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OCTOBER 1967



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**Cover by CASTELLON from OCEAN ON TOP**

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## WHAT SPACE IS FOR

Not long ago, one of our satellites was put to work photomapping part of Arizona — something that satellites can do rather better than any other means known to man, if only because a single exposure photographs a whole state at that moment. (Conventional aerial photographs have to be patched together, and that's a mess, when you've got a piece photographed at 7:00 AM that should match up with one photographed at noon. But how? The angles of the shadows are different; the appearance is different; the information is there, sort of, but it takes a highly trained analyst to get it out.) In the northwest corner of Arizona the picture revealed a long, thin line.

A geological fault! — crowed the photo-interpretation crew, a fault where no one had ever detected one before! And so teams of geologists hotfooted it out to the indicated point, because a geological fault is not just a point of interest, it is more often than not a place where minerals can be found. Unfortunately no minerals were found in this case, because the "fault" turned out to be a range fence, photographed from orbit.

The way we heard about that was listening to one scientist telling a joke on some other scientists — and as a matter of fact, the reactions were probably pretty funny when they reached their "fault" site. But ever and above the anecdotal value of the incident, it illustrates some-

thing about the capacities of our satellites. We can see a lot from space; and we can report it back to Earth, very quickly, very quickly and reliably.

A couple of days later, the Near East erupted into war; and about a week later, the United Nations erupted into its own kind of war, a war of words, with much talk about whose troops were where and whose aircraft carriers were doing what to whom. Listening to the bland and barefaced statements of some of the diplomats involved as they appeared on television, we couldn't help thinking of those recon satellites . . . and couldn't help wishing we had a few more of them in orbit, openly reporting to the world what they observed with their electronic eyes.

No doubt sovereign states do have the privilege of telling flatfooted lies when they want to — anyway, the custom is sanctioned by several thousand years of precedent — but it seems pretty childish to lie about something that can be readily checked.

No wonder all those U. N. delegates looked so haggard! Probably they were thinking about what a little "open sky" surveillance can do to diplomacy over the next few years — and realizing that technological unemployment may be reaching out to claim another batch of victims!

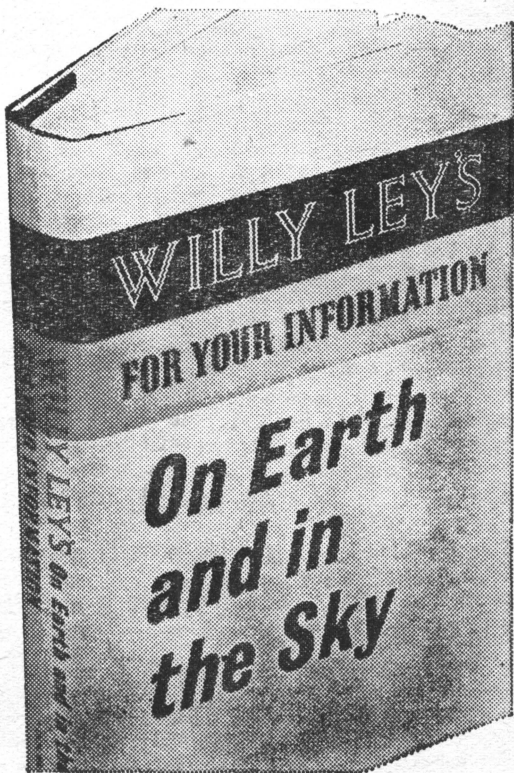
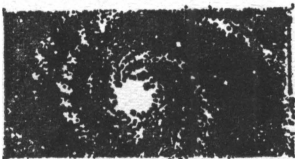
— THE EDITOR



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# OCEAN ON TOP

by HAL CLEMENT

Illustrated by CASTELLON

*My job was simply to find and  
punish energy wasters — even  
at the bottom of the ocean!*



I



I've never met a psychiatrist professionally and don't much want to, but just then I rather wished there was one around to talk to. It wasn't that I felt like cracking up; but when you have something profound to say, you like to have it ap-

preciated, and it would have taken a professional really to appreciate the remark I wanted to make at that moment.

There's a word for people who can't stand being out in the open with crowds staring at them, and there's another one for those who get all in a dither from being cramp-

ed into a small space. They're both common enough ailments, but I would have liked to place a bet that no one before had ever suffered from agoraphobia and claustrophobia simultaneously.

With a name like mine, of course, I've never exactly sought the public eye, and usually I resist the temptation even to make bright remarks in company. Just then, though, I was wishing there was someone to hear that diagnosis of my feelings.

Or maybe I was just wishing there was someone.

I couldn't hear the storm any more. The *Pugnose* had broken up almost where she was supposed to. She had hit the heavy weather just where the metro office had said she would, and her fuel had run out within five minutes of that time — *that* even I could have predicted; trust a Board boss to make sure that no more stored energy than could possibly be helped went down with her. There was some battery power left, though, and I had kept a running Loran check until she drifted as close to Point X as she was going to. This turned out to be about half a mile. When I saw I was going on past the key spot I blew the squibs, and poor little *Pugnose* started to come apart amidships.

She'd never been intended for any other purpose, and I hadn't fallen in love with her as some people might have, but I didn't like the *slight* just the same. It seemed wasteful. I didn't spend any time brooding over it, though. I ducked into the tank and sealed it and let nature take its course. By now, if static

pressure instruments could be trusted, the tank and I were eight hundred feet down.

It was very, very quiet. I knew water was going by because the depth was increasing about two feet a second, but I couldn't hear it. Any loose pieces of the boat were long gone, floatables being scattered over the Pacific and sinkables mostly preceding me toward the bottom. I'd have been disturbed as well as surprised to hear anything solid bump against my particular bit of wreckage. The silence was good news, but it still made me uncomfortable.

I'd been in space once — a waste investigation at one of the Board's fusion research stations — and there was the same complete lack of sound. I hadn't liked it then; it gave me the impression that the universe was deliberately snubbing me until the time would come to sweep up my remains. I didn't like it now, though the feeling was different — this time it was as though someone were watching carefully to see what I was up to and was trying to make up his mind when to do something about it. A psychiatrist wouldn't have been much help with that notion, of course, because there was a good chance that it was true.

Bert Whelstrahl had disappeared in this volume of water a year before. Joey Elfven, as competent an engineer and submariner as could be found on Earth, had been lost track of ten months later in the same neighborhood. They were both friends of mine, and I was bothered by their vanishing.

Six weeks ago, Marie Wladetzki had followed the other two. This was much worse from my point of view. She was not an investigator, of course — the Board, as personified by its present boss whose name I'll leave out of this account, doesn't believe women are objective enough — but that didn't mean she couldn't be curious. Also, she'd been as interested in Joey as I was in her. Being Marie, she hadn't actually broken the letter of any regulations when she took out a Board sub at Papeete, but she most certainly strained the spirit of most of them. She hadn't said where she was going and had last checked in between Pitcairn and Oejo a thousand miles from where I was now sinking with the remains of *Pug-nose*; but no one who knew her had any doubts about where to look first.

The boss was human enough to volunteer me for the look-see. My own inclination would have been to do just that — take a sub and see what had happened; but brains won out. Bert's disappearance could have been an accident, although there were already grounds for suspicion about the Easter Island area. Joey's vanishing within half a dozen miles of the same spot *could* conceivably have been coincidence — the sea can still outguess man on occasion. After Marie's loss, though, only a very stupid person would have gone charging into the region any more obviously than he could help.

Therefore, I was now a thousand feet below the top of the Pacific

and several times as far above the bottom, camouflaged as part of a wrecked boat.

I didn't know exactly how much water was still below me; even though my last fix on the surface had been pretty good and I'd acquired an excellent knowledge of the bottom contours north of Rapanui, I couldn't be sure I was going straight down. Currents near an island are not the smooth, steady things suggested by those little arrows on small-scale maps of the Pacific.

I might, of course, have tried echo-sounding, but to control that temptation I had no emission instruments in the tank except floodlights; and I had no intention of using even those until I had some assurance that I was alone. See without being seen was the current policy. The assurance would come, if ever, very much later, after I had reached the bottom and spent a good, long time listening.

In the meantime I watched the pressure gauge, which told how the water was piling up above me, and the sensors which would let me know if anyone else was using sonar gear in the neighborhood. I wasn't sure whether I wanted them to react or not. If they did, it would be progress; I'd know someone was down here who shouldn't be — but it might be the same sort of progress the other three had made. It might not be grounds for too much worry, since fifteen or twenty feet of smashed hull would show on any sonar scope for just what it was, and supposedly the tank inside would

not. Of course, some sonarmen are harder to fool than others.

I could look out, of course. The tank had ports, and a couple of them faced the opening where *Pug-nose's* stern used to be. I could even see things at times. There were flecks of phosphorescence drifting upward and streaks of luminosity not quite bright enough to identify in color which sometimes whipped past and vanished in the gloom and sometimes drifted for minutes in front of a port as though they marked the position of something which was trying curiously to look in. I was tempted — not very strongly, but tempted — to turn on my lights once or twice to see what the things were.

The wreckage was tumbling slowly. I had been assured that this wouldn't happen — that weight had been distributed so that the sharp prow would always point down and leave the tank on top when I hit bottom — but there was no one to complain to. There also seemed to be nothing to do about it, and I began to wonder just what I could accomplish if the tank wound up in bottom ooze, or even on hard rock, with the wreckage on top of it. The thing had little enough maneuverability as it was. With very much extra weight, dropping ballast might not be enough to start me back toward the surface.

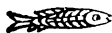
I couldn't shift my own weight enough to affect the tumbling at all. The tank's inside diameter was only about six feet, and much of that volume was taken up by fixed apparatus.

Some of my friends have shown a tendency to solve problems by doing nothing until the last possible moment. I've outlived most of them. Once I'd noticed the tumbling, it took me about five seconds to run through the possible actions. I could cut loose from the wreckage right now, exposing the nearly spherical form of the tank to anyone who was watching with a good sonar — though no one had been so far. I could turn on the lights so as to see the bottom before I hit and, hopefully, still separate in time if it proved necessary; that would also be inconsistent with the concealment plan. I could sit and hope I would land in the right attitude in spite of the tumbling — that is, do nothing. That might mean that I would have to argue for my life with the laws of nature, which are harder to convince than most human opponents.

The first two choices meant — well, maybe Bert and Joey and Marie were still alive. I reached for the light switch.

I didn't touch it, though. All of a sudden I could see the bottom anyway.

At least, it looked as though it ought to be the bottom. It was in the right direction — I could still tell up from down — and it seemed flat. And it was visible.



II



I didn't believe it, of course. I'm a very conservative person who likes even his fiction realistic, and this was too much to swallow. I had



to stop reading *The Maracot Deep* when I was young because it described a luminous ocean bottom. I know Conan Doyle had never been down and needed the light for story purposes and didn't have very high standards of consistency anyway, but it still bothered me. I knew he was wrong for the same reason everyone does — the bottom just isn't bright.

Only now it was.

The tumbling wreck was swinging me upward away from the light, and I had time to decide whether I should believe my eyes or not. I could still read instruments. The pressure dial gave a direct depth of four thousand eight hundred eighty feet; a quick mental correction from the record tape of the thermograph added another two hundred or so. I certainly *should* be near the bottom, somewhere on the northern slopes of the mountain whose peaks are Rapanui.

I swung gently over the top and back down the other side, and my line of sight pointed downward again. Whether I wanted to believe my eyes or not, they insisted there was light in that direction. It was a gentle yellow-green glow — just the sort of thing you use in lighting effects to give the impression of an underwater scene. At first it looked uniform and smooth; then, a few turns later and two hundred feet lower, it showed a pattern. The pattern was of squares, with their corners just a little brighter than the rest of the area. It didn't cover the whole bottom; its edge was almost below me, and it extended toward what I thought was the north,

though my compass wasn't reacting too well to the tumbling. In the other direction was the normal comforting and frightening darkness — that was real enough.

Two things happened at almost the same instant. It became evident that I was going to come down pretty close to the edge of the light area, and it also became obvious what the light area was. The second realization got to me. For three or four seconds I was so furious and disgusted that I couldn't plan, and as a result I almost didn't get around to telling this story.

The light was artificial. Believe it if you can.

I realize that for a normal person it's hard. Wasting watts to light up the outdoors is bad enough, but sometimes it's a sad necessity. Spending power to illuminate the sea bottom, though — well, as I say, for a few moments I was too furious to think straight. My job has brought me into contact with people who were careless with energy, with people who stole it, and even with people who misused it; but this was a brand new dimension! I was lower now and could see acres and acres of light stretching off to the north, east, and west until it blurred out of sight. Acres and acres lighted by things suspended a few yards above the level bottom, things visible only as black specks in the center of slightly brighter areas. At least, whoever was responsible for this display had some sense of economy; he was using reflectors.

Then I got my anger under control, or maybe my fear did it for me.

I suddenly realized that I was only a few dozen yards above the lights. I was not going to come down among them, but a little to the south. I couldn't say *safely* to the south. I couldn't say *safely* anything, because my assemblage of *Pugnose*-bow and safety tank was turning over slowly enough to let me predict the attitude it would have when it hit bottom, and it looked pretty certain that the open end of the hull would be underneath.

Quite aside from the fact that I wouldn't be able to see anything from under the wreckage, there was the likelihood that I wouldn't be able to do anything either — such as get back to the surface. This time I did reach the controls.

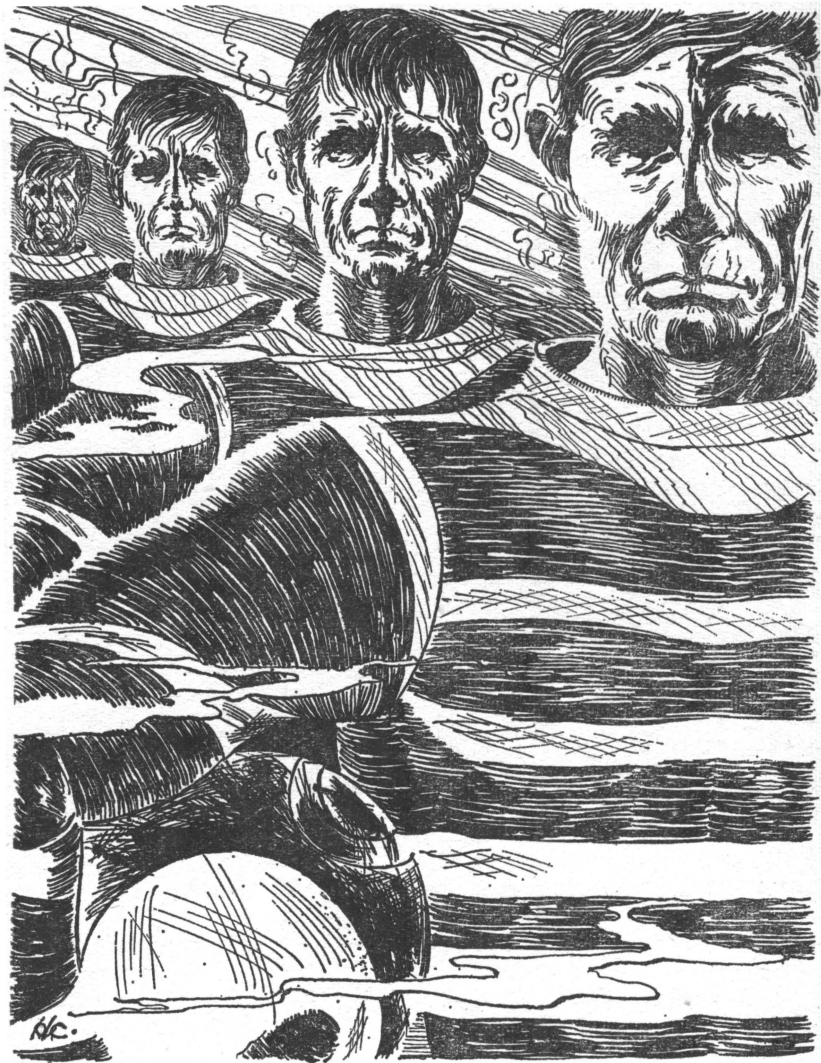
Since the whole idea hinged on concealment, the separators used springs rather than squibs. I waited until the spin put the hulk between me and the light and punched the bottom. The push was light enough to make me wonder for a few seconds whether I mightn't be in even worse trouble than I'd supposed. Then light began to come in through ports which had been covered by the hull, and that worry ended. The springs had kicked the tank away from the lighted region, so I could see *Pugnose's* bow outlined against the luminescence. The separation had slowed our fall very slightly with the wreckage now going just a trifle faster than I was. At least something was going as planned;

the wreck would hit first, so there should be no chance of my getting trapped under it.

I hadn't expected to see it hit bottom, of course. I would certainly never have expected to see what happened when it did.

For the most part, level stretches of sea bottom tend to be on the gooey side. They may call it globigerina ooze or radiolarian ooze, but it's usually obze. You can meet with coral and sand and other firm stuff in shallow water and honest rock at times on slopes, but where it's level you expect something like a cross between ordinary mud and the top couple of inches of a stagnant pond. When something hard and heavy lands on it, even gently, you don't expect the bottom to give it much support. You may sometimes be surprised on this matter, but you never count on anything bouncing off the sea bottom.

*Pugnose* didn't exactly bounce, I have to admit, but she certainly didn't behave properly. She hit the lighted surface thirty or forty yards from the edge, and perhaps twice as far from me. I could see easily. She touched, as expected, and sank in as expected. There was no swirl of silt, though — no sign of the slow-motion splash you normally see when something lands in the ooze. Instead, the bow section disappeared almost completely into the smooth surface while a circular ripple grew around it and spread away from the point of impact. Then the wreckage eased gently back up until it was half uncovered, then back down



again, still in slow motion. It oscillated that way three or four times before coming to rest, and each rebound sent another ripple spreading out from the spot for a dozen yards or so.

By the time that stopped, so had my tank. I felt it hit something hard — rock, for a bet, and I'd have won. Then it began to roll very, very gently toward the light. I couldn't see the surface I was on at all clearly, but it seemed evident that it was a solid slope which would deliver me beside the *Pugnose* in two or three minutes if I didn't do something about it. Fortunately, there was something I could do.

The tank had what we'd come to call legs, six-foot-long telescoping rods of metal which could be extended by springs and retracted again by solenoids. I was still hoping not to have to use magnets, but it seemed that the legs were in order; I propped out four of them in what I hoped were reasonable directions. Enough of the guesses were right to stop the rolling, and for the first time I had a steady observing platform. Naturally, I concentrated on the area I could see.

I was now below the level of the lights themselves. They appeared to be strung on lines at intervals of about twenty yards, with the same spacing between lines. That was a guess, though, since I couldn't actually see any supports. Their regularity bolstered the guess, though the fact that the wreck had come down just about on a line between two of the lights without appearing to disturb

them counted rather against it. I wasn't too surprised to see nothing growing or moving on the flat surface they illuminated, though of course I wouldn't have been surprised to see a few tracks or holes scattered around.

At least, I wouldn't have been surprised at them if I'd not seen the *Pugnose's* landing. With that to go by, it was perfectly clear that whatever I was looking at was **not** sea bottom. It was more like a rubber sheet stretched like a tent roof over everything more than about ten feet down slope from me. The wreck had dented it but hadn't punctured it, and the stuff was strong enough to hold up the comparatively small submerged weight of metal and plastic.

This, I reflected, could be useful. I had no idea why whoever was under the tent wanted to light up the outside, but unless the fabric were completely opaque they could hardly help seeing the shadow and the dent in their ceiling. That should bring people to investigate, and they would be easy to see without my having to use lights of my own and giving myself away. All I needed was one clear view of unauthorized human beings at the bottom of the Pacific; that, plus the scale of energy wastage I could already detail, would be all my report would need — a major control expedition would do the rest. No one expected me to arrest a group large enough to set up an installation like this, and I had no ambition that way either. To put it mildly, the tank wasn't maneuverable enough to serve as a police car;

I was in no position to arrest a passing shrimp. All I asked was a good look at a work sub, or a suit of pressure armor, or even a handling robot under remote control — anything that would show that this setup was being actively managed — one good look, and I'd be ready to drop ballast.

I wouldn't do it too hastily, of course, for two good reasons. A sonarman might reasonably dismiss a sinking object as a piece of a wrecked ship, or even a dead whale, and not be too curious; but he would be most unlikely to feel the same indifference toward something rising. I'd have to take some time to evaluate the sonar danger. It was nice, but not conclusive, that there had been no sign of it so far.

The other reason against haste I didn't know about yet, and didn't learn for a number of hours.

I'm not a clock-watcher. I knew I had plenty of survival time in the tank and wasn't keeping very close track of how much of it had passed. When the second reason did show up it never occurred to me to check the time, and for several hours after that I was very thoroughly distracted from such things as clocks. I can't say, therefore, just how long I spent sitting in the tank waiting for something to happen. I can guarantee that it was a number of hours; long enough to get me bored, cramped, irritated and more than half convinced that there was no one under that tent roof anywhere nearby. The idea that it might be someone who didn't care a hoot

about fragments of ship in his ceiling seemed too far out to be worth considering; if anyone had seen it, he'd have done something about it.

No one had done anything about it. Therefore, no one was within sight. And if no one was within sight under the fabric, I might as well take a closer look at it myself. Maybe I could even get a look under it.

Dangerous thinking, boy. Don't let all those wasted kilowatts go to your head. You're just a detached eyeball; if you don't get back with information, anything you *do* manage to do is pure waste — and waste, of course, is the profane word around the Board.

It was a temptation, though. No motion — no sign of human life except the lights and the tent roof itself, and mighty little sign of any other kind of life. No sound. Nothing from the sonar frequency monitor. Why shouldn't I roll gently down to the edge of the fabric and study it more closely?

The best answer to that question, of course, was that it would be the act of a dithering idiot. As time went on, though, it occurred to me once or twice that merely being here at all wasn't the highest possible display of human intelligence. If I must act like a fool, I might as well be a real one. I don't know where that sort of thinking comes from; maybe I *should* see that psychiatrist.

I'm not sure just how close I came to giving in. I know I *almost* pulled in the legs three times and each time thought better of it.



The first time I was stopped by something moving, which turned out to be a fair-sized shark. It was the first large living thing I'd seen since reaching bottom, and it set my thoughts off on another tangent for a while. The next couple of times I started to move the tank I was stopped by the memory of the shark; it had disappeared — had it heard something I couldn't, that had frightened it off? I had no instruments outside for low or audible frequency detection, just the sonar receptors.

I know all this isn't making me sound much like a genius, or even a reasonably competent operator. I wish I'd had more time to edit my memories a bit before having to tell this story. If I'm to justify the decision I'm trying to sell, I should have some chance to look like a sensible adult first. All I can put in for my own defense at the moment is one of those let's-see-you-do-better remarks. Are you sure just how your own thoughts would have gone if you were practically helpless in a six-foot plastic bubble a mile under the ocean? If you're not, please suspend your criticism until I'm done.

The second reason for not dumping ballast too hastily finally did show up. My attention was still pretty well focused on the wreckage, so I didn't see it coming. My first glimpse was from the corner of my eye, and I thought for an instant it was another shark; then I realized it was human, and I had my evidence. Fine. Once it's out of sight I can head for the surface.

Not a chance. What I needed was convincing evidence, and if my own eyes weren't convincing me it was unlikely that my words would convince anyone else. What I saw was a person, which was all right in itself; a suit of four-inch polyphase armor, adequately powered in the limbs, will hold back the ton and a quarter or so per square inch that sea water exerts a mile down. Such armor will even let the wearer look rather like a human being and move about in a very clumsy walk.

It will not, however, unless he is immersed in an ocean of mercury, let him swim; and this clearly human figure was swimming.

It came into view some distance to my left, appearing in the light rather suddenly as though it had come down from the darkness above. It was swimming toward me and the wreck, not in any obvious hurry. As it approached, details became plainer; and the plainest of all — plainer even than the fact that it was female — was that she wasn't wearing armor. She was wearing a cold-water coverall type scuba suit, absolutely ordinary except that it had a spherical, transparent helmet instead of a breathing mask, and the ballast seemed to be in rings here and there around body and limbs instead of being fastened to the belt. I repeat — in fact, I had to repeat it to myself several times — that the garment was not pressure armor. Its wearer's swimming motions showed plainly that it was nearly as flexible as ordinary skin, just as a scuba suit should be.

She didn't seem to see my tank,

which was some relief. She didn't even seem to see the wreck until she was within twenty yards of it. She had been swimming very slowly along the edge of the tent roof with no more apparent purpose than someone out for an afternoon stroll, up to that point. Then she changed course and headed straight for the bow of *Pugnose*.

That didn't fit. Anyone down here should have been looking for that wreck, not running across it by accident. I'd been expecting a working party sent out by the people under that cover.

Well, there's more than one thing I haven't been expecting about this business. Stop with the working hypotheses, brother, you haven't enough data even for that yet. Just watch (I don't even address myself by name).

So I watched. I watched her swim around the shattered bow, and into it and out again, and over it. Then I watched her unlimber an object which turned out to be a light, which had been clipped to her suit belt, and swim inside once more. That worried me a little; the camouflage for the tank had not been designed for that sort of inspection. Its clamps, its launching springs —

She came out again, with no more visible signs of excitement than before, and at that point something else dawned on me. It was a very minor point compared with what I had already seen — at least, it seemed minor when I first noticed it; as I thought, it became more and more a major puzzle.

Her scuba suit was, as I said,

quite ordinary except for helmet and ballast. Its ordinariness included a small tank between the shoulders, whose upper end just touched the helmet and was presumably connected with it, though I could see no piping. All this was reasonable. The jarring note was that there were no bubbles.

Now, I'm familiar with rebreather systems, and I know about chemical supplies — mixtures of alkali metal peroxides and superoxides which react with water to give free oxygen and pick up carbon dioxide. I know them well enough to know that they must have, besides the chemical container and mixer systems, a sort of "lung" — a variable-volume, ambient-pressure gas bag or tank — with the supply chemicals between it and the user's own lungs. The exhaled gas has to go somewhere until it's ready to be inhaled again. That "lung" must have a volume great enough to take all the air a swimmer can exhale at one breath — in other words it must have as much volume, or nearly as much, as his own inflated lungs. There was no such bag visible on this swimming outfit, and the back tank was not nearly large enough to have contained one. It seemed, therefore, that the unit did not involve a chemical oxygen supply; and unless some sort of microscopic pump was taking the gas as fast as she exhaled and squeezing it back into another part of that little tank at fantastically high pressure, there should be exhalant bubbles. I couldn't see any

reason for such a recovery system, but I couldn't see any bubbles either. I had already been bothered about what gas mixture she could be breathing — at this pressure, half of one per cent oxygen would have burned her lungs out, and there was nothing I knew of which could be used to dilute it. Even helium was soluble enough down here to make decompression a job of many hours.

It crossed my mind for a moment that people might be living permanently under this pressure, breathing a nearly pure helium atmosphere with a fraction of a per cent oxygen in it; but if that were the story, I still couldn't see why that girl's suit didn't give out bubbles. Granted there might be every economic reason to recover helium, there are engineering problems which I still don't think could be completely solved.

No. All hypotheses inadequate. Keep on observing. Facts so far are only that she seems to be living and moving normally in a closed system at outside pressure, and that the pressure in question — skipping the old superstition about flattening a human body — is quite high enough to mess up any biophysical or biochemical processes involving gas dynamics.

There wasn't much more to observe, though. The girl clipped the light back on her belt, took a last glance at the wreckage and began swimming away from it. She didn't go back the way she had come, but continued on to my right, slanting away from the lighted region. In a few seconds she had disappeared,

though I knew she couldn't be very far away yet.

It seemed likely that she was off to get help in moving the wreck off the tent roof. How long before she would be back with it was anyone's guess. There might be a tent entrance a few hundred yards away, or there might not be one for several miles. The former seemed a trifle more likely, but I wasn't going to risk money on the question.

Just my future.

She *might* have noticed the gear that had held and launched my tank; she wouldn't have had to be much of an actress to hide an expression of suspicion under the circumstances. If she had noticed and reported it, those who came with her were going to be very curious about the whole area. The outside of the tank was deliberately a little irregular in outline so that it wouldn't be too obviously artificial, but it was not going to fool anyone who took a really good look at it. Maybe it would be better if I moved a little farther away. I wasn't concerned with personal safety; I could always get away, but I wanted to see as much as possible before that became necessary.

So I told myself.

Moving would be a slow process; traveling ability was not really a design feature of the tank. There were two dozen of the legs, and I had enough stored power to retract them against their springs several thousand times (that had taken argument), but I had not been born a sea urchin. I had had a little prac-

tice rolling the thing around under water, but the purpose of the rig was to let me juggle into a better observing position, not to keep out of the way of searchers. If I were found, my only real recourse would be to drop ballast and start for the surface. That was a once-only operation, and I didn't want to resort to it before I really had to. There was still some hope, I figured, of deciding what was going on down here in some detail.

Maybe it's courage, or maybe just natural optimism.



III



I began working the legs, hoping that no instruments in the neighborhood were recording the D.C. pulses as I turned the retraction solenoids on and off. I had found during practice that I could climb a slope of five or six degrees if the bottom were hard enough to give the "feet" any resistance, but that near the limit of steepness the going tended to be tricky. If I overbalanced and started downhill again it took very fast work with just the right legs to stop the roll. The sphere had a respectable moment of inertia. Because of its outer irregularity, some positions were naturally more stable than others, and some were much less. Just now I was wishing that I had spent more time in practice, though I consoled myself with the thought that the boss wouldn't have authorized the energy expenditure anyway.

I had worked my way between thirty and forty yards farther up

the slope, with only one mistake that cost me any real distance, when the party I expected showed up.

It wasn't a large one — four in all. One could have been, and probably was, the girl I had seen before; the other three seemed to be men, though it was hard to tell at this greater distance. One of the new ones was towing a piece of equipment about three feet long, cylindrical in shape, and a little more than a foot in diameter. It had a slight negative buoyancy, which was understandable — they'd make sure that nothing which got loose would find its way to the surface.

They swam over to the wreck, and two of them began pulling lengths of line from the cylinder. They attached these to convenient parts of *Pugnose*, while the third man pulled from the other end of the cylinder something that looked like a heavy bundle of netting with a collapsed balloon inside it. When the other lines were made fast he manipulated something on the cylinder, and the balloon began to inflate slowly. The wreckage didn't have much submerged weight, and it wasn't long before the balloon had it hoisted clear of the roof. Then all four of them got on the far side and began pushing it, swim fins fluttering violently.

It took them several minutes to get it away from the smooth area and out of the light. I supposed this was all they'd bother to do, but I was wrong. With the tent roof out of danger they moved around and began pushing the load in the direction the girl went after finding it.

This might be a nuisance. Maybe they just wanted it for a souvenir, but maybe they wanted to make a really close examination under better conditions — better light, or maybe even out of water. Which-ever of these might be true, as long as they were interested someone was likely to notice the tank attachments. I'd have been much happier if they'd simply pushed the bow section off their roof and forgotten it. Now I had no excuse for not following to learn more about them. Come to think of it, I should try to locate the entrance, or one of the entrances, to the place anyway.

They weren't swimming fast, but they went a lot faster than I could roll the tank. Once again I wished that some real provision for moving the thing had been made, but the argument had been that the closer the whole rig got to being a submarine, the harder it was going to be to camouflage. I hadn't bought the argument completely at the time, and I would have been even more delighted at a chance to reopen it now. All I could do, though, was hope the chance would come later on, and in the meantime wait until the swimmers got their burden a reasonable distance away and then start rolling in the same direction.

Perhaps I haven't made clear quite all the nuisances involved in rolling the tank. The principle ought to be plain enough; it was simply a matter of letting the appropriate spring push out a leg against the bottom, on the side I wanted to go away from. It may not

have crossed your mind that this general method of getting around meant that living equipment, control panels, and other fixed gear were sometimes to one side of me, sometimes to another, and sometimes above or below. There were times when it was very hard to keep from sitting on all the leg-control buttons at once, for example. As I've said, the legs were meant more for position and attitude fine control, and to keep the tank from rolling on a slope, than for genuine travel. The need for the latter had not been foreseen, or at least hadn't been considered very great, by the authorities.

At least, concentrating on working the machine along the bottom kept my mind from the worries I'd felt on the way down. It was actually more likely now that I'd come under unfriendly observation, but at least I wasn't brooding over it. The swimmers had vanished in the distance, nothing else could be seen moving in the lighted area to my left, and nothing at all could be seen the other way. The bottom under the tank couldn't be made out in detail, and in a way I was groping along — though the verb isn't exactly right, since it implies that you can feel what's ahead of you. I couldn't feel anything; I could only note whether my vehicle rolled a little way, a longer way, or not at all whenever another leg was extended. When it didn't roll at all I had to guess which other legs to try. It would have been a lot easier if I had dared to use enough light of my own to get a decent sight of the



bottom, but I wasn't that silly. If the local population included swimmers, I didn't have a prayer of knowing when any of them were around; when this mess had started we were thinking of subs and sonar. These I was ready to spot.

The slope was not very regular, as I quickly found. Twice I rolled forward out of control for several yards when I reached a small dip. Once I thought I was stuck for good — I couldn't go forward, back or what was presumably downhill toward the light. As a last resort I tried uphill and found that it wasn't uphill at all; I rolled out of control again into a hollow where I couldn't see the lighted area except as a vague, diffused glow over the ridge I'd just crossed. Getting out of that hollow used a lot of time and an irritating amount of stored power.

I couldn't even relieve my feelings with language. The coupling from air through plastic to water, and from water through helmets to gas and human ears, may be pretty bad, but it isn't zero; and the sound-transmitting properties of cold water make up for a lot of matching deficiencies. I didn't dare say a word.

Once out of that devil-invented gully I stopped, once more in full sight of the tent roof and tried to take stock.

My power was rather low. There was no way of telling whether I might reach the entrance in three hundred yards or three thousand; the former seemed more likely, since the girl hadn't taken too long to come back with her help, but then

she might have met the men already outside. Nothing was certain enough to give any possible line of action even the dignity of a calculated risk. It wasn't possible to calculate.

I had to find out more, though. I'd cooled down a little from my original reaction — I could believe what I'd seen, and I realized that others would, too — but the news I had wasn't as helpful as it was supposed to be to the Board. If a police unit were to do anything but grope around, it should know where to start. A regular entrance would make a logical place. Of course it wasn't likely that the tent roof would really keep a sub out; but judging by the area the tent enclosed, the chances of breaking through at a strategically useful point would be rather slim.

Maybe the best thing to do would be to throw out the caution policy and turn on my lights. The extra power would be offset by more efficient travel when I could see where I was going and I should stand a better chance of reaching the entrance before my juice failed entirely and automatically let my ballast go. If I were seen, no doubt some of the swimmers would come close enough to give me a really good look, so I might get a better idea of their high-pressure technique before I left.

I'm a cautious man by nature, and I thought that one over for quite a while before I bought it. There was plenty against it, of course. Just because all I'd seen was swimmers rather than subs didn't prove there

weren't any subs. If there were, there would be an excellent chance that I could never get back to the surface — but I'd accepted that risk before starting the trip. I ping-ponged the matter for several minutes. Then I took a good, deep breath on the theory that I might not get many more and turned on one of my spots.

It made a difference, all right. The bottom was mostly rock, as I'd suspected, and was very rough — no wonder I'd had trouble using my legs effectively. Able to watch what I was doing, I resumed travel and, as I'd hoped, made much better speed with much less power drain. It wasn't exactly easy yet; I was still rolling, and had to change lights as well as legs now as I rolled, but the improvement was encouraging.

I could also see more motion around me. There was a lot of small life — shrimps and their relatives — that I hadn't been able to spot before. They got out of my way without being too distracting. There were also plantlike growths, though considering how far they were from the nearest natural light it seemed likely that they were sponges or something of that sort. They neither helped nor hampered the rolling, as far as I could tell.

However, I was paying for the much better short-range vision with a much worse view of distant objects. I might have been surprised quite easily by a group of swimmers, but what actually happened was less predictable. I lost orientation.

Not in the compass-direction

sense and not completely. I could still see the lighted area to my left, though not as well as before; my compass still worked, when it happened to be right side up; but my sense of up and down, depending more on my view of a few square yards of ocean bottom than on my semicircular canals, was fooled when some of the bottom ceased to be horizontal.

The change must have been gradual, or I'd have spotted it within the small area I could see well. As it was, I overlooked it completely; suddenly I was on an area of rock sloping much more steeply than any I had traversed up to then. Before I knew it the tank had started a stately roll to the left; after I knew it, leg after leg poked out in that general direction proved useless.

It wasn't like rolling downhill in a barrel; it was a slow and graceful motion. I could easily have stayed upright inside the tank if I'd chosen to concentrate on that problem instead of on the controls. For all the use I got out of the latter, I might as well have concentrated on comfort. Some of the legs may have slowed me a little, but none of them came close to putting a stop to the journey. I rolled helplessly into the lighted region and out onto the tent fabric. For several long seconds my report-making attention was divided almost equally between up and down.

Above me I could see the lights clearly for the first time. They were ordinary high-pressure, excited-vapor lamps, bigger than I'd ever seen used for general illumination, but other-

wise nothing strange. I still couldn't see what held them in position, since looking up at them was hard on the eyes.

Looking down was harder on the imagination, though mine was getting a bit calloused. I already knew that the fabric was remarkably strong and elastic; I'd seen how it reacted to *Pugnose's* bow, which must have had some pretty sharp corners here and there. I also knew that it was opaque, or at best translucent, in its normal state. I realized that the part now under my tank would be stretched. But it hadn't occurred to me that stretching the stuff would make it transparent.



IV



When I stopped moving, however, I could see ordinary sea bottom — rock similar to the stuff I had been rolling across — under me. For a moment I thought something must have stopped me short of the tent roof after all, but glances through several of the ports killed that notion. I was nearly fifty yards out on the thing, sunk into it for just about half the diameter of the tank. From ports above that level I could see the lights above and the smooth fabric below; from the lower windows I could make out rock and occasional patches of silt on the bottom and a greenish-white, evenly glowing ceiling above — evidently the fabric, lighted from the other side. It was translucent, then; but the part of it stretched around the lower half of the tank offered no interference at all to vision. Some of

the legs were extended on this side, and the stuff seemed to have spread in an invisibly thin film over these as well — they could hardly have punctured it or I wouldn't have been hanging on the roof. Someone must have done some very fancy work in molecular architecture, I decided — which shows how a wildly wrong set of premises can at times give rise to a correct conclusion.

But why the tent at all? The sea bottom under it looked no different from that above. There was no sign of any human being or artificial structure in the region below. There weren't even any living beings that I could see, and I certainly looked hard — it occurred to me for a moment that someone might have gone so far with the energy-wasting business as to try growing natural foods with artificial light. The idea at least went along with indifference to ordinary morality about energy; people who'd shine all those kilowatts into the ocean probably wouldn't boggle at overreaching their fair share of area in order to grow mustard or something like that. The sea bottom was about the only place on Earth where such a trick could be pulled without being caught right away by indignant neighbors, to say nothing of the Board. The only trouble with the theory, other than one's natural reluctance to believe in such people, was that I couldn't see anything growing. For that matter, I didn't know what sort of food plant could be grown under sea water. There were some, no doubt; and if there weren't natural ones, there is always gene tailoring.

A more immediate question was what to do next. Thirty seconds of trying proved that I could extend and retract my legs until the power cells ran down without moving the tank at all. They just didn't have anything to push against; the bottom was a little too far down. I tried rolling the thing by shifting my weight. This worked as far as turning the tank over was concerned, but didn't get me noticeably closer to "shore." It seemed that the only freedom of motion I had left was upward.

This was a little annoying. I had planned to plant a small sonar transponder near the entrance when I found it, as a guide for the police boats. If I dropped it here, it would mean very little and furthermore would be seen lying on the tent fabric by the first person who happened to pass, either above or below. If I'd had the reaction time and foresight of a fictional hero I might have let one go when I realized I was out of control; but I hadn't, and there was no use moaning about it.

I might wait until they found the tank and just hope for a chance to drop the instrument without anyone's noticing while they were carting me off, but that seemed to involve a historical record for optimism.

I couldn't accept the idea of going back to the surface without leaving it, though, even though that and all the other things it would be so nice to get done seemed to be impossible. Even a snake on a tray of oiled ball bearings keeps wriggling.

And so I remained. There was

really no point in an early departure anyway. I still had plenty of oxygen, and there was always the hope that I'd get a useful idea before they — whoever "they" were — found me. The hope lasted for nearly six hours.

It wasn't a girl this time, though it might possibly have been one of the same men. He wore the same sort of swimming outfit to the last detail, as far as I could see. He was swimming straight toward me when I first saw him, above the tent roof as the others had been, slanting out of the darkness from the direction I supposed the entrance must lie. Certainly he had seen me, or rather the tank. I wished I had spotted him earlier — it would be interesting, and might even be useful, to know whether I had been found accidentally by a passing swimmer or by someone deliberately checking the region where the wrecked boat had been found. However, I could be philosophical about not knowing. I watched as he swam overhead.

