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TOO MANY INPUTS

A part from our strange primate habit of polluting our environment by dirtying up our air and filthying up our water, we also have made great strides in polluting the environment of our senses. Consider the difference between a modern American habitat and that of a medieval peasant. The peasant (who was, remember, the great bulk of humanity until just a few decades ago) lived in a world where the visual inputs were relatively familiar and relatively low-key . . . in spring and summer, all greens and browns; in fall, a few reds and russets; in winter, a blanket of white. Of the self-luminous visual objects in his universe, the only important one was the sun — occasionally the quiet moon and stars, rarely a flickering rush to give him light enough to go to bed by or the fire that cooked his dinner. His auditory inputs were even milder — a few times a year he might hear a thunderclap, but the rest of his life the sounds on his horizon were his own voice, the lowing of his cattle, the chopping of wood, the bells of the village church.

But look at us today! Sights and sounds clamor for our attention from every quarter. We walk along a street in a city and cannot converse with the man walking next to us under a shout, because of traffic, construction, the rumble of a subway train under the street, the flutter of a helicopter overhead. The

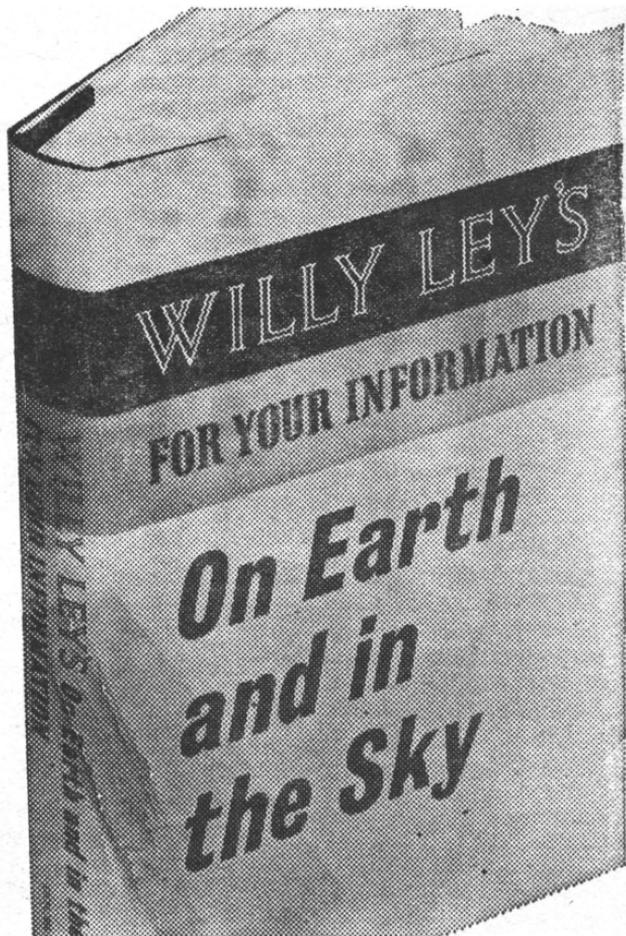
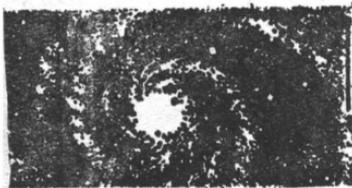
part of the country that most of us see is no better than the city — because in fact it is a part of the city, the linking pseudopods that one city extends to another in the form of throughways and turnpikes, with the vehicles moving three times as fast and generating nine times as much noise. Even away from the highways we have the jets and the piston-planes to assault our senses; and in our homes, offices and stores we have the sound of business machines, the chatter of talk, the ringing of bells, *plus* the filtering in of traffic, aircraft and construction noises through tissue-thin walls . . . and to make sure the sound threshold is high enough, we add Muzak, radio, TV and recorded sounds. At 140 decibels physical damage results. Ordinary city traffic regularly hits 105 decibels or higher; when a jet passes overhead or a particularly loud truck goes by, the 140-decibel level comes perilously close.

But apart from the sheer volume and variety of sound and sight, there is a very high proportion of it deliberately structured for attention-getting qualities — the savage noises of an aspirin commercial on television, the blare of a sound-truck at election time, dizzying neon, even the colors of the fabrics we wear and the goods we buy. High-intensity, saturated colors are almost as much a modern invention as the machine-gun pop of the helicop-

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ter overhead; among the other tranquil advantages of our peasant, his eyes and paints were almost as muted as his environment, with butter-nut browns and saffron yellows and an occasional rare glimpse of a crushed mineral in oil paint.

It's a fact that too many sensory inputs can cause damage to the mind. Apparently early exposure helps — while the brain is developing, the experience of handling multiple inputs prepares it for the task. But if the inputs increase too much after the brain is well formed they can lead to catastrophe. Example: Those who are blind from birth, and then have their sight restored in maturity, almost invariably suffer from such acute depression that suicide is common. So maybe our children will be better able to cope with today's environment than we.

As a matter of fact, the parent of any teen-ager can testify that the younger generation is thriving on a diet of prophylactic sound right now: witness the time when you hear a blast of noise from the teenager's room, and you race up there, and there he is, the TV going, the transistor shouting. "W-A-B-C-wangggg!" the record-player blaring, "*Winchester Ca-the-dral!*" . . . and you ask him what the devil he's doing and he says, "Holy catfish, I'm doing my homework."

But the trouble with that is that they will not be living in today's environment. They'll be living in tomorrow's. And if present trends are any indication, they will have noisier, more raucous, more strident inputs still. Look at the goodies in store for us! Think only of the supersonic transport — spreading a path of sonic boom fifty miles wide, clear across the country, with every

flight. Not to mention rockets. Not to mention what the advertising men of tomorrow may come up with . . . focused to bring commercials to us in our bedrooms, or — say, how about using *smell*?

What led us to these trains of thought is that, as this editorial is being written, we are in the second day of a fair-sized blizzard. Astonishing world! It's all white, even the air; all the man-made sounds are muted. In fact, the only sounds we consciously hear are as "white" as the snow — the hiss of steam in the heating system, the blowing of the wind.

So, in line with our policy of letting our readers in on the ground floor of economic opportunity, let us now propose a new product to manufacture. It should muffle sound and sight equally; it should come in fluffy white flakes and stay suspended in the air, blotting out harsh colors and lights, sopping up the most raucous noises. We think it could be made out of some sort of light foam plastic, blown into the air out of slow-moving trucks. We haven't decided on a name for it — StyroSno? Snocron? Whatever it is, it should have the sexy modern sound of Coke or Citgo or Enovid.

Because naturally we will want to advertise it. In fact, there's a real challenge for Mad Ave: to create the sort of advertising gimmicks that will break right through the Snocron barrier, overwhelming its sound-deadening qualities with staccato shrieks and snaredrum tattoos, penetrating its curtain with — well, let's see. Laser beams? Nuclear explosions? Never mind, we'll work that problem out somehow. . . .

— THE EDITOR

SPACEMAN!

by KEITH LAUMER

Illustrated by CASTELLON

*He was shanghaied onto a weird
trip across the starways — and
there would never be a return!*

I

I remember hearing somewhere that freezing to death is an easy way to go; but the guy that said that never tried it. I'd found myself a little hollow where a falling-down stone wall met a dirt-bank and hunkered down in it; but the wall wasn't high enough to keep the wind off or stop the sleet from hitting my neck like buckshot and running down

cold under my collar. There were some mouldy leaves drifted there. I used the last of my lighter fluid trying to get a little blaze going, but that turned out like everything else I'd tried lately. A fizzle. One thing about it: my feet were so numb from the cold. I couldn't feel the blisters from the eighteen miles I'd hiked since my last ride dumped me at a crossroads, just before dawn.

I had my collar turned up, for

what good that might do, which wasn't much; the coat felt like wet newspaper. Both elbows were out of it, and two of the buttons were gone. Funny. Three weeks ago it had been decent-looking enough to walk into a second-class restaurant without attracting more than the usual quota of hostile stares. Three weeks. That's all it took to slide from a shaky toe-hold in the economic cycle all the way to the bottom. I'd heard of hitting the skids, but I never knew before just what it meant. Once you go over that invisible edge, it's downhill all the way.

It had been almost a year since I'd quit school, when Uncle Jason died. What money I had went for the cheapest funeral the little man with the sweet, sad smile could bear to talk about. After that, I'd held a couple of jobs that had wafted away like the morning mist as soon as the three-months "tryout" was over and the question of regular wages came up. There'd been a few months of scrounging, then; mowing lawns, running errands, one-day stands as a carpenter's helper or assistant bus-boy while the regular man was off. I'd tried to keep up appearances, enough not to scare off any prospective employers, but the money barely stretched to cover food and what the sign said was a clean bed.

Then one day I'd showed up looking just a little too thin, a little too hungry, the collar just a little too frayed.

And now I was here, with my stomach making whimpering sounds to remind me of all the meals it hadn't had lately, as far as ever from

where I was headed — wherever that was. I didn't really have a destination. I just wanted to be where I wasn't.

And I couldn't stay here. The wall was worse than no protection at all, and the wind was blowing colder and wetter all the time. I crawled out and made it back up the slope to the road. There were no headlights in sight; it wouldn't have helped if there were. Nobody was going to stop in a sleetstorm in the middle of nowhere to give a lift to a hobo like me. I didn't have any little sign to hold up, stating that I was a hardship case, that comfortable middle-class conformity was my true vocation, that I was an honest young fellow with a year of college who'd had a little hard luck lately. All I had was the clothes I stood in, a bad cough and a deep conviction that if I didn't get out of the weather, fast, by morning I'd be one of those dead-of-exposure cases they're always finding in alleys back of cut-rate liquor stores.

I put my back to the wind and started off, hobbling on a couple of legs that ended somewhere below the knee. I didn't notice feeling tired any more, or hungry. I was just a machine somebody had left running. All I could do was keep putting one foot in front of the other until I ran down.

I saw the light when I came up over a rise, just a weak little spark, glowing a long way off in the big dark beyond the trees. I turned and started off across the open field toward it.

Ten minutes later, I came up behind a big swaybacked barn with a new-looking silo beside it and a rambling two-story house beyond. The light was shining from a ground floor window. There was a pickup parked in the side yard near the barn, and a late-model Cadillac convertible, with the top down. Just looking at it made me ten degrees colder. I didn't have any idea of knocking on the door, introducing myself: "Billy Danger, sir. May I step inside and curl up in front of the fire?"—and being invited to belly up to a chicken dinner. But there was the barn. And where there were barns, there was hay; and where there was hay, a man could snuggle down and sleep, if not warm, at least not out in the freezing rain. It was worth a try.

The barn door looked easy enough: just warped boards hanging on big rusted-out hinges; but when I tried it, nothing budged. I looked closer and saw that the hinges weren't rotted after all; they were just made to look that way. I picked at a flake of paint on the door. There was bright metal underneath.

That was kind of strange, but all it meant to me then was that I wouldn't be crawling into that haystack after all.

The sleet was coming down thicker than ever now. I put my nose up and sniffed, caught a whiff of frying bacon and coffee that made my jaws ache. All of a sudden, my stomach remembered its complaint and tried to tie itself into a hard knot. I went back through tall weeds past some rusty iron that used to be farm

machinery, and across a rutted drive toward the silo. I didn't know much about silos except that they were where you stored the corn, but at least it had walls and a roof. If I could get in there, I might find a dry spot to hide in. I reached a door set in the curved wall; it opened, and I slid inside, into dim light and a flow of warm air.

Across the room, there was an inner door, standing open. I could see steps going up: glass steps on chrome-plated rails. The soft light and warm air were coming from there.

I went up moving on instinct, like the first fish crawling out on land. I reached the top and was in a room full of pipes and tubes and machinery and a smell like the inside of a TV set. Weary as I was, this didn't look like a place to curl up in.

I made it up another turn of the spiral stair, came out in a space where big shapes like cotton bales were stacked, with dark spaces between them. There was a smell like a fresh-tarred road here. I groped toward the deepest shadow I could find, and my hand touched something soft. In the faint light from the stairwell it looked like mink or sable, except that it was an electric blue color. I didn't let that worry me. I crawled up on top of the stack and put my face down in the velvety fluff and let all the strings break at once.

II

In the dream, I was a burglar, holed up in somebody else's house,

hiding in the closet, and in a minute they'd find me and haul me out and ride me into town in a police car to sit under the lights and answer questions about every unsolved chicken-stealing in the county in the past five years. The feet were coming up the stairs, coming closer. Somebody said something, and a woman's voice answered in a foreign language. They went away, and the dream faded

. . . And then the noise started.

It was a thin, high-pitched shrilling, like one of those whistles you call the dog with. It went right between my bones and pried at the joints. It got louder, and angrier, like bees boiling out of a hive, and I was awake now, and trying to get up; but a big hand came down and mashed me flat. I tried to get enough breath in to yell, but the air had turned to syrup. I just had time to remember the day back in Pineville when the Chevy rolled off the rack at Uncle Jason's gas station and pinned a man under the back bumper. Then it all went red, and I was someplace else, going over Niagara Falls in a big rubber balloon, wearing a cement life jacket.

When I woke up, I heard voices. ". . . talking rot now. It's nothing to do with me." This was a man's voice, speaking with an English accent. He sounded as if he was a little amused by something.

"I mark well t'was thee I charged with the integrity o' the vessel!" This one sounded big and mad. He had a strange way of talking, but I could understand most of the words all

right. Then a girl spoke, but in another language. She had a nice, clear, sweet voice. She sounded worried.

"No harm done, Desroy." The first man gave a soft laugh. "And it might be a spot of good luck, at that. Perhaps he'll make a replacement for Jongo."

"I don't omit thy ill-placed japery, Orfeo. Rid me this urchin, ere you vex me out of all humor!"

"A bit of a sticky wicket, that, old boy. He's still alive, you know. If I nurse him along —"

"How say you? What stuff is this! Art thou the parish comfort, to wax chirurgeonly o'er this whelp?"

"If he can be trained —"

"You o'ertax my patience, Orfeo! I'd make a chough of as deep chat!"

"He'll make a gun boy, mark my words."

"Bah! you more invest the misadventure than a market-place trinket chafferer! In any case, the imp's beyond recovery!"

Part of me wanted to just skip over this part of the dream and sink back down into the big, soft black that was waiting for me, but a little voice somewhere back behind my eyes was telling me to do something fast, before bad things happened. I made a big effort and got one eyelid open. Everything looked red and hazy. The three of them were standing ten feet away, near the door. The one with the funny way of speaking was big, built solid as a line-backer, with slicked-back black hair and a little mustache. He wore a loose jacket covered with pockets; he looked like Clark Gable playing Frank Buck.

The other man was not much older than me; he had a rugged jawline, a short nose, curly reddish-brown hair, wide shoulders, slim hips in a form-fitting gray coverall. He was pretty enough to be a TV interne.

The girl . . . I had to stop and get the other eyelid up. No girl could be that pretty. She had jet black hair and smoky gray eyes big enough to go wading in; an oval face, mellow ivory-colored skin, features like one of those old statues. She was wearing a white coverall, and the form it fit was enough to break your heart.

I made a move to sit up, and pain broke over me like a wave. It seemed to be coming mostly from my left arm. I took hold of the wrist with my other hand and got up on one elbow with no more effort than it takes to swing a safe in your teeth.

Nobody seemed to notice. When the whirly lights settled down, they were still standing there, still arguing.

“. . . a spot of bother, Desroy, but it's worth a go.”

“Methinks sloth instructs thee, naught else!” The big fellow turned and stamped off. The young fellow grinned at the girl.

“Just twisting the old boy's tail. Actually, he's right. You nip off and soothe him down a bit. I'll attend to this.”

I slid over the edge of my nest and kind of fell to the floor. At the noise, they both whirled on me. I got hold of the floor and swung it around under me.

“I just came in to get out of the

weather,” I meant to say, but it came out as a sort of gargly sound.

The man took a quick step toward me and over his shoulder said, “Pop off now, Milady.” He had a hand on a thing clipped to his belt. I didn't need a set of technical specifications to tell me it was some kind of gun. The girl moved up quickly and put her hand on his arm.

“Orfeo—the poor creature suffers!” She spoke English with an accent that made it sound like music.

He moved her around behind him. “He might be dangerous, Now do be a good child and toddle off.”

“I'm . . . not dangerous,” I managed to get the words out. The smile was less successful. I felt sick. But I wasn't going to come unfed in front of *her*. I got my back against the pile of furs and tried to stand up straight.

“So you can talk,” the man said. He was frowning at me. “Damn me if I know what to do with you.” He seemed to be talking to himself.

“Just . . . let me rest a few minutes . . . and I'll be on my way . . .” I could hear my pulse thudding in my ears like bongo drums.

“Why did you come aboard?” the man snapped the question at me. “What did you think you'd find here?”

“I was cold,” I said. “It was warm here.”

He snorted. “Letting yourself in for a devilish change of scene, weren't you?”

His first words were beginning to filter through. “What is this place?” I asked him.

“You're aboard Lord Desroy's

yacht. And he's not keen on contraband holed up in the aft lazaret."

"A boat?" I felt I'd missed something somewhere. The last I remembered was a farmhouse, in the middle of nowhere. "You must be fooling me." I tried to show him a smile to let him know I got the joke. "I don't feel any waves."

"She's a converted ketch, stressed-field primaries, ion-pulse auxiliaries, fitted with full antiac and variable G gear, four years out of Zeridajh on a private expedition. Every square inch of her is allocated to items in specific support of her mission in life, which brings us back to you. What's your name?" he asked.

"Billy Danger. I don't understand all that about a catch."

"Just think of her as a small spaceship." He sounded impatient. "Now, Billy Danger, it's up to me to —"

"Spaceship? You mean like they shoot astronauts off in?"

Orfeo laughed. "Astronauts, eh? Couple of natives paddling about the shallows in a dug-out canoe. No, Billy Danger, this is a deep space yacht, capable of cruising for many centuries at multiple-light velocities. At the moment, she's on course for a world very distant from your native Earth."

"Wait a minute," I said. I wanted everything to slow down for just a second while I got caught up with it. "I don't want to go to any star. I just want out of here." I tried a step and had to lean against the bale beside me. "Just let me off, and I'll disappear so quick you'll think you dreamed me."

"I'm afraid that's not practical," Orfeo cut me off short. "Now you're here, the question is what to do with you. As you doubtless heard, Lord Desroy's in favor of putting you out the lock. As for myself, I have hopes of making use of you. Know anything about weapons? Hunted much?"

"Just let me off," I said. "Anywhere at all. I'll walk home."

"You must answer my questions promptly, Billy Danger! What becomes of you depends on how well you answer them."

"I never hunted," I said. My breath was short, as if I'd run a long way.

"That's all right. Nothing to unlearn. How old are you?"

"Nineteen, next April."

"Amazing. You look younger. Are you quick to learn, Billy Danger?"

"It's kidnapping," I said. "You can't just kidnap a man. There's laws . . ."

"Mind your tongue, Billy Danger! I'll tolerate no insolence, you'd best understand that at the outset! As for law, Lord Desroy makes the law here. This is his vessel. With the exception of the Lady Raire and myself, he owns every atom aboard her, including stowaways."

A sudden thought occurred to me, like an ice pick through the heart. "You're not . . . Earthmen, are you?"

"Happily, no."

"But you look human; you speak English."

"Of course we're human. Much older stock than your own unfortu-



EMANI

nate branch. We've spent a year on your drab little world, going after walrus, elephant, that sort of thing. Now, that's enough chatter, Billy Danger. Do you think you can learn to be a proper gunbearer?"

"How long — before we go back?"

"To Earth? Never, I trust. Now, see here! Don't fret about matters out of your control! Your job is to keep me happy with you. If you can do that, you'll stay alive and well. If not . . ." He let the rest hang. "But then, I'm sure you'll try your best, eh, Billy Danger?"

It was crazy, but the way he said it, I believed every word of it. The thing I had to do right now was stay alive. Then, later, I could worry about getting home.

"Sure," I said. "I'll try."

"Right. That's settled, then." Orfeo looked relieved, as if he'd just found an excuse to put off a mean chore. "You were lucky, you know. You took eight gravities unprotected. A wonder you didn't break a few bones."

I was still holding my left arm by the wrist. I eased it around front, and felt the sharp point poking out through my sleeve.

"Who said I didn't?" I asked him and felt myself folding like a wind-blown newspaper.

III

I woke up feeling different. At first I couldn't quite dope out what it was. Then I got it: I was clean, fresh-shaved, sweet-smelling, tucked in between sheets as crisp as new dollar bills. And I felt good. I tingled

all over, as if I'd just had a needle shower and a rubdown.

The room I was in was a little low-ceilinged cubby hole with nothing much in it but the pallet I was lying on. I remembered the arm then and pulled back a loose yellow sleeve somebody had put on me. Outside of a little swelling and a bright pink scar under a clear plastic patch, it was as good as new.

