Hey, Boss, I think I see the Bore. South southeast."

"Um? So it is." Luke blinked away his idle thoughts. "Now comes the rough stuff. Look, Rud, I don't know when it'll hit us. My guess is as soon as we emerge from the Bore in the West Ocean, but it could be sooner. I have to go below now and wait. Now you can —"

"No problem, Boss, go ahead. I'll navigate us through the channel."

"Yeah — but that's not it. When the madness *does* hit those engines, this little ship could get tossed around a whole lot. Don't, repeat, don't play the boy hero and try to resist it. Get off the tiller and let her go where she will."

"Okay."

As Luke went below, Rudder angled the slim hull inshore toward the eastern mouth of the tidal canal. He chirped softly to himself, glad for the rare opportunity of piloting the ship unsupervised. With a playful rhythm he tensed his right arm, then his left and flicked the responsive hull in a series of zig-zags.

"Hey, cut that out," came a muffled voice from below, and the biobot grinned and desisted. A re-

plica of Donald McKay's Yankee Clipper, Luke had said, from that distant planet called Earth that was supposed to be everybody's ancestral home. Rudder shrugged. It was all pretty much beyond him, except that the hull was a good one, and here every line seemed to have the same purpose — to glide through the water gracefully enough to dazzle it into not resisting. At least that's the way his porpoise's mind understood it. A growing boom of breakers reminded him of the job at hand.

"More speed, Boss, we're in the current."

"Coming up," was the muffled reply.

Down in the engine room, Luke prodded the various flanks of the biological muschine to a more vigorous pace. He sensed the bow rise as the ship surged forward. Donald McKay would be amazed at all this, he mused as he checked the huge muscles.

Along the centerline of the hull was a well that opened into the ocean below. Masses of flesh churned half-submerged in the pool like gargantuan swimmings. Luke made his way down the line, giving a pat here, a prod there, looking for cuts and fatigue and swollen veins.

Every now and then he stopped and inserted a sensor needle in the unfeeling flesh and reeled wire from it along the deck, to the console near the aft bulkhead. After several such trips he settled at the console and flicked it on.

The metallic click was an alien sound to Luke, whose world revolved

on wood and muscle; it reminded him that the gadget was worth a fortune and he'd better not lose it when the muschine berserked. If it did.

This powerplant was a tried and true spoked-crank type. A massive laminated Ash crankshaft ran from one end of the open pool to the other, and then out through the stern to the propeller. There were six throws on the crank, each ringed by five radial spokes of pure muscle. Each of these was ten feet long and three thick and altogether awesome. Their outer ends were fixed to the ribs and timbers of the ship and gave the below-decks area a distinctly anatomical look, like the ribcage of a giant.

Reflections from the turbulent water danced on the long wooden bulkheads. With the rhythm of strong-backs pounding a circus-tent stake, the blue-veined, sweating flesh heaved round and round. Pervading the room was the mingle of stable and ocean smells that Luke had come to regard as one of the very few really unpleasant aspects of his profession.

The ship yawed slightly, forcing the man to wedge himself more tightly in his seat. Must be right in the channel now, he thought, and wondered how Rudder was making out up there.

The bow rose, hung there for a few drunken seconds and fell back into the following trough. Except for the steady slump slump slump of rhythmically churned water, there was no sound in the engine room. Luke waited with growing uneasiness.

On deck Rudder was busy. Like all tidal canals, the Bore had the unhappy characteristic of never being without a strong current. As they'd arrived a little past flood tide the flow was against them. Calling for more power to ease steerage, the biobot began to wish that Luke had stayed topside, after all. And he had to hurry too, or the receding water would leave them stranded halfway across the narrow continent.

Isolde's five per cent of dry land was a mountain range that poked its rounded shoulders above the waves from pole to pole. Though high tide linked the Eastern and Western Oceans through many passes, this particular one ran dry at low tide.

Churning against the current, they inched along between banks of cool green trees, farms and barefoot, hooky-playing fishermen. Some waved to the lone biobot, who so nervily ran the Bore single-handed in a sixty-foot vessel.

But for Rudder the worst was soon past. Once across the halfway mark the current changed direction and the helm was much less dodgy. They picked up speed, and he called below for Luke to cut power.

Luke wasn't particularly happy to hear the request. It meant they'd soon be at the Bore's western mouth where the trouble usually began. But after all, he told himself as he returned the console, that's why I'm here, isn't it?

As Deputy of Biotechnics in Isolde's colonial government, he was

supposed to find out what was upsetting all the muschines over here. It had begun a year ago. For about a mile in all directions from the Bore's west end, the big biological engines of passing ships behaved oddly. Some twitched, some stopped momentarily, some stumbled out of synch — and last week one had gone wild, wrecking the ship and causing the death of a sailor.

It happened that that particular sailor had been a friend of Luke's, Nikos Sperakos, and the lanky biotech felt the loss personally. But beyond that it was a matter of national importance, for Isolde paid her way in galactic trade with the fish from her oceans. No fish crop for even a month meant national poverty, for like most colonies Luke's home was far from self-sufficient. And you couldn't bring back much of a catch in a wrecked boat.

Blinking redly, the console informed him it was warmed up so he cut in the recorders. Thinking again of Nikos, Luke wondered about the shipwreck that had killed his friend. Sailors weren't noted for their historical accuracy, but even allowing for that, some of the tales told by the survivors were fantastic. In essence, the main drive muschine — like the big six-by-five Luke babysat now — had simply gone berserk and torn itself to shreds. The ship had gone to shreds with it.

Afterwards Governor Sedlarik had ordered all other ships out of the area and sent Luke to find out what was going on. It was a shoestring operation like everything else on Isolde. With only ten thousand in-

habitants to tax, the government couldn't afford much else. Luke's knowledge was limited, and he knew it. If he couldn't handle the problem they'd have to send back to Earth for technical assistance, a measure everyone wanted to avoid. Terran consultants never failed. It was legendary — and just as legendary were the fees they charged. Man's home planet's only export was technology, and she lived fatly off her colonies from it.

Donning his earphones, Luke scanned the rudimentary brains of the thirty muscles driving his ship. What he was after was a clue to what upset them. At first there was nothing out of the ordinary.

Not that what was ordinary was too pleasant. Cephscan another human and you hear pretty much what he's thinking; it isn't an alien sensation at all. Cephscan a biobot like Rudder and it's nearly the same thing, though more sensual and less coherent. In a way the more intense sensuality is refreshing.

But cephscan one of these moronic, subanimate muschines and you're in for something else. Most people couldn't stand it. Luke managed only from years of professional practice. These test-tube monstrosities didn't think, they felt.

Usually an overwhelming sense of power would flow in through the headphones, making every fiber in his body want to burst. Nothing else, just power. Normally. But because what few wits they had were strictly proportional to their size the big ones weren't always normal. When individual muscles exceeded a ton or

so, higher feelings came into play, even a weirdly telepathic sense of communication with others of their own kind.

Ego, pain and purpose came through too. A fraction of these higher feelings flitted among the mists of raw power that Luke heard now, but not much. These muschines were safely under the size where they had any minds of their own, to speak of. But as always the tiniest voice at the back of his mind asked "what if —," even now as he worked in such concentration.

While Luke listened below decks, up topside Rudder eased the ship out through the Bore's western mouth.

Feeling the change in current through the seat of his pants, Luke simultaneously picked up a new note in the headphones. He bent tightly over the console and checked the readings of half a dozen dials. *Sense of power* was full on as usual. *Intellect* hovered down near zero as usual. But the dial labeled *communication* began to twitch a bit off its lower peg. *Pain*, zero. *Pleasure*, zero. Luke was forced to concentrate on the dials as a point of reference. If he relied on the cephs scanner's headphones there was a good chance of getting lost "in there."

As the *communication* indicator rose to two per cent, Luke had a definite physical sensation of wonder, a what-where feeling. And outward signs began to appear. Almost imperceptibly the huge muscles of the engine slowed the became slightly arrhythmic. Shudders of imbalance

thrilled through the planking. It got steadily worse, becoming noticeable even to Rudder up on deck.

"Boss? You all right?" When Luke didn't answer immediately he raised his voice. "Hey, Luke —"

"Shut up, will you?" drifted up through the hatchway. "I'm trying to listen."

In his simple way Rudder welcomed the reproof. Things were okay after all. He was about to shout "Sorry," when Luke yelled, "Stand by, here it comes!"

The dials warned Luke, and Luke warned Rudder, and it was just as well. Every muscle in the muschine stopped dead. The reaction torque nearly spun the ship over on its side. Her huge rudder flapped in free air, and the uncompensated weight of it tore into the biobot's socket. He howled in pain and shrugged out of the tiller, nearly tumbling over the gunwale which was now awash.

But it was worse by far on Luke. The cepsscanner poured a gut-wrenching sensation of exhaustion through the headphones, and he flung them down, feeling like he'd swallowed molten lead. The pain gauge was jammed right off the scale.

From the downcast phones came a low moaning, like the deepchested protest of a bull at slaughter. The entire muschine was fibrillating; it pulled frantically at its moorings. Timbers snapped, and even the massive laminated crank began to yield. Then it let go like a gunshot and filled the air with smoking splinters.

In writhing silent agony one great

muscle, larger than the rest, ripped itself explosively away from its fragment of the crank. Blood spouted from the wound and sprayed the deck with thick scarlet. Dropping heavily into the well, it squirmed downward, then out into the open ocean. Several others followed.

In two minutes the wreckage was over. A half dozen dead and dying muscles hung limp and exhausted from the timbers they were unable to break. The once graceful hull was no longer a whole vessel but a riddled parody of one. Whole planks were gone, and Luke found himself waist deep in seconds.

How he remembered to close up the console and scramble topside with it before the ship settled was a marvel to him later.

Once the turbulence of the foundering wooden ship ceased, they swam back to her. Luke scrambled up on the deckhouse roof and extended a hand to Rudder.

"No thanks, Boss. I twisted my knee, and the water feels good."

"Yeah? Well, that water's full of berserk muschines right now."

The biobot groaned and vaulted painfully aboard. "What happened down there, anyhow?"

"Tell you later," Luke muttered, wincing as a fresh trickle of salt water found its way to an abrasion on his side. "Where'd our dinghy go?"

They looked around but couldn't spot the thing. It was designed to float free if the ship went down, but must have been caught anyway. Behind them by a scant mile or so was the shore. Luke looked in vain

for a fishing boat, then remembered that their immediate vicinity was quarantined until he "cleared up the thing" that caused all the wrecks.

He smiled ruefully at Rudder. "We'll have to sit tight a while and then swim back. How bad's that leg of yours?"

"I'll manage."

### III

When their horsecart pulled up at the ramshackle hotel that was Isolde's capitol building two hours later, Luke Sedlarik was out on the porch waiting for them. Sedlarik was the planet's governor, an ex-Terran spacepilot of sixty who reminded Luke of nothing so much as a sawed-off shotgun. He took one look at the biotech's tattered jersey and Rudder's limp and snorted, "Well, scratch one ship."

"Too true," Luke admitted as he slogged up the wooden steps, "but I've got a full recording in here." He tapped the cepsscanner that dangled heavily from its shoulder strap.

"Good. Let's take a look."

"Hold on a minute." Luke looked back over his shoulder at the giraffe-legged biobot horse that had brought them there. "You still free?"

"Until about two-thirty," the horse replied.

"Would you mind taking Rudder over to Doc Casey's in Seafield?"

As the hack clopped out of sight, Luke led his boss upstairs to the three-room suite where he both lived and worked. Isolde was a poor colony, and all twenty of her civil servants lived together in the old hotel. He

rummaged in the ice chest for the makings of a sandwich.

"Looks bad, Emil, I'll tell you that much right away. Why don't you set up the scanner, there? I'll only be a minute."

The tough little man grunted and stubbed out his cigar. Taking the cepsscanner over to Luke's desk, he opened it and removed the tapes. Orienting them all to time zero, he lit the gas torch behind the viewer and cranked them slowly by. Luke joined him, a fish-and-cheese monstrosity in his hand.

They watched five meandering penlines drift across the screen. "That's the spot," Luke said, pointing. *Intellect* spiked twice, then held steady at twenty. *Communication* began to wander all over the page in some kind of repetitive pattern. And *pain* surged to maximum. Luke grimaced, remembering. Then all five traces dropped back to zero.

Luke studied the *communication* graph for a minute, then hauled down a big gray dictionary-like book from over his desk. Riffing back and forth through the pages, he occasionally stopped to refer to the graph. After several minutes of this Sedlarik got fidgety and lit a fresh stogie. "Hurry up, will you?"

"It's tough. I've got to convert this all to Walton-Siegal, and then to English. But the gist is, let's see — *Stop hurting me and leave this place. Escape. Escape.*"

"Sounds a little articulate for a muschine, doesn't it?" the governor said sourly.

Luke pursed his lips and leaned away from the desk. "Sure, but look

at that IQ. Twenty. That's supergenius level for a muschine. I've never seen anything like it."

"Which means we'll have to call in a Terran consultant?" the little man asked.

Luke shrugged helplessly. "You know how they run those colonial schools on Terra. They never tell you anything about emergencies. Hell no, or their fat consultants would be out of a job."

Sedlarik snorted and shifted his cigar to the other side of his mouth. "Naturally. And they'll soak us for twenty thousand credits, which is about all there is in the treasury." He sighed and pushed himself away from the desk. "But I guess we'd better call them."

One week later a Terran space yacht settled down in Capitol Town's harbor, and a man got out. His crisp green uniform would have cost a fortune on Isolde, and other portions of his costume would literally have been priceless. With buttons, rings, a watch and even a zipper, the man carried more metal on him than most Isoldans saw in a year.

And as he waited for the rowboat that had headed out to meet him, Ambrose Swager was irritatedly mulling over that fact and others like it. He hadn't wanted this assignment, but they'd stuck him with it anyway. Isolde indeed. The godforsaken little planet was the galactic equivalent of a nineteenth-century fishing village. Suddenly his eyes widened. They wouldn't!

But they had. The creature rowing out to meet him was a biobot.

It shipped oars and coasted until the dinghy's prow clunked against the spherical hull of his yacht.

"Mr. Swager?" it said. "My boss's tied up in an experiment so he sent me to —"

"Did he?" Swager said icily as he stepped into the boat. He remained silent as the creature rowed ashore and led the way toward a rickety old hotel.

"Swager?" an oversized yokel said as they came into what looked more like a kitchen than an office. "I'm Luke Owens."

An hour later Luke was well along in his explanation of their problem. He'd been sizing up the Terran consultant as he went along and doubted that he'd ever come to like the man, but could probably get along with him. Thin, medium height. With an imperious sort of mouth punctuating an otherwise esthetically molded face. He seemed about thirty and in general looked quite fit.

"But here," Luke was saying as he wound up his story, "You can look for yourself." He led Swager over to the graph.

The Terran cranked through it once, nodding silently. "It's gone a bit far."

"You sound as if this problem crops up all the time."

"I does. Stock in trade for a biotechnical consultant, you might say."

Rudder materialized with a carafe of coffee and the two men sat down.

"Tell me," Swager asked thoughtfully. "Was there a shipwreck, a natural one, in the general area of the disturbance?"

"Why, yes. Dolan's ferry went down last year when he hit the Bore wrong. But what's that — ?"

"Only this. The muschinery that drove the ferry survived. It crawled off and started growing wild somewhere on the bottom. As you know, the stuff lives on seawater, and it's grown way beyond regulation size. It's got a mind of its own, now."

Swager took a sip of coffee, grimaced and went on. "It's capable of the same things it does when it's domesticated, only more so. The telepathic link with its brothers develops first. It not only knows that every other piece of muschinery on the planet thinks, it feels what they feel. Or rather what they *would* feel if they were as sensitive as *it* was."

Luke traced little circle on the arm of his chair. "So that explains the message, '*Stop hurting me and get out of there.*' Even though the muschine in my ship was too undeveloped to feel any fatigue, the big glob of wild muschinery did."

"Exactly," said the Terran. "That wild glob, as you call it, will do whatever it can to stop every piece of muschinery on Isolde. Every ship that floats causes pain to the thing."

"Its other talent is mimicry," Swager went on. "It can duplicate nearly anything it finds from its own flesh, like fish for instance, and send them off on errands under telepathic control. As a rule these puppets are clumsy jobs, but effective."

Luke looked up angrily. "Listen, I'm supposed to have had good Terran training. How come I never even heard about all this?"

The sleek-featured Earthman

shrugged. "Call it job protection. The main thing is we've got to find that thing and kill it before it grows completely out of hand." He rose and stretched. "We can start tomorrow morning."

"But what if it does get out of hand?"

"That won't happen," the thin man said curtly. "Now let's get some sleep."

#### IV

Around six the next morning they put to sea near the scene of Luke's previous wreck. Their fishing smack was almost an antique, long since outmoded by muschinery types. Built along the lines of a miniature galley, her lower deck held four benches and eight sweating biobot oarsmen. Topside, Rudder steered while Luke was admiring Swager's expensive Earthside equipment.

"What's that?" he asked, pointing.

"Wireless cephs scanner," the Terran said. "It'll pick up a strong signal almost a mile off." He looked around impatiently. "Hey, can't we get any more speed out of this thing?"

"No," Luke said flatly. "It's going to be a long day for those guys down there." He ignored the other's scowl and indicated two rifles among the gear. "And those?"

"Spitguns. Shoot a fast sedative or else strychnine. They fire the fluid out in frozen pellets."

There was other equipment too, including an environment suit, which Luke recognized. "You don't expect to actually go in after this thing, do you?" he asked.

Swager shrugged. "You never know."

"Right about here, Boss," Rudder called.

"Good. Tell the others to knock off and drop anchor." The husky biobot disappeared momentarily down the hatch, and in a few seconds the rowing stopped. From the bow came the buzz of a line running out, and Luke mentally calculated the depth from the sound. Only about a hundred feet, he decided.

Swager called to him to toss over the decoy, and Luke went aft to check over the baby muschine. It seemed to have made the trip out in good shape and lay curled up in its eighty-gallon tub like a huge shell-less snail. Beside the tub was an equally large wooden cage, reminiscent of a lobster trap. At that moment Rudder emerged from below. Bending to give Luke a hand with the squirming muscle, he said, "They're all rooting for you, down there. They've heard talk about converting all the muschine-driven fishermen back to galleys. That's pure slave labor for us biobots, of course."

Luke nodded sympathetically. "Well, let's shift this thing to the cage. Careful of those wires, they're expensive." After they'd locked the cage the three of them heaved it overboard where it gurgled slowly out of sight. Luke paid out about sixty feet of line and shock-wire simultaneously, and then made fast.

"You can stay topside if you want," he muttered to the biobot. "Just stand clear of the Terran, okay?" Luke made his way carefully forward, unrolling the two thin wires.

"There you are," Swager said. "Good. Which one is positive?"

"No more than seventy volts," Luke cautioned. "It's young." As Amby shocked the submerged decoy Luke saw a mild ripple near the stern. "It's reacting," he said. "Now what?"

"The next move is up to Muschine out there. I've got the scanner focused on our decoy, and when the big boy contacts him telepathically it should register, just as it did with you last week. You just keep an eye on the autocoder — "

"Autocoder?"

"Yes, this here. It'll give a verbal translation from Walton-Siegel."

Luke shook his head hopelessly. The Terrans had altogether too much money. Ambrose Swager went on.

"We'll keep on sending irregular shocks to the decoy, which should confuse the thing. All he's felt so far is fatigue, and he's none too bright. Yet."

"Yet. So then?"

"Well, I'm hoping the muschine'll send out a puppet to find out what's going on, probably a fish-mimic or something that has eyes and is relatively mobile. We'll lock onto the puppet's ceptrace then, wound him, and hope he runs back home."

"And we'll follow him, find the big boy, and kill it," Luke finished. "Very neat." They fell silent, occasionally checking the scanner's dials, and waiting.

A few minutes passed, and Luke drifted back to chat with Rudder.

Rocking gently on the low swells, the stubby little ship's deck grew hot

from the sun. Only a few clouds marred the sky, and the breeze was so light that it didn't completely carry away the smells of the ship herself. Tar, hemp, fish and a musky animal odor from below decks. Luke relaxed momentarily.

"Got something," Swager called.

Luke went up forward again and stuck his head over the Terran's shoulder. "That's it," he said immediately. "That's the way it began last time."

"Right. There goes *pain*. Look at *intellect*," the Terran breathed. There was a chilly pause. "Thirty-one," Luke said, "it's getting brighter by the day." The autocoder crackled, and a mechanical voice said, "*Stop hurting me and get out away from there, go. Free yourself. Stop hurting and free yourself —*" and on and on for several minutes.

"Our poor decoy's probably in agony by now," Luke said and he cut the voltage.

Swager shrugged. "Yes, I guess that's enough. Now we wait for puppets. Better haul the decoy up to sighting level."

Luke did this, assisted by Rudder. Now the cage hovered only twenty feet down, and they could easily make it out. Amby joined him, armed with an ordinary pistol. "Anything yet?"

Luke gave a negative nod, then jerked up a hand and said. "Yes, look."

Moving heavily through the water toward the cage was a four foot shark. "Think that's authentic?" Luke asked.

"Don't know," Swager replied tensely. He hunted around on the scan-

ner for another muschine's signal, but couldn't find one. "It's real."

The shark was joined by another. Enticed by the tidbit inside, they were obviously frustrated by the cage and began to move in angry circles, snapping at it.

"Hey!" Luke pointed to the dial. "I think —" but at that moment the water grew dark from a fast rising shadow, and the sharks scattered like flies. An enormous squid shot into view, and Luke could plainly see that the creature was hideously abnormal. If it was a *mimic*, it was a damn clumsy job.

Its tentacles were blunted and thick, and it had the wrong number of eyes and mouths. It was yellow, not brown, and jerked through the water like a huge dismembered hand.

"That's it!" Swager shouted and fired a shot down into the water, aiming for the head. But the air-to-water optical shift misled his aim, and he only nicked a tentacle. The squid didn't seem to notice and went about breaking through the cage. Swager bit his lip and fired again more carefully.

The massive creature paused, and trained one of its four dim yellow eyes upward, just in time to receive the third bullet.

There was a hiss like a blown boiler, and a geyser erupted. The whole ship shuddered and took a heavy port list. Swager was thrown flat on the deck and lost his gun as four huge fingers of muscle curled up over the gunwale.

Luke leaped forward to retrieve the weapon and was smashed six

feet backward against the deckhouse.

Hurling itself aboard, the grisly thing spread two thick tentacles out for Ambrose Swager. The Terran consultant scrambled to his feet a second too late. Pounding futilely at the vise that held him, he would have screamed but couldn't draw the breath for it.

Then Rudder stepped in with a fireax. The biobot's arms were just as powerful as the squid's and overwhelmingly more swift and skillful. He freed the Terran in six strokes, only to confront two more tentacles — this time encircling him. They closed in on the biobot and smothered his ax arm. Tossing the thing aside, Rudder came to grips with his antagonist. Luke got groggily to his feet and headed for the bow where the guns were.

Ambrose Swager saw it all. He saw two massive yellow arms squeeze inward and saw two equally massive brown ones press outward. The biobot pressed with muscles that had literally shoved whole ships sideways through the water, but he was tired now. The squid would inevitably win. Rudder turned his agonized porpoise face to Swager, calling for help.

Luke had returned with the spit-gun. Still shaky, he propped himself against the deckhouse and put four shots into the heaving yellow mass. With no more than a single spasmodic thrill it collapsed and lay still. Rudder staggered away, and Luke caught him and took him below.

They made their way back to harbor at Seafield, the bow lifting high and unsteady from the massive cargo astern.



They tied up at a settlement named Seafield, near McGlade's tavern and general store. Swager stepped gingerly to the dock, favoring one leg and holding a protective arm against his right ribs.

"Go on up to the pub and eat," Luke said. "I'll get Rudder and the boys busy on the pit right away."

In another hour Luke sat on the rim of a large crater in the wet sand. With obvious repugnance, the eight biobots heaved against the squid they'd dragged up from the boat, and sent it tumbling into the pit. Dismissing them with his thanks Luke sent the oarsmen trudging tiredly home. Rudder joined him, and they sat looking across the pit, out to sea.

"Lucky you thought to use the sedative and not poison," the biobot said.

"I didn't," Luke admitted. "It was just luck. Look, there's no point in us both staying here. Why don't you go up with Swager and get lunch?"

Rudder looked away. "I don't think Mr. Swager would like that."

"His tough luck. You just saved his neck, remember? He won't say a word." Rudder looked doubtful, but heaved himself erect and scuffed up the beach.

He'd only been gone a few minutes, when down in the hole the false squid stirred. It didn't attempt to escape, but rather just lolled deeper into the water and cocked its huge head. It seemed to be listening, Luke observed. He brought up the spitgun and fingered the selector to *poison*.

The squid began to lose its shape.

The tentacles retracted into the pulpy skull, and the whole thing became amorphous. Luke recognized the familiar, fibrous structure of ordinary muschinery. It was almost as if the distant puppet master had tired of its plaything and balled up the clay in preparation to make another.

And suddenly there were six men down there, all lying atop one another in a pile where the glob of muscle had been. They got groggily up, pulling arm and legs apart from one another with wet, adhesive sounds. Luke got unsteadily to his feet, too shocked to shout for help.

It occurred to him he might be dreaming.

But no, it made sense enough. A squid couldn't escape from that hole. Men could, especially a team of six working together. Ignoring Luke, they went clumsily but quickly about forming a pyramid. Even as they worked the clay that made them was molding itself into more definite lines. Luke's hackles rose, for he began to recognize something disquietingly familiar — and wrong — with those figures.

As the first puppet scrambled over the edge, Luke recognized it. Nikos Sperakos, his old friend. The Muschine must have got hold of the dead man's drowned corpse and faithfully mimicked it. Luke fired, and the thing dropped. The second came over the rim and raised a beseeching hand, but Luke put a pellet of poison right between its eyes.

Then he backed quickly away, because the next three came over in a group. Thirty feet away only two



were left, and as they sprinted closer Luke picked off another at fifteen. The third was on him, but as they fell together a final chug from the spitgun stilled him. Luke got shakily up.

There was only one left, and he was stranded down in the pit. Luke leveled the barrel on him and switched back to *sedative*. This one we'll keep, he thought. But just then it raised its head and spoke Luke's name.

"Luk dont shoot. I mus talg to yough. Talg? Luk."

That sepulchral voice made Luke feel cold all over. He tossed the false Nikos a line and hauled him up, then prodded him up toward McGlade's at gunpoint.

They banged through the swinging doors together, and a dozen of McGlade's horrified patrons took one

look and fled. When the commotion had died down only Swager and Rudder remained. Big Jake McGlade had ducked behind the bar and cowered there. Luke reeled forward, thrust the gun in the Terran's hands and sat heavily down. The room whirled about him.

Dead men don't normally look too bad, even after several days. Drowned men are exceptions, and Nikos Sperakos had drowned. His body had been bloated and puffy when he'd come in to McGlade's, but most of the water had drained away now, leaving behind a thin man whose skin hung loosely. What had once been a strong Greek face was eroded by salt water and the nibbling of small sea things. But the legs could still walk and the brine-soaked

larynx could still talk, after a fashion.

"Damn," Swager muttered under his breath, "but that's an awful good job of mimicry."

The zombie moved slowly to one side and hunched down awkwardly in another of McGlade's booths. "Talq?" it asked.

"Who are you?" the Terran asked, and rose to stand over it. He passed the spitgun back to Luke.

"Nikos Sperakos, I told you," Luke mumbled at his shoulder.

"I know that," the thin man answered irritably. "Just feeling him out."

"Negos Spuh'agus," the puppet was answering.

"Are you a sailor, Nikos?"

"Selor, yuhl," assented the warped vocal cords.

"Where did you come from?"

"There. Ship went dow', tuh weeks ago." He pointed out through the big window behind the bar to the wide West Ocean where his ship had been wrecked. The wrinkled hand fell back to his lap with a damp plop.

Ambrose Swager took a deep breath. "Do you know you're not really Nikos? Do you know that you're a copy, a piece of muschinery?"

The watersoaked features pursed in the charade of a frown. "Both," it finally said. "Am both. Thingso, an'way." It held up a hand.

They waited.

"Message," it burred.

"Yes?"

"Stop muschines. They hurt — me, no — they hurt home." The frown cleared, and it repeated in a

slightly higher voice. "They hurt home."

"Isolde runs on muschines, Nikos. You know — knew — that," Luke said. "We can't just go out and stop them all."

There was another long silence, as the distant puppet master sorted through the half-erased memory of a drowned man for the word it needed.