He should be able to recognize the tank without much trouble. It had a lot of nonstandard equipment fastened outside, but it was basically a regular emergency high-pressure escape tank of the sort you'd find in any large submarine — a sphere of silica fiber and high-stress polymer able to stand the pressure of two miles of sea water. It was light enough to float, ordinarily, but the jury-rigged thing I was in was well ballasted. Besides the legs and their





accessory gear there were the lights, the transponders, sundry pieces of sensing equipment and several slabs of lead so distributed as to keep the center of buoyancy and the geometrical center as close together as practical. The lead made the real difference; I would still float with all the rest.

The swimmer stopped stroking as he glided overhead and drifted, settling slowly toward me. I could see his face now through the helmet — in fact, the helmet itself was barely noticeable; he might almost have been swimming bareheaded. He was no one I could remember ever having seen before in five years of Board work, but I took good note of the line of his black hair, the set of his eyes, and the squarish outline of the rest of his face so as to be sure of knowing him again if the chance ever came up. Presumably he couldn't see me; the view ports were small, my inside lights were out, and he showed no sign of the surprise I would have expected him to feel if he knew or guessed that the tank contained a living man.

He came close enough to touch the equipment — so close that I could no longer see everything he was doing. I told myself that it couldn't be anything very drastic, considering what the tank was built to take, but I'd still have been much happier if I could have seen his hands all the time. He was certainly fooling with things; I could feel the casing quiver occasionally as he pushed something particularly hard.

He drew away again and swam twice more all around the tank, never taking his eyes from it. Then he settled down to the tent roof and pushed his head against it, as though he were trying to swim through.

I didn't dare shift my weight quickly enough to look through one of the lower ports while he was still in that position, so I couldn't tell whether his helmet stretched the fabric enough to let him see through — it was, after all, a lot smaller than my tank. I did let myself down very gingerly, so as not to move my container noticeably, but by the time my eyes had reached one of the lower ports he had risen again — at least, I could see nothing against the fabric except his shadow. He seemed to have started swimming away, and I took a chance and straightened up quickly. The shadow had told the truth. He was heading back in the direction from which he had come.

This time I was much more careful with the clock. He was back with another man in just under eight minutes. His companion was carrying either the cylinder that had been used in moving the wreck, or one just like it; the first man was also carrying something, but I couldn't make out what it was right away. It looked like a rather untidy bundle of rope.

When he stopped above the tank and shook it out, however, it turned out to be a cargo net, which he began to work around the tank. Apparently he had decided on his first inspection that the natural irregularity

ties of his find didn't offer much hold to a rope. I couldn't exactly blame him for that conclusion, but I very much wished he hadn't reached it. I wasn't sure how strong the net might be, but unless it were grossly defective in manufacture it would hold my ballast slugs. If it were fastened around tank and slugs both, releasing the latter would become a pointless gesture. It was definitely time to go, and I reached for the master ballast release.

Then I had another thought. Dropping the lead would presumably give my presence away, assuming they hadn't already guessed there was someone inside. That cat was out of the bag, and nothing else I could do would tell them any more. I might as well, therefore, try something else which might keep that net from enfolding me until I was over bare rock again and stood a chance of dropping the transponder effectively. There seemed nothing to lose by it, so I extended all the legs at once.

Neither of the swimmers was actually hit, but they were very startled. The one with the net had been touching the tank at the time, and may have thought that something he had done was responsible for releasing the springs. At any rate, neither of them seemed to feel that any more haste than before was needed, as they should have done if they'd suspected a man was inside. They simply went about the job of attaching the lifting device as they had to the other wreck; there were plenty of things to fasten lines to now that the legs were out,

and it would have been hard or impossible to get the net around the new configuration. That was all to the good.

The technique was the same as before. I assumed the cylinder contained a chemical gas generator, considering the pressure the balloon was expanding against. That was just a fleeting thought, though. It was much more interesting to watch the two swimmers pushing me toward the edge of the roof even before my container had lifted entirely clear of the fabric. Things were certainly looking up; only two people, bare rock coming up — no, don't be too hasty; maybe they'll push you right to that entrance you want to find. Wait it out, boy. I pulled my fingers away from the panel, and locked them together for extra safety.

Just as had been done with *Pug-nose*, the tank was moved away from the tent and then along parallel with its edge. The motion was slow — even with a weightless load there was plenty of water to push out of the way — and we were more than fifteen minutes on the trip. I kept watching for some sign of the entrance, expecting a break of some sort in the fabric itself, but that wasn't the arrangement I finally saw.

After a quarter of an hour my porters aimed away from the lights again and headed up the slope which I assumed was still to our right. About two hundred yards in this new direction brought us to the lip of another bowl or gully, apparently much like the one I had almost

been trapped in a few hours before, but larger. The center of this depression was even more brightly lighted than the roof of the tent, and the entrance was in the very middle of the bright region.

I didn't take a very good look at it; I acted too fast. I glimpsed what seemed to be a smooth-walled pit about forty feet across with ladders going down at a couple of dozen points around its rim. Most of the light came from some point in the pit below my line of vision. Between me and the opening were a dozen or more swimming figures, and it was the sight of these that made me act. If I were to be surrounded by a whole school of swimmers, my chances of dropping a transponder unnoticed would be negligible; and without spending any more time in thought, I dropped the ballast and one of the sounders simultaneously. I instantly realized that might be a mistake, since each of the lead slabs was heavy enough even under water to smash the instrument, and as I felt the tank lurch upward I dropped another of the little machines. There was a good chance that my company had been distracted by the ballast — a much better one than I realized, as I found later.

I heard the lead hit the rock. So, evidently, did the swimmers around the hole. It took them a few seconds to spot the source of the racket. A man judges sound direction partly from the difference in arrival time of the wave at his two ears; and with the high speed of sound in water, the fact that the disturbance

was also being carried by the rock, and the helmets they were all wearing it was impossible for them to get more than a vague notion of where the sound had originated. When they did start coming my way it was in response to a flashlight which one of my carriers was shining toward them.

The two original swimmers were hanging onto my legs — the tank's, I should say. They couldn't hold me down, of course. It takes more than a couple of almost-floating human bodies to replace several tons of lead. They were staying with me, though, and guiding the others.

That didn't worry me at first, since there weren't enough people in sight to hold me down, and if there had been they couldn't all have found room to get hold. The only real cause for anxiety was the possibility that there might be work subs with outside handling equipment somewhere around. Even from these, though, I'd be fairly safe if they'd just put off their appearance for a few more minutes. They'd have to hunt me with sonar once I was out of sight, and I was beginning to feel pretty certain that the last thing this bunch would do was send out sonar waves. The darned things travel too far and can be recognized too easily. I still didn't know what these folks were up to, but there was enough obviously illegal about it to suggest that secrecy would be high on their policy list.

The ones who were holding on to me would have to drop off soon. There isn't an underwater breathing

ig made that will let a man rise at hree feet a second or so for more han a few hundred feet without unning into decompression trouble. didn't care what gas mixture these haracters were breathing; there are aws of physics and human bodies ave to obey them.

The more distant swimmers were urning back as this thought crossed ny mind; I could see them against he fading background of the lighted pit. I could also see, poorly, the ight which one of my hitch-hikers was shining toward them. He seem- ed to have some hope still; maybe there was a sub in the neighborhood, and he was trying to stick with me long enough to guide it. Unless it showed up very soon, though, he was going to lose that gamble and kill himself in the bargain.

I saw another swimmer, quite close, dwindling between me and the light; my second passenger must have dropped off. When would the first go? His light was still shining, but it could hardly do any good now. I could barely see the pit, and surely no one down there could see his little flash. Evidently he realized this, for after a few more seconds it went out. I expected to see him leave like his fellow, since he could do no more good by sticking, but he wasn't thinking along those lines. He had very different ideas, and one of them from his viewpoint was a very good one. I didn't like it so much.

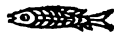
The dual-phase stuff they make pressure tanks out of isn't a metal, and differs widely from any metal in its elastic properties; but like

metals, if you hit it it makes a nose. I didn't know what my rider started hitting with, but it most certainly made a noise. I, from inside, can vouch for that. A nice, steady, once-a-second tapping resounded from the tank, hurting my ears and doing worse to my plans. He didn't need his light; any work sub could home in on that noise from miles away if it had even a decent minimum of instrumentation.

And there was no way that I could think of to stop him.



V



I could try the legs, of course. I did. It was so dark by now, with the light from entrance pit and tent roof alike faded to the barest glimmer, that he may not even have known that I did anything. If he'd been holding on by a leg he may have been disconcerted when I pulled it in and maybe bruised when I popped it out again, but there was no evidence that anything of the sort happened. I ran the legs through their cycle several times without making the slightest change in the rhythm of that tapping.

I tried shifting my weight to make the tank roll over. It worked, but didn't bother my passenger. Why should it? A swimmer doesn't care whether he's right side up or not, and a submarine hitch-hiker in total darkness should care even less. I was the only one who was bothered.

But why was this character alive, conscious and active? We'd risen more than a thousand feet now, through a pressure difference that

should have popped his suit if it were really sealed as tightly as I had judged. If it weren't, and if he were valving off gas to keep his lung volume down, he was going to be in trouble when he descended again; and in any case, volume or no volume troubles, whether he was breathing helium or anything else, he should by now be completely helpless with embolisms.

The simple sad fact, independent of what *should* be, was that he was still going strong, and I had no way of getting rid of him.

Nothing like this had been foreseen by the Board geniuses who had worked out this mission. There was not the slightest doubt that some sort of sub was going to be along shortly to pick me up — no other notion was sane, in view of the fact that this fellow had been fit to stick with me. There were always insane notions to consider, of course; maybe he had decided to sacrifice his life to make sure I didn't get back to the surface, but even that assumed the coming of *something*. Maybe a torpedo, but something. Personally I doubted the sacrifice idea. Lots of people will, for a cause they consider important enough, but I've never met a lawbreaker who acted that way. Especially I've never seen an energy waster who would; selfishness is the key word with those lads — keep the eye out for Number One.

But never mind the psychology; what's to be *done*? The guy may be a moving corpse, but he's still there broadcasting. Why didn't I come down in a work sub? Skip that ques-

tion; it's a waste of good thinking time. How can I make him get off, or at least stop making noise?

Badly phrased question. I can't make him do anything. He's outside, and I'm inside, and with this pressure difference never the twain shall meet. Then, how can I *persuade* him to leave or shut up? Until I start communicating, I can't persuade him either. Obvious.

I put on my lights, both inside and out. That at least caught the fellow's attention; the tapping stopped for a moment. Then it resumed, but less regularly, and I caught glimpses of him as he worked his way to a place which would let him see through one of the ports. I pulled my own face far enough back from it so that he could see me clearly, and for a few seconds we just looked at each other. The tapping stopped again.

**I**t was the same man who had found the tank. I'm not a mind reader, but I felt pretty sure from his expression that he had only just realized there was anyone *inside* and that the discovery bothered as well as surprised him. He resumed his banging on the tank, in a much more irregular pattern. After a few seconds I realized that he *must* be sending some sort of code, though I couldn't read it.

I tried to explain by gestures that the racket was hurting my ears, but all he did was shrug. If he cared at all about my comfort, it certainly wasn't at the top of his priority list. He finished his code message at last and resumed the regular tapping. He

didn't seem angry — didn't scowl, or shake a fist at me, or anything of that sort, but he didn't look as though he considered me a long-lost friend, either. I could see his face clearly and without distortion through the helmet, but I could see no sign of real interest in his expression. I spent some time trying to get him to respond to my gestures, but he paid no attention. I thought of writing a note that he could read through the port, though I couldn't guess what languages he might know, and I managed to find some scraps of paper in one of my pockets; but I could find nothing to write with, and that idea collapsed. I finally gave up and turned my lights off again. There was no use in helping him guide the sub to us.

I couldn't think of any more practical plans, and my mind wandered back to the question of how the fellow lived. We had risen several hundred more feet during the time the lights were on, and his suit hadn't emitted a single bubble. I was beginning to wonder whether it really was an ambient-pressure unit. It was hard to see how anything so thin, and especially so flexible, could possibly be pressure armor; on the other hand, the peculiarities of the tent roof indicated that someone had been making progress in molecular architecture. I was in no position to say such armor was impossible, but I wished I could make at least a vague guess as to how it was done.

I can feel a little silly about it now, of course. I'd had the man in

full sight, well lighted, only a few feet away from me for fully five minutes, and I missed the key fact — not in something I saw but in something I didn't see. At least, I'm not alone in my folly.

The tapping kept up. It wasn't really loud enough to be painful, but it was annoying, Chinese water torture style. It may have been equally so to the fellow outside who was doing it, and I got a little consolation out of the thought that at least he was having to work at it. I got a little more out of the realization that as long as he *did* keep it up the help he was calling hadn't arrived yet.

Two thousand feet was less than halfway to the surface, though it was an unbelievable pressure change for my hitch-hiker. It wasn't very much comfort to me to know that I'd put that much water under me; even twice as much wouldn't be much help. It wasn't as though there'd be a police squadron standing by to pick me up, or even a single boat. The tank had only the normal automatic transmitters for calling help, and they wouldn't even start to function until I reached the surface — which I was unlikely to do. There probably was a Board vessel within a few miles, since the plan didn't include my navigating the opened halves of the tank to Easter Island when I got back to the surface, but that would do me no immediate good. The storm would probably still be going on, and they wouldn't be able to see me at fifty yards. If they did, they probably couldn't do anything about it unless there were more specialized salvage

gear aboard than seemed likely. Even a minor ocean storm is quite a disturbance, and one doesn't pick a pressure tank bobbing around on its waves casually out of the water.

There was an encouraging side to that thought, though. If I did get to the surface, it would also be hard for any sub to get hold of the tank. My broadcaster would then be working, and maybe — just maybe — if it even brought a Board ship into the general neighborhood the pursuers would keep out of sight. On the other hand, it was at least equally likely that they would consider it worth every effort to get hold of me, witnesses or no witnesses, in view of what I had obviously seen down below. But the other hope was worth holding onto for its comfort value. Since I'm a civilized human being, I never thought until later of the possibility that if they couldn't capture me they might just punch a hole in the tank and let me sink.

Maybe I'd make it. The minutes were passing. It was taking each one a year to do it, but they were passing. Each brought me nearly two hundred feet closer to those storm waves, if they were still there. I hadn't bothered to check the forecast beyond the time I was scheduled to submerge, and I'd been down quite a few hours. I'm not immune to sea-sickness by any means, but I rather hoped there would still be enough wave action to give me a good dose of it this time. Maybe it would even make my friend just outside lose his grip on whatever

he was holding onto. That was something else to hope for.

But first I'd have to get up to those waves, and there was still half a mile to go. The tapping went on. If I'd been anywhere else on Earth I might have preferred the Chinese water drops by then, but this was no place to be asking for water drops. I tried to shut out the sound and keep my attention on other things, like the pressure gauge — was there a little wiggle in its needle which might be due to wave action far above? — or the question of food. If the waves were there, maybe I'd better put off eating.

I kept moving from one port to another in a hectic but rather useless effort to spot the sub which must be approaching; but it was my passenger who saw it first.



I knew what had happened when the regular tapping suddenly changed once more to the complex code, but it took me another half minute to spot the approaching light. I didn't have a very wide angle of view from any one of the ports.

All I could see at first was the light, a solitary spark on a space-dark background, but there could be no doubt what it was. It was just a little below us, well to one side. Its bearing changed as it grew brighter. Apparently it was approaching on a spiral course, holding the sound of the tapping at a constant angle off its bow to let the pilot keep a constant idea of his distance from the source.

Even when it was close I had trouble making it out, for its main spotlight was turned straight on the tank and there was too little diffused radiance to show anything close to it. This apparently bothered my passenger, too, for there was another burst of code tapping as the sub halted thirty yards away, and the light went out. In its place a dozen smaller beams illuminated the whole area, none of them shining directly our way; so I could see the newcomer fairly well.

It was not exactly like any sub I'd seen before, but was similar enough to some of them to give my eyes a handle. It was small, either one or two men, not built for speed, and well equipped with manipulation gear on the outside — regular arm and hand extensions, grapples, bits, probes and what looked like a water-jet digger. One of my hopes died quickly; there had been a chance that a small sub would not have enough negative buoyancy to drag the tank back down, but this fellow had big, fat lift chambers and must have ballast to match. It was evidently a tug, among other things. If it could get hold of me, it could pull me down, all right; and it was hard to see how it could be kept from getting that hold. All I had to fend it off were the legs.

I wasn't sure how effective these could be, but I kept my fingers at the panel resolved not to miss anything that looked like a good chance. At least, now that some sort of action was in the offing, I wasn't dithering as I had been during the minutes before the sub came in sight.

The pilot's first method was to drift above me and settle down. He must have had a strong streak of showoff in him, since it was hard to imagine a less efficient means of sinking a round object. I thought he'd have his troubles, but my passenger didn't seem upset, and I have to admit the character knew his boat handling. The swimmer waved him into position, putting me under the sub's center of buoyancy, and he made contact. My pressure gauge promptly showed that the upward motion had been reversed.

I waited a few seconds in the hope that my hitch-hiker would go inside the sub, but he made no motion to, and I finally had to let him see my technique. This was simple enough — simpler than rolling along the sea bottom, since the surface above me was much smoother. Also, I didn't have to go so far to accomplish something; a very small shift away from his center of gravity gave my tank's lift a torque that was too much either for his reaction time or his control jets. Since he had enough weight in his tanks to overcome my own lift, he flipped over, and I was on my way up again.

Unfortunately, as I promptly learned, Lester the Limpet was still with me. His tapping started up within seconds of the time I got out from under. His friend evidently took a while to get his machine back into trim — I could understand that; tumbling, with a couple of tons of surplus negative buoyancy thrown in, is a problem for any sub — but he was back all too soon. He



was no longer in a mood to show off; he bored straight in, with a grapple extended.

I turned on my outside lights, partly to make things harder for him and partly so that I could see better myself. This was going to be tricky for both of us; he had to find something the mechanical hand could grip, and I had to shift my own body weight so as to turn the tank enough to bring a leg into line for what I had in mind. It was just as well I'd gotten my recent practice on the bottom. At least I knew to a hair where each leg went out, relative to the positions of the ports.

I took him by surprise the first time. He hadn't considered all the possibilities of those legs — maybe he didn't even know how many I could use, though they were visible enough from the outside. He matched my upward drift very nicely, though I was able to hamper him a little bit by shifting my weight and changing the frontal presentation of the slightly irregular tank. With relative vertical motion practically zero, he came in slowly with the mechanical hand reaching for some projection or other — I couldn't tell what he had in mind. I rolled just a little to get a leg in line with the grapple, and when the latter was about two feet from contact I snapped the leg out.

The spring was strong. Remember, it was built to prop the tank in position on a slope even when the ballast was still attached. The engineers who built it could tell you how many pounds of shove it gave. I

can't, but I could feel it. The sub and tank were pushed neatly away from each other. The line of thrust was not exactly through the center of my shell, and I got quite a bit of spin out of it. The sub didn't. Either the push was better centered on him or he was quicker this time with his control jets.

He was a stubborn character. He came back and tried the same thing again, after my spin had stopped. I was able to repeat, with about the same results. Konrad the Chiton was still with me, though, and he had my technique figured out by this time. He moved a little away from me to free his hands for signalling, waved them for about ten seconds in a complicated pattern that meant nothing to me, and then came back and took hold of the tank once more.

The sub made another approach, similar to preceding two, and I tried to line up for another kick. My friend, however, had different ideas. He was much farther from the center than I was, and could exert much more torque. He could also see where the legs were, and when I shifted my weight to line up the proper one with the approaching grapple he interfered. He was too smart to fight me directly, though he probably could have managed it; instead, he let me get moving and then supplied an extra shove with me or to one side so that I either overshot or missed the right position. I made three attempts to lineup as the hand was coming in and finally gave the kick a little out of line when the sub was about to make contact. The leg grazed the side of

the handler and put a little spin on the tank, but didn't hit anything solid enough to push us apart. Worse, it gave the sub operator a chance to grab the leg itself. This he seemed to feel was a better hold than whatever he had planned on; he clamped on tightly and began to cut buoyancy once more.

This proved to be a mistake, though it didn't help me as much as it might have. The leg wasn't strong enough to hold the tank down. It parted, and once more the sub disappeared below me. I cut my lights promptly, hoping that my passenger had lost his hold with the jerk. Maybe he did, but if so he wasn't far enough away to lose track of me. In a few seconds the tapping resumed, and in a few more the lights of the sub were close enough to make my blackout an idle gesture. I turned mine back on again so that I could see to resume the sparring match.

Now he got the idea of making his approach toward the spot where the leg had been lost, so that I'd have to turn further to bring another into line. My swimming friend was cooperating nobly, and for a little while I was afraid they had me. The sub operator was too smart to try for a leg again, but he managed to keep out of the way of several kicks I gave out. He got in, made what should have been a successful grab at something on my outer surface, but was hurried and missed. He had to back up for another try . . . and I had time to get another idea into operation.

I knew where the swimmer was. I could see enough of him to tell not only that but to guess which way he'd be pushing next time. I began to put a spin on the tank with him at one pole so that he wouldn't notice it quite so quickly. This worked, though I didn't get a really rapid rotation — I couldn't, of course, with such poor torque; but with the tank's weight I had enough for what I wanted. One of my strong points in basic physics, ages ago in school, was mechanics. I couldn't handle the present problem quantitatively because I didn't know either my angular speed or the tank's moment of inertia, but I hit the qualitative answer on the button. As the grapple approached again I shifted my weight to start the tank processing. Billy Barnacle tried his usual stunt of pushing me sideways and sent the leg right through the point I wanted. Either he'd forgotten what they'd taught him about gyroscopes or he was getting tired. I hit the grapple dead center with my kick, and we were apart again. If I'd been driving that sub, I'd have been getting tired of the whole business by now.

Apparently he was more patient than I. He was back again all too soon.

I had gained maybe three or four hundred feet with each pass of our duel. I had an uneasy feeling that I was going to run out of tricks before those increments added up to the total distance to the surface. Certainly if he had the patience to keep repeating the same technique, he'd soon run me dry.

He didn't, though. He seemed to have decided that the grapple wasn't quite the right tool after all. When he came back next time he did his usual speed-matching some distance above me, instead of level. A small light flickered, apparently in code, and my pressure-proof friend let go of the tank and swam up to the sub. He was back in a moment, trailing a line behind him.

Apparently it had been decided that human hands were more versatile than mechanical ones.

At first I wasn't worried. There was nothing on the outside of the tank except the legs which would really lend itself to the attachment of a rope, and it had already been demonstrated that the legs weren't strong enough. Hours before, on the bottom — no, come to think of it, it was much less than one hour — my pal had felt the need of a cargo net to wrap around the sphere. If he didn't have such a net here, all should be well.

He did, unfortunately. It was bigger and heavier than the one they had had on the bottom, which was probably why he wasn't swimming with it. When he got back just above the tank he began hauling on his line, and the net emerged from one of the sub's service ports. He pulled it to him and began to spread it out so that my tank would float up into it.

He failed the first time through no doing of mine; he simply didn't get his net deployed in time. I ran into it while it was still only partly

open. It had more of its weight on one side of me than on the other, so I automatically rolled out from under it and kept on rising. I didn't have to move a finger. The sub was also rising, of course, so the net trailed downward to the end of its line and folded itself together. The boy in the sub had to reel in mechanically while the swimmer held on to me, before they could go through it all again.

That was another few hundred feet gained.

The next time they spread the net much farther above me. Once open it was even less maneuverable than the tank, and by a little judicious rolling to make the outer irregularities affect my direction of ascent I managed to get far enough from its center to roll out the same way as before. What that team needed was two more swimmers, I decided.

It turned out that one more was enough. They reeled in the net again, lifted the sub a distance, adjusted its buoyancy so that it rose a little more slowly than I did, and then the operator came out to join the swimmer. Each took a corner of the net and with the boat for the third corner formed a wide triangle which they were able to keep centered over me. I tried to work toward the sub, which seemed to be unoccupied and wouldn't back up to keep the net spread. It didn't work. The men moved just a little in the same direction, letting the net sag toward me.

The next thing I knew it was draped around me, and I couldn't

tell which way to roll even if I had been able to start rolling. The swimmers came in from their corners and began tying it together at the bottom.

If they finished, I was done. I watched them as well as I could, trying to spot where there was an edge — anything to tell me that there was more weight of net on one side of me than the other. I spotted what I thought was a chance to interrupt the work while I got a better look, and I'm afraid I took it.

One of the men was next to the tank and a little below it, pulling a section of net closer. Maybe it was the sub operator — the light was good, but I didn't take time to check — and he wasn't as familiar with the leg arrangement as his companion. Anyway, he was in the way of one of them, and I let him have it.

My intention, if I had one — I really didn't take time to think — was to knock him out of the way so I'd have a chance to roll out of the net. I certainly didn't mean to do him serious or permanent damage. The disk at the end of the leg, though, caught him on the right side and could hardly have helped breaking some ribs. It kicked him away like a shark butted by a dolphin. The line he was holding practically flew out of his right hand, and a tool whose nature I couldn't make out fell from his left. He began to sink out of sight.

The other swimmer was onto him before he'd left the reach of the lights. He was evidently out cold;

his body was completely limp as his friend towed him up toward the sub. I didn't watch too closely, partly because I was trying to roll myself out of the net and partly because I regretted what I'd done.

I made little progress with the rolling. They'd gotten some knots into the system already, and it looked as though I were there to stay. I managed to make a half turn, getting what had been the tank's bottom when I was caught swung up to the top, but it didn't do me a bit of good. The meshes wound around the tank even more tightly during the turn.

I was a little above the sub by that time — as I said, they'd trimmed it to rise a little more slowly than the tank — and the tension on the line connecting the net with the boat was swinging me directly over the latter. It was also tipping the sub, I noticed, since the line wasn't attached anywhere near the latter's center of gravity. I watched, helpless but hopeful, to see whether the single rope was strong enough to drag me down when they really put weight on the boat.

I didn't find out. The uninjured man towed his companion to the little vessel, opened its main hatch, and after some trouble got him inside. Up to that point we'd still been rising. Now it appeared that the sub was putting on more weight, for the line tightened and my pressure gauge reversed its direction once more. However, the sub, which had leveled off after the men got on board, now went down badly by the stern. Evidently the off-center lift through

the net line was more than could be countered by shunting ballast, at least if enough total weight was in the tanks to maintain a descent. Apparently there was a higher priority attached to bringing me back than to keeping the boat level. I watched, with my fingers crossed, hoping the line would give.

It didn't, but someone's patience did. Maybe the swimmer I had hit was seriously injured, though I hoped not; but whatever the cause, whoever was now running the sub decided that speed was of prime importance.

He suddenly cast off rope, net, and all, and disappeared in a few seconds. I was alone at last, bound once more for the surface. It was almost an anticlimax.

It was also quite a letdown. The dogfight, if you could call it that, had lasted only ten or fifteen minutes in all and certainly hadn't involved me in much physical labor, but I felt as though I'd just done ten rounds with someone a couple of classes above my weight.

Now I was safe. There wasn't a prayer of their finding me again without sonar, with no one hanging outside to broadcast sound waves from my own hull, and with my lights out — I hastily turned them out as that thought crossed my mind. I had less than two thousand feet to go — not much over ten minutes, unless the drag of the net and line made too much difference. I watched the gauges for a while and decided that they didn't, and for the first time since I'd left the surface I fell asleep.

I was awakened by being tossed around; the storm was still on. More specifically, I was awakened by being cracked on the head by a corner of the control panel.

It wasn't hard enough to damage either the panel or my skull, but it was uncomfortable. So was the whole situation. Riding up and down on fifteen-foot waves is bad enough in a stable boat, but in a nearly spherical container which has practically no preference for a definite up and down it is infinitely worse. I've been in free fall in space, which is no joke, but I'll take it again any time before being a human volleyball in the middle of even a modest-sized Pacific storm. That was one thing they hadn't bothered too much about when they designed the submarine escape shells. The idea was to get to the surface rather than to be comfortable afterward. All I could do was turn on the rescue broadcaster and try to keep my stomach in place.

I couldn't even be sure anyone was receiving it — the broadcast, I mean. It was a good bet that they were, since my return was certainly expected. But several good bets had failed to pay off already.

I couldn't even sleep. Fortunately I'd had enough sense not to eat when the idea had occurred a while back, so I couldn't do what my stomach wanted most to do just then. I couldn't do *anything*. The whole situation was as bad physically as the original descent had been mentally.

But there's no point trying to make it any clearer; I might succeed.

I did wish I'd taken the trouble to find out how long the storm was due to last. Then I might have gotten some comfort from an occasional glance at the clock. As things were, I quickly found that it was better not to look at it; the time since the last look was always so much less than I'd guessed. As it turned out, I should have watched some of the other instruments, though their reading would have been no comfort either — and there would have been nothing to do about them.

I would never have believed that the end of that motion could have been anything but a relief. If anyone had told me that it would make me feel worse, I'd have used violence on him for fear he might convince me. Unfortunately, he'd have been perfectly right. The end came much too suddenly.

The first motion to stop was the rolling. The tank still bobbed up and down, but seemed to have acquired a definite top and bottom. Then the vertical oscillation also decreased, and finally stopped. By that time there was nothing more the pressure gauge could tell me, but I looked at it anyway.

I was right. The tank was going down again.

There was one thing I didn't have to worry about; it wasn't a case of ordinary sinking. The only hollow space which gave the tank its buoyancy was the one I was in, and if that had been leaking I'd

have known it already. No, I was being pulled down; and granting that there are such things as giant squids, I didn't for an instant think that one of them was responsible. The sonar monitor was dark now, but maybe it hadn't been for the last hour or so — I wouldn't have known.

There was only one reasonable explanation. I looked down, not knowing what I really hoped to see and didn't see very much; the sub wasn't bothering with lights. I turned on my own, but could see only the single line, taut now, leading from the net which was now thoroughly tangled around me to a vague bulk just on the edge of visibility.

The line, it may be remarked, was quite strong enough for what it had to do; we were descending much faster than my original ballast had carried me down. If the owners of that rope were prepared to trust it under such stress, I saw no point in doubting their judgment. I didn't even bother to hope it would break. I calculated that I'd be on the bottom in twenty minutes or so, and let it go at that.

At least, I could eat now. I began to absorb a dextrose pill with such calmness as I could collect. There was nothing else to do; they had me.

We were still several hundred feet from the bottom when company showed up. Two more subs, brightly lighted, hove into view. They were work machines similar to the one I'd had trouble with a few hours before. If they were in communication with the one which had me in



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OCEAN ON TOP

tow, it was by means of something none of my instruments could pick up. They probably were, since their maneuvers were perfectly coordinated. First one and then the other newcomer swung close beside me, and each used its "hands" to hang several hooked slugs of metal into my net. These weights took nearly all the stress off the tow rope and removed any hope there might have been of its breaking at the last moment.

Then a swimmer slipped out of each boat and took station beside me, saving themselves work by holding onto the net too. I flicked my lights on for a moment, but couldn't recognize either face. I began to wonder about the fellow I'd hit and what his friends might think about it if I'd hurt him really seriously. The human mind sometimes goes off on funny side tracks; I never once, while I was being towed, thought about their reaction to my having discovered their obviously secret installation. If I had, I'd probably have told myself that if they really wanted to do anything final any of their subs could have cracked the tank with no trouble at all.

Eventually the bottom came into view in the range of my own lights.

It wasn't luminous this time. I thought at first that they must have turned their lights off; then I realized that the storm must have carried me some distance, and there was no reason to expect to be very near the tent. This was ordinary sea bottom complete with crab burrows; I could tell, because after reaching it the sub reeled in most

of the tow line and left me only about twenty feet up. This gave me a good look at the boat itself, too, and I could see that it wasn't my former antagonist. For one thing, it was about twice as big.

It wasn't very different in general design, though. There was still plenty of equipment on the outside — more, if anything. It was meant for work, not travel. Even without the drag of my tank it wouldn't have made very good speed over the bottom, but I could see that we were moving. I had no doubt we were heading either for the entrance I'd seen earlier or for some other one and kept looking ahead for its lights.

As it turned out, we reached a different one. We were a couple of hours getting there, though that's an academic point since I didn't know where we'd started from anyway. This pit was smaller than the other, and the lighted tent roof was nowhere in sight when we reached it.

This entrance was only about twenty-five feet across, much too small for the sub that was towing me and borderline for the other two. It was perfectly cylindrical, with vertical sides, and opened from the bottom of a shallow bowl just as the other had. It was very well lighted, so I had no trouble making out details.

There were many ladders around the rim. At first they led down out of sight, but as I came closer I found I could see the bottom ends of those on the farther side of the opening. The pit was apparently a



hole in the roof of a chamber something like forty feet deep.

There were several more swimmers in and above the hole who seemed to be waiting for us. As we approached, they paddled out rather casually and gathered around the tank as the sub that was towing me settled to the bottom just beside the entrance.

My tank drifted upward and slightly forward until the tow rope was vertical. One of the swimmers waved a signal, and an escort sub swung back in and hung another slug of ballast onto my net. That took the rest of the tension off the rope, and I began to sink.

The swimmer signaled again, and the tow line came free of the big sub. Several men grabbed it; the rest took hold of the net, and they all began to work me toward the pit as I settled. This seemed to be the last lap. Unless they had the stupidity to leave me right under their hole in the roof, which would be too much to expect even in twentieth-century realistic literature, the most remote chance of my getting back without their consent and assistance would vanish once I was inside that entryway.

I was nearly frantic. Don't ask me why I felt so scared at one time and so calm and steady at another; I can't tell you. It's just the way I am, and if you don't like it you don't have to live with it, at least.

I don't know what I did or thought in those few minutes, and I'd probably not want to tell anyone if I did remember. The fact was that there was nothing whatever I could do. I

had all the power of a goldfish in his bowl, and that sometimes upsets a man — who, after all, is used to saving at least a little control over his environment.

I was a little more calm as I reached the edge of the pit; I don't know the reason for that, either, but at least I can report the incident. There was a pause as we reached the tops of the ladders, and the subs and swimmers both clustered around and began hanging more ballast onto my net, adding insult to injury. The swimmers also picked up what looked like tool belts from hooks near the ladder tops and buckled them around their waists, though I couldn't see why they should have more need of these inside than out. At least, I couldn't see any reason at first; then it occurred to me that tools might be useful in opening up my tank. I decided not to think of that just yet.

From inside, the pit looked even more like a hole in a ceiling. The chamber below was much larger than I had realized, fully a hundred feet on each side. The entrance was simply a black circle above me, and as I watched it ceased to be above me. The swimmers were pushing me toward one of the walls.

I thought for a moment that rolling across the ceiling would at least be easier than the same action on the sea bottom, but dismissed the point as irrelevant and academic. My morale was rising, but was still pretty low.

At least, I was still alive, and in a way I'd done some of my job. I'd

dropped the transponder near one entrance, and there seemed a decent chance that it hadn't been found. My pick-me-up broadcast had been going for several hours at the surface, and the chance that it had been received was excellent. The Board would know I'd done *something*, and would certainly be moved to check up on what had become of me. If they swept the bottom with high-resolution sonar they could hardly miss the smooth surface of the tent, even if the transponders didn't work. In fact, considering how big the tent seemed to be, it was rather surprising that ordinary depth-meter records hadn't picked it up some time or other.

I should have given more thought to that point, though it would have sent my morale downhill again. As it was, I could believe that this installation would be found fairly soon, even if I myself wasn't.

The big room had little detail to mention. I assumed at first that it would turn out to be a pressure lock or the vestibule to one, but the big tunnel opening from it had no door. There were smaller panels on the walls which might have been locks — some of them were big enough to admit a human figure.

The swimmers towed me toward the tunnel mouth and into it. It was fully twenty feet in diameter, much more than large enough for the tank, and was lighted almost as well as the chamber we had just left. I found myself getting angry again at this bunch who were being so free with their energy. I was also beginning

to wonder where they got so much of it. I'd run into power-bootleggers before in the course of business, naturally, but never an outfit with so much of it to throw around.

We went only a few yards — twenty or so — down the tunnel before coming to another large room which opened from it. They towed me into this. It had several much smaller tunnels — maybe I should say shafts — opening from its floor; I counted eight in my first glance. None of these openings had lids or doors either. Apparently a large part of the installation was flooded and under outside pressure. Maybe it was a mine; that would account for the energy, if the product were uranium or thorium, and it would not be practical to try to keep all the windings and tunnels of a submarine mine free of water.

I had just about time to run that thought through my mind while the swimmers were putting me and my tank down on the floor. It started to roll a little, and I put out three legs to prop it. Luckily all three got through the meshes of the net which was still around me without being jammed. With that settled, I looked at the bunch of people around me to see what they'd do next. It was clearly up to them.

I'm used to it now, but I still don't like the memory of what they did and what it did to me.

They took off their helmets. A mile under the sea, in pressure that would crush sponges metal into foil, they took off their helmets.

TO BE CONTINUED

# CONQUEROR

by LARRY EISENBERG

*She seemed very like a woman  
— but there was something  
inhuman about her as well!*

Joe found much of the Sentient city quaint, even charming, but it was not like home. It was an ancient, sophisticated city on an ancient planet, and yet it did not display the material comforts that Terra had attained after a meager fifty thousand years out of the Stone Age.

He walked through the shattered cobbled streets in full gear, outfitted in the smart dark dress blues of the invading forces, looking for women and entertainment. It was not easy to find. Determined to make this a model Occupation, the commanding general had worked out a limited schedule of available services and had set up severe rationing standards. Only three drinks of the potent

*ragacsi* were permitted daily. And at most one woman a day, Meals and food packages were also strictly regulated by item and quantity.

Rationing control was handled by the Central Terran Computer. Payment had to be *in advance*. Small input scan devices were located all over the city which only accepted dogtags and recorded serial numbers plus the nature of the transaction. Joe sighed. He had been scouring the shops for souvenirs to send home and he had already used up his quota of drinks for the day. But he still had a woman coming.

The Sentients were behaving with scrupulous propriety. They had been badly beaten, but they hadn't relin-

quished their basic dignity. As reparations for their prolonged and costly resistance, they had been forced to give up tremendous quantities of treasure and goods. Hence everyone was living on a substandard basis. But there was almost no black marketeering.

There was very little prostitution, too. Traditionally the Sentients used android women for this purpose, amazingly lifelike figures designed for erotic pleasures, good enough to pass muster with the most exacting of men. But most of the Terran soldiers, like Joe, considered this practice emasculating, a sign of the degeneration of the Sentient culture, and avoided the android women like the plague. Only a handful of the men, weak in moral fiber and controls, joking to cover their inner shame, had defiled themselves in this way.

Fortunately there were a few *real* women around, whose circumstances were so straitened that they had gone to the streets to earn Terran credits. But only a few. Joe had waited now for fifty-three days. And the torment was growing stronger with each day.

He stepped into one of the very neat candy-pink social clubs maintained by the Sentients for the Terran soldiers. There were four women seated quietly about the room — all of them android, he was certain. They were uncannily like the Sentient women in appearance. None were pretty by Terran standards. Their noses were too broad, their eyes set very wide apart, the

skin an almost alabaster white. But they were extraordinarily sensuous creatures. He stared at each one in turn, tempted but not quite enough. He took great pride in maintaining his own self-respect, in holding on to his masculinity.

He advanced to the bar and asked the Sentient bartender for a *ragacsi*. "Your dogtag, please," said the bartender.

Joe slipped the metal disk into the scanner and waited stoically for the intermittent red flash to appear. It did and the bartender sighed.

"I'm sorry, sir. You've reach your quota for the day. But I'll be happy to serve you tomorrow."

"The hell with it," snapped Joe. "I didn't want the goddam drink anyway."

He stepped angrily into the street and looked along the narrow lane. There was no one in view. High above, two young Sentient women had been leaning out of an oval picture window but when they caught his glance they both withdrew and closed the outer blinds. He was terribly depressed.

"I'm hungry," he thought, "but it isn't sex alone. I want intimate contact with another human being."

He stopped off at a curio shop and chatted politely with the proprietor. He even priced several expensive items although he knew he didn't have sufficient credits left to pay for them. The Sentient dealer was courteous, but no more. Joe tried to hint obliquely at how lonely he was, but the Sentient didn't seem to grasp his meaning. They parted on correct but distant terms.

And then he saw her. She wasn't even as pretty as the android women he had seen, but she was *alive*. He was certain of that. She had her head averted and was looking wistfully into a shop window. He came up just behind her and looked over her shoulder. She was eyeing a lavishly packaged food assortment.

"It looks mighty tempting, doesn't it?" he said softly.

She turned to look at him, but said nothing.

On sudden impulse, he went into the store and used up his food allowance on the package. When he came out into the street he handed it to the Sentient woman.

"I cannot take this from you," she said.