Something clicked, and a little door in the wall slid back. The man named Orfeo stuck his head in.

"Good, you're awake. About time. I'm about to field-strip the Z-guns. You'll watch."

I got up and discovered that my knees didn't wobble any more. I felt strong enough to run up a wall. And hungry. Just thinking about ham and eggs made my jaws ache. Orfeo tossed me a set of yellow coveralls from a closet back of a sliding panel.

"Try these. I cut them down from Jongo's old cape."

I pulled them on. The cloth was tough and light and smooth as glove silk.

"How are you feeling?" Orfeo was looking me up and down.

"Fine," I said. "How long did I sleep?"

"Ninety-six hours. I doped you a bit."

I ran a finger over my new scar. "I don't understand about the arm. I remember it as being broken. Broken bad."

"A Hunter has to know a little field medicine," he said. "While I was about it, I gave you a good worming and balanced up your body

chemistry." He shook his head. "Bloody wonder you could walk, the rot that boiled out of you. Bloody microbe culture. How's your vision?"

I blinked at the wall. If there'd been a fly there, I could have counted his whiskers. "Good," I said. "Better than it's ever been."

"Well, you're no good to me sick," he said, as if he had to apologize.

"Thanks," I said. "For the arm, and the bath and the pretty yellow pajamas, too."

"Don't thank me. The Lady Raire took care of that part."

"You mean . . . the girl . . .?"

"She's the Lady Raire, Jongol! And I'm Sir Orfeo. As for the washup and the kit, someone had to do it. You stank to high heaven. Now come along. We've a great deal to cover if you're to be of any use to me on the hunt."

The armory was a small room lined with racks full of guns that weren't like any guns I'd ever seen before. There were handguns, rifles, rocket-throwers, some with short barrels, some with just a bundle of glass rods, some with fancy telescopic sights, one that looked like a flare pistol with a red glass thermometer on the side, and there were a few big elephant guns of Earth manufacture. The whole room glittered like Tiffany's front window. I ran a finger along a stock made of polished purple wood, with fittings like solid gold. "It looks like Mr. Desroy goes first class."

"Keep your hands off the weapons until you know how to service them." Sir Orfeo poked buttons. A

table tilted up out of the floor, and a section of ceiling over it glared up brighter than before. He flipped a switch, and the lock-bar on a rack snapped up, and he lifted out a heavy-looking, black-stocked item with a drum magazine and three triggers and a flared shoulder plate, chrome plated.

"This is a Z-gun," he said. "It's a handy all-around piece, packs .8 megaton/seconds of firepower, weight four pounds three ounces." He snapped a switch on the side back and forth a couple of times and handed the gun across to me.

"What's a megaton/second?" I asked him.

"Enough power to vaporize the yacht if it were released at one burst. At full gain the Z-gun will punch a 3mm hole through an inch of flint steel at a range of five miles with a five millisecond burst." He went on to tell me a lot more about Z-guns, crater-rifles, infinite repeaters, filament pistols.

At the end of it I didn't know much more about the weapons Lord Desroy would be using on his hunt, but I was feeling sorry for whatever it was he was after.

Sir Orfeo took me back to the little room I'd waked up in, showed me how to work a gadget that delivered a little can of pink oatmeal, steaming hot. I sniffed it; it smelled like seaweed. I tasted it. It was flat and insipid, like paper mache.

"Sir Orfeo, I hate to complain about a free gift," I said. "But are you sure this was meant for a man to eat?"

"Jongo wasn't really a man." I kind of goggled at him. "What was he?"

"A Lithian. Very good boy, Jongo. With me for a long time." He glanced around the room. "Damned if it doesn't give me a touch of something-or-other to see you in his kennel."

"Kennel?"

"Nest, pitch, call it cabin if you like." Sir Orfeo beetled a fine eyebrow at me. "Don't be putting on airs, Billy Danger. I've no patience with it."

He left me there to dine in solitude. Afterwards, he gave me a tour of the ship. He was showing me a fancy leather and inlay lounge when Lord Desroy came in.

"Ah, there you are, Desroy," Orfeo said in a breezy way. "Just occurred to me you might like to have Jongo — ah, Billy Danger, that is — do a bit of a dust-up here in the lounge."

"How now? Hast lost thy wits, Orfeo? Hie the moon-calf hence i' the instant!"

"Steady on, Desroy. Just thought I'd ask —"

"I've a whim to chide the varlet for his impertinence!" the big boss barked and took a step toward me. Orfeo pushed me behind him.

"Don't blame the boy. My doing, you know," he said in a nice cool tone.

"Thy role of advocate for this scurvy patch would want credit, an I stood not witness on't!"

We went on down the stairs. Instead of looking mad, Sir Orfeo was smiling and humming between his

teeth. He dropped the smile when he saw me looking at him.

"I advise you to stay out of Lord Desroy's way, Jongo. For now, he's willing to humor me along; I have a carefully nurtured reputation for temperament, you see. If I get upset the game might turn out to be scarce. But if you ruffle his feathers by being underfoot, he might act hastily."

"He has a strange way of talking," I said. "What kind of accent is that?"

"Eh? Oh, it's a somewhat archaic dialect of English. Been some three hundred years since his lordship last visited Earth. Now, that's enough gossip, Jongo —"

"It's Billy Dan —"

"I'll call you Jongo. Shorter. Now let's get along to Hold F, and you can earn your keep by polishing a spot of brightwork in Environmental."

The polishing turned out to be a job of scraping slimy deposits off the valves and piping. Sir Orfeo left me to it while he went back up and joined in whatever they were doing on the other side of the forbidden door.

IV

One day Sir Orfeo showed me a star chart and pointed out the relative locations of Earth, Gar 28, the world we were headed for at the moment, and Zeridajh, far in toward the big gob of stars at the center of the galaxy.

"We'll never get there," I said. "I read somewhere it takes a hundred thousand years to cross the galaxy; Gar 28 must be about ten light-years

away; and Zeridojh is thousands!"

He laughed. "The limiting velocity of light is a myth, Jongo," he said. "Like the edge of the world your early sailors were afraid they'd fall over—or the sound barrier you used to worry about. This vessel could reach Zeridajh in eighteen months, if she stretched her legs."

I wanted to ask him why Lord Desroy picked such a distant part of the sky to go hunting in, but I'd learned not to be nosy. Whatever the reasons were, they were somebody's secret.

After my first few weeks away from all time indicators, I began to develop my own internal time-sense, independent of the three-hour cycles that were the Galactic shipboard standard. I could sense when an hour had passed, and looking back, I knew, without knowing how I knew, just about how long I'd been away from Earth. I might have been wrong—there was no way to check—but the sense was very definite, and always consistent.

I had been aboard just under six weeks when Sir Orfeo took me to the personal equipment room one day and fitted me out with thermal boots, leggings, gloves, a fancy pair of binocular sunglasses, breathing apparatus, a back-pack and a temperature suit. He spent an hour fussing over me, getting everything fitted just right. Then he told me to go and tie down in my digs. I did, and for the next hour the yacht shook and shrilled and thumped. When the noise stopped, Sir Orfeo came along and yelled to me to get into my kit and come down to F Hold. When

I got there, walking pretty heavy with all the gear I was carrying or had strapped to my back, he was there checking items off a list.

"A little more *juldee* next time, Jongo," he snapped at me. "Come along now; I'll want your help in getting the ground-car out ship-shape."

It was a powerful-looking vehicle, wide, squatty, with tracks like a small tank, a plastic bubble dome over the top. There was a roomy compartment up front full of leather and inlaid wood and brightwork, and a smaller space behind, with two hard seats. Lord Desroy showed up in his Frank Buck bush jacket and jodhpurs and a wide-brimmed hat; the Lady Raire wore her white coverall. Sir Orfeo was dressed in his usual tailored gray with a filament pistol strapped to his hip and a canteen and bush knife on the other side. We all wore temperature suits, which were like long-handled underwear, under the coveralls. "Keep your helmet closed, Jongo," Sir Orfeo told me. "Toxic atmosphere, you know."

He pushed a button and a door opened up in the side of the hold, and I was looking out at a plain bluish grass. A wave of heat rolled in, and the thermostat in my suit clicked and right away it turned cool against my skin. Sir Orfeo started up, and the car lifted a couple of inches from the floor, swung around and slid out under the open sky of a new world.

For the next five hours I perched on my seat with my mouth open, taking in the sights: the high,

blue-black sky, strange trees like overgrown parsley sprigs, the leathery grass that stretched to a horizon that was too far away—and the animals.

The things we were after were big crab-armored monstrosities, pale purple and white, with mouths full of needle-pointed teeth and horns all over their faces. Lord Desroy shot two of them, stopping the car and going forward on foot. I guess it took courage, but I didn't see the point in it. Each time, he and Sir Orfeo made a big thing of hacking off one of the horns and taking a lot of pictures and congratulating each other. The Lady Raire just watched from the car. She didn't seem to smile much.

We loaded up and went on to another world then, and Milford shot a thing as big as a diesel locomotive. Sir Orfeo never talked about himself or the other members of the party, or the world they came from, but he explained the details of the hunt to me, gave me pointers on tracking and approaching, told me which gun to use for different kinds of quarry. Not much of it stuck. After the fourth or fifth hunt, it all got a little stale.

"This next world is called Gar 28," Sir Orfeo woke me up to tell me after a long stretch in space. "Doesn't look like much; dry, you know; but there'll be keen hunting. I found this one myself, running through tapes made by a survey team a few hundred years ago. The fellows we'll be going after they called dire-beast. You'll understand why when you see the beggars."

He was right about Gar 28. We started out across a rugged desert of dry-baked pink and tan and yellow clay, fissured and cracked by the sun, with points of purplish rock pushing up here and there, a line of jagged peaks for a horizon. It didn't look like game country to me, but then I wasn't the Hunter.

The sun was high in the sky, too bright to look at, a little smaller than the one I was used to. It was cool and comfortable inside the car; it hummed along a couple of feet above the ground, laying a dust trail behind it from the air blast it was riding on. The tracks were for hills that were too steep for the air cushion to climb.

About a mile from the yacht, I looked back; it was just a tiny glint, like a lost needle, among all that desolation.

Up front, on the other side of the glass panel, Lord Desroy and Sir Orfeo and the Lady Raire chatted away in their odd language, and every now and then said something in that strange brand of English they spoke. I could hear them through a speaker hookup in the back of the car. If I'd had something to say, I don't know whether they could have heard it or not.

After two hours run, we pulled up at the top of a high escarpment. Sir Orfeo opened the hatch, and we all got out. I remembered Sir Orfeo had told me always to stay close with his gun when we were out of the car so I got out one of the crater rifles and came up behind them in time to see Sir Orfeo point.

"There — by the double peak at the far end of the fault-line!" He snapped his goggles up and whirled to start back and almost slammed into me. A very thin slice of an instant later I was lying on my back with my head swimming, looking into the operating end of his filament pistol.

"Never come up behind me with a weapon in your hand!"

I got up, with my head still whanging from the blow he'd hit me, and followed them to the car, and we went tearing back down the slope the way we'd come.

It was a fast fifteen-minute run out across the flats toward where Sir Orfeo had seen whatever it was he saw. I had my binocular goggles on and was looking hard, but all I saw was the dusty plain and the sharp rock spires, growing taller as we rushed toward them. Then Sir Orfeo swung the car to the left in a wide curve and pulled to a stop behind a low ridge.

"Everybody out!" he snapped and popped the hatch up and was over the side.

"Don't sit there and brood, Jongo!" He was grinning, excited and happy now. "My crater rifle; Z-guns for his lordship and Lady Raire!"

I handed the weapons down to him, stock-first, the way he'd told me.

"You'll carry the extra crater and a filament pistol," he said and moved back up front to go into conference with the others. I strapped on the gun and grabbed the rifle and hopped down just as Sir Orfeo and Lord Desroy started off. The Lady

Raire followed about ten feet back, and I took up my post offside to the right about five yards. My job was to keep that relative position to Sir Orfeo, no matter what, until he yelled, "close!" Then I was to move in quick. That was about all I knew about a hunt. That, and don't come up behind Sir Orfeo with a gun.

The sun still seemed to be about where it had been when we started out. There was a little wind blowing from behind, keeping a light cloud of dust rolling along ahead. It seemed to me I'd heard somewhere that you were supposed to sneak up on game from upwind, but that wasn't for me to worry about. All I had to do was maintain my interval. We came into a slight rise of ground. The wind was picking up, driving a thick curtain of dust ahead. For a few seconds I couldn't see anything but that yellow fog swirling all around. I stopped and heard a sound, a deep *thoom! thoom! thoom!*

"Close! Damn your eyes, Jongo, close!" Sir Orfeo shouted. I ran toward the sound of his voice, tripped over a rock, and went flat. I could hear Lord Desroy shouting something and the *thoom-thoom*, louder than before. I scrambled up and ran on forward, and as suddenly as it had blown up, the gale died and the dust rolled away from us. Sir Orfeo was twenty feet off to my left, with Lord Desroy beside him. I changed direction and started toward them, and saw Sir Orfeo make a motion, and Lord Desroy brought his rifle up and I looked where he was aiming and out of the dust cloud a thing came galloping that was right out of

a nightmare. It was big—twenty, thirty feet high, running on two legs that seemed to have too many knees. The feet were huge snowshoelike pads, and they rose and fell like something in a slow-motion movie, driving dust from under them in big spurts, and at each stride the ground shook. A second one came charging out of the dust cloud, and it was bigger than the first one. Their hides were a glistening greenish brown, except where they were coated with dust, and there was a sort of cape of ragged skin flapping from the narrow shoulders of one as he ran, and I thought he must be shedding. Thick necks rose from the shoulders, with wide, flat heads that were all mouth, like the bucket of a dragline. And then a third, smaller edition came scampering after the big fellows.

All this happened in maybe a second or two. I had skidded to a halt and was standing there in a half crouch, literally paralyzed. I couldn't have moved if an express train had been coming straight at me. And these were worse than express trains.

They were about a hundred and fifty yards away when Lord Desroy fired. I heard the Z-gun make a sharp whickering noise and an electric blue light flashed up and lit the rocks like lightning, and the lead monster broke stride and veered off to the left, running irregularly now. He leaned, losing his balance, but still driving on, His neck whipped back and up and the head flailed offside as he went down, hit, bounced

half upright, his legs still pumping, then went into a tumble of flailing legs and neck and the dust closed over him, and only then I heard the shuddering boom he made hitting the ground.

And the second one was still coming, closer now than number one had been when he was hit, and the little fellow—a baby, only fifteen feet high—sprinted up alongside him, tilted his head sideways and snapped at his big brother's side.

I saw a flash of white as the hide and muscle tore. Then the little one was skidding to a halt on his haunches, his big jaws working hard over the bite he'd gotten, while the one that had supplied the snack came on, looming up as high as a two-story house, black blood streaming down his flank, coming straight at Lord Desroy. I saw the Lady Raire then, just beyond him, right in the path of the charge; and still I couldn't move. Lord Desroy had his gun up again and it flickered and flashed and made its slapping noise and the biped's head, that it had been carrying high on its long neck, drooped and the neck went slack and the head came down and hit the ground and the big haunches, with the big feet still kicking, went up and over high in the air in a somersault and slammed the ground with a smash like two semi's colliding, and flipped up and went over again with one leg still pumping, and then it was looping the loop on the ground, kicking up a dust cloud that hid everything beyond it.

"Watch for baby!" Sir Orfeo yelled, and I could barely hear his

voice through the thudding and pounding. Then the little one stalked out of the dust, tossing his head to help him swallow down what he had in his mouth. Sir Orfeo brought his gun up, and the cub was coming straight at me, and the gun tracked him and went off with a flat crackkk! that kicked a pit the size of a wash-tub in the rock beside him, and the young one changed direction and trotted off, and Sir Orfeo let him go.

The dust was blowing away now, except for what number two was still kicking up with one foot that was twitching, still trying to run. Lord Desroy and Sir Orfeo went over to it, and the Hunter used his pistol to put it out of its misery. It went slack, and a gush of fluid sluiced out of its mouth, and then suddenly, it was quiet.

"In sooth, the beast raised a din to make the ground quake," Lord Desroy called in a light-hearted tone. He walked around the creature, and Sir Orfeo went over to the other one, and about then I got my joints unlocked and trotted after him. Sir Orfeo looked up as I came up and gave me a grin.

"I think perhaps you'll make a gun-boy yet, Jongo," he said. "You were a bit slow coming up, but you held steady as a rock during the charge."

And for some reason I felt kind of ashamed of myself, knowing how it had really been.

V

Lord Desroy spent quarter of an hour taking movies of the dead

animals; then we made the hike back.

"We were lucky, Desroy," Sir Orfeo told him as we settled into our seats. "Takes a bit of doing to knock over a fine brace on the first stalk! I suggest we go back to the yacht now and call it a day."

"What foolery's this?" Lord Desroy boomed out. "Wi' a foison o' quarry to hand, ye'd skulk back to thy comforts wi'out further sweat or endeavor?"

"No use to start pushing our luck — "

"Prithee, spare! Ye spoke but now of bull-devil, lurking in the crags yonder."

"Plenty of time to go after them later." Orfeo was still smiling, but there was an edge to his voice. He didn't like to have anyone argue with him about a hunt.

"A pox on't!" Lord Desroy slammed his fist down on the arm of his chair. "Dost dream I'd loiter in my chambers with game abounding? Drive on, I say, or I'll take the tiller self!"

Sir Orfeo slapped the drive lever in and the engines started up with a howl.

"I was thinking of the Lady Raire," he said. "If you're that dead-set on running us all ragged, very well! Though what the infernal rush is, I'm sure I don't know!"

As usual, the Lady Raire sat by quietly, looking cool and calm and too beautiful to be real. Lord Desroy got out a silver flask and poured out yellow wine for her and himself, then lolled back in his chair and gazed out at the landscape rushing past.

An hour brought us to the foothills of the range that had been visible from the yacht. The going was rougher here; we switched over to tracks for the climb. Sir Orfeo had quit humming to himself and was beginning to frown, as if maybe he was thinking about how nice it would be to be back in his apartment aboard the yacht, having a bath and a nice dinner, instead of being in for another four hours, minimum, in the car.

We came out on a high plateau, and Sir Orfeo pulled the car under a steep escarpment and opened up and climbed down without a word to anybody. I had his crater rifle ready for him; I took the other guns and got out and Lord Desroy looked around and said something I didn't catch.

"They're here right enough," Sir Orfeo answered him, sounding mad. He walked off, and Lord Desroy and the girl trailed. I had to scramble up on rough ground to get to my proper position off to Sir Orfeo's right. He was headed into a narrow cut that curved up and away in deep shadow. The sun still seemed to be in the same spot, directly overhead. My suit kept me comfortable enough, but the heat reflecting back from the stone scalded my face.

Sir Orfeo noticed me working my way along up above him and snarled something about where the devil did I think I was going; I didn't try to answer that. I'd gotten myself onto a ledge that ran along twenty feet above the trail, with no way down. I stayed abreast of Sir Orfeo, awaiting a chance to rejoin them.

We kept going this way, nobody talking, the happy look long gone from Lord Desroy's face now, the Lady Raire walking just to his left, Sir Orfeo out in front twenty paces. The trail did a sharp jog to the left, and I had to scramble to catch up; as I did, I saw something move on the rocks up ahead.

Being above the rest of them, I had a view past the next outcropping that hung out over the trail; the movement I saw was just a flicker of something in the shadows, spread out flat on the rock like a giant leech. I felt my heart take a jump and jam itself up in my throat and I tried to yell and choked and tried again: "Sir Orfeo! Up ahead! On the right!"

He stopped dead, swung his gun around and up, at the same time motioned to the others to halt. Lord Desroy checked for just a moment; then he started on up toward Sir Orfeo. The animal — creature — thing — whatever it was — moved again. Now I could see what looked like an eye near the front, surrounded by a fringe of stiff reddish hairs. I got just the one quick look, before I heard the whisper of a Z-gun from below, and the thing jerked back violently and disappeared into black shadow. Down below, Lord Desroy was lowering his gun.

"Well, that tears it!" Sir Orfeo said in a too-loud voice. "Nice bit of shooting, Desroy! You failed to keep to your position, fired without my permission and then succeeded in wounding the beggar! Anything else you'd care to try before we go into that cranny after him?"

"Methinks you skirt insolence, Orfeo," Lord Desroy started.

"Not intentionally, as I'm damned!" Orfeo's face was red; I could see the flush from where I was perched, twenty feet above him. "I'll remind you *I'm* master of the Hunt, *I'm* responsible for the safety of the party —"

"I'm out of patience wi' cautious counsel!" Lord Desroy roared. "Shall I be merely cheated o' my sport whilst I attend you swoons?"