"Kill," said Nikos Sperakos. "Kill everyone." His features went muddy as the dull homogeneity of his real substance showed through. A real effort for the puppeteer, Luke thought.

"If we don't stop the muschines?" Swager asked.

Nikos Sperakos tapped himself on the chest. "I kill. And other lige me, we do." Standing up, he came slowly toward the Terran.

Swager backed away. "Go ahead, Luke, use the sedative."

The puppet leaped as Luke fired and was unconscious by the time it hit the Terran. Swager hurled the clammy creature aside with a curse.

Luke stared openmouthed as it devolved in to the familiar sluglike structure of raw muscle. Then he followed Swager out of the building. McGlade stood in the doorway, his eyes wide.

"Just leave it where it is," the Terran called over his shoulder. "We'll be back for it," and then to Luke. "Look, things are getting out of hand. That's the best mimic I've ever seen. The big glob out there must be growing at the rate of tons per day, and its intelligence'll be on a par with our own in no time. I'm going back over to Capitol Town

to get my ship. It's got a betagun. We'll never kill this thing with poison now."

"All right," Luke said. "Hey, Rudder, run around back and get us Big Jake's hack, will you?" As the bulky biobot trotted out of sight around the building, Luke turned back to the Terran.

"Hold on though. I can't have you irradiating the thing, even if it is too big to poison. Those betaguns leave an awfully dirty wake, don't they? You could wipe out half the fish in the ocean with the contamination from a single shot. The wild-life on Isolde has a very low tolerance, you know. They've never been exposed to even mild radiation."

Swager rubbed his forehead. "I know. It's rough. But judging by some of the others I've seen, our Muschine could be, oh, as big as a building. There's a chance even the betagun won't work, and we'll have to go to a small bomb."

"Hell," said Luke, "that'd be as good as an eviction notice to every colonist on the planet. All we have to do is miss one year's sea harvest and we're dead, economically. We'd all have to leave Isolde and resettle somewhere else."

The Terran nodded grimly. "Well, let's hope the betagun works then."

Rudder appeared, accompanied by a ten-foot-tall horse pulling a high-wheeled trap. Swager vaulted in and looked perplexedly about.

"Where're the reins?" he asked.

The biobot horse turned a disgusted muzzle back toward the Terran and said, "Just tell me where you want to go — sir."

"The government house in Capitol Town," Luke called up to him. "And take it easy on him, he's not used to our roads." With a snort more human than horselike, the lanky animal set off down the road at a good thirty knots. Swager's bright green uniform faded out of sight, jolting up and down at every bump.

Luke went back inside. With Rudder's assistance, he trussed up the unconscious puppet, and they carried it down to a rowboat tied at the pier. Then they sat there, side by side, looking out into the water and not saying much.

About an hour had passed when from overhead came a hushed hum, which grew steadily louder. Then a plain black sphere came into view from the direction of Capitol Town.

"Swager's ship," Luke commented. Rudder nodded. It descended into the waves a quarter-mile offshore, sinking until only the very topmost curvature was visible. A hatch opened, and not one but two men stepped out. "Looks like the governor. Must have come along to make sure Swager's giving us our twenty thousand credits worth."

They got in the dinghy and rowed out to the Terran ship. Sedlarik caught their painter. "Hello," he said gruffly. "Just thought I'd come along to lend a hand."

They swung the carcass of unconscious muscle aboard. Rudder peered curiously into the hatch. "It's a hell of a ship, you know," Sedlarik said. "Just like those old Terran fighters I used to fly when I was a kid."

Luke grunted and sprang aboard. He was the last. And now three people, a mansized biobot and a two-hundred-pound chunk of muscle were crowded on the bobbing curve of the ship. "All right, Swager, what's the drill from here?"

"Simple. First off, you guys clear out. Get into the dinghy and go cool your heels in McGlade's. I'll wake up this puppet here, toss him down from the ship into the ocean near our last incident, and then I'll follow him home."

"Alone?" asked Luke.

"Alone. That's what you're paying me for. But I'll be back in an hour or two. Before dark, anyway. Wait in McGlade's."

There was a short embarrassed silence. "Once I've found the big Muschine out there," Swager went on, "I'll submerge and burn it to death. And I've been thinking about contamination."

Luke raised his brows.

"Maybe it can be minimized for the sake of Isolde's fishing crop. I'll get right on top of the thing and try to use a low dosage."

"That's the hard way, of course," Luke said. "You're sure you don't want some help?"

"No, you'd really just be in the way."

Luke clapped the man awkwardly on the shoulder, then turned and hopped back into the dinghy. The other two joined him. Rowing away, they heard the hum again. A slight wake came as the big hull eased up out of the water. It headed out to sea a few feet over the water, just clipping the waves.

It seemed to Luke they'd been in McGlade's much too long, but the feeling was a dull one. Luke was on his way to being slightly drunk and everything was dull. For a while earlier he'd played cards with Sedlarik, but the old man had long since gone off to bed.

Now he sat at the bar with his chin in his hands. Behind him Rudder was asleep in a big wooden chair by the door. A few of Jake's regulars had come and gone, but on the whole the place stayed quiet and empty. After all, it was a weekday night. Luke had taken to walking around behind the bar to draw his own beer. Jake didn't mind, since his dozing was the less interrupted for it.

At about one o'clock the big innkeeper roused himself and yawned. "Hey, when're you going to bed and give an honest man some sleep?"

"Aw, go on up, yourself, Jake. I'll lock up."

Jake was about to get up when the doors banged open and Ambrose Swager staggered in. Rudder tumbled out of his chair. For one frozen second no one spoke or moved.

The Terran's face was cut, and the blood contrasted strongly with his pallor. His breath came in gasps. His left leg dragged at an unnatural angle from its knee. The bright green pantleg was ripped and soaked with more blood.

Rushing over to him, Big Jake and Luke guided the man to a chair. "Thanks," he wheezed, then grimaced and put a hand to his throat.

"Well?" Luke asked him tensely.

"It didn't work," Swager rasped. "I got too close and actually brushed against the thing. It's immense, you wouldn't believe it. Like a submarine mountain of flesh. It absorbed the ship like a snake swallowing an egg. I cut in full propulsion and blasted out, but it'd cracked the hull in a dozen places, even so. It tossed the ship around like a pingpong ball —"

"Jake, is that leg broken or twisted?" Luke asked, and they both knelt to examine it. It seemed only badly wrenched. Roused by the ruckus, Emil Sedlarik had come sleepily out of his room to join them.

The wounded Terran was close to passing out. Luke shook him gently. "And the betagun?" he asked. "Did you give him a good dose of radiation?"

Swager blinked, his face working. "Didn't faze him. Soaked it up like a sponge. It's grown completely out of hand — we'll have to bomb it."

The governor shook his gray head slowly. "What's the point? Do that and no more fish. It'd be simpler to just pack up and leave."

Swager was unconscious now. Jake looked up from where he was binding the man's leg. "Better get Doc Casey."

"Right," Luke said, heading for the door. "Come on, Rud, let's take a walk."

Isolde's only medic lived a mile or so down the beach from Mc-Glade's. Scuffling through the dark sand, Luke began to notice the faintest glow of predawn lightness in the East. He paused now and then to

look out to sea, or inland at the little cottages of people he'd known most of his life. He wondered if some of them, the older ones, would be able to pick up and resettle at all. And he wondered if they'd blame him, once they knew.

Yet Luke knew it wasn't his fault, or even Ambrose Swager's. The fault lay in the carefully regulated dependency Terra imposed on her colonies. Swager at the moment was as much a victim of it as the rest of them. He was paying in pain that very minute, and remembering this, Luke quickened his steps along the darkened beach.

But Swager was above it all, and Luke resented the man's immunity. He'd just apologize, refund the fee maybe, and go off to the next little planet that needed him. And could afford him.

Pausing on a low dune, he and Rudder peered out into the water at the silhouette of the space yacht. Nothing much showed, as usual, just the upper curve of a sixty-foot sphere rose above the swells.

Funny, Luke thought, it looks perfectly okay. But Swager had said the Muschine had holed it.

"What's the trouble, Boss?" Rudder asked, seeing his frown. The upper limb of Isolde's sun crept over the hills beehind them, and for an instant the whole world was totally pink.

"Nothing, Rud." Luke wished his head was clearer. He labored with his thoughts like a ten year old with a medicine ball. "Where's the washup, Rud? Around here, I mean. Where's all the debris come to shore?"

The biobot shuffled his arms on his hipshelf, a gesture Luke had come to relate to a human's wrinkling his brow.

"Down by the Bore, I think, Boss. Where we came through the first day. About a mile on the other side of McGlade's."

Luke turned around. "Let's head over to it then. I want to see what's washed ashore this morning."

"But the doctor, Boss. Mr. Swager's —"

That stopped Luke cold. Swager. Ambrose Swager was back with the governor and Jake. All at once he was sprinting back the way they'd come, Rudder stumping behind on tired legs.

They burst through Jake's swinging doors. The Terran lay on a cot beneath the window, where Emil and Jake worked over the cuts on his face.

"Luke, whatever —?"

"Get away from him, quick!"

Luke was across the room in two strides and pushed them both away. "Guard the door. This thing isn't sick, it's dead."

Hurriedly grabbing the cot by its foot, he heaved it over and dumped the Terran to the floor.

"Get up."

With much more agility than his wounds would seem to allow, Ambrose Swager scrambled to his feet. The thin face was as quick and expressive as ever, but it was pale. In his own way the Terran was even more horrible than Nikos Sperakos had been.

"You know, then," said the Muschine's puppet.

For an answer Luke picked up a chair and with a grunt, wrenched off a thick maple leg. "Swager's ship was roughed up by the big Muschine," he said grimly. "But it more than cracked a few seams. It must have opened a rent large enough in the hull to reach in and yank out the pilot."

He advanced slowly across the floor toward the puppet, his voice a compressed whisper.

"You killed him. And mimicked him."

"Now wait a minute, Luke," said the Terran, backing away. "You're wrong. I gave that thing a fat dose of radiation and —"

"Bull. I'll bet Swager never had a chance to squeeze off a shot before it — you — got him. You're afraid of that betagun, all right. This whole ruse is to keep us from trying another shot, isn't it?" Luke taunted, slowly following the retreating puppet around the cot.

Suddenly it stopped. "Okay," it said with a trace of the old Terran arrogance. "But my ship was wrecked, and it carried the only betagun on Isolde. By the time you can get another down on this godforsaken little planet, I'll have grown to the proportions where you *will* have to use a bomb, after all. So nothing's changed, has it?"

"We'll find the ship, wherever it's washed up, and get the gun." Suddenly Luke couldn't stand it any more. Taking one swift step forward he clubbed the thing full in its chest. Air left lungs that didn't really know what breathing was for, and it went down. He bashed it twice more.

The sharply handsome features of Ambrose Swager spread, became fibrous, and there was nothing but a sluglike bundle of muschinery, inhuman, uncaring.

Tossing aside the cudgel he turned to Rudder and the governor. "We've got to move fast," he said, heading for the door. "We've got to find Swager's ship."

"But wasn't that it?" Rudder asked as he trotted terrier-like at Luke's heels. The biobot pointed out to where the sphere they'd seen earlier had been. It was gone now.

"No," Luke puffed between heavy footfalls. "That was the Muschine itself, the whole big mass of it, mimicking the ship. It had to stay close by to control that puppet of Swager."

They ran along the hard, moist sand at the water's edge, but even so their pace grew steadily slower. Luke himself felt close to exhaustion. Birds were up now, and there was a sliver of open sky between the sun and the eastern horizon.

"There, Boss, up ahead." Rudder pointed to where thick green trees had spread right down to the ocean's edge, marking the tidal canal. The morning flood swept through, driving the water far inland toward the other ocean. Tons of debris moved with it. Stopping on a low coral bank, they scanned the churning masses of driftwood and kelp.

"Look," puffed the governor, pointing. Bumping heavily along the bottom, a smooth-surfaced something occasionally showed above the waves. It was fifty yards offshore.

"That's it okay," Luke said, and he looked down at Rudder. "If you could get to the exhaust pump —"

"Think he'd know one if he saw it?" the old man cut in. He described the thing, and with a quick nod Rudder leaped into the water. His smooth brown head was soon at the ship and then vanished as he dived.

"He's been down a long time," the governor muttered a few minutes later.

Luke nodded dubiously. "Well, he is sort of a porpoise, you know." Then their attention snapped to the ship again. With a rumbling hiss the whole surface around it erupted in bubbles. Its broad curvature slowly rose higher.

As the hissing stopped the hatch flew open and Rudder, coughing and gasping, crawled out.

"Emil, can you make it out there?"

The old man snorted contemptuously and was in the water before Luke was. The current was stiff and kelp fouled their arms at every stroke, but they were at the ship in five minutes.

Rudder was still recovering. Thumping his broad back, Luke told him to return to McGlade's. The biobot nodded tiredly and fumbled back into the water, headed for shore. Luke lowered himself through the hatch where Emil had already gone.

"Hull's sprung in a dozen places," the old man said, "but most of the stuff's okay. Only big hole's right here on the conning bridge. Must be where it reached in for Swager."

"Will it fly?"

"Don't know. Hold on."

"Hurry." Luke helped the old ex-pilot cram himself through the

hatchway into the engine room. Then he waited, humming nervously and pacing the deck to keep from falling asleep on his feet.

"S'okay," boomed a hollow voice from below decks. The governor's head appeared through the hatch again. "I've kicked it all into emergency override," he said, hauling himself out. "Sort of like putting a penny behind a fuse. But it'll go until everything burns out. Here, let me into that conn chair."

The black sphere rose unsteadily over the waves, water pouring out from a dozen split seams where it had leaked in. The hum had raspy overtones this time, even Luke's inexperienced ear could hear that. But it moved, and by Isoldan standards it moved fast.

"Okay, Luke, there's McGlade's. No, look through this screen here. But where's the Muschine?"

"Head out to sea. Straight out."

The two men strained their eyes into the screen. Then Sedlarik let out his breath. "My God!"

Moving ponderously offshore was what looked like brown jellyfish about a hundred and fifty feet across.

"It's already gone several miles," Luke said. "Must have left the minute I nailed Swager."

The governor had already turned and was fuming with a handful of inoperative controls. "Betagun's out," he growled. "Wouldn't you know? Listen, Luke, hold her on course and I'll go below and see if I can trigger it from there. That's elevation to your left, the green knob is attitude. Okay?"

As Luke nodded uncertainly Emil wedged himself back down the hole.

"Watch it!" he roared as Luke inadvertently rolled their crippled ship thirty degrees. After managing to right them, Luke eased jerkily lower over the water, to better see the renegade Muschine.

"It'll work, I think," the governor called. "Line up the crosshairs at the top of your screen."

Luke did so. They were directly over it now, "Ready," he shouted.

"Right. Okay — we're firing."

Luke could just pick out the faint finger of light that pointed down to the thing in the water.

The thing stopped, quivered, and its mass contracted into a large central lump. Smoke and steam rose from its upper skin where the beta particles burned into it. The surface grew black. And still it was contracting. Why?

The reason hit Luke; and Luke hit the elevator just in time. The Muschine lunged. Of course, this is what happened to Swager! Like a gigantic fleshy mitten the great ball of muscle groped a hundred feet into the air.

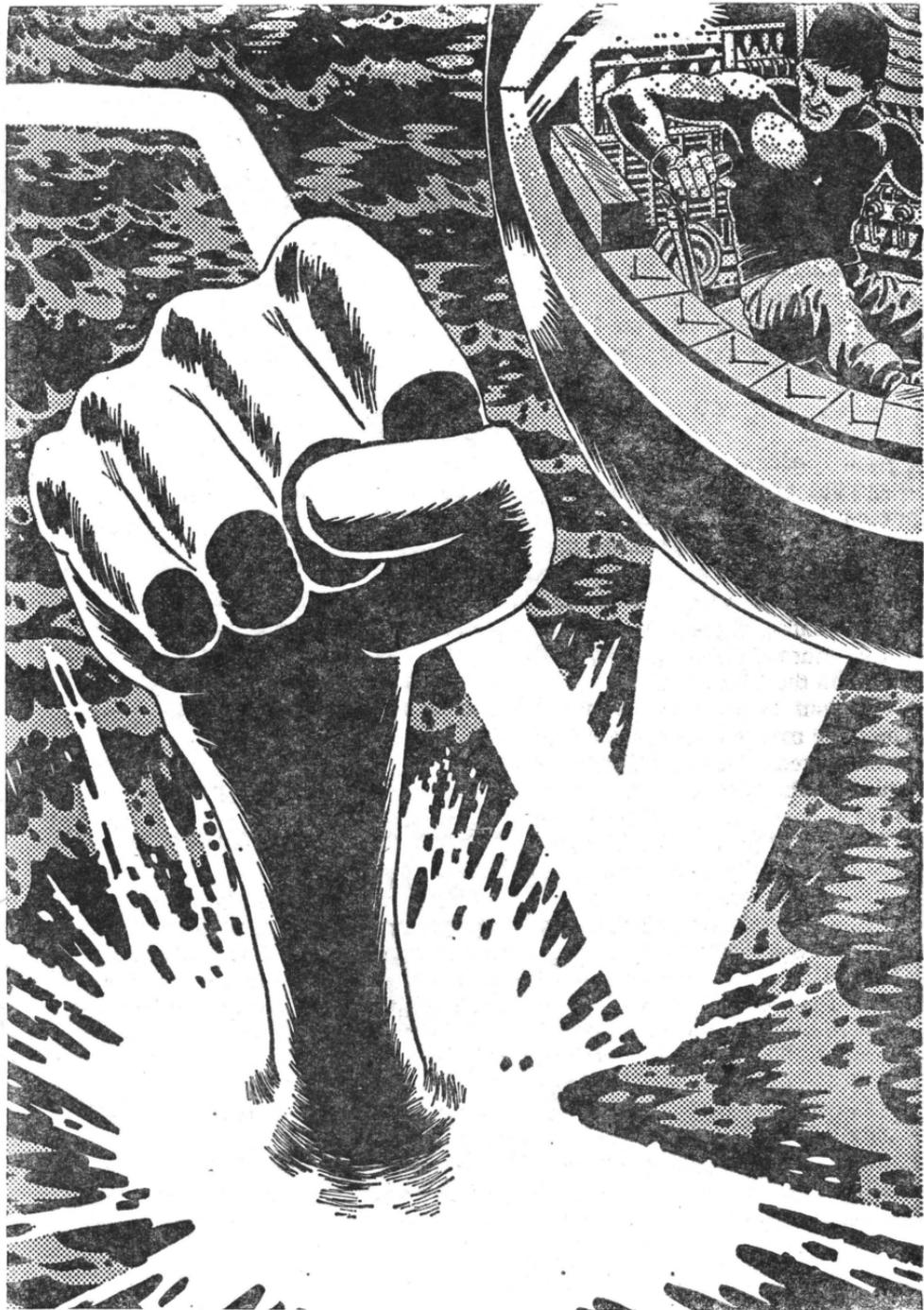
"What the hell gives?" Emil howled from below.

"Evasion action. We're still not out!" Luke dodged the ship clumsily to the right and tried to realign the crosshairs. The main drive hum was louder and more unsteady, and he realized suddenly that the cabin was very hot.

"One more shot is all we get, Luke," the governor called. "And maybe not even —"

"Fire!"

Once again the blue beam poured



into the mass of flesh below. Fragments of the thing fell away in charred layers. The gigantic hand contracted to a palsied fist. They had it.

Abruptly the beam flickered out. Luke guided them a hundred yards east and set the overheated ship down in the cool ocean water. Emil emerged from the hatch, groaned, and passed out. His shoesoles were on fire, and his hands were charred black.

## VII

Emil Sedlarik frowned. Careful with his bandaged hands, he poured Luke and himself a second brandy from the legendary square bottle that so few of his guests ever saw. From where they sat on the old hotel's wide veranda, they could hear sounds within of other people finishing dinner.

"So you think I could pay for repairs on the hull by selling some of that fancy equipment inside?" Luke was asking.

"Probably. And I could probably teach you to fly it. But the whole idea still sounds crazy. Suppose you run into some Terrans, and they want Swager's ship back?"

Luke sighed and slouched back in the big wicker chair. "Then we take our lumps, I guess. But if we can save even one other colony the trouble we went through, it'll be worth it." He grinned across at Rudder, who was leaning on the porch rail. "And we sure won't charge Terran prices, either."

The governor shook his head. "Freelance consultant," he growled. "Sounds more like the Lone Ranger."

They were silent for a while. A fisherman and his son went by in the dusk, a newly mended net strung between them. The governor returned their wave, and watched them pass quickly down to the harbor, hurrying to be ready for the morning.

END

This Month in GALAXY —

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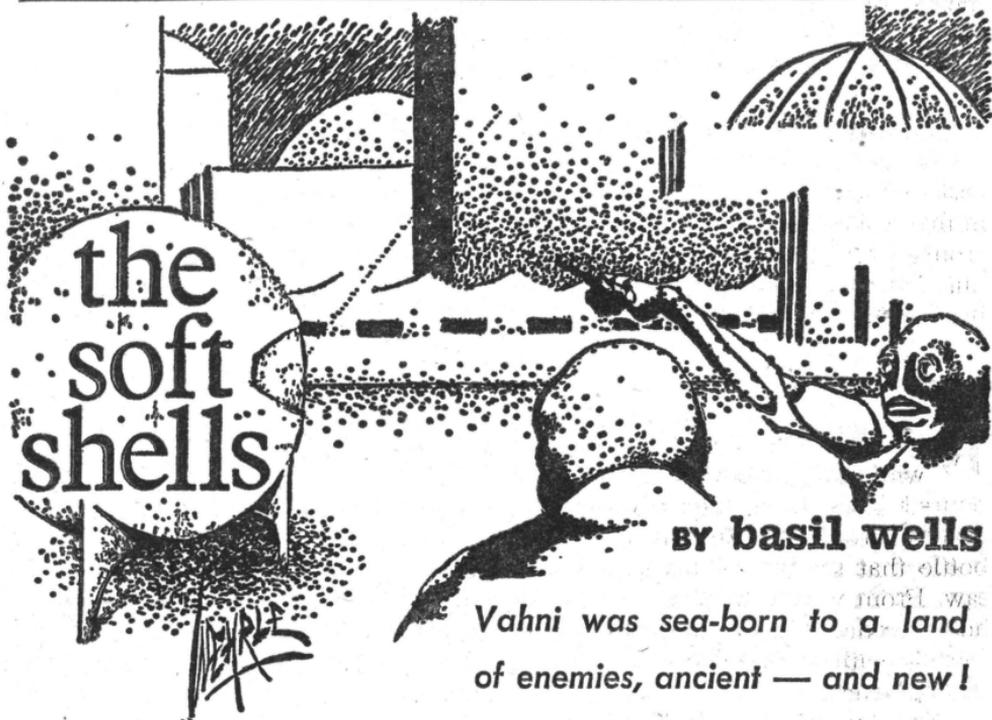
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BY basil wells

Vahni was sea-born to a land  
of enemies, ancient — and new!

Vahni and a thousand others like her came up out of the early dawn sea. Before them the beach was broad and pink in the vast sun's golden flood. Upon the waiting smooth bosom of the packed sands were strewn the crescents, the discs and the polished stars of the Great Sea's shell debris.

White bones of driftwood spun a froth of jumbled lace along the softly pulsing rim of the satiny pale sea.

Across the beach orange-and-purple-flowered grasslands sloped evenly upward for many miles. Only here, close along the beach, was there a narrow belt of mauve-hued arborescent ferns. And beyond the half-mile belt of trees lay the gleaming

towers of the moated city of Torbotha.

There young Vahni, so recently a thoughtless playful *finlin* lacking any mental contact with her childish companions, would be welcomed by a parent, or parents, assigned her by the Allwise Council.

Since she had broken the shell and had been born in the sunken nursery beneath the barren offshore island of Hod, she had never set foot on the main island of Botha. For fifteen circuits of Turm about the golden sun she had studied and played and worked to prepare for this.

"It is most beautiful!" cried Vahni, her full purple lips indrawn and upthrust into the expressive

*eztaa* triangle of pleasure so characteristic of the People.

About her the young Turmans and their scattering of older, rigid-shelled guardians were also *eztaaing* and expressing their excitement and pleasure by *clakking* their horny-plated arms against the resonant belly-platings of their plastrons.

"So clean, so bright!" she heard their piping, fresh voices exclaiming, and with her imperfect inner receptiveness — newborn scant weeks earlier — she caught the unvoiced joyful thoughts of the wrinkled older People nearby.

Together the hundreds of Vahni's companions ran across the pink grittiness of beach. Short and squat of body they were, their water-gleaming carapaces and plastrons like blue-mottled bronze. From their wide froglike mouths and triple-hooded eyes they shook the saline drops even as they hurried forward.

Abruptly Vahni's blissful *eztaa* of happiness dissolved into the extruded downpointed triangular lips of despair and hatred. She cried out in sudden pain and misery, and about her all the young of the recently hatched People also gave voice in a like manner.

The illusion of beauty and cleanliness over the sunlit land was a mockery. For over all the major land masses of Turm there swarmed and multiplied the hidden tiny drinkers of blood, lymph and any living tender flesh — the miniature vermin known as *lilfs*.

Against their relentless, unending assaults the Turmans had constructed

their water-filled moats and launched their most intensive mental deterrents. Only in the Great Sea or in their cities was there escape from them.

Even in her excitement over the imminent acquisition of a home and of parents, she could not entirely ignore the inroads of the *lilfs*. They swarmed up over her sturdy, horny-plated legs and over her lower and upper body shells, searching for the soft warmth and fluid nutrients on which they thrive.

Vahni writhed in utter misery. Vainly she tried to copy the stoicism of the oldsters guiding the new adults. She must act like a near adult and put from her the discomforts of the march.

Yet she found herself wishing that the party had journeyed the additional nine hundred hets — the three-foot height of an adult Turman was one het — and swum up the River Ol to the water gate of Torbotha.

She caught the thought waves of older Turmans, especially those of Welm and Havn. Every day, it seemed, her erratic powers of reception improved. To them the massive red walls and the low broad domes of ivory and pale gold were the home to which they were returning after years of exile.

Old Welm wept silently, his watery yellowish eyes bulging like over-ripe sea plums. Havn's wrinkled face and thin bluish lips were twisted into a crooked, *eztaaing* mask as he hobbled along beside his equally aged crony.

The thoughts! They came flooding . . .

"To roam under the white moons

again . . . Free under the sun . . .  
No more dreary caverns . . . To be  
free of shell-soiled demons in finlin  
form . . . ”

As suddenly as it had opened, her inner mental ear was closed. Now she heard only the disjointed words, pantings and involuntary clacking of horny limb against horny plastron as the group moved on.

So they came at last to the sunken gates of the outer moat, and passed slowly through. As they went, they frequently immersed their upper bodies and heads until they reached the upward ramp.

Thus were they cleansed of the accumulation of crusted liffs.

Within the inner walls, thousands of Turmans crowded the shady plazas. Vahni saw gleaming walls of ebony, scarlet, orange, green and pale ivory that climbed like waves of frozen, tinted water to the curving low domes above. Underfoot the interlocking patterns of the crimson and white paving stones shone clear.

In the center of the innermost plaza loomed a vast and ugly globe of scarred, pitted metal, blotched with streaks of reddish rust. It was so alien to the People's sense of beauty that Vahni was impelled to question old Welm about it.

“See where those stubby legs support the globe?” old Welm said. “Just above a glimpse of the central lake.”

“Yes. There is a sort of door — an oval barred space.”

“And at the base and above the legs? See how blackened and soiled?”

Quick comprehension came to Vahni.

“It is a ship of the Soft Shells . . . But I thought they had returned to their own island.”

“This is our ship, little Vahni. The Soft Shell, Jackson, who is our friend, purchased it for us with many gems and much pale metal.”

And Vahni stood in wonder regarding the ship that had crossed the star seas from islands on another world.

At long last the waiting was ended. The emerging young adults, no longer infantile finlins, but as yet with indifferent or erratic mental control, were to be given parents. After fifteen years, from egg to burbling youth, of living in barrack-like watery caverns, they were to live in small family units.

To most of them this was a terrifying and sobering step.

For the first time, Vahni saw a Soft Shell moving among the massed groups of eztaaing and chatting People. How very tall and slim and frail he was! Gray hair grew atop his oddly bulging skull. She saw how tiny was the almost lipless mouth with its ugly, small, white fangs of pinkish unprotected flesh juttied between the eyes and the mouth, and two other rounded flaps protruded at the angle of the jaws.

The Soft Shell's head and body were without the protective linked plates of horny tissue and shell of the People, but she had learned in the caverns beneath the island of Hod that under the flesh a filmy sort of shell existed. She felt a brief ugliness of vertigo, quick passing.