"No strings," said Joe and when he saw the look of puzzlement on her face, he rephrased his words. "I want nothing in return," he said.

She looked at him warily for a moment and then reached out for the package. He was elated because she had accepted it.

"Where do you live?" he said.

"You wish to come home with me?"

"Only to talk. Nothing more."

She shrugged and took his hand in hers, the warmth of her fingers coming almost as a shock to him. Together they wove through the maze of darkening streets, dimly lit by the orange glow of the setting Star above. There were tangles of debris everywhere since much of the destruction had not yet been cleared away by the Sentient population. He pretended not to see it.

When they arrived outside her

home, she asked him to wait while she went within. She returned in a few moments.

"I can't ask you in," she said quietly. "My parents will not permit it. But since I have accepted your gift, I feel I owe you something."

"You don't owe me a thing," he said vigorously.

"No, no," she insisted. "I will go to your home with you, now."

His home? He had no home on this planet. He was quartered with an elderly Sentient couple in a small bedroom with a private side entrance. He told her this, and she shrugged her indifference. But he wanted more than gratitude.

They walked to one of the few parks that had not been shattered by the invasion. It was on a hill of several hundred feet that overlooked a river winding below like a metallic ribbon. He talked hesitantly about his parents, and when she looked at him sympathetically, he fished a frayed picture out of his wallet to show to her. She smiled and remarked about the resemblance.

He asked her about herself, her family, but she wouldn't answer.

"I see only destruction about me," she said, and she pointed a slender finger toward the heaps of rubble that lay at the foot of the hill. Then she leaned toward him, and for the first time that evening, she ran her fingers gently over his cheek. His blood began to race at the implications of her caress.

"Do you like me?" he said earnestly. "Really like me?"

"I do," she said seemingly in earnest.

Although it was terribly expensive, he hailed one of the few helicopters that hovered over the ravaged city. He had the pilot place them down a few blocks before his destination so that he might stop to purchase a corsage. He pinned the exotic flowers, despite her mild objections, to the shoulder of her brightly colored blouse.

They entered noiselessly through the side door and quickly undressed. Afterward, he caressed her hair and spoke to her of intimate things, of his home, his loneliness, his contrition for the wanton destruction of her city, of his gratitude to her. She smiled at him as she reached out for her purse. She opened it and took out one of the small scanning devices issued by the Occupying Forces.

He felt icy fingers close about his heart.

"What are you doing?" he cried.

"Reporting the transaction to your Computer," she said, the word *your* heavily accented. "I should have recorded it in advance."

"But this wasn't just a transaction," he said. "It was one human being showing friendship to another."

She laughed outright.

"Me?" she said. "Human?"

He sat bolt upright in the bed.

"What do you mean?" he said.

"You even have parents! You said so."

"Parents was just a euphemism for my owners," she said. "I always give them Terran food packages."

He went to the closet and gathered up her clothes.

"Get the hell out of here," he said.

She dressed before him with exaggerated slowness, moving her body seductively in a caricature of sensuality. She curtsied grandly before she left, a grotesque mockery, he knew, of his Terran values.

She walked through the streets in a leisurely manner until she reached one of the city's communication centers. There she called her home, collect. Her mother's face came alive on the visiscreen. It was without emotion.

"I did it," she told her mother. "He is humiliated and unnerved. I made him something less than a man."

"It was a courageous and patriotic thing to do," said her mother. "And yet I wish the glory were being garnered by someone else's daughter."

Her mother's face faded from the screen like a wraith of smoke. And then, after straightening the hem of her skirt and discarding the corsage, the girl walked out into the street looking for another Terran soldier.

END



# FANS DOWN UNDER

by LIN CARTER

*Our Man in Fandom  
travels 12,000 miles  
to the Fantipodes!*

PEOPLE WHO read this column every month probably get the idea that science-fiction fandom exists only in America. Well, that's dead wrong. I know I tend to talk about American fans almost without exception, but that's only because I'm more closely connected to it than to the many foreign fandoms. Actually, people all over the world read science fiction, and a goodly number of them are fan-type people. Perhaps it would be a good idea if I did a little talking about them, for a change.

## Fans Down Under

Let's begin with Australia, the place the kangaroos and the duck-billed platypusses come from. I am beginning this Fandom-'Round-the-World thing with Aussie-land for the very good reason that the Sixth Continent is a veritable hotbed of fan-activity these days and seems to

be crawling with avid science-fiction readers, collectors and fans of all descriptions. This is a fairly recent phenomenon, although there have been fans in Australia for as long as there has been science fiction. But things went into the doldrums about 1958, for some reason.

The guy who touched off the current renaissance in Aussie fandom is named John Foyster. He organized and conducted the Seventh Australian SF Convention in the city of Melbourne around Easter of 1966. As you can tell from the Convention's official title, there have been over the years six other such cons. But the Melbourne affair was the first in about eight years, and it served to pull scattered fans together, bring new people into contact, and spark activity in general. John Foyster left for England early this year, and perhaps he can whip things into action there, too.

It was a combination of curious accidents that brought the current state of Australian fan-activity to my notice. The first thing that happened was that Pat Terry, an elderly Australian fan, very fond of Andre Norton, was moved to write to me because of a brief study I wrote of Miss Norton's books that appeared in some of the Ace paperback reprints of her novels. We began exchanging letters, and among other things he sent me two copies of a lively fan magazine called *Australian Science Fiction Review*, or ASFR for short. Then science-fiction writer James Blish sent me yet another copy. He received an extra of the current issue and, for want of a better idea, passed it along to me. Thus besieged with copies of ASFR arriving from all points of the compass (including yet another copy that ASFR's editor, John Bangsund, sent to me direct), I kinda *had* to read the thing. I found it lively, controversial and stimulating.

The editor points out, in issue #5, that ASFR came about as a direct consequence of this Convention. And, since just about all the fans in or about Australia get ASFR regularly, it has served to draw them together and help them get organized.

ASFR is not a heavy, lit'ry-type magazine by any means. The people who do the reviews are not of the persuasion that science fiction is either Serious Thought-Provoking Social Criticism or Scientific Prophecy (you know what I mean, the "Shape of Technologies to Come"

sort of idea). They have the idea that SF is *entertainment*, to be read for fun. And they criticize on that basis. They tend a little towards the chop-it-up-in-little-pieces brand of reviewing and don't spare the egos of the authors concerned. Oh, it's lively stuff — and the authors have been howling, as in the current issue, when William F. Temple howls and Jim Blish registers a polite quibble or two with ASFR's critique of his recent novel, *The Hour Before Earthrise*.

### The Melbourne Science Fiction Club

It would seem that Melbourne (which is *not* the capital of Australia) is certainly the SF center of the continent. Besides serving as the site of the Convention, and the home of ASFR, it boasts an SF fanclub of considerable activity. One of these activities — and one that I wish American fanclubs would adopt! — is holding regular screenings of science-fiction movies for club members. The Melbourne group is now trying to get copies of such movies as *Fantastic Voyage*, George Pal's *Seven Faces of Doctor Lao* and Truffaut's version of the Ray Bradbury yarn, *Fahrenheit 451*, for next year's season. As you might imagine, such films bring a rare turnout of sf fans.

The Melbourne group also have another feature that the American clubs universally lack: a *library*. In fact, Mervyn Binns (who writes up a monthly report on club doings for ASFR) claims it is one of "the most comprehensive collections in Australia." They've been adding to the collection, which already in-



cludes books, paperbacks and close to one thousand sf magazines, at the astounding rate of more than 150 books over a period of eight or nine months. Members, of course, have reading privileges . . . and, presumably, borrowing privileges. This is a great way for impecunious fans to catch up on their current reading, and I wish American clubs would adopt that notion too.

#### Celebrities, Even!

Nor is Australian fandom entirely made up of fans alone, as you might suppose. Plenty of professional science people make Australia their home. The late Dr. Paul Linebarger, for example, lived there for a number of years. If that name doesn't ring any bells with you, his famous pen-name was "Cordwainer Smith." If you've read many of his stories, you'll probably remember the planet "Norstrilia" — which was a contraction for "Old North Australia" and is an indication of his affection for the country.

Then there is A. Bertram Chandler, author of all those "Rim world" stories, such as his recent *If* serial, *The Road to the Rim*. Bertram Chandler is, or was, a ship's officer in the maritime service and makes his home in New South Wales. He has letters and brief articles scattered through the copies of ASFR that I have seen and seems to be a local celebrity.

And a crop of new young writers is rising Down Under. Such as Jack Wodhams, an expatriate Englishman; Ron Smith, an expatriate American and Australia's own John Baxter, a home-grown

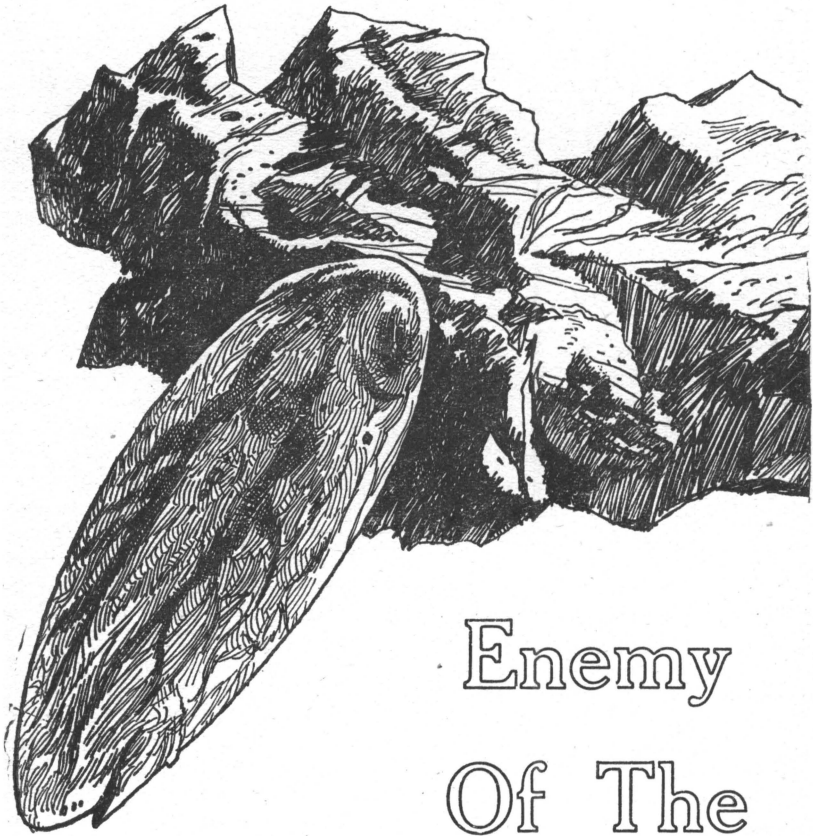
local boy. There is utterly no doubt that John Baxter is an authentic Australian: he once had a pet bunyip, and that's as Australian as you can get!

Baxter's novel, *The God Killers*, is reprinted over here by Ace Books under the title of *The Off-Worlders*. I am intimately familiar with this particular novel, because it's half of an Ace "Double" and the novel on the other side is a Lin Carter effort called *The Star Magicians*. I just slip this in casually.

Booming professional writers all over the Australian landscape is something comparatively new, and must contribute quite a bit to the excitement of the sf renaissance now in the works down there in the Antipodes. Here in New York where I live, sf writers, editors and cover artists are a part of the local scenery and hardly get noticed any more. (I recall the Saturday evening my wife and I were coming out of a theatre on Times Square and bumped into Randall Garrett, James Blish and Sam Moskowitz, all in the space of about 20 minutes.) The New York fan clubs are pretty blasé about it all . . . so many professionals drop around to the club meetings that their "celebrity" value has all but rubbed off by now . . . but it's rather new to the Australian fans, and I suppose it's pretty diverting.

I thought I wouldn't be able to cover the other fan movements in Italy, Germany, Scandinavia and elsewhere all in this one article, and I see I was right. So more about the foreign groups next month.

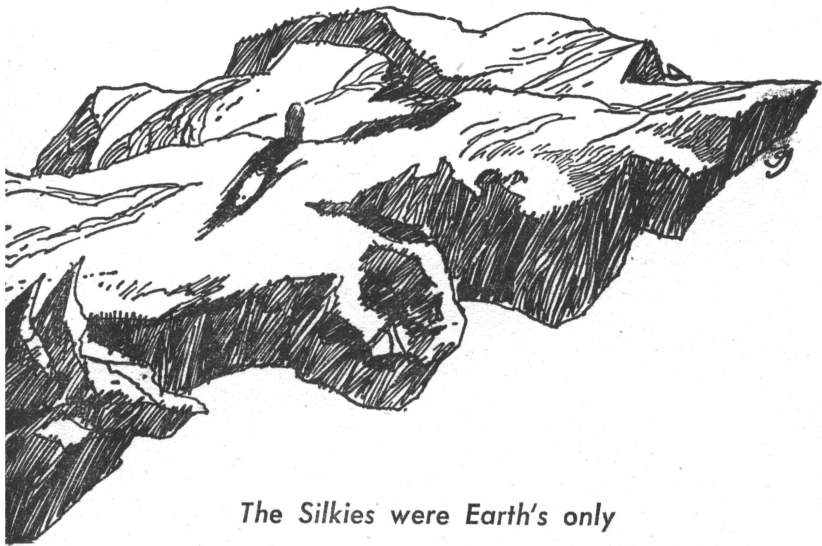
END



Enemy  
Of The  
Silkies

by A. E. VAN VOGT

Illustrated by GAUGHAN



*The Silkies were Earth's only  
defense against a foe who had  
already defeated them once!*

## I

When the Silkie call for help came, Nat Cemp, himself a Silkie, was exploring the planet which had been given the astronomical designation Minus 1109-93 . . . the 1109th planet farther away than Earth from the new, mighty sun, of which Earth had become one small, green, planetary part, revolving at

an angle of  $93^\circ$  in relation to Earth's orbit.

It was a temporary nomenclature. No one took the attitude that Earth was the most important planet of the new system.

Not, apparently, that it was going to matter. On the three planets that had been assigned to Cemp — 1107, 1108 and now 1109 — there were no detectable inhabitants. He had

been skimming for nearly half a day among the strange, slender buildings which reared like stretched lacework toward the sky. And already it was sadly obvious that here, also, the transition period had been too long for life to survive. Perhaps only Earth and the few others already discovered had been able to make the changeover.

The call for help came as Cemp was floating through a vast generator building complex. Clear and sharp and urgent, he picked it up from the mechanical relay system between 1109 and 1110.

It said, "All Silkies and government agencies: I have just received a (Silkie word) message from Lan Jedd."

The special Silkie "word" was a thought-form that was used to describe an after-death Silkie communication phenomenon. As a Silkie descended into death, there was a threshold point at which an isolated neural bundle was activated. The bundle was a telepathic sender; and it, quite simply, transmitted the final living thoughts, perceptions and feelings of a Silkie who, at the time the message was sent, was already dead.

The name of the dead Silkie, thus relayed, shocked Cemp. For Lan Jedd and he had been as much friends as any two Silkies ever were, or rather ever were allowed to be. Human beings and particularly the Special People — humans who could communicate telepathically with Silkies — had always discouraged Silkie-with-Silkie associations.

Lan and he had chosen to ex-

plore adjoining sets of planets at this remote end of the system in order to have relatively unmonitored discussions about the increasing severity of the Silkie-human problem.

So for Cemp, as the message reached him, the shocking thrill-thought came: except for the sender, he himself was the nearest "help."

He responded at once with: "Nat Cemp coming immediately. Who are you?"

"Ou-Dan! Calling from 1113-86."

The identification of the sender was disturbing. It was a name of the type and style common to meteorite Silkies, whose existence had been unknown until less than a year ago. The presence of such "original" Silkies in this vastly larger sun system was an unknown, unresolved factor . . . which Cemp and Lan Jedd had also talked about in great detail.

Startling to consider that, perhaps, Ou-Dan had "listened in" to their discussion.

But what especially disturbed Cemp was that he had no confidence in the fighting abilities of these newly arrived Silkies. It meant that for many hours he would be virtually alone against a mysterious, powerful enemy who had already proved himself strong enough to kill a Silkie.

As he had these awarenesses, Cemp was projecting himself out of the building he was in. Moments later he was rising out of the atmosphere by means of his Silkie method of gravitation reversal. Literally, the planet expelled his

body which, in his C-Silkie form, was almost bullet-shaped and ten feet long. In this form it was a body that was fully able to operate and live in the vacuum of space.

Once away from the planet, Cemp maintained his expulsion momentum and moved through space by cutting off gravity from all objects in space except in the direction he wanted to go. Thus the outer planets drew him, and he "fell" with ever increasing speed toward his destination, a special "ship."

In spite of his initial acceleration, it was the usual slow journey of a Silkie traveling by himself through space. And so it was several anxious hours later before at last he saw the ship in the dark space ahead.

The ship was a defensive vessel that had been built as part of a crash program after the disaster of Earth becoming part of the new sun system. Built without walls, utilizing weapons as modern as what Cemp had learned from the Glis, it and others like it were part of the safety measures set up in conjunction with exploring so many new and unknown planets.

As soon as he was securely in control of the ship, Cemp started it toward Ou-Dan, a distance of only four planets. Which was no problem at all to the fast ship.

Once under way, Cemp allowed its relay sender to activate again. Thus he tuned into communications which were already in progress from more remote points: Silkies speculating telepathically about what had happened.

*What a powerful life-form that particular planet which Lan Jedd had been exploring must have, if one or even several of them could kill a fully grown Silkie like Lan.* That was the general thought. From all over the system converging Silkies readied for a mass battle with a dangerous opponent.

Unfortunately, it would be quite a while before these more distant helpers arrived on the scene. For at least an earth day, Ou-Dan and he would be the only living beings on or near the scene of the crime.

Arriving at ship speed, Cemp learned that the dead Silkie body had been taken by Ou-Dan over to a meteorite, which circled 1113-86.

The strange bright-dark of space with its black "sky" and the huge, faraway sun glaring with a thousand reflected brilliances from every rock and metal facet of the meteorite — that was the backdrop.

In such a vast frame, the shattered Silkie body seemed like an atom in infinity. It lay sprawled on a flat spread of rock. In death it bore an even vaguer resemblance to a human being than in life. There was a sort of leg separation at the rear, and up front was a caricature of a human face.

No indication of how the destruction had been done. Ou-Dan commented telepathically that the body looked collapsed. But it was not much smaller than normal: eight inches at most.

As Cemp gazed silently down at his dead friend, he thought: The worst possible had happened. A highly trained adult Silkie, with all

that implied in alertness and ability to utilize powerful defensive and offensive energies, had been confronted by another being.

And the Silkie had been defeated and killed.

Ou-Dan, looking a little like an elongated meteorite himself, telephated: "Lan had just reported to me that there were no inhabitants surviving on 1110, 1111 and 1112, and I, working backwards, had found the same situation on 1115, 1114 and 1113, when his after-death message came."

Cemp thought: A dead Silkie, and only one clue: that single flash of communication from the mature and powerful Lan Jedd, instants after he died.

. . . A mental picture of a pyramidal shape and the thought: It came from nowhere, from nothing.

Cemp felt a chill as he contemplated the fantastic implications of the message. The immense speed of the attack . . . out of nowhere.

Presently, Cemp telephated to Ou-Dan: "Why don't you come with me and we'll wait in the ship? Its weapons will help us if we're attacked."

Ou-Dan followed Cemp into an alcove barrier at the heart of the machinery that made up the "ship."

"But I'm not staying," he said.

Cemp sensed behind the decision, not antagonism, but disinterest.

Ou-Dan's thought came again: "I remained with Lan's dead body out of courtesy till someone arrived. Now, that you're here, I plan to return to Earth."

"It's safer in the ship," Cemp urged.

He pointed out that it was an Earth Silkie maxim never to take unnecessary chances. Ou-Dan's plan to go out by himself into space seemed a risk of this kind.

"It would be purely accidental," was the reply, "If I met the killer in these vast reaches. My guess is he spotted Lan when he used the relay system to communicate with me. As I see it, the closer you are to a ship, the greater your danger."

The analysis had its own reasonableness. But why, since Ou-Dan had joined the exploration group in the first place, leave now? Cemp asked the question.

Ou-Dan said that because of Cemp's action in saving the meteorite Silkies from the Glis eight months before, Ou-Dan felt obligated to tell him that he considered this to be a crisis. But truth was it was probably typical of the many crises that would occur in the future in a new system comprising eighteen hundred and twenty-three habitable planets. So the time to resolve Silkie rights in relation to human beings was now.

Ou-Dan predicted that the Silkie originals would undoubtedly take no further action until their legal situation with Earth was settled.

"The others and I came out to get the feel of being involved," said Ou-Dan. "So I can tell you right now that we're not going to settle for being police officers like you. And of course we're not going to give up our ability to change to any form or shape of body.

"After all," Ou-Dan continued tolerantly, "just because you're limited to the Silkie-human cycle doesn't mean we have to be."

They had been talking mentally at the super-speed of thoughts synchronized with magnetic carrier waves. It would have actually required a small book for a transcript of the details of their messages to each other; the overtones were that many.

Now, for the period required for a private thought, Cemp put up a barrier.

The fantastic subject of change of form was not one that he was prepared to discuss with anyone.

In fact, he had instructions from the Silkie Foundation to keep secret his special knowledge.

The original Silkies — like Ou-Dan — had a basic ability to change into any living shape or form that could contain, expand or compress the total number of molecules involved. It need not be merely a human form. Theirs was, however, an elementary level transformation, beginning with a general internal and external resemblance — not too refined but adequate for any reasonable purpose. In addition, in the presence of a life-form, they could by a continuous rapid scanning and feedback method duplicate it at virtually any level of refinement — so long as the being who was duplicated was close by.

Earth Silkies, on the other hand, had been biologically limited to the human-Silkie B-Silkie C change, which was automatic once it was set in motion.

Only Nat Cemp, of the Earth Silkies, could go beyond the Silkie-human cycle.

In confronting the remarkable Kibmadine, he had learned its perfect method of metamorphic ability. He needed only the memory of somebody once met to be able to become that being with total duplication.

Having had these thoughts, and hidden them, Cemp telepathed in a temporizing way, "Don't underestimate human beings."

"I won't," retorted Ou-Dan, "so long as they have you fooled into being on their side."

Cemp said, "Even with the 6,000 original Silkies added to our own numbers, the total Silkie population of the entire universe is less than 8,000. Such a minority has to adjust to the vast planetary populations of other life-forms."

Ou-Dan said, "I don't have to adjust to anything. I'm free to do as I please."

Cemp said, "All through human history, wherever people got the right to make their own choices, they presently refused to cooperate even for the common good. Soon, each person set himself up as having an opinion as good as anybody else's. Naturally, they first of all soon fell under the influence of individuals with skillful systems and in the end were maneuvered into a new slavery. Now, here you are making the same error of refusing to cooperate."

"Let others cooperate with us," was the reply. "We're the superior beings."

"If we were so great," Cemp flashed back, "how come there're so few of us left?"

"Well — " Ou-Dan was impatient — "we were unlucky that we ran into a race with even more capability than we had. At least, that's the legend. And of course after that we were in that meteorite under the control of the Glis, and our numbers were kept limited."

Cemp pointed out gently that control of Silkies by the Glis was the slave condition. "Therefore," he said, "we may deduce that long ago Silkies reached the state of refusing to cooperate for the common good. We can picture enormous, vaulting egos, opinionated and ridiculous, never once having a true survival thought.

"We can," Cemp continued, "picture Silkies refusing to abide by any system of law, going out into space if anyone threatened them. Feeling absolutely impregnable. And then one day out there in the dark reaches they met their match, and were hunted down one by one by a remorseless enemy."

"I don't see," said Ou-Dan, "how we free Silkies can even talk to someone as conformist as you are."

"Reliable is the word," answered Cemp. "I can be trusted to do what I say. Evidently you and your originals cannot even decide what role you want to play."

"Why should we have a role? Why should we work at all, at anything? Why shouldn't human beings work for us instead of we for them? That's a perfectly fair question."

Cemp explained that human beings seemed to be easily surviving their present association with Silkies. But this might not be true if the conditions of association were altered.

Ou-Dan seemed indifferent to the possibility. And Cemp realized it was a lot to expect that someone who had had no previous contact with human beings would care about them. But Cemp, who had been born to a human mother, did care. So he said, with the intent of ending the discussion, "We'll have a general meeting soon. We'll talk then."

Such a meeting had already been proposed by Charley Baxter, head of the Silkie Foundation. Baxter, who was one of the Special People, was as anxious about the attitude of the original Silkies as Cemp.

Ou-Dan accepted the end of conversation with: "I have nothing more to learn here. Good-by."

Whereupon he launched into space, and was quickly lost from view. Presently, he did not even register on the magnetic band as any different from the meteorite flotsam and jetsam that populated all areas of space.

## II

In this distant point in space, with all the trigger systems for the "ship" set for instant reaction, Cemp waited for he knew not what.

The open-to-space ship was itself lightless. Artificial light on any level interfered with the sensitive instruments that monitored the protective weaponry. It was enough problem for the equipment around him that



he himself had to be taken account of.

Periodically, Cemp made a complete check of that equipment. He established each time that every relay was ready to snap and that each device was separately set to permit the presence of his Silkie shape and mass and of that portion of his life energy which he could not contain within himself.

While he waited, Cemp gazed "down" in the general direction of Earth.

The view below him had the forever-new quality of light and form that had passed a threshold point of abundance. There were so many, many brilliant planetary lights in the dark sky of Earth's new super-sun system. The sheer number of planets, each with a different coloration, made for a timelessly beautiful panorama.

For Cemp, it was below and down because he had long ago oriented himself in such human terms. In his Silkie body he always operated at what would have been face down in a human being. So he had a right and a left, a front and a back, and an up and down.

In the several conversations that he conducted with far Earth, Cemp could obtain no additional advice as to any other precautions he might take. No one believed that way out there at the remote edge of the system any living being could approach him, unnoticed.

Yet what Lan Jedd reported, indicated that there would be no advance warning.

There wasn't.

At the moment of the attack, Cemp had waited in the ship exactly four Earth hours, eighteen minutes and forty-two seconds.

The being who at that time for a few split-instants was exposed to Cemp's perception had the shape of an inverted pyramid. Interesting that in the transmission of the same image from the now deceased Lan Jedd, the invert had not come through. The transmitting computer, consulting its analogs, had produced a pyramid stereotype wherein the base was down and the point up.

In fact, the base was up and the point down.

That was all Cemp had time to "see," for the creature was in the trap only momentarily. A less speedy perception than that of a Silkie would have noticed at best a shadow darkening a lighted space.

Despite the colossal speed of the being's withdrawal, Cemp with his heightened Silkie perception was able to examine awareness centers in himself that had automatically recorded more data. Thus Cemp continued to view where it had been through a series of neural and energy receptors that played back their information for his evaluation.

He realized, fascinated: During the moment it was in the trap, the creature attacked and tried to kill him.

But he was saved by the defenses of the trap.

A strong impulse came to study the battle, to discover immediately what it was that had made him vulnerable, why his own screens wouldn't have worked.

Cemp fought that impulse, thinking: Put the battle aside. Examine it last.

For an attack was only that — energy, force, whatever. It was the Nijjan method of approaching the trap that everybody down the line wanted to know about. Where *had* the fantastic thing come from?

Studying the after-images, Cemp saw with amazement that the pyramid shape was actually an energy projection from a source.

The being at the source he could not get a good look at; it withdrew so rapidly.

Considering the “impossible” speed of that withdrawal, he recalled a scientifically oriented speculative discussion he had had with other Silkies about his encounter with the Glis. Now, he felt that Glis experience again in his mind — and that wasn't it.

The discovery appalled him. For what he had perceived had been something; and then it was nothing.

Something to nothing. Nothing to something to nothing.

What could it be?

Cemp had one receptor that had on it a vague perception. So vague that it gained reality only because he played it for himself a dozen times, and even then it remained unclear. But with so many replays he had an impression, if so it could be called, that the energy point which was the apparent source of the inverted pyramid had another point at some vast distance beyond it. And behind — beyond — that point was still another point, and

beyond that another, and more points in the vaster distance. Or was it distance? Cemp couldn't decide.

After viewing and re-viewing the perceptic impression, so shadowy and uncertain, he consciously compared what he saw to an endless image reflected in two perfect mirrors facing each other.

But even that was only an analogy. Because the images extended into only one mirror and not the other. It was a one-direction phenomenon.

It was a mystery which he could not solve; so, uneasily, he turned his attention to the life-and-death battle he had fought.

Like the other aspects of that momentary contact, the engagement could only be studied in its confusing aftermath. Examined thus, it showed as having started the split-instant that the creature arrived. The trap, consisting in its first phase of a Glis-type molecule with the gravity power of a planet, had instantaneously oriented to the enemy.

It was instantaneous because, of course, gravity has no lag; there is no moment of waiting while it goes through a process of adjustment.

The molecule, that remarkable discovery of the ancient nature of matter the secret of which Cemp had gotten from the Glis, reached with the power of an entire world — and attached itself to the alien.

Hindered him.

The attacker, thus handicapped, nevertheless did something. What, Cemp had no idea. All Cemp's great defenses were up: his energy

screens, his magnetic methods of turning aside radiation, what he had learned from the Kibmadine about using attack energy against the attacker.

But the attack was not on an energy band. Cemp's defenses had no effect.

— He felt a change in his whole body, a sudden sense of inward-collapsing distortion . . . .

His thought twisted strangely. Unable to put up a single barrier, Cemp felt himself spin toward death —

The next split-moment the creature, hindered by the molecule, disappeared.

And the battle was over.

### III

Urgently, Cemp opened a line to Earth. He was quickly deluged with questions.

And someone had the same thought as he had had: that the pyramid was a weapon that operated through some mirror principle from an actual distance. Thus — it was argued — the effect of nothing to something to nothing was like a mirror being turned on and off in the time it took a relay to push-pull a switch.

"No!" answered Cemp. "It was a life-form. I sensed its aliveness."

That ended that part of the argument right there.

Charley Baxter came on. "Your data is being fed into the computer, Nat," he said gravely. "While we wait, would you like to speak to your wife?"

"Of course, what do you think."

Joanne's thought, when it came through, reflected irritation. "Everybody's so damned secretive about what you're doing," she began.

So they hadn't told her his danger. Cemp was relieved.

"Look," he telephated, "we're exploring out here and testing a new ship. That's all I'm allowed to say."

It was a truth of sorts. He added, "What have you been up to?"

His attempt at diverting her was successful. Joanne became indignant. "I have had the most horrible experience," she reported.

What she told him was that Silkie women — members of the original Silkies — had called on the human wives of Earth Silkies and urged them to divorce their Silkie husbands. Such a Silkie woman had called on Joanne and demanded that she divorce Cemp.

The Silkie woman had pointed out bluntly that Cemp as a Silkie would live to be at least a thousand years old. And, of course, Joanne was more mortal than that by far.

"So — " the Silkie woman had urged — "why not face the reality of that now, while you are still young?"

Cemp had the unhappy feeling that the problem was more severe than Joanne knew. A thousand years was as long as the Glis, for its own reasons, had allowed meteorite Silkies to live. A Silkie's actual life span was an unknown.

Yet he had always felt that these matters would be resolved in their own good time. Joanne was under thirty. Her present life expectancy

was about one hundred and fifty. Long before she reached that age, human immortality might become possible.

Questioning her, he discovered that Joanne had toughly pointed out all these things to the Silkie woman and had given as much as she received.

**I**t was not a moment for Cemp to consider what changes might come in the Silkie-human tangle. He telepathed with warmth, "Don't worry about any of this. You're my darling."

"That's a powerful point," said Joanne sweetly. "But don't think you've fooled me for a moment. I sense there's a big event coming up in your life, and you're taking it in stride as usual."

"Well —" Cemp began.

"It's really an unresolvable dilemma," answered Joanne.

"What is?" Cemp asked, in surprise.

Cemp quickly realized that Joanne's concern was not with the danger but, of all things, with the fact he was not afraid. She said, almost tearfully, "If you feel so confident against such a mighty enemy — what's going to become of Silkie-human relations?"

"Meaning, I presume," said Cemp, "that Silkies don't need humans any more?"

"Well, do they?"

Cemp explained patiently, "In the first place, my confidence is in Logic of Levels, and not in myself."

Joanne brushed that aside. "It's the same thing. Logic of Levels is a

tool that you can use whether you're associated with humans or not."

"In the second place," Cemp replied, "I don't even know yet whether I'm going to dare use it, though I'm certainly going to threaten it."

"You'll be forced to. And then you'll win, and there you'll be at an incredible height of power and ability."

"In the third place," Cemp continued, "the association between Silkies and humans exists. And I'm particularly happy with what I got out of the transaction — meaning you." He broke off. "Do I seem any smarter?"

"N-no."

"I.Q. human level, eh, still?"

"I suppose so." Reluctant admission.

"I still seem to reason like a human being, correct?"

"But you're so powerful."

"Perhaps you should think of me as a battleship commander," said Cemp. "In this instance, the battleship is my Silkie body, and you're the commander's beloved wife."

The comparison seemed to buoy her, for her mind smiled at him, and she said, "They're motioning me to stop, and I still love you, but good-by, my dear."

Her communication ceased.

**C**harley Baxter came on. "The computer," he said, and there was concern in his thought, "was reminded by your data of something you reported months ago; something the Glis told you during its death throes."



**Cemp remembered:** The Glis, realizing that **Cemp** was a dangerous Silkie, had headed toward a remote star system. This system — according to what the Glis had told **Cemp** in its final, desperate effort to save itself — was inhabited by an ancient enemy of the Silkies.

These beings called themselves Nijjans. Which was a race name with the mighty meaning: **Creators of Universes. Or, in its fullest sense: The People Who Know the Nature of Things and Can Create Universes at Will.**

As **Cemp** uneasily pondered the hideous possibilities if the analysis were true, **Baxter** continued in an arguing overtone, "**Nat, the Glis was going somewhere. You did get alarmed and you threatened him. As you described it, the Glis slowed down and tried to make his peace with you. So that whatever system he was pointing toward must be out there in the direction he was going, not too far away.**"

Since astronomers had gotten a line on Sol, Earth's former sun, they had already projected a line fairly straight at the Glis's original destination somewhere in near space.

"**And,**" said **Baxter**, "the system is out there about six light-years beyond you, **Nat.**"

Such details were, of course, of interest. But **Cemp** was under too much threat for anything but the absolutely decisive points to matter.

He telepathed hastily, "Does the computer have any idea how the Nijjan killed Lan? Or how I should handle him if he comes back with reinforcements?"

**Baxter's** disturbed reply came. "**Nat, this is a terrible thing to tell someone in your situation. But the computer hasn't the faintest idea how the thing came out of nothingness or what the force used against Lan and you was. It says it has no programming that fits and —**"

That was all **Cemp** had time to receive.

At that precise split-instant, the perceptors that he had projected beyond the Nijjan's first relay point were triggered.

Since he had a communication line open to Earth, he allowed his recording of danger to go through him and along that line.

The essential of communication that he thus instantly passed along was: **The Nijjan is back . . . before I'm ready.**

#### IV

It seemed like long, long before. There the creature was, in much the same position as the first time: partly inside the ship, a hundred feet away.

But alone! That was the one hopeful aspect.

The inverted pyramidal projection glimmered with flickering energy pulsations.

**Cemp** now saw that the actual being at the source of the projection was also an inverted pyramid — in a way. The base was much narrower. And it had, he observed, arms and legs. It was about six feet long, and beautiful in that its hard, bright skin glittered and shone with changing color.

At the instant of the alien's arrival, the Glis molecule tried to attach itself. But the Nijjan was evidently prepared; for he balanced himself against it, somehow.

And thereafter ignored the molecule.

Cemp grew aware that the creature was looking at him intently from one or more of the bright points at the upper part of its body. Tentatively, Cemp sent a thought on a magnetic wave.

The answer came at once on the same wave band; came with multiples more force than Cemp was accustomed to receiving. Yet he had his own neural transformers that stepped the power down to his level —

And he had his first communication.

The creature began: "Let's have a conversation."

"You have a lot to explain," Cemp thought back, grimly.

"We're puzzled," was the reply. "Suddenly a Nova-Osiz appears only a few light-years from our own system. On investigation, we discover that the system which has so suddenly come into being is the largest planetary family, possibly, in the galaxy. Only a few of the planets are inhabited. But many have been in the past and are no longer so. Climactically, one of our exploring units meets a Silkie, a powerful being known from our antiquity as an enemy. He naturally destroys this being."

Said Cemp, "We shall require your people to execute this explorer who so instantly — and naturally — took

it upon himself to destroy a Silkie."

"It was an ancient reflex, which has now been modified," was the reply. "So execution will not occur. It could have happened to any Nijjan."

"Did you do it?" Cemp asked. "Are you this — what did you call him? — exploring unit?"

"Would it matter?"

"Probably not."

The Nijjan changed the subject, "What do you Silkies do in relation to human beings? What is your role?"

"We're police."

"Oh! That's interesting."

Cemp couldn't see how. Besides his attention was still concentrated on the other's explanation for the killing of Lan Jedd.

Cemp admitted reluctantly to himself that if an attack reflex had indeed been set up long ago in all these creatures, and never canceled, it would be difficult to adjudicate intentional murder.

But his next communication acknowledged none of this, as he continued: "All right, so here we are, accidentally doomed to occupy a space only a few light-years from each other. And we have eighteen hundred habitable planets. How many do you have?"

"That's a difficult question to answer. We don't think in terms of having a planet of our own. But I sense this is a difficult concept for you, so I'll say we probably do own one planet — our original home."

"Do you want any more,"

"Not in the sense that you mean.

All this is too new. But our basic purposes are peaceful."

Cemp didn't believe him.

It should have been true. The passing of the eons should have ended old impulses of hatred and destruction. On Earth, a thousand descendants of enemies of an equal number of yesteryears now lived side by side, at peace apparently forever.

Of course, this was not quite the same. The Nijjans were not descendants. They were the same beings who, long ago indeed, had attained the heights of their civilization and also immortality. These were the same creatures that had in the distant past hated and sought to exterminate the Silkies — so the Glis had told Cemp.

In that olden time, desiring to have the Silkies as servants, the mighty Glis had offered them a symbiotic relationship as the price for saving them. And the Silkies had accepted.

But that, with the transformation and defeat of the Glis, was now over. And the Silkies were again on their own. They could expect no help from any outside source.

It was a shaking thought. But Cemp was unrelenting. "I can't accept your disclaimer," he said. "Because why, when you first arrived here, presumably with your attack reflex already canceled, did you try to kill me?"

The Nijjan's reply was: "It was a defensive act. Something grabbed me. I see now that it is an unusual gravitational manifestation. But in that first moment I reacted in two

ways: Immediate counter-attack. And retreat. As soon as I had considered what the threat was, I decided to return. And here I am. So let's talk."

It was a good explanation. Yet Cemp's feeling remained: he didn't believe the story.

Couldn't accept it. Considered it motivated by the Nijjan's' desire to gain time . . . He had a desperate conviction that his danger was increasing with each passing moment.

Cemp wondered: What does he want the time for?

The obvious answer: Time to explore the ship, of course. Its structure, its weaponry.

"If what you say is true," Cemp countered, "then you will tell me what your method of attack was. How did your colleague kill a Silkie?"

"It would be foolish of me to reveal my advantages," answered the Nijjan. "How do I know what *your* plans are?"

Though that, also, was basically true, it was a total stop to discussion.

Yet there were still things he could learn.

Cemp sent out magnetic waves on all bands, designed to stir reactions in the other's body. He recorded the information that came back on magnetic waves passing through the Nijjan's body at the time his messages arrived.

He used radar and read the data that bounced back.

— And geon waves, those strange time-delay patterns.



— He used the Ylem energy, also — and that was dangerously close to being a weapon. But his purpose, which he telepathed to the Nijjan, was to elicit a reaction.

If there was, in fact, any understanding for him in the waves and energies that reflected or came back to him, Cemp could not analyze it.

With an effort, Cemp braced himself against the failure, and commanded, "Leave! Unless you reveal the method of murder, I refuse to continue this conversation. And I assure you that no further negotiations between our two groups can occur until that revelation is made."

The Nijjan answered, "I cannot give such data without authorization. So why not come with me and talk to — " He used a mental meaning that implied a government but had a different, additional implication, which Cemp could not evaluate.

Cemp answered, "That would place me at your mercy."

"Somebody has to negotiate. Why not you?"

One thing, it seemed to Cemp, could be said for this Nijjan. As a deceiver, if that were what he was, he was certainly consistent.

Telepathically, he temporized: "How would I go with you?"

"Move past me, across and into the projection of myself at a distance of — " The Nijjan named a measurement in terms of a certain magnetic wavelength.

Once more, Cemp felt grudging admiration for this being. He thought: For all I know, that will be his method of killing me.

What was fascinating was that he was being maneuvered into doing it to himself.

The extreme skillfulness of the deception involved was what, in this near-ultimate moment, focused Cemp's attention on *that* aspect.