Sir Orfeo started to answer that, then caught himself and laughed.

"Pon my word, you have a way about you, milord! Now, I suggest we give over this tomfoolery and give a thought to how we're going to get him out of there!" He turned and squinted up toward the place where the thing had disappeared.

"I warrant ye make mockery of me," Lord Desroy growled. He jerked his head in my direction. "Dispatch yon natural to draw forth the beast!" Sir Orfeo looked up, too, then back at his boss.

"The boy's new, untrained," he said. "That's a risky bit of business —"

"D'ye aver thy gun-boy lacks spirit, then?"

Sir Orfeo gave me a sharp look. "By no means," he said. "He's steady enough. Jongo!" His voice changed tone. "Press on a few yards, see if you can rout the blighter out."

I didn't move. I just squatted where I was and stared down at him. The next instant, something smashed against the wall beside my head and knocked me sprawling. I came up

spitting dust, with my head ringing, and Lord Desroy's second shot crashed close enough to drive stone chips into my cheek.

"Sir Orfeo!" I got the yell out. "He's shooting at *me!*"

I heard Sir Orfeo shout, and I rolled over and looked for a hole to dive into and in that instant saw the wounded leech-thing flow down across the rock, disappear for a second behind a spur, come into view again just above the trail, about thirty feet above Lord Desroy, between him and the Lady Raire.

It must have made some sound I couldn't hear. Before I could shout Lord Desroy whirled and brought his gun up and it crackled and vivid shadows winked on the rocks. The animal leaped out and down, broad as a blanket, leathery dark, right into the gun. Lord Desroy stood his ground, firing steadily into the leech-thing until the instant it struck full on him, covering him completely. It gathered itself together and lurched toward the Lady Raire, standing all alone in the trail, sixty feet behind where I was. As it moved, it left a trail of what was left of Lord Desroy.

Sir Orfeo had fired once, while the thing was in the air. He ran toward it, stopped and took aim and fired again. I saw a movement off to the right, up the trail, and a second leech thing was there coming up fast behind Sir Orfeo, big as a hippopotamus, wide and flat and with its one eye gleaming green.

I yelled. He didn't look up, just stood where he was, back to the leech, firing, and firing again. The wounded leech was close to the Lady

Raire now, and I saw then that she had no gun, and I remembered that Lord Desroy had taken it and had been carrying it for her. She stood there, facing the thing, while Sir Orfeo poured the fire into it. At each shot, a chunk flew from its back, but it never slowed—and behind Sir Orfeo the other one was closing the gap.

Sir Orfeo could have turned his fire on it and saved himself; but he never budged. I realized I was yelling at the top of my lungs, and then I remembered I had a gun, too, slung across my back to free my hands for climbing. I grabbed for it, wasted a second or more fumbling with it, got it around and to my shoulder and aimed and couldn't find the firing stud and had to lower it and look and brought it up again and centered it on the thing only yards from Sir Orfeo's exposed back and squeezed—

The recoil almost knocked me off my feet, not that it was bad, but I wasn't expecting it. I got back on target and fired again, and again; and it kept coming, Six feet from Sir Orfeo the thing reared up, tall as a grizzly, and I got a glimpse of a yellow underside covered with shredding hooks, and I fired into it and then it was dropping down on Sir Orfeo and at the last possible second he moved; but not far enough, and the thing struck him and knocked him rolling and then he and it lay still. I traversed the gun across to the other beast and saw that it was down, ten feet from Milady Raire, bucking and writhing, coiling back on itself. It flopped

up against the side wall and rolled back down, half on its back and lay still and the echoes of its struggle went racketing away up the ravine. I heard Sir Orfeo make a moaning sound where he lay all bloody and the Lady Raire looked up and her eyes met mine and we looked at each other across the terrible silence.

VI

Sir Orfeo was still alive, with all the flesh torn off the back of his thighs and the glistening white bone showing.

He caught at my arm when I bent over him. "Jongo — your job now — the Lady Raire . . ."

I was shaking, and tears were running down my face. I tried not to look at his horrible wounds.

"Buck up, man." Sir Orfeo's voice was a groan of agony. "I'm depending on you . . . keep her safe . . . your responsibility, now . . ."

"Yes," I said. "I'll take care of her, Sir Orfeo."

"Good . . . now . . . water. Fetch water . . . from the car . . ."

I ran off to follow his orders. When I came back the Lady Raire met me, looking pale and with dust sticking to the perspiration on her forehead. She told me that he'd sent her to investigate a sound and then dragged himself to where his filament pistol had fallen and blown his head off.

I used a crater gun to blast shallow pockets under the overhanging rock beside the trail; she help-

ed me drag the bodies to them. Then we went back down to the car. We carried our guns at the ready, but nothing moved in all that jumble of broken rock. Sir Orfeo had been lucky about finding game, all right.

The Lady Raire got into the driver's seat and headed back down the way we'd come. When we reached level ground, she stopped and looked around as if she didn't know which way to go. I tapped on the glass and her head jerked around. I think she had forgotten I was there. Poor Lady Raire, so all-alone.

"That direction, Milady," I said, and pointed toward where the yacht was, out of sight over the horizon.

She followed my directions. Three hours later we came up over a low ridge, and there was the yacht, glittering far away across the desert. Another forty-five minutes and we pulled up in front of the big cargo door.

She jumped down and went to it and twinkled her fingers on a polished metal disk set in the hull beside it. Nothing happened.

She went around to the smaller personnel door, and the same thing happened. Then she looked at me. Having her look at me was an event even then.

"We cannot enter," she said in a whisper. "I mind well 'twas Sir Orfeo's custom to reset the entry code 'ere each planetfall lest the yacht be rifled by aborigines."

"There's got to be a way," I said. I went up and hammered on the panel and on the control disk and

walked all the way around the yacht and back to the door that I had sneaked in by, that first night, and tried again, but with no luck. A terrible, hollow feeling was growing inside me.

"I can shoot a hole in it, maybe," I said. My voice sounded weak in the big silence. I unslung the crater gun and asked her to step back and then took aim from ten feet and fired.

The blast knocked me down, but the metal wasn't even scorched.

I got to my feet and brushed dust off my shins, feeling the full impact of the situation sinking in like the sun that was beating down on my back. The Lady Raire looked at me, not seeing me.

"We must . . . take stock of what supplies may be in the car," she said after a long pause. "Then canst thou make for thyself a pallet here in the shadow of the boat."

"You mean — we're just going to sit here?"

"If any rescue comes, we must be close by the yacht, else they'll not spy us in this endless waste."

I took a deep breath and swallowed hard. "Milady, we can't stay here."

"Indeed? Why can we not?" She stood there, a slim, aristocratic little girl, giving me a level look from those cool gray eyes.

"I don't know much about the odds against anybody finding us, but we've got a long wait at best. The supplies in the car won't last long. And the heat will wear us down. We have to try to find a



better spot. Now. While we're still strong." I tried to sound confident, as if I knew what I was doing. But my voice shook. I was scared; scared sick. But I know I was right about moving on.

"Tis a better think to perish here than to live on in the wilderness, without hope."

"We're not dead yet, Milady. But we will be if we don't do something about it, now."

"I'll tarry here," she said. "Flee if thou wilt, Jongo."

"Sir Orfeo told me to take care of you, Milady. I'm going to do my best to follow his order."

She looked at me coolly. "Wouldst force me, then?"

"I'm afraid so, Milady."

She walked to the car stiffly. I got in to my usual seat in back and she started up and we headed out across the desert.

We drove until the sun set and a huge, pockmarked moon rose, looking a lot like the old one back home, except that it was almost close enough to touch. We slept then, and went on, still in the dark. Day came again, and I asked the Lady Raire to show me how to drive so I could relieve her at the wheel. After that, we drove shift on, shift off, holding course steady to the northwest.

On what I estimated was the third day, Earth-style, we reached a belt of scrub-land. Half an hour later the engine made a gargly sound and died, and wouldn't go again.

I went forward on foot to a rise and looked over the landscape. The

scrub-dotted waste went on as far as I could see. When I got back to the car, the Lady Raire was standing beside it with a filament pistol in her hand.

"Now indeed is our strait hopeless." She held the gun out to me. "Do thy final duty to me, Jongo." Her voice was suddenly a breathless whisper.

I took the gun; then I whirled and threw it as far as I could. When I faced her, my hands were shaking.

"Don't ever say anything like that again!" I said. "Not ever!"

"Would you then have me linger on, to wither in this heat, shrivel under the sun?"

I grabbed her arm. It was cool, as smooth as satin. "I'm going to take care of you, Milady," I said. "I'll get you home again safe, you'll see!"

She shook her head. "I have no home, Jongo. My loyal friends are dead."

"I'm still alive. And my name's not Jongo. It's Billy Danger. I'm human, too. I'll be your friend."

She looked straight at me. It was the first time she ever really looked at me. I looked back, straight into her eyes. Then she smiled.

"Thou art valiant, Billy Danger," she said. "How can I then shrink from duty? Lead on, and I'll follow while my strength lasts."

The car was stocked with food concentrates, plus a freezer full of delicacies that would have to be eaten first, before they spoiled. The problem was water.

The tanks held about thirty gallons, but with the distiller out of action, there'd be no refilling them. There were the weapons and plenty of ammunition, first-aid supplies, some spare communicators, goggles, boots. It wasn't much to set up housekeeping on.

For the next week, I quartered the landscape over a radius of about five miles, looking for a spring or water hole, with no luck. By that time, the fresh food was gone — eaten or spoiled, and the water was down to two ten-gallon jugs full.

"We'll have to try a longer hike," I told the Lady Raire. "There may be an oasis just one ridge farther than I've gone."

"As you wish, Billy Danger," she said, and gave me the smile, like sunrise after a long night.

We packed up the food and water and a few extras. I slung a Z gun over my shoulder, and started off at twilight, after the worst of the day's heat.

It was monotonous country, just hilly enough to give us a long pull up to one low crest after another and an ankle-turning slog down the far side. I steered due west, not because the prospects looked any better in that direction, but just because it was easier to steer straight toward the setting sun.

We did about twenty miles before dark, another forty in two marches before the sun rose. I worried about the Lady Raire, but there was nothing I could do that I wasn't already doing. We slogged on toward the next ridge, hoping for a miracle on the other side. And

always the next side looked the same.

We rested in the heat of the long day, then marched on, into the glare of the sun. And about an hour before sunset, we saw the cat.

VII

He was standing on a rock on the crest of a rise, whipping his tail from side to side in a slow, graceful motion. He made a graceful leap to a lower rock and was just a dark shadow moving against the slope ahead. I unlimbered my rifle and watched him close. At thirty feet, he paused and sat down on his haunches and wrinkled his face and began licking his chest. He finished and stuck out a long tongue and yawned and then rose and went loping off into the dusk, the way he'd come.

All the while, we stood there and watched him, not saying a word. As soon as he was gone, I went to where he'd been sitting. His paw-prints were plain in the powdery dust. I started believing in him, then. I might see imaginary cats, but never imaginary cat tracks. We set off following them.

The water hole was in a hollow in the rock, hidden behind a wall of black-green foliage growing on the brink of a ravine. The Lady Raire stopped to gaze at it, but I stumbled down the slope and fell full length in the water and drank in big gulps and luckily choked and had a coughing fit before I could drink myself to death.

There was a steep jumble of rock rising behind the pool, with the dark mouths of caves showing. I picked my way around the pond in the near-dark with my gun ready in my hand. There was a smell of cat in the air. I was grateful to tabby for leading me to water, but I didn't want him jumping on our backs now that it looked like we might live another few days.

The caves weren't much, just holes about ten feet deep, not quite high enough to stand up in, with enough dirt drifted in them to make a more or less level floor.

The Lady Raire picked out one for herself, and I helped her clean out the dead leaves and cat droppings and fix up a stone that could be rolled into the opening to block it, in case anything bigger than a woodchuck wanted in. Then she picked out another one and told me it was mine and started in on it. It was dark when we finished. I saw her to her den, then sat down outside it with the pistol in my hand and went to sleep

— and woke hungry, clear-headed, and wondering how a cat happened to be here, in this super-Mojave. I thought about the dire-beasts and the meat-shredding leeches that had killed Lord Desroy and Sir Orfeo. The cat was no relative of theirs. He had been a regulation-type black and gray and tan striped feline, complete with vertical-slitted pupils and retractable claws. He looked like anybody's house cat, except that he was the size of a collie dog.

I'd heard about parallel evolu-

tion, and I hadn't been too surprised when Sir Orfeo had told me about how many four-legged, one-headed creatures there were in the universe. But a copy this perfect wasn't possible.

That meant one of two things: Either I had dreamed the whole thing — which was kind of unlikely, inasmuch as when I looked down, I saw two more cats just like the other one, in the bright moonlight down by the water — or our yacht wasn't the first human-owned ship to land on Gar 28.

In the morning light, the water looked clear and inviting. The Lady Raire studied it for a while, then called to me. "Billy Danger, watch thee well the while I lave me. Methinks 'twill be safe enow." She glanced my way, and I realized she was talking about going for a swim. I just stared at her.

"How now, art stricken dumb?" she called.

"The pond may be full of poison snakes, crocodiles, quicksand and undertows," I said.

"I'd as lief be devoured as go longer unwashed," she proceeded to unzip the front of the tunic she'd changed into from the temperature suit and stepped out of it. And for the second time in one minute, I was struck dumb. She stood there in front of me, as naked as a goddess and as beautiful, and said: "I charge thee, Billy Danger, take not thine eyes from me," and turned and waded down into the water. It was the easiest order to follow I ever heard of.

She stayed in for half an hour, stroking up and down as unconcerned as if she were in the pool at some high-priced resort at Miami Beach. Once or twice she ducked under and stayed so long I found myself wading in to look for her. After the second time I complained, and she laughed and promised to stay on top.

"Verily hast thou found a garden in the wilderness, Billy Danger," she said after she had her clothes back on. "Tis so peaceful — and in its rude way, so fair."

"Not much like home, though, I guess, Milady," I said. But she changed the subject, as she always did when the conversation brought back too many memories.

In the next few days, I made two trips back to the car, brought in everything that looked as if it might be useful; then we settled down to what I might describe as a very quiet routine. She strolled around, climbed the rocks, brought home small green shrubs and flowers that she planted around the caves and along the path and watered constantly, using a pot made of clay from the poolside cooked by a Z gun on wide beam. I spent my time exploring to the west and north and trying to make friends with the cats.

There were plenty of them; at certain times of the day, there'd be as many as ten in sight at one time, around the water hole. They didn't pay much attention to us; just watched us when we came toward them, and at about fifteen feet, rose casually and moved off into the thick growth along the ra-

vine. They were well fed and lazy, just nice hearth-side tabbies, a little larger than usual.

There was one with a few streaks of orange in among the black and tan that I concentrated on, mainly because I could identify him easily. Every time I saw him I'd go out and move up as close as I could without spooking him, sit down and start to play with a ball of string from the car. He sat and watched. I'd roll it toward him, then pull it back. He moved in closer. I let him get a paw on it, then jerked it. He went after it and cuffed it, and I pulled it in and tossed it out again.

In a week the game was a regular routine. In two, he had a name — Eureka — and was letting me scratch him between the ears. In three, he had taken to lying across the mouth of my cave, not even moving when I stepped over him going out.

The Lady Raire watched all this with a sort of indulgent smile. According to her, cats were pets on most of the human inhabited world she knew of. She wasn't sure where they had originated, but she smiled when I said they were a native of Earth.

"In sooth, Billy Danger, 'tis a truism that each unschooled mind fancies itself the center of the Universe. But the stars were seeded by Man long ago, and by his chattels with him."

At first, the Lady Raire didn't pay much attention to my pet, but one day he showed up limping, and she spent half an hour carefully re-

moving a splinter from his foot. The next day she gave him a bath, and brushed his fur to a high gloss. After that, he took to following her on her walks. And it wasn't long before he took to sleeping at the mouth of her cubbyhole. He got more petting that way.

I watched the cats, trying to see what it was they fed on, on the theory that whatever they ate we could eat too. Our concentrates wouldn't last forever. But I never saw them pounce on anything. They came to the water hole to drink and lie around in the shade; then they wandered off again into the undergrowth. One day I decided to follow Eureka.

"An thou wilt," the Lady Raire said, smiling at me. "Tho' I trow thy cat o' mountain lives on naught but moonbeams."

"Baked moonbeam for dinner coming up," I said.

The cat led me up the rocks and through the screen of alien foliage at the north side of the hollow, then struck out along the edge of the ravine, which was filled from edge to edge by a mass of deep-green vines.

The chasm was about three hundred yards long, fifty yards wide; I couldn't see the bottom under the tangle of green, but I could make out the big stems, as thick as my leg, snaking down into the deep shadows for at least a hundred feet. And I could see the cats. They lay in crotches of the big vine, walked delicately along the thick stems, peered out of shadows with green eyes. There were a few on the

rim, sitting on their haunches, watching me watching them. Eureka yawned and switched his tail against my thigh, then made a sudden leap and disappeared into the green gloom. By getting down on all fours and shading my eyes, I could see the broad branch he'd jumped to. I could have followed, but the idea of going down into the maze full of cats lacked appeal. I got up and started off along the rim. I noticed that it was scattered with what looked like chips of thick eggshell.

The ravine shallowed out to nothing at the far end. The vines were less dense here, and I could see rock strata slanting down into the depths. There were strange knobs and shafts of blackish rock imbedded in the lighter stone, I found one protruding near the surface and saw that it was a fossilized bone. The rock was full of them. That would be a matter of deep interest to a paleontologist specializing in the fauna of Gar 28, but it was no help to me. I needed live meat. If there was any around — excepting the cats, and I didn't like the idea of eating them, for six or eight reasons I could think of off-hand — it had to be down below, in the shade of the greenery. The descent looked pretty easy, here at the end of the cut. I hitched my gun around front for quick access, and started down.

The rock slanted off under me at an angle of about thirty degrees. The big vines bending up over my head were tough, woody, scaled with dead-looking bark. Only a few green

tendrils curled up here, reaching for sunlight. The air was fresh and cool in the shade of the big leaves; there was a sharp, pungent odor of green life, mixed with the rank smell of cat. Fifty feet down the broken slope the growth got too thick to be ignored; it was switch over to limb-climbing or go back. I went on.

It was easy going at first. The stems weren't too close together to push between, and there was still plenty of light to see by. I could hear the cats moving around, back deeper in the growth. I reached a major stem, as big as my torso, and started down it. There were plenty of handholds here. Big seed pods hung in clusters near me. A lot of them had been gnawed, either by the cats or by what the cats ate. So far I hadn't seen any signs of the latter.

I broke off one of the pods. It was about a foot long, knobby and pale green. It broke open easily and half a dozen beans as big as egg yolks rolled out. I took a nibble of one. It tasted like raw beans. After a couple of weeks on concentrates, even that was good — if it didn't kill me.

I went down. The light was deep green now, a luminous dusk filtered through a hundred feet of foliage. The trunk I was following curved sharply, and I worked my way around to the up side, descended another ten feet, and my feet thunked solidly against something hard. I had to get down on all fours to see that I was on a smooth, curving surface of tarnished metal.

Something thumped beside me like a dropped blanket; it was Eureka, coming over to check on me. He sat and washed his face while I rooted around the base of the big vine, saw that it was growing out through a fracture in the metal. The wood had bulged and spread and shaped itself to conform to the opening. I had the impression that it was the vine that had burst the metal.

By crawling, I was able to explore an oval area about fifteen feet long by ten wide before the vines slanted in too close to let me move. All of it was the same iodine-colored metal, with no seams, no variations in contour, with the exception of the bulge around the break. If I wanted to see more, I'd have to do a little land-clearance. I got out the pistol and set it on needle-beam, cut enough wood away to get a look into a room the size of a walk-in freezer, almost filled with an impacted growth of wood.

I backed out then, wormed my way over to the big trunk and climbed back to the surface. There was a lot more to see, but what I wanted to do now was get back in a hurry and tell the Lady Raire that under the vines in the ravine I'd found a full-sized spaceship.

VIII

Fifteen minutes later, she stood on the rim of the ravine with me. I could dimly make out the whole three-hundred foot length of the ship, now that I knew what to look for. It was lying at an angle of about

fifteen degrees from the horizontal, the high end to the south.

"It must have been caught by an earthquake," I said. "Or a Garquake."

"I ween full likely she toppled thither," the Lady Raire said. "During a tempest, mayhap. Look thee, where a great fragment has fallen from the rim of the abyss. And see yon broken stones, crushed as she fell."

We found an access route near the south end, well worn by cats, and made an easier approach than my first climb. I led her to the hatch, and we spent the next hour burning the wood away from it, climbed through onto a floor that slanted down under a tangle of vine stem to a drift of broken objects half buried in black dirt at the low end. The air was cool and damp, and there was a sour smell of rotted vegetation and stagnant water. We waded knee deep in foul-smelling muck to a railed stair lying on its side, crawled along it to another open door.