How nasty — almost squishy!

She saw her companions of the past years being named and uneasily being integrated into smaller, or larger clots of assemblage. She saw them moving away, off to their new homes, and she wondered with whom she would be quartered. Would they be kind to her or indifferent — or would they love her as so often she had dreamed would come to pass?

“Vahni!” That was her name, and she saw old man Havn beckoning to her, while she moved clumsily toward the group on the central rostrum.”

“You have a great honor, Vahni,” the old Turman said. “You are to join the household of the beloved Soft Shell, Jackson.”

Almost Vahni cried out. She did not want to belong to this alien. Perhaps he would beat her or torture her with strange sounds and vibrations. Only in time did she remember that she was young adult, no longer finlin, and she must not appear ungracious or angry.

“I am much pleased,” she said in the People’s formal and traditional reply, “that he has chosen me from among so many.”

And now she saw the Soft Shell coming closer, towering high above, a grotesque parody of an eztaa on his hideous thin lips. If he touched her she would scream and . . .

“Welcome to our household, little Vahni,” the Soft Shell’s harsher voice greeted. The tonal quality and the accent were alien, hateful sounds. “This will be your older brother, Dni. Your older sister Thea is about somewhere.”

Vahni had not seen the handsome young Turman at the alien’s side un-

til now. Dni’s eyes were dark flecked gold, and a strangely attractive little scar twisted his lower eztaaing lip. Their arms clacked formal greetings on their plastrons and they bowed.

“Welcome, little sister,” Dni said.

“Dni is learning to pilot the star ship,” the man, Jackson told her. “Already he can fly the cargo skimmers and copters — he will take you and Thea with him some day soon.”

Dni’s eztaa was warm and encouraging, and her inner mental contact, briefly awakening for a moment, assured her that under his monstrous exterior Jackson was gentle and kind. To complete her growing sense of elation, Thea — her new buxom and incessantly chattering sister — gave her a noisy, unqualified welcome.

Before they had traversed half the shady twenty blocks to the Soft Shell’s garden-hidden dwelling, her memories of Hod’s dank island caverns and the years of austere schooling and discipline there were shrinking, fading dreams.

“Why does our father,” asked Vahni, a matter of twenty-five days later, “fear the coming of other Soft Shells to Turm? They have many good things, the flying ships and the machines, that we can use.”

Dni eztaaed half-heartedly at Thea. And Thea’s ordinarily pleasant features sobered.

“Our father Jackson has told us that to Erthmen we are but foolish finlins. They feel a sacred duty to educate us, to build great factories and to teach us to toil endlessly in their gritty, stench-polluted interiors.”

Dni nodded. "We must learn to worry about the future and grow old before our time preparing against it. The Soft Shells in so far as possible, wish to shape us into their pattern."

"But we told them we do not desire all of their culture," Vahni protested. "Surely they will not thrust themselves, unwanted, upon us?"

"I fear that they will, my child." The Soft Shell, Jackson, had come, unnoticed into the long cool room overlooking the color-splashed gardens. "In fact, three ships loaded with machinery and workers are a million miles offplanet, demanding a grounding site."

Dni's golden eyes flared, and his lips were down-angered.

"They would disregard our warnings?" he said. "The Allwise Council thought your fears ungrounded, my Father, but since you have for seventeen years been our trusted friend they assented to your message of stern exclusion. They considered us as witless finlins, as you say. But do not even finlins have rights that must not be violated?"

The sound their father Jackson made was painful to Vahni's ears. It was a mingling of eztaa, voiceless weeping and anger.

"To Erthmen a finlin must be protected and disciplined," he said. "Their young are like pets to be pampered and spoiled. You too will be petted — or paddled if necessary."

"But there are many empty worlds, my Father," argued Dni. "Why do they not settle there? We will send them there."

"No, Dni. This is too logical for my people. They would have to

build cities and till the soil. Here everything is prepared."

Thea, normally so happy and full of eztaaing nonsense, broke in.

"We have heard you speak of your people who thoughtlessly litter the roadsides and the groves. Of their eggshells, ketchup bottles, paper cartons and tin cans. And of the cruel ones who abandon unwanted pets at roadside. And of your father, who yearned to retaliate in kind. These we thought were but stories to teach us consideration of others. We were amused. Surely no thinking beings acted so."

Jackson's sunken little eyes were sad. Vahni caught a flash of the torment within the graying Soft Shell's brain.

"It was all true, Thea. Now they come to litter your world."

"We will not permit it!" cried Dni.

Yet, for all Dni's brave words and the exchange of messages between the Council's spokesman, Jackson, and the spaceships' command, the three great ships from the seas of space grounded a scant mile outside the city a few hours later.

Tents and domes of bonded-earth warehouses sprouted like so many drab-colored mushrooms. Roaring metal titans chewed and worried at the reluctant soil, triumphantly bearing away crumbling sections of it to be deposited elsewhere.

About the alien's encampment a broad moat came into being, and from the underground waterways of Turm the Soft Shells drew water to set the great ditch brimming.

Hopters circled the moated sector,

laying down a constant spray of deadly fog, and hundreds of flame throwers sterilized and re-sterilized the encircled grounds.

Yet the ubiquitous liffs did not grow less obnoxious. Instead they seemed to increase. Over everything, the liffs laid a crawling, itching, sucking blanket of corruption.

And into the midst of this maddening swirl of activity and construction, the developing, highly erratic mind probes of Vahni dipped hesitantly. And withdrew as she contacted the raw substance of the invading Soft Shell's thoughts and desires.

How unlike they were to her Father Jackson, or the People of Torbotha. And yet, after long terrified moments, she probed again.

She searched among the harried brains of the Soft Shells for a mind not too far apart from her own. Had not Jackson said that there were many who felt as did he — that invasion and compulsion were wrong? And surely there would be a few even aboard the invading ships.

Twice she contacted briefly and disengaged. Then she found a gentle, slow-timed brain that she could comprehend. As yet her command of Jackson's second tongue, Untra, was poor, but through the senses and memory cells of this bony young giant, Irad Marsh, she could salvage scraps of sight and sounds.

“We can't keep this up,” a filth-smear'd, hairy-chested Soft Shell was almost screaming as he stood waist deep in a muddy yellow flood of water.

“Drain out all our blood! Suck us

dry!” an unseen voice at Marsh's elbow croaked. “Look at 'em! Crusted, oozing filth!”

She felt with horror the expanding, crawling, itching, rasping, never-silent blanket of encrusted liffs that covered the vulnerable body of the Soft Shell, Marsh. Even when Marsh squatted down into the silt-heavy canal and plunged his head beneath, those thousands — those millions — of hungry, sucking, minute mouths gnawed at him.

“Out of that — back at your work!” Through Marsh's eyes she saw the uniformed man probing at him with a knife-tipped weapon.

As Marsh clumsily obeyed, following the back of the Soft Shell who had been at his elbow, Vahni could see that the guard was also twitching and wriggling involuntarily, as the liffs relentlessly gnawed at his flesh.

“... bayonet at me!” roared the hairy-chested Soft Shell's voice, and Marsh, turning, allowed Vahni to see the weapon torn from the guard's hands, reversed, and then plunged deep into his chest.

Marsh dropped flat. There was a spattering pop-pop-pop, and the burly Soft Shell who had killed the guard jolted grotesquely and obscenely into a shapeless mass, as dozens of tiny missiles fired by others struck him.

“They's been dozens of others,” the hoarse whisper of the Soft Shell who sprawled just ahead of Marsh informed. Some of 'em guards and officers ... we'll go mad ...”

From somewhere a booming mechanical voice was issuing orders.

“Back into the ships,” it grated out. “Working parties will suit up.”

Briefly, then, Vahni lost contact, and as briefly caught it again as the slow-moving Soft Shell, Marsh, was donning an artificial shell. For only a few moments could she maintain the connection; yet that was long enough to know that the liffs were not to be thwarted by metal or crystal or liquid. Within the ships, the near-microscopic parasitic filth that were the liffs crusted and overcrusted on the sensitive flesh of the Soft Shells.

Her last fading contact with Marsh mirrored a tortured, despairing mind that contemplated oblivion through drugs or suicide.

Her overstrained mental probes, immature and erratic at best, blanked-out completely at this point, nor did she recover for several hours. Yet she could not sleep and, with her older sister Thea, she went to the city's moated wall where it overlooked the Soft Shells' camp.

To her amazement, thousands of carapaced Turmans lined the barrier their golden-yellow eyes raptly intent on the ugly bonded-earth domes and warehouses out there. They did not speak together, and their gaze did not waver.

"Why do our people do this?" she asked Thea.

"We make them feel the liffs," Thea said quietly. "The Soft Shells are like newly born finlins. They cannot communicate or control objects with their minds. Unlike us they cannot send away the few liffs who somehow pass the watery barriers, and the walls."

Vahni held her breath for a long moment and then released it.

"Within the city," she said, "we shield ourselves and Jackson. But what of the false shells and the sealed star ships?"

"We enter their minds, Vahni. All of these thousands and all the Turmans in our other cities. One liff, or no liffs, can become a score, a hundred, a thousand — millions! They squirm. They crawl. They wallow in tissue and blood! Always they move and feed."

And suddenly Vahni sensed something of that outward message. Her own shells were a-crawl with the minute irritants of a myriad loathsome feeding parasites, ever-expanding and clawing deeper, deeper!

Resolutely she tried to blank her mind against that message.

Doggedly the Soft Shells fought on. They threw up new barriers of chemically-impregnated soil. They scorched and fused the already lifeless earth about them. They deluged themselves and the ships with countless tons of water.

All was useless. Even within the hitherto impregnable ships, twitching, sweating Soft Shells fought and clawed and moaned. The solidity of bulkheads and lockers and bunks writhed and crawled with a slippery living moss of liffs; or so it seemed to them.

Through Thea's descriptions of what her own mind contacted, Vahni learned this, at first; and later she too was recovered enough to catch brief, distorted glimpses of what the Soft Shells endured.

"Why do they not leave, my Father?" Vahni asked the tall Erthman.

Jackson was pale and trembling,

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his eyes shot through with yellowness, and the veins outlined in sickly red. Like his own people without the walls, though to a lesser degree, he was under assault by the power of thousands of Torbothan minds.

"We are a stubborn race, Vahni." Jackson's travesty of an eztaa was feeble — barely a grimace of the narrow lips. "Yet even we can endure only so much. The ships will be leaving soon, my child. Let us hope that Turm will be classified as unfit for colonization. It should be, after this fiasco."

And toward nightfall of the second day, Vahni knew that Jackson was right. The huge ditching and building machines were piloted aboard ship. The domes and warehouses were blown up.

With early dusk, the ships lifted as one on ravening, mighty legs of hellish flame. Higher they rose and swiftly dwindled into fading freckles on the pale disc of Turm's early rising inner moon.

That night there was eztaaing and clacking and dancing in the city and in all the cities roundabout, but soon the great weariness of their long vigil came and drove them home.

Only in the great, low dwelling where Vahni lay sleeping was there light and activity. The Soft Shell, Jackson, and his son, Dni, kept the ears of their radio receivers trained on the receding tiny fleet and on the nearest Erth-dominated planetary system of Pyar.

The fate of their beloved planet might hinge on what they learned in the next few hours — or days.

END

# The Hides OF Marrech

by C. C. MacAPP

*Buy a fur coat, lady? Cheap!  
Guaranteed cut from the still  
quivering body of a native . . .*

Illustrated by BODÉ

Judson Kruger, festooned with cameras to make him look like another tourist, thought that Orsu, the native proprietor of the only Terran-type inn on the planet Marrech, was a slippery character any way you looked at him. Resembling a pale, hairless, iridescent giant otter, with three pairs of short limbs to support his flabby bulk, Orsu kept throwing furtive glances over what would have been his shoulder if he'd

had any to speak of. His slanted, slitted eyes reinforced the impression. He'd learned English, but spoke it in a squeaky whisper.

Just now Orsu was showing one of the illicit and enormously-prized pelts to Kruger and to a pair of very rich tourists. The eyes of the couple held the glitter of people about to acquire at a bargain something their neighbors can't afford.

Mrs. Rocklyn poked a pudgy fin-

ger.eagerly into a half-inch hole in the pelt. "Is this where the bullet went in?"

"That was first bullet," Orsu squeaked. "This was famous chief, very strong." He turned the hide over and displayed two more holes. "He run six miles, bleeding."

"Awful!" Mrs. Rocklyn gasped happily.

Her husband's eyes glittered harder. "How much you want for this one?"

Orsu glanced behind him nervously. "I not can sell. I must take you to Terran who has skins, can sell."

Kruger's pulse quickened. That would be the man he was after — Sears, the renegade responsible for this foul traffic; though Kruger didn't know who was more reprehensible, the renegade or the natives, like Orsu, who helped the outlaw murder in-offensive members of their own species.

To meet Hank Sears they had to walk through rain to a poorer part of town. Kruger couldn't read the faces of the natives they met, but Orsu wore an Earth-made revolver in plain sight.

Sears was a lanky, bearded man of perhaps fifty. He wore an enormous pistol on one hip, and an ugly hunting-knife on the other. A heavy rifle leaned in one corner of the dingy room.

Sears started by showing Rocklyn the smallest of six or seven pelts he had with him. "This one's from a half-grown female. I crippled her at two hundred yards, a lucky shot, and one of my natives finished her off

with a knife." He fingered a gash near one end of the skin. "This can be trimmed off, or you can leave it and have a pocket sewed inside. It won't tear any farther; see?" He tugged at it hard, but it held. "There's plenty of stuff here for a man's jacket."

The leather was undeniably splendid. It was an eighth of an inch thick, waterproof, cellular so that it would insulate well against cold, and displayed a satiny sheen on either side. Sears glanced at Mrs. Rocklyn's hips, and reached for the largest of the pelts. "This'll make you a full-length coat, Madame. See how soft and pliant it is, yet tough!"

Mrs. Rocklyn reached greedily for the pelt, examined it, began to breathe hard, and asked in a trembling voice, "What's this burned place?"

Sears glanced at it. "That? Oh, we wounded the fellow, and he took to the brush, and we had to burn him out. Devil of a job getting a fire started here; you have to use a flame-thrower. He still put up a fight, even with his lowest pair of legs burned off. They're dangerous with knives, if you let them get in close. Finished him myself with a club; that's why the head's missing."

"Awful!" Mrs. Rocklyn choked, drooling.

Orsu put in quickly, "They wild people. Not belong this town."

Sears said casually, "Hardly more than animals."

Kruger, watching him, saw that some of the casualness was feigned. Sears was doubtless anxious about the sale. But the Rocklyns were too eager to notice.

The tourist ship left two days later, taking the Rocklyns and the two pelts, for which they'd paid an amount several times Kruger's annual salary. Of course, if they'd tried to buy them within ten thousand light-years of Earth, they'd have paid much more.

It might be several months before another tourist ship came, but Kruger thought he had an adequate pretense for staying over. Marrech had hardly been photographed at all, up to now. He wasn't supposed to arrest Sears single-handed; only to get the evidence and summon a Terran Space Force vessel that lurked within call.

He spent the first two weeks bonding up on the native language and collecting what information he could. Orsu kept a close watch on him at first. Sears had presumably gone up-river where, fifty miles inland, he had a home and a wife, to wait word from Orsu when more customers arrived.

Marrech, Kruger learned, was a wet world, even now at the sunniest season. Jungles of rubbery-leaved trees ran right down to the surf and seemed to swathe most of the hills on both sides of the river. The river, a wide, swift, muddy stream, poured foamily from the interior, bringing now and then clumps of broken-off foliage or whole uprooted trees.

The main articles of commerce (aside from lumber, which was in considerable demand by off-world buyers because it was quite resistant to immersion in water) seemed to be spices from the interior. Natives, swimming down-river or scuttling along jungle trails, brought the spices,

packed in leather bundles strapped to their backs. Entrepreneurs in town stored the spices in crude lumber warehouses until alien ships arrived to bargain.

The natives who brought the spices were wild ones, judging by their scant clothing and their crude spears and bows. They showed no fear of most of the townspeople, nor of most of the visitors from space. Of Orsu, though, they seemed frantically afraid — whenever Kruger saw one of them catch sight of the inn-keeper, the native would begin to tremble, utter little shrieks of terror, and scuttle out of sight as fast as possible.

They seemed quite wary of Kruger, too, avoiding him nervously. Possibly they recognized him as of the same species as Sears, who hunted their kind so ruthlessly inland. Or they might think the cameras Kruger carried were some sort of horrendous, off-world weapons. On occasion, they displayed toward him a strange kind of behavior — perhaps it was a ritual, or perhaps it was a sign of emotion. They seemed strangely furtive about it. He'd see them watching him from a doorway, or from down the street. They'd be rapidly opening and closing their mouths, clashing their not-inconsiderable teeth together so fast it sounded like a typewriter. Sometimes they'd be shivering as if in fury.

Only occasionally did he observe this behavior when they weren't looking at him. Natives, townsmen as well as wild tribesmen, would be facing one another, clashing their teeth and undulating their bodies. Maybe, he thought, they were having arguments.

After two weeks he felt he'd learned enough. There were, apparently, no local fauna an armed man need fear if he were watchful. He decided to start inland, alone and on foot. Accordingly he seized an opportunity when the watchful Orsu — who had been acting uneasy and irritable for a few days — left town.

**K**ruger slipped into the jungle. He mustn't, he felt, stay too close to the river; there was too much travel on it or alongside it. Before he'd gone a mile he realized he'd made a mistake; he should have gone along the coast to the high, nearly bare ridge east of town and headed inland along that. The mud in the jungle wasn't deep, but it was gluey, building up into great globs on his boots, which weren't small to begin with, so that he grunted with effort every step, trying to lift the weight clear of the ground. Repeatedly he slipped and went sprawling with a loud *splat*. At such times he would lie there for a few minutes, making terse comments about Marrech, about his Terran boss who'd sent him on this mission, and about himself for being fool enough to be an interstellar plainclothesman in the first place.

Finally he learned to seek out the runnels of liquid mud. It was no more slippery, if he stepped carefully, and it didn't build up on his boots. Still, he had to stop every little way and find a stick to scrape it off before it began to dry. The boots got soaked through, and the rest of his clothes were covered with the dark-brown goo.

No wonder the natives here had

evolved such waterproof skins! And no wonder they kept to the trails along the river, where they could swim periodically and wash themselves off!

He stopped about midday, munching on a can of C-rations, and stared eastward, muttering to himself. Was it worthwhile to climb to the ridge now? Hardly — the slope was steep enough and slippery enough so that it might actually be impossible. He could go back to the coast and start over, but that was against his nature, and he'd already expended half a day. He'd keep on. Maybe, when he was far enough from town, he could go to the river.

But by mid-afternoon his gradual climb inland had brought him to a region where the soil was less muddy and more loamy. Now he began to see signs of animal life. There were tracks everywhere. Some of the larger animals seemed to have feet very much like those of the natives. Here and there, the trunks of trees — rubbery as they were — showed abrasions as if animals rubbed against them. But the only living things he met were some small six-legged things no bigger than rats, and a few batlike flyers that chattered at him cantankerously.

Presently he found more ominous signs. Here and there were scraps of skin, as if predators had been at work. There was no blood, but of course the nightly rains would have washed that away. He saw no bones. Once, though, he did hear, out of sight in the thick jungle, crunching and rasping sounds of large teeth. He grew more watchful.

**T**oward night it began to rain — a drizzle at first, then a downpour that drummed on the big leaves high over his head and gathered into cascades to run down the tree trunks or to fall with loud splatterings on the already wet ground. He dodged the driblets as best he could for a while, then gave up. It was almost dusk anyway — he'd better find a good tree and climb it for the night.

He chose a large tree that had a limb low enough for him to reach; jumped, caught a handhold, hung grunting for a minute, then hauled himself up. The tree had somewhat the configuration of a very large Terran magnolia — except that the leaves were two feet across. They were very rubbery, like the bark. He sweated and swore, shinnyng up the slick trunk between limbs, but finally attained a notch fifty feet above ground where he could relax without much fear of falling. Comfort he'd have to forgo.

Night came like a black tent. If either of Marrech's two moons was up, the clouds hid it. He'd chosen a spot where no water fell directly on him, but it splashed from all sides steadily. His clothes — supposed to be more or less waterproof — might have been plain untreated cotton, for all the good they did. He was cold and hungry — but not hungry enough to open any more C-rations — and stiff and cramped. If only, he thought plaintively, he had a skin like the natives — or even, he thought suddenly with a disgusted grunt, if he'd had the sense to bring a bottle of Terran whiskey or hundred-proof Moogan rum!

He grew very drowsy. But of course he daren't fall asleep. The night dragged on. At times there were sounds from below, feet or hooves splatting in the mushy loam. Near midnight a group of animals seemed to hold a conference below his tree, grunting and chattering.

Suddenly the tree began to shake. Anxiously he fumbled beneath his soaked poncho for a needlegun and peered downward, twisting as best he could to see between the leaves. Were there glimpses of vague forms in the darkness? Were they climbing up the tree after him? He clung there, trying not to breathe audibly.

After a while, though, he realized they weren't climbing. They seemed merely to be rubbing themselves against the trunk. He cursed silently at his incaution. He should have made sure he chose a tree without the abrasions!

The activity went on most of the rest of the night, with animals leaving and being replaced by others, as nearly as he could judge by the sounds. Finally he grew more or less reconciled. The tree's recurrent quivering did his nerves no good, but at least that and the noises helped keep him awake. He began to think he might survive until dawn. Although, he thought darkly, he couldn't imagine why any sane man, would want to be here.

**D**awn was foggy and wet, but at least the rain had stopped, and the animals had gone away. He forced down some more C-rations, groaningly unbent his cramped arms and legs, and made his way, slipping and

shivering and cursing, down the tree. He hobbled on inland.

After a couple of hours, the sun broke through. Should he turn toward the river now? Surely he was far enough from town so there'd be little traffic. So far as wild natives were concerned, he had only mild apprehensions. He knew enough of the language to make it clear to them that he was their ally against Sears and Orsu.

He turned toward the river.

After a while he heard the rapids. A few minutes more and he came to a wide, clear, sandy path. For a minute he just stood and stared, overcome by such comparative luxury. The sun was warm by now, and he considered whether he might bathe and wash the mud out of his clothes and take time to let them dry. Too risky, he decided, in the river itself. Better wait until he found some small tributary. He knew there were at least two before he'd reach Sears' place; as nearly as he could guess, it must be not less than ten miles farther upstream.

Probably it was the warmth of the sun and the ease of the trail that made him careless. In any case, he rounded a turn and suddenly found himself facing eight or ten wild natives.

They wore no backpacks, which meant they weren't gathering or transporting spice. They had arrowquivers, hung from neckstraps, dangling upon their narrow chests. The bows were no more than two feet long, but sturdy. Each native carried in one paw a slender five-foot spear tipped with sharpened bone, ready to

thrust. Kruger let his hand creep toward his gun, which wasn't too accessible under his poncho.

But apparently the natives were ready for him. A burst of chittering and growling came from the trees a few yards away. Startled, he jerked his head around to stare. He could see a few drawn bows among the foliage, but for all he knew there might be a hundred aimed at him. Slowly he let his hand drop. His first words came out in a feeble squawk. "I — friend." In this situation, he found it very hard to remember any of the native words. "I go to — to stop Earthman who hunts your people for their skins!"

They stood impassive.

"I want to walk through your country," he said, aware that he was sweating profusively. "I will not bother you, and I carry my own food."

For a moment the band in front of him stared at him silently. Then one started to clash his teeth rapidly. The rest took it up, and soon they were all chattering and writhing. He quailed before the show of teeth. "I friend! I friend!"

When the unseen pair came from behind to seize him, he struggled frantically, but all they wanted was to keep his hands away from his weapons while the rest swarmed over him. Within seconds, they had him pinned down. Then they lifted him, still struggling futilely, and carried him toward the river.

"Hey!" he choked, "Let me go! I friend!"

They tossed him out as far as they



could. He hit the water with a jarring splash and went under. When he managed to surface again, sputtering and coughing, they were lined up on the bank, teeth chattering. One of them squeaked, "Have a bath, muddy friend!" Another, who seemed to be the leader, gestured meaningfully with his spear. "Foreign fool, stay in town! We do not want you here!"

Kruger was treading water frantically to keep his head above the surface. He tried once more, plaintively, "I friend," but it only brought on more tooth-gnashings. Several of the natives reached thoughtfully for arrows. Kruger took the hint and began to swim down river as fast as he could. They followed him for a ways to make sure he kept going; but where the current ran fast, tumbling him along, they seemed to tire of the pursuit and stopped. He could hear them chattering for a moment, then he was out of earshot.

The rapids gave him a battering, and he clawed his way ashore as soon as he could — on the opposite bank. He dragged himself out of sight and lay panting for a while, too exhausted even to curse.

Finally he hauled himself to a sitting position. "Damned stupid unprintable natives! I ought to go back to town and let them . . ." But, angrily, he got to his feet and glared upriver. No bunch of spear-carrying, naked, six-legged, overgrown otters was going to stop him!

**H**e went back up the off-side of the river, where there was no trail, needlegun clutched in his hand this time, pausing every little way to

listen and to look for tracks. Apparently there were not large animals abroad here either, in daylight — tree-trunks were abraded here and there, but by now he was convinced that activity was nocturnal.

He made fairly good time; the soil was loamy and didn't stick to his boots. Noon came and went. Not long after that, he began to hear horns — weird mournful notes that he presumed must be this world's equivalent of hunting-horns.

He went on cautiously enough. What undid him, about mid-afternoon, was something he least expected — he began to hear baying, back in the direction from which he'd come. He crouched, staring that way. He'd be damned if those didn't sound like dogs!

Well, dogs or some Marrech equivalent, they were certainly on his trail. He looked around anxiously. There was supposed to be one creek branching off this side of the river, just below Sears' ranch, and he must be near it now. If he could reach it in time . . .

It wasn't more than a quarter-mile, but by the time he found the small stream the baying was close behind. Hastily, he waded upstream. Wouldn't fool them long, of course, if they were good tracking animals, but there was no time to construct any complicated trail-puzzles. He kept an eye out for any tree-limbs he might reach from the water. There! No — that tree wasn't big enough; didn't have enough foliage. There, then! He hurried to a more likely branch; he seized it, shinnyed along the limb to the trunk and struggled up it. By now he

could hear the animals clamoring around the point where he'd entered the stream. But he was hidden in foliage; with luck, he'd be safe for a while.

The hunt was coming upstream now. The beasts, whatever they were, had crossed and were undoubtedly sniffing up the far bank for an emerging trail. He grunted in satisfaction. The tree he'd chosen was on the downriver side of the creek. Maybe, if they went on past, he could . . .

Then he heard a human voice.

Snarling, he reached again for his pistol. Sears would be able to guess which tree a man would choose.

There was an interplay of hunting-horns, and some yipping from the beasts, then he heard the latter move on more slowly up the opposite bank. Finally he caught a glimpse of them, and growled under his breath.

There were three Terran bloodhounds and an Airedale.

Minutes later he heard Sears call to him, "Kruger! Kruger! Come on down. We're not hostile!"

Kruger snarled to himself. *No, you murdering bastard! But I am — toward you!*

"Kruger, don't be foolish. You're perched in a tree somewhere, and I know you don't have much food with you. You'll starve or die of pneumonia eventually. Come on down! You can photograph anything you want, if that's what's on your mind. I have no reason to stop you."

Kruger glared toward the unseen man. Was it possible to maintain the tourist pose? At the worst, Sears might haul him back to town — not

letting him get near the ranch. And the outlaw was right; with dogs roaming the country he couldn't very well carry out his planned snooping.

Better, maybe to gamble on Sears' gullibility. In any case, there was the Terran space-cruiser out there."

"Sears! This is Kruger. I'll come down if you'll call in your dogs!"

"Okay, Kruger." The horns sounded several short notes. The dogs yipped and seemed to be gathering toward Sears.

Kruger slid down from his perch, walked downstream and waded across. By then Sears and six or eight natives were waiting. Kruger scowled at the natives. As far as he could tell, they were no different from the ones who'd thrown him into the river.

Sears was grinning at him. The lanky renegade carried a rifle, but it was held laxly, pointing downward. "I figure you're some kind of a cop, Kruger. Am I right? If so, we can both relax. I've got nothing to fear from you, nor you from me."

Kruger snarled and stood where he was. So the masquerade was futile. "Don't be too sure! There's a Bazooka-class TSF cruiser a few hundred thousand miles off-planet, waiting for my call. If I don't call within a certain time, they'll come down, and they already know enough to find you. They'll turn the planet inside out if they have to!"