As he realized the possibility, Cemp did two things.

He sent a beam to the trap mechanism which controlled the molecule with its planet-sized gravity; and released the molecule's hold on the Nijjan.

The rationale of this first action was: the being must be bracing himself against that gravity, was using power to hold himself away from it. At the moment of release, he would have to deal with the resultant inertia, the equivalent of a planet's centrifugal thrust.

The second thing Cemp did was more subtle, but he did it at the same instant.

He tried Logic of Levels on the *one* behavior that he had now belatedly noticed in the Nijjan.

And, because he wasn't sure it would work, and didn't want to give away what, until now, had been a human-Silkie secret, he hoped the gravity release would confuse the great being who had come into this trap with such total confidence in his own ability against Silkies — confuse the Nijjan, render him momentarily vulnerable and, somehow, prevent disaster.

The behavior Cemp believed he had observed was the creature manifesting the famous betrayal pattern.

From the point of view of Logic of Levels, it was a minor event in the brain. Since it was the basic winning cycle of life, nothing decisive could be done against it.

By triggering it, he could force the Nijjan to win more.

— Which was pretty ironic and could lead to unknown consequences.

But it was the only opening available.

Three things happened at the same moment:

The molecule released. The betrayal cycle triggered. Cemp entered the path of the energy beam, which created the larger pyramid.

He felt a sensation different from anything he had ever experienced.

Under him and around him, the trap-ship . . . vanished.

He perceived that he was in a strange — not place, for there was nothing. But . . . what?

## V

**I**n a group, only the leader can betray. And he must betray, or be ready to betray, or there is no group.

Everyone else has to conform, fit in, follow the rules, be a supporter without qualifications. Even to think an objection is wrong. You must swear fealty to the leader "without mental reservations."

You must support the code and ideally report to the leader's police any deviations from it on the part of others, and on the part of yourself.

At any moment for the good of the group — by the leader's judg-

ment alone — you can be betrayed (sacrificed) without any other explanation being required.

Periodically, you or some other conformist must be betrayed as a matter of policy, even if you have not deviated from the code by any previously applied standard of judgment.

The leader's act of betrayal (of you) of itself makes you guilty.

Immediately every other person in the group must disconnect from you without mental reservations.

The rule of betrayal by the leader alone applies under any group system, including the elective — where the leader's immediate aides are his group.

As a group grows larger, the leader delegates his betrayal rights to unevenly qualified persons, who act in his name. Where this process (of delegation) continues and expands, there are alleviations because not every sub-leader is as sensitive to the danger of non-conformism — being a conformist himself — as the leader.

But the leader who can read minds, and who utilizes the betrayal cycle through a remorseless police control method, can remain leader . . . forever.

Thus betrayal, consistently applied, wins at all levels.

**F**or Cemp, a combination event was occurring. He felt as if someone with whom he was in a kind of total telepathic communication was small. So small. Or — a sudden puzzlement struck him — was he, in fact, very large?

Incredibly large? Larger than the universe? The being whose thoughts Cemp was receiving rejected the concept of vastness. It was more comfortable to feel — small.

Satisfied that he was a mere point, the being considered what he might *become*. He thought, and Cemp received the thought along with the awareness: N'Yata will be pleased that I am having this moment of near-ultimate reality.

At his stage of development, he could only expect to hold on for a brief time, aligning what was possible for him, setting up as many of the golden lights as he could, in the time available. Mustn't waste a second!

One by one the being, himself so small, discharged even tinier bits of the smallness into the dark. Each bit was hard to push away, as if it's attachment to him, or consanguinity, prevented it from departing to any distance. The first few yards were tremendously hard, the first miles hard, the first light-years progressively easier, the distance of a galaxy like wafting a feather into a whirlwind. And the dark light-years beyond seemed almost barrierless.

Suddenly, one of the points he had thus put out attracted the being's attention. He thought: No, oh, no, I mustn't.

What he fought, then, was a surge of interest within himself in that point. He tried to tell himself the truth: that it was he who had put out the point, and it was he who was projecting the interest into it. That it had no interest of its own.

But a curious inversion was taking place: the conviction that the point was of itself *interesting*. That there was something attractive there, separate from his thought about it.

As he had that awareness, Cemp sensed that the creature's high, pure energy began to drop. Rapidly, it seemed — how long it took he didn't know — the being suffered an emotional transformation from a kind of radiance to — an, oh, well — boredom, through a momentary flash of rage to the self-delusion of: I am probably god, or at least a sub-god. So everything *must* align with me.

He was back, the creature thought sardonically, to the level of betrayal.

As he had that awareness, he was already *at* the other point, the one that had so automatically aroused his interest.

— Every instant that these remarkable events occurred, Cemp was fighting and observing, by means of another aspect of his awareness, a life-and-death battle that had no meaning.

Because no one was fighting him.

**L**ike a man who falls through an unnoticed manhole into a drainage pipe of deep, dirty, swirling water; like a child grabbing at and abruptly caught by the surging power of a live wire; like someone who puts his foot into a noose sets off a trigger and is jerked a hundred feet above ground as a bent tree springs back into position — Cemp had moved himself into a cosmic equivalent of the slipstream of a rocket.

He was instantly beyond his ability to cope, struggling with a natural force that transcended his experience. It was a basic condition of space, the existence of which had never been suspected by man or Silkie.

Cemp put up his barriers. Drew energy from the trap-ship. Replenished what was being suctioned from him.

The golden dot winked out.

And Cemp grew aware that he was in a large room. Several human beings, who were sitting before an enormous instrument bank, turned and looked at him in amazement.

As Cemp recognized top personnel of the Silkie Foundation, Charley Baxter leaped from his chair and came loping across the distances of the thick carpet.

Another realization forced itself upon Cemp: His Silkie body felt unstable in a unique fashion. Not unpleasant, the sensation was as if some part of him were aware of a distant place.

The alarmed thought came: I'm still connected to another location! I could be snatched out of here any moment.

And what was alarming about that was that he had no further defense. Except for one small delaying idea, he had used up his available possibilities.

Accordingly, the real crisis was upon him, unless —

Cemp transformed to human.

Doing so was not a well considered act. He had the thought that a change of structure might free him even a little from that remote . . .

connection. Because it was his only remaining possibility, he made the change at once.

And, in his haste, he half-fell, half-slid, to the floor.

The transition, he noted with relief, seemed to work. The feeling of being connected faded to a shadowy thing — still there, but like a whisper in a room where someone had been yelling moments before.

As Charley Baxter came up, Cemp called out to him, "Quick! Let's get to the computer. I don't know what happened. I should be read."

On the way, someone slipped Cemp a robe. He donned it over his naked body without pausing.

There was a little conversation, tense, staccato. Baxter asked, "What seemed to happen?"

"I gained some time," replied Cemp.

As he explained it, it was of course much more than that. Instead of being instantly defeated, he had manipulated and confused the enemy. Confronted by a superior being, he had used what ability and capacity he had. Now he desperately needed help, some kind of understanding about the fantastic thing he had experienced.

Baxter asked anxiously, "How much time do you think we have?"

Cemp replied, "I have an impression that they're working at top speed. An hour — no more."

It appeared to be true. At least they arrived in the computer room safely.

In its swift electronic way — yet slowly for the urgency that Cemp

felt — the computer made its study of him.

And came up with its four alternative answers.

The first of the two that mattered — number three — was strange indeed. "I have the impression," said the computer, "that everything that happened was occurring in someone's mind. Yet there is an impression of something ultimate in that concept. Something — well, I don't know — really basic to all things."

And of course that was hard to accept. Ultimate — basic — was too great.

An ultimate, axiomatically, could not be fought or resisted by something less.

"And that," said the computer, "is really all I can tell you. The manipulations of space of which the Nijjans seem to be capable are new. It would seem as if the cells in their system had to adjust to conditions that give them an advantage over other life-forms; some kind of greater control over the essence of things."

It was a bad moment. For even as the computer reported failure, Cemp sensed an internal change for the worse. The something — out there — was adjusting to his human body. He had a sudden conviction that at any moment a threshold point would be crossed.

Hastily, he reported the sensation to Baxter and finished, "I was hoping we'd have time for me to visit the Earth headquarters of the original Silkies, but I'd better go Silkie myself right now."

Charley Baxter's reply showed his

awareness of Cemp's danger, the possibility that Cemp might find himself in some far vacuum of space in his unprotected human body. Baxter asked anxiously, "Didn't you transform to human because as a Silkie you were even more vulnerable to whatever is pulling at you?"

It was true. But there was no alternative. As a Silkie he would temporarily at least be safer in a dangerous environment.

Baxter went on, and his voice held a note of strain. "Nat, why don't you change to some other form?"

Cemp turned and stared at him. And then for a space the two of them were silent. They stood there in that plush room, with its cushioned chairs and its small mechanical protrusions — which were all that was visible of the giant computer. Finally Cemp said:

"Charley, the consequences of what you suggest are an unknown factor."

Baxter said earnestly, "Nat, if we can't trust you to work it out, then it's an unsolvable problem anyway."

The sensation of imminent change was stronger. But still Cemp temporized. What Baxter suggested was almost as world-shaking as the Nijjan threat.

Transform — to anything!!

To any body. To any form. Be something entirely different from the three bodies he knew so well.

He believed what Charley had said was a truth. But it was a truth in relation to a known past — the human-Silkie situation that he had

grown up with. It was not a truth to someone who didn't have that background. The meteorite "original" Silkie, Ou-Dan, had made that crystal clear.

Cemp had the strangest conviction of his entire life: that he was like a man poised in pitch darkness on some edge, preparing to jump into the night ahead — and below.

It would of course be a limited jump. At the moment there were only about three alien changes he could make. He could become a Kibmadine and the creature to which the Kibmadine had changed to . . . and a Nijjan.

He explained to Charley, "You have to have a mental picture to go by, have to have 'seen' the other being first; and I only have a few."

"Change to Nijjan!" urged Baxter.

Cemp said, almost blankly, "Are you serious?"

And then, because he had an internal sensation as of something beginning to slip away from him — it was a very distinct impression — he hastily played the Nijjan image, as he had recorded it — "played" it through the transmorphe system.

As he did so, all his cells received the uniform simultaneous charge of energy that acted like the explosion of the cap of a cartridge, releasing the pent-up energy in the cell.

The transformation was as rapid as it was because the chemical energy thus released needed instantaneous unions with their chemical counterparts.

Again, it was one of those situations where, by theory, the entire

process should have required a second or less. In actual fact, of course, living cells were slow to adjust.

So, it was exactly five and a half seconds after start that Cemp was in his new state.

He was also, he observed, in a strange place.

## VI

Cemp became aware that he was recording the thoughts of the other being again.

This being — the Nijjan enemy — grew conscious of something to his left.

He glanced in that direction and saw that N'Yata had moved from her remote center of being into his space.

It was a movement that he welcomed and admired, since she was at least half a stage above him in development. Under ordinary circumstances, he would have appreciated her coming because it was both flattering to and educational for him. And normally it would have been an ideal opportunity for him to observe and imitate her greater perfection.

But this was not a normal or ordinary occasion. She had come in response to his need for help; his puzzling failure to deal with Cemp.

Her thought about this showed in her movement, and so he perceived her as a single golden dot the size of an atom. Her smallness, and her location to his left, he was able to mark by crisscrossing lines of forces.

Cemp marked it with him. But presently he had a private thought to the effect: how am I observing

this? And then he realized. With his own energy, automatically evoked from him by an emotion, which (the other being's thoughts noted with a wry self-judgment) was still only a few vibrations above betrayal.

Once again, Logic of Levels and all its implicit awareness of the nature of emotion was Cemp's only possible overt defense.

And of course, as before, betrayal was simply not an area by which he could decisively defeat anyone.

Also, he felt intuitively reluctant to trigger the more capable N'Yata to some ultimate level of win.

With these various restrictions in mind, he directed his one defense against all the destruction implicit in the betrayal emotion.

Subtly.

He urged her to a slightly gayer meaning of betrayal. Suggested seduction. Argued that the pleasure outweighed negative aspects.

His was a skillful counteraction, for the golden dot switched positions in space. Moved from his left to directly in front of him.

How many light-years were involved in that switch, Cemp could not determine. N'Yata was still at a very remote viewpoint. The vast distances defied measurement by his one-half-step lower techniques, in which he reflected the condition of the Nijjan body he had duplicated.

"You can still betray!" That was the thought-feeling, which flowed back now from the golden dot to Cemp. Having sent the message, the dot began to recede. Cemp felt a distinct drop in his own energy level

to a still lower (than betrayal) level of grief and apathy. As he watched the dot go, the first longing came for death, so great was the outflow of his life energy.

He recognized it as a half-hearted attempt to kill him, sensed that even though she knew he was not the real G'Tono, she was puzzled. In the final issue, she could not bring herself to destroy another Nijjan — not even a duplicate one.

Her withdrawal was an intent to consider the problem. He felt her let him go.

His thought ended. He was back in the computer room.

Cemp glanced over at Baxter and telepathed, "What happened?"

Having asked the question, Cemp grew conscious of three things. The first of these was merely interesting:

During Cemp's . . . confrontation . . . with N'Yata, Baxter had moved away.

The man stood now staring at Cemp, a wary expression on his lean face.

Once more, Cemp asked, "I had an experience. What seemed to occur while I was having it?" It was the same question as before, but more detailed.

This time, Baxter stirred. He said aloud, "I don't get your thoughts any more. So let me just say that right now I sense that your Nijjan body is radiating more force than I can take. Evidently you're in a different energy state."

Cemp was remembering his own earlier problem in receiving the communication of the Nijjan. After a

moment's consideration of the difficulty, he tentatively tried for an adjustment of output in the bank of cells devoted to the problem. Then he telephated to Baxter, again tentatively.

An expression of relief came over the lean man's face. "Okay," he replied, "We're on. What happened?"

Cemp hastily reported his experience, finishing, "There's no question, my original use of Logic of Levels confused the first Nijjan I met, whose name I gather is G'Tono. By spiraling him up to a super-win situation, I escaped whatever he had in mind. And now, by becoming a duplicate of him — essentially that's all I did — I momentarily confused N'Yata. But she recovered fast, and so time is of the essence."

"You think —"

"Wait!" admonished Cemp.

It was the second awareness that was suddenly in Cemp's mind, and that was not merely interesting; it was urgent:

He still had the consciousness of being a Nijjan.

It had all happened so fast. At the moment of change, instant transfer to a confrontation with N'Yata; then back here —

Now, Cemp realized that as a Nijjan he could hear sounds. Baxter's human voice had penetrated to him at a normal level — sea-level Earth pressure, it seemed.

With that to start, Cemp did a lightning-swift orientation: not only sound was affected but sight, feeling, proprioceptive sensations. He

possessed an apparently human physic-emotion spectrum.

And he could walk. He felt odd-shaped appendages that held him, balanced him, enabled him to stand . . . and arm-like things, more sinuous.

Cemp was not surprised that he was aware of human qualities. Change of shape was not change of being, but a chameleon-like alteration of appearance, a total alteration as distinct from merely a method of concealment, not simply a blending with a background.

He was the human-Silkie, Nat Cemp, in the shape of a Nijjan. His Earth-born cells were the basic stuff of his new body, different undoubtedly from the actual cells of a Nijjan.

Yet the similarity, in its finer details, was sufficiently intricate to be interesting to Cemp. It made him hopeful that, by being a Nijjan-shape, he would be able also to discover some of the secrets of that shape's abilities.

His attention continued to leap from point to point of his Nijjan body.

The legs and arms — being able to have them in the vacuum of space: that was different from Silkie-human.

The Silkie shape could survive in space only if the interior flesh and structure were separated from the vacuum by a steel-hard chitinous substance. For that, even legs had to be massive. And so Silkies had semi-legs and nothing but a grimace where the face and head should be.

The Nijjans evidently had the



same ability without change of form. A hard substance? It didn't seem that way. It seemed more like a different molecular structure.

— No time to investigate *that!*

On a higher level, there was in the Nijjan body the entire magnetic wave band, and radiation sensitivity; also, awareness of gravity, and all the stasis centers that made it possible for Silkies to operate stably in the vacuum of space.

There was more.

Cemp perceived another set of control centers high in the thickest part of the pyramidal shape. But these neural areas were silent, flowed no energy and responded to none of his hastily directed thought-commands.

If there was any automatic activity above the level of mere chemical survival in that mass of nerve substance, Cemp could not detect it.

He surmised uneasily: was it the space-control lobe of the Nijjan brain?

But he had no time to experiment with it. Not yet.

What was particularly frustrating was that there was no larger pyramidal energy image projecting from him. So that was not an automatic process. Could it be an output of some kind from the space-control cells?

No time to investigate that either.

No time, because his third awareness was forcing in upon his attention, and that was something he could do something about.

By his reasoning, furthermore, it was related to the second awareness

he had had. Thus he was not really turning away from what it was like to be a Nijjan to something less urgent. Not completely turning; anyway.

"Wait . . . a little longer," Cemp repeated to Baxter.

Having telepathed the second admonition, Cemp put out another thought on a magnetic beam that humans could read.

The thought was directed toward the headquarters on Earth of the Space Silkies. It was on an open channel; and so he was not surprised when he received answers from three minds, one a Silkie female.

All three answers were the same: We space Silkies have agreed that we will not discuss our affairs on an individual basis.

"What I have to say is very urgent. Do you have a spokesman?" Cemp asked.

"Yes. I-Yun. But you'll have to come over. He can only talk if some of us are monitoring."

The implication was of group thinking and group action, decisions by many, not merely one. Considering the restrictions — which he did fleetingly — Cemp had a sudden intuition, a thought that was surely an insight of major import.

"I'll be there in — " Cemp began.

He paused, turned to Baxter and asked, "How quickly can you get me over to Space Silkie headquarters?"

Baxter was pale. "It would take too long, Nat," he protested. "Fifteen, twenty minutes — "

“— in twenty minutes; so get everybody together in one room!” Cemp completed his thought to the Silkies in their distant headquarters.

Whereupon, he mentally persuaded Baxter, still objecting, literally to run to the nearest elevator. People turned and stared as the silvery Nijjan body and the human being ran along side by side. But Cemp was already explaining, already convincing the other.

As a result, what authority could do, was done.

A “down” elevator stopped on an emergency signal, picked them up and whisked them to the roof. A helijet, about to take off, was held back by a pre-emptive control tower command, and presently it was zooming across the rooftops of the huge buildings that made up the Silkie Foundation, soaring many degrees indeed away from its original destination.

It zeroed in presently on the landing depot of the three-story building which had been assigned as a preliminary headquarters and which was more or less across town from the main Silkie community.

During the flight, Cemp resumed his magnetic level communication. He told the receiving trio who the enemy was and explained, “Since I had no reaction to it in my Silkie form, I’m assuming that those of us born on Earth do not have any old reflexes on the subject of Nijjans. But it seemed to me that the meteorite Silkies might.”

There was a long pause, and then another mind sent a thought on the magnetic beam. “This is I-Yun. All

restrictions are temporarily off. Answer with any truth you have, anyone.”

The female Silkie’s thought came first. “But it’s so many generations ago!” she protested. “You believe we’ll have an ancestral memory after such a long time?”

Cemp replied, “If that’s what it takes, I can only say I hope so, but — ”

He hesitated: What was in his mind was even more fantastic. He had got the impression from the Glis that a number of *really* original Silkies were still around.

His brief hesitation ended. He sent the thought.

“You mean, like a hundred thousand years old?” came an astonished male Silkie response.

“Maybe not that long,” said Cemp. “In fact, I compute from feeling-thoughts I recorded that it’s not more than ten thousand years since the Glis attached the Silkies to him. But anywhere from five to ten thousand, yes.”

There was a pause. Then the thought came: “What do you expect such a Silkie to do? Defeat a Nijjan? Remember, our understanding is that we Silkies were the ones who were defeated and decimated. And, besides, how will we find the old ones? No one remembers anything like that far back; the Glis with its memory-erasing techniques saw to that. Do you have a method of stimulating such ancient reflexes?”

Cemp, who indeed had the perfect, practicable method, wanted to

know how many Silkies were in the building this very moment.

"Oh, about a hundred." That was I-Yun.

It seemed a sizable cross-section.

Cemp wanted to know if they were all together as he had requested.

"No, but we'll get them here if you wish."

Cemp very much wished. "And quick!" he urged. "I swear to you that there's no time to waste."

Presently, Cemp sent another magnetic level message, "Mr. Baxter and I are now landing on the roof. We shall be down in the big room in about one minute."

During that minute he sent streams of thoughts down to the group, explaining his analysis.

The decisive question was: Since the Silkies had indeed been decimated in the long ago by the Nijjans, how come a few had survived?

Why had not all Silkies been exterminated?

What survival method had kept a few alive?

Since the survivors, or their descendants, were the only Silkie available, the answer must be buried deep in their unconscious minds, or else be available by stimulation of ancestral DNA-RNA molecules.

Cemp and Baxter emerged from their elevator and started along a corridor toward a large green door.

At this penultimate moment, I-Yun's thought showed a qualm.

"Mr. Cemp," he telepathed uneasily, "we have cooperated with you more than we intended to co-

operate with anyone on Earth. But I think we should know before we go any further what to expect next."

At that point, Baxter opened the green door for Cemp, and Cemp walked into the big room.

Cemp was aware of Baxter returning along the corridor, running at top speed — his retreat was actually protected by an energy screen that Cemp put up at the moment he went through the door. But the agreement was that Baxter would get out of the way, so that Cemp would not have to devote attention to his defense.

The reason Baxter had come this far was that he wanted to see the room where the space Silkies were waiting. With that much pre-visualization, he could get the rest by way of the telepathic channel Cemp left open for him.

In an emergency his experience might be useful; that was the thought . . . .

## VII

At that instant of entry the scene that spread before Cemp was of many men and women, sitting or standing. His Nijjan body had visual awareness to either side, and so he also noticed that four Silkie shapes "floated" near the ceiling on both sides of the door. Guards? He presumed so.

Cemp accepted their presence as a normal precaution. His own quick defense against them was to put up a magnetic signal system which, when triggered by any dangerous force, would automatically set up a screen.

The majority of the occupants of the big room were not a prepossessing lot, for the human shape was not easy for these space Silkies. But human-like they were. And, as Cemp entered, they naturally focused their gazes on him.

Every pair of eyes at the exact same moment saw the silvery glittering body of a Nijjan.

How many individuals were present Cemp did not know or count, then or later.

But there was an audible tearing sound as all over the room clothes ripped, threads parted and cloth literally shredded.

The sound was the result of a simultaneous transformation by the majority from human to Silkie. About a dozen people, eight of them women, merely gasped and made no effort to change.

Three individuals turned into Nijjans.

Having become so, they instantly scattered. They ran off in three directions and came to a halt each in a separate corner; they did not actually leave the room.

Cemp waited, tense, all receptors recording; not knowing what more to expect. This was what he had hoped for; and here, in all its potentiality, it was. Three. Almost incredibly, three out of a hundred or so had responded with — what? He wanted very much to believe that theirs was an age-old reflex that operated in the presence of Nijjans.

Could it be that the defense against a Nijjan was — to become a Nijjan?

It seemed almost too elementary. Raised numerous questions.

Cemp received a thought from Baxter: "Nat, do you think the old Silkies of long ago might have been killed one by one because they were surprised and couldn't turn Nijjan quickly enough?"

It seemed reasonable. The lag, always that lag in the transmorphia system, had been a dangerous few moments for Silkies.

But the question remained: After turning into Nijjans, what did they know? And what could they do against *real* Nijjans?

Out of the darkness of unknown numbers of millenia, from somewhere below the mist of forgetfulness, created by the Glis in its effort at total control, had now come a response. Like a pure light carrying images as from a projector, it shone from that far distant time into the here and now.

Was there more to those images than appeared on the surface? More than the transformation itself?

The swift seconds ran their courses, and Cemp got nothing more, nothing special.

Baxter's anxious mind must have registered Cemp's developing disappointment, for his thought came, "Isn't there some association they've got with the changeover? Some reason for why the transformation was successful?"

Cemp took that thought, made it his own, transferred it to a magnetic wave and sent it on to the three Silkie-Nijjans.

With that, he got his first non-automatic response. Said one, "You

want my moment by moment reactions? Well, the reflex that was triggered had only an ordinary transmorphic lag. I estimate no more than seven Earth seconds was what the changeover required. While waiting for the change, and immediately after, my impulse was to escape. But of course I only ran a few yards and then recognized that you were not a true Nijjan. At which moment of awareness I stopped my flight. There followed intense anxiety — memories, obviously, since I had no reason to feel any of that here. But that's it."

Cemp asked quickly, "You had no impulse to use any attack or defense energies?"

"No. It was just change and get out of there."

One of the remaining two Nijjan-Silkies was able to add only a single new thought. "I had the conviction," he said, "that one of us was doomed. And I felt sad and wondered who it would be this time."

"But there was nothing," Cemp persisted, "about *how* one of you would be killed? And I presume no awareness of the means by which the Nijjan had suddenly appeared in your midst without advance warning?"

"Nothing at all," answered the three in unison.

Baxter's third thought intruded, "Nat, we'd better get back to the computer."

En route, Baxter made another, more far reaching decision.

From him, preceded by a private emergency code — known for its extreme meaning only to its reci-

ipients — there was mentally projected by way of a general alarm system in the Silkie Foundation, a warning message to "all Silkies on Earth and all Special People —"

Slightly more than six thousand persons received it.

In the warning Baxter described the Nijjan danger and the only solution so far analyzed for Silkies: change to Nijjan and scatter!

Having completed his own message, Baxter introduced Cemp who broadcast, for Silkies only, the Nijjan image.

Shortly after, Baxter and Cemp completed their trip to the computer, which said, "Though this new data gives no additional clue to the space control methods of the Nijjans, we can now view the nature of the battle by which the old Silkie nation was gradually decimated. The method was a cautious, never-altered system of one-by-one extermination."

The computer thought it interesting that even the higher type Nijjan female, N'Yata, had not made a serious attempt to kill Cemp while he was in his Nijjan form.

Listening to the analysis, Cemp was plunged into gloom. It was clear now that, first, the Glis molecule, and then his small use of Logic of Levels on betrayal had saved him in his first two encounters.

He thought blankly: What *could* be the nature of space that man or Silkie had never even dreamed of it?

Nothing to something to nothing — and that slightly caved-in, collapsed body of Lan Jedd. Those were the only clues.

"Space," said the computer in answer to Cemp's question, "is considered to be an orderly, neutral vastness, wherein energy and matter masses may interact according to a large but finite number of rules. The distances of space are so enormous that life has had an opportunity to evolve at leisure in innumerable chance ways on a large but finite number of planets on which, accidentally — it is presumed — suitable conditions developed."

The definition deepened Cemp's gloom. It seemed like truth. Yet, if it were literally so, then how could the Nijjan have spanned those enormous distances apparently in no time at all? One or more of the assumptions needed to be modified. Or so it seemed.

Cemp said unhappily, "We've got to remember we're looking at an evolved universe. Perhaps, in its younger days, space was less — what did you say? — neutral. The speculative question arises, what might an unorderly space have been like?"

"This is something that can be learned, now that Logic of Levels is applicable."

"Eh!" That was Baxter, astounded. "Logic of Levels will work here? How?"

"Consider!" said the computer. "A command to operate the space-control areas will have to come from the central self of a Nijjan. Our problem is that we don't know what that command is. But some kind of thought stimulates it. Once stimulated a basic action response occurs. Naturally, somebody will have to

force a dangerous confrontation in order to trigger such a cycle."

Cemp said quickly, "Do you still have the feeling that what we might trigger is bigger than what happened to the Glis? And more basic?"

"Definitely."

"But —" baffled — "what could be bigger than an apparently small object — like the Glis — expanding into the largest sun in the known universe?"

"This is something you will discover. I presume you *are* the one who will discover it."

Cemp, who hadn't thought about it, presumed instantly that he would indeed be the one.

Thinking thus, feeling the irony but resigned nonetheless, Cemp transformed to his Silkie body. He expected that he would immediately perceive the distant tug on all his cells.

But there was nothing. No awareness in him of a faraway segment of space. He had not the faintest sense of being unbalanced at some deep level. His entire body was at peace and in a state of equilibrium with his surroundings.

Cemp reported the situation to Baxter — and then warily transformed to human.

But there was no distant pull on him in that state either.

A few minutes later the computer expressed what was already obvious, "They're taking no chances. They never did with Silkies. You'll have to seek them out . . . or else be exterminated one by one, now that they have found you."

From the corner of his eye, Cemp

noticed Baxter as that analysis came through. The man's face had a strange look: sort of hypnotic, sort of inward-turning . . . .

Cemp was quick. He grabbed the man and yelled, "What's the thought? What command is being given?"

Baxter twisted weakly in that iron grip, abruptly stopped his resisting and whispered, "The message I'm getting is absolutely ridiculous. I refuse!"

### VIII

The doorbell rang with a soft, musical note. Joanne Cemp stopped what she was doing in the kitchen and thought: The time has come for revelation. The night of no-memory is over.

Having had the thought, casually, as if it were an ordinary concept, she headed for the door. And it was then that she simultaneously realized two things. The shock of each of the two brought a reaction of an intensity that she had not previously experienced in her entire life.

The first realization was: *Night of no-memory! . . . Revelation! . . .* Why, that's crazy! Where would I get an idea like that?

The second realization was that she was getting no thoughts from whoever had rung the doorbell.

She felt a chill. She, who could read minds better even than her Silkie husband by the direct telepathic method, she was receiving no thoughts. It had always been a point of wonder that the Special People were so great in this area of mind

reading: something about a unique DNA-RNA combination in the cells of a few human beings, that was not duplicated in other humans or in Silkies.

But even that uncanny ability sensed no presence at the door. Nothing. Not a sound. Not a thought. Not a sign of another mind or being.

Joanne veered down the hall and into her bedroom and secured her gun. That was pretty weak stuff against what she now suddenly suspected might be a space Silkie woman making a second visitation. But the first Silkie woman had not been mentally silent.

Still, against a human the gun would be effective, particularly as she had no intention of opening the door. A moment later, Joanne turned on the closed-circuit TV and found herself gazing at — nothing.

She had the thought: The bell was rung from a distance, from many light-years away, to tell you that someone will come. You have done your duty. The painful laboratory change from Nijjan to human will now be reversed . . . . Unfortunate that Nijjans have had no natural way of transforming from one shape to another. However, by changing shape in this difficult way you were enabled to marry on Earth Silkie. By so doing you have lulled him and understood him; and now that the space Silkies have finally revealed themselves, we can finally decide what to do with this dangerous race.

And what you and the other Special People have done will determine the fate of the universe endangers.

Joanne frowned at the message — for that was how she thought of it — but she made no answer. She simply stood there, silent and disturbed. What kind of nonsense!

The thought went on: You are skeptical, no doubt, but it will soon be proved. You may now ask any questions you wish.

After many heartbeats, during which Joanne considered, remembered, decided, she still refused to reply.

She saw the message as a trap, a lie, an attempt to locate her if she replied. Actually, even if it were true, it didn't matter. *Her* involvement on Earth was total. She thought to herself: This is the final Silkie-Nijjan confrontation, and it's all a bunch of Nijjan madness.

She didn't have to accept such a solution, no matter if her own background were Nijjan.

During all these intense moments, Joanne had kept her own thoughts out of the telepathic band. Yet the fear was already in her, the realization that this message, or a variation of it, was probably being received by all forty-seven-hundred-odd of the Special People on Earth. And the fear which almost petrified her was that among these numerous persons somebody would be foolish, somebody would answer.

The awful conviction came that any reply would mean disaster for everybody. Because all of the Special People without exception knew so much that was basic about Silkies.

Even as she had the anxiety, somebody did answer. Two women and three men almost simultaneous-

ly projected their outraged replies. Joanne received every nuance of the emotion that accompanied each unwise reply:

Said one: "But many of the Special People have died in the past two hundred years —"

A second chimed in, "So they can't be immortal Nijjans."

A third mind said, "If what you say is true, it proves that Silkies and Nijjans could live together."

The fourth person — a man — was scornful: "This time you crazy killers have run up against more than you bargained for."

And the fifth telepathic human reply to the Nijjan trap was, "I don't know what you expect to gain from this lie, but I reject it."

That was as far as the doomed five got with their response.

The best later reconstruction of what happened then was that in each instance, answering located the individual to the remote watching minds of the Nijjans. At once a Nijpan arrived on the scene — in the house, on the street, wherever — and seized the person.

At the moment of seizure a single mental scream of despairing realization came from one of the women. The remaining four went silently to their fates.

What had happened: shortly after the Space Silkie, Ou-Dan, left Cemp in the ship near the dead body of Lan Jedd — he saw a rapid movement beside him.

That was all Ou-Dan had time to observe. The next split-instant he was subjected to an internal pressure



against which he had no defense. It could have been his moment of death, for he was completely surprised and helpless. But the Nijjan, G'Tono, have already had his double failure with Nat Cemp, wanted a prisoner and not a dead body. Not yet.

Moments later, he had the unconscious Ou-Dan on his own planet.

The resultant study of the internal working of a Silkie was somewhat disappointing to the various Nijjans who came from distant place to look him over: there was nothing in Ou-Dan's memories that explained how Cemp had escaped destruction in his confrontation with G'Tono.

His captors quickly discovered the differences between the space and Earth Silkies and learned from Ou-Dan that Cemp was an Earth Silkie. The Nijjans thereupon reasoned accurately that the Space Silkies, being considered unreliable, had simply never been given the secret of the special technique that Cemp had used.

In their study of Ou-Dan, the great beings were delayed for many minutes, perhaps even an entire hour, by an attitude that radiated from him. Ou-Dan so thoroughly dismissed and downrated the human-Silkie relationship that his emotion about it was a barrier. Thus, for a decisive time, the Nijjans did not note in his mind that the Special People were a unique human group.

During that vital period, Baxter extended the information about the Nijjans to the Special People, Cemp and he met with the Space Silkies

and talked to the computer. And so, when the five Special People were captured, Earth was as ready as Earth would ever be.

The Nijjans secured the basic clue from all five of their human prisoners. Moments later, the knowledge of Logic of Levels was going down the Nijjan line of planets, multi-millions of them.

## IX

On G'Tono's planet was a tall mountain that rose thousands of feet sheer from the ground. On top of that mountain stood the palace of G'Tono.

Inside the throne room, the octopus-people hurried and bustled and shuffled in a steady stream of activity, partly ritual and partly in relation to the five human prisoners and to the Space Silkie, Ou-Dan.

The quintet of Special People were beginning to feel a little easier; were no longer so certain that they would be murdered out of hand. Ou-Dan, who had been internally damaged as a result of his interrogation, lay unconscious in one corner, ignored by all except a few guards.

Across the room from the humans — a distance of more than a hundred yards — was a great, glittering throne chair. On the chair sat a figure even more glittery in his natural state than any of the inanimate objects that framed him — . . . G'Tono himself!

About a dozen of the octopus-people lay face down on the marble in front of their tyrant. Their gentle bulbuous faces pressed against the

hard floor. It was a priceless privilege for those who were there, and every half hour the dozen or so person-ages reluctantly gave up their places to another group of the same size, all of whom were equally appreciative.

G'Tono paid no attention to these, his servant-people. He was engaged in a mental conversation with N'Yata, 2400 light-years away, and the subject of their concern was in fact the fate of the prisoners.

G'Tono believed that the five Special People and Ou-Dan had served their purpose and should be put to death on the betray principle. N'Yata felt that no final decision should be made about prisoners until the Earth-Silkie situation was entirely resolved, which could only happen if all the Silkies were destroyed.

She pointed out that the betray idea did not apply except where it was part of a control system. No control existed as yet for human beings and would not until a Nijjan took over Earth as his domain.

G'Tono was beginning to feel very boldly masculine in relation to N'Yata. And so he took the attitude that her answer showed a loveable feminine weakness, a caution unnecessary now that the human-Silkie problem was solved. For all Nijjan purposes, the procurement of the Logic of Levels concept ended the danger.

"You seem to believe that something can still go wrong," he protested.

"Let's wait," said N'Yata.

G'Tono replied scathingly that Nij-



jans, after all, had their own rationality, long-tested by experience. It was not necessary to await the outcome of a logical sequence once it had been reasoned through.

He thereupon listed for N'Yata the reasons why the Silkies were defeated for all practical purposes:

Nijjan attacks — said G'Tono — would in future be made in such a way that no Silkie could ever again hitch a ride as the Silkie, Cemp, had so skillfully done. Furthermore, the vast majority of Nijjans, though allowing through their mind-barriers the information about Logic of Levels, had fortunately refused to be involved in the actual struggle.

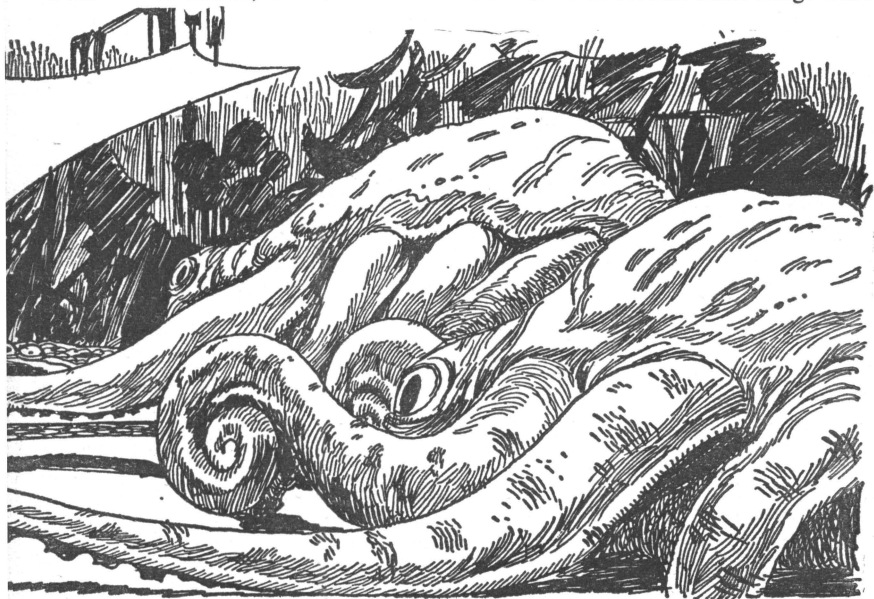
G'Tono explained, "Contrary to our initial irritation with their refusal to participate, what they have done — or rather, not done — is

really favorable to our side." He broke off for purposes of clarifying his point. "How many helpers do we have?"

"You saw most of them," N'Yata answered. "About a hundred."

The smallness of the number momentarily gave pause to G'Tono. He had a natural cynicism about things Nijjan; yet his rationalization seemed true to him . . . . It was true that Nijjans had a hard time getting along with one another. So *many* proud individuals, each with his planet — of which he, or she, was absolute ruler. Where everyone, without exception, was a king or a queen, egos had a tendency to soar out of sight.

Once in a while, of course, a queen would accept a communication from a king, as N'Yata had done with him. And at certain times kings were



receptive to a communication from a queen. G'Tono had observed with jealousy that the hundred-odd who had responded to N'Yata's call for volunteers were all males . . . .

But that very aloofness of the great majority was now, G'Tono argued, a sign of the indestructibility of the Nijjan race. Scattered all over the universe, out of contact with their own kind, individual Nijjans in their total numbers couldn't be hunted down in a million years, even assuming that somebody existed with the ability and power to kill Nijjans; but there was no such person, group or race.

"And now that we have the only dangerous Silkie weapon, Logic of Levels, our position is absolutely impregnable," G'Tono pointed out.

N'Yata replied that she was still studying Logic of Levels and that it wasn't the mistakes Nijjans might make in the future that worried her; indeed, she conceded that the chance of additional errors was unlikely. The question was, could G'Tono and she recover from the errors that had already been made?

G'Tono was astonished. "The only mistake that would matter," he objected, "would be if we had left this Silkie, Cemp, some means of forcing me or you to transport him here by our space control system. Though I," he continued scornfully, "would certainly like to be the first to know of such a method, I find myself wondering, would he dare to come? Because what could he do in a direct confrontation with me, who is more powerful than any Silkie?"

He had been thinking hard while he was speaking, and now he saw an opening in her logic and a way of gaining his own point, made earlier.

"As I see it," he said, "the one way in which we might be vulnerable is through these prisoners. So I think you will agree that instant extermination is a safety precaution, if nothing more. Don't try to interfere!"

He did not wait for N'Yata's reply, but sent a high-level energy blast at the two women and three men, and at the helpless Ou-Dan. All six prisoners were literally dissolved into their component elements; death was as rapid as that.

Having taken the action, G'Tono proceeded with his listing of favorable points. "After all," he said, "lacking space control, Silkies are trapped on or near Earth or at best are subject to the slow speeds of ordinary space travel. I estimate that in three Earth weeks I could perhaps expect to have an Earth ship arrive at my planet. Whereupon, if you were to invite me, I could visit you for a while. And, frankly, what could they do? Where could they look? A Nijjan can disappear into a distance in a split-instant."