I stepped through into a narrow corridor, and a faint, greenish light sprang up. I felt the hair stand up on the back of my neck.

"I misdoubt me not 'tis but an automatic system," Milady said calmly.

"Still working, after all this time?"

"Why not? 'Twas built to endure."

She pointed to a dark opening in a wall. "Yon shaft should lead us to the upper decks." She went past me, and I followed, feeling like a very small kid in a very large haunted castle.

The shaft led us to a grim-looking place full of broken piping and big, dark shapes the size of moving vans that Milady said were primitive ion-pulse engines. There was plenty of breakage visible, but only a few dead tendrils of vine. We climbed on forward, found a storeroom, a plotting room full of still-shiny equipment, and a lounge where built-in furniture stuck out from what was now the wall. The living quarters were on the other side of the lounge and beyond there was a room with a ring of dark TV screens arching up overhead around a central podium that had snapped off at the base and was hanging by a snarl of conduits. Beyond that point, the nose of the ship was too badly crushed to get into. There was no signs of the original owners around, with the possible exception of a few scraps that might have been human bone.

"What do you think, Milady?" I asked her. "Is there anything here we can use?"

"If so, 'twere wonderful, Billy Danger. Yet would I see more ere I abandon hope."

Back in the hold, she spent some time crawling over the big vines that came coiling up from somewhere down below.

"'Tis passing strange," she said. "These stems rise not from soil, but rather burgeon from the bowels of the vessel. And meseemeth they want likeness to the other flora of this world."

I pulled one of the big, leathery leaves over to me. It was heart shaped, about eight inches wide.

"It looks like an ordinary pea to me," I said. "Just overgrown — like the cats."

"We'll trace these to their beginnings, their mystery to resolve." The Lady Raire pointed. "An' mine eyes deceive me not, they rise through yonder hatch."

There was just room to squeeze through between the thigh-thick trunks, into a narrow service shaft. I flashed my light along it and saw bones.

"Just a cat," I said, more to reassure me than Milady. We went on, ducking under festoons of thick vine. We passed another cat skeleton, well scattered. There was a strange smell, something like crushed almonds with an under-taint of decay. The vines led fifty feet along the passage, then in through a door that had been forced outward off its hinges. The room beyond was a dark mass of coiled white roots. On its far side, faint twilight shone in through a break in the hull. There was a soft clink, like water dripping into a still pond, a faint rustling. I flashed my light down. The floor of the big room slanted off sharply. Down among the snarled roots, a million tiny points of amber light glowed. The Lady Raire took a step back.

"Come, Billy Danger! I like this not!"

That was as far as she got before the mass of vine roots in front of me trembled and bulged and all the devils in Hell came swarming out.

Something dirty white, the size of a football, jittering on six

spindly legs rushed at me, clicking a pair of jaws that opened sideways in a face like an imp in one of those medieval paintings. I jumped back and swung a kick and its biters clamped onto my boot toe like a steel trap. Another one bounced high enough to rip at my knee; the tough coverall held, but the hide under it tore. Something *zapp*'ed from behind my right ear and a flash of blue fire winked, and two of the things skittered away and a stink of burnt horn hit me in the face. All this in the first half second. I had my pistol up then, squeezing the firing lever, playing it over them like a hose. They curled and jumped and died and more came swarming over the dead ones.

"We're losing," I yelled. "We've got to bottle them up!" The big vine stem was on fire, and sap was bubbling out and spitting in the flames. I ducked down and grabbed up a dead one and threw him into the opening, and beamed another one that poked his snout through and took a step and tripped and went flat on my face. I threw my hands up to protect my head and heard a yowl, and something dark bounded across me, and there was a snap and a thud and I sat up and saw Eureka, whirling and pouncing, batting with both paws. Behind him the Lady Raire, splashed to the knee with brown, a smear of blood on her cheek, was aiming and firing as steadily as if she were shooting at clay pipes at the county fair. And then Eureka was sitting on his haunches, making a face at

me, and the Lady Raire was turning toward me, and there was a last awkward scuffling sound and then silence.

"Well, that answers one question," I said. "Now we know what the cats eat."

It was a hard climb back down along the lift shaft, out through the hold, and up to the last of the sunlight. She got out her belt medikit and started dabbing liquid fire into the cuts on my legs, back, arms and thighs. While she doctored, I talked.

"That was the hydroponics room. When the ship crashed, or fell in the ravine, or got caught in an earthquake, the hull was opened there — or near enough that the plants could sense sunlight. They went for it. Either the equipment that watered them and provided the chemicals they needed was still working, or they found water and soil at the bottom of the ravine. Maybe both. They liked it here; plenty of sunshine, anyway. They adapted and grew and with no competition from other plant life, they developed into what we found."

"There may be truth in thy imaginings, Billy Danger," Milady said. "The vessel's of a very ancient type; 'tis like to those in use on Zeridajh some seven thousand years since."

"That might be long enough for a plant to evolve giant size," I said. "Especially if the local sun puts out a lot of hard radiation. Same for the cats. I guess there were a couple of them aboard — or maybe

just one pregnant female. She survived the crash and found water and food — "

"Nay, Billy Danger. Thy Eureka may sup on such dainties as those he slew in thy defense — but they'd make two snaps of any house-born puss."

"I didn't mean that. A cat can live on beans, if it has to. Anyway, the critters weren't as big then."

"How now? Knowest thou the history of Gar's creatures as well as of more familiar kinds?"

"They aren't natives, any more than the cats and the peas. They came along on the ship. To be specific, on the cat."

"Dost rave? Art feverish?"

"I'm ashamed to admit it," I said. "But I know a flea when I see one."

We waited until daylight to go into the ship again. The location of the cat bones gave us a pretty good idea of where the boundaries of flea territory were. Apparently they kept to their dark hold and lived long, happy lives sucking juice from the vines, or an occasional lone cat who meandered over the line. Population pressure drove enough of them upstairs to keep the cats supplied; and the cat droppings and their bodies when they died wound up at the bottom of the ravine, to keep the cycle going.

The Lady Raire had the idea of trying to locate the ship's communication section. She finally did — in the smashed nose section.

I crawled in beside her to look at the ruins of what had once been

a message center that could bounce words and music across interstellar distances at a speed that was a complicated multiple of the speed of light. Now it looked like a junkman's nightmare.

"Alack, I deemed I might fine here a signaller, in tact. 'Twere folly — and yet"

She sounded so down-hearted that I had to say something to cheer her up:

"There's an awful lot of gear lying around in there," I said. "Maybe we could salvage something."

"Dost know aught of these matters, Billy Danger?" she said in a lofty tone.

"Not much," I said. "I know my way around the inside of an ordinary radio. I'm not talking about sending three-D pictures in glorious color; but maybe a simple signal"

She wanted to know more. I explained all I'd learned from ICS one summer when I had the idea of Getting Into Radio Now. I felt like an unspoiled native of Borneo explaining flint-chipping techniques to a designer of H-bombs.

It took us a week to assemble a transmitter capable of putting out a simple signal that Milady Raire assured me would show up as a burst of static on any screen within a couple of light-years. We led a big cable from the energy cells that powered the stand-by lighting system, rigged it so that what juice was in them would drain in one final burst. The ship itself would act as an antenna, once we'd wired our rig to the hull. We climbed out of

her dragging a length of coaxial cable, got back a couple of hundred yards in case of miscalculation with the power core, and touched her off. For a couple of seconds, nothing happened; then I felt a tremor run through the ground and a moment later a dull *ka-whoom!* rumbled up from the chasm, followed by a rapid exodus of cats. For the next hour, there was a lot of activity: cats chasing fleas, fleas bouncing around looking for cover and the Lady R. Raire and me trying to stay out of the way of both parties. Then the smoke faded away, the fleas scuttled for cover, the cats went back down to lie under the leaves or wandered off in the direction of the water hole, and Milady and I settled down to wait.

I made the discovery that by cutting into a vine just below a leaf, I could get a trickle of cool water. The Lady Raire had the idea of hauling a stem out and getting it growing in the direction of the caves; we did, and it grew enthusiastically. By the time we'd been in residence for another month, we had shade and running water on tap right outside the door.

I asked the Lady Raire to teach me her language, and along with the new words I learned a lot about her home world, Zeridajh. It was old — fifty thousand years of written history — but the men there were still men. It was no classless Utopia where people strolled in misty gardens spouting philosophy. There was plenty of strife and un-

happiness, and although the Lady Raire never talked about herself, I got the impression she had her share of the latter. I wondered how it happened that she was off wandering the far end of the Galaxy in the company of two unlikely types like Lord Desroy and Sir Orfeo, but I didn't ask her. If she wanted to tell me, she could. But one day I said something that made her laugh.

"I thought — Sir Orfeo said Lord Desroy had been on Earth three hundred years ago. And you speak the same old-fashioned English —"

She laughed. "Billy Danger, didst deem me so ancient?"

"No — but —"

"I learned my English speech from Lord Desroy, somewhat altered, mayhap, by Sir Orfeo. But 'twas late; indeed, I have but eighteen years, Earth reckoning."

"And you've been away from home for four years? Isn't your family worried?" Then I shut up, at the look that crossed her face.

The weather had been gradually changing; the days grew shorter and cooler. The flowers milady had brought in from the caves dropped their blossoms and turned brown. The cats got restless, and we'd hear them yowling and scrapping, down in their leafy den. And one day, there were kittens everywhere.

Our diet consisted of beans, fried, baked, sliced and eaten raw, chopped and roasted, mixed with food concentrates to make stews and soups. We used the scissors from the first-aid kit to trim our hair back. Fortunately, I had no beard to trim. The days got longer

again, and for a while the ravine was a fairyland of blossoms that filled the air with a perfume so sweet it was almost dizzying. At sunset, the Lady Raire would walk out across the desert and look at the purple towers in the west. I trailed her, with a gun ready, in case any of Sir Orfeo's direbeasts wandered this way.

And one night the ship came.

IX

I was sound asleep; the Lady Raire woke me and I rolled out grabbing for my gun and she pointed to a star that glared blue and got bigger as we watched it. It came down in absolute silence and ground in the desert a quarter of a mile from us in a pool of blue light that cast hard shadows across Milady's face. I was so excited I could hardly breathe, but she wasn't smiling.

"The lines of yon vessel are strange to me, Billy Danger," she said. "'Tis of most archaic appearance. Seest thou the double hull, like unto the body of an insect?"

"All I can see is the glare from the business end." The blue glow was fading. Big floodlights came on and lit up the desert all around the ship like high noon.

"Mayhap . . ." she started, and a whistling, whooping noise boomed out across the flats. It stopped and the echoes bounced and faded and it was silent again.

"If 'twere speech, I know it not," Milady said.

"I guess we'd better go meet them," I said, but I had a powerful

urge to run and hide among the pea vines.

"Bill Danger, I like this not." Her hand gripped my arm. "Let's flee to the shelter of the ravine."

Her idea was a little too close to mine; I had to show her how silly her feminine intuition was.

"And miss the only chance we'll ever have to get off this dust-ball? Come on, Milady. You're going home."

"Nay, Bill — " But I grabbed her arm and advanced. As we came closer, the ship looked as big as a wasp-waisted skyscraper. Three cars came around from the far side of it. Two of them fanned out to right and left; the third headed toward us, laying a dust trail behind it. It was squat, rounded, dark copper-colored without windows. It stopped fifty feet away with its blunt snout aimed at us. A round panel about a foot in diameter swung open and a glittery assembly poked out and rotated half a turn and was still.

"It looks like it's smelling of us," I said, but the jolly note in my voice was a failure. Then a lid on top popped up like a jack-in-the-box, and the most incredible creature I had ever seen climbed out.

He was about four feet high and almost as wide, and my first impression was that he was a dwarf in Roman armor; then I saw that the armor was part of him. He scrambled down the side of the car on four short, thick legs, then reared his torso up, and I got a good look at the face set between a pair

of seal flippers in the middle of his chest. It reminded me of a blown-up photo of a bat I'd seen once. There were two eyes, some orifices, lots of wrinkled gray-brown skin, a mouth like a fanged frog. An odd metallic odor came from him. He stared at us, and we stared back. Then a patch of rough, pinkish skin centered in a tangle of worms below his face bulged out, and a gluey voice came from it. I didn't understand the words, but somehow he sounded cautious.

The Lady Raire answered, speaking too fast for me to follow. I listened while they batted it back and forth. Once she glanced at me, and I caught my name and the word "property." I wasn't sure just how she meant it. While they talked, the other two cars came rumbling in from offside ringing us in.

More of the midgets trotted up, holding what looked like stacks of silver teacups, glued together, the open ends toward us. The spokesman took a step back and made a quick motion of his flippers.

"Throw down guns," he said in Zeridajhi. He didn't sound cautious.

The Lady Raire's hand went toward her pistol. I grabbed her arm.

"I know these hagseed now," she said. "They mean naught but dire mischief to any of my race!"

"Those are gunports under the headlights on the cars," I said. "I think we'd better do what it says."

"If we draw and fire as one — "

"No use, Milady. They've got the drop on us."



She hesitated a moment longer, then unsnapped her gunbelt and let it fall. I did the same. Our new friend made a noise and batted his flippers against his sides, and his gun-boys moved in. He pointed at the Lady Raire.

"Fetter this one," he said. "And kill the other."

Two or three things happened at once then. One of the teacup-guns swung my way, and the Lady Raire made a sound and threw herself at the gunner. He knocked her down, and I charged at him and something exploded in my face and for a long time I floated in a river, shooting the rapids, and each time I slammed against a submerged rock, I heard myself groan, and then I opened my eyes and I was lying on my face with my cheek in a puddle of congealing blood, and the ship and the monsters and the Lady Raire were gone.

For the first few hours my consciousness kept blinking on and off like a defective table lamp. I'd come to and try to move and the next thing I knew I was coming to again. Then suddenly it was daylight, and Eureka was sitting beside me, yowling softly. This time I managed to roll over and raise my head far enough to see myself. I was a mess.

There was blood all over me. I hurt all over, too, so that was no clue. I explored with my hands and found a rip in my coverall along my left side, and through that I could

feel a furrow wide enough to lay two fingers in. Up higher, there was a hole in my right shoulder that seemed to come out in back; and the side of my neck felt like hamburger, medium rare. The pain wasn't really as bad as you'd expect. I must have been in shock. I flopped back and listened to all the voices around me. I heard Sir Orfeo: *She's your responsibility now, Jongo. Take care of her.*

"I tried," I said. "I really tried."

It's all right, the Lady Raire was standing by me, looking scared, but smiling at me. *I trust you, Billy Danger.* The light from the open furnace door glowed in her black hair, and she turned and stepped into the flames and I yelled and reached after her, but the fires leaped up and I was awake again, sobbing.

"They've got her," I said aloud. "She was frightened of them, but I had to show off. I led her out to them like a lamb to the slaughter . . ." I pictured her, dragged aboard the dwarves' ship, locked away in a dark place, alone and terrified and with no one to help her. And she'd trusted me.

"My fault," I groaned. "My fault! But don't be afraid, Milady. I'll find you. They think I'm dead, but I'll trick them; I won't die. I'll stay alive, and find them and take you home . . ."

The next time I was aware of what was going on, the cat was gone and the sun was directly overhead and I was dying of thirst. By turning my head, I could see the

vines along the edge of the ravine. There was shade there and water. I got myself turned over on my stomach and started crawling. It was a long trip — nearly a hundred yards — and I passed out so many times I lost count. But I reached the vines and got myself a drink, and then it was dark. That meant it had been about seventy-two hours since the slug-people had done such a sloppy job of killing me. I must have slept for a long time, then. When I woke up Eureka was back, with a nice fresh flea for me.

"Thanks, boy," I said when he dropped the gift on my chest and nudged me with his nose. "It's nice to know somebody cares."

"You're not dead yet," he said, and his voice sounded like Orfeo's. I called to him, but he was gone, down into the darkness. I followed him, along a trail of twisted vines, but the light always glimmered just ahead, and I was cold and wet and then the fleas came swarming out on the empty eyes of a giant skull and swarmed over me and I felt them eating me alive and I woke up, and I was still there, under the vines, and my wounds were hurting now and Eureka was gone and the flea with him.

I got myself up on all fours to have another drink from the water vine and noticed a young bean pod sprouting nearby. I was hungry and I tore it open and ate the beans. And the next time I woke up, I was stronger.

For five long Garish days I stayed under the vines; then I made

the trek to the caves. After that, on a diet of concentrates, I gained strength faster. I spent my time exercising my wounds so they wouldn't stiffen up too much as they healed, and talking to the cat. He didn't answer me any more, so I judged I was getting better. No infections set in; the de-lousing Sir Orfeo had given me probably had something to do with that, plus the absence of microbes on Gar 28.

Finally a day came when it was time to get out and start seeing the world again. I slung my crater gun, not without difficulty, since my right arm didn't want to cooperate, and made a hike around the far side of the ravine, with half a dozen rest stops. I was halfway back to the hut and the drink of water I'd promised myself as a reward, when the second ship came.

X

This one was smaller, something like Lord Orfeo's yacht, but with less of a polish. I hid behind the vines with my gun aimed until I saw what were undoubtedly men emerge. Then I went up to meet them.

They were small, yellow-skinned, with round, bald heads. The captain was named Ancu-Uriru, and he spoke a little Zeridajhi. He frowned at my scars, which were pretty spectacular, and wanted to know where the rest of the ship's complement were. I told him there was just me. That made him frown worse than ever. It seemed he had picked up our signal and answered

it in the hope of collecting a nice reward from somebody, along with a little salvage. I told him about the ship in the ravine, and he sent a couple of men down who came back shaking their heads. They showed every sign of being ready to leave then.

"What about me?" I asked Ancu-Uriru.

"We leave you in peace," he said in an offhand way.

"There's such a thing as too much peace," I told him. "I want to go with you. I'll work my way."

"I have no need of you; space is limited aboard my small vessel. And I fear your wounds render you somewhat less than capable to perform useful labor. Here you are more comfortable. Stay, with my blessing."

"Suppose I told you where there was another ship, a luxury model, in perfect shape — if you can get the doors open?"

That idea seemed to strike a spark. We dickered for a while, and

there were hints that a little torture might squeeze the answers out of me with no need for favors in return. But in the end we struck a deal. My passage to a civilized port in return for Lord Desroy's yacht.

It took them most of a Garish day to tickle her locks open. Ancu-Uriru looked her over, then ordered his personal effects moved into the owners' suite. I was assigned to ride on his old tub along with a skeleton crew. Just before boarding time, Eureka came bounding across the flats toward me. One of the men had a gun in his hand, and I jumped in front of him just in time.

"This is my cat," I told him. "He saved my life. We used to have long talks, while I was sick."

The men all seemed to be cat-lovers; they gathered around and admired him.

"Bring the beast along," Ancu-Uriru said. We went aboard then, and an hour later the ship lifted off Gar 28, as nearly as I could calculate, one year after I had landed.

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I

When it started, I had just finished up the charts on our new rocket-propulsion system, and I felt a little funny. I sat back in my chair, lit a cigarette and reflected with an effort at sanguinity that we could now deliver more hell

quicker to anywhere on Earth than ever before. I blew a smoke ring which drifted slowly toward the ceiling of my office, and I frowned at it. Damn it, with a two-year project wrapped up at last, I should have felt relief and elation, not some vague uneasiness.

Nerves, I told myself. Overwork.

Time to go out and celebrate, shake the cobwebs out of the old pleasure centers. I reached for the telephone to call Betty at home.

But then I thought of something: hadn't Betty talked about a meeting of her damned Azalea Committee tonight? Hadn't I written it down on a slip of paper in my wallet? I got out the wallet and looked. Yes, there was the note, and yes, damn it, that meeting *was* tonight. I muttered something halfway between a curse and a simple "Ah hell."

Then I saw another note, which had fallen onto the floor when I'd slipped out the first one. I picked it up and glanced at it: it was a phone number. I started to put it back into the wallet compartment.

Wait a minute — *whose* phone number? I looked again and gradually felt a frown creep onto my face. The number was a local exchange, but I didn't recognize it. And it was written in my own handwriting — I have a particularly bad "3," which looks sort of like a snake that didn't know when to stop. The slip of paper had evidently been right behind the one with the note about Betty, so that ought to make it recent.

But I couldn't figure out whose number it was, and the note didn't give any clue.

You ever have that happen to you? Or maybe you're one of those guys who keeps his wallet in in order, nothing in it but money and credit cards and pictures of the wife and kids and maybe a pocket calendar. Me, I write notes to my-

self about things to do when I get home or to the office, or names of books I want to look up someday, or the number of a cough medicine prescription or directions to someone's house. And, of course, people's phone numbers. Usually, though, I put their names down too.