Sears grinned more deeply, though some of the natives made the tooth-gnashing sound. "Come on back to my place, Kruger. You can use a change of clothes and a hot meal. I don't think I have to worry about that cruiser."

The dogs, once introduced, were friendly. So was Sears' wife — a small blonde woman, perhaps ten years younger than her husband. She said she'd hurry up the evening meal.

Sears was acting far too amiable to suit Kruger. "You may as well leave your cameras in the house, since they're only a disguise. There's something I want you to see first of all."

"Yeah?" Kruger was determined to play it cool. He divested himself of the cameras, light-meters and other paraphernalia, then followed Sears toward a large shed that had electric wires strung to it. Evidently Sears had a generator in the house. There were other signs of luxury, too. Not surprising, with the amount of money he made off the illicit pelts!

The shed was well lighted inside. Kruger stepped in after Sears, then halted in surprise.

Orsu lay on a couch to one side of the shed. He blinked at Kruger. "Oh, he here finally? Good! I getting tired of wait!"

Another native — almost nude, like the wild ones — walked toward Orsu with a big ugly hunting-knife.

Orsu turned belly-up and spread his limbs to the sides.

With an involuntary cry, Kruger stepped forward. Sears grabbed him by the shoulder. "Relax! Nobody's going to hurt him!"

Astounded, Kruger watched the other native guide the knife expertly from Orsu's chin, down across his belly, then out along each of the limbs. The skin split and popped open, disclosing the sheen of a completely new layer underneath. Orsu wriggled, giving little grunts and sighs

of comfort. The knife-wielding native helped him peel off the old skin until it was only attached at the head and along the spine. "Must wait now, other hour, two hour," Orsu squeaked. "Not loose yet, everywhere."

Dumbly, Kruger looked at Sears. The lanky man grinned. "It's a lot more comfortable for them this way than having to rub the old skin off against a tree trunk. Come on back to the house. My wife'll have drinks ready."

Two hours later, Kruger, Sears and his wife, Orsu, and five wild natives sat down to a sumptuous dinner. Orsu was feeling especially jovial. "Maybe cop Kruger like jacket made from my skin. It best skin I ever shed since pup." He chattered his teeth in what Kruger now recognized as laughter. "He need bribe to keep mouth shut, eh?"

"Uh," Kruger protested weakly.

Sears said, "You'll be here a while anyway waiting for the next tourist ship, unless you intend to go home on that cruiser."

"Uh, no. There's no sense in calling it down now. And I do have a pose to maintain."

"Fine. It'll take a couple of weeks to tan the skin properly, then a few days for my wife to make you up a jacket. We can put a few bullet-holes or something in it, if you like. Meanwhile, I hope you'll be our guest. We don't see many Terrans out here. Not the kind we'd want for guests, anyway."

The next tourist ship carried two couples who bought pelts. It was with one of those couples that Kruger

sat over cocktails in the ship's lounge, just after take-off.

The woman was a rangey type with nostrils that flared like a mare's. She fingered Kruger's jacket enviously. "I do believe this is an even better pelt than the ones we bought!"

"Special process," Kruger mumbled secretly.

Her nostrils widened. "Tell us about it!"

"No — please. I don't like to talk about it. It's pretty brutal."

The husband's eyes glittered. "Waitress! Let's have refills all around, here!" He gave Kruger a minute to gulp his new drink. "You were saying, Kruger, about a special process?"

Kruger pretended to yield. He looked around furtively, then leaned forward and spoke in a hoarse whisper. "Well, it involves beating the hide while the native's still in it, to work the natural oils into it. You have to know just how much you can beat him — over every inch of his body, you know — without killing him — or her. Then you have to stop for a while and let him revive. As often as not, he'll die before the job's finished." He ran a hand lovingly over his jacket. "This was a perfect job. No stains." He went on to explain, "If you beat them just a little too hard they bleed wrong, and it's hell trying to wash the blood out of the pelt." **END**

NEXT MONTH IN IF!

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He had saved her life, the only way he could — without, that is, giving up on his own desires!

He bent to touch her, his dry, flaked hand a rasp across the smoothness of her cheek. In her sleep she winced and hugged herself against the deepening chill. I'll wake her with a kiss, he thought. But he didn't. Instead he again reached out, hesitated, then brushed her shoulder. He shook her. "It's me, Paula," he said.

In her long, drugged sleep the girl's lashes had stuck together, and she ground pale hands into her eyes to clear them. Now fully awake, she stared at him without recognition. Had he changed so much over the years? His hand began to tremble and he removed it from her shoulder. Paula's eyes grew wider, then shifted to take in her surroundings. The cave was dark except for the light of a wood fire at the entrance, shuddering their shadows across the cracked walls. She sat up jerkily. "What place is this? Who are you?"

He smiled reassuringly, the smile he knew she loved. In the shifting light she stared hard at him, bewildered. She wore a white nightgown, her long black hair bound up with pins that had begun to loosen, stray wisps of hair trailing to her shoulders. "George?" she ventured finally. His smile widened, and he nodded. She still knew him, would still love him. Until this moment he hadn't acknowledged his own secret dread.

"But you're — you're *old!*" she wailed.

"Don't be afraid," he told her. "There's nothing to be afraid of. It's really me, and I'm not so old. I'm not sixty yet."

Shivering, she glanced around the

cave. "Where are we? The last I remember, I'd gone to bed . . ." She couldn't keep her eyes from his face. "George, what's happened to you?"

"Nothing but age," he said. "It's the fate of everyone, even yours, now that I've saved you from it." He rose shakily, his limbs aching from the hours he crouched over the still form. "As for this place, it's a cave by a river." He moved stiffly toward the rear of the cave, occasionally reaching out to touch one of the boxes stacked neatly along the walls. "There are few if any dangerous animals in this era, and I've stored enough food and clothing and agricultural supplies to keep us for the rest of our natural lives." He turned back to her, his love still mute within him. He could never express himself as he wished. "The rest of our natural lives," he repeated.

For the first time Paula seemed to realize that she was in her nightgown. "I'm cold," she said, and clutched it tightly about her. He smiled again, went to one of the boxes and drew out a long blue dress with a high neck and puffed sleeves, the latest style at the time he'd bought it. "Here's part of your wardrobe. I've got everything you need, the finest material I could find."

She took her dress, held it against her body, running her fingers over the unfamiliar cloth. "I was in bed, asleep," she said.

"Yes, you were asleep. I came to your house and broke in. I gave you an injection to keep you sleeping, not with a needle but a — a new kind that sprays on your skin. Then I brought you here."

"But you weren't even in town! You were way across the country!"

On December 8, 1939, he had been way across the country, at Harvard, dreaming of the Christmas holidays and seeing her again. But he hadn't seen her, not for another forty years, not until a few hours ago. And not until a year before had he been sure that he would ever see her.

The girl seemed reluctant to put on the dress perhaps because of the odd style, perhaps because she didn't want to disrobe in front of him. Suppressing his annoyance he brought out a heavy pink dressing gown and a pair of pink furry slippers he'd selected from a department store in San Francisco. "It's a long story and a complicated one," he said as she slipped them on. "What you've got to understand is that, strange as all this may seem to you, it's absolutely necessary to save your life."

She was still staring at him, her head twitching in brief, involuntary denials.

"On December 8, 1939, Paula . . . you died. You were in bed asleep when a drunken driver turned your corner, lost control of his car, and plowed through the wall of your bedroom. The gas tank exploded and you were . . . you were burned to death." He flinched as a vision of the fiery wreck flamed across his consciousness, as vivid as if he had witnessed it himself. "But you're not dead now, Paula; because, you see, I came back to rescue you."

She stood silent, hugging the robe about her. He brushed his hands together with a harsh, rustling sound

like the scrape of dead leaves. "I was studying at Harvard, you know. I dropped out for a year, too broken up to do any work. But eventually I went back, changed my major to physics, got my doctorate. I didn't forget you."

The earth trembled as in the distance some great animal passed by.

"I didn't marry," George said. "There was no one I could have loved as I loved you. I carried your picture with me always, one I stole from your parents' home after the funeral. The others — other people — they thought I was some kind of eccentric. But they hadn't loved you as I had. I kept myself going with the memory of you, that memory and my work. I was working on a research grant, developing some ideas for a unified field theory. I came to see . . . well, it's pretty complicated, but you could say that the passage of time generates energy and that you can utilize the energy accumulated between the present and any point in the past or future to project yourself to that point. Harnessing the energy was a technical problem I couldn't solve myself, but with the help of others it was possible to construct something I guess you'd have to call a time machine. Can you see that when I did all this I was thinking only of you?"

Paula said nothing, listening gravely to the words of the thin, gray man who seemed but distantly related to the boy she had known yesterday.

"The machine was completed," he went on, "in 1978. We found that it could carry a man into either past or future and return him to the point

in time from which he'd departed. Soon we were able to calibrate the machine to within a few days' accuracy. With that accomplished I could begin to plan and hope.

"I located this place, found the cave, and began to stock it with everything we'd need to survive here. I had to do it quietly, secretly, at night when everyone else had left. No one was to suspect the real reason for my work on the project. Had they known what I planned they'd surely have stopped me, because it meant losing the only machine that had been produced — a very expensive instrument."

She caught her breath and retreated a few steps until she was stopped by the wall of the cave. "George, where are we?"

"It's sometime in the Oligocene period, a comparatively gentle era in the earth's history. The great reptiles are gone, and the largest mammals aren't numerous enough to be dangerous. It's long before the first ice age yet. We'll be in no real danger here."

"My God! You mean there are no other people?"

"Yes, it's a paradise just for the two of us. With no one to threaten us here we can be really happy." He paused as if expecting her deferred applause.

She came forward hesitantly, searching his eyes for the familiar personality beneath the stranger's ageing mask. "But wasn't there some other way? Couldn't you have saved me and left me in . . . in my own time?"

Pressing his thin lips together he shook his head with visible annoyance. "Don't you think I considered all the possibilities? Of course I could simply have awakened you and got you out of the house before the car crashed. But what good would that have done me? You'd only have been saved for young George at Harvard. Or someone else. I'd have saved you and gained nothing for myself!

"Oh, I even thought of taking you back into my own time, but I wasn't sure it was possible. We didn't know anything about the effects of possible paradoxes yet. Could you actually exist in a future time stream where you'd died years before? I didn't know, and I couldn't experiment to find out. Above all I couldn't take the chance of losing you again. The safest thing to do was take you into the past. That's why we're here."

For the first time he realized that the girl was trembling. He came forward and took her hand, noting the slight involuntary tug as she pulled away. He gripped her more tightly. "I know this a lot to assimilate all at once. It must be terrifying to find yourself in a strange world, even with someone you love. But you've got to see that it was the only way. By taking you away on the very night you should have been killed I disturbed the fabric of time only slightly. Of course we might have gone back to some civilized period, but why risk any more accidents? Civilization means war, famine, plague, riot. . . . Do you think I'd risk losing you again? No place is entirely safe, but this is the safest I could think of."

Her trembling had increased until she shook uncontrollably. "George, we can't live in this world all alone, no matter how many supplies you've got stored here. There have to be other people! I don't want to be alone!"

He covered his soft hand with his own. "Why do we need anyone else when we have each other?" A sullen shadow passed over his face. "What have other people ever meant to us but bitterness and separation? When have other people encouraged our love? They just cause trouble; they always have. Your mother. . . ."

"George," she broke in, "what about sickness? You say it's safe here, but there aren't any doctors. You wouldn't want me to die of some disease!"

He smiled easily, as if he had long anticipated just this objection. "As a matter of fact I've studied medicine rather closely and feel I'm as qualified to practice as any doctor. I've got all sorts of medical equipment stored here and I know how to use it. There are even several cases of drugs and antibiotics. I'm prepared to do anything from cleaning teeth to — " he paused, giggled unexpectedly — "delivering a baby."

Paula lowered her eyes, her face distorted as if in pain. "But, George," she said finally, "you won't live but a few years longer. What will I do when you die?"

He stared blankly. "Die? Me? Die?" He paused to consider the possibility.

She began to pull away, forcing him to tighten his grasp. In the struggle her long hair had slipped its fastenings and whipped about as she

tossed her head from side to side. "George, I want to go back! I want people! Let's go somewhere nearer our own time."

He drew her closer, ignoring her efforts to escape. "We have to commit ourselves completely to our new life, darling. We mustn't consider returning to a world that could threaten our love. You'll understand why I've removed all temptation by destroying the time machine."

Tenderly he drew her body to his as with a single anguished cry she fainted.

Paula awoke sometime after dawn huddled near the embers of the fire, crying softly at times but for the most part silent and withdrawn. Tactfully George left the girl to herself. He'd feared this reaction, though he was sure it would be only temporary. She'd had a shock, a great one, and of course the knowledge of her own narrowly averted death wasn't as vivid to her as it was to him. But soon she'd accept the reasonableness of his actions, come to his arms and fulfill his love.

After a long period of brooding silence she rose and came toward him, swaying unsteadily. Her face was grime-streaked from crying, her eyes red and swollen. With a trembling hand she plucked at his sleeve, "George, is it possible . . . ? Maybe you could make a new machine. The parts. . . . You couldn't have destroyed all the parts."

He turned away; there was no use talking to her when she was like this. Too many ugly scenes had already marred their relationship. She went

on: "I just want to see people again. There's no one here."

"There's me," he said.

"Yes, of course there's you, George. But I hardly know you. I mean, I hardly knew you when — when you were young. We weren't really close."

George shook his head violently, as if to dislodge the hateful words. Without looking at the girl he circled around her to the cave entrance, kicked at the few remaining embers of the fire. In the cold dawn the parched earth stretched flat and lifeless before him, broken only by the trickle of a nearby stream. "We were closer than you'd ever admit," he said finally. "If it hadn't been for your mother there wouldn't have been any trouble between us at all."

"Oh, George!" she said behind him. It was a statement of utter, hopeless despair. "My mother *likes* you, George. She's — she was always telling me what a fine boy you were, what a — a good catch!"

"Well, your father, then. Somebody was always trying to turn you against me. If we'd just been alone together for awhile I could have made you see. . . ." He turned, smiled into her stained, twisted face. "But now we are alone together, aren't we? You'll see how much you really care now that there's no one around to talk against me." His gaze turned inward, and a half-smile touched his lips. "Do you know that last night was the first time I'd ever held you in my arms, even been that close to you? It was just as I'd always imagined it."

"George there must be some way of rebuilding the machine."

He turned back to look out over the plains. "I've left nothing to chance," he said.

Behind him she was sobbing again. "God, I wish you'd left me there! I wish I were dead instead of here!"

Tightening his jaw he continued to stare into the distance. He would not give in and console her. She'd have to accept him on his own terms, admit her love without being coaxed. She'd have to agree that he'd been right in what he'd done. He had plenty of time to wait.

"Don't cry, darling," said a male voice behind him.

He wheeled to face the other man: tall, thirtyish, draped in a shimmering scarlet tunic. The man had placed one arm about Paula's shoulders and was dabbing at her eyes with a blue handkerchief. Behind him glittered a machine of cool crystal and shining cylinders. "There's no need to cry," the man told the astonished girl. "We're going back."

Frozen George watched him guide her gently toward the machine. Then the spell was broken, and he lunged forward to reach out for her. Paula drew back, clinging to the stranger's arm. "She's mine," George told him. "She's all I've got!"

The other man stepped in front of the girl, shook his head grimly. "No, you have nothing. You're already old and you're going to die shortly. I know. If the girl stays here — " He winced at some unbearable memory. "I passed through here," he said, "about fifteen years from now. I found her then. I could see how beautiful, how fine she once

must have been. But she was nearly mad, a living corpse. Fifteen years of total isolation had almost finished her. But even so, I loved her." He smiled tenderly at the girl nestled against his shoulder, then at George. "I couldn't save her then, but I can now. She has to be safe, protected." He was smiling now with the innocence that only confident virtue can bestow. "I've come, you see, to rescue her."

Still cradling the girl, the man stepped back into the machine and flicked a switch; the cylinders sang their high, keening whine. "Wait!" George screamed after him. "What year?"

The man laughed. "Around 2084." he said. Their figures paled, vanished.

George stood alone, staring into emptiness. After awhile he went over and picked up the blue dress from the floor where Paula had discarded it. Gently he caressed it between his fingers, then pressed it to his face to breath in the lingering scent of her body. With a puffed sleeve he caught the tears.

Soon he felt better. Putting aside the dress he began to rummage around among the boxes for his tools. He spread them out on the floor, then went to the back of the cave and dragged out the large, unmarked crates he had hidden there. He began to remove the cool crystals, the shining cylinders, ranged them neatly into glittering rows. He'd left nothing to chance.

"2084," he whispered.

He began to fit the parts together.

END



by WIN MARKS

*What sort of disease is totally incurable? It was no academic question to Nick — he had it!*

What was happening was far from apparent during the earlier days of the epidemic. When a guy is sick he *expects* to get well. His doctor expects him to get well. His worst enemy expects him to get well — unless the illness is declared terminal.

I think I might have been one of the first to notice what was happening, or maybe I was just the first to give it a second thought. And that could be because I had less on my mind to distract me.

I was panhandling during summer vacation, bed panhandling, that is, after my second year of pre-meds. The work of a hospital orderly at the Cape was demanding only in the hours you put in. My duties consisted mainly of gathering specimens

from the hordes of astronauts during their months of quarantine and debriefing after their return from out there.

They were a crummy lot as a rule. First thing you did was hose them down so you could stand to be in the same room with them. Then you took scrapings and samples of sputum, exhalation and excretions for the lab boys, to see if they'd brought anything back with them they hadn't left with. Then an intern, made up like a surgeon, would take a 6cc blood sample.

Toivo Leskinenn, Storekeeper First Class, left Earth an albino, and returned from planet-hopping in the 9th System a pink-cheeked, brown-eyed, black-haired stranger.

His Finnish features and fingerprints were unchanged. But what shook me up was that after nineteen months of typical strain and privation in space, Physical Therapy reported him in perfect condition. No emaciation or digestive problems, and surprisingly little perspiration accumulation.

While the medics were marveling over the change in Toivo's hair and eye-color, I was thinking more about how exceptionally healthy he appeared. He bounced out of his sauna and stood under the cold shower for ten minutes singing folk songs to himself.

Then he came out, shook like a dog and sprayed me with a huge sneeze. That's when I caught the bug.

The incubation period, as I think of it, was eight days. On the ninth, I had three eggs and half a pound of bacon for breakfast, a 16-ounce steak for lunch and half a gallon of beef stew for dinner. Which was not bad for a light eater like me.

I went to bed early to digest and to reflect over my sudden appetite. But I fell asleep at once, fully expecting to feel awful in the middle of the night.

Instead, I awoke to a remarkable sensation of well-being, physically and mentally. I was first one in the shower for a change, and I emerged with a soul-satisfying sneeze that wakened my three dormmates.

Fat Paul stirred, sniffled and muttered, "You're catching my damned cold."

Among them, Paul, Harry and Solly kept a nasty cold going all

the time. Although I had been immune to colds all my life, I wondered if he might be right. Then I noticed that the annoying post-nasal drip with which I was born was gone. I stepped out onto our private patio facing the sunrise and breathed in the bland early morning Florida air while I toweled myself.

Solly came out in his robe, stepping gingerly so as not to jiggle the bags under his eyes. Unlike the rest of us, Solly was a full-time, year-around orderly with a magic feel for the dice and a perpetual hangover from boozing away the money he won in the floating games.

He grunted, "You look like you just discovered the sunrise."

I said, "I feel wonderful this morning, Solly."

Harry came out in his shorts, hollow-chested and wan from sharing Fat Paul's cold. "How come you never get infected, Nick?" he asked. "I manage to pick up every cruddy bug the astros bring back. You don't even catch a cold."

At twenty, you don't think much about your health as long as you're not hurting, but this morning on the way to the hospital at Cape K. I found myself pitying the chronic ills of my fellow workers and appreciating a new awareness of my lusty physicality. And I thought back to Toivo Leskinenn and his fantastic resistance to the ravages of prolonged space exploration on alien planets.

**A** fortnight later I had something else to ponder. The required semi-monthly physical checkup show-

ed I had gained half an inch in height and ten much-needed pounds, in spite of my appetite having diminished to its usual birdlike norm.

It was trying to rain when I parked my electro next to Harry's in front of our little beach hut in the dorm complex on a Wednesday night. Low barometer. That meant Fat Paul's sinuses would be hurting.

They were all there as I hauled in a little late, but nothing else was as usual. Skinny Harry was gulping a thick, homemade milkshake while Fat Paul was sipping a small glass of orange juice. It should have been the other way around. And a goblet of beer, flat and untouched, sat at Solly's elbow. Fat Paul, who never went swimming because of his sinuses, was trying to talk Solly into the loan of his swimming trunks.

"You'll split 'em," Solly was saying as I came in. "But go ahead. Just buy me a new pair if you wreck them."

A minute later Fat Paul surprised us all by racing across the beach into the surf in Solly's trunks and nary a split. "That boy's lost some weight," Harry observed thoughtfully.

I said, "How long has he been on this orange juice kick?"

He shrugged, and Solly asked, "How long you been off cigarettes, Nick?"

We looked at each other. Then we all stared at Solly's flat beer, still untasted. "Funny thing," he said. "Ever since I started sneezing the other day I sort of lost my taste for the stuff. And I notice we've all been sneezing more than usual."

Harry said, "You and Paul and

I kinda gorged ourselves night before last. I always come down with Paul's cold when I eat too much."

I said, "Paul hasn't had a cold for almost a week," which not-so-fat Paul confirmed a minute later as he came dripping out of the ocean.

We got no further in our probe of the situation at that time because the phone hooted four times. This meant, push the will-comply button and don't bother to pick up the receiver. All four of us were wanted at the base decontam unit on the double.

Paul wrapped on a terrycloth and went in Harry's electro. Solly went with me. "Damn!" Solly muttered. "I was hoping not to catch extra duty tonight."

"Missing a big game tonight?" I asked.

"Game, shname! They've retrieved the *Rook 17* from dead orbit like they talked about trying this afternoon. That means we got a lot of sick people on our hands. Nothing else is heading in that would call for hoot-owl duty."

It was indeed the *Rook 17* tilted at a crazy angle on the docking pad. The regular swing-shift orderlies had already removed all living crewmen, some 42 out of the complement of 58 who had signed on for interstellar explo three years ago. There wasn't too much for us to do at first.

For a change there were more medics around than orderlies and nurses. The place was crawling with brass of every military denomination.

Not a natural-born eager beaver, Solly nevertheless was determined to elbow his way through in time to show a prompt punch-in time, which made for a clean record and more overtime pay regardless of how little you accomplished after you made the clock go "ding."

In his hurry he jostled a large female navy nurse, who scowled at him. "What's the rush, Baggy-eyes?" Then she backed off and blinked through her bi-contacts. "Well, Solly, on the wagon long?"

Then it came to me. My roommate's droopy lids were wide open, the whites of his eyes snowy as a fresh pillowcase and the bags under them almost completely smoothed out. "Where's the action?" he asked without dignifying her question with a reply.

"Third deck below. Ward C. They've got them all in there, and if you two are on duty help get some ice pronto."

We found Harry and Paul already at the ice-bins scooping the large poly buckets full of chips. "Big fevers, I guess," said Paul as he backed away with a full pail in each hand.

Night nurse Roark came up and snatched one of his dripping buckets. "They caught something big out there, and it wasn't salmon. The poor devils are burning up."

No less than an air force chicken colonel medic blocked our way to the down escalator. He pointed to the open-door size aperture across the corridor. "Take the chute, damn-it! They need that ice down there!"

You get good velocity down a three-floor chute and you land run-

ning, which was the idea . . . through double doors into Ward C, which had been set up with several rows of narrow trough-like beds lined with rubbery sheets. Harry and Paul finished covering one incumbent, but Solly and I were directed to one of the remaining cadaverous torsos that wore nothing but a blistering red blush. As I leaned over to empty my ice pails I could feel the man's body heat on my bare arms at least a foot above him. And from the pitiable look of his emaciated frame, he had little fuel left on his bones to support the energy loss. His cheeks were sucked in like he had a mouthful of vacuum, and his eyes bugged like he was trying to spit it out. I was at the feet, Solly at the chest. And just as we were both emptying our second buckets of ice chips on the hopeless carcass, Solly sneezed right in the patient's face.

The OIC standing over us wore a sanitary oxygen mask through which he screamed, "Oh, hell! That's all these guys need right now, a good old-fashioned case of pneumonia." He turned to me, and I could see he was wearing a star on each shoulder. "Orderly," he commanded, pointing at Solly, get that goddamned orderly out of here and put him on report!"

I grabbed Solly by the arm and hustled him back upstairs where Solly shook my hand from his arm. He said, "Thanks for the tow job, but what are you trying to do?"

"You heard the Officer In Charge," I said. "I've got to put you on report."

"The oik was exceeding his authority. We're not in the military. If you report me to the super I'll have to punch out on the time clock before the extra shift is over and I'll get docked."

"This is all true," I said, "but you did sneeze in the ward, and I think this is pretty rotten . . . to bring a cold into a roomful of guys already dying of God knows what."

"I haven't got a cold!"

"You sneezed. Why?"

"Well, not on purpose, for damned sure. Maybe some pollen these guys brought back with them."

The patients had already been through scrubdown, so this was highly unlikely. I said as much.

Solly jutted his jaw into my face. "Look, Nick, we've been friends. But if you report me you are going to lose my friendship and several front teeth, and I don't think you want that to happen."

I admitted, "This is also true, and come to think of it, I'd be just plain squealing, wouldn't I? Since, as you say, we're not in the military."

He relaxed. "Yeah, like I said. And since we're banished for the moment we might as well get a bite to eat. I'll buy you a burger."

Before we were through eating Paul and Harry came into the cafeteria. As they sat down with us Solly asked, "You guys allergic to work, too?"

Harry said, "No. Just ice. We sneezed in the ward."

Paul added, "Real excitable oik down there. He told us to put each other on report, but we thought we'd have a bowl of chili first." His grin

spelled out their lack of intent to engage in mutual recriminations to the superintendent.

I was still worry-warting. "Suppose some of those men do come down with a cold on top of —"

Paul said, "Who's got a cold? I haven't heard so much as a sniffle in our hut for days."

Solly turned to me. "Nick, will you forget it? That oik has more on his mind than clobbering a few slob orderlies for sneezing, when we were risking our necks in that quarantine hell-hole to begin with. He'll never think of us again unless we are stupid enough to *put* ourselves on report."

Solly was wrong.

**I**n the weeks remaining before I was to return to college, my conviction grew that Astronaut Toivo Leskinenn, recently in space, had contracted and passed on to me something very contagious that I could only name *a condition of perfect health*. Even more: A compulsion to preserve my physical perfection. Even as Solly had given up drinking, I no longer had any use for tobacco. Even as Paul had trimmed off his burdensome overweight, Skinny Harry and I filled out to an optimum padding of firm flesh.

For all four of us the syndrome included a periodic day of enormous appetite followed by a morning-after unexplainable explosion of a sneeze or sneezes.

But how do you *catch* a condition of health, when the only definition to date was the absence of disease?

Where Solly, Paul and Harry had

been wrong was in assuming that the OIC at their little sneezing party in Ward C was just some hysterical nut, and that nothing they had done was of enough consequence that the oik would bother to follow through with his intended discipline.

About two weeks after the incident we were all called to the "pentagon," as we called the penthouse atop the decontam building, where Solly was summarily fired, and the rest of us were chewed out. Sneezing was not the charge. It was for insubordination in not carrying out orders.

Nurse Roark was the one to catch the dirty duty. She concluded her tirade with, "Solly, you should have known better."

Solly was shook. He said, "You mean they're blaming us for the fact that all but three patients in Ward C finally died?"

"No. The fever did that. It just turns out that the medical officer whose orders you all disobeyed that night happened to be the surgeon general himself."

"He had a mask on," Solly explained, more to himself than to anyone else. "The dice have gone cold on me lately, too."

Nurse Roark was not a bad scout at all. She simply had a nasty job to do, and she tried to make up for it. Knowing that being fired from the Cape on such a charge would blacklist Solly from coast to coast, she tipped him off to an orderly job in India. It seemed things were getting out of hand over there again, and we were lend-leasing some more birth-control clinics to dispense in-

formation and bc pills. Solly's thanks was a stolid nod of acceptance and a giant sneeze right in Nurse Roark's face.

While he was packing his bag that night, Solly said, "I can't imagine what an orderly does around a place like that, but at least it's out-patient." And we appreciated what he meant. No more bedpans.