He stopped, feeling suddenly dizzy.

N'Yata telepathed sharply, "What's happening?"

"I — " faltered G'Tono.

That was as far as he got. The dizziness had become an all-enveloping madness, and he fell from this throne chair to the marble floor. Fell hard, rolled over onto his back and lay there like one dead.

The Nijjans had lied. That was what snatched Cemp's most intense interest.

A quick check of records by the computer had established, with thousands of detailed documentations, that the Special People could not possibly have been Nijjans. And so it was a lie.

Hard to believe that the Nijjans could have exposed one of their number to a counter-attack on that level. But it looked as if they had.

Cemp shared his analysis with Charley Baxter and watched Baxter become excited. The thin man said, "You're right, Nat! A lie is a complete disaster in a world where people understand the energy flows involved."

And could control them as Silkies could.

Because an existing object is truth incarnate. There it is — whatever it is — unparadoxical, without an opposite.

It cannot not-be. Or at least it cannot not-have-been; if it was matter and has been converted to energy, or vice versa, it still exists in some aspect of its ever-form.

A lie about such an object is a mental attempt to alter the "is" of it. Basically, the effort implicit in the lie is to create a dichotomy where none can exist. There is no opposite, yet the lie says there is.

Hence, the moment a dichotomy is evoked in somebody's mind, there is a confusion created.

It was too potentially great a possibility to miss.

In telling his plan to Baxter, Cemp pointed out, "You'll have to send a ship after me, because I'll be stranded there!"

"You don't think the method of getting you to Nijja will also get you away?" Baxter asked, doubtfully.

"No. Somebody will be riding herd on all this, and they'll notice."

"It'll take three weeks for a ship to get there," Baxter objected.

Cemp couldn't take the time to consider that. The pace of this battle was super-speed. Since the struggle had begun out there between G'Tono and himself, the enemy had taken time only to make brief studies of new data before striking again.

"After all," said Cemp, "I can't be sure how successful I'll be. I expect to get whoever told the lie, but that won't solve the problem. And I'll set it up so that whoever helps him is doomed also. But a chain reaction like that can only go so far before somebody gets wise."

Baxter spoke again, urgently,

"Now that these beings have Logic of Levels, they'll be able to trigger it in you even as you're triggering it in them. Have you thought of that?"

Since there was no defense against Logic of Levels, Cemp hadn't even considered it. There being no point in thinking about it, now that it had been called to his attention . . . he didn't.

He converted to Nijjan and projected the thought: "I want you to recall the moment when the message

arrived telling you the lie that you were a Nijjan."

Between such experts as Baxter and himself, it required less than a minute to make a study of the wave patterns and to measure the subtle variations of the Nijjan version of the telepathic band of the Special People — and to superimpose on that exact band and that individual variation *all* two hundred and seventy-eight dichotomies, known to be the most confusing of the verbal opposites that had mentally tangled human beings since the beginning of language:

. . . *Right-wrong . . . good-bad*  
. . . *justice-injustice. . . .*

A living brain receiving for the first time such a madness in the time of a few seconds could go into a state of total confusion.

At key points along that train of words, Cemp placed large, hypnotic-type command loads designed to influence the receiving Nijjan brain during the confusion to —

First, utilize Cemp's own previous experience to transport him through space.

And, second, set up a basic Logic of Levels in the receiving Nijjan brain.

Cemp arrived — it was part of his hypnotic command to G'Tono — outside the atmosphere of G'Tono's planet. As he descended toward the surface, he saw that there was a great city below and a huge ocean beside it.

He landed on an isolated beach of that ocean where the thunder of the surf and the smell of sea briefly enticed him. Ignoring that sudden

desire for the feel of water, he walked toward the city. Arrived at the outskirts, he boldly entered the first of the odd-shaped dwellings he came to; odd in that the doorways were low and broad, and inside he had to stoop because the ceilings were less than six feet. There were three chunky octopus-like aliens inside. But he saw them; they never saw him. Cemp manipulated the hallucinatory mechanisms of the three, whereupon they observed him as one of themselves. After studying their minds, Cemp carefully went to a nearby street, climbed up to a roof, and watched the octopus-beings who went by.

As Cemp had already correctly analyzed, these aliens were not dangerous to him, and they were very definitely not up to defending themselves. After reading the minds of several hundreds, Cemp did not detect a single suspicious thought. The fundamental goodness of the beings he did observe decided him on his next move.

Minutes later, he walked in on several leading members of the government, hallucinated them into seeing him as a human being and thought at them, "Where is the one who can betray?"

The tense creatures had drawn away from him. They did not understand the significance of his question, for they said that on Nijja no one ever betrayed anyone.

The answer amused Cemp in a steely-grim fashion. It meant, as he had suspected, that there was only one betray cycle in action on

the entire planet: the true Nijjan as the betrayer, and then all these beings who must conform.

He directed another thought. "Has this planet always been called Nijja?"

They knew of only one other name. Anthropological studies of their antiquity indicated that, at the time the common language had begun some indeterminate thousands of years before, the name had been Thela, meaning Home of the Brave. Nijja, on the other hand, in their language meant Home of the Pure.

Obviously, the name would have to have a meaning in their language as well as in that of the true Nijjans. A different meaning, of course.

"I see," said Cemp.

And he did see.

With that, he asked one more question, "Where can I find the one who requires purity?"

"Oh, you can see him only through the police."

"Where else?" thought Cemp to himself, sarcastically.

Whereupon, the exact, proper time having gone by, and the exact moment for G'Tono to awaken having come, he directed a thought on the Special People telepathic band. He said, "I am that Silkie who confronted you after you killed my Silkie associate — and I'm sure now it was *you* who killed him. As I now understand it, this planet illustrates what you meant when you stated Nijjans had no home planet in the ordinary sense. *All* planets controlled by a Nijjan are part of the Nijjan system — the nearest place, in other words, where a single

ruling Nijjan could be located. Is that correct?"

Along with the message, Cemp projected the thought that would trigger the Logic of Levels cycle he had set up in G'Tono's brain. Having done so, Cemp spoke again to the focal point nearly three hundred miles away, "You'd better talk to me before it's too late."

It was moments after that when Cemp sensed a peculiar sensation in his transmorpha system. N'Yata, he thought. He remembered Baxter's fear that he also might be attacked, and here it was. It interested him intensely to observe that it was the mechanism for changing form that was affected; not surprising, really, but nobody had known. By the time he had that thought, he had already accepted his personal disaster. From the beginning he had had to consider himself expendable.

Cemp felt briefly sad for Joanna. He presumed that he would die, and her life would now have to go on without him. As for what might happen to the Nijjans — Cemp felt a chill, recalling what the computer had predicted: that the Nijjans Logic of Levels would be bigger than what had happened to the Glis.

Again he wondered: What could be bigger than that?

The awareness remained with him only fleetingly. Abruptly, he didn't have time to consider anything except what was happening to him.

## XI

For Cemp there was, first of all, a kaleidoscope of visual images.

He saw Nijjan bodies and faces — if the upper part of the pyramidal shape could be considered a face. The images streamed by, not exactly silently — for thoughts came from some of them.

Cemp himself seemed to be floating along in a timeless void. Each set of Nijjan thoughts came to him separate and distinct:

“ . . . But how did he do it? . . . ”  
“ What exactly is happening? — ”  
“ Why not kill him and then solve the problem, ourselves? . . . ” “ — Because we don’t even know what part of the Nijjan brain was utilized for the attack, that’s why. Besides, we have no proof yet that we can kill him. In this Silkie, Logic of Levels seems to be a time phenomenon. In us, it’s of course the space thing — ”

As these thoughts and others like them whispered into Cemp’s awareness, he was conscious of a developing stir in the greater distance of the Nijjan world. Other minds, at first a few, then many, then tens of thousands turned their attention in amazement and took note of him and had *their* thoughts . . . and were hooked into G’Tono’s disaster.

. . . Like an anthill deep into which somebody has kicked, the Nijjan system began to roil and churn with innumerable reactions. What they were afraid of briefly held Cemp’s astonished interest:

— Two bodies cannot occupy the same space or . . . two spaces the same body; there was danger that this would now happen.

More basic: the space-time continuum, though it was a self-sustaining mechanism of immense but finite

complication, needed Nijjans to survive: *that* was the thought. So that if a Nijjan were over-stimulated, space might have a reaction.

. . . That was how Lan Jedd had been killed: a Nijjan consciously over-stimulating himself in some small, precise way elicited a reaction in the space occupied by Lan’s body.

Push at the universe, at space. A Nijjan might be affected. Push at a Nijjan, the universe would push back or adjust to the push in some fundamental way.

What are they implying? thought Cemp, staggered. *What* are they saying?

Between the universe and the Nijjans a symbiotic relation. If one was unstable, so was the other.

And the Nijjans were becoming unstable.

As Cemp’s awareness reached that point, there was a flash of alarmed agreement that extended through every observing Nijjan mind. Whereupon, N’Yata telepathed to Cemp:

“ I speak for Nijja. We’re in process of being destroyed by a chain reaction. Is there anything we can do to save ourselves, any agreement we can make? ”

“ In us, ” N’Yata continued in that desperate way, “ awareness of the connection of life to all atoms in the universe was not dulled. Somehow, in those long ago days of the beginning of things, we automatically worked out a method of maintaining consciousness without constantly endangering ourselves. Other life forms had to attenuate or shut off direct



contact with space and its contents. We Nijjans can therefore be destroyed if we are forced to a state of order from the chaos in which, alone, life can survive, and this forcing you have now done."

It was as far-fetched a story as Cemp had ever heard. "You're a bunch of liars," he said contemptuously, "and the proof is that G'Tono could be victimized by an overflow of opposites."

He broke off, "The truth is I couldn't believe any promise you made."

There was a pause, brief but pregnant; finally a mental sigh from N'Yata. "It is interesting," she said, resigned, "that the one race we feared above all others — the Silkies — has now made a successful attack on us. Because of the overweening pride of countless Nijjans, we are particularly vulnerable. Each Nijjan, as he tunes in, has a Logic of Levels cycle triggered in him. And there's nothing we can do to warn him ahead of time. What you're saying is that you won't listen to any argument against this."

It was more than that, Cemp saw. Between these two races there was no quick way to cooperation. That would be true, he speculatively realized, *even if* the fate of the universe depended on it. The Nijjan destruction of Silkies had been too remorseless.

But the fact was also, there was really nothing he could do. Logic of Levels, once started, could not be interrupted. The cycle would complete in them *and* in him and take whatever course the *logic* required.

A brain mechanism had been triggered. The pattern of that mechanism had been set ages before, and it had no other way to be.

That was as far as his thought had time to go.

There was an interruption. Two things happened, then, almost simultaneously.

From N'Yata's mind to his there leaped an emotion of anguish. "Oh, it's happening," she said.

"What's happening?" Cemp's mind yelled at her.

If there was ever an answer from her, Cemp did not receive it. For at that precise instance he felt a strange, strong feeling inside him.

That was the second event.

He was on Earth with Joanna. It was at the beginning of their marriage; and there she was, and there he was, completely real both of them. Outside, the sun was shining.

It grew dark suddenly.

That was earlier, he realized. More than a hundred years before he was born.

— This is the time change in myself, Cemp thought. Logic of Levels affecting *him*, taking *him* somehow earlier in time, a kind of genetic memory journey.

Night. A dark sky. A Silkie floated silently down from the heavens . . . . Cemp realized with a start: That was the first Silkie to come to Earth, the one that — it was later pretended — was created in a laboratory.

The scene, so briefly observed, yielded to a view of the city inside

the Glis meteorite. There were the Space Silkies; and he was there, also — or so it seemed. Probably, it was his ancestor with his trans-morpha cells: the DNA-RNA memory of earlier bodies.

A space scene came next. A blue-white sun in the distance. Other Silkies around him in the darkness. A contented happiness was in all of them.

Cemp had an impression that the time was long ago indeed, twenty or more thousand Earth-years, before contact with Nijjans.

Now, a more primitive scene showed. Millions of years earlier, according to his impression. Something — himself, but different, smaller, less intelligent, more creature-like — clung to a small rock in space. There was darkness.

Another scene. Billions of years. And not darkness but brightness. Where? Impossible to be sure. Inside a sun? He vaguely suspected, yes.

It was too hot. He was flung in a titanic eruption of matter into the far blackness.

Flung *earlier*.

As he receded to an even remoter time, Cemp felt himself somehow still connected to G'Tono and to the other Nijjans, somehow held to what — for want of a better understanding — he decided was a mental relationship.

Because of that tenuous mind connection and interaction, he was able to sense the Nijjan disaster from a safe distance in time.

It was possible, then, that he was the only living being who, from his

vantage point, witnessed the destruction of the eight-billion-light-year-in-diameter universe, of which Earth's galaxy was but one small bit of cosmic flitter.

## XII

The start of it was very similar to when the betrayal-win cycle in G'Tono was triggered toward ultimate win during his and Cemp's second confrontation.

Swiftly, there came the moment when all those connected Nijjan bodies reached the dividing line between becoming ultra-small or super-large. But this time the victims had no choice. Winning was not involved. It was a Logic of Levels cycle in its ultimate meaning, operating on and through innumerable individuals, each of whom had the potential for that ultimate state.

Every rock has in it the history of the universe. Every life form has evolved from a primitive state to a sophisticated one. Touch the wellspring of that evolvment in a living thing — or a rock — and *it has to remember*.

For the millions of Nijjans, it was the end. What was happening to them was a process that was not concerned with maintaining identity.

One moment each Nijjan was a unit object, a living being, with location and mass; the next the Nijjan brain center that had the ability to move the individual Nijjan through space tried to move him simultaneously into all spaces. Instantly, the entire Nijjan race was shredded into their component atoms.

On the object level, the process scattered them, put one atom here, another there, quadrillions more in as many places.

At the moment when Nijjans became as large as the universe, the universe inverted in relation to them to its real normalcy, to the perfect order that is inherent in a dot the size of an atom, which is unaffected by other atoms.

It was not a shrinking phenomenon. Turning inside out was the best analogy. The collapse of a bubble.

Cemp, who was merely tuned in to G'Tono and the others, felt his own thought expand with the doomed Nijjans to a state that was an exact proportion to the largeness of the universe with which the Nijjans had interacted.

Having become in this purely mental way larger than space and time, Cemp so to say blinked away his dizziness and looked around him.

At once he saw something in the great dark. He was distracted and he forgot the dot that had been the universe. It thereupon disappeared.

The tiny spot of light, the universe, which one moment had glowed with such brilliance, winked out and was gone.

Cemp was aware of its vanishing with a portion of his mind only. But he could not immediately turn his attention away from the sight that had made him forget.

He was looking at the "tree."

He was at such a remote viewpoint, at such vastness in relation to all things that, yes, he saw the golden tree.

Presently, he forced himself to look away from that jeweled thing.

When Cemp finally, after what seemed to be several seconds, was able to consider the disappearance of the universe once more, he thought: how long has it been gone? A thousand, a million, a trillion years? Or no time at all?

Perhaps, in some future when he reached this viewpoint, not by artificial projection but by growth, he would be able to count the time elapsed in such a phenomenon.

He was still thinking about it, bemused, when he felt an unsteadiness in his position. He thought, Oh, oh, I'm going to invert again.

The first evidence of his unstable state: the glorious tree disappeared.

Realization came that he probably had only moments to find the universe.

How do you find a universe?

As Cemp discovered, then, it was not really a problem. The entire meaning of Logic of Levels was based on the certainty that all life forms, at some inner root, know the origin of things, and that by the very nature of their structure they are balancing themselves against all other things.

There is no moment when the tiniest insect, or plant, or rock, or grain of sand is not interacting. The atoms at the centers of remote stars are part of that interaction.

The problem is not is the interaction happening? The problem is that, in order to function, awareness of so much has had to be reduced.

Such attenuation is not normally

conscious. Hence, sensitivity to many good things is automatically cut down so close to zero that, in this universe, apparently only the Nijjans had retained through all the vicissitudes of their evolution the cellular method of space and control.

As Cemp remembered his universe it began to interact with him, to become in essence what he knew it to be.

And there it suddenly was, a dot of golden brightness.

Cemp sensed by the interaction he continued to feel that it was still re-forming deep inside itself; responding exactly to his universal memory of it. He had a mighty thought: Before it all reverts to exactly the way it was, why don't I change it?

Obviously, there was no time for detailed consideration. A few flash thoughts, quick judgments, snap decisions — and that would be it. It was never or now. Forever.

The Nijjans?

In a way, he could understand that they had felt it necessary to protect themselves and the space-time continuum by destroying races that were capable of challenging Nijjan hegemony. So they were not as guilty as he had once considered them. But truth was the universe did not need a race that could destroy it. It was time the place became permanent.

Cemp refused to remember the Nijjans in his recollection of the plenum.

So what about human beings, the Special People and the Space Silkies? ..

Cemp's immediate solution: In his universe they *all* became Earth Silkies with the ability to change to any form and a complete willingness to play a benevolent police role everywhere in space.

And, without exception, they understood the Nijjan method of space control but their ability to interact with space was on the small scale necessary for transportation. In addition, no Silkies were subject to Logic of Levels, and all the effects of the cycle that had been triggered in him were reversed. Also, in case there was any question, Silkies were immortal.

There was no Kibmadine race — Cemp felt no mercy for those perverted creatures.

... And Earth was back with her own sun.

Was it a good way for things to be? There was no one to tell him yea or nay. He thought it, and then it was too late to remember it differently.

In a flash, the orderly perfection of the single light in the blackness . . . altered, expanded. As Cemp watched tensely, the ochre-colored dot reached the moment of inversion.

For Cemp, it was the return back to smallness. Something grabbed him, did an irresistibly powerful thing with him, squeezed him — and pushed.

When he could perceive again, the starry universe stretched around him in every direction.

He realized he was somewhere in space, his Nijjan body intact.

For that super-sensitive shape and form, now that he understood it, orientation in space was an instinct. Here he was; *there* was Earth. Cemp did the Nijjan space-control manipulation — and interacted with another space many light-years distant, whose existence he sensed. With that space Cemp did the inversion process on a small scale, became a dot, became himself, became a dot . . . something to nothing to something —

And he stepped eighty thousand light-years into the Silkie Foundation and said to Charley Baxter, "Don't bother sending that ship after me. I won't be needing it."

The thin man gazed at him, eyes shining. "Nat," he breathed, "you've done it! You've won!"

Cemp did not reply immediately. There was a question in his mind. Since, while the universe was being destroyed and reborn, he himself had been in a time change, had he witnessed and participated in the second formation of the continuum?

*Or the first?*

He realized it was a question to which he would now never know the answer.

Besides . . . could it all have been a fantasy, a wish that drifted through his mind while he was unconscious, the strangest dream ever?

There was a great window to his right, one of those massive structures that led to a balcony from which a Silkie could launch himself. Cemp walked out onto the balcony.

It was night. Earth's old moon floated in the dark sky above, and there were the familiar star configurations that he knew so well.

Standing there, Cemp began to feel excitement, a surging consciousness of the permanence and finality of his victory.

"I'm going to Joanna," he announced to Charley Baxter, who had come up behind him.

As Cemp launched himself into the familiar universe that was Earth, he was thinking: he had great things to tell his darling.

END

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# THE FOOD OF MARS

by MAX H. FLINDT

*Here's what ancient Martians ate  
— maybe — with directions on  
how you can try it for yourself!*

**M**ars is the planet that is deemed most likely to support intelligent life. It has a canal system that has been seen many times all over the world by the most competent and respected observers in the astronomical profession. Spectroscopic observations prove that the famed snow caps, or ice caps, at the poles of Mars are just that — ice on Mars. Professor Percival Lowell's work shows that in the spring, the rate of growth of the green areas adjacent to the canals is in perfect agreement with our theoretical calculations that indicate that their pumping rate for water is the most efficient one possible for a planet with Mars' smaller gravity content. The surface of Mars is flat, and there are few mountain ranges. Movement of water must, therefore, be by mechanical pump.

Recent spectroscopic observations of the green areas of Mars show that the observed spectrum is more

like the spectrum of lichen as observed here on Earth than any other Earth vegetation. Three or four blasts that looked like tiny bursts of light have been seen on Mars within the last thirty years. These blasts were followed by dust clouds that, in at least one case, were observed to persist for several days. This was long enough to permit the event to be confirmed by astronomical observatories all over the globe.

In 1956 a new green area about the size of Texas was observed. It was located in an area that had shown only desert before. At Mount Palomar in 1956 Dr. Richardson momentarily observed *blue* canals in the desert regions of Mars. In other words, he saw the water in the canals. The careful mathematical analysis of the canals that Wells Webb made shows almost conclusively that the canals are the work of intelligent beings. No other agency

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whether natural, animal, or insect has ever made a network of lines to compare with the map of the canal systems of Mars — except man.

This, briefly, is what is known about Mars. A supposition will now be explored that can comfortably answer the question: Just *what* is going on on Mars? The most obvious answer is that someone, or something, is building canals on Mars for the purpose of conducting the water from the melting ice caps to the equatorial desert regions in the spring. There it seems to be used to irrigate crops of lichen. Lichen — why lichen? Why not tomatoes or potatoes? Lichen, after all, is that odd stuff that grows on rocks and is of no value to anyone.

Here the story of Mars takes an unexpected turn, for there is reason to believe that lichen is grown on Mars as human food and that some of the forms grown there are a real delicacy. It is necessary to see what supportive data exists to substantiate these bold claims. First, it is found that lichen is not a common plant. It is actually a fungus and algae living in common-law marriage and is an incredibly hardy and durable organism. It is found on rocks in mountain ranges at extreme elevations where it experiences extremes of cold, moisture and searing heat that is fatal to all other plant life. Thus, the strange combination of algae and fungus can stand such extremes of temperature and moisture variation that it could live on Mars.

Here is found, as in any theory

that is later proven valid by the advance of science, that classical agreement of observed phenomena that to the trained scientist means just one thing: "The theory is correct; carry it forward." It is not surprising that when a U.S. scientist undertook to grow lichen it was in a partial vacuum that simulated, as nearly as possible, the conditions that are understood to exist on Mars. The lichen grew and prospered.

The astounding conditions under which this lichen grew should be examined. The temperature ranged from approximately —100 degrees F. to plus 80 degrees F., and the pressure was approximately one pound per square inch. (The pressure on Earth's surface is about 14.7 pounds per square inch). The only moisture was vapor in the form of dew. The oxygen was very low — so low that man would die in it. Yet this lichen grew and seemed to thrive. There is a most happy agreement between the spectroscopic observations that indicate that there are lichen-like plant growths in the green areas of Mars and the astounding ability of Earth-lichen to grow in a simulated Martian atmosphere.

It is seemingly foolish to consider that human beings or any animal for that matter could be living on anything so little resembling good food as lichen. But it happens that this is exactly the case. Lichen is used for animal food here on Earth, and in Japan and China it is used as a food delicacy. The reason that this is so is that the plant family that comprises lichen is actually a large one (15,000 varieties). It takes in

many unobtrusive plants that we commonly ignore. These are plants which nevertheless are lichens and which in certain regions lend themselves very nicely to the food demands of man and beast.

In Lapland, for instance, reindeer moss — which is a lichen that is known by the scientific name of *Cladonia rangiferina* — is used in the winter for cattle and reindeer food. Another type of arctic lichen that is known as Iceland moss or *Cetraria islandica* is occasionally used as human food. In Japan and China people have made an art of fine cooking for more centuries than people in the Western World care to think about. Two varieties of a certain lichen family are used for food in those lands and they are considered to be real delicacies.

If lichen is grown on Mars and our spectroscopes say that it or something very much like it is grown there, then some of that lichen may easily be a variety or varieties that are usable for transformation into animal food like beef cattle. Other varieties may be the most delicious human food. This information is remarkable because it so neatly dovetails into what is already known to be true about Mars' canals, polar ice caps and green areas. Our astronauts may take along whatever they may like to eat for the trip to Mars, but there is a definite chance that on Mars and on the trip home that they will be eating lichen by choice.

This whole lichen picture is so convincing that the author,

completely carried away by the thought of eating Martian food, went out into the woods and procured some samples of Spanish Moss (*Dendropogon usneoides*), which is a common lichen in California. When it was steeped in vinegar it tasted like confetti or straw, but when it was cooked for ten minutes in water with a little salt — ah — that was different. It tasted very much like spaghetti and thoughts of various types of savory and tempting combinations came immediately to mind. The addition of small bits of bacon would make the most delicious dish while those who preferred the rich and wonderful Italian spaghetti seasonings could brew up savory sauces. Well, each cook must find his own combination, for the author is, unfortunately, not a good cook.

As a result of the happy outcome of the above little adventure in cooking lichen, the author — and his wife sallied forth to San Francisco on a beautiful autumn night. They hoped that in San Francisco's Chinatown, which is the largest Chinese settlement in the United States, that more information could be obtained regarding the lichen that is a delicacy. The trip was successful. Edible lichen was purchased on Grant Avenue in Chinatown. At the famed Great Eastern Cafe which is just off Grant, the manager gave assurances that, with proper advance notification, he could provide edible lichen in a variety of food combinations such as soup or fried dishes with pork. The price for serving this specialty to two persons was



quoted at about three dollars.

The next day, the cooperative and intelligent Chinese proprietor of "The Bamboo" in Palo Alto came up with the information that the two types of lichen that could be purchased in San Francisco were known as "The Ear of the Wood" and "The Ear of the Rock." These highly descriptive names were literal English translations of the Chinese names for the delicacy. He further said that the strange thin dollar-sized crispy fragments required long cooking time and did not disintegrate under protracted cooking. The lichen derived their names from the fact that one type was obtained from the trunks of trees while the other type was taken from the surface of rocks. The use of the word "ear" derives from the way the fresh plant curls up when it is dried. In strange ways it resembles a human ear.

It seems more logical than ever before to believe that the canals of Mars do carry water and that the water nourishes lichen. Does any reader desire some Martian food? He need only inquire at the nearest Chinese restaurant about "The Ear of the Rock" or "The Ear of the Wood" and enjoy an "out of this world meal."

END



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# Winter of the Llangs

by C. C. MacAPP

Illustrated by FINLAY

*The first thing a young krote  
learns is to respect his  
Elders—and it's a good thing!*

## I

The Council Fire was a great roaring thing that climbed far into the night, dwarfing the family fires strung along the foot of the cliff. Its ruddy illumination made strange slowfalling gems of the unseasonable snowflakes.

Chimmuh, young and not yet thick of hide, would ordinarily tuck his three pairs of limbs beneath him in the shelter of the slight cliff overhang, with the calves and females; but as his father and older brothers

were absent, he paced hesitantly toward the arc of huge mature males out beyond the fire. Scarred old Lozh, immense with age, rumbled, "Come lie to windward of me, youngster. At least I am still good for a windbreak." There were coughs of amusement.

Glesh, the Leader came slowly into the firelight, walking tiredly on all sixes. The mutter of small talk died. Glesh took his place, settled himself on the wet ground and turned his horned head slowly, counting the family representatives. His wide-

ly spaced, deepset eyes lingered on Chimmuh. "You speak for Family Wurgan, youngster?"

Chimmuh, conscious of his higher-pitched voice, said, "I do."

Glesh dipped his horns, acknowledging. "We are all here, then. I will talk, then we will listen to any who disagree." He heaved his forebody up for a moment, unfolding his forelegs out toward the fire. "Never in my lifetime, nor in my sire's, has snow come this early. But the lore says that when snow comes early, it is not a freakish storm, but the true onset of winter." He paused. The older males dipped heads in agreement.

"Therefore," Glesh went on, "we must expect snow the rest of the night, and tomorrow night, and for many nights. The passes back into Big Valley will be too difficult to cross. We must take the unfamiliar way down Katta river and southward along the edge of the sea to Wintering. It will be a hard migration. We dare not delay to collect fodder, but must live on what grows along the way. We must start in the morning." He glanced around the arc. "I will listen now."

There was a moment of silence. Then Hutu—the young-mature male with the broken right-middle leg—muttered, "We should not have come across into Katta Valley."

Glesh inclined his head without rancor. "True. But the pahia-seed here has been rich, as we hoped, and at least we are fat to begin the migration. We could not know the winter would come so early."

There were mutters of agreement. Hutu subsided, testily. Glesh turned his deep eyes toward Chimmuh. Chimmuh squirmed. This was the moment when he must speak, but his voice would not come.

Old Lozh filled the breach. "There are four sixes of prime males who are not with us."

Now Chimmuh found his voice. "My sire, and those with him, will — be returning from the north with metal, for tools and for weapons if we are pursued by llang's. My sire and the others are prime, able to travel fast and to cross the mountains. They will have seen the winter two days ago, or three, and will be hurrying down Big Valley to reach us. They will see our tracks where we left Summering and follow into Katta Valley. They will be here in a few days."

There was an embarrassed silence. Glesh rumbled a sigh. "You do not understand about snow, youngster. It will cover our tracks. Even if your sire's party is not trapped in the north and perhaps overwhelmed by llang's, they will assume we have gone down Big Valley as usual." He sighed again. "What of your dam? Is she able to migrate?"

Chimmuh stared past the fire to where his mother, eyes downcast, lay among the females. His stomachs felt as if they were both full of nettle-weed. "She is not. She will calve within days."

There were mutters of sympathy. Glesh shifted his bulk and waggled his head and looked as if he wished he were not Leader. "I must consider the Herd. We cannot wait;

nor can we halt along the way. There will be several ancients left behind here, as well as Hutu. And Lozh says he will stay. Also —" he tossed his head in annoyance — "my youngest she-calf Alwa has sworn she will not go with us, but will try to get back to Big Valley, since her mate is with your sire. I cannot make her listen." He stared at Chimmuh. "What of you, youngster?"

Chimmuh felt dead inside. "I cannot abandon my dam."

Glesh waited for the mutters of approbation to subside. "Thus be it, then. It is possible the snows may not be heavy; also, that the llangs may not come until their normal season. In that case, your dam may calve and be fit to travel before long, and you can follow us. Until you know, it is best you stay here, or go higher into the mountains, rather than straggle and be caught in Katta Valley." He looked around slowly. "Is there any disagreement?"

The arc of males was silent, except for Hutu, who grumbled but didn't actually protest.

The snow stopped with daylight, but the sky remained sullen. Chimmuh, shivering atop the cliff, stared out over the Katta Valley. The migration had left a broad beaten track down Nameless Creek, and now, tiny with distance, it wound among the vertical-sided hummocks, like little mesas, on which the pahigrass grew. He could only make out the big males plodding along in hollow formation, to shelter the females and calves.

The valley looked strange, its level floor blanketed in white. Even the hummocks were snowy, so that the upthrust seedstalks stood out sharply. He peered up-valley. It looked lifeless. Then, miles north, he saw movement. He crouched anxiously, then saw it was only a herd of yenko grazing on phia-tendrils that hung down from the hummocks. That was a good sign. If the north carried any scent of llangs, the yenko would be running. He'd seen how a yenko's six slender legs could flash.

If there were no llangs yet he could go down and gather pahia-seed. He'd need help to carry it, though.

He couldn't see over the edge of the cliff, but smoke-scent told him he was about over the campsite. He turned and trotted laterally, to where he could climb down.

## II

His dam lay with four limbs tucked beneath her gravid flanks, her forelegs lifting and letting drop a hardwood pestle to grind seed in a mortar-stone. She gave him a relieved look. "I was worried, male-calf. You were gone long."

He inclined his head in greeting to Alwa, Glesh's she-calf, who squatted sullenly near the fire. "I went up Nameless Creek. Do you remember where our trail down from the passes joined it?"

His dam said, "I remember."

"Well," Chimmuh said, "a short climb up the creek to the north there is a big hollow with only one narrow exit. It is like the one Glesh showed



Virgil  
Finlay

us and called a 'cirque,' left by some ancient river of ice. We will be much better hidden there. Brush grows on the bottom and up the sides until they are too steep. We might build a fence across the exit. And if we can get enough seed to go with brush-roots and foliage, we can —"

Alwa was on her feet. "Did you go up to the pass?"

"No."

She stamped about, making impatient gestures with her forelimbs. "I am going across even if I must go alone!"

Chimmuh, annoyed, said, "The absent ones will not be this far south for a few days, if at all. You must stay and help my dam."

Alwa stamped her feet. "I will wait today and tomorrow. Maybe only today. Then I will go!"

Chimmuh held his temper. He understood why males sometimes bellowed at their mates. "I cannot argue now. Where are the others? I must persuade them to go with me for pahia-seed."

His mother glanced half absently at his back — thinking, no doubt, that a male calf with dorsal spines hardly sprouting was too young to do much persuading. She said listlessly, "Lozh is somewhere digging roots. The ancients and Hutu have gone to find a Dying Place."

Chimmuh reared his head in shock. "A Dying Place! But — I had counted on — even Hutu?"

His dam paused wearily in her grinding. "Hutu's leg is hurting him badly, and he sees that things are hopeless."

Chimmuh said no more. He bounded over to the scanty pile of equipment Glesh had left them, chose a heavy chopping-knife in a scabbard and buckled it on so it hung at one flank. He looked back. "First I will find Lozh. Meanwhile, can the two of you carry what we have here up to the cirque and build a fire? We will all join you there, though it may not be before dark."

Alwa said petulantly, "We have the cliff here."

Chimmuh fought his anger. "There is good shelter in the cirque. And you will be closer to the passes."

That persuaded Alwa, but his dam looked at him with sad, fond eyes. "Must you go? Today . . ."

He said, a little harshly, "We are not dead yet. There will be a tomorrow and a day after tomorrow. I will be careful."

Lozh was a short gallop down the creek, working with a shovel the ruddy metal blade of which was worn and nicked. Chimmuh spat out, "Yohut! Is that the best they left?"

Old Lozh drove the blade into the snowy soil and relaxed, gazing at Chimmuh with a hint of amusement, standing on five limbs, the other forepaw resting on the wooden spade handle. "There is one better, but this will suffice me. What did you see, from above?"

"No sign of trouble, but snow everywhere. And I found a place where we might winter, if we can get enough food. You've seen hungry years, Lozh. Tell me. Can we live on roots and foliage?"

The old male gestured toward the pile of tubers he'd dug. "This particular kind will keep us alive for a while, but not healthy. Starvation is not our real worry, youngster. I did not want to speak frankly before the females, but when the llangs come, they are voracious and vast in numbers. You must have stolen away with the other calves at some time to peep at the Dying Places and seen the bones scattered about, with not even one old hide as unsavory as mine left to cover them. Do not shudder. When a krote is old and stiff and lame, and his joys are safe in the past, death is no horror. And llangs are merciful at least in being quick." He looked at the scabbard Chimmuh wore. "Were you going down, youngster to exterminate the species of llangs all by yourself?"

Chimmuh tossed his head angrily. "I am going to chop pahia-seed, if I can persuade anyone to help me carry it. Yohut! Were the others so anxious to die that they could not wait?"

Lozh pulled the spade free and began digging slowly at another bush. "They have no hope. Grant them decency in taking themselves from the camp, to draw the llangs away from your dam." He wagged his head slowly. "I hope it succeeds for a while at least. Somehow, one feels that the act of birthing should be allowed to occur, even if dam and calf perish a day later. Perhaps then their spirits may find peace."

"Spirits!" Chimmuh snorted. "If those ancients would try as hard to live as they do to die, we might survive the winter. I'm going down to

talk to them. If you care to be useful you might help my dam and Alwa move to the cirque I found." He started down-creek, then turned, ashamed of his disrespect. "Forgive me, Elder. You could have gone with the Herd; you are not yet feeble. Why did you stay?"

Lozh went on with his digging for a moment. Then he said, "It was I who suggested crossing over into this valley. Therefore, it seemed right that I stay. I'll carry these roots up and get the camp moved. If you see llangs, remember that you can outspurt them but your wind will not last. And you are still agile enough to climb a hummock. Llangs cannot."

Chimmuh found the resigned group huddled about a small fire in a little box canyon masked from the creek by tall brush. Besides Hutu, there were four old males and two females; the latter as scarred and sere-hided as the males though not nearly their size. Only Hutu looked at Chimmuh. The others, eyes dim with apathy and memories, slowly chewed their cud.

Hutu lay on his left side, his splinted leg thrust out toward the fire. He tossed his head and rumbled, "Why are you here, youngster? If you're to stay with your dam, you should not wander about leaving tracks."

Chimmuh moved nearer the fire, stamping his feet with cold. "There are no llangs in the valley yet. I am going to chop seed. You must all help carry it up to the place I have chosen."

Hutu snorted. "Who are you, without one horn on your head — with hardly a dorsal spike, even — to say what we must do? We have said farewell to the Herd, and to Lozh and your dam and Alwa. And now we say farewell to you. Be-gone."

Chimmuh hesitated, then burst out, "There is a calving to be guarded, and food to be brought for the dam and for Alwa who tends her! My dam cannot — cannot make good milk on a diet of weeds! And there is a fence to be built, to keep out the llangs. *We* are the Herd now, all that is left here. Have you lost all courage, like these senile hulks?"

Hutu rumbled ominously and gathered his limbs beneath him, wincing. But the oldest and biggest of the ancient males spoke, and Hutu waited, in deference. The ancient rumbled, "You can know little of courage, youngster, since you know little of life!"

One of the females said drily, "It is not our fault your dam is late in the year with her calving."

Chimmuh said, "Other females have calved as late. If this were a normal year, there would be no trouble." He hesitated. It was against all instincts to be so brash with ancients. Still, he had them talking, at least. "You will have all winter to die in, if you must. Help me haul the seed to the new camping place. There will be snow tonight, to cover our tracks. If there are still no llangs tomorrow, you can return here if you must. At least, then, you'll have pahia-seed to chew on while you wait."

Another old male said, "But if there *are* llangs, we will be trapped with the rest of you in whatever place you have chosen. It is not right that ancients wait their end in a camping place."

Chimmuh said, "It is less right that grown males desert a female who is calving."

Hutu heaved himself to his feet, wincing as his splinted leg dangled. "Yohut! What is this talk of a fence?"

Chimmuh told him, "I found a place with a narrow mouth, where we have everything but pahia-seed. I think we could fence out the llangs."

The oldest male said, "We are not agile enough to climb mountains, youngster."

"There are no steep climbs," Chimmuh said. "You can do it, slowly."

The ancient sighed and began heaving himself ponderously, by sections, to his feet. "Though you are hardly more than a calf, you preach like a nettle. Gallop on down and be about your chopping, so that we may find good loads when we catch up with you."

### III

The snow had melted a little in Katta Valley, so that there was much mud, and from the vertical-sided hummocks water dripped. Gone were the autumn smells of warmth and ripe grasses. The snow had its own smell — watery, but in addition a little bitter, a little pungent, like certain roots one chewed for medicine. Regular valley dwell-



lers evidently felt dislocated. A flock of putak birds, scavengers, circled on wide wings, so high their shrill cries came down only faintly. Insects crawled in the snow, moving Chimmuh to pity. A small vertebrate clung on a hanging vinelike pahia-tendril, shifting its six frail legs uncertainly, half afraid to descend.

From the nearest hummock, at least four sixes of seed stalks grew up, twice as tall as Chimmuh's full length, each bearing at the top a pod as big as his head. In a normal year, these would be nearly ready to split, releasing the vaned seeds to go gliding away haphazardly like little models of putak birds. Chimmuh, nervous on the valley floor, hurried to the hummock, seized a thick tendril, bent it up in a loop and tied it with the non-slipping knot he'd been taught as soon as he was old enough to climb. He was almost too old for it, now. He made a second loop in another tendril, lunged up and got one of his hind feet in each of the loops and began tying other loops higher up. By the time he reached the level top, he was puffing.

Pahia-shoots grew thick and erect, so it was hard to shove his way through. He got a seed stalk, peered up to make sure the pod was ripe enough, drew the heavy knife and began to chop. A few hard strokes had the stalk leaning. He reared up and tugged at it so it would fall toward the edge of the hummock. It tilted slowly and crashed down, the chopped end breaking loose and upending so that the whole slid off. He heard it thud on the soil below.

The stalk itself could be split for fence-posts, or chopped for firewood.

He worked his way around the hummock, cutting all the stalks that were near the edge, then went to his makeshift ladder. It was then the strange discomfort — almost a panic — seized him. He crouched there, trembling and staring around, torn between an urge to cry out for others of his kind and a fear of making any noise. Gradually, he understood. It was not so much a definite fear as the realization of being alone. He had never before been long out of calling-distance of other krote.

Well, he'd simply have to bear it. He climbed down and trotted to another hummock. It was a little better while he worked, usually shut in by the grass shoots so he couldn't see his loneliness. He had four hummocks harvested and was starting on a fifth when, faintly, he heard Hutu's voice. With a glad cry, he scrambled down and ran toward the voice.

By mid-afternoon he'd felled all the ancients could haul. He rested, watching them tie the stalks, pods and all, into long bundles, using pliant tendrils, to be slung over their backs. Chimmuh, who couldn't have carried much anyway, stayed unburdened to act as scout.