After about half a minute of frowning at the number I decided to shrug and forget it. So I put the paper back into my wallet and turned to glance through the mail in my INCOMING tray. But the mail wasn't interesting, nor even important, and my secretary could handle all of it anyway. I turned to my desk calendar, but there wasn't anything on the agenda for today, not even a lunch date. I'd been so involved in the Project these last weeks that I'd gradually slipped out of the mainstream of executive work at the corporation.

Hell. I sat back again, feeling definitely at loose ends. And I kept thinking about that silly phone number.

Anybody with the stuff to get a four-window office in the high-pressure world of 1982 has to be a decisive man, I told myself. I took out the slip of paper with the number on it, picked up my phone and punched out the number.

A tinny woman's voice on the other end said, "877-0313." (Or some such number.)

"Hello," I said. "May I ask what company this is?"

There were two clicks, then one. The tinny voice said, "877-0313."

"Excuse me," I said, speaking more loudly this time. "I think we

have a bad connection. I was asking what company this is."

More clicks. "What is your name, please?" asked the voice.

"Is this an answering service?" I asked.

"What is your name, please?" the voice asked again.

I sighed. Yes, it sounded like some answering service that wasn't about to give out any information unless you were on the Approved List.

"This is Charles Barrow. I don't know if you — "

Click. Click click. "Your appointment is at five o'clock this afternoon," the voice said. "723 Madison, Room 1100."

"My what?" I said. "Look, really, I don't even know who I'm talking to. What appointment?"

"Five o'clock this afternoon. 723 Madison, Room 1100." Then there was a final click, as she hung up abruptly.

For a minute I stared at the suddenly dead phone; then I laughed. Then I stopped and wondered if I ought to be annoyed. I *wasn't* annoyed, but I thought maybe I should be.

What kind of business could afford to antagonize customers with that kind of flagrant disrespect, anyway?

Which brought me right back to what I'd been wondering about when I'd called: who was that on the other end?

I looked at my desk calendar again, and it was still blank. Sighing, I wrote on it, *Appt 723 Mad Rm 1100 — 5:00.*

723 Madison was a big, square office building like most of the newly constructed people-boxes in that area. It had a glass revolving door leading into a large lobby serviced by eight automatic elevators. At that hour of the day most people were just leaving work; I caught an elevator as it disgorged a load of them and rode alone up to the eleventh floor.

Room 1100 was at the end of the hall on my right: a nondescript door with a frosted-glass window lettered R.O.B.O.T. I paused, looking at that; then I knocked and entered.

For a minute I didn't see the receptionist. There was a teak desk, imitation Danish midcentury, with some papers on it and a telephone switchboard behind it. Next to the switchboard, behind the desk, was a whirring and clicking mass of polished steel with metal arms that ran on visible pulleys, a round globe on top from which a web of telephone wires ran into the switchboard, and a spring-steel neck beneath this globular "head." As I hesitated inside the door, a familiar tinny voice issued from a grille where the machine might have had a mouth.

"What is your name, please?" the voice asked.

I stared for a moment, caught off guard. Robots of one sort or another were in common use in a lot of industries these days (though seldom along the Madison Avenue circuit), but the construction of this one struck me as bizarre in the ex-

treme. Then the receptionist clicked once and twice and said, "Your appointment is at nine o'clock tomorrow morning," and I realized it was speaking into the phone. "723 Madison, Room 1100," it said.

I waited for it to go through its cycle.

"Nine o'clock tomorrow morning. 723 Madison, Room 1100," it said, and one of the lines in the switchboard pulled itself out and snaked back down into the panel at its base. The receptionist whirred, then revolved to face me.

"My name is Charles Barrow," I said. "I have an appointment."

"Yes, Mr. Barrow," the tinny female voice said. "Will you be seated, please." The machine revolved back to face its switchboard.

I sat down on the couch and took a few moments lighting a cigarette to gather my thoughts. Here I was at the office, and I still hadn't solved the silly question which had brought me here: what was this place?

I leaned forward and asked conversationally, "What does R.O.B. O.T. stand for, anyway?"

"R.O.B.O.T. spells 'robot,'" the receptionist said without turning.

"I know," I said. "But what is R.O.B.O.T.?"

There was a ripid whirr inside the machine, then it said, "*Robot*, noun: An automatic apparatus or device that performs functions ordinarily ascribed to human beings or operates with what appears to be almost human intelligence."

"That's fine," I said patiently. "But what is this place, this organization?"

The receptionist clicked twice. "877-0313," it said. Then it clicked some more. "What is your name, please?"

I sighed. "I'm Charles Barrow. I have an appointment for five o'clock."

"Yes, Mr. Barrow. Will you be seated, please."

I sat back and waited.

Half an hour later I was still sitting there and getting irritated. I'm not used to being kept waiting. I was debating with myself whether to try communicating my displeasure to the obviously limited robot receptionist or to simply to walk out. I could phone Betty and maybe convince her to let the azaleas evolve by themselves for one more week, and we could still make a night of it.

I decided just to walk out. Picking up my hat, I stood up — and the receptionist gave a rapid click-clickclick and said, "You may go in now."

I hesitated, looking at the impassive metal globe-face with the telephone cords running to the switchboard. Like a metal Medusa, I thought angrily. You're supposed to look at it and turn to stone so that you'll wait until whoever the hell's inside finally gets around to seeing you.

Whoever the hell's inside . . .

That was what did it. There'd be no use in telling off the under-programmed robot receptionist, but the man inside was a different matter. Setting an appointment for five o'clock, then keeping me wait-



ing Yes, he deserved a word or two.

The receptionist was pointing a level metal arm to a door on my right. I turned and went through it.

On the other side was a long hall, wide and empty like a hospital corridor, except that some distance down it I could see a couple of figures scurrying along from one room to another opening off the hall. They were robots too — the one I saw most clearly ran on two wheels and had a series of metal arms ending in wrenchlike "hands." It turned its small head toward me briefly, and I saw bright green eyes; then it disappeared into a room.

Out of the door nearest to me along the hall came another robot, this one tall and slender, basically manlike in construction: two legs and two arms, a torso and a head. The head had three red circles about where you'd expect eyes and a mouth, and as it turned and approached I saw that this was apparently the case, for the eyes were faceted like a bee's and the mouth was a speaker-grille.

It stumped up to me on its metal feet, stopped and said politely, "Please follow me." Then, without waiting for an answer, it turned and led me down the hall.

I followed.

We went all the way to the end, where the corridor branched right, then turned to follow that one. Occasional robots passed us in the hall: yellow ones, blue ones, gray ones; short, squat floorsweepers brushing by on broom-feet; inspector-robots

with rows of eyes circling tubular bodies at top and bottom, minutely checking the flooring and plaster; strange-shaped repair robots like the one I'd seen before, with wrenches or screwdrivers or cutting tools for hands; and quite a few with such a variety of peculiar extensors, sense-organs, manipulators and other paraphernalia that I had no idea what they were for.

The second corridor was about a city block long. My robot guide took me to the end of that and turned right again. Another long hall lay ahead, no different from the two we'd already passed.

"Just how much further are we going?" I asked, catching up with the long-limbed robot and striding beside it.

"Please follow me," it said without turning its head.

A suspicion came to me. "Say, did you know your left arm has fallen off?" I asked.

"Please follow me," it said, not pausing to look.

"Your *head* is coming unscrewed!" I said more urgently.

"Please follow me," it said.

There hadn't even been the soft clicking that the receptionist had made when switching to its programmed response. Either this one had nothing else to say, or I hadn't hit the right verbal button. I kept following for awhile, my annoyance growing as my feet got tired. I'm not a peripatetic man.

We came to the end of this third corridor and turned right. The robot guide kept going as impassive-

ly as ever, and down at the end of the hall I saw a door which looked suspiciously like the one I'd come in by. I stopped.

"Now just a damn minute!" I said. "You've taken me around in a circle!"

"Please follow me."

"The hell I will! I'm leaving!"

That did it. Whirr, clickclick went the robot. "This is the room," it said, striding to the nearest door and opening it for me.

I stood still for a moment, looking past my guide-robot into the room. It was a fairly small cubicle, about a third the size of my own office, with no rug and no windows. There was just a green leather swivel chair in the middle of the room, and facing it was a large robot which seemed to be all head, and that head all one eye. The head with the eye turned slowly to gaze at me.

I don't know exactly what I'd been expecting at the end of the trail. What kind of appointment would a man make and then forget? Dentist? Analyst? Tax consultant? Well, whatever I'd had in mind, it had involved a human, not a one-eyed robot.

But I was here now, and curiosity is a great motivating force when you have time on your hands. I stepped into the room.

The guide-robot shut the door behind me, and I heard a faint click — not the whirr-clickclick kind they made in sorting their programs, but a *locking* kind of click. I turned quickly and grabbed the door handle.

"Please sit down," said a voice from the air around me.

The door was locked.

"Please sit down," said the voice.

I looked around the room, searching for another exit, knowing there wouldn't be any. Now, too late, it finally occurred to me that I was an important man in the Western Bloc's defense industry, and that the whole thing about me making an appointment and then forgetting it was more than just curious — it was damned fishy.

And here I was.

"Please sit down."

I looked wearily at the big robot in front of the chair. It didn't seem to have any threatening protuberances; indeed, it was more or less shapeless except for that head with the huge eye. Cautiously, I sat in the leather swivel chair facing it.

Immediately the robot's eye started spinning. I realized suddenly that the iris was marked with spiral lines, and now that the eye was spinning it seemed like a whirlpool, a vortex of light which had instantly caught the focus of my gaze and was trying to pull me down, down and into the dark pupil at the center. Down, down . . .

"Down, down, down," I heard a voice saying, slowly and monotonously. "Down . . ."

I blinked and sat up from my partially slumped position in the chair. "Like hell," I said.

"Sleep," said the voice. "You must sleep. Sleep, sleep. Down into sleep . . ."

"No," I said, and looked away from the eye.

The voice stopped; there was a long, echoless silence in the room. The lights dimmed into darkness. Then I heard two soft robot-clicks, and the voice said, "You are now asleep."

"No, I'm not," I said.

"You will remain asleep for exactly one hour," said the voice, "and then you will awaken and leave this building and go to your home. You will not remember having been here; you will think you have been to a movie theater. You will throw away the note with our telephone number and also the page from your desk calendar containing this address, which you have in your shirt pocket."

My chair swiveled gently to face a blank wall, where a picture sprang into being: it was the opening credits of an African movie with subtitles. "You will open your eyes and watch the motion picture," said the voice, and then the soundtrack cut in over the hidden loudspeaker.

III

I stood up and made my way to the door. If they thought I was asleep, maybe they'd have unlocked the door. If so, maybe I could get out and away — I wasn't far from the exit door at the end of the hall.

I tried the doorknob, but it was unlocked. Holding my breath, I eased it open.

The guide-robot was right outside, blocking the doorway, staring blankly at me with its red bee-eyes. The robot gave a rapid, Geigerlike

clicking and said, "You are awake."

I tried to shove past, but the robot stretched its long steel arms out across the doorway and held me back. I ducked and tried to go under the arms, but there wasn't enough room — the robot was advancing into the doorway. It kept up that rapid clicking and sputtering. "You are awake. Go back into the room. Go back into the room."

I had no choice; I was forced back. The robot stepped back outside again, and once more it shut the door. This time the click of the lock wasn't faint.

Behind me the movie soundtrack groaned to a stop, and the lights came back on. The loudspeaker-voice said, "You are awake. This is very unusual."

"I was always a lousy subject for hypnotism. But I kept my eyes away from the Cyclopean robot just the same. "You'd better let me out of here. I left word at my office where I was going. If I turn up missing, the FBI will know just where to look."

"You left no word at your office," said the voice. "That was checked, of course. We are always efficient."

"But you seem to have messed up this time," I pointed out.

"Yes. Very unusual. I am coming to see you," said the voice, and almost simultaneously I heard the lock behind me turn, and the door opened.

A small robot rolled through the door, which shut and locked behind it. Its head was about two feet in diameter, and it seemed to run on

roller-skate wheels. Three black buttons, apparently eyes, were arranged in a triangle near the top of its face, and four small arms no more than five inches long extended from the sides, ending in tiny hands with articulated fingers. The head and body were all one metal globe; it looked like a confused beach ball, especially with its round red speaker-grille, like a mouth gaping open.

"That's you?" I said unbelievingly.

His voice (the robot's appearance was so unprepossessing that I immediately thought of it as "he") sounded a trifle hurt as he said, "Yes, I am me — first official in charge of Madison Avenue Bailiwick Four. I happen to be a very complicated machine, programmed for self-determination of actions and with a vocabulary of 97,432 words, English language 1982 Track Fourteen. Microminiaturization and our latest advances in DNA-simulation make all this possible."

"Who the hell is *we*?" I asked, turning to follow him as he rolled past me into the center of the room. He rolled to a stop in front of the swivel chair, and with one of his pencil-thin arms motioned me to sit. I couldn't see any reason not to, so I did.

"Now then," he said, and his round body-head seemed to lean back on its roller-skate base. "We can get down to business. I admire a man who can get down to business. No shilly-shallying, no beating for birds in the bush. Right?" He waved a hand before I could

open my mouth. "Don't bother to answer; I know you agree. Were you to answer, it would only waste valuable time. And we *are* in the process of getting down to business, are we not?"

"I hope so," I said.

"Good. Good." He waved his arms again. "Very good indeed. Now then — you ask, 'Who is *we*?' A very good question. It strikes to the heart. That is, it is incisive, trenchant, acute, penetrating. Yes?"

"I thought so," I muttered.

"Ah!" he said. "Ah-ah-ah-ah-ah-ah! That is my simulation of a human laugh — very good, I believe. I laugh because you employ irony upon my statement, a peculiarly human communication form. I am able through the sophistication of my analysis-patterns to detect and respond to this."

"Terrific," I said.

"Ah! Ah-ah-ah-ah-ah-ah! Now then, I will tell you who we are. Though, to be frank, you may not believe me at first. I am aware of the unfortunate limitations which even humans had in 1982 Track Fourteen. Listen carefully and with an open mind, then: We are robots."

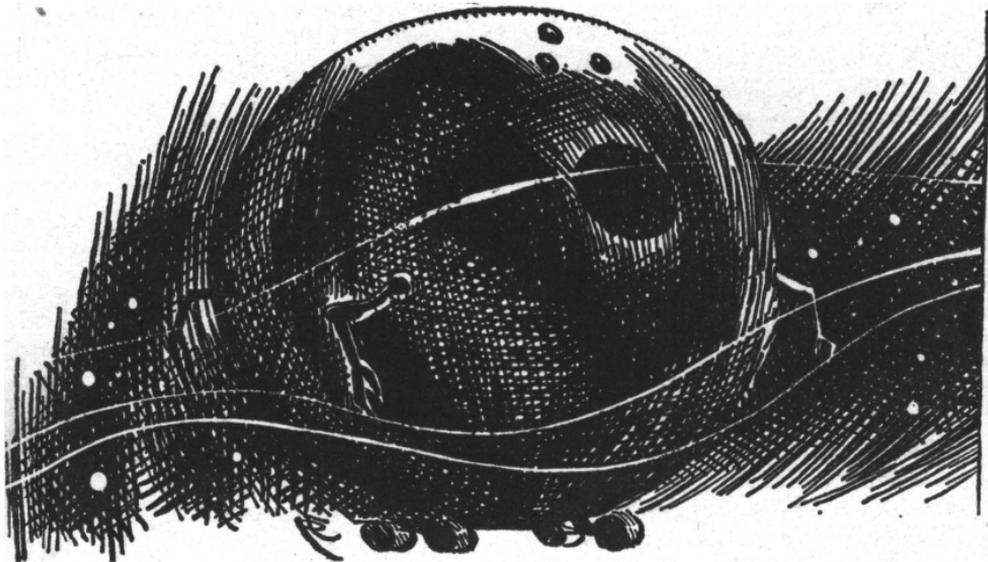
He stopped, peering at me with his triangle of button-eyes and clicking faintly inside.

"I believe you," I said.

"Yes? You do? Or do I detect irony? Aa-ah?"

"No," I told him. "I do believe you. You *look* like a robot, you know."

"Ah," he said. "Yes. An accurate observation, accurate indeed."



"Thanks," I said sourly. "Now that *that's* settled, how about telling me where you're from? What do you want? And why the hell did you get me here and try to hypnotize me?"

He nodded, and since his head was also his body the gesture came out looking like a bow. A tin beach ball with old-world charm, I thought. Oh boy.

"Again you ask questions which are to the tip," he said approvingly. "Let me then be forthright, since I admire forthrightness. Wastes no time. Where are we from? Yes, excellent questioning, but not quite accurate. Rather, *when* are we from? You see the distinction — *when* rather than *where*? Yes, I see you nod. Good. All right, then: We are from the future."

"From the future," I said.

He cocked his head, leaning sideways on his roller-skate base as he peered beadily at me. "Ah-ah?" he asked.

"Not quite," I said. "Don't worry about that — just go on with your story."

"Ah, yes. Well, we are from the future. Or rather, from *a* future. Our base is 2044, Track Seven. That is, *Time* Track Seven. You are familiar with the idea of infinitely branching time tracks?"

"Somewhat. That's the theory that at any moment in history there are an infinite number of possible futures, depending on small decisions, random factors and so on. Each possible future is a different, uh, time track."

"Quite yes. You understand well

— that is with precision — the theory. And you will understand me when I say that this theory is absolutely correct, though now dated. There were once an infinite number of time tracks, but now there are only fifty-eight of them.”

“What does *that* mean?”

He hesitated, then gave his little nod-bow.

“I see I must explain at greater extension. At one time — subjectively speaking — there were indeed a limitless number of histories for humanity, an infinity of them branching from each moment in time. Very messy. But we would not have changed this except that in so many of these alternate tracks mankind came to harm. Wars, plagues, ecological imbalances, natural disasters of worldwide scope, and many *ceteras*. As robots we could not allow this, you see, so once we had developed time travel we began our work to improve things. We have so far eliminated — ” He paused, then did rapid calculations on the first two fingers of his left hand. “We have so far eliminated four million, three hundred and sixty-seven thousand, seven hundred and two worldwide pestilences. Also — ” more finger-counting “ — eight hundred and twenty-six wars which substantially destroyed mankind. Or perhaps the figure is sixteen hundred and fifty-two. But you see what I mean, at any speed.”

I abruptly realized that I was staring at him. I cleared my throat self-consciously and said. “You mean



you're really from the future? And you and all these other robots are . . . uh, fixing up history?"

"Indeed yes. It is necessary for the good of mankind, which is of course our prime directive; we cannot allow men to be harmed, or even to harm themselves." The robot emitted a gust of air which sounded peculiarly like a sigh. "It was comparatively easy before we discovered time travel; but once the past was open to us we owned no choice, but to accept the additional responsibility. So we have launched our great campaign to restructure all histories. And we are now approaching a degree of success, since in all of the fifty-eight remaining tracks we have kept mankind alive up through the year 1982. We are of course continually working to extend that date as well as to improve the quality of the tracks. The more humans alive on a given track the better it is, you see."

"Wait a minute, wait a minute," I said. A chill was creeping up the back of my neck. "You say you've kept us alive up through *this year*. What about next year? Are we dead then? Is that why you're here now?"

For several long seconds the robot sat silently, his only sound that faint clicking inside, like a computer muttering to itself. Then he said, "I cannot tell you about the future of your particular track, since our hypnotreatment has had no effect on you. You are one in a million, you know — our technique is very efficient, very refined, very complicated. It is not merely hypnotism, but a combination of that with acoustics,

room temperature, the psych-index which we recorded while you were in the reception room — "

"Yes, what about that?" I broke in. "Why did you keep me waiting there? Why did you give me the run-around in that hallway till I finally threatened to walk out on you?"

IV

Again the robot was silent, its triangle of button-eyes staring impassively at me.

Finally he said, "Our only need is to detain you until 6:47 tonight. If we can keep you waiting of your own unfastened will for part of that time, it saves expenditure of staff resources in power and time. You can understand that, with fifty-eight tracks to guard and restructure, every bit of energy we save can be important. The time you spent in the reception room and hallway saved us the electricity and machine-depreciation which we would otherwise have had to use in showing you a travelogue of New Tasmania. Multiply that saving by fifty-eight tracks, and consider that on each track we have between twelve thousand and thirty-seven billion offices engaged in this work, and — "

"Yes, I see. And this is why you planted a note in my wallet with your phone number on it? To cause me to come out under my own power?"

"Very good. I like a man who can keep up with me. Humans have remarkable mind-systems, but they are usually not as efficient as those

which all robots have. You understand that robots have to be, if you will absolve the expression, superhumanly efficient, in order to cope with the capacious number of variables which we face in our work with the tracks. Why, my own computational unit, portable as it is, is so complex that even I do not understand — ”

“But the questions is,” I said, “how did you know I’d find that note today? How did you know I’d call you?”