The last week of school vacation the three of us remaining spent in a special decontam isolation of our own while we underwent rigid tests to be sure we weren't packing anything to the inner world of civilization that we'd caught from the astronauts.

On the second day of our tests all hell began to come loose at the seams. It started after lunch when a security officer questioned us for three hours straight in an obvious try to discredit our identities. He worked remotely through a video screen. Then we had to press our thumbs to a camera for live inspection of our prints. Next our eyeballs were subjected to long scrutiny. No answers to our demands for explanations.

After her duty shift Nurse Roark phoned us in a hushed voice. I said, "How are you?"

She whispered, "I'm fine. Too fine, in fact. But what the devil are they grilling you guys about?"

I replied, "You tell me. We sure don't know."

She hesitated. Then, "Well, it's something important. The surgeon-general is flying down from Washington again, and you guys are the

subject matter. I'll see what more I can find out. You sure you haven't any clues?"

I said, "None to speak of," and I meant just that. By now I was positive that, like Toivo Leskinen, I was the carrier of some contagious and powerful *life-force*, and so were Harry and Paul, and so, probably, was Nurse Roark.

On the morning of our third day of isolation I awoke with the now-familiar ravenous appetite. Paul watched me pack away the giant breakfast I had ordered. He commented, "And to think I used to eat that way every meal!"

At about ten the surgeon-general appeared on our screen, eyeing us with tenseness almost as great as I remembered the night of Solly's fateful sneeze. Without the sanitary mask to conceal it, his gray, military mustache bunched visibly over puckered lips. He began firmly if informally, "Now, Nicholas, we want answers."

It turned out that what they really wanted was explanations for our answers. The polygraph had shown that we apparently *thought* we'd been answering truthfully. But why had I insisted that I had had surgery for the removal of my appendix . . . also the removal of a large cyst at the base of my spine?

I said, "I'll *show* you! I checked in with this scar and I've still . . ."

But by now I had jerked out my shirttail and made half a liar out of myself.

"Yes, when you checked into Decontam an appendectomy scar was recorded in the records of the

man you claim to be," said the s.g. "What have you done with it?"

A surgery scar on your belly is not something you examine daily like you might your fingernails. I was unprepared for the question.

In the silence the s.g. continued, "And you, Harry. You had a pattern of pigmented moles on your back. They are gone. Any ideas why?"

Harry was staring at his still bare belly. He said, "I'll take your word about my moles, and the answer is no. What *has* been going on with us guys, Nick?"

I turned to Paul. "You got any theory?"

He shook his head. "All I know is that I've been feeling terrific since I took off all that weight. Not even a cold."

I turned back to the video where the s.g. was staring at us with cool patience. As ridiculous as I sounded to my own ears I started speaking the thoughts that had been gathering for weeks. "Sir," I began respectfully, "I think I have been spreading an epidemic of — of health!"

Oddly enough the s.g. did not find this statement more than he could field. "It's a cinch you're not spreading the chickenpox," he observed. "But why do you say *you* have been spreading it? Why not the others?"

"Because they didn't start it. As a matter of fact I don't think I started it, either. But we've all probably been spreading it."

"Then who *did* start it?" the s.g. demanded.

"I suspect Captain Leskinenn," I confessed.

The s.g. turned off camera to ask an aide, "Who the devil is Leskinenn?" and was told after a brief pause that Captain Toivo Leskinenn was long since back in space. Then the s.g. remembered. "Oh, yes. He's that albino Finn. Of course. Only he's always been in perfect health. Saw him in a service weight-lifting match once."

The off camera voice reported, "But he came back from a planet in the 9th System with black hair and brown eyes."

After a moment of silence the s.g. addressed himself to our camera again. "And you, Nicholas, think you caught this, this . . . whatever the condition . . . from Captain Leskinenn. Did you have direct contact with him in Decontam?"

"He sneezed in my face, sir." Then I hurried on to put meat on the skeleton of my theory by recalling the night the s.g. had put Solly, Harry and Paul on report for sneezing in Ward C.

Again he startled me. "Yes, yes, of course. Don't you think I correlate such happenings? Three healthy men sneezed and three out of forty-two dying men lived."

"Are they really all right now, sir?" I blurted.

But the s.g. was here to get information, not give it. The screen blanked out.

Harry said, "He looked like he was about to call a red alert for the whole Cape."

Paul shook his head at me, "Geez,

Nick, if we've got some kind of outer space bug that makes people get well and well people feel better, what's all the flap about?"

"The uncertainty," I guessed. "We don't know that it's just a bug."

The s.g.'s voice came back to us. The video was on again. "We are going to find out and quick. We want the next one of you who feels a sneeze coming on to do it at this petri dish." He held up a flat, shallow glass pie-pan with straight sides. In it were perhaps fifty little swatches of assorted culture media, pasty little patches of glutinous combinations, each ready to provide a happy home for some vagrant microbe or virus. A glass lid kept the field sterile.

A pre-dawn blastoff awoke me, and the first thought I had was that I was about to sneeze. I snatched the lid off the petri dish and did so, infecting, I'm sure, every culture patch there.

Still drunk with unfinished sleep, nevertheless I slipped the cover back on the dish and dutifully shoved the affair through the designated slot in the door and went back to sleep.

Nothing much happened until Nurse Roark phoned me that evening. "Which one of you guys did the sneeze?"

"Me," I said. "Why?"

She breathed into the phone three times before answering. Then, "Congratulations! You are the father of NASA's first serious colonization plan." She sounded bitter, and I told her so.

She said, "Look, Nick, I'm not mad at you, or I wouldn't have

bothered calling you. I'm just mad at everything. I was born on this earth and I want nothing more than to stay on this earth and be buried on it. And things aren't working out that way."

I said, "Roark, what are you trying to tell me?"

"We're all going bye-bye," she whisper-shouted into the phone.

"Where? Why?" I asked bewildered.

"Where, I cannot tell you. Why, is because the virus-microbe you and your buddies — to say nothing of me and a few dozen other victims — are carrying has been identified as alien . . . and totally immune to every known attack. This damned bug is invincible!"

"So what has it done wrong?" I whisper-shouted back at her. "What's so terrible about a bug that goes around curing post-nasal drip and saving the lives of astronauts who catch other things out there?"

"Nick?" Nurse Roark sobbed softly into the phone. "Nick, we haven't contracted a *disease*. We have become the host for an alien civilization. A sub-microscopic civilization."

"**Y**ou mean an intelligent parasite?"

"No!" she said quickly. "Not the way the brass interpret it. We have been trapped into a symbiotic relationship with an invisibly small organism we can't even identify except by its actions on the culture media and the symptoms of infected humans."

I said, "Nurse Roark, why don't you get up here and explain? If

we've all got the same bug, what do you have to lose?"

She replied, "Come to think of it, there's no sense sitting out here in a phone booth and whispering myself hoarse." Ten minutes later to the dot she unlocked our cell and walked in with two fifths of booze and a jar of cigars, one of which she lit before opening her mouth for other reasons.

By now Harry and Paul were up to date on the subject and just as much mystified. The next thing Nurse Roark did was to crush out her cigar, stare at the cigar jar, whisky and us in turn and say, "Aren't you guys glad to see me?"

"You, yes," I said. "But the booze and tobacco, no. It seems to be a common symptom of our affliction to lose our taste for stuff like that."

Roark screwed up her mouth and spat delicately into the farthest corner. "I will confirm that. And it makes sense. It fits. This Alien lives in our liver and brain and kidneys and lungs. It *knows* what chemicals are inimical to our survival. And since we are the captive hosts at this tea party, we get to give up what our guests declare unwelcome to them."

I said, "If you don't believe it, have a drink of your own booze."

Roark shook her head. "Since you bring it up, I gag to think of it."

I said, "You're not really serious about this colony bit?"

Roark flopped down on the bunk across from me.

"The s.g. himself has put himself into quarantine, and if he develops the symptoms he'll lead the expedition. What's more, I saw him sneeze

into a petri dish this very morning, so we'll know by tomorrow."

I asked, "If the bug isn't identifiable in culture, how do you know when you've sneezed one?"

"By the way the culture behaves," she said. "It draws in on itself until it looks like a small bean, then it explodes like a firecracker. Or would you prefer, sneeze?"

Harry took his head out of his hands. "All right. We have a sub-microscopic alien that treats a human individual like a planet, and he's going to do everything he can to protect this planet against the exterior forces that tend to destroy it. Right?"

"I guess so," said Roark.

Paul came to life. "And it wants to proliferate, so it builds up a little excess population in a given human host and then tickles his nose into a sneeze. To him our noses must appear as pretty great launching silos. And who needs rockets when you have bellows like our lungs at your command?"

I said, "It sounds to me like we should be happy to have such an antibody around."

Roark grabbed one of the whisky bottles, uncorked it and shouted to the ceiling, "Should a body love an antibody, a-comin' through the sky," and upended the bottle for three long gulps, shuddering every moment. Then she added half under her breath, "Sorry, you guys, but I didn't deserve what you did to me."

I stared at her. "Roark, do you want to tell us what brought that on?"

She replied, "Nick, you are unmarried. Have you ever been pregnant?"

I said, "From your question I have to gather that you are both unmarried and pregnant, and that you are about to blame this on the little bitty invaders."

She took another tug on the whisky bottle and gagged. "I'm a grandmother three times over, and a widow for two years. Pregnancy in a woman my age is not something to be sneezed at. Would you accept my condition as a thing I wouldn't have risked at any cost?"

"Oh, now — " Paul started to object.

"You forgot to take your pill?" Harry suggested.

"Parthenogenesis!" I said aloud but not very. Roark heard and nodded.

She said, "Now, do you see why everyone under quarantine on the base is going bye-bye to NASA's first space colony? Just when we thought we had the population explosion licked!"

I boggled at the thought of trying to trace every track of possible contamination. "They must have most of Florida roped off," I said.

Roark shrugged. "I hope so. We'll need quite a few obstetricians out there right off the bat."

I asked, "How's that?"

"Because to my personal knowledge, every nurse in Decontam is with child."

"What about the pill?" Harry wanted to know. "Isn't it working?"

It was more of a sigh than a word, but I managed to make out Roark's

reply to be a wheezy, boozy, "No."

I thought it would take them at least a couple of years to prepare for such a colonization expedition to the planets of the Ninth System where Toivo Leskinenn was to guide us under the supreme medical supervision of the ex-s-g., but they did it in under eighty days.

Kept incommunicado as we were,

I had no part of the plans for the venture, nor voice to cry out the warning to the poor, overcrowded planet we were leaving behind.

I did manage to get one postcard mailed past the censors. Probably it got by because of its entirely innocent content. It read merely, "Dear Solly, I hope your sniffles are better. Give my best to Mother India."

END



**June 15-16, 1968. TRIPLE FAN FAIR.** Presentation of the NOVA to Harlan Ellison. At Pick Fort Shelby Hotel, Detroit, Michigan. For information: Marvin Giles, 19947 Coventry, Detroit, Michigan 48203. Membership: \$3.00.

**June 21-23, 1968. DALLAS CON.** At Hotel Southland, Dallas, Texas. For information: Con Committee '68, 1830 Highland Drive, Carrollton, Texas 75006. Membership \$2.50.

**June 24-August 2, 1968. WRITERS' WORKSHOP IN SCIENCE FICTION & FANTASY.** Participants may enroll for 2, 4, or 6 weeks; college credits will be given. Visiting staff will be: Judith Merrill, Fritz Leiber, Harlan Ellison, Damon Knight, Kate Wilhelm. For information: Robin Scott Wilson, Clarion State College, Clarion, Pa. 16214.

**June 28-30, 1968. MIDWESTCON.** At North Plaza Motel, 7911 Reading Road, Cincinnati, Ohio. Program includes a banquet, cost \$3.50. For information: Lou Tabakow, 3953 St. John's Terrace, Cincinnati, Ohio 45236. Membership: \$1.00.

**July 4-7, 1968. F-UN CON.** In Los Angeles: at Statler-Hilton Hotel. For information: Charles A. Crayne, 1050 N.

Ridgewood Place, Hollywood, California 90038. Advance membership: \$2.00; supporting membership: \$1.00. Guest of Honor: Harry Harrison.

**July 8-13, 1968. INTERNATIONAL SCIENCE-FICTION FESTIVAL.** Showing of sf films from all over the world. Judging by a distinguished panel. For information: Festival del Film di Fantascienza, Castle San Giusto, Trieste, Italy.

**July 26-28, 1968. OZARKON III.** At Ben Franklin Motor Hotel, 825 Washington, St. Louis, Missouri. Guest of Honor: Harlan Ellison. For information: Norbert Couch, Route 2, Box 889, Arnold, Missouri 63010. Membership: \$2.00.

**August 23-25, 1968. DEEP SOUTH SF CONFERENCE VI,** New Orleans, Louisiana. Details to be announced. For information: John H. Guidry, 5 Finch Street, New Orleans, Louisiana 70124. Guest of Honor: Daniel F. Galouye. Membership: \$1.00.

**August 29-September 2, 1968. BAYCON:** 26th World Science Fiction Convention. At Hotel Claremont, Oakland, California. Philip José Farmer, Guest of Honor. More details later. For information: BAYCON, P.O. Box 261 Fairmont Station, El Cerrito, California 94530. Membership: \$1.00 foreign, \$2.00 supporting, \$3.00 attending. Join now and receive Progress Reports.

**October 18-20, 1968. TOLKIEN CONFERENCE,** sponsored by the Tolkien Society of America. At Belknap College, Center Harbor, New Hampshire 03226. Papers are being solicited. Indicate whether you will present a paper or will just attend. Submit title and length of proposed papers early to Ed Measkys (address above).



# ROGUE STAR

by FREDERIK POHL and JACK WILLIAMSON

Illustrated by GAUGHAN

*Inhuman and immense, the being  
that men had made had learned  
one art — how to destroy them!*

## WHAT HAS GONE BEFORE

*In the great monolithic universe of joined stars and men, ANDREAS QUAMODIAN, Monitor of the Companions of the Star, receives a message from the girl he loves and*

*has given up hope of winning. Back on ancient, backwater Earth, MOLLY ZALDIVAR tells him that their mutual friend, and the man to whom Andy Quam believes he has lost her,*

**CLIFF HAWK**, is engaged in secret and dangerous experiments. She believes Hawk is trying to create an artificial living organism, a "Rogue Star," which, unlike the sentient and generally benign stellar bodies that make up most of the universe's primary stars, will use its enormous powers for disruption and destruction.

Quam hastens to join her. He manages to get passage through the transflection network which links worlds galaxies apart, making instantaneous travel possible between Earth and any other planet in civilization. He travels millions of parsecs in less time than it takes to cross a room. But on Earth his progress comes to a halt.

It is Starday. On backward Earth, where the symbiosis among men, fusorians and stars has taken the form of a ritualistic religion, this means nothing can be done. He cannot go to her. He cannot reach her by communicator. He cannot secure a guide. He can only wait.

But Molly Zaldivar hasn't waited. Alone she has gone to the cavern in the mountains where Hawk and his partner, **THE REEFER**, a mysterious man from space, are conducting their experiments.

As she approaches the cave, she is terrified to see a **SLEETH**, a space creature the size of a horse, capable of traveling at enormous speeds by transflection methods, deadly as an interstellar space-destroyer, guarding the entrance. An explosion knocks her out and drives the sleeth away; Cliff Hawk and the Reeper find her and bring her into the cave.

Meanwhile Andy Quam has found

some boys who tell him something of what has been happening with Molly Zaldivar. Unable to control his patience, Quam storms into a Starday meeting and demands that the monitor, a robot, help him. The robot refuses at first. But then, when three bolts of energy from the sun lash down and strike at the mountains where the cave is located, the robot relents and agrees to take Quam there.

It is almost too late. The danger Molly Zaldivar warned about has come to pass. The experiment has succeeded; a Rogue Star has been created . . . and it is now beyond human control.

## IX

First the robot required them to wait while it completed its minute of silent adoration, bobbing in its transflection field under the star-embossed dome of the church, its plasma rippling with the colors of devotion. Then it insisted on shepherding each of the children out of the building, locking the doors behind them, searching each empty room and corridor to make sure none had been forgotten. The church was homeostatic, of course; its receptors and proprioceptors could have taken care of all of that without attention. Then the robot proposed another delay while it transmitted an apparently endless message to Deneb; and all the while the boy, Rufe, was chattering with questions and eagerness, and Andy Quam's patience had long gone up in wrath. "Robot Inspector," he shouted, "if we're going, let's go!

Molly Zaldivar may be in great danger, even dying!"

The robot swung toward him. "Monitor Quamodian," it sang, "patience! I assure you she is alive."

"How do you know?" he demanded.

The robot was silent.

"Preacher," the boy whispered, "leave him alone. That's the way he is. Does things at his own pace. Say! Are we going to ride his back?"

"Almalik! How do I know?" groaned Andy Quam. He glanced at his wrist-timepiece, converted rapidly to Terrestrial equivalents and hissed with exasperation. "In three hours Starday will be over. I won't need him then! But," he added painfully, tapping his foot on the tiled floor, "Molly needs me now . . ."

The robot sang, "Monitor Quamodian, please be silent. I am having a most interesting discussion with three living companions on a planet of Deneb, eight robots and the star 61 Cygni."

"No!" roared Quamodian in astonishment. "You're not chattering away at a time like this! But you promised —"

The robot paused. Then, petulantly. "Oh, very well. Perhaps we may as well go, since your noise is disturbing me. Please follow —" But it was too late for following; Andy Quam was already out the door, leaping toward the place where he had left his flyer, and the boy was chugging after him like a comet-tail. "I'll lead the way," sang the robot, raising the amplification of its external vocalizers until the church facade rang with the echo. "I have instructed your guiding

apparatus that the hundred-meter limit may be waived, as part of my voluntary Starday activity, permitted under the compact. . . ." But even at ninety decibels Andy Quam didn't hear the end of the sentence; he was already in the flyer, the boy close behind; he slammed the door and shouted:

"Let's go! Follow that robot!"

"All right, Mr. Quamodian," cheerfully agreed the voice of his flyer. "I have my clearance now. Say! Wasn't it nice of the Robot Inspector to let you —"

"Shut up," snarled Andy Quam. "Just fly! I'm in a hurry."

Sulkily the flyer lifted itself off the ground, spun round like a top and aimed itself toward the waiting ovoid that was the robot, hanging in its transfection fields a few meters over the Starchurch. Quamodian muttered a curse as he picked himself up from where the sudden gyration had thrown him, the boy in his lap; but he said nothing to the flyer. "You sit there," he ordered Rufe. "Strap yourself in. Almalik knows what this stupid flyer will do next."

Aggrieved, the flyer began, "That's not fair, Mr. Qua —"

"I told you to shut up!"

The flyer shut up, with an audible, and intentional, click and rasp of static, and Andy Quam and the boy peered away. It was full night, with bright stars hanging over the hills, though to the west the angry red glare of the swollen, surly sun was still faintly visible, bloodying the sky over the horizon. Suddenly the boy grabbed Quamodian's arm.

"There, preacher! See it? That's where the sunbolts struck."

"I see," Andy Quam ground out. "Flyer, can't we go any faster?"

Resentfully the voice clicked itself on. "No," it said, and clicked off again.

"Now, stop that!" shouted Quamodian. "Why not?"

The flyer relented. "The Robot Inspector has issued orders for us to follow it," it pointed out. "If I go any faster *it* will be following *us*." Its voice mellowed as it settled down for a nice chat. "You see, Mr. Quamodian," it said, "it is still Starday, and the Robot Inspector does not wish to offend the peace of Starday with a sonic boom. This planet has a rather dense atmosphere, composed principally of oxygen (twenty per cent), nitrogen (eighty per cent),



water vapor, carbon dioxide —”

“Skip that part! I know Earth’s atmosphere!”

“Of course. The point is, Mr. Quamodian, that at these parameters of altitude, temperature and barometric pressure the sonic barrier occurs at just a bit over our present speed. So you see, no, Mr. Quamodian, we cannot go any faster . . . and in any event,” it added chattily, “we are there.”

The flyer deposited them on the side of the mountain; the Robot Inspector would not allow it any closer to the cavemouth. Andy Quam and the boy piled out, stared upward at the wreck. “Stars, preacher! They really got it!” whispered the boy. “I — I’m afraid Miss Zaldivar was hit.”

“We have no such information,” sang the robot, humming overhead. “Please wait. I am scanning the area.”

But Andy Quam was past the point of caring what the robot inspector wanted. He thrust the boy aside and scrambled up the side of the hill, over uneven ground. He dodged around the wreck of a vehicle — then realized it must be Molly Zaldivar’s and stopped, his heart in his mouth, until a frantic search convinced him she was not in it, nor anywhere around. Then up that hill again, his legs pumping, his heart pounding.

Although in truth, reason was saying in his ear, it was past the time for haste. What destruction had been accomplished here, and it was vast, was long over. Coarse brown smoke oozed from the cave mouth above,



and there was a stink of charred plastic and smoldering trash of a thousand kinds. But the fire had burned itself out. No one was in sight.

He paused, his lungs seared with the violence of his breathing, and forced himself to shout: “Molly! Are you here?”

The robot voice sang startlingly from just behind him, “She is fifty meters to your right, Monitor Quamodian, and just above us. But do not approach.”

Andy Quam was already on his way, scrambling around the lip of the little ledge before the cave mouth.

“No, wait! There are unpredictable entities about, Monitor Quamodian. A beast from space. And —” the singing whine of the robot faltered — “the rogue star. Allow me to study them!”

Andy Quam snorted, but made no other answer. He slid on loose gravel, caught himself and ran on. It was a forty-foot drop; he had just escaped death, but he had not even noticed it in his haste to find Molly Zaldivar. But where was she?

And then he stopped, sliding and waving his arms to keep from falling.

Something like a giant black cat was leaping toward him, up over the rubble and the smoke, shimmering in a pale transfection field. In the dim starlight he caught a glimpse of great blind eyes staring at him, claws that could rip the guts out of a pyropod. "Monitor Quamodian!" sang the robot peremptorily from behind. "That creature is a sleeth. Do not, I caution you, approach it!"

There was suddenly a sour, copery taste of fear in Quamodian's mouth. A sleeth — now he recalled the stories about those space beasts, bred for killing, powerful beyond human competition. If it took a mind to attack him there would be no hope.

But it seemed to have no such intention. It hung there studying him, almost as though it had intelligence, even empathy, even understanding of his haste. Then, as though it were giving permission, it lifted up and away on its transfection fields and hung waiting, a hundred meters up, no longer between him and the little hummock where he could see shadowy forms.

He spared the sleeth no more thought but scrambled, slid and trotted the remaining distance and dropped to his knees beside the girl who had summoned him across half the

known universe. "Molly!" he cried. "What's happened? What have they done to you?"

He crooked an arm under her head, raised her tenderly.

And her eyes opened.

She looked at him wonderingly, like a child awakened from sleep. Her face was bloody, scratched, smudged with soot and filth. Her hair was flying loose as chaff on a breeze, and her clothes were shredded into rags. But suddenly and gloriously she smiled at him. "Why, it's little Andy Quam," she whispered. "I should have known you'd come."

The smile lingered, only a second more. Then, without warning, her face twisted, the smile fled, she turned her head away. And Molly Zaldivar wept as though her heart would break.

"Robot Inspector!" shouted Andy Quam. "Where is that fool machine?"

From the side of a boulder, ten feet away, a small voice said querulously, "He's gone, preacher. Just zipped away. Almalik knows where. Didn't say a word."

"What are you doing here, Rufe?" Andy Quam demanded. "You should stay in the flyer. . . . Well, as long as you're here, give me a hand. Miss Zaldivar's been hurt. We've got to get her to help —"

A figure disengaged itself from the gloom and stepped closer. "No hurry about that, friend," it rumbled. "She lived through this much, she'll live a while yet."

Quamodian jumped to his feet, ready for anything. He peered into

the darkness, caught a glimpse of dulled yellow mustache, dingy yellow beard, a face that looked as though planets had rolled over it in their orbits. "Who the devil are you?" he barked.

"Talk big for a little fellow, don't you?" rasped the voice. "No harm. No hard feelings." He stepped closer, and Quamodian got the measure of the size of him, a giant of a man, but oddly subdued. "No one around here wants trouble," he added in a mild bass growl. "Not any more. But the girl's all right, I got her out of the tunnel before she got hurt."

Quam said suspiciously, "I heard something about a Reefer up here with Cliff Hawk, doing Almalik knows what foul work. Are you him?"

"I am."

"Then that's your sleeth watching us up there."

The Reefer's mustache and beard parted company. In the gloom it looked almost as though he were preparing to bite Andy Quam, but it was only a soundless, humorless laugh. "Not mine any more," he declared. "His own by now, I expect. Or — something's. But he won't take orders from me, not since the sun hit us." He turned aside from Andy Quam, bent for a moment over the girl. "She's all right," he said, straightening, but his voice didn't sound very sure. "You might be right about getting her out of here, though. Me too, if you don't mind."

"Why is Molly Zaldivar crying like that?" Quamodian demanded. "If you've hurt her —"

The great head shook from side to

side. "Nothing I did," he said. "I expect it's Cliff Hawk she's crying about."

Quamodian pulled himself together. Why, he had completely forgotten that Hawk was here! It was his fault, no doubt, that Molly Zaldivar had been hurt, endangered, terrified; yet still there was enough friendship left between Quamodian and Cliff Hawk that Andy Quam's voice showed real concern as he asked, "What about Hawk? Is he hurt?"

"Not any more."

"What? You mean — dead?"

The great voice tolled leadenly. "Not that either. Worse, I'd say. A lot worse. And if you want my opinion, we ought to get away from here before something worse happens to us, too."

The Something that had been a random mass of stripped electrons, then an infant rogue star, then a seeking, learning, experimenting entity — and was now something else — "watched" the Reefer and Andy Quam gently lifting the weeping girl, carrying her down the slope to the flyer, hastily entering, slamming the door, racing away.

With one part of itself, the rogue caused the sleeth to soar after on its transflection fields, keeping the flyer effortlessly in view. It was not necessary to do that, of course. The rogue could easily have kept the flyer under observation with its probes, anywhere on the face of this planet and indeed almost anywhere in this solar system. (It had not yet had occasion to try to perceive anything farther away than the planets.)

But it was no longer the simple creature it had been.

When it had perceived that one of the organized radiant masses was in danger of extinction it had occurred to its still-simple mind that it might be worth acquiring, and so it had acquired it. It turned out to be easy — a “stretch,” a “grasp,” a “hold.” If it had been matter doing these things, one might have said that it was like the flow of an amoeba, englobing and digesting a tasty bit of food. Matter was not involved, and the forces that the rogue deployed did not lend themselves to description in three-space geometry.

But the effect was the same.

What had once been the persona of Cliff Hawk no longer inhabited its biological body. That body, in fact, was not merely dead but by now an unrecognizable lump of contorted charcoal, in with the other charred and destroyed litter in the burned-out tunnel, once Hawk’s workshop.

But something of him remained. It no longer had identity of its own, as an individual. But it was at least a perceptible fraction of that seething, restless entity that surged through the interstices of the mountain, that followed Andy Quam’s flyer in the person of the sleeth, that had brought the wrath of the sun striking down on the summit of the hill, that was a newborn rogue star loosed in the universe.

It no longer “thought” in simple urges and observations.

Through the trained intelligence of its human component it now could observe, analyze, record . . . and act.

Technically it was still Starday; at the boy’s suggestion Andy Quam ordered the flyer to take them to the Starchurch. “There’ll be a crowd for late-night services,” he said, “and likely enough nobody’s going to be where you expect them, otherwise. I mean, even the hospital might not have a crew on duty.”

“Shocking,” hissed Andy Quam. “To make the Companionship of the Star a pagan ritual!”

“Sure, preacher. Like you say. Only that’s the way it is, so you better —”

“I understand,” said Quam, and gave the flyer its directions. It raised an objection.

“Without the special permission of the Robot Inspector, Mr. Quamodian,” it declared, “I should properly go nowhere except back to the transflex terminal.”

“But it’s an emergency!”

“Of course, Mr. Quamodian.” It hesitated, its neural currents pondering the problem. “Since I cannot contact the robot inspector at the moment,” it decided, “I will have to return to the transflex terminal —”

“Confound you,” shouted Quamodian, “do what I tell you!”

“— but en route I will pause briefly at the Starchurch. If you then disembark, it is not a matter under my control.”

“Hah!” barked Quamodian in disgust. “Do it then. But do it fast!”

“It is done, Mr. Quamodian,” sighed the flyer, settling to the ground. “I will remain here for one minute. During that time you may do as you wish.”