The procession started toward the slopes. He ranged ahead, trotting back and forth across the route, dropping back now and then to relieve the loneliness. Above the clouds, the day was aging.

Then, while they were still among the hummocks, he met a herd of fleeing yenko.

The herbivores — built along the lines of krote, but smaller than Chimmuh — came pouring from the north, slender limbs flashing rhythmically, their skins, darker than his own, inconspicuous against the dark hummocks. He crouched, startled, then darted for shelter. The tide flowed around him, some of the males pointing horns in warning but not attacking. Then the tide ended with a few stragglers limping along. He ran toward his own companions.

As soon as he was in sight, the old males automatically closed up to form a circle. He pulled up, gasping. "Yenno! Running!"

Hutu growled, "Yohuti!" The oldest male rumbled, "How hard did they run, youngster? Were they winded? Did you see their tongues?"

"N-no."

"Then," the ancient said, "we have a little time. And I do not think llangs will come into the hills tonight, with yenno to interest them." He peered at Chimmuh. "Will you stay behind and north of us, youngster? If you see llangs, or yenno really running, come to warn us at once. We cannot demand it of you. If you prefer, take what seed you can carry and hurry up to your dam. We will keep the llangs occupied a while."

Chimmuh stared distractedly toward the mountains. "I — I could not carry much. I will stay."

Hutu grumbled and said harsh things about his broken limb and made a sign of good luck to Chimmuh.

Chimmuh drifted north of the

caravan. He was determined not to be cowardly, nor yield to his loneliness. Possibly that was why he made little of another herd of yenno, running slightly harder than the first.

It wasn't long afterward that he saw the llangs.

This — he realized after his first frozen terror — was a sort of advance guard, not more than four sixes of them, trotting in a swift easy gait out to valleyward of the yenno's track. They were already fed, perhaps, and just keeping tab on things. They halted the instant they saw him, fierce yellow eyes startled and wary, as if they suspected a full krote herd nearby.

Individually, they were only a quarter of Chimmuh's bulk, long and low, with wedge-shaped ears now stiffly erect. They were not bare-flanked like krote, but had short, light gray fur all over. Some, the older males no doubt, had ruffs to protect their throats as did mature males of Chimmuh's own species. All six paws were running-paws, not made for grasping, but all fear-somely clawed. Their long slender muzzles showed fangs that nearly paralyzed Chimmuh with fright.

One of them broke the brief tableau by snarling. Now Chimmuh learned how to run.

He ran in pure mindless panic at first, body throwing itself into swerves to avoid hummocks, lungs pumping with an agonized violence. His head jerked about, bringing his eyes to bear on each dimness at the foot of a hummock, tossing quick looks behind. His legs ached and felt

ready to collapse, but he streaked on, leaving the llangs out of sight. No yenko could have kept pace with him in this initial wild burst. Finally exhaustion forced him to slow. The llangs were certainly on his track; he heard the peculiar chopped shrieks of their tracking.

His mind was working now. He swerved around another hummock; shot off at nearly a right angle, toward the area where he'd chopped stalks. He had to give the caravan time. He worried whether he could find the right hummocks, but some part of his brain was taking him there. He saw a familiar pattern, darted toward it; crouched a moment gasping and staring back. Then he grasped the tendril-loops and hauled himself up. His muscles seemed to crack, and a small bleat of agony forced itself from him, but he went up. Before he reached the top, angry snarls broke out nearby. He heaved desperately and scrambled over the edge. He would have fled to the very middle of the hummock, if the shoots hadn't resisted. He twisted around to see his pursuers.

Most of them had stopped as soon as they saw he was out of reach. Now, those turned and trotted to the wind-shelter of another hummock, where they sprawled loosely, panting, heads on their forepaws, yellow eyes fixed on him. Two, though, had come right below him and were pacing about, staring up. He lay shuddering. His lungs ached, and both stomachs wanted to empty themselves.

Time passed. The two llangs pac-

ed. The others lay lax, only moving their ears at some distant hunting cry. The sky was nearly black, though above the clouds at least one moon must be shining. Chimmuh's breath was easy now, but the terror remained. How long would they wait here?

Then one of the pair below him uttered a special snarl, reared up, and got a forepaw into one of the tendril-loops. He stretched, hooked the other forepaw in another, bunched his hindquarters and surged up. Chimmuh's panic brought him to a tense crouch. Surely the llang couldn't reach him! Lozh had promised they couldn't climb!

But maybe he'd made the loops too many, and too close together.

The llang stretched its body incredibly, caught a higher loop. It heaved itself violently, missed, clung for a moment and tried again, caught the loop it wanted. Chimmuh could see how its wrists strained to stay hooked over the tendril, but it met his eyes and snarled a death-promise, and he knew it wouldn't give up. He pressed back into the restraining grass.

The llang was gathering itself for the final stage. And now the others were on their feet, staring avidly. Suddenly Chimmuh remembered the scabbard that had slapped madly against his flank as he ran. Did it still hold the knife? He could cut the tendrils! He rolled onto his side; darted a forepaw up to feel. Yes! He drew the knife; forced himself to lean forward. In the dusk, he couldn't tell the right tendrils. And

now the llang made its final effort — threw itself up and got first one, then the other forepaw onto the matted edge of the hummock. Its yellow eyes seemed luminous. Its scent was almost paralyzing in Chimmuh's nostrils. It snarled in triumph.

Frantically, he swung the knife.

The beast's scream made him cower back. The llang fell, still screaming. Chimmuh was only dimly aware that the knife fell too. After a moment the thrashing about below made him open his eyes and peer down. The llang was writhing on the ground, snapping at its shoulder. The reek of blood was sickening. The second llang was dancing about as if puzzled. It darted in and nipped experimentally at the injured one's flank. That one snapped back viciously. The others were converging now. The wounded one got to its feet and loped away unevenly. Chimmuh had the feeling that the others would have chased it and torn it to bits, if they'd been very hungry. As it was, they gradually settled down to their vigil.

Chimmuh let his head droop, unmindful of their steady scrutiny, not caring that his tool — his weapon — lay below, unreachable. Both his stomachs wanted to be empty.

He recalled how, a calf, he'd crept secretly after a pair of grown males who'd gone to a secluded spot to settle a difference. He'd been sick then, too, as they lunged at each other, hooking with horns and striking with clawed feet, until they were streaming blood. But afterward the eventual victor had been as sick as the one who lay behind. He'd stag-

gered away by himself and retched awfully for a long time, with no sign of jubilation.

Now Chimmuh understood. Even in necessity, to spill the blood of another creature was a terrible thing.

He lay there long after the snow began, long after the llangs silently departed. Finally, though, it penetrated his dulled mind that he was freezing.

He climbed down, very stiffly, reclaimed the knife, scrubbed it thoroughly in the snow, and hobbled away. He half expected to meet more llangs. Evidently, though, they had no need yet to rove in snowstorms. And snow would cover his tracks.

He must have staggered on half asleep, for it seemed both a very long time and a short time before he turned up the stretch of Nameless Creek that mumbled down out of the cirque. Ahead, he saw the glow of a fire.

As gravid as his dam was, she lurched to her feet when he plodded into the firelight. "Child!"

There was a confusion of bellowing and "Yohuts!" and headwagging.

Finally Lozh silenced it. "Let him sleep. He has earned it."

#### IV

The snow continued next morning, the more disturbing because it hid what one should see in daylight, reducing the world to a cliff and a half-circle of brushland. The camp place Lozh had chosen was, objectively, very good. The cliff gave shel-

ter from the north wind. One of the many trickles that nursed Nameless Creek flowed nearby. There was level soil, upon which they'd built a long shelter, backed by the cliff, of upright poles roofed over slantingly, pahia-pod hulls serving as shingles. A single long fire fronted it a few paces out.

It was fascinating to watch the snowflakes disappear into nothing as they met the rising warm air.

Chimmuh's dam lay in the dim interior, silent and withdrawn. That added to Chimmuh's uneasiness. But the two old females placidly ground seed to make pahia-bread. The old males, including Lozh, were barely visible in the snowfall, collecting roots and foliage. There'd be no hunger for a while. Hutu lay by the fire, his broken leg stretched out to the warmth. A long application of steaming mud, followed by a more careful splint, had lessened his discomfort. Only Alwa stamped about impatiently.

When Chimmuh realized the snow was not going to stop, he hauled himself lamely to his feet and hobbled out to find Lozh.

Lozh was using the imperfect shovel again. He stopped and peered at Chimmuh. "You are not at peace, youngster."

Chimmuh spoke with respect. "Nor would the others be, Elder, if they had met the llangs as I did."

Lozh wagged his head. "True. I was looking where we might build your fence. We will not have enough posts. Anyway, there is not soft soil all the way across. We cannot erect posts in solid rock."

Chimmuh shifted his feet for warmth. "What then?"

Lozh said, "We can only gather loose rocks and pile them. I was hoping the snow would stop so we could find some. Have you another harangue in mind, to put the ancients to work?"

Chimmuh said a little huffily, "Let us simply start work and shame them into joining."

**T**he old male who was spokesman for the four had, it developed, experience with fences. He took a sharpened post and thrust it lightly into the ground. "It is done thus. Now, since my forepaws are not much good for grasping, I must rear up and put this thick board across the top, so I can bring enough of my weight to bear." He did so, gruntingly, and the post slid a fifth of its length into the ground. "So. Now, that thick one about here, I think — it will be good for a gatepost." Amused, he watched Chimmuh's effort. "You see, youngster? Your forepaws are deft for grasping, but you do not have the weight. I have weight to spare, but cannot grasp well. It is one of life's jokes. A similar one exists in the matter of dealing with females . . . but you will not bother about that for three years, or four." He took hold of the post. "Permit me."

There were enough posts for the stretch of soft soil, set closely so no llang could squeeze through. That left both ends, plus Nameless Creek, which must be closed with a lattice of brush-trunks that wouldn't dam the water. The chore of gathering

rocks began. Chimmuh trotted about, finding them for the old males to carry. The two she-ancients chopped bushes and took them to Hutu to trim.

The snow stopped in mid-afternoon, but the night was cold. Chimmuh slept fitfully. Once or twice he heard his mother moan in her sleep. But what disturbed him more was the distant tracking cry of llangs, somewhere down Nameless Creek. He was about with the first daylight, anxious to resume work on the fence. By evening, when it was still not snowing, the work was almost finished, though the rocky ends must still be built higher. And it was that evening that Chimmuh, peering between the posts, saw a group of llangs down Nameless Creek. They were staring toward the cirque, lifting their muzzles as if either the scent of krote or the drifting wood-smoke were puzzling. Finally they trotted down the creek.

Chimmuh, shaken, sought out Lozh. "Supposing, Elder, the fence keeps out llangs indefinitely. We will run out of pahia seed before long. Could we make trips for more, while it was snowing?"

Lozh wagged his head doubtfully. "As few and as feeble as we are, I fear not. One or two trips, soon, perhaps. But as winter extends and the llangs grow hungry, they'll be less particular about the weather." He started to say more, but paused, staring toward the fire.

Chimmuh saw the females gathered there. He galloped that way. One of the she-ancients rumbled at him and moved to block him, then, re-

membering who he was, moved aside. He stopped, stiff-legged, staring at the pale-hided thing eagerly nursing at his mother's belly. She looked up, eyes tired but bright with emotions he didn't entirely understand. "Male-child, you have a small sister."

He must have slept soundly, for the trouble that night was well evolved before he heard it.

He scrambled to his feet, full of panic and the stupidity of slumber, craning his neck to see beyond the fire. The bulky forms of the four old males loomed there, motionless. From down-cirque he heard Hutu and Lozh bellowing, Alwa screaming, and a bedlam of snarls and shrieks that could only be llangs. He was so weak with terror he could hardly move; but he forced himself into action, grabbed the shovel that was the nearest weapon and somehow got to one end of the fire.

He was nearly trampled as two of the old males, their minds working now as well as their instincts, wheeled to occupy the gap between that end of the fire and the cliff. The other two, presumably, were at the other end. Then, as he started toward the fence, Alwa almost bowled him over. He had wit enough to thrust with the shovel-blade at the dim shape snapping at her heels. He felt the impact, saw blood gush from the llang's chest. It went sprawling and screaming. Two more came out of the dark, split around him and darted on. Still another appeared, and he thrust at it with the shovel. He hit it, not solidly, and it



turned and disappeared into the dark. He heard a thump and a shriek behind him as one of the pair that had avoided him got too close to the big males. Its partner shot by him in retreat. Chimmuh galloped into the dark, dreading what he'd find. As his eyes adjusted he saw a writhing knot of shadows at the gate. His legs kept going.

Hutu lay motionless and silent in the snow. Lozh, his tail to the fence, was standing off a full six llangs that darted about him, looking for an opening. Three or four other llangs lay dead. Chimmuh hurtled in, shovel poised. He realized that the gate was shut, with a horde of llangs clamoring outside. The ones around Lozh saw him coming and broke. He thrust and caught one full in the flank. The rest, except one, darted to his right along the fence, thinking now only of escape. The single one swerved around him and went after its fellows. Lozh bel-lowed, "Come! Don't give them time to think!"

The snow was heaped up at the foot of the slope, and against the rock fence. The beasts floundered in it, trying to climb free. Chimmuh, mind hardly working, crippled another with the shovel, but that was his last contribution to the action. Lozh finished the killing.

Chimmuh stood shaking with re-action. Finally he gasped, "Hutu?"

Lozh rumbled savagely, "Hutu is dead. He sold his life to get that gate shut." He reached out, picked up a dead llang and heaved it might-ily over the fence. He reached for another, but paused. "No; one is

enough to show them now. We'll skin the others first. We'll need warm pelts."

By the time they got back to the gate, the pack outside had taken it-self off. Hutu's blood was a dark congealed blob in the snow. His throat ruff had not been enough against so many slashing fangs.

Chimmuh followed in a daze as Lozh marched toward the fire.

## V

Alwa lay huddled between the old females. Lozh prodded at her, not gently. "Why did you do it?"

Her flanks heaved with emotion, but she was silent. Lozh prodded harder. "Why did you open the gate?"

This time she lifted her head. Her eyes were dull with inward pain. "I didn't know there'd be llangs near. I was going to — to slip away and cross the mountains to find my mate."

One of the old males rumbled, "A fool's errand. Do you think, now, he would be alive even if you found him? His bones lie somewhere in the north!"

Alwa put her head down again. Lozh left her.

There was talk about Hutu's corpse. The decision was to leave it until morning. Silent with grief, the camp settled down.

Chimmuh moved out beyond one end of the fire and huddled against the cliff. He wanted to be able to see the fence without the fire glare in his eyes. The fence was barely visible in the dim light. The rest



of the cirque was a ghostly, uneasy place, with faint, dancing gleams and shadows. After a while he got up and went to find Lozh.

The old male lay at the other end of the fire. He lifted his head as Chimmuh approached. "Can you not sleep, youngster?"

"No. Elder, I know very little lore, but it seems to me that we can't hope to survive long as things are. What do you really feel are the chances my sire is still alive and will be going down Big Valley?"

Lozh stared into the fire. "Your thoughts are mine, too. The llangs are not totally irresistible. We have seen how awkward they are in snow too deep for them, and they die easily under heavy blows. If your sire and brothers and those with them learned quickly, they might fight their way down Big Valley. If I were more agile —"

Ohimmuh interrupted impatiently. "I am best fitted to cross the mountains. And if I found my sire's party, we would not have to worry about starving. So many prime males could travel down Nameless Creek and return with pahia-seed every few days, if necessary. Could they not?"

Lozh wagged his head. "I would not choose it as a pastime. But probably they could. Are you willing to try the mountains?"

Chimmuh stamped his feet for warmth. "Of course. But do you think my sire would already have passed by?"

"That," Lozh rumbled, "depends upon many things we do not know. But every day increased the likelihood."

Chimmuh said, "I can start tomorrow, if it snows. The llangs seem to retire down-creek when it snows."

"Possibly," Lozh said, "but I would think it wiser after dark. And you cannot go without preparation. Packs must be made up, for you'll need food and firewood. And we'll skin those dead llangs for pelts. Rest, now; I will keep watch. Tomorrow may do its own planning."

The morning was overcast, but snowless. Icy wind whipped over the north rim of the cirque, seizing upon the smoke from the fire and whirling it away. The four ancient males lay chewing their cud and discussing Hutu's corpse. They favored dragging it to a spot near the left end of the fence, where they could pile brush over it, then snow. They were disturbed that he hadn't been able to get to a Dying Place and seemed worried that they themselves might meet the same disgrace. Chimmuh, after listening a moment, galloped away angrily toward the fence, to peer down-creek. There were no llangs in sight, but he could hear them somewhere. Lozh said he must not start yet.

He plodded back to the fire. His dam was well enough now to walk from the shelter, the she-calf wobbling after her. "Male-child," she said sadly, "you have risked yourself enough. Must you do more?"

He fought impatience. "Who but me? And would you want my sire to travel on south without knowing we are here?"

She gazed at him quietly for a moment, glanced at the calf, which

was staring wide-eyed at the fire, and dipped her head in acquiescence. "Care well for yourself." She turned and nuzzled the calf gently back under the shelter.

There was no snow by nightfall, but the llang-sounds were far down-creek. Chimmuh stood at the gate, peering out with mixed feelings.

Lozh plodded toward him, carrying things. "Here are pelts enough to lie on, and to cover you. I had the females scrape them thoroughly and rub ashes into them, so they shouldn't be unbearable. And here's a bit of lore I learned once." He displayed some oddly shaped pieces of pelt.

"Put these on your feet like this, fur side in, and tie them thus. They will keep your toes from freezing. And this — you hang it around your neck, so the pouch is convenient to thrust your forepaws into. You may prefer at times, when you rest, not to build a fire. Huddle, if you can, in a corner of rock, or at worst in deep snow. The snow will not freeze you as quickly as the wind. Do not get too cold or tired or hungry, or your strength will desert you with little warning. Think well before making irreversible decisions."

Chimmuh said, "I will travel fast. I shall not take very long in the passes."

Lozh rumbled a sigh. "And do not be overconfident. It will be harder than you think. The cold and the high thin air are things you are not used to."

Chimmuh shifted his feet impatiently. "Will you help me with these knots?"

It seemed to Chimmuh that the faint noises Lozh made opening the gate and closing it would draw every llang within a day's gallop. He crouched for a moment staring down-creek, glanced back at the quartet of males guarding the gate, dipped his head to Lozh and ran quietly for the right-hand slope. He climbed far enough to see over the brush along the creek, then trotted carefully along the slope, eyes and ears straining. The crackling of the fire was far behind him, and all he could hear now was the soft voice of Nameless Creek and the cold wind plucking at the brush and snow. He looked back. He could see nothing but the fence silhouetted against the fire glow. He went on.

The mountain's shoulder curved away from Nameless Creek, and now the cirque was out of sight. Somewhere, down-creek, there was a short outburst of llang snarls, which hastened him a little. He went farther around the slope and was in the ravine that climbed westward. Before long, that was bare of brush. Now there'd be no sudden ambushes.

He found a place that kept him tolerably warm without exhausting him, but to hold it he had to stay out of snowdrifts, which took some thought. He tried to recall what this ravine had been like when the Herd came down it. Passably free of boulders, he thought, but his footing was a little nervous.

The wind came over the north slope, swirling in the ravine, icily. He stopped to adjust a foot covering and was shivering at once. He climbed on. After a while a light snow-

fall began, increasing his sense of isolation. But probably he didn't have to worry about llangs now. He could stop, when he was tired enough, and get warm.

He remembered that the opposite side of this canyon had been crumbled at one point, with a rock slide and some shallow caves above it. Had he passed that already? Things looked so different. But his instincts said the place was still ahead. He trotted on wearily. Then, where a side canyon split off, he had a flash of memory. The rock slide wasn't far.

He reached it and stood peering up the white slope. Could he climb the slide? He crossed the ravine and started up, settling five paws carefully before moving the sixth. It wasn't too difficult. He would have liked a torch to see into the caves, but building a fire was a chore, so he settled for listening and sniffing. The caves were empty. He chose one with a level floor just big enough to curl up on, brushed out the snow, spread some pelts and settled himself. He decided against a fire. With more pelts spread over him, he was warm enough. He chewed a mouthful of pahia-seed and slept.

Snow was intermittent the next day, but the going was harder, because now the air was thin and his lungs labored. Also, his body warmth seemed to flood away alarmingly. He had to stop several times, and that night he built a fire in the best shelter he could find. He had to work very long with the spinning-stick until the shaved kindling ignited and his forepaws were cramp-

ed and exhausted. But once he got a few big sticks burning, everything was fine. He dried out the pelts and foot coverings and what he could of the packs.

Sometime during the next day, which was snowy, he got lost.

The blind canyon he blundered into was short, so he soon realized his mistake, but momentarily he panicked. He turned and floundered back wildly, going eastward along his own tracks, not thinking at all until he tripped and went sprawling. He lay there, gasping and thinking of the cirque, with its warmth and the companionship of other krete. Then, slowly, reason returned. There was no safety in failure. He struggled up — shockingly stiff and weak — and turned westward again, past the blind canyon. At the first good rock-shelter, he bundled himself in the pelts, piling the other things around him, and got warm.

Before nightfall he was definitely descending. And now he recognized his surroundings.

This ravine would lead down to a creek which flowed into Big Valley. The air would be getting better again, and he wouldn't be constantly laboring uphill. But those difficulties would be exchanged for another. Big Valley was no doubt swarming with llangs.

## VI

On a cold but snowless morning, he lay on a finger-ridge and stared out over Big Valley. Beyond a wide stretch of hummocks, the river wound its broad channel.

Movement, closer, caught his eye. A pack of llangs, tiny with distance, trotted along. The snow barely covered their feet. Evidently there hadn't been much in Big Valley.

He saw three or four other packs, one of them in full chase after something. The choppy pursuit cry reached him faintly and made him shiver beneath his covers. He obviously couldn't go down into the valley in clear weather, if at all.

The summering camp was south of here, on this side of the valley — not a long trot, on level ground. He stared at the next ridge, then looked inland. If he followed the contour of the land, it would take him days. So, he must cross the ravines. He watched this one for a while and saw nothing but putak birds soaring low over some carrion. Loading himself, he started down.

As he reached brush, something small darted from before him, making him leap. He went on, sense alert. At the bottom he crossed a small creek and stopped to listen. No sounds close. He started up the other slope.

He wasn't yet clear of the brush when he heard a shrill chopped cry behind him.

He ran, equipment slapping against his flanks. Something under the snow tripped him, and he went sprawling. He got up, wincing with pain, and went on. Other llang voices had joined in, so there was no doubt they were on his track. He headed for a part of the slope where the snow looked thicker. His lungs already ached. When the llangs burst from the brush and saw him,

he knew it by the sudden urgency of their cries. He was having to make high leaps in the snow now. What would he do at the top of the ridge? If he turned up it, would they stay in the ravine, paralleling him, to cut him off? No; they were charging up the slope. He realized that his lead in elevation was as good as a long lead on the level. He got to the rounding-off and stopped almost impudently to watch them. Let them struggle in the deep snow, then.

He trotted up-ridge, on easy footing now, watched them flounder, then passed over the brow of the ridge out of their sight. He slowed to peer into the next ravine. If he ran into another pack, he was in bad trouble — his lungs and muscles couldn't handle another such flight. But he was farther up this ravine, and the brush was thinner, with no sign of llangs.

He plunged down the slope and across the bottom and picked the easiest ways up the far ridge. When he heard his pursuers top the one he'd left, he turned to watch them. They stood in a tight group, staring at him, but they'd had enough of the chase.

He went on at a bearable pace, crossing several more ridges. He saw and heard llangs, but none close. By late afternoon he was within sight of the summering place.

The old camp was in a deep ravine that had a fair-sized creek and a steep northern side for shelter. Each spring, arriving, Chimmuh had seen the previous year's fire sites, winter-washed but not obliterated. It

was strange now to see the unbroken blanket of snow. Even the rocks arranged into cooking places were mounded over. Here and there were abandoned baskets and such, also covered. There were no shelters standing, since they'd been torn down for fuel on the mountain crossing.

There were no krote tracks or other signs that his sire's party had been there. A day or two of snow, doubtless, would cover such tracks. There were llang tracks — everywhere. And those were fresh.

His stomachs felt heavy with frustration. What a forlorn mission this was! Even if the metal-gathering party still lived, wasn't it foolish to expect them to fight their way down the length of Big Valley? Wouldn't they find some haven in the north, as Chimmuh and his group had? Surely they'd presume the Herd would be long gone. So, even if they did come down Big Valley, why would they bother with the summering place? Wouldn't they go down the river channel, where there was only short brush and long open stretches of bottomland?

Unless they hoped for some message left at the campsite.

There was, he thought, only a faint hope that they'd still come. But it was the only hope, so he must wait. The trouble was, he had food and fuel for only a few days.

If he could go down into the valley and climb a hummock, he'd have everything he needed. The pahia-seed hadn't been rich in Big Valley this year, but he could exist on it. Would he get the chance? It wasn't

snowing now, here. Anyway, by this time the llangs might be hungry enough to ignore snowfall.

He stared at the campsite. If he could at least get that far, he could leave a cairn with a message — pile rocks up, and find a bit of charcoal to draw on a slab of wood. What kind of drawing? A sketch of a female krote and a small calf and an arrow pointing in the direction of the mountain passes? Not very understandable. It might be that no one with his father had ever seen the passes.

Anyway, for now, he'd have to stay where he was. Should he build a fire? The smoke would be visible quite a way, and at night the fire would show.

At least it was activity. He found a level spot and shoved snow off it; unpacked his goods. This time he took pains shaving the kindling and, with the lower air, had no trouble.

The warmth was wonderful, but the smoke was a disappointing beacon. It swirled up only a little way then whipped south with the wind. The afternoon dragged by. He ate, and tried to rest, and fretted.

Night came crisp and snowless. He worried that he was using wood recklessly and that the fire would attract llangs. Almost he would have welcomed seeing a few, if they didn't come close — his solitude was agony again. It always was, when he didn't have something to keep him busy. Now and then he heard llangs. Once a pack of them went by at the foot of his ridge, and he tensed for flight, but they were on some track. He imagined their yellow eyes staring

up toward the fire as they passed.

Then, sometime during the night, it began to snow.

## VII

He tensed in uncertainty. Should he quench the fire to save wood? It couldn't be seen far now. Should he sneak down to the camp-site? He might not get another chance. And it would be good to have the fire to return to. He listened. Was that a llang? If so, it was far out in the valley. And almost any risk seemed better than just huddling here.

He took his chopping-knife and started down the slope. At the edge of the brush he turned down-ravine, shying at every mound in the snow. He could barely make out the fire's glow now.

Finally, a snow mound had a familiar shape. He ran to it, thrusting his forepaws into the snow to feel the cooking stones, as if they were old friends. Presently he began to shift them into a ground layer for a cairn. Then he went to the next cluster for more. He tried to be quiet, but the stones made a distressing amount of noise. He paused to listen. Nothing. But to his imagination then night was full of stealthy paw-falls. He had to go farther to get more stones.

When he had a pyramid half as high as himself he was satisfied the snow would not hide it. Now, what about a message? There'd be no convenient flat slabs of wood here. He should have thought about that before he left the fire. Well, then a

sharpened twig, to point in the right direction? A poor message. Maybe he'd beter get back up to the fire; make a second trip while the snow lasted.

He started in that direction — and heard a snarl somewhere ahead.

He whirled and ran the other way, blindly. After a few strides he turned up the slope. But here it was too steep; he lost footing and slid, floundering. The llangs were clamoring now. He scrambled to his feet and darted away from the slope. He knew this ravine, knew its flat floor and the gentler slope on the far side. He plunged through brush; reached the creek and bounded across it, splashing in icy water, tore through the brush on the far side, falling at least twice. Then he was on the up-curving slope. He was gasping, but he could tell by their cries that the llangs were breathing hard too. He headed by memory for a slight gully where the snow would be deeper. He stumbled into it and climbed.

Eventually, dazed with fear and exhaustion, he gained the top of the ridge and went along it, toward higher ground. He could tell when the llangs hit deeper snow. Evidently they were already tired from some earlier chase — this must be the bunch that had gone up-ravine earlier, as he huddled by his fire — for they gave up quickly, and he heard them no more.

But now he was far from his fire and all his equipment. Even the chopping-knife lay somewhere near the stone cairn. He peered across the ravine. If the fire still burned, the snowfall hid it completely. How



WINTER OF THE LLANGS

Virgil  
Finlay

long would it take him to plod inland, cross the ravine high up and come back down the other ridge?

Without even his foot coverings, he trembled violently now. He tried to hurry on, to warm himself, but he was too exhausted. Dare he curl up in deep snow and rest a while? He didn't think any llangs would come up here. The snowfall would quickly cover his scent, if not his deep tracks.

He couldn't go on without rest.

He shoved a pile of snow together and burrowed into it, knowing dimly that he mustn't rest too long, or he'd be too frozen to walk. But, curled into a ball with his paws tucked in, he felt surprisingly well. He was cold, but at least the wind didn't tear at him. Maybe he could rest here till daylight.

Gradually, his trembling stopped. His body seemed to be accepting the cold. He drowsed.

Vaguely, once, he realized it was daylight, but that didn't matter. He stirred feebly, relieving a cramp, and slept again.

Then one voice cut through to him — a voice as familiar as his own limbs, a full male voice he'd known all his life. "Male-calf! Rouse yourself! We found the cairn and your tracks. What are you doing here? Where is your dam?"

They had strange artifacts that no lore had ever mentioned. They wore pelts stitched together to cover their whole bodies, except the limbs and elaborate foot coverings. They had weapons larger than a spade, with fearsome points of hammered

ruddy metal. They had flat platforms of hewed pahia-stalk, floored over with thin-beaten metal, on which permanent fires burned and which they dragged after them, slipping easily and amazingly over the snow. Others of those platforms bore quantities of metal or chopped wood, or pouches bulging with pahia-seed. For part of the way Chimmuh had ridden on one of those platforms. Now, rested, he trotted beside his sire.

Wurgan turned his big head. "We had desperate times before we learned to cope with everything. Yohut! The llangs were everywhere! We had to devise new things." He peered anxiously at Chimmuh. "Was that fence of yours secure? Do you think Lozh will have been able to cope with things?"

Chimmuh said, "He did not act at all senile. And I think the ancients are resigned to living another year."

Wurgan wagged his head in amusement. Then he said, "A new she-calf! How much farther?"

"We will be there soon," Chimmuh told him. He tried to sound confident. "The winter is not bad, when one learns its ways. And llangs aren't so much."

Nevertheless, he tensed nervously when he saw a small pack of llangs ahead, just where the ravine converged with Nameless Creek. He felt much better when the beasts, after staring for a moment at the oncoming phalanx of huge male krote, turned, snarling, and skulked away.

And he felt even better when, turning up Nameless Creek, he saw the fence still intact and smoke rising beyond it. END



# Mu Panther

by DONALD J. WALSH

*It was a pleasant little hunting trip in the sun, the quarry a panther as big — and deadly! — as a dinosaur!*

**I**t isn't often that a mu panther is loose around here. When one is, the farmers and breeders usually call on Everret, Matler & Crawford, C.P.H. I'm the Everret part of it, Barry Everret, and the chief partner.

We were loafing around the office in Denver, throwing opinions on some new armament round-robin style, when we got the word that a cat was loose north of us.

"Barry, I don't like the feel of those new Brownings that were sent out. They're made for a factory load, and the special slugs you wanted tested out throw the balance off, as well as —" The telephone cut Jesse Matler off with its nasal buzz. He grabbed it resignedly.

It really isn't often that we get a panther. Cougars are our biggest problem, ever since the '92 blow-

ups. Occasionally panthers show up, but the ratio was eight to one, at least. So when one comes around from up in the Rockies and slashes some breeders' mu steers, we usually get the job. Even young Brad Rodgers out on his father's spread knew our reputation as the best professional hunters in four states; the Certified before our names could tell anyone that at a glance. It was Rodgers on the line, from the half-million acre spread of his up in Wyoming.

Jesse hung up and turned to us.

"Rodgers says they've lost four prize steers in two nights. They weighed in at ten tons each and stood thirty hands high, so he's lost quite a lot. They were champion stock. He wants us up there right away."

"We'd better get up there, then,"

Bill Crawford said, with his personalized sarcastic drawl. "If he loses any more stock like that he won't be able to afford our services. He must know we don't work for peanuts. Anyway, since when is Rodgers running his spread? From all accounts he couldn't tell a prize steer from a cow."

He was perfectly right, of course; just one look at Rodgers would be enough to convince anyone that he was about as competent as a Mongolian idiot. Jesse just ignored Bill and continued.

"He positively identified the tracks as panther's, and all of sixteen inches across."

That sobered Bill up right away. We knew then that it would be one heck of a cat; body symmetry would make it thirty-five feet long, and maybe fifty tons in weight. That would be a record; so in six hours we had packed a full expedition and in another four we stood in front of the Rodgers ranch house. It looked like pure Park Avenue.

Jesse Matler and Bill Crawford have been partners with me for ten years now, and friends before that. Matler is the bigger of the two, a huge man, built like a boulder, with hands that can pulverize sandstone. But Jesse's one of the easiest-going people I know, until he gets mad. That's very seldom, but when it happens it's a perfect case history of multiple personality. Jesse turns into a reasonable facsimile of a charging hippo. Aside from that, he's one of those pro hunters who cut their teeth on a .30-30. He grew up

in South Africa, the son of the owner of one of the last great private preserves in the Continent. He got his first lion when he was sixteen. It was normal sized because of the scarcity of power plants in Africa; the unknown blowups in America had not affected them at all. That had been twenty-five years ago and seventy-five years from the blowups, so few mutations had shown up at that time anyway.

His first rhino fell a year later; the same mad rhino had killed his father a few hours before, so that hunt was more than for pleasure or profit. Jesse sold the preserve to the government soon afterwards, not by choice but because of a large land-reclamation program under way. He moved back to his father's native America and met Bill and me at a hunting lodge in California where he was listlessly teaching greenhorns how to hunt like a pro.

That was fifteen years ago. Since then Jesse has become the backbone of EMC, CPH. God knows he doesn't need the money we collect; his father's land in Africa paid off nicely. But Jesse could no more give up hunting than Minnesota Fats could quit pool.

Bill Crawford is almost opposite Jesse in build and temperament, but just as skilled at his specialty. He's about average height and weight, but is solid rock, a high-ranking karate belt-holder. He was an artillery specialist in the Army. He can handle a 188-mm. howitzer like it was a popgun, with either atomic or chemical explosives in the charge. He cut his teeth on a recoilless rifle,

not unlike our own antitank gun. And when you've got forty tons of cat moving at you, the boom of the big gun over your head is mighty welcome and cheering.

And then there's Schultz, my mu dog with a talent for telepathy and such. I had Schultz custom-bred from prize German-Shepherd stock, specially trained for hunting purposes. The fact that a phenomenal intelligence went along with the psi mad Schultz a good friend too.

We've been contriving to find ourselves a mu panther for a while. Now, since we tracked this cat down on the Rodgers land, reports have been coming in of some more sightings in the area. Some, I guess, are cranks, because of the widespread publicity after Brad Rodgers died on the hunt. The inquest cleared us of any foul play. But it was the one hunt I'll never forget; I doubt if we'll ever meet up with another cat like that one. At any rate, I hope not.

We've been controlling mutations commercially for some time now, ever since the early successes with the chromosome-controls were developed in the early '70's. Now it's the world's largest industry. It ought to be. It solved the world's food problems, since fifty-pound cabbages can go a long way. But the blowups of the big Nevada and Colorado nuclear power plants started a wild-cat chain of mues, even worse because it showed up only after eighty years had passed. Once in a while a mu cat shows up, and we get called in, or one of the other few pro firms.

We're still dreading the day when these mues start to attack towns, or farmhouses. So far the only deaths were cattle.

Not counting Rodgers, of course.

He was waiting for us at the landing strip behind the main complex of the farm and ranch, and it was clear from the first that he was the type who ran the show totally, disregarding any advice that went against it . . . which it usually did. I can't really blame him, because he was totally starved for power. His father had left the ranch in the care of the foreman, and his son could never manage his own property. I knew the elder Rodgers slightly. He was fiercely possessive where his land was concerned, an anachronism from the times of the range wars, probably. He could have trained his son — but that involved risk to his land, or at least some uncertainty.

None of us had ever seen Brad Rodgers in person before. We had dealt with his ranch only through his foreman, never with him. What he was holding over someone's head now we couldn't guess, but it was obvious who was in charge here.

He was wearing a khaki shirt and light slacks, and he wasn't built too badly, though compared to the three of us he was scrawny. He looked as if he was a commander briefing his troops, as he faced us in his study and pointed to a map of the spread.

We had already been introduced, and he wanted to get down to business fast. The foremen were nowhere in sight. A hired hand had

guided our airboat in to the strip, and the heliport had been open when we landed.

He pointed to a spot on the map about five miles from the house.

"Here's where the carcasses were found last night, gentlemen," Rodgers said. "Their throats were ripped out and large sections in their bodies had been torn up and eaten. One of my hands found the tracks not far from the steers, in some soft mud. All the area was torn up by the struggle between the steers and the cat. They were panther's tracks, Mr. Everret."

He handed me a photograph of the tracks as a group and a plaster of Paris mold of one of them. There were five that were readable enough for this type of identification. They were panther's, all right, and easily the sixteen inches that Rodgers had quoted.

I passed the photo and mold to Jesse; he confirmed the identification. This was a record cat, and the smell of a great hunt was in the air, as much as could filter over the atmosphere of fear induced by the thought of the huge panther, anyway.

"Uh, Mr. Rodgers," Bill Crawford broke in, "could we speak to one of your foremen for the details of this, like the direction and the time factors involved? I mean —"

"Crawford, I run this ranch. As long as I do, you come to me for whatever information that you need. Remember that." Rodgers was fuming mildly at the slight to his pride. I broke back in.

"Mr. Rodgers, we know this is your land and we respect you. But we need an experienced hunter, someone who knows this area like the back of his hand. Besides, we have only one extra seat and gun in the airboat. If we could, we'd be glad to take you out with us, but as it stands . . ."

"Everret, I've got my own guns. What are you using?"

"Small arms are 8-gauge shotguns fitted for rifled slugs and built for 45-gram explosive slugs." I smiled in triumph; that beauty costs upwards of fourteen hundred dollars. But Rodgers was undaunted; he walked over to a rifle rack I hadn't noticed and removed a twin to the express rifles outside, with a few extras: a gold inlay, suede cheekpiece and recoil pad and hand-carved fiberglass stock. Those would jack up the price considerably. Our own weapons were bare of these, because we all agreed that it is useless and costly.

"You said yourself that you have an extra seat in the airboat, Everret. Well, I'm going to be in it, or else the whole deal is off. If I have to go to every Certified Professional Hunting team in the country, I'll see that cat brought down with my own eyes."

With that he brought us back outside and vanished back into the ranchhouse, leaving us to decide which was worse: hunting with a greenhorn or not hunting at all. Jesse and Bill were disgusted.

"Barry, he can't be serious. Rodgers is probably safe only on a target range — with small bores. Even

if he were a fairly good amateur hunter, this kind takes a special type of nerve. You know that. A mutated panther isn't exactly an ordinary game."

Bill agreed with Jesse.

"Any non-pros — and even some pros, I think — will do either one of two things. Either they would fold up like a sick jellyfish or they would empty their usually considerable armament into everything around — except the cat. And Rodgers looks like the amateur's amateur, well equipped but Kelly green."

"I know it's risky," I said, "but it's the only way we can get at that panther. We don't want to pass that panther onto the Muller spread or Jerry Dane's land to the east. We'll have to put up with Rodgers until we get up. Then I'm the boss, as captain, or Jesse as co-pilot. Up there he can't spit unless I let him."

"But, Barry, this is going to be tough work. We can't afford any useless weight till that cat is cold and cut up for the hogs."

"Sure, Jesse, I know. But we have to go after that cat. If it goes after a town or a ranchhouse because of a delay we caused, we can expect to have our license revoked by the Game Commission, at least."

So the issue was settled. But Rodgers would have done better to stay behind. When I said we were a professional team I didn't mean that we were a bunch of jungle boys who go after the big cats with loin-cloths and knives. We cheat at this game — a lot.

We have to. Nature made us what we are and in so doing fixed the

odds at a thousand to one against us when faced with one of the mues. When we go after one of them — cougars, jaguars, panthers — we use custom airboats that can climb two hundred feet in a second, or skim over any surface at three hundred miles per hour. This isn't too much speed in comparison to the big cats, but it's the climbing power that is the big advantage, bringing us up and out of the range of the biggest cat's claws.