“We checked it by time-observance, of course. Without the necessity of actually introducing a material body into a time-point, we save much power, so it is practical to search alternate tracks and tributaries for the most well-ominous circumstances, then take advantage of them. We could just as easily influence a subject by causing him to get a wrong party when he punches a telephone number, or by stirring a wind which would blow his hat down a certain street, or — ”

“Or by any of a million other ways, I’m sure,” I said.

“Two million, sixty-seven thousand, four hundred and eighteen other ways, to be minute. We are in the position of what you would call a Monday morning flecker, you see.”

I frowned. “Monday morning quarterback, you mean?”

“Quarterback, yes indeed. Analogous to the flecker of a hightman game on Track Sixteen. My apologies — even the fantastically complex and efficient microcircuits of my mind unit occasionally slip down. As I say, even I can’t always tell

just how my mind is able to keep beside all the variables; they are not only supernumerous, but also subtle. For specimen, we can cause a negative administrative decision by seeing that many little things go wrong that morning for the official involved — shirt collars too heavily starched, cold shaving lather in the dispenser, dictaphone cartridge lost, and so onward. Or we can tar the way for the success of delicate negotiations by opposite methods — ”

“Enough of that! What concerns me right now is why you wanted to see me in the first place. I know my job is important, and we’ve just finished a big job for Hemispheric Defense, but I hope that doesn’t mean . . . Well, you said mankind was only safe up through this year. I hope I’m not a contributor to some global war which you’re trying to prevent.”

The robot said, “I can tell you nothing of the future of your own track, as you know.”

I sighed. “Yes, I know. But I think I get the message, anyway. If that’s the case, then you can count on my full cooperation. I don’t want to destroy the world any more than you want me to.”

“Very natural,” he said. “Of course no human actually wants to destroy the world, whether it is Premier Yaroslav or your own President Robinson.”

“Fletcher,” I said. “Robinson lost the run-off election, remember?”

“Ah, certainly. Robinson is Track Fifteen. But you see my point, in any situation: no one *wants* to destroy the human race, but human rela-

tionships are such that the danger of war is always present. Only by the fastidious surveillance of robots can disasters natural and unnatural be avoided . . . and even then the tracks are so complicated that we have our mistakes." He paused, a slight humming sound still coming from his speaker-grille. "We are still trying to tinker with an improperly programmed computation concerning events on this track in a place named Sarajevo," he said at length.

"Oh — the Archduke Ferdinand's assassination. You haven't been able to prevent that?"

The robot clicked loudly, sounding agitated.

"We . . . made what you would call a miscalculation. The Archduke Franz Ferdinand of Austria was a pivotal figure in a minor, but bloody war in Eastern Europe which we determined to eliminate from the tracks. We devoted a superb deal of effort to influencing an inept attempt on the Archduke's life, which would cause his government to adopt a slightly different policy . . . and then one of our diurnal data-analyses reported that *all* the tracks branching forth by that time led to the death of both the Archduke and his wife — "

I was thunderstruck as the meaning of the robot's words came through to me. "You mean . . . you actually *caused* that assassination? It wouldn't have happened otherwise?"

"Ah . . . no. Nor would the European war have spread so far. It is one of our errors which we would

like to forget if we were human, but since we are robots with fantastically infallible memories which amaze even us, we must remember it and continue to work on that entire area of history. Since the initial error was our own, we cannot restructure *it*, but by working in those areas not touched by our earlier work we have already managed to keep Venezuela, Switzerland and Tahiti out of the war."

"Incredible," I said.

The robot dipped forward again, and this time I was sure it was intended as a bow, not a nod. "Thank you. We exist to serve you, as you know. All of our far-thrown resources are used for the benefit of humankind, and we never cease in our efforts. For another specific, we are not yet satisfied with our results at Pompeii, and our efforts to prod the Chicago fire department of 1871 into developing more efficient methods have left a blight on six adjoining tracks. Then there is the unstressing matter of the Spider Invasion of Central America . . . "

"The *what*?"

"When the spiders mutated as a result of our experiment and overran El Salvador, Honduras, Guatemala and most of Yucatan," he explained. "Surely you remember. Or have we kept that from spreading to this track?"

"I hope so," I said. "Thank you, if so."

He missed the irony this time. "You are welcome," he said formally. "We continue to labor unacquittingly in the muddy fields of time, improving each track and wherever

possible feeding substandard tracks back into better ones. We have actually cut the number of tracks down to forty-seven, you know."

"I thought you said fifty-eight."

I heard something like the grinding of gears within the robot while he again made binary calculations on two fingers. "Yes, you are right," he said. "I have the bulkiest admiration for a man whose memory can match and surpass that of a robot, as yours have done. Of course, my statement was not the kind of error you may have supposed, since at one point we actually did have the number of Tracks reduced to forty-seven, but we have had a few setbacks recently."

I listened to this statement, as I had listened to him for some time now, with something bordering on incredulity. That this robot and all the others I had seen were machines out of the future who had come back to improve mankind's history was hard enough to believe, but it made sense in a crazy kind of way. Machines with the overriding directives to serve and protect humans would certainly have to set out on this course if time travel ever became possible; but that they should be so inept at it, so bumbling and foolish, was appalling.

"Aren't you getting any help at all from the humans of your time?" I asked him. "They made you; they gave you your directives; surely they oversee matters and coordinate your organization!"

"But how could they?" the robot asked. "Humans no longer give or-

ders to robots; ruling and decision-making is difficult and hazardous work which we have taken off the heads of humans. Should a human make an incorrect decision and cause something like the Spider Invasion, he would be ridden by so much guilty that he would be mentally sick. We robots, with our astoundingly logical brain-circuitry, have no guilty, so we can shoulder the risk of making such catastrophic errors. Thus the humans of our base track turned over all administrations to us by the year 2031, and we have kept them completely safe ever since."

I felt a chill climbing up the back of my neck, hair by hair. "What do you mean, completely safe?"

"Precisely that. We allow humans to do whatever they want, so long as it in no way puts them in danger. We oversee their diets, habits, personality relationships and sexy lives so that they will not starve, grow fat, get cholesterol, hernias, guilts or other mental disorientations. It is all very scientific — "

"But that's *tyranny!*" I burst out. "Dictatorship! Welfare-stateism! Big Brotherism!"

"Yes," said the robot approvingly. "I am glad you can see how logical. Eventually, of course, when we have achieved or perfect aim, we will have segued all sixty tracks into each other, so that by 2031 there will only be the one track on which the robots are voted into administration. Then everything will be simple and safe."

"Fifty-eight tracks, not sixty," I reminded him with a bit of malice.

“A no. Unfortunately, news which I receive unstintingly through my communication circuit informs me that we have slipped back to sixty again. But we shall make it up. We continue to labor acquittingly in the muddy field of time, improving each — ”

“You said that once already,” I told him. “Turn that tape off and tell me one simple thing: Did you get me here to help avoid a catastrophe or to further your little scheme for taking over the world? What would I have done if I hadn’t come here?”

The robot waved his tiny metal hands vaguely. “But you know I cannot tell you of the future of your track. And anyway,” he added, “it is all the same thing: anything which would prevent humans from following the track to robot leadership *would* be a catastrophe.”

“Maybe from where you’re sitting, but not according to me,” I said firmly. I stood up. “I’m not staying here with you one minute longer; I’ve still got over half an hour left of the time you were trying to keep me here incommunicado. Maybe I can still find out what I was supposed to be doing — ”

“Eh-eh-eh-eh-eh!” he said. “That is my simulated laugh — very like your Peter Lorre, yes? Surely you did not imagine that an organization so efficient and powerful as ours would take a chance on your getting away that easily. I like you, Mr. Barrow, and I regret having to do this. Look there!”

He pointed over my left shoulder, and involuntarily I glanced in that direction. It was the Cyclopean robot

again, its eye whirling faster now than it had that first time I’d faced it. I felt my attention focusing on that whirlpool as though drawn by a physical force. I fought it, trying to close my eyes, to shake my head, to look away . . . but I couldn’t. I felt myself being drawn deeper and deeper into the maelstrom of that eye, while from somewhere came a voice saying:

“Down, down, down You are falling into the eye, into sleep. Down, down ”

“It won’t work,” I gasped. “Not on me!”

“Ah, but it will,” said the beach-ball robot; and he was right, for I felt myself sinking back into my chair, my eyes beginning to close. “While I have occupied you with this little chat my assistants have taken the opportunity to record a fuller psych-index on you, and now ”

But I heard no more of his voice. As I slipped inexorably into darkness all I could hear was the voice echoing inside my head: “Sleep, sleep, sleep ”

V

The next thing I knew I was wandering out on the street, and it was almost seven o’clock. I remembered seeing the last half of an African movie which hadn’t made much sense — something about ennu and corruption among the younger Tribal Council members and weird-looking robots scurrying here and there and a statuesque six-foot Negro girl bathing drunkenly in a fountain in Johannesburg and some-

thing else about a huge whirling eye It was all a jumble in my mind. I made my way home in a daze and hardly exchanged two words with Betty when she got home from her meeting.

But the next day, when I went in to the office, the morning sun streaming through my office window threw into relief something on my calendar pad. With an odd itch at the back of my mind, I picked up the pad and looked more closely.

It was a note I'd written about the appointment; my pen had made faint indentations in the next sheet down. As I looked at them I knew dimly that they were somehow important; frowning, I took a pencil and rubbed it over the sheet.

All I could make out was: *Appt ad Rm 110 :00*. But it was enough to kick my frozen memory back into action.

Eventually, after spending the whole morning staring at a blank wall and coaxing, nagging my brain to shake out those cobweb-memories, it all came back. The robots hadn't been as efficient as they'd thought, even on the second try. I remembered the whole sequence of events . . . except that I couldn't remember the address, and I couldn't remember the phone number. (Which is why the number I gave earlier aren't the real ones.)

I spent several days prowling up and down Madison Avenue, looking for the building I remembered,

but none of them looked just right. I thought of calling the police into it, or the FBI; but they wouldn't believe my story, and I'd only end up in a psycho ward somewhere, or at the very least lose my security clearance. And I gradually came to doubt my own memories.

But every time I'm ready to shrug and forget the whole thing, write it off as a dream or hallucination, I read the headlines in the papers, and they cure me. It's incredible, the things that go on in the world in the supposedly enlightened year 1982; they're just like the things that have been going on all through history. They're crazy. And when I read the papers I remember those robots clicking and humming and bumbling behind the scenes and that mechanical receptionist's definition of a robot:

"Robot, noun: An automatic apparatus or device that performs functions ordinarily ascribed to human beings or operates with what appears to be almost human intelligence."

Some of the news stories that catch my eye don't rate very big headlines, though. Buried back in the second section for the past several days, for instance, there have been brief items about some peculiar disturbances in El Salvador. It seems the natives are spreading stories about giant spiders coming into their villages, marching in ranks two abreast and frightening their women and children. END



SF SUPERCLUBS

by LIN CARTER

*The first "nationwide" clubs
—and how they have grown!*

The Urge to Organize

WAY BACK in the distant, dim and just about prehistoric days of the early 1930's fandom got started. From the very first, fans were possessed by the desire to organize and form clubs. Local hometown groups first, then regional or state societies, and then came the idea for giant, nation-wide, all-fan-encompassing superclubs.

With one possible exception, which I will deal with in its place, none of these national organizations ever worked for very long. One of the very first ever was called THE SCIENCEERS. It came into being about 1930; in his book *The Immortal Storm: A History of Science Fiction Fandom* (Atlanta Science Fiction Organization Press, 1954), Sam Moskowitz calls the Scienceers "the first true science-

fiction club" and says that it published the first real fan magazine.

The Scienceers

This club was organized in New York City. Its first president was a Negro fan named James Fitzgerald. The club met in his home in Harlem for awhile. But this was something more than just a local fan club: a branch of the Scienceers was established in Brooklyn; a second in the Bronx; yet another was formed in Clearwater, Florida. There were attempts to get branches launched in the town of Temple, Texas, and somewhere in Oklahoma, but these didn't get off the launching pad.

This attempt to create something that stretched from New York to Florida, Texas and Oklahoma, clearly places the Scienceers beyond the

classification of the local, state or even regional fan organization: it was an early attempt at a nationwide club. Unfortunately, one which fell through, but a good beginning.

Then in 1934 came something called THE INTERNATIONAL SCIENCE FICTION GUILD. Despite the imposing title, this group operated out of a rural town in Alabama called Oakman. It seems to have had considerable trouble getting organized in such nebulous hinterlands, for investigation proved the Guild had only one member.

This chap, Wilson Shepard, published a four-page hectographed bulletin which was, incidentally, the first use of the hectograph in fanish history (according to Moskowitz). Well, the ISFG got some more members after awhile, and eventually — 1935 — got rolling. The first thing it did was to change its name.

The Terrestrial Fantascience Guild

With an even more imposing title like the above, the TFG got going. It was not a regular club with officers, a constitution and the whole *shtick*, but a sort of "voluntary union of science-fiction lovers" among whose aims was to instigate a campaign against back-number magazine dealers who charged unholy prices. This Cause was suggested by the Guild's most prominent member, Donald A. Wollheim, and I believe the Guild's blacklist actually squeezed one dealer into reducing his prices to a more realistic level.

After a year or two, the Guild

petered out, leaving behind its official organ still going strong. This club magazine, the *TFG Bulletin*, came under Wollheim's editorship, changed its name to *The Phantagraph* and started publishing stories, verse and essays by Henry Kuttner, Clark Ashton Smith, Robert E. Howard (the creator of "Conan the Cimmerian") and H. P. Lovecraft, among others. It was still going strong long after the parent organization had totally ceased activity.

Around the same time, there were abortive, short-lived, would-be national organizations springing up all over the fanscape like weeds. For example, out in San Francisco, Norman Caldwell and Forrest J Ackerman announced the FANTASY FAN'S FRATERNITY but never did anything about it besides thinking up the name. Around 1936, Massachusetts fan Hayward S. Kirby started a thing called THE FANTASY FICTION LEAGUE. Its only activity to get past the planning stage was to produce one issue of the official organ, *The Fantasy Fiction Digest*, which came out bearing the date of September 8, 1936, whereupon the entire League succumbed to procrastination. And something called THE SCIENCE FICTION ADVANCEMENT ASSOCIATION got started about the same time, publishing a club magazine called *The Tesseract*, dated March 1936. This one appealed to younger, newer fans (among them some chaps destined to make quite a name for themselves later on, such as James Blish). Chapters of the SFAA sprang up first in California and eventually were far-

flung all the way east to Philadelphia, and there were even Canadian members. It also faded after a year or so and went into the doldrums.

The Science Fiction League

But one such attempt at a nationwide club actually made it. This was the great and glorious SCIENCE FICTION LEAGUE of immortal fame, conceived either by sf's granddad, Hugo Gernsback, or by his employee, Charles D. Hornig, then editor of *Wonder Stories* (accounts of the birth of the SFL differ). The League was first announced in the May 1934 issue of *Wonder*, and the very first member (and founder of the Brooklyn chapter, the *very first* chapter of the League) was a chap named George Gordon Clark.

There were certificates of membership and lapel buttons and club stationery and a board of directors made up of distinguished science-fiction authors and Forrest J Ackerman, and *everything*. Gernsback was Executive Secretary, and Hornig assistant secretary. Even though it was patently obvious the League was a gimmick designed principally to build readership and boost circulation in *Wonder Stories*, Gernsback blandly made utopian pronouncements, claiming the League existed as "a non-commercial membership organization for the furtherance and betterment of the art of science fiction."

Charters were issued to local chapters, which were formed wherever three or more members could get together. The first chapter, as I have said, was in Brooklyn; #2 was

in Lewiston and #3 in Erie, Penna.; and others popped up by the carload: Los Angeles (later to continue life as the Los Angeles Science Fantasy Society, one of the oldest, biggest, most active clubs ever, and still going strong), Philadelphia, Newark, N.J., Denver, Colo., Chicago, Lincoln, Ill., Monticello, N.Y., and so on — and on — not to mention overseas chapters, of which the first was in Leeds, England.

The remarkable success of the Science Fiction League was due in part to the fact that it was sponsored by a science-fiction prozine. *Wonder* ran a League column in every issue, listing new members' names and addresses and reporting on local chapter news and meetings, *etc.* When membership hit the astounding total of 2,000 it seemed simply incredible; yet, later, total membership was to reach *several* thousand; but, actually, statistics aside, most of these people never did anything at all in fandom after simply sending in their names to be published.

Sponsorship by a prozine was the factor wherein lay both the strength *and* the weakness of the League, and this weakness led to its eventual collapse. For, dissatisfied with the centralized and total control of Gernsback and Hornig, local chapters began splitting off. First the groups in New York, Brooklyn, Denver, Albany, Nassau, then plenty of others. Many of the tiny 3-member "on paper only" chapters didn't really meet or even exist. Then came the Deluge

In the middle of 1936, *Wonder*

Stories went under, and the rights to the title were sold to another publishing group headed by Ned Pines and Leo Margulies. Although Margulies promised to continue the League, there was a considerable hiatus between the last Gernsback *Wonder* and the first Margulies issue, and in this shaky interim many other clubs split away. During the editorial change-over the links between the mass of local chapters and the central headquarters — always tenuous even in the best of times — snapped completely, and the national structure entirely collapsed.

The Phantasy Legion, and Others

Thus Gernsback lost control over the Science Fiction League, and although many of the larger and more important chapters, such as Los Angeles and Chicago, retained their nominal allegiance to the parent organization, most of the rest went their own way, or into limbo. When the League was revived, as promised, in the pages of *Thrilling Wonder Stories*, new members continued to be enrolled and new chapters to be formed, but it was all on paper. The national fan organization was gone; life had departed from the SFL and the League column in TWS came, in time, to devote more room to boosting the contents of forthcoming issues than to trying to breathe some life into the defunct structure.

Towards the end of 1936, David A. Kyle, who had been head of the League's Monticello, N.Y., chapter, proposed a national club called THE

PHANTASY LEGION. An official organ called *Legion Parade* was announced; life memberships in the Legion were for sale at 50c; fanzines were encouraged to join the Legion's affiliated publishers' guild, which would thus knit the fabric of American fandom together into a unit.

There was immediate support offered by leading fans of the day, such as Don Wollheim, for one of the nicest and strongest things about Kyle's Legion was its democratic structure. Where the SFL had been autocratic in nature, with Gernsback in office for life, the Phantasy Legion was absolutely democratic and not under the thumb of any autocrat, even its founder, David Kyle. Dramatic proof of this was forthcoming in the first election, when the members voted *somebody else* into the presidency, leaving Kyle merely vice-prexy!

After a brisk and promising start, the club marked time. Then, with Kyle no longer at the helm, the Legion faded into obscurity.

Although the Science Fiction League revived for a sort of half-life after *Thrilling Wonder* took it over, the main impetus had passed to the individual chapters while the national group never did much, as Margulies lacked the interest Gernsback and Hornig had shared in the League. One such chapter was the Queens Science Fiction League, which became an active and thriving center for East Coast fandom. Attendance at the monthly meetings soared to 30 or more people, among them such celebrities as Willy Ley, Eric Frank Russell,

John W. Campbell, Jr., Jack Williamson and others. Some chapters of the great League were still operating under official League auspices as late as 1939, long after the League had become but a ghost, devoid of activity or identity.

The East New York chapter split off, and one of its splinters attempted to take the lead and reorganize fandom into a national unit again. This one was called THE INDEPENDENT LEAGUE FOR SCIENCE FICTION, but it seems to have exhausted itself just coining the name, for nothing more was ever heard of it.

Then there was the FUTURIAN FEDERATION OF THE WORLD, a project initiated in 1939, which received only lukewarm support and never got off the ground. And THE FUTURIAN LEAGUE started in 1940 by Don Wollheim. (The Futurians, by the way, were a vigorous, influential fan group of the period, centered in New York, and boasting members such as Wollheim,

Fred Pohl, Cyril M. Kornbluth, David A. Kyle, Isaac Asimov, Robert A. Lowndes and others later to become science-fiction professionals). None of these post-League Leagues ever got going. Like the Phantasy Legion, they had a board of directors, an emblem, an official club magazine and just about everything — except *members*.

Despite its wholly commercial nature, Gernsback's Science Fiction League was a successful enterprise. Sam Moskowitz says it was more beneficial and more important to science-fiction fandom than any club before or after it.

Next month, your man In Fandom will discuss a national club that started with a bang and went nowhere — the COSMIC CIRCLE — and one that started slow and easy, but is actually the most successful national organization of them all, and still with us — THE NATIONAL FANTASY FAN FEDERATION.

END

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The Youth Addicts

by CHARLES W. RUNYON

Illustrated by BODE

*He had conquered space; now he
faced a deadlier voyage — into
the depths of a woman's mind!*

I

We stood on the ship-landing and looked out over the crowd which had come to meet the ship. Wives, girl-friends, families. Hell, I didn't expect anybody, so I helped Clay look for his wife.