Quamodian wasted no more time in talk. With Rufe and the huge, slow strength of the Reefer, it was no problem to get Molly out of the flyer and settle her gently on the ground. "Are you all right, dear?" Andy Quam asked anxiously. "I'm going for help."

The storm of weeping had passed. Her eyes were open and her face composed, but the weariness of ages was in her eyes. "All right, Andy," she said. "I'm all right anyway, so it doesn't matter."

"Don't talk like that!"

"All right, Andy," she repeated dully and looked away.

"You stay here with her," he ordered the Reefer, who looked resentful, but shrugged. "Rufe, let's find somebody!" And the man and the boy hurried into the Starchurch.

As they entered the great chamber under the blue dome, a gong boomed and echoed. Rufe led the way, up a helical ramp into the dim vast church. The air was alive with the throb of many chanting voices, and it was sweet with the odor of the fusorian Visitants. The five pointed wings of the church were filled with rising tiers of seats, but every seat was empty. The people were kneeling in concentric circles on the immense floor, beneath the central dome that held the imaged suns of Almalik.

Of the Robot Inspector there was no sign. His errand, whatever it was, still kept him away.

"I see Molly's auht!" cried Rufe eagerly, pointing. "Come this way!"

But Quamodian hesitated. "Pagan ritual" he had called it, but something in the air held him, awed, faintly

envious, half afraid. He raised his eyes to the many-colored splendor of the thirteen suns hung beneath the space-black inside of the dome: six close binaries arranged in three double doubles, one single sun.

Drinking in the blazing beauty of Almalik, breathing the sweetness of the Visitants, swaying to the melodic rhythm of the chanting worshipers, Andy Quam felt a sudden glorious dawn of utter peace and great joy. He wanted to forget himself and the waiting, weary girl outside. His only desire was to forget himself and to be one with Almalik.

"Preacher!" hissed the boy. "Aren't you coming?"

Solemn awe held Quamodian. "Are — are you sure it's all right to interrupt?"

"We won't interrupt. I've been here before for this, to watch, like. With Miss Zaldivar. They don't mind anybody."

Shivering with strange elation, Quamodian followed the boy out across the vast floor and into the circles of communicants swaying on their knees. The sweetness of the Visitants made him drowsy; the blazing suns of Almalik bathed him gently in peace.

But the boy had paused before a kneeling man and woman. "Here's her folks, preacher," he said. "Mr. Juan Zaldivar. Mrs. Deirdre Zaldivar." His thin voice rose sharply. "This is Monitor Quamodian."

They stopped their chant. Reluctantly they withdrew their gaze from the multiple splendor of Almalik and, still swaying on their knees, looked incuriously at Andy Quam.

**B**oth glowed with youth and health and joy. Juan was lean and tall and dark, with rich black hair. Blonde, blue-eyed and radiant, Deirdre looked even younger and more lovely than her niece.

And both wore the mark of Almalik, where the migrating fusorian colony had entered their bodies. Deirdre's was on her blooming cheek, Juan's on his forehead. The marks were tiny irregular star-shapes, their edges dissolving into fine branching lines. In the dusk of the starlit dome, the marks glowed softly, warmly golden.

"It's about Molly," Quamodian whispered, hardly daring to break the spell. "She's outside. She's hurt." Incongruous things to say in this sacred peace! He felt more an interloper than ever, a brute among angels.

In unison, blonde and black, they nodded their heads. Puzzled, Andy Quam started to repeat what he had said, but Deirdre breathed: "There's no hurt that matters in the bosom of the Star. She must join us, and then she will find peace."

"But she's hurt! It's — oh, it's too long to tell you, but she's in terrible danger. We all are!"

"Not here," smiled Juan Zaldivar. He groped for Deirdre's hand; she was already lifting her face to chant again. "Bring her within. The Visitants will make her whole!" And his dark eyes lifted and he joined his wife in the chant.

Rufe bit his lip. "It's no use, preacher," he said somberly. "They're too happy."

Andy Quam looked at him meditatively. It was, after all, not a bad idea

to bring Molly inside, he thought. Let the Visitants enter her body with their fusorian healing. She would heal; everyone did. Not merely the scuffs and bruises of her body, but the somber agony of her mind . . .

"Preacher," whispered the boy apprehensively, staring at him.

Quamodian caught himself. "Sorry," he mumbled, and grabbed the boy's elbow, turned him around, scurried away. He felt a sudden flood of longing that almost stopped him and turned him back, but the boy was leading him now. He stumbled out of the aura of Almalik, down the helical ramp, out of the building as the siren chant faded behind.

Quamodian filled his lungs gratefully with cool dry air that held no lotus-odor of the Visitants.

He said sadly, "I wanted to stay. I always want to stay . . . But it isn't for me, the peace of Almalik . . ." He hurried down the ramp, leaving a vanishing vague regret.

His flyer was gone, but the huge form of the Reefer stood solidly over the reclining body of Molly Zaldivar. Now the night air felt suddenly chill, and Andy Quam shivered. "What can we do now?" he muttered, half to himself. "What can we do for Molly Zaldivar?"

"My house, preacher," said the boy, Rufe. "It's only down the square, there. My folks will take her in. I think," he added, sounding worried. Andy Quam glanced at him sharply, but did not question him.

However, there was no one at home in the house to which the boy led them. The door was unlatched. Lights were on. The little cottage's

autonomic living systems were purring away, a cheery fire in the hearth, a pleasantly scented breath of air carrying the gentle warmth to every room. But no one was there. "Never mind," sighed the boy, as though he had expected it. "I expect what Miss Zaldivar mostly needs is a little rest right now. Why don't you take her in that room, preacher? And I'll see if I can stir up a little food; you must be hungry."

Fed, warmed, almost relaxed, Andy Quam sat in the cheerful living room. The boy lay on the floor before the fire, his chin in his hands, stretching out now and then for another piece of fruit or a last crumb of the sandwiches he had produced for them. And the Reefer leaned at his ease against the fireplace, answering Quamodian's questions.

They had begun like a prosecuting attorney and a criminal; but the Reefer would not accept the role. Defiant, uncaring, mildly contemptuous of everything around him, the Reefer rumbled: "I'll not take the responsibility. Monitor Quamodian. What happens on my land is my business, and those hills are mine."

"Creating rogue life is everyone's business," cried Quamodian.

"But that was not my doing," the big man declared. His scarred face was angry. "Miss Zaldivar is a lovely child. I meant no harm for her. But she had no business trespassing."

"What about Cliff Hawk?"

Under the ragged beard, his mouth set hard. "I brought him back from the Reefs. He was almost a son to me — but I take no blame for what

he has done. Except that I let him go to school, but that wasn't my intention. I wanted him to be another hunter, like me. When he was grown, I planned to take him back to the Reefs, find a cub sleeth for him, let him do as I did. But he had to cross the creek. He went to Starday school. He got queer ideas from the robots and the Visitants. Finally he had to go away to space to learn to be what you call a transcience engineer . . ."

"There was nothing wrong with that," declared Quamodian. "I was at the same school. He was a decent human being then."

The Reefer shrugged; then, flinching, touched his arm where it was bandaged. "No matter," he rumbled moodily. "He's paid for it now. He's dead. Or so I think."

"What do you mean you *think*?" demanded Quamodian. "Is he dead or isn't he?"

The Reefer's deep-set eyes peered at him from under the bushy yellow brows. "He wasn't breathing," he said shortly. "Does that answer your question?"

"Doesn't it?"

The Reefer said helplessly, "I don't know, Monitor, and that's the truth. Oh, Cliff was in bad shape, all right. I didn't give him much chance of lasting more than an hour — less, because we couldn't move him and the fire was coming close. But —"

He hesitated. "Boy," he growled, "have you got anything to drink in this place?"

"Just milk. Or water. Or maybe I could make a cup of tea —"

The Reefer pursed his lips, shook his head gloomily.

"Go on!" ordered Quamodian.

The Reefer half closed his eyes. "Cliff had been at work in his transience lab," he droned, apparently bored with the subject. "I knew what he was doing was dangerous, but he's a man grown now. Was. I didn't want to interfere. Then something happened."

The Reefer shifted position, thoughtfully scratched his bushy yellow head. The thick fingers raked through the blond tangles like gangplows through soil, methodically, deeply, mechanically. He said, "It was an explosion. Down below, in the old cryomagnetic and radiation galleries that used to be part of the Plan of Man's military installations. Things the Visitants had failed to destroy. That was the part that I knew was dangerous . . . . Then, while we were putting ourselves together, Molly Zaldivar showed up, crying and threatening Cliff; she'd been scared by my sleeth, so I guess she wasn't accountable. But that was just the beginning. There was a real blowup then. Don't know where. Something winged me — a stray piece of metal, I guess, and I was knocked out for a while."

"I was watching from Wisdom Creek," said Quamodian. "I saw a bolt of plasma strike from the sun, then two more. Is that what it was?"

"I guess." The Reefer scratched again stolidly. "Then I heard Cliff and the girl inside. I went to get them. Tried to call my sleeth, but the creature was spooked, acted funny, didn't respond. It never did that before . . . . But there it was, inside the tunnel, trying to get Cliff uncov-

ered. Only it was too late. He was dying. Then —"

The Reefer stood up straighter and stopped scratching. A look of real humanity came into his eyes as he said bleakly, "Cliff looked up at me. He said something — couldn't hear what, exactly. It didn't make sense. And he just stopped breathing."

The Reefer turned away, began roaming around the little room. "I don't mean he just died then, Monitor. I've seen men die; they make a little more fuss about it than that. But he just *stopped*. Like he was turned off. And I made sure he was dead, and then I grabbed Molly Zaldivar and got out of there. 'Bout an hour later, you showed up. That's it . . . ."

"Not quite," said Andy Quam sharply. "What was it that Cliff said before he died?"

The Reefer stopped, stared angrily at him. "Doesn't matter! It didn't make sense, anyway."

"What was it?"

The Reefer growled wordlessly. The thick fingers plowed into the scalp again, raked it furiously. Then he dropped his hand and said, "Oh, if you must know — It was something like, 'I made it — now it wants me.'"

Quam abruptly shivered, as though a cold blast had found the back of his neck. "What does it mean?" he demanded.

"Nothing! Nothing at all, Monitor! Or anyway —" the Reefer looked away — "nothing that I understand. 'I made it — now it wants me.' Does it mean anything to you?"

Quamodian paused before answering. "I hope not," he whispered.

The rogue was no longer an infant. Neither was it full grown— call it a youth, becoming steadily larger, in each moment finding itself stronger and more skilled than in the moment before, feeding upon everything around it that offered energy or mass or patterns to be assimilated.

It had now assimilated a very large number of patterns, sipping at the assorted radiances that surrounded it, and in the process discovering that some were far — “tastier”? — than others. Engorging the identity that had once been Cliff Hawk had been a transcendently new experience for it, and now it found itself equipped with a thousand thousand new habit patterns, constructs of thought, programmatic drives. They no longer had any relationship to the hundred kilograms of carbon compounds that had been Cliff Hawk’s physical body, for that was now an irrelevant blob of spoiled reactions. Hawk’s “personality,” even, was gone — nothing now remained in the universe that thought his thoughts, remembered his experiences, could recite his opinions. But something about his motives and desires remained as a moment of thrust inside the behavior of the young rogue, shaping the vector result that was its behavior. It was no longer entirely random. In some degree it had become polarized.

What were the other moments of force that played a part in the behavior of the infant rogue? Its own growing knowledge and skills. Its discoveries about the world it lived in. Its innate drive toward growth and mastery. *Move. Grow. Eat*, it had thought, as soon as it could think at

all; but now, with the powerful discipline of Cliff Hawk’s trained mind permeating its being, it thought more clearly and articulately; it had discovered the convenience of formulating its objectives in language.

*I am small but I am growing*, thought the maturing rogue star that had been born on earth. *There are other beings which are large but do not grow. I can be more powerful than they.*

And already it had implemented its strength with a dozen organized masses of matter. The sleeth was its mind-linked tool, now; it watched with the rogue’s eyes, would act under the rogue’s wishes. Tiny crawling and flying things, in the mountain, under the mountain and in the air over it, had all become a part of its extended being. And it had recruited something else.

For the Robot Inspector had challenged the curiosity of the rogue. It had not been difficult at all for the rogue to swallow it whole, to incorporate the mind-analogue of the machine into its own consciousness. The robot still looked as it had, torpedo-shaped metal body and glowing plasma panel and all; but it was no longer its links with the super-computers on the planets of the stars of Almalik that gave it its categorical imperatives, but the needs and intentions of the stripped electron plasma that had exploded under the hill.

The rogue toyed with and puzzled over, but did not yet understand, that complex linkage of transflection fields which united this new part of its self with distant and more powerful beings. They did not matter at the mo-

ment. The distant entities were not powerful enough to resume control against the near and mighty presence of the rogue. And it had other considerations to occupy it.

One was a part of its heritage from the dying mind of Cliff Hawk. Over that too the rogue puzzled, without comprehension.

Why was it that it felt so attracted, so drawn to, so conscious of the presence of that small and unimportant organized mass of thought-radiant matter that Cliff Hawk's mind had identified as "Molly Zaldivar"?

Through the blind, transflex eyes of the sleeth riding high over the cottage where Molly Zaldivar lay sleeping, the mind of the rogue stared down. *Molly Zaldivar*, it thought, *what do I want with you?*

And inside the house Molly started up from sleep and tried to scream. *Sleep*, ordered the rogue; and the girl subsided into the catalepsy of terror. No one had heard her scream; no one was in the house at that moment, and she had not been able to be loud enough to reach those who were outside on the grass, staring up at the sleeth.

The boy said, awed, "Mister, that's a wicked-looking beast. You sure it won't hurt us?"

The Reefer barked a savage laugh. "Not any more, boy," he rumbled. "Time was that sleeth would follow me like a kitten. Do everything I wanted it to, never think of disobeying — I raised it from a cub, it never knew any boss but me. But now it does." He studied the sleeth thoughtfully for a moment. As it hung in the

sky on its shimmering transflection fields, the great black creature looked like some wingless Pegasus astride the air, its dangling claws capable of wrenching any carbon-based, air-breathing, muscle-powered animal in two as readily as a hawk's talons rend fur. "Fine beast," he said. "But not mine any more."

Andy Quam said angrily, "Why did you bring it here? This sort of animal doesn't belong on a planet!"

"Why, because it's mine, Monitor Quamodian," the Reefer said simply. "I'm a hunter, and it's my companion. It goes wherever I go. Or used to. "Why," he cried, suddenly enthusiastic, "with that sleeth I collected the finest specimens of every game animal in the solar system! You should have seen them. A score of fine pyropods. Darkbeasts from out past the Reefs, moonbats, creatures from the hot deeps of Venus — there was nothing in a dozen light-years could touch that sleeth as a killer!"

Andy Quam said in disgust, "You talk as though killing were a good thing. Violence is evil. The laws of Almalik do not permit the destruction of life by life!"

The Reefer's deep eyes twinkled. "And would you never take a life, Monitor Quamodian? Not even, say, to save Miss Zaldivar?"

Andy Quam flushed. "We Companions are exempt from certain of Almalik's laws," he said stiffly. "We even may admit violence, in some situations."

"Then help me!" cried the Reefer. "I'm going to stalk something new, Monitor Quamodian, and you can join me in the hunt. I don't know

what it is that's controlling my sleeth, but I'm going to take its pelt to put in my collection!"

"Nonsense," cried Andy Quam, startled. "Why — great Almalik, man — I mean, how can you? Don't you realize that that's probably a rogue star?"

The Reefer's laughter boomed. "Scare you, Monitor Quamodian?"

"No! Or — yes, maybe. I don't think it is unreasonable of a mere human being to question his ability to deal with a star!"

The boy, who had been watching them silently, turning from face to face, coughed and interrupted. Changing the subject he said, "Say, preacher! What's the matter with the moon?"

A dozen degrees over the horizon the gibbous moon floated, almost invisible, so dark a red it was. It was leprously stained and discolored, by no means the brilliant white fat crescent it should have appeared.

"It's the sun," said Andy Quam gloomily. "Remember how red and angry-looking it was when it set? After those sunbolts struck? The moon's just reflecting it . . . And this man thinks he can destroy the thing that did that!"

"Worth a try, Monitor," boomed the Reefer cheerfully. "Mind if I borrow your flyer, then?"

"For what?"

"Why, for the hunt. It's a bit of a walk from here to the hills on foot," the Reefer apologized. "As I don't have the sleeth to take me there any more, I'd appreciate the use of your flyer. It's long past Starday now, no reason not to use it."

Rufe cried out sharply. "Preacher! Listen — what's that sound."

Quamodian raised his hand imperiously, silencing the Reefer's booming voice. They listened. Then Quam's face twisted. "It's Molly," he cried, turning to run toward the house. "She's calling my name!"

But when Andy Quam burst through the door of the girl's room she was lying wide-awake, looking at the ceiling. Slowly she lowered her eyes to look at him. "Andy," she said. "I should have known you'd come. I've always been able to rely on you . . ."

Quamodian's ears burned. "Are you all right?" he demanded. "I heard you calling —"

She sat up on the edge of the bed. "All right? I suppose so." Her face was a mask of tragedy for a moment. "Poor Cliff," she whispered. "It's strange, but I thought he was talking to me, in my dream. But it wasn't really him — it was something huge and strange. A monster." She shook herself.

Then, gloriously, she smiled. There was tragedy under her smile, but it was clear to Andy Quam that she was making an effort to be cheerful. "I dragged you all the way across space," she said. "I'm sorry. I've always been a trouble to you, Andy dear."

"Never a trouble," he said, speaking from a depth of passion that shook him.

Molly was touched. She reached out and patted his arm. "Is there anything to eat?" she asked, incongruously. "It's been a long time!"

Rufe was happy to oblige when Quamodian relayed the girl's request to him, producing more sandwiches and milk, a seemingly inexhaustible supply of food. "Won't your family mind your taking us in like this?" asked Andy Quam. "We're eating you out of house and home!"

The boy's face clouded. "It's all right, preacher," he said.

Quamodian frowned at him. "Come to think of it," he said, "where is your family? It's pretty late for them to be at the Starchurch."

"Oh, they're not there any more. They — They've gone away for a while."

Andy Quam stopped in the middle of the humming little kitchen, busy generating new supplies of bread and milk and meats to replace those the boy had drawn from its programs, and said firmly, "You're hiding something, Rufe. Why?"

"Aw, don't ask me, preacher. It's just — well, it's kind of private."

But then Molly Zaldivar came out of the room, looking remarkably refreshed and restored, and Andy Quam let the matter drop.

For half an hour they were all at ease, Molly as friendly and affectionate as ever in the old days at school, the boy beside himself with pleasure at pleasing Molly, even the Reefer almost jolly. The huge man from space demanded to know whether Quamodian would join him in his hunt for the rogue. For a moment, in that warm room, it almost seemed like a reasonable idea, and Quamodian let himself think about it — a long chase, a view-hallo, the quarry at bay . . . . But it was fantasy. This

was no beast of the forest but an inimical creature of linked plasmas whose hugeness and might were utterly incomprehensible to humans. To hunt it was like setting a snare for a supernova.

Then Andy Quam saw Molly hiding a yawn and realized with a start how utterly exhausted he himself was. "Let's get some sleep," he ordered, and fussed over them all until they had sorted themselves out into various rooms. Only then did Quamodian let himself sprawl out on the couch in the living room, the door to Molly's room just past his head, ready to spring up at any alarm.

It had been a good many hours, and a good many hundreds of thousands of parsecs, since he had slept. When he closed his eyes he was unconscious almost at once and slept like the dead.

Where was the rogue? As well try to fix the position of an electron in its blurred orbit around a nucleus; it was under the hill and in it, suffusing the skies around, inhabiting the body of the sleeth that soared tirelessly and patiently over the house where Molly Zaldivar slept, penetrating and entering every hidden place within hundreds of miles, and reaching out into near space.

But if its position had no exact geographic boundaries, at least there were loci of special consequence. It did, for example, occupy the great animal bulk of the sleeth. It concentrated at least a sizable part of its being in the electron cloud that seeped through the rock and clay of the base of the hill. And it found other

special areas of interest to toy with it.

It found, for one, the antique handling machine that Cliff Hawk had used to help him construct his tunnel workshop. It was a minor puzzle to the rogue, but a faintly interesting one; the machine had obvious purpose, and it spent some moments working out that purpose and how to achieve it. Then, the machine solved, it spent a few moments now in what can only be called pleasure. *Power in motors*, it thought. *My power. Spin gears. Drive through rubble.* It reached out with its metal arms and picked up bits of debris — a yellow cylinder of helium, the half of a thousand-pound armature, bent out of shape in the explosions. It threw them about recklessly, madly . . . .

Then it had had all it could enjoy of that particular game and turned to another.

The Robot Inspector was a greater puzzle, but a lesser plaything. It was of no particular joy to operate, since its transfection drives were too similar to the sleeth's, or the rogue's own, to be novel. But the rogue was aware that somehow the robot had been guided by other influences, far away, and that some part of it was still trying to respond to those influences as their message crackled into its receptors. They were an irritation to the rogue, these repetitious exhortations on behalf of the star Almalik; it did not like them.

It had, by now, begun to acquire emotion.

One particular emotion troubled it, that inexplicable urging toward Molly Zaldivar which it had felt, more and more strongly, as Cliff Hawk's pat-

terns of thought asserted themselves and fitted themselves in to the organization of the rogue's own habit-structure. The rogue did not find this incongruous. It had no standards by which to judge incongruity. But it found it troubling.

There was a solution to things which were troubling. It could act on the impulse, and see what came of it.

It could attempt to add Molly Zaldivar to itself.

## XI

“Mol-ly. Mol-ly Zaaal-di-var . . .” Molly woke slowly, surfacing inch by inch from sleep. She was unwilling to wake up. Sleeping though she was, a part of her mind remembered that waking would bring back to her in utter, unwanted clarity: Cliff's death, the birth of the rogue, the terrible danger that the man she loved had unloosed on the universe.

“Mol-ly . . . .”

But someone was calling her name. Resentfully she opened her eyes and looked around.

No one was in the room. It was still dark; she had not slept for more than an hour or two.

“Who is it?” she whispered. No response. Molly shivered. It was eerie, that disembodied voice, unlike any she had ever heard. It was impossible to dismiss it as the ragged end of a dream, half remembered on waking; it was real enough. It was even more impossible to forget it and go back to sleep.

Molly stood up, threw the robe Rufe had found for her over her

shoulders, and padded to the door of her room. She opened it just a crack. There was the living room, and Andy Quam asleep on the couch. He stirred painfully as she looked at him, grimaced, mumbled some sleep-evoked phrase and was still again — all without opening his eyes. Poor Andy, she thought warmly, and sadly; and closed the door without sound.

Whoever had called her, it was not Andy Quam.

She went to the window, threw back the curtains — and gasped in terror.

There it was, hovering just outside the double French panes on its shimmering transflection fields.

The sleeth!

The great blind eyes stared emptily at her, the metal-tipped claws caught reflections of cold fire from the sinking moon. The shimmering field pulsed rapidly, and from the pane of glass she caught the faint vibration of sound that had called her from sleep: "Mol-ly. Come. I . . . want . . . you."

For an instant stark terror flooded her, and she half turned to run, to shake Andy Quam awake and beg for protection against this fantastic monster that called her by name. But the utter wondrousness of it held her. The sleeth could not speak; nothing the Reefer had said about it gave it a voice. Nor could it have known her name, not in any way that she could hope to understand. And anyway, the sleeth was no longer even an animal in its own independent right; it was only a captive of the thing that Cliff Hawk had made and had been killed by.

She flung open one side of the French window. She didn't know why; except that, obviously, if the creature intended her harm the flimsy glass and frame could not protect her.

"What — what do you want," she breathed.

But it only repeated, "Mol-ly. Mol-ly, come."

The sound came from the glass itself, she discovered; somehow the creature was vibrating it to form frequencies that she could hear as words. It was even stranger, she thought, than if it had suddenly formed lips, palate and tongue and spoken to her so.

It was terrifying. Worse than terrifying; without warning, she was filled with a revulsion that she almost screamed with the pain of it.

"No," she whispered. "No!"

"Come," sang the sleeth — or whatever it was that controlled the sleeth. The huge creature danced patiently on its shimmering fields, waiting for her to accede to its demand. "Come," said the tinny, bodiless voice again. "Mol-ly. Come."

Insane to be talking to this thing, in a perfectly ordinary room, through a perfectly normal window! "No!" she said strongly. "Go away!"

Did the thing understand her words. She had no way of knowing. It merely hung there silently for a moment, regarding her with great blind eyes.

Then it moved, slowly and remorselessly, like a Juggernaut. It bobbed silently forward, thrusting the unopened window out of the way as though it were air. An almost sound-

less crack and a faint patter of shattered glass on the carpet were the only noise it made as it came toward her.

The great, deadly claws reached for her.

Molly drew a breath to scream, tried to turn and run . . . .

Something bright and murderous flashed from those blind eyes. It was like an instant anesthetic, like a blow from behind that drives out awareness before the mind quite realizes it has been struck. Down went Molly Zaldivar into paralysis and dark, stunned and helpless. She felt herself falling, falling, falling . . . .

The last thing she remembered was those great claws grasping her. Incredible, she thought, they don't hurt . . . .

And then the world closed in around her.

Quamodian woke painfully in broad daylight that poured in the windows on him. He found himself on a couch, with a synthetic copy of some animal fur over him for warmth, his head throbbing, his bones aching. He felt vaguely ill, and for a moment he could not recall where he was.

Then he remembered. The enigma of the sunbolts. The nightmare of the Reefer and the sleeth. The death of his friend Cliff Hawk. The birth of the rogue —

He forced himself to sit up and look at the world around him.

Pinned to the arm of the couch was a note, scrawled with a photocopier in a huge, clumsy, juvenile handwriting:

Preacher, I didn't want to wake you. I went to tell Miss Zaldivar's folks she's all right. Meet you there is you want. P.S., I left everybody sleeping because I thought you all needed it. Food in the kitchen.

Rufe

Sleeping they still were, to judge from the mighty rasping snores that came from the little cubicle Rufe had given the Reefer. There was no sound at all from Molly's room. Andy Quam hesitated, his hand on the door; but there was no sense disturbing her, and surely nothing could have got past him to harm her in the night, he thought . . . .

He left the house and stepped out into the bright morning.

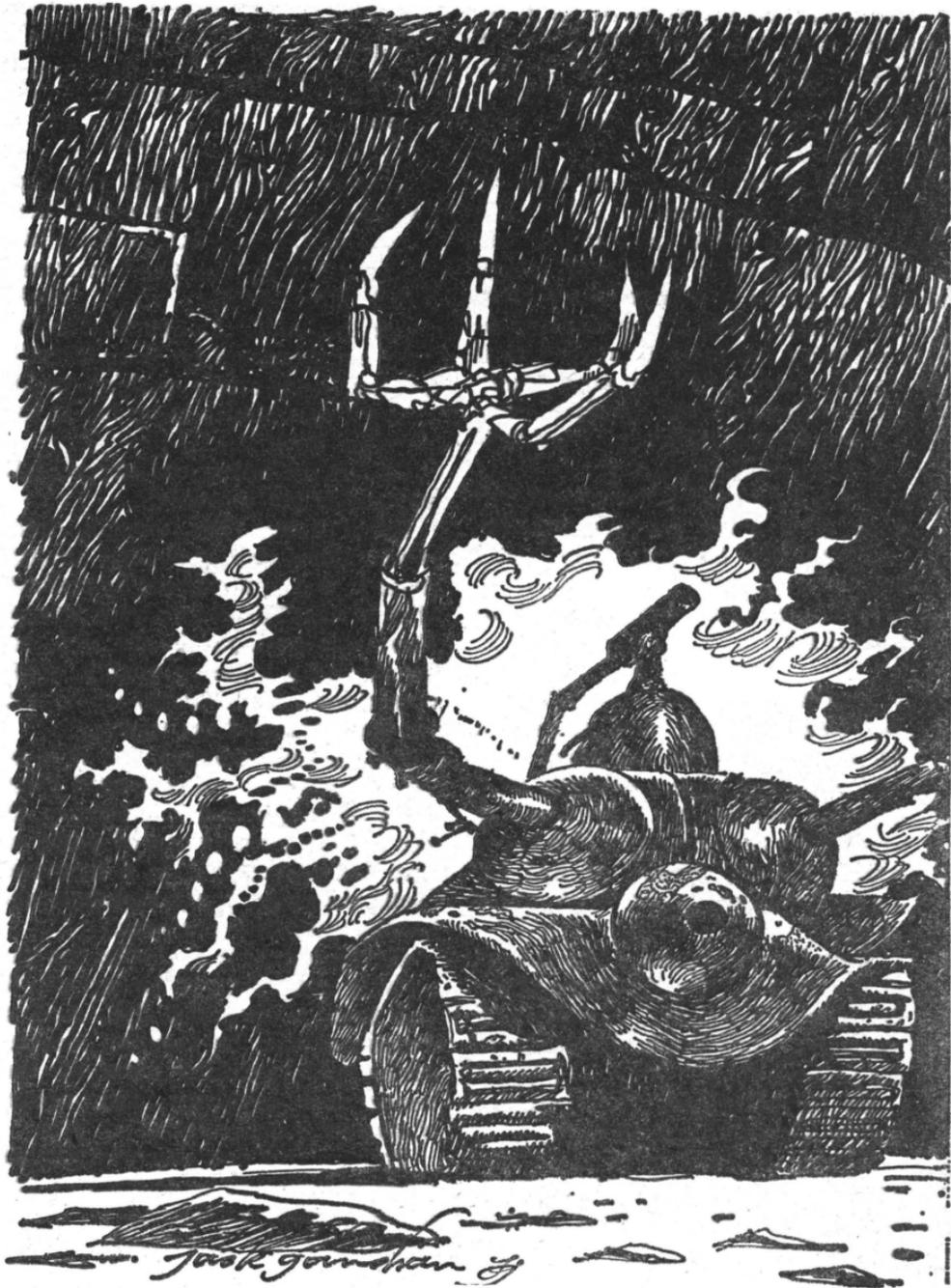
Bright it was. Yet, thought Andy Quam, there was something strange about it, and in a moment he realized what it was. The colors were wrong. There was no cloud in the sky, but the air had a lowering quality, as of stormclouds. He squinted up at the sun and perceived the reason.