We also carry sound pickups, radar and infrared scopes for tracking and night work. And besides the small arms — if you can call the 8-gauge shotguns "small" — we have an antitank recoilless rifle mounted on the rear of the airboat, Bill Crawford's pride and joy. He can do everything with that piece but make love. Next to that and the crates of armorpiercing shells was a small ruby laser, designed for industrial cutting and welding. We've never had to use that beauty yet, but from the tests I've run I'd say it would be one hell of a barbecue. Bill has the laser and antitank gun controls hooked into a radar unit operating in unison with the unit up at the control panel. Unless one of us is at the guns, the radar aims and fires the weapon automatically. Of course, it's keyed for animals only, just in case.

Jesse and I sat in the front of the airboat, with Bob in the artillery mount and Rodgers in the extra seat behind me. We unpacked the shotguns and loaded boxes filled with clips of the banana-sized shell,

five to a clip. I charged the laser's power supply and checked the liquid helium coolant bath surrounding the ruby shield and flash tubes. I set the beam for a pencil-thin "slicer" that can cut through a diamond like a knife through butter and settled the flashhead back into the mount.

With that armory it might sound like we hunt fish in a barrel. Not quite. The mu cats can smell humans about a mile away, and four humans approach with all the subtlety of John Philip Sousa in his glory.

Our usual tactic is to wait until radar tracking indicates that the cat has been stationary for some time and thus is probably sleeping. Then you move in and lob several explosive shells into it and hope that you hit a vital spot. If you missed or, worse, only wounded the cat, the hunt becomes a good, old-fashioned chase. Quite often the roles of hunter and hunted are exchanged. Then you move up high fast and hope to pick it off from above it. If not, there's always the laser.

One thing makes our team unique: Schultz. He's a rare type of telepath, a visual empath combined with controlled clairvoyance. Through Schultz, I could scout a fifteen-mile area in a few minutes, not by radar but by direct vision. The actual empathy was limited to vision, but Schultz could project any other sense as well. I value that dog more than the radar and sound amplifiers together.

Schultz is slightly larger than most German Shepherds, due both to champion parents and the radio-genetic treatment that turned him

into a mued esper. He weighs about one hundred fifty pounds, all solid muscle, and stands up to my waist — and I'm not exactly tiny. His coat is a mixture of tan and brown fur, short and bristly. His face and head are typical, with the squared-off muzzle and blunt forehead.

Rodgers gave us the location of the original killings, and we VTO'd to about fifty feet and shot northeast at an easy 150. The violent blast of the air from the fans quieted down to a low whine under the hull as the automatics cut in.

The dead steers were visible from a good distance away. I set the airboat down a few yards away from the carcasses. They had been dead for about twelve hours in the sun and were beginning to decay. But most of the massive bulk was still warm. One of the gargantuan slabs of beef that had been gorged from their bellies would have filled the panther, but the four were each gorged slightly, just enough to fill the stomach of the cat. This was a killer, the worst kind of mu.

We examined the tracks in the soft clay; the fight had crushed the grass down into a soft pulp and turned the soil. The tracks were panther's, a complete single set. I wanted Schultz to see this.

*Schultz, come here, boy,* I called to him.

*What, Barry-man?* He jumped from the airboat and trotted over to me.

*Sniff the tracks.* It only took him a moment.

*Panther. Very big one.*

He looked up at me, with a gleam in his eye. He sensed the brutality of the killings, and he wanted that panther now. When you train an ordinary dog to hunt, he develops a reflex. But Schultz is more than a dog; he can sense emotions and motives and has a deep sense of justice. Maybe revenge would be a better word, but it's all the same thing in practice.

We started moving outward in a spiral pattern. We didn't have any clues as to which direction the panther had taken, and the spiral would cover all directions very thoroughly. It was six o'clock now, and the sun was almost down. Jesse watched the radar anxiously as Bill fiddled with the controls on the antitank gun. Rodgers was fidgeting with his 8-gauge, running his fingers over the carved receiver lovingly. He handled it as if he was familiar with it. A novice would be clumsy with the heavy gun, but he appeared to know the feel of it well. That was some relief, anyway; a good shot might come in handy. But he would be more trouble than he was worth if he didn't stay put and keep out of our way.

He didn't look too bad, for an amateur; he was heavily built, for his weight, and not too much of him was fat. Maybe he would be useful. But maybe I'm just a perpetual optimist.

I turned to Jesse. "Anything yet?"

"Not a thing, Barry. It's getting dark, too. Better fit the sniperscopes onto the 8-gauges."

"Sure thing, Jesse." I snapped

the intercom on and signaled Bill to bring the infrared assemblies down from the mount and teach Rodgers how to use one.

After a moment he climbed down from the mount and set a box of Farnsworth 'scopes down next to Rodgers. He unpacked one, snapped it into a magnetic Bushnell mount and slipped it onto the grooved receiver of his shotgun. He slid the power supply and infrared source onto the gun and checked to see if the balance wasn't disturbed too much. It wasn't. He switched the cadmium cell on and gazed into the image tube; in a few seconds the image cleared and the infrared waves illuminated the ground below. He clicked it off.

"Think you can put that sniper-scope together, Mr. Rodgers?" Bill's tone was level; that meant only that he was annoyed.

"I can try. I've fooled around with telescopic sights before. Thirty-X Weavers, mostly."

"Really?" The slightest bit of sarcasm dripped through this time. Bill is a confirmed cynic, and we're used to it, but Rodgers wasn't.

Rodgers snapped the tube onto his mount and correctly placed it on the receiver. He glanced back at Bill's gun and snapped the rest of the assembly on. Then he flipped the switch.

I heard a crack and whirled. Rodgers had flinched and dropped the gun. Bill dived for it and caught the magazine soon enough to prevent the 'scope from being smashed on the airboat floor.

"You son of a Gila monster," he snapped quietly, "that's a five hundred dollar instrument! You reversed the polarity and got hit by 4500 volts. You're lucky you didn't fry. Next time check the wiring, okay?" Bill walked back up to the gun mount and left Rodgers slightly confused and with a bruised ego. Jesse and I returned to our controls. After a few minutes I glanced back at our employer; he was slouched in his seat, an expression on his face as plain as a neon sign.

If so much as a grasshopper moved down below, he'd empty five slugs into it as fast as he could squeeze them off. I set the controls on automatic and turned around to speak to him.

"Rodgers," I said, "I know you hired us. On your land you're the boss. But up here I call the shots.

"When we spot the panther, let Crawford handle it. We're going to approach the cat while it sleeps and we'll lay an artillery shell into its head from five hundred yards. If you start popping off slugs from the shotgun at that range you'll accomplish two things: waste ammunition and wake up the panther. If you've ever seen thirty-five feet of black, muscled hell jump seventy feet into the air straight at you, you'd realize why we like to be nice and sneaky about it."

Evidently Rodgers was still nursing the bruise on his ego.

"Everret, what d'you think I am? Some kind of fool? I won't crack up. I want that panther."

I could plainly see that I'd had no effect at all on him. I just sat

back and hoped that Bill's first shot would score before Rodgers started blasting away.

About twenty minutes later Jesse turned to me.

"Barry, I've got a blip on the screen. Stationary. Right size and shape."

"What's the relative position to us," I almost shouted. It was northeast, about two o'clock.

"Want to try an approach, Barry," Jesse asked.

"Not yet. I'm going to let Schultz take me out there."

"Good hunting." As soon as I had thought his name, Schultz stood up and walked over to me.

*Good boy, Schultzie. Ready for a trip?*

*Sure, Barry-man. Where do you want to see?*

I checked the range on Jesse's scope: 800 yards to the northeast. *Now, okay.*

He brought me out there, eight hundred yards from the airboat. The controls were still on auto. I felt myself go limp and my eyes close as I went into empathy.

The effect is like a zoom camera with you inside.

It was the panther, all right. I could see it perfectly, two hundred yards away, through the low, wide angle of the dog's mental eyes. Strange, no one's ever gotten an empathy animal to project the master's eyes out there; they can only send out their own eye and hook you in on what they see.

The cat was sleeping, digesting the rich beef from the steers, I guessed. The body symmetry was



perfect, not deformed like many natural mues. It was every inch of the thirty-five feet, and more. The sleek, black hide stretched out glistening like a living sphinx, cold as ebony and as hard.

Suddenly I felt a great heaving sensation, and my thoughts were torn from the cat with sickening force. Pain seared my mind, my eyes; my entire head ached with a deep, continuous throb. My vision was cut off; for several seconds I was totally blinded. The pain spread slowly down my neck and my face muscles cramped into a grimace. Far away, I heard Schultz yelping.

I opened my eyes, my real ones, and saw Rodgers standing over me, shaking my arm, and Jesse coming toward us with blood in his eyes. Schultz was whimpering at my feet.

Rodgers had broken the empathetic coupling, a painful experience for both Schultz and me. I picked Schultz up and put him in my lap, trying to soothe his body and mind, in him in very precarious balance. It had been laid bare as if a steel rasp had been drawn across it.

"You double-dyed son of a sand lizard!" Jesse snapped out at Rodgers. "You broke empathy between Barry and the dog! They were in mental coupling, and you forcibly cut it off. You might have ruined his mind, as well as the dog's."

Rodgers was almost cowering. I would have, with Jesse looking as if he were out for blood.

"I didn't know," he croaked. "I saw the airboat go on hover and

Everret slump down in his seat. I thought he was sick."

"Sit down and shut up, Rodgers! And stay there until we're back at your ranchhouse," I roared at him, fighting down an enormous headache. Rodgers fell back into the seat as if he had been pushed. He was licking his self-respect for a third time. Poor old guy, I thought. He gets pushed around down there, on his own property, and he gets pushed around up here, by the men he hired. Well, we couldn't afford to have somebody cutting up in the airboat. Once we got back down I would recommend a good analyst.

Then I remembered what I'd seen out there.

"Jesse, that's the panther out there all right. It's asleep there now. Keep an eye on the radar image. If it so much as blinks sing out loud. Bill, d'you hear that?" I'd cut the intercom in previously. In answer, I heard the automatic guidance mechanism in, for the laser and the antitank gun, and the slow whine and crackle of the storage capacities filled the cabin. Ozone soon became noticeable; each of the forty capacitors had a capacity of 3000 millifarads.

"Bill, when I give the word, fire the armor-piercer into the cat. Set it on ten-second delayed action so I can get out there with Schultz in time."

"All set up here, Barry," the intercom buzzed. I drove the boat in to five hundred yards and then set her down easy on the hard ground. The muzzle of the antitank gun swung up a few degrees as the

controls locked into the radar. Bill adjusted for windage after he consulted a portable anemometer built into the mount.

"Mark," I said. Up in the control room, Bill started the timer.

*Schultz, I thought softly, how are you feeling?*

*All right, Barry-man. Head still hurt a little. He sounded weak.*

*That's okay, Schultz, so does mine. How about another trip?*

*Just a short one, Barry-man. Need rest.*

". . . eight . . . nine . . . ten . . . fire . . . plus one." The timer lights on both panels blinked patterns. Then I was back looking at the panther.

In the back of my mind I heard the muffled roar of the gun and felt the shock pass through the springs of the absorbers and diminish to nothing. The link was weak, and the panther was faint and blurry in Schultz's mind. But I saw it suddenly awaken and leap out of the way, just as the flash of the explosion shot through my mind and Schultz's.

A miss.

I pulled myself back to the airboat. Rodgers had started yelling in triumph, expecting a chorus. Finding himself quite alone, he died out fast. Jesse and I were watching the radar intently, as was Bill in the mount up above. The blip was moving fast and toward the center of the screen. Toward us.

I rammed the fans into high and climbed to three hundred feet as fast as it would move. The panther

was already visible and closing fast, a black strip streaking through the low grass and brush.

"It dodged that shell without blinking twice," Jesse snorted. He clicked off the safety of the 8-gauge. I shook my head.

"Hold it, Jesse. And Bill, don't cut the laser loose. We'll let it tire itself out jumping at us, and then we'll tail it until it drops. We'll finish it off."

The panther was much closer now; its movements were plain. It was coming in at about four hundred miles an hour and was about one hundred yards away. In a fraction of a second it was under us, leaping.

It reached halfway to us, a hundred and fifty feet. You might call that a record of some kind, but at the time I didn't notice that. Rodgers, who had been frozen since the miss, suddenly leaped to the side of the airboat and fired the five shots in his shotgun at the cat.

It touched ground as the last shot rang out and bounded off with a roar of pain and rage that shook the airboat like a toy boat in a hurricane. I'd expected Rodgers to crack, but I was surprised at his skill. Three of the slugs hit home. They must have lodged in the thighs or low in the shoulders, because the cat moved away at about two hundred MPH. This was slow enough for the airboat to tail, luckily enough. Still, this wouldn't stop Jesse from giving Rodgers a pretty bad time.

I glanced back at the spare seat. Jesse had grabbed Rodgers by the collar and hoisted him up from

where he had fallen after the cat's roar. He had pulled the rancher up to face level, so that Rodger's feet dangled a few inches from the deck plate. He stared into Rodgers's eyes for a moment, then lowered him back to his seat. When Jesse looks at anyone that way, words are inadequate. At least printable words are.

I checked the radar once more and found that the cat had raced almost out of range of the screen. I cut the automatic pilot in, to follow the panther at half a mile, with steady compensation for increases and decreases in the speed. I didn't want that cat to turn and fight until it was dead tired, and if we moved in any closer than five hundred yards it would probably do just that. So we would patiently keep up with the animal and kill it when it couldn't fight back.

I didn't blame Jesse one bit for humiliating Rodgers, but I wanted to clarify a few things with him before he decided not to pay our bills after the hunt was over.

"I told you we couldn't afford any trigger-happy idiots on this trip, Mr. Rodgers. It makes no difference that you're a crack shot. That panther is potentially dangerous to neighboring communities, and if he gets past us the responsibility is on your head. But until we're through, you're going to stay put. The only reason we're not taking you back to your ranchhouse now is that we can't spare the time."

He stood up and faced me. So now he was going to make his stand, I thought.

"Everret, you seem to forget who hired you. As long as I employ you, I do what I want. And if you think that I'm going to let myself be pushed around because I shot at the beast, you're crazy. I want that panther dead and its head above my mantle."

His voice was arrogant, and if he had omitted that last sentence I might have slugged him. Not only would Rodgers fail even to come close to bagging that game himself, but mu game is considered varmint game. A mu trophy was a little out of taste, like stuffing and mounting a tomcat, only on a larger scale.

"Rodgers, that head goes to nobody. Even if you earned it — and you won't — the corpse will be vaporized by a wide-angle laser. If you want a trophy, hire a guide to take you out and find a good-sized mu bear. But I won't give you a panther. Anyway, all you accomplished with the 8-gauge was to give us three times the work in killing that panther. You might as well have injected it with a kilo of adrenalin."

"What work? Just turn the laser on that cat." His stupidity was amazing.

"Look, Mr. Rodgers, that laser is for use at point-blank range and at that, only for emergencies. If I used it and missed, the beam would keep on going. They've bounced weaker ones than that off the moon, and with small relative divergence. If that laser tore through a town, it would make the Chicago fire look like a marshmallow-roast."

I turned away and checked the radar. The panther had slowed down to a hundred miles per hour already. It seemed to be slightly tiring. I hoped.

We kept up the chase for another six hours. Jesse and Crawford were standing radar watch while I dozed. Rodgers was out like a light.

The next thing I knew, Jesse was shaking me roughly.

"It's stopped, Barry. We're still a mile from it; I pulled back the extra five hundred yards when I saw its pace falter and halt. We're hovering now, in the clear."

The intercom was already on. "What do you think, Bill?" I asked. "Want to try to move in and drop a shell from close range or stay back and pick it off from here?"

"I'd move in, Barry," replied Bill. "That cat is half-dead, and we've got the speed on it. Closer, I'd have a better chance of getting a good one in, and the cat would have less time to dodge."

"Same here, Barry," Jesse said. "Wait any longer, and the cat might rest up enough to put on a fresh bit of speed and get away. But now we've got him."

I felt the same way; I gunned the fans forward, and moved in a quarter of a mile closer. No movement on the screen. We moved in the other quarter mile, and there was still no sign of life from the blip. So far, so good.

I noticed Schultz at my feet; he seemed nervous. I called to him.

*What's wrong, Schultz?*

*Wrong way, Barry-man. Cat not there.*

*What? Are you saying it's dead?  
No. Cat behind us.*

This confused me. I checked the radar and pressed the system-check button. It was functioning perfectly. I projected a mental caress to the dog, and silently cursed Rodgers for ruining Schultz's mind.

We were about a hundred yards from the panther now; through the infrared sight it was visible plainly, a giant thing, breathing fast and labored.

The intercom buzzed on. It was Bill.

"Barry, something's wrong with the laser auto control. It's faced 180 degrees to the south, directly away from the target."

I told him to run a circuit check, switch to manual control and junk the auto until we returned to the hanger in Denver.

"When you're finished with the laser controls," I told him, "get a fix on the panther and lob a shell in."

He aimed and gave a ten-second warning. Jesse and I were glued to the radar. The gun fired, and the shell exploded directly on target; through the sniperscopes we could see the corpse. The head was blown off.

Then there was a new blip on the screen. I flipped a spotlight on and saw Rodgers running toward the cat.

The next few seconds went by very, very fast. I saw the panther's body waver and disappear and stood gawking as Rodgers turned,

puzzled, then froze in terror. He raised the 8-gauge and fired, but he didn't have enough time to get off a second shot. He was smart enough to realize that aiming over a million-candlepower beacon was impossible; he shielded his face and threw the gun down, turned and ran. A long shadow engulfed the airboat, and the black panther leaped over us at Rodgers. He had time for only one scream. . . .

The panther turned back toward us; then I saw the laser's ruby tube swing down fast at the thing in front of us and come alive with scarlet brilliance. Bill twisted it upwards in a long slash as the cat jumped once more, and the beam charred a long, disemboweling slash that clove the panther from head to loins. It fell in front of the boat, almost crushing us.

Jesse and I dismounted and ran in front of the burnt corpse. The slit eyes stared at us still, carrying a message of agony and hate. I leveled my shotgun and fired point-

blank into the left eye and heard the answering explosion that shattered the skull.

**I**t was a perfect natural defense for a hunted animal. Like Schultz, the panther could project sensory images into our minds, but in this cat the images could be controlled. It showed us non-existent blips on the radar and false visual images.

That's why the laser autocontrol seemed haywire. It was following the real panther. And Schultz couldn't be fooled by the mental broadcasts, any more than we could be fooled by someone whispering into our ears. Schultz must have felt like a two-year-old child trying to warn its parents of a burglar. It could attract their attention but couldn't communicate.

Anyway, that's the only mu so far with this type of power. Possibly the first of many, though. If so, it'll be a long season for us.

And for Schultz.

END

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# FAUST

by JAMES BLISH

Illustrated by Morrow

The demons were loose — on a world that had no weapon to battle them but technology!

## SYNOPSIS

**B**AINES, president of Consolidated Warfare Service, the munitions subsidiary of an international chemical and dye cartel, has applied to THERON WARE, a black magician of the highest repute, for a demonstration of his abilities. Accompanied by his executive assistant, JACK GINSBERG, a thorough-going skeptic, he visits Ware's rented palazzo in the Italian resort town of Positano, where Ware provides a minor exhibition of alchemy, changing two tears successively into blood, gold and lead under controlled circumstances.

This does not satisfy Baines, who has something much bigger in mind. Ware warns him that all magic, regardless of degree, is based upon the invocation of angels or demons — mostly the latter — and that it is expensive, dangerous and difficult. Baines already knows this from an earlier visit to Monte Albano, a sanctuary of white magicians. Strictly as a further test, Baines commissions Ware to procure by magic the death of the current Governor of California. Ware agrees. Ginsberg, a man of slightly odd tastes, is intrigued by Ware's obvious con-

# ALEPH - NULL

fidence and, in a private interview, attempts to ask a favor of the magician, but doesn't succeed in specifying what it is. Ware offers him the use of a succubus, but is refused.

At Monte Albano, the white magicians have divined something of the nature of Baines's forthcoming major commission and have reason to believe it may be a major disaster for the whole world. Under the terms of the Grand Covenant, under which all magic operates, they are entitled to impose upon Ware a white magician as an observer, providing that the white magician does not interfere in any way with Ware's operation. They choose FATHER DOMENICO, a suitably skilled and blameless man, who does not relish the assignment.

In the meantime, Baines, who has returned to Rome, receives news of the death of the Governor of California, as specified. He decides to return to Positano, taking with him this time not only Jack Ginsberg, but also a scientist of his firm, DR. ADOLPH HESS, also as an observer.

Thanks to various delays en route, Baines, Ginsberg, Hess and Fr. Domenico all arrive for the next invocation of Hell at the same time — during the Christmas season.

Baines's second commission is a further test, this time the death of an eminent theoretical physicist with

no known enemies. Ware agrees and also consents to allow Baines's party to watch the process of invoking the demon involved; he bars Fr. Domenico, however. The monk subsequently divines that this in any case is not the major disaster he has been sent to observe.

Prior to the experiment, Ware shows Hess, in whom he sees a potential ally, his laboratory and apparatus and explains to him some of the theory of magic. Hess is unwillingly impressed.

Before the group, Ware then conjures up a demon named MARCHOSIAS, one of many with whom he has pacts, to tempt and destroy the next victim. It is a fearful process and leaves nobody in any doubt that Ware is exactly what he says he is.

Then all must wait for the sending to take effect. During this period, Jack Ginsberg succeeds in expressing to Ware what it is that he wants: He would like to learn the Art. Ware, who by now has realized that Baines's next assignment will be so huge that he must have assistants, says he will consider this if Jack will first sample the banquet he thinks he wants. At Ginsberg's assent, Ware does send him the previously proffered succubus, Jack is both revolted and captured — that is, he becomes addicted.

The victim of MARCHOSIAS duly dies, and Baines reveals at last

what has been at the back of his mind all the time:

*"I would like to let all the major demons out of Hell for one night, turn them loose in the world with no orders and no restrictions, and see just what it is they would do if they were left on their own hooks like that."*

*Ware consents, but this time asks Fr. Domenico to be present at the ceremony, in case it should get out of control. Fr. Domenico must agree, but points out that it would be safer if he could call together a whole convocation of white magicians at Monte Albano, to stand by in case of disaster. Ware on reflection decides that this is a wise precaution and assents.*

*Because of the time needed for preparations, and for Fr. Domenico's trip, the experiment is scheduled for Easter.*

#### XIV

Father Domenico found getting north to Monte Albano a relatively easy journey despite all the snow; he was able to take the *rapido* most of the way. Absurdly, he found himself worrying about the snow. If it lasted, there would be devastating floods in the spring. But that was not the only affliction the spring had in store.

After the journey, nothing seemed to go right. Only about half of the world's white magicians, a small number in any case, who had been summoned to the convocation had been able to make it, or had thought it worth the trip. One of the greatest,

the aged archivist Fr. Bonfiglioli, had come all the way from Cambridge only to find the rigors of being portaged up the Mount too much for him. He was now in the hospital at the base of the Mount with a coronary infarct, and the prognosis was said to be poor.

Luckily, Fr. Uccello had been able to come. So had Fr. Monteith, a venerable master of a great horde of creative (though often ineffectual) spirits of the cislunar sphere; Fr. Boucher, who had commerce with some intellect of the recent past which was neither a mortal nor a Power, a commerce bearing all the earmarks of necromancy and yet not; Fr. Vance, in whose mind floated visions of magics which would not be comprehensible, let alone practicable, for millions of years to come! Fr. Anson, a brusque engineer-type who specialized in unclouding the minds of politicians; Fr. Selahny, a terrifying Kabbalist who spoke in parables and of whom it was said that no one since Leviathan had understood his counsel; Fr. Rosenblum, a dour, bearlike man who tersely predicted disasters and was always right about them; Fr. Atheling, a well-eyed grimorian who saw portents in parts of speech and lectured everyone in a tense nasal voice until the Director had to exile him to the library except when business was being conducted; and a gaggle of lesser men and their apprentices.

These and the brothers of the Order gathered in the chapel of the monastery to discuss what might be done. There was no agreement from



the outset. Fr. Boucher was of the firm opinion that Ware would not be permitted to work any such conjuration on Easter and that, hence, only minor precautions were necessary. Fr. Domenico had to point out that Ware's previous sending — a comparatively minor one to be sure, but what was that saying about the fall of the sparrow? — had been made without a sign of Divine intervention upon Christmas Eve.

Then there was the problem of whether or not to try to mobilize the Celestial Princes and their subordinates. Fr. Atheling would have it that just putting these Princes on notice might provoke action against Ware, since there was no predicting what They might do, and hence would be in violation of the Covenant. He was finally outshouted by Frs. Anson and Vance, with the obvious but not necessarily valid argument that the Princes must know all about the matter anyhow.

How shaky that assumption was was revealed that night, when those bright angels were summoned one by one before the convocation for a council of war. Bright, terrible and enigmatic They were at any time, but at this calling They were in a state of spirit beyond the understanding of any of the masters present in the chapel. ARATRON, chiefest of Them all, appeared to be indeed unaware of the forthcoming unleashing and disappeared with a roar when it was described. PHALEG, most military of spirits, seemed to know of Ware's plans, but would not discuss them and

also vanished when pressed. OPHEIL, the mercurial, too, was preoccupied, as though Ware's plotting were only a negligible distraction from some immensely greater thought. His answers grew shorter and shorter, and He finally lapsed into what, in a mortal, Fr. Domenico would have unhesitatingly called surliness. Finally — although not intended as final, for the convocation had meant to consult all seven of the Olympians — the water-spirit PHUL when called up appeared fearsomely without a head, rendering converse impossible and throwing the chapel into a perilous uproar.

"These are not good omens," Fr. Atheling said; and for the first time in his life, everyone agreed with him. It was agreed, also, that everyone but Fr. Domenico would remain at the Mount through the target day, to take whatever steps then appeared to be necessary; but there was precious little hope that they would be effective. Whatever was going on in Heaven, it appeared to leave small concern to spare for pleas from Monte Albano.

Father Domenico went south again far earlier than he had planned, unable to think of anything but the mystery of that final, decapitate apparition. The leaden skies returned him no answer.

## XV

On that penultimate morning, Theron Ware faced the final choice of which demons to call up, and for this he needed to repair to his laboratory, to check the

book of pacts. Otherwise his preparations were all made. He had performed the blood sacrifices the previous evening and then had completely rearranged the furniture in the workroom to accommodate the Grand Circle — the first time he had had need of it in twenty years — the Lesser Circles and the Gateway. There were even special preparations for Fr. Domenico — who had returned early and with a gratifyingly troubled countenance — should it become necessary to ask the monk to call for Divine intervention; but Ware was tolerably sure it would not be. Though he had never attempted anything of this magnitude before, he felt the work in his fingertips, like a well practiced sonata.

He was, however, astonished and disquieted to find Dr. Hess already in the laboratory — not only because of the potentialities for contamination, but at the inevitable conclusion that Hess had worked out how to placate the Guardian of the door. This man evidently was even more dangerous than Ware had guessed.

“Do you want to ruin us all?” Ware demanded.

Hess turned away from the Circle he had been inspecting and looked at Ware frankly. He was pale and hollow-eyed; not only had the fasting been hard on his spare frame — that was a hazard every neophyte had to come to terms with — but apparently he had not been sleeping much, either. He said at once:

“No indeed. My apologies, Dr.

Ware. My curiosity overcame me, I’m afraid.”

“You didn’t touch anything, I hope?”

“Certainly not. I took your warnings about that with great seriousness, I assure you.”

“Well . . . probably no harm done, then. I can sympathize with your interest and even approve it, in part. But I’ll be instructing you all in detail a little later today, and then you’ll have ample time to inspect the arrangements; I do want you to know them intimately. But right now I still have some additional work to do, so if you don’t mind. . . .”

“Quite.” Hess moved obediently toward the door. As he was about to touch the handle, Ware added:

“By the way, Dr. Hess: how *did* you deceive the Guardian?”

Hess made no pretense of being puzzled by the question. “With a white pigeon and a pocket mirror I got from Jack.”

“Hmm. Do you know, that would never have occurred to me; these pagan survivals are mostly a waste of effort. Let’s talk about it more, later; you may have something to teach me.”

Hess made a small bow and finished his departure. Forgetting him instantly, Ware stared at the Grand Circle for a moment and then walked around it clockwise to the lectern and unlocked the book of pacts. The stiff pages bent reassuringly in his hands. Each leaf was headed by the character or sign of a demon; below, in the special ink reserved for such matters — gall,

copperas, gum arabic — was the text of Theron Ware's agreement with that entity, signed at the bottom by Ware in his own blood and by the character of the demon repeated in its own hand. Leading all the rest was the seal, and also the characters, of LUCIFUGE ROFOCALE, which also appeared on the book's cover.

from HAGITH in his salad days as a white magician. Nevertheless it could be said that in the possession of this book, Ware was at least potentially the wealthiest mortal in all of history, though to anyone else in the world the book would be worth nothing except as a *curiosum*.

These spirits, not counting LUCIFUGE ROFOCALE, comprised the seventeen infernal archangels of the Grand Grimoire and the seventy-two demons of the Descending Hierarchy once confined in the brazen vessel of Solomon the King: a fabulous haul indeed, and each captive commanding troops and armies of lesser spirits and damned souls by the thousands of millions, more of them every minute (for these days, virtually everyone was damned; it had been this discovery which had first convinced Ware that the Rebellion was in fact going to succeed, probably by the year 2000 A.D.; the many plain symptoms of chiliastic panic already being manifested amongst the laity were almost certainly due to be vindicated, for everyone was rushing incontinently into Hell-mouth without even the excuse of an Anti-Christ to mislead him. As matters stood now, Christ Himself would have to creep stealthily, hoping to be ignored, even into a cathedral to conduct a Mass, as in that panel of Hieronymus Bosch; the number of people who could not pronounce the Divine Name without a betraying stammer — or their own names, for that matter — had grown from a torrent to a deluge, and ridiculously, hardly any of them were claiming



There then followed eighty-nine others. It was Ware's sober belief, backed by infernal assurances he had reason to trust, that no previous magician had held so many spirits in thrall. After forty years, true, all the names would change, and Ware would have to force the re-execution of each pact, and so, again and again through the five hundred years of life he had bought

any fraction of the possible profits in this world. They did not even know that they were on the winning side, or even that there was more than one side. No wonder Ware had found so much fat in the cauldron, waiting to be skimmed.)

But as Ware had already warned Baines, not all the spirits in the book were suitable for the experiment at hand. There were some like MARCHOSIAS, who hoped after an interval to be returned to the Celestial choirs. In this hope, Ware was grimly certain, they were mistaken, and the only reward they would receive would be from the Emperor of the Pit, that kind of reward customarily given to fair-weather friends and summer soldiers. In the meantime, the evils they could be persuaded or compelled to do were minor and hardly worth the effort of invoking them. One, whom Ware had already mentioned to Baines, VASSAGO, was even said in the *Lesser Key* and elsewhere to be "good by nature" — not too trustworthy an ascription — and indeed was sometimes called upon by white magicians. Others in the hierarchy, like PHOENIX, controlled aspects of reality which were of little relevance to Baines's commission.

Taking up the pen of the Art, Ware made a list. When he was finished, he had written down forty-eight names. Considering the number of the Fallen, that was not a large muster; but he thought it would serve the purpose. He closed and locked the book and, after a pause to rebuke and torment the Guardian of his door, went out into

the Easter morning to rehearse his Tanists.

No day, it seemed, had ever gone so slowly for Baines as this Easter, despite the diversion of the rehearsal; but at last it was night and over, and Ware pronounced himself ready to begin.

The Grand Circle now on the parquetry of the refectory bore a generic resemblance to the circle Ware had composed on Christmas Eve, but it was a great deal bigger and much different in detail. The circle proper was made of strips of the skin of the sacrificial kid, with the hair still on it, fastened to the floor at the cardinal points with four nails which, Ware had explained, had been drawn from the coffin of a child. On the northeast arc, under the word BERKAL, there rested the strips the body of a male bat which had been drowned in blood; on the northeast, under the word AMASARAC, the skull of a parricide; on the southwest, under the word ASARADEL, the horns of a goat; and on the southwest, under the word ARIBECL, sat Ware's cat, to the secret of whose diet they were now all privy. (Indeed, there had not been much of moment to the rehearsal, and Baines had inferred that its chief object had been to impart to the rest of them such items of unpleasant knowledge as this.)

The triangle had been drawn inside the circle with a lump of haematite or lodestone. Under its base was drawn a figure consisting of a *chi* and a *rho* superimposed, resting

on the line, with a cross to each side of it. Flanking the other two sides were the great candles of virgin wax, each stick sitting in the center of a crown of vervain. Three circles for the operators — Ware, Baines and Hess; Jack Ginsberg and Fr. Domenico would stand outside, in separate pentacles — were inside the triangle, connected by a cross; the northern circle had drawn horns on it. At the pinnacle of the triangle sat a new brazier, loaded with newly consecrated charcoal. To the left side of the horned circle, which was to be Ware's, of course, was the lectern and the book of pacts, within easy reach.

At the rear of the room, before the curtained door to the kitchen, was another circle, quite as big as the first, in the center of which was a covered altar. That had been empty this afternoon; but there now lay upon it the nude body of the girl Ware had used to address as Gretchen. Her skin was paper-white except for its markings and to Baines gave every appearance of being dead. A small twist of violet silk, nearly transparent and with some crumpled thing like a wad of tissue or a broken matzoh inside it, rested upon her navel. Her body appeared to have been extensively written upon with red and yellow greasepaint; some of the characters might have been astrological, others more like ideograms or cartouches. In default of knowing their meaning or even their provenance, they simply made her look more naked.

The main door closed. Everyone was now in place.

Ware lit the candles and then the fire in the brazier. It was the task of Baines and Hess to feed the fire periodically, as the time wore on, the one with brandy, the other with camphor, taking care not to stumble over their swords or leave their circles in the process. As before, they had been enjoined to the strictest silence, especially should any spirit speak to them or threaten them.

Ware now reached out to the lectern and opened his book. This time there were no preliminary gestures and no portents; he simply began to recite in a gravid voice:

"I conjure and command thee, LUCIFUGE ROFOCALE, by all the names wherewith thou mayest be constrained and bound, SATAN, RANTAN, PALLANTRE, LUTIAS, CORICACOEM, SCIRCIGREUR, *per sedem Baldarey et per gratiam et diligentiam tuam habuisti ab eo hanc nalatimanamilam*, as I command thee, *usor, dilapidatore, tentatore, seminatore, soignatore, devoratore, concitore, et seductore*, where art thou? Thou who imposeth hatred and propagateth enmities, I conjure thee by Him, who hath created thee for this ministry, to fulfill my work! I cite thee, COLRIZIANA, OFFINA, ALTA, NESTERA, Fuard, MENUET, LUCIFUGE ROFOCALE, arise, arise, arise!"

There was no sound; but suddenly there was standing in the other circle a dim, steaming figure, perhaps eight or nine feet tall. It was difficult to be sure what it looked like, partly because some of

the altar could still be seen through it. To Baines it resembled a man with a shaven head bearing three long, twisted horns, eyes like a spectral tarsier's, a gaping mouth, a pointed chin. It was wearing a sort of jerkin, coppery in color, with a tattered ruff and a fringed skirt; below the skirt protruded two bandy, hooved legs and a fat, hairy tail which twitched restlessly.

"What now?" this creature said in an astonishingly pleasant voice. The words, however, were blurred. "I have not seen my son in many moons." Unexpectedly, it giggled, as though pleased by the pun.

"I adjure thee, speak more clearly," Ware said. "And what I wish, thou knowst full well."

"Nothing may be known until it is spoken." The voice seemed no less blurred to Baines, but Ware nodded.

"I desire then to release, as did the Babylonian from under the seal of the King of Israel, blessed be he, from Hell-mouth into the mortal world all those demons of the False Monarchy whose names I shall subsequently call and whose characters and signs I shall exhibit in my book, providing only that they harm not me and mine and that they shall return whence they came at dawn, as it is always decreed."

"Providing no more than that?" the figure said. "No prescriptions? No desires? You were not always so easily satisfied."

"None," Ware said firmly. "They shall do as they will for this their period of freedom, except that they harm none here in my circles and

obey me when recalled, by rod and pact."

The demon glanced over its transparent shoulder. "I see that you have the appropriate fumigant to cense so many great lords; and my servants and satraps will have their several rewards in their deeds. So interesting a commission is new to me. Well. What have you for my hostage, to fulfill the forms?"

Ware reached into his vestments. Baines half expected to see produced another tear-vase, but instead Ware brought out by the tail a live mouse, which he threw over the brazier as he had the vase, except not so far. The mouse ran directly toward the demon, circled it frantically three times outside the markings and disappeared in the direction of the rear door, cheeping like a sparrow. Baines looked toward Ahktoi, but the cat did not even lick its chops.

"You are skilled and punctilious, my son. Call then when I have left, and I will send my ministers. Let nothing remain undone, and much will be done before the black cock crows."

"It is well. By and under this promise I discharge thee. OMGROMA, EPYN, SEYOK, SATANY, DEGONY, EPARYGON, GALLIGANON, ZOGOGEN, FERSTIGON, LUCIFUGE ROFOCALE, begone, begone, begone!"

"I shall see you at dawn." The prime minister of LUCIFER wavered like a flame and, like a flame, went out.

Hess promptly cast camphor into the brazier. Recovering with a start from a near paralysis of fas-

ination, Baines sprinkled brandy after it. The fire puffed. Without looking around, Ware brought out his lodestone, which he held in his left hand; with his right, he dipped the iron-headed point of his wand into the coals. Little licking points of blue light ran up it almost to his hand, as though the rod too had been coated with brandy.

Holding the tonguing wand out before him like a dowsing-rod, Ware strode ceremoniously out of the Grand Circle toward the altar. As he walked, the air around him began to grumble, as though a storm were gathering about his shaven head, but he paid the noise no attention. He marched on directly to the *locus spiritus* and on into it.

Silence fell at once. Ware said clearly:

"I, Theron Ware, master of masters, Karcist of Karcists, hereby undertake to open the book and the seals thereof, which were forbidden to be broken until the breaking of the Seven Seals before the Seventh Throne. I have beheld SATAN as a bolt falling from heaven. I have crushed the dragons of the pit beneath my heel. I have commanded angels and devils. I undertake and command that all shall be accomplished as I bid, and that from beginning to end, alpha to omega, world without end, none shall harm us who abide here in this temple of the Art of Arts. *Aglan, TETRAGRAM, vaycheon stimulamaton ezhphares retragrammaton olyaram irion esytion existion eryona onera orasym mozm messias soter* EMAN-

UEL SABAOTH ADONAY, *te adoro, et te invoco. Amen.*"

He took another step forward and touched the flaming tip of the rod to the veil of silk on the belly of the still girl. A little curl of blue-gray smoke began to rise from it, like ignited incense.

Ware now retreated, walking backwards, toward the Grand Circle. As he did so, the fire on the wand died; but in the mortuary silence there now intruded a faint hissing, much like the first ignition of a squib. And there were indeed fireworks in inception. As Baines stared in gluttonous hypnosis, a small fountain of many-colored sparks began to rise from the fuselike tissue on the abdomen of the body on the altar. More smoke poured forth. The air was becoming distinctly hazy.

The body itself seemed to be burning now, the skin peeling back like segments of an orange. Baines heard behind him an aborted retching noise in Jack Ginsberg's voice, but could not himself understand what the occasion for nausea could be. The body — whatever it had once been — was now only a simulacrum made of pith or papier-mache, and charged with some equivalent of Greek fire. Indeed, there was already a strong taint of gunpowder overriding the previous odors of incense and camphor. Baines rather welcomed it — not that it was familiar, for it had been centuries since black powder had been used in his trade, but because he had begun to find the

accumulation of less businesslike perfumes cloying.

Gradually, everything melted away into the smoke except an underlay of architectural outline, against which stood a few statues lit more along one side than the other by one of the two sources of fire. Hess coughed briefly; otherwise there was silence except for the hissing of the pyre. Sparks continued to fly upward, and sometimes, for an instant, they seemed to form scribbled incomprehensible words in the frame of the unreal wall.

Ware's voice sounded remotely from one of the statues:

"BAAL, great king and commander in the East, of the Order of the Fly; obey me!"

Something began to form in the distance. Baines had the clear impression that it was behind the altar, behind the curtained door, indeed outside the palazzo altogether; but he could see it nevertheless. It came forward, growing, until he could see that it was a thing like a man, in a neat surcoat and snow-white linen, but with two supernumerary heads, the one on the left like a toad's, the other like a cat's. It swelled soundlessly until at some moment it was inarguably in the rectory and then, still silently, had grown past them and was gone.

"AGARES, duke in the East, of the Order of the Virtues; obey me!"

Again, a distant transparency, and silent. It came on very slowly, manifesting like a comely old man carrying a goshawk upon his wrist.

Its slowness was necessitous, for it was riding astride an ambling crocodile. Its eyes were closed, and its lips moved incessantly. Gradually, it too swelled past.

"GAMYGYN, marquis and president of Cartagra; obey me!"

This grew to be something like a small horse, or perhaps an ass, modest and unassuming. It dragged behind it ten naked men in chains.