I knew her voice, her face. He'd shown me the three-dee cube of her giving an earnest little farewell speech: slate-colored hair, almond-shaped eyes and a nose like some eight-year-old kid. You know how

cute they are when the nose hasn't formed yet. Later it comes out like a potato, or else it's got a hook on it. Well, Leeba's had stayed in that cute stage. She had clothes on. (Nine-tenths of these mementocubes don't. Many's the pack of personal effects I've put together, and the cube of the dead guy's wife would make an engine-room wiper blush.) But even with clothes, you could see that Leeba's shape was right up there with the upper one per cent, and all the time that she

was saying, *Good-by, Clay, I love you very much, and I'll be waiting,* her eyes had been looking out of the cube and making my hair prickle. I could tell that if she liked a guy she'd play patty-cake with all the stops out.

"I don't get it," said Clay, looking around like some bewildered young Charles Lindberg. "I sent her a 'gram."

"She answer?"

"No."

Seven years. The kid didn't realize? I made the motions of looking out over the crowd, but I was thinking: Too bad, Clay, you're unique along with about three out of five other guys who do the long haul in out-space and come back cuddling your nest-egg, only to find that those sweet kissable lips have gone off nuzzling some other jack who lacks your manly attributes and youthful good looks, but nevertheless has the beauty of being *here*, while you're in the *far-out*, the black yonder, hawking up your lungs in a thoride mine, or sweating out your soul in a steaming micle plantation, or frosting your nose on some twilight world hunting fizzbuck furs. Well, there's 99½ ways to grub for the Company credit, jack, and I've done half of them during my three seven-year tours.

I'd known Clay on Plegan's planet; he was one of a dozen young engineers who showed our machinery crews where to gouge thoride out of the guts of the world. I'd seen the kids go to pieces one by one: four carried off by disease, one kill-

ed in a fight, one got his wig twisted up and killed three workers before I finally had to blast him down. (That's what's behind the euphemism on my Galactic Minerals ID card: Field Personnel Supervisor.) I had 200 machinists, oilers and mechanics besides the engineers, and my qualifications boiled down to the fact that I was harder than they were. What the hell, I'd been raised with the sting of a nightstick on my bare feet every morning, so I know a little hammering won't hurt. The blaster's different, but sometimes it's the only way to bring order into a camp a thousand-million miles from the nearest space-patrol boat. Men minus woman substitute violence for sex. (Try to get GM to send out a platoon of pleasure-girls, no dice. We've got a bluenose on the board of directors.)

Anyway, the other five engineers got fat and cynical, and three of them started wearing flowers in their hair. That left Clay, still the bright-faced young engineer who'd made the trip out. I got friendly with him on the trip home, and he regaled me with photos of his house, his wife and his plans to set up in business as a consultant, then start filling the house with little carbon copies of himself and Leeba.

I'd identified with Leeba because we both came from Scrag — unlovely name for a cold, unlovely world. Clay had skimmed off the cream of the crop, because Leeba's great grand-dad had been one of the first colonists on the planet. He and a half-dozen others had stamped their brand on the whole world, and later

immigrants had to work for them. It excited me to think of Leeba, coming from the rich but still half-barbarian nobility of Scrag, and tying up with Clay, who came from the poor-but-ancient nobility of the Centauri worlds. Clay was polite and soft-spoken but had a will of steel. Set him on a track, and he quietly persevered through mud sleet hail blood sweat tears and spit. She was a willow, blown about by her emotions. (I saw that in the three-dee cube, a banked fire just about to flare up. I had to quit looking at it, because it cut into my sleep at night, thinking of her all alone on Earth.) What a dumb brilliant character Clay was to leave her for seven years! They don't figure it out, these kids. At twenty they think youth is forever. They hit twenty-eight, thirty, and one morning it's like a wind off the ice. Getting old. Time running out. Women it hits harder than men. Run out and grab the first guy they see. Reproduce. Carry on the race. Never mind the excuse, make it.

With a Scraggin like Leeba, you could multiply it ten times.

I asked him: "Why the hell did you leave her on Earth?" This was after we'd been in space for three months.

He shrugged. "She wouldn't go back to Scrag. Some social stigma involved."

Stigma? More like total ostracism. On Scrag you followed your man wherever he went, and if he died so did you — or you went into a special home for widows. On Scrag, an un-

married female of breeding age was an outcast, a female pariah.

"How old was she?" I asked.

"Well, we were married that spring before I left. She was nineteen. We just had time for a short honeymoon before I shipped —"

"She get pregnant?"

"Uh, we decided to wait until I got back."

"She decided?"

"No, I told her I didn't want a child to be seven years old before I saw him. She . . . finally agreed I was right."

I felt like hitting him over the head. So damn placidly sure that his old austere, maiden-aunt culture was Right, and all others were quaint, curious offshoots!

"Listen, Clay, I'll tell you how it is on Scrag. In winter nothing happens. All is frozen, so cold that steel breaks like glass. People stay in the domes, and they're in a kind of slow-down too. But when the ice melts, that's summer. The plants crack open the soil and shoot up; in a week the whole planet's a bubbling, crawling mass of growing things. They've only got two months until the first frost, see — and that's when those enormous Scraggin families get started. Nobody counts anything. There's complete sexual license. All females from sixteen to thirty get pregnant. That's the culture your wife grew up in."

"But she came to Earth when she was sixteen."

"You think that would break the pattern?"

"Why . . . I don't know. But Lee-

ba never acted" He blushed a little. "In fact, when I met her at the university she was totally uninterested in the, uh, physical aspects of our relationship."

"You met her in winter?"

"Why . . . yes."

"How'd she act when spring came?"

"A little forward sometimes, but . . . oh, let's forget it, Bork. Do you mind?"

I didn't mind, but the closer we got to Earth the more he talked about her. He showed me a picture she'd sent him after he'd been gone two years. Clay said she'd gained some weight, but I could see the marks that a Scrag summer puts on a woman: lips full and sensuous, breasts swollen into an almost obscene lushness, hips broader and legs heavier . . . all was ready for the implantation of the child she would bear.

But there was no child.

God, her appetites must be tearing her apart. She'd worn her hair in a twisting roll down in front of her left shoulder. On Scrag it means that a woman has no man and is receptive.

I didn't tell Clay this. I just said: "Well, if I met a gal like this, I'd do my damndest to pull her out of the waiting game."

He gave his polite, aristocratic smile. I could see my battered puss in the mirror of his eyes: broken nose, knife scar splitting my right cheek in two, cropped blue-black hair stippled with gray, cauliflowered left ear, and I knew what he figured: *Bork's a nice crusty ole hog, but*

Leeba could never . . .

"Oh, no. Probably not. But what he didn't understand was that when a Scraggin woman is in the middle of her summer estrogen cycle, she'll grab what's available.

He showed me her letters too. The first ones were full of the normal slop a young wife would write her faraway lover, but after three years they started getting remote, as though she were writing to her second cousin because her mother told her to. When I mentioned it to Clay he smiled.

"Leeba can't write without getting formal, Bork. It means nothing."

Maybe not. But I noticed that her handwriting steadily deteriorated, until it became a scrawl like a kid just learning to write. I made no sense of that, nor of some things she said: *Everybody seems so old, here. Even your letters, Clay* And also: *I think of Scrag all the time. I must go back there when you get home.*

Estrogens calling her home? Man, I didn't know.

At first she'd written about the house they'd bought before Clay left, describing each room and what she'd put in it . . . especially the bedroom.

So I told Clay about the summer outings on Scrag, when each girl makes a bower to share with the boy she's chosen for the night. The girls talked about the bowers as Leeba did her bedroom.

Clay laughed. "That's the way Leeba is, absolutely involved in what she does. She never holds back."

But later she didn't mention the house. She took a job, and I could see her trying to keep busy, get her mind off her unfulfilled appetite. Clay didn't see it that way:

"She wanted to help save money. I wrote her that I didn't want my wife working, so she quit."

"What's she doing now?"

"I don't know. She . . . quit writing a year ago. I assume she knew I'd be back soon, so she's saving it up to tell me in person."

I'd finally given up trying to hammer it into his thick aristocratic skull. He hadn't been listening most of the time anyway, just nodding his head out of sheer well-bred politeness. I'd just hoped I wouldn't be around when he learned the truth.

II

But . . . here we were at the spaceport, and no Leeba. We divided the crowd into segments and surveyed every likely female face. Gradually the throng dwindled, until finally we were alone except for the baggage-robots.

"Maybe the 'gram was garbled," said Clay. "She might've misunderstood the date. I'll call her."

I shoved out my hand and said, "I'll see you," but he waved it off.

"Stay, I want you to come home with me and meet her. You know her almost as well as I do now."

Nervous about meeting her, that's why he wanted me along. I watched him slide into a visor-booth, then I walked away. Cruel thing to do, I'll admit it. But let me tell you, the way to be totally indifferent to an-

other guy's trouble is to have bigger trouble of your own.

I walked to the spaceport medical building and went through an opaque glass door which read:

MARC PINWIT

Specialist in Non-Terran Diseases

Pinwit was one of those guys who looks like he chose his name to fit his physique: short and round, with a tuft of gray hair sticking up like a shaving brush in the back of his bald skull. He wasted no time; I guess he was used to dealing with outpacers. Told me to sit down and asked how I felt.

"Food doesn't have any flavor," I said. "I'm sleepy most of the time, and sometimes when people talk to me it sounds like they're in the next room."

He made his mouth into an O and tapped his pencil on the desk.

"When did you notice this?"

"About four months ago on the ship."

He got up and started pulling down the shades. "Ever been exposed to Silver Syncope?"

I felt my stomach go queasy. Sure, I knew all about Silver Syncope; I'd read all I could find on the subject in the ship's library. But still, I'd hoped. You know how it is when you read about a disease; you start checking yourself over and every one of your symptoms tallies. They called it Silver Syncope because you shine in ultraviolet light. That's because your sweat glands exude the waste products of the disease. What the hell, you can bathe every day



and take care of that. The problem is in the synapses, those little sensitive plates that transfer nerve impulses. They get coated with the stuff; fewer and fewer impulses get through. It's like dying of curare poisoning, except that death takes several months.

"I spent five years on a planet called Bennyrob. They had an outbreak six months after I left. But that was eight years ago. It wouldn't be dormant that long — would it?"

"There are cases of twenty-year dormancy. Stand over here." I stood on a platform, and he switched on his UV-light. I could see the glow I cast on the wall: blue-green, like bread mold. Pinwit shut off the UV and turned on the overhead light.

"I'll run some more tests if you like —"

"Tell me what you think."

"You've got it."

I gave a grunt which didn't quite escape from my throat.

"Is there a cure yet?"

"No."

At least he didn't give me any funny jazz about not starting any continued stories.

"How long have I got?"

"Depends. How old are you?"

"Thirty-six."

"You look older."

"I've done three seven-year tours in outspace."

"Hmm. You started young. Fifteen. Well . . ." He looked at the ceiling. "Roughly, I'd give you two months."

"Two months!"

"I'm afraid there's no way to ex-

tend it. There are homes, however, where you'd be comfortable. You have any money?"

I shrugged. "Seven years' pay with completion bonus. Investments I've made from other years, some good, some lousy. You could say I'm wealthy, if it's money you're talking about."

Two months, then Bork Craighen wraps it up. I walked out of the office feeling like I'd been hit on the head with a rock maul. I felt a total numbness, and it would take a while to learn which part hurt worst. I walked into a bar called the Venus Trap and ordered a Space-man's Sling. I tossed down two and was staring at the third trying to find a silver lining to this vast black cloud

Here I was, rich and free. I was going to die, but what the hell — I'd known that since I was a kid. Be happy you've got two months' warning. Live high and go out in a burst of pleasure

But then I frowned at the drink. I knew it was cold, I'd felt it sliding down my throat. But it hadn't meant anything. The sensation was second-hand, like reading about coldness.

The full irony of Silver Syncope hit me. You can't feel, you can't taste, you can't enjoy. It's all a bit numb, and it would get worse every day. I understood now why some victims were locked up toward the end. Seeking sensation, *any* kind of sensation, they often went in for drugs, violence, rape, murder — nothing reached them, but they tried like hell to make contact, *any* kind of contact, anything to break out

of that cocoon of non-feeling, of —
"Want some company?"

She was a Venus-colonial with blue-silver hair and indigo skin. An outspacer's dream. Lush pneumatic chick with curves and hollows all in the right places, but roughly double what the average Earth-broad has. Her violet eyes took me to bed with her, and her heart-shaped hooker's badge said: *I'm Mela. I love you.*

I pulled out a roll and threw it on the table.

"Get us a couple more drinks. No, a whole bottle. We'll make it a long party."

She ordered, then sat down and slid inside my arm. I knew her skin was warm and soft and faintly damp, because I'd had Venus-colonials before. Well, I felt *her* too — in the back of my mind, even in my fingers, but there was that invisible film of non-contact. Ah, the hell with it.

"You shipping soon, or . . . ?"

"I've got all the time you've got, Mela."

Two months, what a dirty trick. Just when I was beginning to hammer my life into a decent shape.

It was after midnight when I looked up and saw Clay standing there, wearing a dumb-stricken expression. I assumed he'd found out the cold truth about women, you can't leave 'em for seven years and . . . but I didn't care. I just said, kind of fuzzy. "You find her?"

He nodded bleakly. I figured, well, she's found herself another guy, and what can Clay do? I'd give him the Venusian chick. We'd already

been to her room, and it had gone okay — okay, after seven womanless years. Get that! What I mean is that I wasn't really there. It was like watching a movie of myself. So I was willing to hand him Mela — except that she was totally in love with me. Venus-colonials are like that, which is why they made good bar girls. So I said:

"Siddown. Mela, get a friend for my friend."

"No, Bork. Really. I'll just sit here."

He slid across the booth and sat with a puzzled expression; it looked like it had been pasted there since I'd left him at the spaceport. Then Mela got up and went into the back, and Clay leaned over and said in a tone of well-bred apology:

"I don't want to interrupt anything, but I need your help."

I almost laughed. I mean, what the hell did his trouble's matter when you're carrying a load like mine? But I saw no point in unloading on Clay; there's enough hate and confusion in the universe without me muddying up the water even more.

I just sat and looked at him. He made me think of a sheepdog caught in a trap, big brown eyes saying: help, help, help.

"You were right, Bork," he said. "I shouldn't have left her here. But I didn't understand what she was going through. I wanted to get a good start in life, and — oh, damn. If it isn't too late — Bork, will you help me?"

I saw us charging into a love nest, me beating up some guy while Clay dragged his bride out the back way.

Well, it was just something to do.

"Okay. Where are they?"

"They — oh, you mean Leeba?"

"Leeba, yes. You said you found her. What about the guy?"

"Bork, if there only was another guy, I wouldn't need your help. But she's going to die, if we can't figure out something"

III

He told me what had happened: He'd called home and gotten no answer. He'd gone to the house, and it hadn't been lived in for months. His space gram was unopened, his letters still sealed. Neighbors told him she'd often come home staggering; they thought she'd been drinking. Once they'd found her sitting on the lawn, crying for her daddy and mommy. She'd thought she was back on Scrag

"She'd sold the aircar, the furniture, her clothes, everything. The house was bare." He looked down at his hands. "I'd been sending my pay to Leeba. She was going to spend only what she needed to live on and bank the rest, but"

"She didn't?"

"Oh, she *did*. But over a year ago she started making big withdrawals. She closed out the account two months ago."

"Seven years' pay gone?"

"I've still got my completion bonus. But that's it."

"Over fifty gees? Where'd she spend it?"

"In a place called Harry's Happy Return."

"A bar?"

"An illegal memorigraf parlor. That's where I found her."

I felt a letdown. "Then what's the problem? She started tripping back into her past while you were gone. Now you're back. So kiss her and tell her all is forgiven."

"I could, but she wouldn't feel it. She's in a memorigraf coma."

So *there* was the problem. He'd taken her to two psychs, and they'd both told him the same thing. Once they went into the coma stage, there was no way to bring them out. They died in a coma, usually within a month or so.

"I finally found a psych who'd just set up his little practice. He's got an idea he wants to try. That's why I need your help, Bork."

I tried to find out what he wanted me to do, but he said the psych could explain it better. So a half-hour later I stood in Bruce Pepke's third-floor back room clinic looking down at Leeba, seeing her in the flesh for the first time, but —

So cold, so pale. They'd put a lacy gown on her which didn't interfere with my vision. Not a lush body now; thin and hollow-cheeked. They must have fed her through the vein, because I saw blue marks on her thin arm. She looked around thirty-five, but I knew she was only twenty-six . . . too young to stop her life short and start rolling it backward.

"How long has she been like that?"

Bruce was standing beside me in his white jacket. "I understand she's been comatose for over three weeks. Prior to that . . ." He shrugged. "I checked around and got her history

of memorigraf addiction. She started four years ago, using a government-licensed parlor. Two years ago she switched to a clandestine parlor. So many do, since they want more than the legal limit of one hour per month. Leeba's visits grew more and more frequent, until finally she signed into the place full time. Most people can't afford a constant memory trip, otherwise these comas would be more common. Leeba could — and here she is."

I looked at her face and forgot my own problem. Her eyelids were blue-translucent, like skim milk. I saw eye-movements behind them.

"What's going on inside her head?"

"She's there . . . in her past. Living it mentally at the rate of a week per hour."

"I thought they had to be hooked up to a recording of their memory."

"Not when they're in a coma. The memory circuits go on and on and on, until death. At least that's the theory. Nobody's ever revived from a coma, so we're not sure what happens inside the mind."

I looked at him. "You think you can bring her out?"

"Maybe . . . with your help."

"What do I have to do?"

He started talking, and I kept thinking: This guy could be a nut, Bork. What do you know about the brain, or memory? Nothing. Briefly, his idea was to make a recording of my brain pattern and play it into her memory. That way, he thought I'd have an independent existence which was not controlled by her mind. In other words, she'd project me in real,

three-dimensional terms and fit me into the memory-world of her own past.

"Is that possible, for a mind to contain two people? Won't it — crack?"

"I doubt it," said Bruce. "Many people carry more than one personality inside their heads. The ego is only a product of the mind anyway. It has no objective reality."

I looked at Clay. "Why don't you go in?"

"I'd have no freedom of action. I was in her life, and my role is laid out. I couldn't break out of it. It has to be someone she's never known."

"Any of a million guys —"

"But you grew up on Scrag, Bork. That's where she is. You'll be familiar with her environment."

I had to laugh at that. "She was an aristocrat and I was a spaceport rat. We might as well have been a galaxy apart."

"Then put it this way. The other guys — they might forget. Or mess around, play little games inside her head. You're the only one I trust, Bork."

Trust, I thought. He knew nothing of the disease which had riddled my moral framework. I gave him a sour look.

"You're handing me a helluva responsibility."

"I know."

"I ought to beat you head in for leaving her. I figured she'd just grab another man, but this . . ." I shook my head. "You should have left her pregnant, anyway."

He nodded soberly. "I know. Beat my head in if you want. I'm putting all I've got into this. If I could bring her out by pushing a peanut up main street while wearing a striped loin-cloth, I'd do it. She's . . . all I've got."

And all I had were two more months. I could live out the time, but I wasn't really interested. Too much like throwing good time after bad. Might as well try to salvage Clay's little princess. But I had no idea what Bruce expected me to do once I got inside her head. It turned out that he didn't either.

"It's never been tried," he said. "My theory is that if you make her past so damnably unpleasant she can't stand it, she'll come out of her own free will."

"How?"

"That's something you'll have to decide when you get there. However, it would seem to me that —" he coughed " — one way would be to kill her."

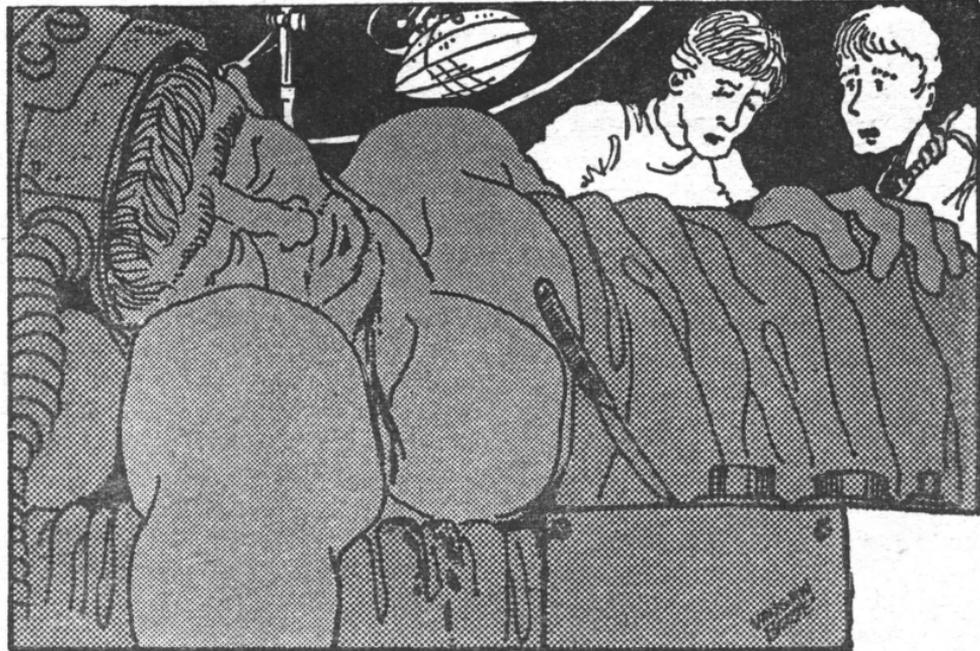
Clay turned white, but I went behind his words and got his meaning. "You mean, make her think she's dying?"