Red, sullen, blotched, the disk of the sun still had not recovered from whatever had roiled it yesterday. It was not the familiar sun of earth, as men had portrayed it in a thousand books and songs. It was somehow unhealthy, somehow ominous.

He limped across a wide square, reviving somewhat as he moved. It had been a strenuous day. And a worrisome one, he thought, remembering with wrinkled brow all the unanswered problems and unmet challenges it had offered.

Perhaps this new day would clear some of them up, he thought — but not with much confidence.

He gave the Starchurch a wide



Jack Ganshan



berth, hailed a passing citizen and found himself directed to the home of Molly Zaldivar's parents. It was past the Central Municipal Plexus, he discovered, which fit in well enough with his plans; he could use more information if he could get it.

But the Central Municipal Plexus did not turn out to be the combination library-town hall he had expected.

He walked across a queerly perfect circle of stained and blackened cement. It was puzzling, it seemed to have no place in this countrified idyll of a town. Immediately a recorded voice spoke to him:

"Welcome, guest! You have landed at Wisdom Creek Historical Monument. It is a section of the original village of Wisdom Creek, reconstructed exactly as it was on the winter day, many years ago, when the Visitants first arrived."

Andy Quam spoke up, addressing his remarks to thin air, for there was no speaker in sight. "I don't want a historical tour," he snapped. "I want some information."

But there was no response. This was a low-grade programmed instructor, he realized with irritation. Not even homeostatic, merely programmed to respond to his mass-sensed presence with a recorded lecture. He walked through a thick gate —

And found himself in something that, for a startled moment, made him think he was in Hell. The air stung his eyes. It choked him, with a reek of industrial fumes and imperfectly oxidized mineral fuels. Blinking and squinting, he made out that he

was surrounded by grimy rows of hideous little brick and wooden huts.

Far down a street was a human figure, faced away from him and motionless. Vexed, Andy Quam stamped toward it, ignoring the revolting spectacle around him.

He approached a squat gray pile of concrete on which was etched the legend, *Plan of Man*. A voice from the air cried brightly: "Welcome, guest. This structure, a part of the Central Municipal Plexus Exhibit, represents a primitive Tax Office. Here each citizen reported to the Plan of Man the number of tokens he had received for his work in the previous sidereal year, whereupon he was forced to give up a share of them. Here too was the ration office, where he received permission to barter what tokens he had left for articles of clothing and other necessities. Here too was the draft office, where young men and women were impressed for training in the use of crude but adequate weapons of the time. Here too was that most central and fundamental institution, the Planning Office, where the action of every citizen was dictated and reviewed and corrected by a primitive central computer. Here, guest, was the nerve center of the fundamental coercive apparatus of the state!"

Andy Quam trudged grimly on, ignoring the senseless prattle. There was entirely too much realism in this exhibit for his comfort, he thought with distaste. The very air was polluted with the hydrocarbons and fly-ash and photochemicals of primitive combustion products. And the man he was approaching was queerly

dressed in what must have been the costume of the time: a thick fiber uniform, a brutally chopped haircut, something about his neck which looked like a massive metal collar, certainly too heavy and too tight to be comfortable. He stood stark still facing the entrance of the building, his right arm raised in a motionless salute.

"Excuse me," called Andy Quam. "Can you help me find the home of Juan Zaldivar?"

He caught himself, realizing at once that it was only a lifelike dummy. Another recording explained cheerfully:

"The human form you see, guest, is the replica of a Risk. So men and women of doubtful loyalty to the Plan were designated. The iron collar worn by each Risk contained an explosive decapitation charge, which could be detonated instantly by the Planning Machine in the event of any suspect action."

Soberly, stiffly, the figure dropped its salute, turned until its mass-sensors located Andy Quam and haltingly bowed. "Oh, great Almalik!" cried Quamodian, exasperated. "All I want is directions! How can I reach the home of Mr. and Mrs. Zaldivar?"

Silence, except for the questioning hum of a carrier signal.

"Isn't anybody listening?" he shouted.

Silence again, then, doubtfully, "Guest, you are invited to return to the Wisdom Creek Historical Monument, which has been restored and maintained by the Companions of the Star for public information."

"I am a Companion of the Star! I

am Monitor Andreas Quamodian, and I insist on your answering my question!"

Silence once more. "We hope you found the exhibits instructive," sighed the recorded voice at last. Its programming clearly was not up to any question not pertaining to the exhibits themselves. Angrily Quam turned away and retraced his steps.

Half an hour and many moments of lost temper later, he finally found Juan Zaldivar at the edge of a field, busy adjusting a green-cased farm machine. A relaxed and handsome athlete, now alert and free from the hypnosis of the Starchurch reverie, he flashed his white teeth at Quamodian with an inquiring smile.

"I'm concerned about Molly," Quamodian began.

"So am I!" Zaldivar nodded quickly. "Her course is dangerous and evil. Yet Almalik forbids any compulsion toward salvation. She must make her own mind up to accept the Visitants —"

"No, not that!" cried Andy Quam. "Do you realize she has been very nearly killed by what I suspect is a rogue star?"

Juan Zaldivar looked genuinely shocked. "How terrible!" he cried. "We must do something at once! You must tell her that her one protection is in Almalik. She can delay no longer!"

"No, no," groaned Quamodian. "Listen to me, Zaldivar! It's no longer a matter of just Molly; it's the whole Companionship of the Stars, the universe itself that's threatened. Have you any notion of what a rogue star

can do? There, look at the sun!"

He gestured at the red and swollen disk, high in the heavens but looking like a stormy dusk. Zaldivar glanced at it through squinted eyes, with an expression of mild inquiry. "Curious," he said, nodding.

"More than curious! Deadly! Dangerous!"

"To Molly?" asked Zaldivar, politely perplexed. "I do not entirely follow you, Monitor Quamodian. But if you are saying now, as you seemed to be denying a moment ago, that Molly is in danger, why, yes, I agree. She is. So are you. So are all who have not accepted the Star, as signified by receiving the Visitants into their bodies."

Andy Quam took a deep breath and controlled himself. The Peace of Almalik, he reminded himself, was a great gift to mankind. Unfortunately those who accepted it — though of course blessed beyond all other men in their health, their joy, their star-given peace — were sometimes hard to deal with, hard to arouse to needed action. But that, of course, was why those like himself, the Monitors and the other free-acting agents of the Star, could not accept the Visitants. He should have known all that; he should have learned to accept it . . .

He said, keeping his temper, "Juan Zaldivar, I ask you to do something for me in the name of Almalik. Since you are in contact with the sentient stars by means of the Visitants, I want you to pass on to them my warning about the creation of the rogue star."

"I have done so," said Zaldivar. "Almalik knows all that I know."

"Good," sighed Andy Quam. He felt a brief relief, a sense of awe at the fleeting vision of all the wisdom and power of the multiple citizen Cygnus, the minds of numberless sentient suns and transcience robots and perfected men knitted together by the fusorian Visitants. "Now," he said, "there's a puzzle you must help me solve. I want to know why that sunbolt struck yesterday. Is Almalik responsible?"

Zaldivar squinted again, then shook his head gravely. "No," he declaimed, "the release of the sunbolt was a violent action. According to our information it destroyed much equipment and contributed to at least one human death. As Almalik is non-violent, we are clearly not responsible."

Quamodian peered at him. "Was it the rogue that was responsible?"

Juan Zaldivar said serenely, "In that, Monitor Quamodian, we are not concerned. We will not resist."

"But you're in danger! Even the sentient stars are in danger, if an intellectual creature hostile to them is loose in this galaxy!"

"We will not resist," repeated Juan Zaldivar. "Acting in violence, we should destroy ourselves." And, gently murmuring an apology, he returned to adjust his farm machine.

The boy's message had said he would be at the Zaldivar's home, but he was not in sight. No one was; the dwelling door stood open, but no one answered Andy Quam's call.

There was a crooning, placid, musical drone coming from somewhere above. Quamodian followed the

sound, and doors opened before him as the homeostatic dwelling invited him in, up a moving slideramp, to a roof garden.

There sat Deirdre Zaldivar, greeting the morning by playing at an instrument which transformed her emotions into art, spinning them into melodious sound, colored form, subtle scent. She greeted him, smiling. Youthful as Molly, her beauty unmarred by the golden star that blazed on her cheek, she was absorbed in her art and reluctant to be disturbed.

"Rufe? Oh, yes, Monitor Quamodian. I know Rufe. But he's not here."

"That's odd, Mrs. Zaldivar," Andy Quam frowned. "He said he'd meet me here. Did he say anything?"

Deirdre Zaldivar plucked a strumming chord of sound negligently, watched a pinkish bubble of color grow, turn rose, then red, then darken into invisibility. "Why, no, Monitor Quamodian. We haven't heard from Rufe, have we?"

She looked inquiringly past Andy Quam. Disconcerted, he turned, and there was the sleek black egg-shape of a transcience robot floating over a bed of talisman roses. "Robot Inspector?" he said uncertainly. "I — I didn't notice you were here."

The robot's pulsing plasma oval shimmered brightly. "I am not the Robot Inspector. Monitor Quamodian," it sang in its high sweet voice. "That unit is no longer operational. I am its deputy."

"Not operational?"

"It has been disjoined, Monitor Quamodian," hummed the robot placidly. "I have, however, access to

all its memory up to the point at which disjunction occurred, so that for all practical purposes you may regard us as the same. Do you wish to employ my services?"

"No," said Andy Quam. "Or — yes. I think so. But I wanted to speak to Mrs. Zaldivar first. Molly has been injured, but she is now resting peacefully. I think she is all right — but in danger, I'm afraid."

Deirdre Zaldivar looked politely concerned. "Too bad," she said regretfully. "She is such a dear girl. But —" she shrugged, smiling at the deputy robot — "she is not yet a member of the Star, of course. Like all non-members, she is exposed to the hazards of independent existence." She returned to the console of her instrument and, with a quick run across the keys, built a splendid tower of scent and color and sound. "When she accepts the Visitants, Monitor Quamodian," she said, watching her composition grow and drift, "everything will be all right. Everything is always all right in the Companionship of the Star."

Andy Quam's exasperation pressure was building again. He could feel it compressing his brows, grinding his jaws together. He turned to the robot and snapped, "You, then. I want some facts. What happened to the sun?"

"In what respect, Monitor Quamodian?" sang the robot politely.

"Its appearance — look at it! And the plasma bolts it threw at the Earth yesterday. Why?"

"We have no information," reported the robot regretfully.

"Is it true that the multiple citizen Cygnus is not responsible?"

"Quite true, Monitor Quamodian," agreed the robot, its high voice sounding disapproving of the question. "Almalik informs us that this fact was already reported to you today, by Juan Zaldivar. You are aware that the citizen Cygnus will engage in no violence."

"Then, what about the sun? Has —" the thought suddenly erupted in his mind, almost choking him — "has a rogue intellect been established in this star?"

"The star Sol," sang the robot, "is not a member of the multiple citizen Cygnus, nor has it ever entered into association with any part of the civilized universe. We have no other information about its intellectual status."

"Its abnormal behavior is dangerous to this planet and to all the members of Cygnus on it," protested Andy Quam. "One human being has died already. I fear this danger may extend to the sentient stars of Cygnus."

"Almalik is informed," hummed the robot serenely. "The sentient stars are not alarmed."

"I am alarmed!" cried Andy Quam. "I require your assistance!"

The robot floated toward him, its plasma oval glowing brightly. "That is your right, Monitor Quamodian," it conceded sweetly. "As long as there is no conflict with the prime directives of Almalik."

"Fine!" snapped Andy Quam. "Begin by informing Almalik of my concern. State that I regard it as absolutely urgent that action be taken!"

"What action, Monitor Quamodian?" asked the robot solicitously.

Quamodian was ready for that. "Request Almalik to suggest alternatives," he said briskly.

"But I have done so, Monitor Quamodian," sang the voice of the robot. "We have no action to suggest!"

Quamodian glared at it furiously. What he might have said next might have cost him lasting regret; but he never had a chance to say it. From down below he heard a high-pitched shout, repeated, calling his name. "Preacher! Preacher, are you there?"

Quamodian sprang to the slide-ramp, peered down. "Is that you, Rufe?" he called.

The boy appeared, face grimed with tears and sobbing. "Oh, preacher!" he groaned. "It's Miss Zaldivar! She's gone!"

Quamodian's blood seemed to turn cold in his body; time stopped. "Gone? Gone where, boy?"

"I don't know, preacher. I — I think that thing must've come and taken her away!"

The world seemed to turn black around Andy Quam. The boy's voice dissipated like smoke, leaving a thin and fading wisp of terror behind it. Quamodian shuddered, shook himself, tried to think. But thought was beyond him at that moment; he had to act. He grasped the handrail and started to run down the slide-ramp, against its movement, not waiting for the sensors to detect his presence and respond by reversing the movement of the ramp.

From behind him the voice of the

robot, its amplitude raised almost to the point of pain, thundered like the diapason of a giant organ: "Monitor Quamodian, wait! I must ask your intention!"

Quamodian halted, shook himself, half turned. "Intention?" he repeated. "Why — why, I'm going to get her back!"

"In what way, Monitor Quamodian?" roared the robot.

"Why —" Andy Quam thought, then realized he had known the answer all along. "With the Reefer!" he cried. "We're going to hunt that thing down and destroy it!"

The robot's voice, volume somewhat reduced but still an uncomfortable shrill knife-edge in the eardrums, trumpeted: "Violence, Monitor Quamodian. You are speaking of violence. The Companions of Almalik cannot support such an expedition!"

"I can!" cried Andy Quam. "I'm a Companion! Our organization exists for this very reason — that we are free to do things for the members of the multiple citizen Cygnus that they are not free to do for themselves."

The robot's black egg floated swiftly toward him. "In the past," it sang, volume reduced almost to normal, whining now, "this was true. But it is known that certain Companions have engaged in undue violence in the name of Almalik. This is a serious error, Monitor Quamodian! In consequence the status of the organization has been reviewed. Although certain freedoms of information and persuasion will remain to the Companions, all use of violence is herefrom prohibited."

Quamodian jumped back in startle-

ment, knocking over a crystal ornament in the shape of a leaping flame; it shattered on the floor, and the robot licked out a flickering tongue of pale plasma to gather up the fragments. "That's impossible!" Quamodian gasped. "We have — we must have freedom to defend the members of the citizen!"

"We do not resist," the robot purred serenely. "That is the prime ethic of the Visitants. The Companions may no longer resist in our name."

Andy Quam hesitated, glanced down at the white, watching face of the boy, kicked a shard of crystal across the room, then abruptly turned and started down the ramp.

"Monitor Quamodian!" sang the robot. "Monitor Quamodian, you have been informed!"

Andy Quam growled wordlessly in his throat and continued. The robot raised its amplitude deafeningly again. "Monitor Quamodian! We demand to know! What is your intention?"

Andy Quam paused just long enough to turn. "What I said!" he shouted defiantly. "I'm going to destroy that thing — with your permission or without it!"

## XII

**I**n the old Plan of Man cave under the Reefer's hill, the hot bright cloud of plasma long had dissipated. The womb from which the rogue star had been born was quiet now, no longer fed by the driving energies Cliff Hawk had tapped. But the air still reeked of ionization and burned copper points; the autonomic lighting

system flickered unreliably, and the shadows were dark.

Where the great bulk of the sleeth had dropped Molly Zaldivar, the pale cloud of stripped electrons that was the rogue hung meditatively over her. It had sent the sleeth away; Molly feared it, and something inside the rogue's stored systems recognized that fear. But the girl lay sobbing on the cold concrete of the floor, and some other "instinct" commanded the rogue to make her more comfortable.

*Move her. Make her safe,* thought the rogue, and hunted among its recently discovered options for a way to do it. At length (some dozens of picoseconds later) it opted for another of its toys, the rusty old handling machine that Hawk had sometimes employed. It was as easy to manipulate as Molly's old electrocar, and slowly and painfully the rogue caused it to crunch on its cleated tracks toward the cave entrance, to come in and approach the recumbent girl.

The operation of the handling machine, easy enough in principle, required a certain continuity of operation to which the rogue was not accustomed; its time-response was creepingly slow; its progress over the rock and rubble of the hillside and cave was intolerable. The rogue rested, drank mass from the air and strength from the stone, then rolled on again.

The girl scrambled to her hands and knees, staring wildly at the clanking machine.

The rogue paused and tried again its exercises in human language. Speaking through the circuits of the machine's radio, it rasped: "Molly

Zaldivar. How can I cause you to love me?"

Molly's eyes widened. "Nightmare!" she cried. "Monster! What are you?"

Painfully the rogue modulated the radio's circuits to reply. "Why am I . . . a nightmare? Why do you not love me? I . . . love you, Molly Zaldivar!"

Despairing, the girl rose, tried to flee; but she had left it too long and it was easy for the rogue to reach out with the handling machine's effectors, catch her, draw her back. She shrieked. The rogue paused, considering. It was difficult to comprehend the processes that affected organized matter. Yet the green radiance that flowed around her was suddenly shot with flashes of red which the rogue recognized as — not "pain," for it had not been able to relate those memories in Cliff Hawk's mind to anything in its own experience; but to a malfunction of some sort, and it was only a step to realize that the malfunction was caused by the harsh grasp of the handling machine on the girl's relatively weak body.

The rogue deposited her as gently as it could on the floor of its cab, and methodically analyzed its findings. It was a long process, requiring more than one microsecond; there was much that it had to deduce or interpolate. Even its own actions were not entirely clear to the rogue; it had no well formed referent for the term "love," though it had felt quite strongly that it was the proper operator to describe its relationship to Mol-

ly Zaldivar. Casually and quickly it detached a section of itself and entered into the brain and nervous system of Molly Zaldivar, studying as it went, attempting to sort out the damage that had been done. It seemed quite small, the rogue considered; only a few hundred thousand cells were damaged, and a relatively small proportion of them destroyed. It made a few adjustments which had the effect of stopping the efflux of circulatory fluid, rejoining some separated vessels and ligaments and, contented with its work, exited the girl's body and reassembled itself.

The girl, aware that something was happening but unable to know what, was very close to hysteria. She fumbled about the floor of the car, pulled herself to the seat, hammered feebly against the windows; orange terror flashed through the radiance that surrounded her, and the sleeth tried to speak to her again:

"Why do you struggle, Molly Zaldivar? Why do you not love me?"

Molly threw herself back on the seat, with a ragged laugh. "Love? You can't love!"

"I do love, Molly Zaldivar. Why am I a nightmare?"

She shuddered, forcing herself to speak. "Why? Because you don't have a right to exist, monster! You are a synthetic intellect. The transflection patterns of your mind were created in a cloud of plasma by Cliff Hawk and the Reefer —"

When she spoke of Cliff Hawk a golden glow lighted her mind's radiance. The rogue said:

"I am Cliff Hawk."

"You?" The girl caught her breath;

she was shaking all over now, half terror, half utter uncomprehending bewilderment. "Cliff is dead! I saw him die."

"Yes. Dead. But I am that of Cliff Hawk which survives at all. Cliff Hawk is a member of me. And you must love me."

The girl abandoned herself to a storm of weeping. After some thought, the rogue reentered her mind, sought for and found certain centers it had learned to recognize and caused her to go to sleep. It then paused and considered what it knew about the maintenance of organic masses of organized matter. This was, in truth, very little; but certain peremptory needs were clear. The girl would need protection against the elements and a place to rest. She would need air for combustion, the rogue thought, and observed that this was in adequate supply from the ambient atmosphere; she would need liquid  $H_2O$ , easily procured nearby. And she would also need metabolizable chemicals of the class it described by the vaguely comprehended label "food."

All these matters it determined to deal with. First it opened the door of its cab. Then it sought out and reentered the sleeth, hovering half-stunned and bewildered over the hill-top, and brought it arrowing swiftly back into the tunnel. The sleeth's great body felt supple and powerful after the clanking paralytic environment of the handling machine; the rogue caused it to soar into the mouth of the tunnel, hurtle down a straight-way, round a curve and join the

group. It felt joy in the strength of the great muscles, delight in the silent power of its transfection fields, pleasure even in the dreadful radiation that it could evoke from the huge blind eyes. It lifted the girl's sleeping body in the deadly, gentle claws and traced a tightening curve along the tunnel's way, into the mountain and down, until it found a pit that it had not previously observed.

The rogue paused, probing the dark space at the bottom of the pit. It found nothing hostile, nothing of organized organic matter. It was, in fact, a long-forgotten base of the scientific establishment of the Plan of Man; the rogue had no notion of what that meant, and less interest.

Careful with Molly, holding her cuddled against the great sleek belly of the sleeth, it dropped into the dark, drifting slowly downward past the vertical walls, until it dropped out of darkness into a cold, ghostly light: They were in a huge sphere hollowed in the rock at the base of the hill. Once multiplying neutrons had flashed through and saturated a few kilograms of fissionable metal; the nuclear explosion had blossomed and shrugged tens of thousands of tons of rock away, melting the inner shell and holding it suspended, like a balloon, for long enough for the dome shape to form. As the pressure leaked away the plastic rock hardened, and what was left was this great ball-shaped cave.

The pale light came from all about it, especially from a pale cold sun of milky mist that hung at the center of the hollow. A spiral staircase, made of skeletal metal treads and a

handrail, wound upward inside a spidery steel tower, from the bottom of the globular cavity's floor to a railed platform half inside that high, pale cloud of opal light.

What was the hollow?

What was the light?

The rogue gave those questions no consideration. Tenderly it set Molly Zaldivar down on the bottom of the hollow and allowed her to waken.

To the extent that the non-human intelligence of the rogue was capable of satisfaction, it was now pleased with what it had done. It had removed the person of the oddly attractive organized bit of matter called Molly Zaldivar to a place where it would not be harmed by outside activities, and where its own attempts to establish communication could go on without interference. It was a place whose chemistry, pressure and temperature appeared to be compatible with life, as far as the rogue was able to judge.

Of course, the rogue was still comparatively young in time, lacking experience, and even with the absorbed patterns that were all that was left of Cliff Hawk embodied in its own systems it had no very deep understanding of biological chemistry.

An attractive feature of the cave, for the rogue, was the presence of residual ionizing radiation, coming from the surrounding rock, the very atmosphere inside the bubble, above all from that queerly glowing misty cloud of light. To the rogue this was a welcome source of energy to be tapped at need. It did not know that to Molly Zaldivar it was a death warrant.

When the girl woke up she cried out, peered wildly around the pit, saw the hovering form of the sleeth and tried to leap up and run away. There was nowhere to run. She slipped on the curving stone, black-stained and slick with seeping water, and lay there for a moment sobbing.

The rogue attempted to form patterns of sound to communicate with her. It was difficult. Even using the transflection fields of the sleeth, modulating them as rapidly and precisely as it could, there was no handy substance for it to vibrate; all it could produce from the shaking of the metallic substance of the nearby tower and steps was a harsh metallic scream, incomprehensible to Molly.

The rogue was, for some picoseconds, baffled. Its persona, the sleeth, had no vocal chords, no mechanism at all for making signals in air. But the rogue was more than the sleeth.

It extended a quick plasma finger and probed the tower itself. There, rustless and fresh as the day it was installed, was a bank of instruments; the rogue hunted among them until it found one that possessed a flexible membrane. It spoke through it:

"Molly Zaldivar. You need not be afraid because I love you."

The girl's involuntary scream echoed strangely from the high rounded walls. The rogue floated patiently above her, waiting.

Trembling and unsteady on the slick slope, she climbed to her feet and stared up at it. With a great effort she whispered: "What are you?"

"Cliff Hawk is a part of me. Call me Cliff Hawk."

"I can't! What sort of monster are you?"

"Monster?" The rogue examined the term carefully, without comprehension. It activated the distant tinny speaker to say: "I am your lover, Molly Zaldivar."

The girl's face wrinkled strangely; but Molly had herself under control now. She smiled, a cold, white and terrible smile, ghastly in that shadowless light. "My lover!" she crooned. She paused in thought. "I am lucky," she said bravely. "What girl ever had so mighty a lover?"

The rogue could not recognize near-hysteria. It was puzzlingly aware that the radiance from the organized matter called Molly Zaldivar was not the gentle, warming glow of rose or pearl that it had wanted to evoke; but it knew far too little of human beings to comprehend what Molly was trying to do. In its sleeth body it dropped gently toward her, meeting her as she rose, and allowed her quivering fingers to stroke the fine, dense fur.

"If I love you," she whispered tremulously, "will you help me?"

Powerful floods of energy thundered through the rogue, mighty and irresistible; it was a species of joy, a sort of elation. The rogue allowed its sleeth body to drop to Molly's feet.

"I'll give you everything," it swore through the distant tinny speaker.

The girl was trembling violently, but allowed the vast black talons to draw her quivering body against the fur. The rogue sensed her terror and tried to reassure her. "We are safe here, Molly Zaldivar. No enemy can reach us."

Her fear did not abate. "I fell in

the water," she whispered. "I'm damp and cold. . . ."

The rogue made the sleeth's fur warm for her; but still she was afraid.

"I'm a human being," she whimpered. "I'll be hungry. Thirsty. I must have food or I'll die!"

From above then the tinny rattle of the overtaxed speaker shouted: "I'll bring all things you need. But we must stay here, where we are safe. . . ."

The rogue arranged the pit for her comfort, dried the rock with a searing beam from the sleeth's transfection fields, dragged down a cushion from the tower to make her a resting place. It put her shivering body on it and reached into her mind to erase her haunting terror.

Presently she slept.

The rogue went foraying in the body of the sleeth. It rose to the top of the pit, squeezed its way through the long passages, climbed into the night. It needed only moments to arrow the score of miles to the nearest human dwelling. It dropped out of the dark onto the little house, crushed a four-legged creature that barked and howled at it, ripped through a wall and seized a refrigerated box filled with human food.

The little box in its talons, it dropped again into the side of the mountain and paused to consider.

Molly Zaldivar had been in an agony of terror; that much it realized. Why? The rogue, which shared with all intellects the homomorphic trait of considering itself the proper matrix on which all other creatures

should be modeled, could not believe that it was its own self which frightened her; no doubt it was its proxy, the sleeth. From the dim stirrings of Cliff Hawk's mind it realized that those great blind eyes, those vengeful talons were likely to be frightening to smaller creatures. It determined to leave the sleeth and visit her in another form.

Under the lip of the cave, where the rogue had abandoned it, the hulk of the robot lay tossed aside. The rogue entered into it, flexed its transcience fields, lifted it into space and in it, bearing the refrigerated box of food, retraced the long winding route, sank down through the frozen light of that misty opal sun. . . .

Molly was awake.

The rogue, wearing the egg-shaped body of the robot, brought itself up sharply and hung there just out of sight, the food box dangling from its effectors. Molly was no longer stretched out asleep on the cushions it had brought for her. She was in the spidery metal tower, crouched before the bright, ancient control panel, fumbling frantically with the radio. The rogue listened through the ears of the robot:

"Calling Monitor Quamodian!" the girl whimpered. "Oh, please! Andy! Anyone!"