"VALEFOR, powerful duke; obey me!"

A black-maned lion, again with three heads, the other two human, one wearing the cap of a hunter, the other the wary smile of a thief. It passed in a rush, without even a wink to mark its going.

"BARBATOS, great count and minister of Satanachia; obey me!"

But this was not one figure; it was four, like four crowned kings. With it and past it poured three companies of soldiers, their heads bowed and their expressions shuttered and still under steel caps. When all this troop had vanished, it was impossible to guess which among them had been the demon, or if the demon had ever appeared.

"PAIMON, great king, of the Order of the Dominions, obey me!"

Suddenly after all the hissing silence there was a blast of sound, and the room was full of capering things carrying contorted tubes and bladders which might have been intended as musical instruments. The noise, however, resembled most closely a drove of pigs being driven down the chute of a slaughterhouse. Among the bawling,



squealing dancers a crowned man rode upon a dromedary, bawling wordlessly in a great hoarse voice. The beast it rode on chewed grimly on some bitter cud, its eyes squeezed shut as if in pain.

"SYTRY!" Ware shouted. Instantly there was darkness and quiet, except for the hissing, which now had a faint overtone as of children's voice. "*Jussu secreta libenter detegit feminarum, eas ridens ludificansque ut se luxurise nudent;* great prince, obey me!"

This sweet and lissome thing was no less monstrous than the rest; it had a glowing human body, but was winged and had the ridiculously small, smirking head of a leopard. At the same time, it was beautiful, in some way that made Baines feel both sick and eager at the same time. As it passed, Ware seemed to be pressing a ring against his lips.

"LERAJIE, powerful marquis; ELIGOR, ZEPAR, great dukes, obey me!"

As they were called together, so these three appeared together: the first an archer clad in green, with quiver and a nocked bow whose arrow dripped venom; the second, a knight with a scepter and a pennon-bearing lance; the third, an armed soldier clad in red. In contrast to their predecessor, there was nothing in the least monstrous about their appearance, nor any clue as to their spheres and offices, but Baines found them no less alarming for all that.

"AYPOROS, mighty earl and prince: obey me!"

Baines felt himself turning sick even before this creature appeared,

and from the sounds around him, so did the others, even including Ware. There was no special reason for this apparent in its aspect, which was so grotesque as to have been comic under other circumstances: it had the body of an angel, with a lion's head, the webbed feet of a goose and the scut of a deer. "Transform, transform!" Ware cried, thrusting his wand into the brazier. The visitant promptly took on the total appearance of an angel, crown to toe, but the effect of the presence of something filthy and obscene remained.

"HABORYM, strong duke, obey me!"

This was another man-thing of the three-headed race — though the apparent relationship, Baines realized, must be pure accident — the human one bearing two stars on its forehead, the others of a serpent and a cat. In its right hand it carried a brazing fire-brand which it shook at them as it passed.

"NABERIUS, valiant marquis, obey me!"

At first it seemed to Baines that there had been no response to this call. Then he saw movement near the floor. A black cock with bleeding, empty eye-sockets was fluttering around the outside of the Grand Circle. Ware menaced it with the wand, and it crowed hoarsely and was gone.

"GLASYALABOLAS, mighty president, obey me!"

This appeared to be simply a winged man until it smiled, when it could be seen to have the teeth of a dog. There were flecks of foam at its mouth. It passed soundlessly.

In the silence, Baines could hear Ware turning a page in his book of pacts and remembered to cast more brandy into the brazier. The body on the altar had apparently long since been consumed; Baines could not remember how long it had been since he had seen the last of the word-forming sparks. The thick gray haze persisted, however.

"BUNE, thou strong duke, obey me!"

This apparition was the most marvelous yet, for it approached them borne on a galleon, which sank into the floor as it came nearer until they were able to look down through the floor onto its deck. Coiled there was a dragon with the familiar three heads, these being of dog, griffin and man. Shadowy figures, vaguely human, toiled around it. It continued to sink until it was behind them, and presumably thereafter.

Its passage left Baines aware that he was trembling — not from fright, exactly, for he seemed to have passed beyond that, but from the very exhaustion of this and other emotions and possibly also from the sheer weariness of having stood in one spot for so long. Inadvertently, he sighed.

"Silence," Ware said in a low voice. "And let nobody weaken or falter at this point. We are but half done with our calling — and of those remaining to be invoked, many are far more powerful than any we've yet seen. I warned you before, this Art takes physical strength as well as courage."

He turned another page. "ASTA-

ROTH, grand treasurer, great and powerful duke, obey me!"

Even Baines had heard of this demon, though he could not remember where, and watched it materialize with a stirring of curiosity. Yet it was nothing remarkable in the light of what he had seen already: an angelic figure, at once beautiful and foul, seated astride a dragon. It carried a viper in its right hand. He remembered belatedly that these spirits, never having been matter in the first place, had to borrow a body to make appearances like this and would not necessarily pick the same one each time; the previous description of ASTAROTH that he had read, he now recalled, had been that of a piebald Negro woman riding on an ass. As the creature passed him, it smiled into his face, and the stench of its breath nearly knocked him down.

"ASMODAY, strong and powerful king, chief of the power of Amaymon, angel of chance, obey me!" As he called, Ware swept off his hat with his left hand, taking care, Baines noted, not to drop the lodestone as he did so.

This king also rode a dragon, and also had three heads — bull, man and ram. All three heads breathed fire. The creature's feet were webbed, as were its hands, in which it carried a lance and pennon; and it had a serpent's tail. Fearsome enough; but Baines was beginning to note a certain narrowness of invention among these infernal artisans. It also occurred to him to wonder, fortunately, whether this very

repetitiveness was not deliberate, intended to tire him into inattentiveness or lure him into the carelessness of contempt. *This thing might kill me if I even closed my eyes,* he reminded himself.

"FURFUR, great earl, obey me!"

This angel appeared as a hart and was past them in a single bound, its tail streaming fire like a comet.

HALPAS, great earl, obey me!"

There was nothing to this apparition but a stockdove, also quickly gone. Ware was calling the names now as rapidly as he could manage to turn the pages, perhaps in recognition of the growing weariness of his Tanists, perhaps even of his own. The demons flashed by in nightmare parade: RAYM, earl of the Order of the Thrones, a man with a crow's head; SEPAR, a mermaid wearing a ducal crown; SABURAC, a lion-headed soldier upon a pale horse; BIFRONS, a great earl in the shape of a gigantic flea; ZAGAN, a griffin-winged bull; ANDRAS, a raven-headed angel with a bright sword, astride a black wolf; ANDREALPHUS, a peacock appearing amid the noise of many unseen birds; AMDUSCIAS, a unicorn among many musicians; DANTALIAN, a mighty duke in the form of a man but showing many faces both of men and women, with a book in his right hand; and at long last, that mighty king created next after LUCIFER and the first to fall in battle before MICHAEL, formerly of the Order of the Virtues, BELIAL himself, beautiful and deadly in a chariot of fire as he had been worshipped in Babylon.

"Now, great spirits," Ware said,

"because ye have diligently answered me and shown yourselves to my demands, I do hereby license ye to depart, without injury to any here. Depart, I say, yet be ye willing and ready to come at the appointed hour, when I shall duly exorcise and conjure you by your rites and seals. Until then, ye abide free. Amen."

He snuffed out the fire in the brazier with a closely fitting lid on which was graven the Third or Secret Seal of Solomon. The murk in the refectory began to lift.

"All right," Ware said in a matter of fact voice. Strangely, he seemed much less tired than he had after the conjuration of MARCHOSIAS. "It's over — or rather, it's begun. Mr. Ginsberg, you can safely leave your circle now and turn on the lights."

When Ginsberg had done so, Ware also snuffed the candles. In the light of the shaded electrics, the hall seemed in the throes of a cheerless dawn, although in fact the time was not past midnight. There was nothing on the altar now but a small heap of fine gray ash.

"Do we really have to wait it out in here?" Baines said, feeling himself sagging. "I should think we'd be a lot more comfortable in your office — and in a better position to find out what's going on, too."

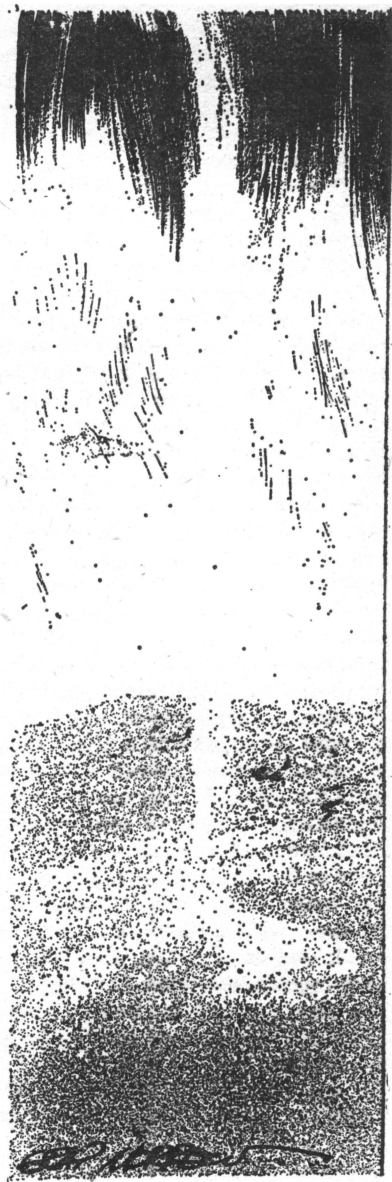
"We must remain here," Ware said firmly. "That, Mr. Baines, is why I asked you to bring in your transistor radio — to keep track of both the world and the time. For approximately the next eight hours, the area inside these immediate walls will be the only safe place on all the Earth."

Trappings, litter and all, the re-  
fectory now reminded Baines  
incongruously of an initiation room  
in a college fraternity house just  
after the last night of Hell Week.  
Hess was asleep on the long table  
that earlier had borne Ware's con-  
secrated instruments. Jack Ginsberg  
lay on the floor near the main door,  
napping fitfully, mumbling and  
sweating. Theron Ware, after again  
warning everyone not to touch any-  
thing, had dusted off the altar and  
gone to sleep — apparently quite  
soundly — upon that, still robed  
and gowned.

Only Baines and Fr. Domenico  
remained awake. The monk, having  
prowled once around the margins of  
the room, had found an unsuspected  
low window behind a curtain and  
now stood with his back to them all  
looking out at the black world, hands  
locked behind his back.

Baines sat on the floor with his  
own back propped against the wall  
next to the electric furnace, the  
transistor radio pressed to his ear.  
He was brutally uncomfortable, but  
he had found by experiment that this  
was the best place in the hall for  
radio reception — barring, of course,  
his actually entering one of the Cir-  
cles.

Even here, the reception was not  
very good. It wavered in and out  
maddeningly, even on powerful sta-  
tions like Radio Luxembourg, and  
was liable to tearing blasts of static.  
These were usually followed, at in-  
tervals of a few seconds to several  
minutes, by bursts or rolls of thun-





der in the sky outside. Much of the time, too, as was usual, the clear spaces were occupied by nothing but music and commercials.

And thus far, what little news he had been able to pick up had been vaguely disappointing. There had been a major train wreck in Colorado; a freighter was foundering in a blizzard in the North Sea; in Guatemala, a small dam had burst, burying a town in an enormous mudslide; an earthquake was reported in Corinth — the usual budget of natural or near-natural disasters for any day.

In addition, the Chinese had detonated another hydrogen device; there had been another raiding incident on the Israeli-Jordanian border; black tribesmen had staged a rape and massacre on a government hospital in Rhodesia; the poor were marching on Washington again; the Soviet Union had announced that it would not be able to recover three dogs and a monkey it had put in orbit a week ago; the U.S. gained another bloody inch in Vietnam, and Premier Ky put his foot in it; and . . . .

All perfectly ordinary, all going to prove what everyone of good sense already knew, that there was no safe place on the Earth either inside this room or without it, and probably there never had been. What, Baines began to wonder, was the profit in turning loose so many demons, at so enormous an expenditure of time, effort and money, if the only result were to be just like reading any morning's newspaper? Of course, it might be that inter-

esting private outrages were also being committed, but many newspaper and other publishers made fortunes on those in ordinary times, and in any event he could never hear of more than a fraction of them over this idiot machine.

Probably he would just have to wait until days or weeks later, when the full record and history of this night had been assembled and digested, when no doubt its full enormity might duly appear. He should have expected nothing else. After all, the full impact of a work of art is never visible in the sketches. All the same, he was obstinately disappointed to be deprived of the artist's excitement of watching the work growing on the canvas.

Was there anything that Ware could do about that? Almost surely not, or he would have done it already; it was clear that he had understood the motive behind the commission as well as he had understood its nature. Besides, it would be dangerous to wake him — he would need all his strength for the latter half of the experiment, when the demons began to return.

Resentfully, but with some resignation too, Baines realized that he himself had never been the artist here. He was only the patron, who could watch the colors being applied and the cartoon being filled; he could own the finished board or ceiling, but had never even in principle been capable of handling the brushes.

But here — what was that? The BBC was reporting:

"A third contingent of appara-

tus has been dispatched along the Thames to combat the Tate Gallery fire. Expert observers believe there is no hope of saving the Gallery's great collection of Blake paintings, which include most of his illustrations for the *Inferno* and *Purgatorio* of Dante. Hope also appears to be lost for what amount to almost all the world's paintings by Turner, including his water colors of the burning of the Houses of Parliament. The intense and sudden nature of the initial outbreak has led to the suspicion that the fire is the work of an incendiary."

Baines sat up alertly, though all his joints protested painfully, feeling an even more acute stab of hope. *There* was a crime with real style, a crime with symbolism, a crime with meaning. Excitedly he remembered HABORYM, the demon with the dripping firebrand. Now if there were to be more acts that imaginative —

The reception was getting steadily worse; it was extraordinarily tiring to be continuously straining to filter meaning out of it. Radio Luxembourg appeared to have gone off the air or to have been shut out by some atmospheric disturbance. He tried Radio Milan and got it just in time to hear it announce itself about to play all eleven of the symphonies of Gustav Mahler, one right after the other, an insane project for any station and particularly for an Italian one. Was that some demon's idea of a joke? Whatever the answer, it was going to take Radio Milan out of the newscasting business for

well over twenty-four hours to come.

He cast further about the dial. There seemed to be an extraordinary number of broadcasts going out in languages he did not know or could even recognize, though he could get around passably in seventeen standard tongues and in any given year was fluent in a different set of three, depending on business requirements. It was almost as though someone had jammed an antenna on the crown of Babel.

Briefly, he caught a strong outburst of English; but it was only the Voice of America making piously pejorative sermonettes about the Chinese fusion explosion. Baines had known that that was coming for months now. Then the multilingual mumbling and chuntering resumed, interspersed occasionally with squeals of what might indifferently have been Pakistani jazz or Chinese opera.

Another segment of English shouted, " — with Cyanotabs! Yes, friends, one dose cures all ills! Guaranteed chock-full of crisp, crunchy atoms — " and was replaced by a large boys' choir singing the *Hallelujah Chorus*, the words for which, however, seemed to go, "Bison, bison! Rattus, rattus! Cardinalis! Cardinalis!" Then more gabble, marvelously static-free and sometimes hovering just on the edge of intelligibility.

The room stank abominably of an amazing mixture of reeks: brandy, camphor, charcoal, vervain, gunpowder, flesh, sweat, perfume, incense, candle-wicks, musk, singed hair. Baines's head ached dully; it was like trying to breathe inside

the mouth of a vulture. He longed to take a pull at the brandy bottle under his rumpled alb, but he did not know how much of what was left would be needed when Ware resumed operations.

Across from him, something moved: Fr. Domenico had unlocked his hands and turned away from the small window. He was now taking a few prim steps toward Baines. The slight stir of human life seemed to disturb Jack Ginserg, who thrashed himself into an even more uncomfortable-looking position, shouted hoarsely and then began to snore. Fr. Domenico shot a glance at him and, stopping just short of his side of the Grand Circle, beckoned.

"Me?" Baines said.

Fr. Domenico nodded patiently. Putting aside the overheated little radio with less reluctance than he would have imagined possible only an hour ago, Baines heaved himself arthritically to his knees, and then to his feet.

As he started to stumble toward the monk, something furry hurtled in front of him and nearly made him fall: Ware's cat. It was darting toward the altar; and in a soaring arc incredible in an animal of its shameless obesity, it leapt up there and settled down on the rump of its sleeping master. It looked greenly at Baines and went itself to sleep, or appeared to.

Fr. Domenico beckoned again and went back to the window. Baines limped after him, wishing that he had taken off his shoes; his feet felt as though they had turned into solid blocks of horn.

"What's the matter?" he whispered.

"Look out there, Mr. Baines."

Confused and aching, Baines peered past his uninvited and unimpressive Virgil. At first he could see nothing but the streaked steam on the inside of the glass, with a spume of fat snowflakes slurring beyond it. Then he saw that the night was in fact not wholly dark. Somehow he could sense the undersides of turbulent clouds. Below, the window, like the one in Ware's office, looked down the side of the cliff and out over the sea, which was largely invisible in the snowwhorls; so should the town have been, but it was in fact faintly luminous. Overhead, from frame to frame of the window, the clouds were overstitched with continuous streaks of dim fire, like phosphorescent contrails, long-lasting and taking no part in the weather.

"Well?" Baines said.

"You don't see anything?"

"I see the meteor-tracks or whatever they are. And the light is odd. Sheet lightning, I suppose, and maybe a fire somewhere in town."

"That's all?"

"That's all," Baines said, irritated. "What are you trying to do, panic me into waking Dr. Ware and calling it all quits? Nothing doing. We'll wait it out."

"All right," Fr. Domenico said, resuming his vigil. Baines stumped back to his corner and picked up the radio. It said:

"— now established that the supposed Chinese fusion test was actual-



ly a missile warhead explosion of at least thirty megatons, centered on Taiwan. Western capitals, already in an uproar because of the napalm murder of the U.S. president's widow in a jammed New York discotheque, are moving quickly to a full war footing, and we expect a series of security blackouts on the news at any moment. Until that happens we will keep you informed of whatever important events come through. We pause for station identification. Owoo. Eeg. Oh, piggly baby, I caught you — cheatin' on me — owoo — ”

Baines twisted the dial savagely, but the howling only became more bestial. Down the wall to his right, Hess twisted his long body on the table and suddenly sat upright, swinging his stockinged feet to the floor.

“Jesus Christ,” he said huskily. “Did I hear what I thought I heard?”

“Dead right you did,” Baines said quietly, and not without joy; but he too was worried. “Slide over here and sit down. Something's coming to a head, and it's nothing like we'd expected — or Ware either.”

“Hadn't we better call a halt, then?”

“No, Sit down, goddamn it. I don't think we *can* call a halt — and even if we could, I don't want to give our clerical friend over there the satisfaction.”

“You'd rather have World War Three?” Hess said, sitting down obediently.

“I don't know that that's what's going to happen. We contracted for this; let's give it the benefit of the

doubt. Either Ware's in control, or he should be. Let's wait and see.”

“All right,” Hess said. He began to knead his fingers together. Baines tried the radio once more, but nothing was coming through but a mixture of the *Messiah*, *Mahler* and *The Supremes*.

Jack Ginsberg whined in his pseudosleep. After a while, Hess said neutrally:

“Baines?”

“What is it?”

“What kind of a thing do you think this is?”

“Well, it's either World War Three or it isn't. How can I know yet?”

“I didn't ask you that . . . not what you think it *is*. I asked you, what *kind* of a thing do you *think* it is? You ought to have some sort of notion. After all, you contracted for it.”

“Oh. Hmm. Father Domenico said it might turn out to be Armageddon. Ware didn't think so, but he hasn't turned out to be very right up to now. I can't guess, myself. I haven't been thinking in these terms very long.”

“**N**or have I,” Hess said, watching his fingers weave themselves in and out. “I'm still trying to make sense of it in the old terms, the ones that used to make sense of the universe to me. It isn't easy. But you'll remember I told you I was interested in the history of science. That involves trying to understand why there wasn't any science for so long, and why it went into eclipse almost every time it was re-discovered. I think I know why now.”

I think the human mind goes through a sort of cycle of fear. It can only take so much accumulated knowledge, and then it panics and starts inventing reasons to throw everything over and go back to a Dark Age . . . every time with a new, invented mystical reason."

"You're not making very much sense," Baines said. He was still also trying to listen to the radio.

"I didn't expect you to think so. But it happens. It happens about every thousand years. People start out happy with their gods, even though they're frightened of them. Then, increasingly, the world becomes secularized, and the gods seem less and less relevant. The temples are deserted. People feel guilty about that, but not much. Then, suddenly, they've had all the secularization they can take, they throw their wooden shoes into the machines, they take to worshipping Satan or the Great Mother, they go into a Hellenistic period or take up Christianity, *in hoc signo vinces* — I've got those all out of order, but it happens, Baines, it happens like clockwork, every thousand years. The last time was the chiliastic panics just before the year 1000 A.D., when everyone expected the Second Coming of Christ and realized that they didn't dare face up to Him. That was the heart, the center, the whole reason of the Dark Ages. Well, we've got another millennium coming to a close now, and people are terrified of *our* secularization, our nuclear and biological weapons, our computers, our over-protective medicine, everything, and

they're turning back to the worship of unreason. Just as you've done — and I've helped you. Some people these days worship flying saucers because they don't dare face up to Christ. You've turned to black magic. Where's the difference?"

"I'll tell you where," Baines said. "Nobody in the whole of time has ever seen a saucer, and the reasons for believing that anybody has are utterly pitiable. Probably they can be explained just as you've explained them, and never mind about Jung and his thump-headed crowd. But, Adolph, you and I *have* seen a demon."

"Do you think so? I don't deny it. I think it very possible. But Baines, are you sure? How do you *know* what you think you know? We're on the eve of World War Three, which we engineered. Couldn't all this be a hallucination we conjured up to remove some of our guilt? Or is it possible that it isn't happening at all and that we're as much victims of a chiliastic panic as more formally religious people are? That makes more sense to me than all this medieval mumbo-jumbo about demons. I don't mean to deny the evidence of my senses, Baines; I only mean to ask you, what is it worth?"

"I'll tell you what I know," Baines said equably, "though I can't tell you how I know it, and I won't bother to try. First, something is happening, and that something is real. Second, you and I and Ware and everyone else who wanted to make it happen, therefore *did* make it happen. Third, we're turning out to be wrong about the outcome —

but no matter what it is, it's *our* outcome; we contracted for it. Demons, saucers, fallout — what's the difference? Those are just signs in the equation, parameters we can fill any way that makes the most intermediate sense to us. Are you happier with electrons than with demons? Okay, good for you. But what I like, Adolph, what *I* like is the result; I don't give a damn about the means. I invented it, I called it into being, I'm paying for it — and no matter how else you describe it, *I made it, and it's mine*. Is that clear? *It's mine*. Every other possible fact about it, no matter what that fact might turn out to be, is a stupid footling technicality that I hire people like you and Ware not to bother me with."

"It seems to me," Hess said in a leaden monotone, "that we are all insane."

At that same moment, the small window burst into an intense white glare, turning Fr. Domenico into the intensest of inky silhouettes.

"You may be right," Baines said. "There goes Rome."

Fr. Domenico, his eyes streaming, turned away from the dimming frame and picked his way slowly to the altar. After a long moment of distaste, he took Theron Ware by the shoulder and shook him. The cat hissed and jumped sidewise.

"Wake up, Theron Ware," Fr. Domenico said formally. "I charge you, awake. Your experiment may now wholly and contractually be said to have gone astray, and the Covenant therefore satisfied. Ware! Ware! Wake up, damn you!"

Baines looked at his watch. It was 3:00 a.m.

Ware awoke instantly, swung to his feet with a spring, and without a word started for the window. At the same instant, the agony that had been Rome swept over the building. The shock wave had been attenuated by distance, and the jolt was not heavy; but the window Fr. Domenico had uncurtained sprang inward in a spray of flying glass needles. More glass fell from behind the drapes below the ceiling, like an orchestra of celestes.

As far as Baines could see, nobody was more than slightly cut. Not that a serious wound could have made any difference now, with the Last Death already riding on the winds.

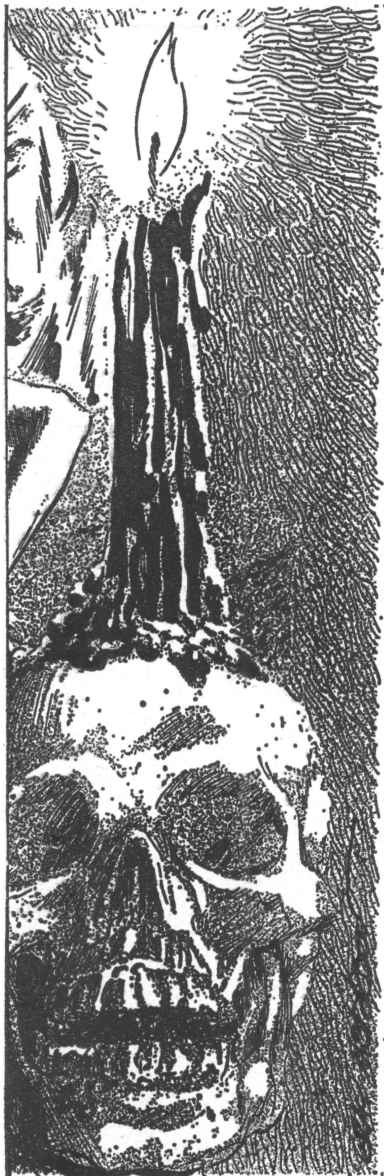
Ware was not visibly shaken. He simply nodded once and wheeled toward the Grand Circle, stooping to pick up his dented paper hat. No, he was moved — his lips were pinched white. He beckoned to them all.

Baines took a step toward Jack Ginsberg, to kick him awake if necessary. But the special executive assistant was already on his feet, trembling and wild-eyed. He seemed, however, totally unaware of where he was; Baines had to push him bodily into his minor Circle.

"And stay there," Baines added, in a voice that should have been able to scar diamonds. But Jack gave no sign of having heard it.

Baines went hastily to his Tanist's place, checking for the bottle of brandy. Everyone else was already





in position, even the cat, which in fact had vaulted to its post promptly upon having been dumped off Ware's rear.

The sorcerer lit the brazier and began to address the dead air. He was hardly more than a sentence into this invocation before Baines realized for the first time, in his freezing heart, that this was indeed the last effort — and that indeed they might all still be saved.

Ware was making his renunciation, in his own black and twisted way — the only way his fatally proud soul could ever be brought to make it. He said:

"I invoke and conjure thee, LUCIFUGE ROFOCALE, and fortified with the Power and the Supreme Majesty, I strongly command thee by BARALEMENSIS, BALDACHIENSIS, PAUMACHIE, APOLORESEDES and the most potent princes GENIO, LIACHIDE, Ministers of the Tartarean seat, chief princes of the seat of APOLOGIA in the ninth region; I exorcise and command thee, LUCIFUGE ROFOCALE, by Him Who spake and it was done, by the Most Holy and Glorious Names ADONAI, EL, ELOHIM, ELOHE, ZEBAOOTH, ELION, ESCHERCE, JAH, TETRAGRAMMATON, SADAI: do thou and thine forthwith appear and show thyself unto me, regardless of how thou art previously charged, from whatever part of the world, without tarrying!

"I conjure thee by Him to Whom all creatures are obedient, by this ineffable Name, TETRAGRAMMATON JEHOVAH, by which the elements are overthrown, the air is shaken, the sea turns back, the fire is generated,

the Earth moves and all the hosts of things celestial, of things terrestrial, of things infernal, do tremble and are confounded together; come, ADONAI, King of kings, commands thee!"

There was no answer, except an exterior grumble of thunder.

"Now I invoke, conjure and command thee, LUCIFUGE ROFOCALE, to appear and show thyself before this Circle, by the Name of ON; by the Name Y and V, which Adam heard and spake; by the Name of JOTH, which Jacob learned from the angel on the night of his wrestling and was delivered from the hands of his brother; by the Name of AGLA, which Lot heard and was saved with his family; by the Name ANEHEXTON, which Aaron spake and was made wise; by the Name SCHEMES AMATHIA, which Joshua invoked and the Sun stayed upon his course; by the Name EMMANUEL, by which the three children were delivered from the fiery furnace; by the Name ALPHA-OMEGA, which Daniel uttered and destroyed Bel and the dragon; by the Name ZEBAOOTH, which Moses named, and all the rivers and the waters in the land of Egypt were turned into blood; by the Name HAGIOS, by the Seal of ADONAI, by those others, which are JETROS, ATHENOROS, PARACLETUS: by the dreadful Day of Judgment; by the changing sea of glass which is before the face of the Divine Majesty; by the four beasts before the Throne; by all these Holy and most potent words, come thou, and come thou quickly; come, come! ADONAI, King of kings, commands thee!!"

Now, at last, there was a sound: a sound of laughter. It was the laughter of Something incapable of joy, laughing only because It was compelled by Its nature to terrify. As the laughter grew, that Something formed.

It was not standing in the lesser Circle or appearing from the Gateway, but instead was sitting on the altar, swinging Its cloven feet negligently. It had a goat's head, with immense horns, a crown that flamed like a torch, level human eyes, and a Star of David on Its forehead. Its haunches too were caprine. Between, the body was human, though hairy and with dragging black pinions like a crow's growing from Its shoulder-blades. On one shaggy forearm was tattooed, *Solve*; on the other, *Coagula*.

Ware fell slowly to one knee.

"*Adoramus te, PUT SATANACHIA,*" he said, laying his wand on the ground before him. "And again . . . *ave, ave.*"

AVE, BUT WHY DO YOU HAIL ME? the monster said in a petulant bass voice, at once deep and mannered, like a homosexual actor's. IT WAS NOT I YOU CALLED.

"No, Baphomet, master and guest. Never for an instant. It is everywhere said that you can never be called and would never appear."

YOU CALLED ON THE GOD, WHO DOTHT NOT APPEAR. I AM NOT MOCKED.

Ware bowed his head lower. "I was wrong."

AH! BUT THERE IS A FIRST TIME FOR EVERYTHING; YOU MIGHT HAVE SEEN THE GOD AFTER ALL. BUT NOW

INSTEAD YOU HAVE SEEN ME; AND THERE IS ALSO A LAST TIME FOR EVERYTHING. I OWE YOU A MOMENT OF THANKS; WORM THOUGH YOU ARE, YOU ARE THE AGENT OF ARMAGEDDON. LET THAT BE WRITTEN, BEFORE ALL WRITING, LIKE ALL ELSE, GO INTO THE EVERLASTING FIRE.

"No!" Ware cried out. "Oh, living God, no! This cannot be the Time! You break the Law! Where is the AntiChrist —"

WE WILL DO WITHOUT THE ANTI-CHRIST. HE WAS NEVER NECESSARY. MEN HAVE ALWAYS LED THEMSELVES UNTO ME.

"But — master and guest — the Law —"

WE SHALL ALSO DO WITHOUT THE LAW. HAVE YOU NOT HEARD? THOSE TABLETS HAVE BEEN BROKEN.

There was a hiss of indrawn breath from both Ware and Fr. Domenico; but if Ware had intended some further argument, he was forestalled. To Baines's right, Dr. Hess said in a voice of high ultra-violet hysteria:

"I don't see you, Goat."

"Shut up!" Ware shouted, almost turning away from the vision.

"I don't see you," Hess said doggedly. "You're nothing but a silly zoological mixture. A mushroom dream. You're not real, Goat. Go away. Poof!"

Ware turned in his Karcist's circle and lifted his magician's sword against Hess in both hands; but at the last minute, he seemed to be afraid to step out against the wobbling figure of the scientist.

HOW GRACIOUS OF YOU TO SPEAK

TO ME, AGAINST THE RULES. WE UNDERSTAND, YOU AND I, THAT RULES WERE MADE TO BE BROKEN. BUT YOUR FORM OF ADDRESS DOES NOT QUITE PLEASE ME. LET US PROLONG THE CONVERSATION, AND I WILL EDUCATE YOU. ETERNALLY, FOR A BEGINNING.

Hess did not answer. Instead, he howled like a wolf and charged blindly out of the Grand Circle, his head down, toward the altar. The Sabbath Goat opened its great mouth and gulped him down like a fly.

THANK YOU FOR THE SACRIFICE, IT said thickly. ANYONE ELSE? THEN IT IS TIME I LEFT.

"Stand to, stupid and disobedient!" Fr. Domenico's voice rang out from Baines's right side. A cloth fluttered out of the monk's circle onto the floor. "Behold thy confusion, if thou be disobedient! Behold the Pentacle of Solomon which I have brought into thy presence!"

FUNNY LITTLE MONK, I WAS NEVER IN THAT BOTTLE!

"Hush and be still, fallen star. Behold in me the person of the Exorcist, who is called OCTINIMOES, in the midst of delusion armed by the Lord God and fearless. I am thy master, in the name of the Lord BATHAL, rushing upon ABRAC, ABEOR, coming upon BERORI!"

The Sabbath Goat looked down upon Fr. Domenico almost kindly. His face red, Fr. Domenico reached into his robes and brought out a crucifex, which he thrust toward the altar like a sword.

"Back to Hell, devil! In the name of Christ our Lord!"

The ivory cross exploded like a Prince Rupert's Drop, strewing Fr. Domenico's robe with dust. He looked down at his horribly empty hands.

TOO LATE, MAGICIAN. EVEN THE BEST EFFORTS OF YOUR WHITE COLLEGE ALSO HAVE FAILED — AND AS THE HEAVENLY HOSTS ALSO WILL FAIL. WE ARE ABOARD AND ALOOSE, AND WILL NOT BE PUT BACK.

The great head bent to look down upon Theron Ware.

AND YOU ARE MY DEARLY BELOVED SON, IN WHOM I AM WELL PLEASED. I GO TO JOIN MY BROTHERS AND LOVERS IN THE REST OF YOUR WORK. BUT I SHALL BE BACK FOR YOU; I SHALL BE BACK FOR YOU ALL.

"One moment, please," Fr. Domenico said. "If you would be so kind . . . I see that we have failed . . . . Would you tell us: *Where* did we fail?"

The Goat laughed, spoke three words, and vanished.

The dawn grew, red, streaked, dull, endless. From Ware's window the sleeping town slumped down in rivers of cold lava toward the sea — but there was no sea; as Fr. Domenico had seen hours ago, the sea had withdrawn and would not be back again except as a tsunami after the Corinth earthquake. Circles of desolation spread away from the ritual Circles. Inside them, the last magicians waited for the now Greatest Powers to come back for them.

It would not be long now. In all their minds and hearts echoed those last three words. World without end. End without world.

*God is dead.*



## THIS MONTH IN GALAXY

*Galaxy's 17th Anniversary Issue — All-Star Lineup!*

### DAMNATION ALLEY

*Complete Short Novel*  
by Roger Zelazny

### UNDERSTANDING

by George O. Smith

### THE TRANSMOGRIFICATION OF WAMBA'S REVENGE

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Dear Editor:

It is my opinion that adults are discriminating against the younger generation of science-fiction readers. There are some adults who welcome a youth's view of S.F., but they are few and far between. All others either ignore you or criticize the younger generation. They claim ours is but a passing interest unlike their eternal passion for science fiction. I may be only sixteen years old, but I have been reading S.F. for quite a while. I have collected sixty paperback stories and am a subscriber to *IF*. There is nothing I like better than reading one of the current works. I therefore believe that I too should have the right to be recognized as a S.F. aficionado. I would enjoy going to NYCON in September, being only a short distance from New York, but I am deathly afraid of being thrown out because of my age by the righteous and older fans. Is there any possibility of obtaining a safe-conduct pass? — Richard Kurzberg, 84 Crescent Avenue, Passaic, New Jersey.

• All fans are welcome at all sf conventions — regardless of age, sex, color or creed. That's one of the nice things about sf conventions! — Editor.

\* \* \*

Dear Editor:

The most irritating letter I have ever read in any sf magazine was Alma McCormick's April '67 contribution. Why are so many people turned off science fiction?

Absolutely not because the story has dropped to second place in favor of philosophy! The average person will not read sf because of the bad name it acquired in the "junk period" of the 40's, when sf did not *teach*. I disagree emphatically with her idea that the major purpose of sf is pure entertainment.

In defense of the books that have "slid off the tracks where story comes first," as Mrs. McCormick stated, I will offer the following list of titles. I defy anyone to say these books don't entertain while at the same time allowing the reader to think:

*City*, by Clifford D. Simak, *The Martian Chronicles*, by Ray Bradbury, *Stranger in a Strange Land*, by Robert A. Heinlein, *Childhood's End*, by Arthur C. Clarke, *A Canticle for Leibowitz*, by Walter M. Miller, Jr., *Davy*, by Edgar Pangborn, *Brave New World*, by Aldous Huxley, *The Lord of the Rings*, by J. R. R. Tolkien and *Flowers for Algernon*, by Daniel Keyes.

Mr. Pohl, please don't write what Mrs. McCormick considers a good

book. Make us think. Write another *Plague of Pythons* — write a book that teaches! — Frank Flynn, 2418 Walker Lane, Holladay, Utah 84117.

\* \* \*

Dear Editor:

I am not a letter writer, but I feel impelled to write by what I see you are hearing about the New Wave of British science fiction. This is very much a minority movement.

The British magazines nearly collapsed because no one wanted them, and were saved by a subsidy obtained when Brian Aldiss used his personal prestige.

The American magazines are in every shop; the British ones can hardly be found. I personally am ashamed that Britain should be identified with them, and would like to remind you that the lunatic Burroughs came from your side of the Atlantic!!

Please print this fast, before our national image is ruined! — D. C. Jackson, 322 Cromwell Road, London S. W. 5., England.

\* \* \*

Dear Editor:

I think some comment should be made regarding the letter by Alma McCormick in your April issue. Mrs. McCormick seems quite dissatisfied with the science fiction being written today; I can only assume this is because she has been reading the wrong stories. Since I'm only eighteen, I can't claim to be as widely read in the field as Mrs. McCormick. I do know one thing, however: The quality of sf today is excellent, and it's getting better all the time.

I find it hard to believe that such an obviously intelligent person says today's writers are trying to teach and neglecting *the story*. This just

isn't so! A story written for a totally didactic purpose would sell about as well as a snowball in Alaska.

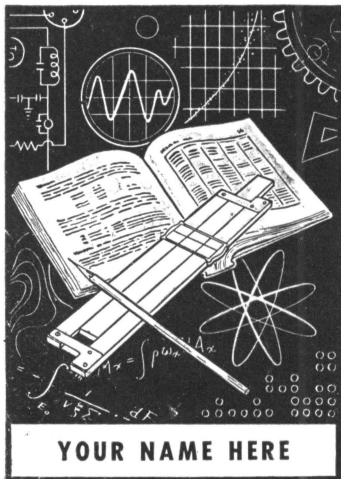
As a case in point, Mrs. McCormick refers to Heinlein's *The Moon Is a Harsh Mistress*. This is probably the best novel Heinlein has written in many a year. And why? Because the author is, as Mrs. McCormick puts it, busy playing sociology professor? Hardly! Because it's a darned good story, that's the reason. Mrs. McCormick is quite right when she says that the Heinlein who wrote *The Puppet Masters, etc.* is the same one who wrote *The Moon Is a Harsh Mistress*; except, that is, for the fact that Heinlein is a little more adept at story-telling than he once was.

I couldn't agree more with Samuel Goldwyn's remark: "If you've gotta message, use Western Union." However, it just doesn't apply here. Maybe sf writers today are trying to teach; but certainly not to the extent Mrs. McCormick would lead us to believe.

Heinlein, Blish and Clarke are better than ever; and if the lady hasn't seen a new Pohl in ages, I refer her to *The Age of the Pussyfoot*, in *Galaxy's* 15th anniversary issue. Regarding her comments about today's writers, I feel that Laumer, Zelazny, Niven, *et-al.*, are as good as anything the forties produced.

Mrs. McCormick concludes by telling you to write to "Write a good book for yourself". Why doesn't *she* write one? — Wayne Spiceland Jr., 5054 Stillwood Dr. Nashville, Tenn. • That's it for another month. This month's "First" is Donald Walsh's *Mu Panther*. Cramped for space — see you next month! — *The Editor*.

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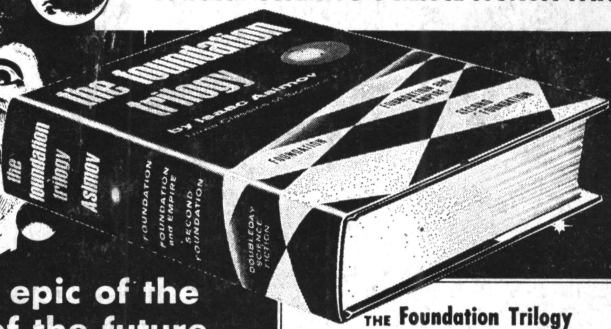
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