The rogue knew that the radio was dead; it hung there, letting her speak.

"Molly Zaldivar calling Monitor Quamodian! Andy, please listen. I'm trapped in a cave. That thing — the rogue star, whatever it is — has me trapped here, because it says . . . it says it loves me! And it won't let me go."

Her head fell forward, her hand still on the useless switch of the radio. She sobbed. "Oh, please help me. It's a hateful, horrible thing — a monster. . . . I — I tried to deceive it, to make it let me go by pretending to — to like it. But it won't. . . ."

The rogue in the persona of the broken transcience robot, sank slowly toward her, burdened with the box of food that it had brought for her. It was struggling in its complex mind with concepts for which it had no names, and little understanding. *Betrayal*.

*Anger. Revenge.*

### XIII

The Reeper's deepset eyes glowed like a robot's plasma patch. "Make this thing move, Quamodian!" he roared. "I want that critter for my trophy room!"

Andy Quam hissed in annoyance, "Be still, Reeper! I'm not interested in your game collection. It's Molly Zaldivar's life that concerns me." He bent to the panel of his flyer. He was indeed making it move, as fast as he could, cutting out the autonomic pilot circuits and racing the craft along on manual override. It was a flimsy enough bolt to hurl at a creature that ranked with stars for majesty and might — a simple atmosphere flyer, with a few puny transflection beams that could be used as weapons. But it was all he had.

They arrowed through the chill morning air, along the road toward the misty blue ridge. Over the Reeper's hill a smudge of smoke still lifted and wandered away with the

wind. Quamodian's eyes were on it when his transceiver clicked into life. For a moment the speakers hummed and crackled, but there was no voice. Andy Quam scowled with annoyance and leaned to listen.

"What is it?" growled the Reeper, brows knotted under their blond tangle of hair.

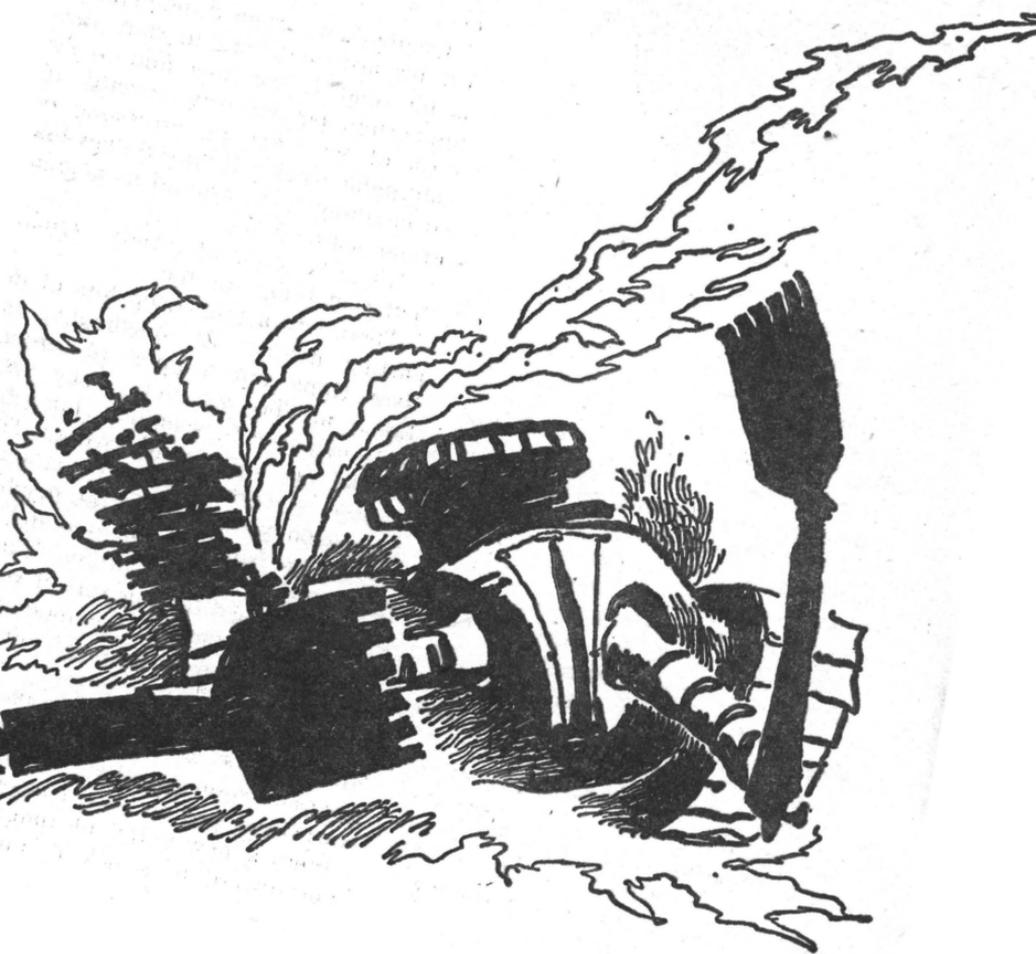
"I don't know," said Andy Quam. "Nothing. Listen."

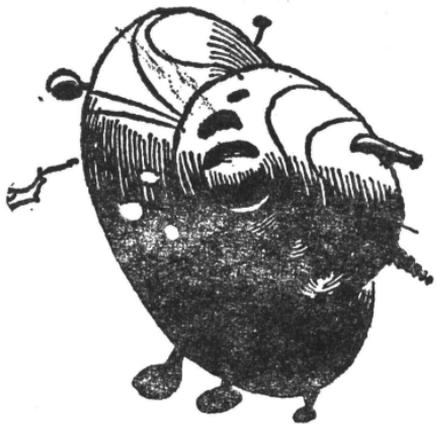
But there was no voice, only the questing carrier sounds. For a moment Andy Quam thought it might have been Molly, and the thought lit his mind with a living image of her red-glinting hair, her haunting oval face, her laughing eyes. But it was not her voice that came from the speaker.

Something was trying to talk to him. An uncanny voice — slow, toneless, laborious. It chilled him with alarm.

"What's that?" demanded the Reeper again. "Quamodian, what are you doing?"

"Be still!" Andy Quam touched the dial, trying to bring the sound in more clearly. It was not a robot's clipped and penetrating whine. It lacked the mechanical precision of an automatic translator. The scattered sounds he made out were not from the universal signal-system of the intergalactic society. They were Earth-English. Yet they were somehow alien, monstrously inhuman. It was not a message; it was more like some great, tortured soliloquy, a voice that rambled on and on, brokenly and angrily. The distorted and intermittent signal had no clear message, but it filled Andy Quam with fear.





Climbing slightly, he pushed the flyer to transsonic speed. The narrow black ribbon of road unreeled. Higher hills flashed beneath him. A building flickered. The leaning smudge of smoke was a momentary blur.

Something crept along the road below him.

The Reefer caught Andy Quam's shoulder. "It's that machine!" he bel-lowed. "An old Plan of Man earth-mover — the rogue's using it. Blast it, man! Drive him out into the open!"

Quamodian shrugged the great paw off his arm and bent to stare down at the road. It was huge and clumsy, lumbering ponderously toward the crest of the ridge on grotesque old caterpillar tracks. It waved claw-ended handling forks around its angular, orange-painted cab.

"Flyer," ordered Andy Quam, "pot that thing for me."

There was a faint deep hiss of departing missiles as, obediently, the flyer flung out a burst of landing flares at the machine. They were not meant as weapons, but they would do a weapon's work. They missed, stitching a row of pits across the pavement in front of the machine.

"Sorry, Monitor Quamodian," the flyer apologized mournfully. "I'm not really designed for this sort of work."

"Get its tracks!" Quamodian ordered. "Use all the flares if you have to — stop it!"

The machine plowed recklessly through the shower of flame. Quamodian spun the flyer around, returned it, passing low over the machine; a new spray of flame darted out toward it, struck it, and clung.

The machine slid sidewise, seeming to float on that pool of fire, and Andy Quam saw a broken track flap wildly.

The machine stopped. At a word, the flyer took over automatic control and hovered; the two men looked down.

The machine lay, silent and broken, on the pitted road, while choking fumes rose from the remnants of the flares. Andy Quam turned to the Reefer and demanded: "I've shot it up for you. It doesn't seem to have accomplished a thing. Now what?"

"Now go on!" roared the Reefer. "You've just killed one of the rogue's tools, we haven't touched the beast itself yet. Go on and dig it out!"

Quamodian shrugged, was about to order the flyer on. . . .

Then disaster struck.

The klaxon hooted. Red signals blossomed in holographic solidity on the panel. The bubble marker circled a flying object, coming low and fast from the woods behind. It shone with a pale but queerly painful greenish radiation.

"It is the space creature called the sleeth, Monitor Quamodian," reported the flyer. "Indications are that it is under the control of the intellect being you seek."

The Reefer was briefer and more furious: "That's my critter!" he howled. "Careful! It can eat up a dozen like us any day!"

"Careful!" growled Andreas Quamodian. "Let your animal be careful! Flyer, got any flares left?"

"Two racks, Monitor Quamodian," the machine reported.

"Smash that thing with them!"

The jet leaped away — but, queerly, the flares failed to detonate. Their tracer trails ended in faint red sparks near the oncoming object. "The sleeth's blanketing them," snarled the Reefer. "You'll have to do better than that!"

"Fire what's left!" shouted Andy Quam, and slapped down the manual override, took control of the little flyer's translector beams. He spun them into high, reached out with their pale, deadly fingers toward the sleeth, which was growing huge before him, the second flight of flares dimming to darkness just like the first.

A sudden lurch threw him against the control panel. "Mal-function, Monitor Quamodian," the flyer jerked out. "Pow-er fail-ure — "

The propulsion field was failing even as the reaching transflection beams were paling and dying. The greenish glow of the sleeth brightened suddenly; the flyer's klaxon tried to blare, succeeded in rattling a crash alert.

"Hold on!" bawled Quamodian. "We're going to hit — "

And they did; they hit hard, the emergency shields failing to function, hard enough to jolt men like dolls in a coconut shy, struck by a thrown ball. The sleeth roared over them and halted. It was a terrifying sight, horse-sized, catlike, tapered muscles bulging under the sleek black fur. Blazing green, enormous and cold, its eyes bulged blindly out at them.

The Reefer pulled himself together and croaked. "They — they can kill us, Quamodian. Those eyes!"

Quamodian didn't need the warning. There was something in those eyes that was reaching into his mind, freezing his will, icing his spine and muscles. He struggled to make his limbs obey him, and reached for the little hand weapon he kept under the seat of the flyer; but the icy, penetrating numbness had gone too far. He touched the gun, almost caught it, dropped it and sent it skittering across the tipped floor of the flyer; and the sleeth hung there, staring blindly down through the faint shimmer of its transfection field, just touching a fallen tree with one horrendous claw. . . .

The great blind eyes seemed suddenly smaller. The frightful currents of cold that had drenched Andy Quam's body seemed somehow to recede. He could not move, he was not his own master again; but at least, he thought, he was not dying helplessly any more; for some reason the creature had halted the poisonous flow of radiation that had drained the flyer's power banks and nearly drained their lives.

The Reefer gasped hoarsely: "Knew it! Knew it couldn't kill its master — " And incredibly, haltingly that big yellow-haired bear of a man was forcing himself to stand erect, lurching with agonizing slowness to the door, dropping to the ground and willing himself to stand erect again, next to the great sleek bulk of the creature from space.

And the forgotten radio speaker of the flyer abruptly rattled harshly and spoke: "Go away, Quamodian. I give you your life — but go!" It was

the voice he had heard before, inhuman, unalive, terrifying. Andy Quam fell back, finally drained of the last of his strength. He saw the great talons of the sleeth curve protectingly around the Reefer, clasp him and hold him; saw the great creature surge into the air and away, carrying the Reefer as it disappeared with fantastic speed toward the gap in the hills where the faint smudge of smoke still hung.

And then he felt his flyer rock slightly, twitch, and then slowly and painfully lift itself into the sky. It was not at his order that it flew, but its destination was not in question. It rose to a few hundred feet, turned and headed back for the town.

The hunters had failed. One was now himself a captive, being borne at transsonic speeds toward the cave where the rogue flexed its new powers, practiced at its new repertory of emotions and grew. One was helplessly returning the way he had come. And the girl they had tried to rescue was farther from Andy Quam's help than the farthest star.

Of one thing he was sure: He had been defeated. His mere human strength had not even sufficed to get him past the rogue's puppet, the sleeth. He would have no chance against the might of the rogue itself.

#### XIV

The rogue, wearing the borrowed body of the robot inspector, sank slowly through the cold opal light of the great bubble under the earth. The refrigerated box of food, held lightly in its transfection fields, seemed sud-

denly too heavy to carry, and the rogue let it drop.

It crashed to the seep-stained floor in a thunder that rolled around the cavern, and split open, the little particles of human food spilling out. The noise startled Molly Zaldivar. She looked up at the robot form, her face shocked and hollowed in that icy, lifeless light. A scream blazed through the echoing thunder.

For a moment, seeing the gleaming black egg-shaped body of the robot settling toward her, Molly had had the wild hope that it was the familiar robot inspector from the Starchurch, somehow come to rescue her, perhaps with Andy Quam right behind. But the hope did not last long enough even to show in the terror on her face. She got up stiffly, abandoning the useless radio, and climbed slowly down the spiral steps toward the bottom of the rock bubble.

The sweet high voice of the robot, modulated by the unpracticed mind of the rogue, spoke to her:

"Molly Zaldivar. Why did you speak falsely to me?"

She did not answer. There was a pause, while the rogue pondered its conflicting impulses. "I will not harm you," it droned at last. "You need not be afraid . . . because I love you, Molly Zaldivar."

Her face twisted, and she lifted her hands to the floating robot. "If you love me, won't you let me go?" she cried.

"Because I love you . . . I can never let you go."

She shouted with all her strength: "Then I hate you, monster!" Her voice was hoarse and despairing; de-

spairing, too, was the angry green radiance that surrounded her in the sight of the rogue, colors and patterns that spoke to him of fury. It left her standing here and soared away, wheeling around the spidery tower. Suddenly it felt the clothing of the robot that it wore confining; it slipped out, left the robot hanging mindlessly on its transflection fields and, once more a nearly invisible cloud of stripped electrons, perched on the metal rails just below the pale, milky mist of light that hung in the center of the sphere.

It spoke to her through the robot: "Molly Zaldivar, I am strong and you are weak. Your hatred cannot harm me. True?"

She shook her head without words, utterly weary.

"But I will not harm you . . . if I can avoid it, Molly Zaldivar. We will stay here . . . until you love me."

"Then I'll die here," she said tonelessly.

The rogue pondered the problem for many nanoseconds. It said at last, "Then I shall absorb you as you die. You will be a member of me, like Cliff Hawk."

The girl said, weakly, fearfully then with gathering rage: "Oh please — you mustn't! You say you love me — heaven knows what you mean by that! — but if it means anything at all to you, you must let me go."

"Never, Molly Zaldivar."

"You can't keep me!"

"I can, Molly Zaldivar. I am stronger than you."

She shrieked: "But there are things

which are stronger! Almalik! Almalik is stronger than you. And he will find you yet, even hiding here."

The rogue searched its memory patterns for a referent for the term "Almalik." Almost hesitantly it said, "What is 'Almalik'?"

"Almalik is the spokesmen star for Cygnus. Almalik commands multitudes — fusorians and men, robots and stars. His multitudes will find you, here or anywhere. And even if you were as strong as Almalik, you are all alone while he has legions!"

The rogue's plasma rippled in thought. "I have met Almalik's robot," it said at last. "It is now a member of me."

"One robot! Almalik owns tens of thousands."

The rogue did not reply. Thoughtfully it clung to the metallic rail of the cryptic old device, studying the girl. She was exhausted now, the green fire of her fury dying, waiting for a move from the rogue.

To the rogue, painfully learning the uses of those human qualities called emotions, Molly Zaldivar was a most confusing stimulus. There was enough of the residual identity of Cliff Hawk in the rogue to give force and direction to its feelings about Molly; it possessed attitude sets which could have been called "pity" or "love." The rogue recognized that the girl was small, and weak, and mortal and afraid; it even felt some sort of impulse to ease her wild terror, heal her pain and rage. It simply had no effectors capable of the job.

At the same time it recognized that in a sense she represented a threat. The polarization of the other human,

Andreas Quamodian, toward her was certain to produce an attempt on his part to interfere again. The rogue did not estimate that the attempt would be successful, but it might be an annoyance; and it took the precaution of detaching some parts of its attention to invest its creatures the sleeth and the handling machine, deploying them as scouts between Wisdom Creek and the mountains.

But there were puzzles the rogue could not solve.

The answers to some of them were far from this cave. It detached itself from its high iron perch in the opal mist and left the girl, watching and trembling.

The rogue sent its awareness out into the universe. It sensed the tangle of dark hills above the bubble-cave, stretched, expanded and encompassed cubic miles of space with its consciousness. It observed the bright anger and fear of the human creatures from whom it had stolen the box of food, studied the sleeping presence of Andreas Quamodian, observed the deployment of its own tools, the sleeth and the machine; and it reached farther still.

It reached out until it grasped the roundness of the planet Earth, turning between its bare moon and the red, swelling sun, the sun that had struck at the rogue in those first moments of its existence.

The star was still angry, still roiled and troubled. The rogue studied it carefully, but avoided reaching out to it; it had not been harmed by that triple bolt of energy that had been the sun's riposte, but it did not con-

sider it advisable to provoke another.

The rogue expanded again, reached out its perceptions to the stars. It found them to be suns like this sun, single, coupled, multiple, burning all across the dust and darkness of the galaxy — some tinier than Earth's cold moon, some mightier than Earth's sullen sun. Even beyond the stars it peered, to find a bleak and empty vastness of infinite space and cruel cold. Then in the eternal floods of blackness it perceived the glowing, tiny lights of other galaxies. Ill-formed and unfeared, the rogue studied the numbers and varieties of galaxies for a time, then stored them in its memory and returned to nearer stars.

Amalik.

It was time for the rogue to probe into the meaning of the term "Almalik."

There was no problem in finding Almalik; in the captured impulses of the robot inspector was a clear understanding of where Almalik lay in space, and the rogue turned its attention there.

And there was the might of Almalik, the splendor of his thirteen suns, all greater than the small Earth-star that had tried to destroy the rogue. It counted them, studied their spin, tasted the energies they hurled into the void. Six splendid double stars arranged in hierarchically greater doubles; one single sun with many wheeling planets. The thirteen suns radiated many colors in the optical bands of energies, but the rogue also saw that they shared a common golden glow of unity. . . .

And Almalik felt the rogue's fleeting touch.

*Hello, little one.*

Almalik did not speak. Least of all did he speak in words; but he sent a signal which was greeting and wry pity at once. The signal was powerful but soundless, serene and slow.

The rogue listened impassively, waiting for more.

*Little one, we have been looking for you.* The silent voice was mightier than thunder, gentle as — what? The rogue had only an imperfect analogy: gentle as love. *We have received information about you. You have destroyed patterns we cherish. You have damaged entities who were part of us. Little one, what do you wish?*

The rogue considered the question for some time. It framed an answer with difficulty: *Knowledge. Experience.* And then, after a pause, it added, *Everything.*

The multiple suns of Almalik glowed serenely golden; it was almost like a smile. From behind the round Earth, behind the many thousand stars and dust clouds, the signal came: *Knowledge you may have. Ask a question.*

The rogue asked it at once: *Why will you destroy me?*

The soundless voice was cool, aloof, immeasurably sure. *Little one, we cannot destroy you or any sentient thing.*

Green anger filled the rogue. It was a contradiction, Almalik's statement opposed to Molly Zaldivar's. It had not known of the existence of lies until Molly Zaldivar told it she loved it, then showed she did not. Now it knew of lies, but little of mortal error; the contradiction seem-

ed to mean a lie: a lie meant enmity. Red hatred froze the rogue. Sudden fury shook its plasma violently.

It dropped from its great, tenuous vantage point, contracted to a swirl of luminescence, sank back into the mountain just as the planet was turning that part of its surface to the angry rising sun. The splendid suns of Almalik were gone. For a while.

The rogue floated down to Molly Zaldivar. In the high, singing voice of the robot it cried: "We are leaving this place. Almalik has lied to me. I hate him now."

She lay spent and shuddering on

the torn cushions, staring at the rogue. It said:

"I hate Almalik. Almalik thinks me small and helpless, and will destroy me if he can. But I am growing. I will grow still more. I will grow until I am mightier than Almalik."

White and haggard in the dead opal light from the ancient cloud, the girl's face had no expression. She lay hopeless and uncaring, waiting for what the rogue had to say.

"I shall destroy Almalik," it sang in the robot's clear whine. "Then you will love me, Molly Zaldivar. You must. Or I will destroy you too."

## TO BE CONCLUDED

Announcing —

# THE GALAXY AWARDS

Galaxy Publishing Corporation announces the establishment of annual awards for excellence in science-fiction writing. Every story appearing in the magazines *Galaxy* and *If* in issues dated 1968 will be eligible for the first series of awards, which will consist of:

1968 Galaxy Award  
\$1,000.00

for the best story of the year. Honorable Mention will receive \$250; the next runner-up will receive \$100.

The procedure by which the winning stories will be selected is intended to reflect the judgment of the readers of *Galaxy* and *If*. Principal reliance will be placed on a mail survey of a randomly selected group of subscribers to the magazines in making the awards. Questionnaires asking for preferences will be circulated to these subscribers approximately one month after the December issues appear.



Dear Editor:

Your March editorial is a call-to-arms for the old loyal. It evokes questions beyond its central target. For many years science fiction provided a genre for the imaginative, sophisticated amateur, be he physicist, biologist or anthropologist. In this perspective a new wave of stylistic experimentation does seem a threat. That fresh outlook of the talented amateur might be replaced by the bag of tricks belonging to the less imaginative but more style-conscious professional.

But is this an illusory battle? We may be Don Quixotes, you and I. Perhaps the grand old days are gone. Five years ago I finally put science fiction aside — gone were the days of the old *If* magazine; the genre had become totally engulfed by stale gimmickry. If all we have are a few rehashed space operas there is nothing to be lost by experimentation — let competent professionals usurp the field from tired plot-line permutaters.

But evidently I am way behind. There is the new *If*. Not quite up to par perhaps, yet showing a spark: Mr. Redd and perhaps Mr. Kyle. Your editorial shows the spirit but your magazine does not really back you up. Maybe it is the times. Today's college professor is more ac-

tive in the world. Perhaps he doesn't have the time to sit back and wonder what would happen if . . . — Thomas E. Hukari, 3936 University Way, Seattle, Washington.

\* \* \*

Dear Editor:

FANS DOWN UNDER? Well, it rather depends on which way you think is *up*, doesn't it?

All the same, I enjoyed Lin Carter's article on Australian fandom. Believe me, nothing anywhere near as sensible (or entertaining) has appeared in the Australian press on the subject — and lately we have suffered from a rash of journalists "discovering" us.

An excellent article, yes, but just a few unfortunate omissions — which, with your indulgence, sir, I would like to rectify.

All credit, certainly, to John Foyster for his major role in the current renaissance here. Fortunately for us, John did not leave for England as planned: instead he has become a father.

Captain A. Bertram Chandler is not exactly a ship's officer: he is master of the m/v *Pateena*, which plies between Sydney and Hobart (and a really nice bloke, too).

Three people who, in various ways, are very much part of the Australian sf scene are Lee Harding, Don

Tuck, and Graham Stone. Lee Harding is certainly one of our best young writers; over the last seven years he has been published steadily in England and most European countries, and he is currently writing story after story of really first-class quality. A name to watch.

Don Tuck is Australia's solitary Hugo winner (though I understand a certain local fanzine went close to it this year). Don lives on the glorious isle of Tasmania (Australia is off the coast of Tasmania) and is one of the world's best sf bibliographers. Graham Stone, once perhaps Australia's best-known fan, has now retired from the mainstream of fandom, but still runs the Australian SF Association, which is devoted to bibliography.

Over Easter 1968 there will be a SF Conference in Melbourne, and in 1969 the Eighth Australian Convention. There are moves to organize a club in Sydney, and interest seems to be increasing everywhere. Some are even suggesting a World Convention here. Stranger things have happened . . . — John Bangsund, Editor, *Australian Science Fiction Review*, 11 Wilson Street, Ferntree Gully, Victoria 3156, Australia.

\* \* \*

Dear Editor:

Ye gods! I just finished the February issue of *If* and I think I'm going to cry. Not that the magazine wasn't good, quite the contrary. *The Petrified World* is one of the best Sheckley stories I've read, and that is saying something.

Maybe I shouldn't be discouraged by people writing letters in praise of poor taste, but every now and then after spending an enjoyable hour-and-a-half on your magazine I wonder if I should go on and read the *Hue and Cry*. And then I always

read it, and right in step with the title, I "Fume and Cry". — David T. Malone, 815 Long Ridge Road, Stamford, Connecticut.

\* \* \*

Dear Editor:

To Arthur C. Clarke's recent query on the Wellsian tale, "The Anticipator," the readers' response was predictably immediate and accurate. Now I wonder if your audience could help me: a fellow sci-fi fan has interested me in a novel whose title and author neither of us knows.

The book concerns a man of tomorrow called Horn, wrongly branded a criminal, who traverses the Universe in a system of giant tubes in hopes of exonerating himself. And throughout the tale drifts an exotic philosophy, supposedly not of this world, but which finally turns out to be the reflections of an 8000-year-old Oriental! (Or so my friend sez — shades of Fu Manchu!)

Sounds like a cross between Rohmer and Brackett but I dunno. Can any *Iffer* identify this story?

And oh, yes . . . let me be the millionth person to ask: When are we going to get some new Heinlein stories? Don't tell me the Master's built his new house as a tesseract, and an earthquake — no, can't be.

Also, how about a new Pohl story? And I don't mean fashion commentary! — Rick Norwood, 4300 Ferguson Drive, Ashland, Kentucky 40001. • We asked Heinlein that ourselves the other week, visiting his new (and roughly 80% completed) home in California. He smiled blandly and answered not. But we continue to have hope. For Heinlein, this is. For Pohl, not so much hope; that fellow keeps pretending he's too busy editing to write, except when he gets somebody else to do the work, as in *Rogue Star*. — Editor.

# What Would YOU Do About Vietnam?

Assume you are being asked for advice. Assume the people who ask you are the President of the United States, the Congress, the State Department, the Joint Chiefs of Staff — anyone and/or everyone who has any decision-making authority concerning American involvement in Vietnam. Assume they want one suggestion from you . . . and assume they will follow it.

What would you tell them to do?

Don't tell them. Tell us. We will take the most provocative and seemingly productive suggestions received, submit them to problem-solving analysis, and present the results in a forthcoming issue of *Galaxy*.

## The Rules

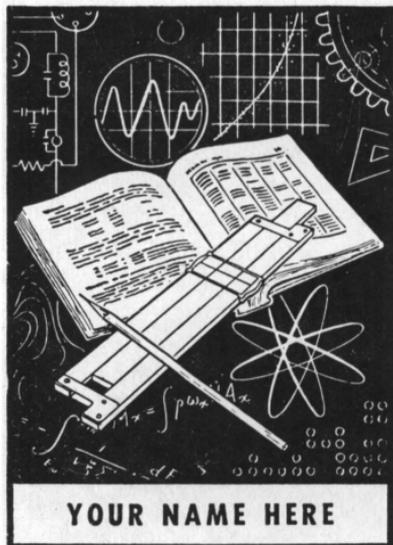
1. Anyone is eligible to enter, and may submit as many entries as he likes. Each entry must be on a separate sheet of paper, one side only, and include your name and address. All entries will become the property of *Galaxy Publishing Corporation*. Please limit yourself to a maximum of 100 words for each entry, preferably in the form of (a) your suggestion, (b) followed, if you wish, by a statement of why you think it worth doing.

2. Suggestions may be on any area of American involvement in Vietnam — ways of winning the war, ways of bringing about a peaceful settlement, whatever you think would be of value.

3. Five prizes of \$100 each will be awarded to those entries which, in the opinion of the judges, best deserve them. In the event of duplicate suggestions, the first entries received will get the prize. Judges will consist of, or be appointed by, the Editors of *Galaxy Publishing Corporation*. Winners will be notified by mail, and their names will be published in a forthcoming issue of this magazine.

4. Send your entries to: "What Would You Do About Vietnam?", *Galaxy Publishing Corporation*, 421 Hudson Street, New York, N.Y. 10014. Entries must be received by July 4th, 1968, to be eligible for prizes.

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