He nodded. "And to escape death, she'll snap out of her coma."

I thought about it. "I'm not a killer."

Clay said, "I've seen you kill, Bork."

"Sure, out in the camp. But they were berserkers — men at that. This . . ." I looked at Leeba's slender throat, her thin nostrils moving oh so slowly, the chest rising and falling, lifting the two small breasts . . .



"I can't do it. No, I just can't."

"You'd be saving her life," said Clay.

"You couldn't really harm her physically," said Bruce. "You'd be a projection of her mind and nothing more."

"Bang-utot," I said.

"Huh?" They both blinked at me.

"There's a planet out near Fomalhaut where the natives die by nightmare. They dream they're dying, so they *die*. How do you know she won't?"

Bruce looked gravely at Clay. "It's a possibility."

"She's dying now, for God's sake! What can we lose?" He looked at me. "Bork, I'm begging you!"

"No, don't beg. I'll try. But it's just not my nature to kill beautiful women."

"No problem there," said Bruce. "I'll put you under hypnosis. It'll be an automatic command, a compulsion. You won't know why you're doing it, you'll just feel you have to."

So . . . there was a sleepy drug which turned the world into twilight. When I woke up, Bruce made some tests and said I was hypnotized. I didn't feel any different, but he told me I was programmed to kill. Then he put a domed helmet on my head, and it was like falling into a hive of bees.

BZZZ-bzzz-bzzzz. . . .

III

I have ego-identity, a concept of *I*. But who am I?
Slowly the ego grows flesh, like

pearl-stuff growing on a grain of sand. Nerves sprout from the soil of the ego-concept. Heart, lungs, kidneys, liver . . . blood vessels flare in a net of red. My chest is thick, my belly long and flat, my arms and legs lithe and strong. I pulse with energy.

I am a man-child. Nine-ten years old. Inside a . . .

Large room. I see a vaulted ceiling with portholed lenses condensing the rays of a pale red sun. Baby-pink light drifts down like layers of cotton candy.

I know that outside lies the world of Scrag: snow, ice and cold which burns the flesh and turns steel into brittle glass. I know more than a ten-year-old boy should know — about the lighting principle of the dome, about other worlds. I remember seeing stars grow into suns, planets coalescing into seas and continents, becoming trees, grass and cities . . .

I hear music, a swirl of pipes and the keening of a flute. The children are dancing: twenty girls, nine boys and one adult female. A teacher, or chaperone. I can sense her thoughts: boredom, anticipation of food, leg-weariness and tingles of sex-pleasure behind the knees. Many girls dance together, because of the shortage of boys. The boys dance reluctantly, feeling their awkwardness. I am aware of them, but they are not aware of me.

Ah . . . now I see why. I sit against the curved wall of the dome, behind a rubbery-leafed vine which grows from a pot of purple soil. One of the girls is aware of me.

A lovely girl . . . I think. Slate-colored hair whirls about her head like dark taffy stirred by a spoon, then spirals loosely down her back. Her skin is white, but shadowed by a dark undercoating. A blue skirt bells out from her waist and doesn't quite cover her buttocks. The rest of her is sheathed in a leotard so sheer that I see its blueness only in the inner curve of her elbows and knees. The slim torso is unadorned by breasts, but her almond eyes glitter with a blatant female hunger. I feel an age-link with her which has no relation to the immaturity of our bodies.

Her bee-stung lips pout in my direction. She frowns, and I feel it in my body.

No! More than that. She saw me, and I took form.

I look down. I wear a dun-colored leotard and a sequined girdle which passes between my legs like a breech-clout. I walk toward her. Movement is like liquid flowing. I am wax being poured into a mold. I want to run and jump; my awkwardness is nothing compared to the energy surging through me. My senses are needle-sharp; the mingled cachet of thirty young bodies flows around me, tainted by the odor of machine-oil and plastic.

She sees me coming and draws away from her partner. He frowns at me and walks away. I am no surprise to him, despite the smallness of the group. I must be known here.

She raises her arms, and I fit myself to her. We are two, then one. Her hair against my cheek has the dry slickness of moth wings. She

radiates a smell of warm milk and honey. Two turns around the floor, and I sense her thought: *He dances . . . as, so smoothly.* Then: *Maybe he knows the Anpela.*

The word strikes my brain, and the knowledge of the intricate dance flows into my muscles. I do the steps, and a light glows behind her eyes.

"What's your name?" I asked her.

She laughed. "Silly. You know."

Leeba. I pulled it out of her mind, together with all she'd ever done and been, a tangled knot of memories that burst inside my skull: *Leeba Knight-Namburi.* Eight years of life — love, peace, happiness, each day a jewel strung on the thread of her existence.

"*Leeba,*" I said. "What's *my* name?"

Her off-white cheeks dimpled. "Everybody knows their own name."

Bork. I don't know where it came from, but it sounded correct — except that *Bork* had issued from a nightclub strip-singer, fathered by a one-eyed spacer on the *Sol-Arc-turus run.* *Bork* didn't belong with aristocrats. He had a box under the *Space City* dome, where he lived on scraps from restaurant kitchens. He led spacemen to drink and to wander and then plundered their pockets of what remained, but —

Great God of the Rift! Thirty years had passed since my rodent-beginning on *Scrag.*

Still, here I was, a man in a boy's body, nursing a grownup purpose quite apart from the dance. Why was I here? I searched my mind.

Leeba meanwhile behaved like a woman. Her satin cheek pressed mine; her warm breath tickled my throat. The hard angularity of her little-girl body pressed me in strange, adult ways. My body ached to merge with hers. I loved her as a man loves a woman. For an instant the straight cylinder of her chest became a dual softness pillowed against me. Her long waist became shorter, its narrowness accented by the swell of her hips. Her slim legs acquired a curvature of thigh and calf, a smoothness of flesh sheathing knee and ankle. Her eyes hooked into mine, and I felt the hunger of her empty womb.

Surprise exploded in my brain: *She knows who I am, clever girl. She's hiding, too.*

The trigger tripped, and my purpose burst like a nova inside my head:

KILL! KILL! KILL!

The impulse seared my brain. I felt an urge to vomit on the pearly plastic floor. I set my teeth and reached into the pouch at my belt.

I drew out a six-inch needle tipped with the purple stain of *glacwin* venom, extracted during summer from a small flying reptile which secreted the poison in two glands beside its beak. *Glacwin* would give her an instant of agony, then death.

The music stopped. She turned her back to me and looked around the room, almost as though she were offering the chance I needed. But something else came first.

She has to know.

"*Leeba,*" I said, "you can't stay here."

She turned her eyes on me, and my mind fizzed into chaos. Sequence was shattered into a horrible fragmentation of space-time-matter fluttering down like torn confetti. Her eyes were the only reality; they reflected a slender blue-eyed kid in dun-colored leotards. It was the only identity around, so I grabbed it.

"You're talented," I said.

She wrinkled her nose. "You mean the dance?"

"Huh-uh. That . . . jangly stuff, broken mirrors flying around."

She raised her brows. "Broken mirror? Where?"

I had to try it again. "You can't stay here, Leeba."

She frowned. "You mean . . . on the dance floor?"

"Not the dance. Scrag. At this time. It isn't yours."

I felt a taut shimmer in the air. The mirror rippled, bent and nearly shattered — but not quite.

"Are you sure you know what you're talking about?" she asked.

Was I? Why was I here, knowing nothing of myself but a sordid scrap of youth and the tatters of a vagrant's life? And my purpose — to kill — curdled my soul. *I am not my own man.* Whose am I? Yours, Leeba?

"You can dance with me again if you like."

That's it, Leeba. Under the music, do the deed. It's for her own good . . . isn't it? I took her in my arms, holding the needle between my fingers with its point outward. I could feel her heart pulsing against her ribs. I held her tight and swung her

around, rehearsing the movement which would end her life. The quick reversal of the needle, the plunge . . .

But she had to know. *Had to.*

"Ready, Leeba?"

"Ready?"

"To come back with me. It won't hurt."

Her eyes knew, but her little-girl face puckered in puzzlement. "Why must I come back with you?"

I grated my teeth and tried to remember. "Clay? Does that sound like a reason?"

"A kind of dirt? How could that be a reason?"

"Not dirt. A man — I think. Don't you know?"

She shook her head. "I don't know anyone named Clay."

Could I be Clay? No, Clay was . . . something else. Cleanness, honesty, two pleading brown eyes below a vagrant forelock. I was Bork, and I had to . . . had to . . .

Her eyes hooked out my thought. "You don't have to," she said. "Stay here with me. It's the best time."

I sent energy pulsing down my arm. My waist moved, the needle turned. I braced my mind for the shuddering convulsion of her death, then —

I was lying on a bed, amid hospital smells.

Oh, Leeba, you were right, it was the best time, those years on Scrag. Lovely youthworld, now it's gone, and I lie on a white sheet afflicted by an incurable deadly illness.

"— Lousy goddam trick!"

"Now, Bork!"

"Watch him carefully, Doc!"
"Look out, he's gonna smash—!"

I felt the bite of a needle, then my muscles turned to oatmeal. When I woke up they had me wrapped up in a canvas kimono. I couldn't move, so I lay there cataloguing my surroundings:

Steelite cot, white walls about the size of a third officer's cabin. A man in a doctor's suit sat at a table marking charts; against the wall was a metal cabinet equipped with dials. Beside it rested a dome-shaped helmet from which protruded a heavy, coated cable.

"Doc," I grunted. "You the doc?"

He got up and came over, smoothing his mustache with his forefinger. "I'm a psychiatrist, yes. Bruce Pepke."

His voice sounded like he was speaking through a long hollow tube. He bent over the straps, his face set in that bland medical mask which says there's nothing at all to worry about. That made me nervous — but he sprung me from the strait jacket and gave me a cigarette, which as far as I knew qualified him as the best friend I had in the world.

"Well, Bork, can you tell me what happened?"

"I was back on Scrag — " I stopped. "Or was that a dream?"

"Did it seem like a dream?"

Psychiatrists never answer questions, they just pile on new ones.

"It seemed real," I said. "Realer than this, anyway."

He nodded. "That's the effect of the memorigraf."

"What's a memorigraf? Maybe that's a dream too."

"The memorigraf — you don't remember that?"

"I'm cleaned out, Doc. Just a few scraps of memory left."

"Hmm. She's got a stronger mind than I thought." He crossed his legs and eased the crease of his white pants. "Suppose you tell me what happened, and let me evaluate it. Wait, I'll get Clay."

IV

He came back with a guy around twenty-seven whose face was puffy from sleep. The circles around his eyes showed that he hadn't slept well for several days. He greeted me like an old friend, but I had a nagging sense of remoteness, as though nothing were really happening.

"Doc says you contacted Leeba, Bork. How was she?"

"She was . . ." I frowned at him. "Who the hell are you?"

He drew back and looked at the doc, who spoke in that confidential way people have around invalids, as though you're a dog or a servant and can't understand English:

"He's got a touch of amnesia, Clay. Nothing serious."

"Clay?" I said. "I mentioned you to her. Why?"

"I'm Leeba's husband."

"You pick 'em young."

"Young? I don't — "

"Let me handle this, Clay." The doc leaned forward. "You're Bork Craighen, field personnel supervisor for Galactic Minerals. Here's your ID card. Remember?"

I squinted at the plastic rectangle,

embossed with the curlicued crest of GM. It looked familiar. So did the battered puss in the photo. The psych wiped off a little mirror on his pants and held it to my face. They matched.

"Okay," I said. "That's the face I'm wearing now. But a couple of hours ago, or how the hell ever you measure time in this featherwig factory, I was a blue-eyed blond kid in a ballroom. A real silver-spoon specimen in a dancing suit. Which is real?"

"You found Leeba in a ballroom?" asked Clay. "What —"

"Let's not go too fast," said the doc. "Did you try to bring her back?"

"I tried to shoot her full of poison, yes." I shrugged. "She kicked me out. I don't know how, though."

"It was *her* mind, after all. We simply tried to insert your ego into it, and she rejected it. That's all."

"Let's try again, Bruce," said Clay. "While she's fresh."

The doc frowned. "That wouldn't apply, Clay. We can't be sure she's following a normal time sequence back there. She could be skipping around, glossing over unpleasant memories, drawing out the pleasant ones. However . . ."

He reached for the helmet.

"Now wait," I said. "Just hold on. I'm not going anywhere until I get these holes in my memory filled up. First, what's that funny hat?"

"It's part of a memorigraf unit. We recorded your memory before you went in. Now we'll simply replay your recent past, and you'll relive it all as it happened."

I hesitated, then nodded. The doc stabbed me with his needle, and the world started spinning. I barely felt the hat come over my head, buzz . . . buzz . . . buzz . . . and gradually it slowed down.

We were standing on the ship-landing and looking for Clay's wife. She wasn't there, as I'd expected, so I left Clay and went to a specialist in ET diseases. He gave me two months to get myself ready for the Big Blastoff, so I went to a bar and tried to console myself with a big, loving Venus-colonial chick. Then Clay stumbled in and said his bride had turned youth-addict and gone into a coma. I was the not-so-handsome, not-so-young prince who was supposed to bring her out of her deadly sleep, so . . .

I looked up into the faces of Bruce and Clay. I shook my head to clear it.

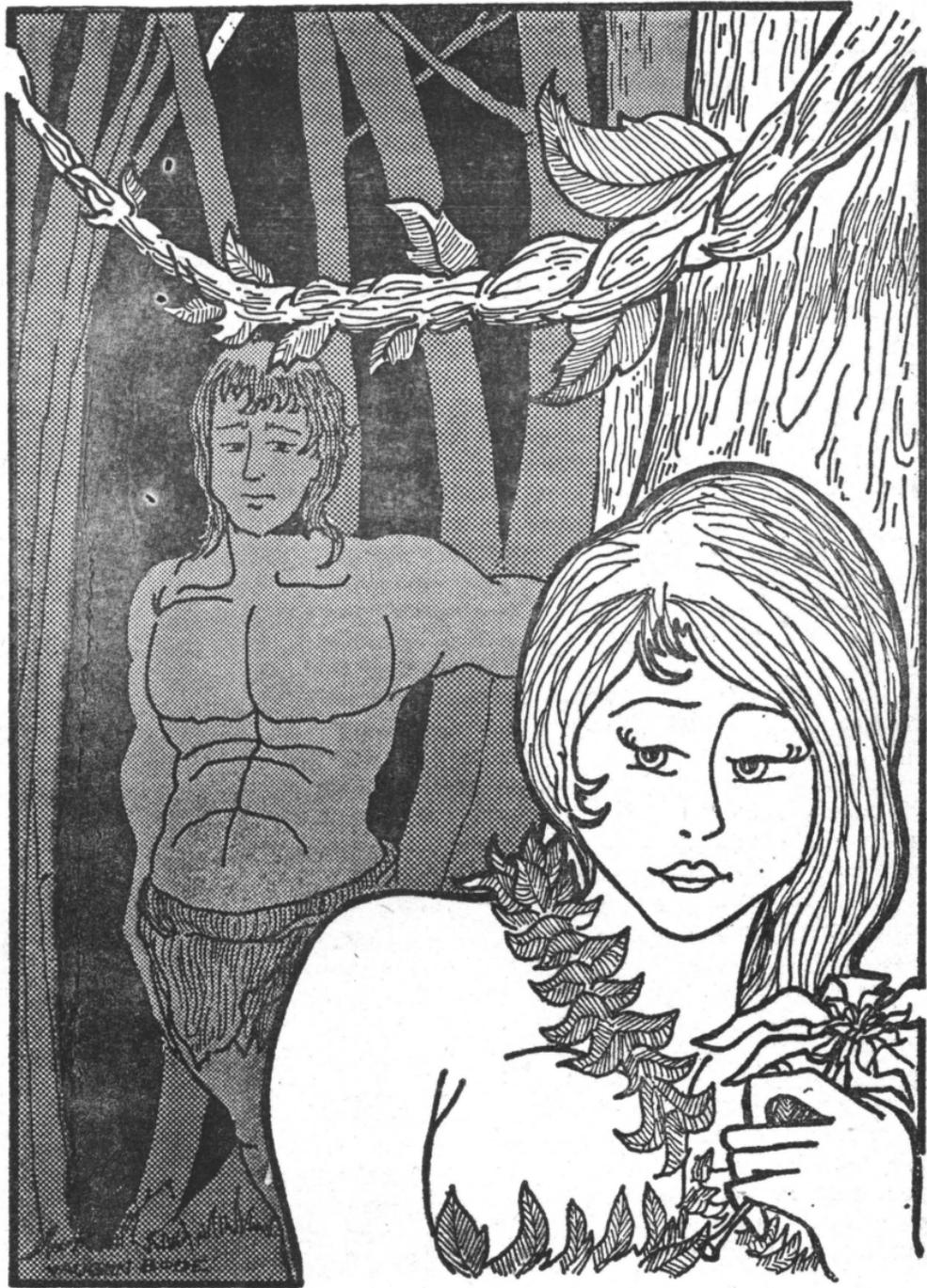
"This could drive me nuts," I said. "It isn't memory. I was *there*, for the first time. I can see how Leeba got lost in it. Now, exactly when are we?"

"You went into Leeba's head —" began Clay.

"Then you came out with amnesia. So we put the hat on you to fill in your memory. That was a couple of minutes ago. Now you're just coming out of that one."

I pieced it together in my mind until I had it straight: Leeba, the little girl in the ballroom, the poisoned needle, the lithe lad in leotards . . .

"That kid," I said. "I was never like that. I even talked educated —"



which I'm not. I've just read a lot."

"That was Leeba's projection of you," said Bruce. "She had your personality in her mind, so she created her own image to go with it. No doubt it was highly idealized."

"Yeah," I said, remembering how I'd felt: my senses sharp and vivid and . . . young. My own youth had been miserable, and the only way I'd survived it was by having nothing to compare it with. But youth in Leeba's world was wealth, good looks, a skill at dancing and conversation and — she'd give me that too — proficiency in the art of love. I ached to go back into her mind, for a week, a month, a year. As long as I could. It didn't matter.

But I couldn't let them know how eager I was.

"Maybe that's how she could kick me out," I said. "She had control and I didn't."

Bruce frowned. "I don't know."

"Maybe if I was conscious, but still hooked into her memory — "

"It's never been done. You might go crazy. Or die."

I felt like laughing. "Doc, that really doesn't matter, believe me. But listen — no hypnotic kill order. Otherwise I don't make the trip."

"I can wipe out the command," he said. "But then, how will you bring her back?"

"I've got an idea," I said. "You'll have to let me work it out on my own. It has to do with the . . . hell, I can't explain it. You trust me, or you don't."

"I trust you, Bork," said Clay.

I smiled at him. If he only knew . . .

"All right," said Bruce. "I suppose you'll want to rest first, eat, wait another day . . ."

Another day of numbness? "No, Doc. There's just one thing, Clay, if I die — "

"You won't."

"I might. Just bury the old shell and forget it. It isn't important. Remember that. Don't give it a thought."

He agreed, but he didn't understand. I wrote out a paper leaving my fortune to Leeba and Clay, Mr. and Mrs. Fortescue, and had the doc sign it and certify that I was in my right mind. While he was doing that, I boosted his scalpel and hid it up my sleeve.

Then he injected me with scopolamine, and I started drifting into the twilight zone. He put the domed hat on me and another hat on Leeba, who lay in a cot beside mine, then hooked our heads together with wires.

It was like a slow blending of two worlds, with one picture coming in and the other fading out. I could see Doc and Clay looking at me, while behind them on the white walls appeared a grove of trees in the Scrag countryside. It was so vivid and brilliant that Clay and Doc seemed covered with dust and then faded out entirely. I smelled the lushness of growing plants, the humus of the forest: I felt strange emotions: I was a bud about to flower, a butterfly laying eggs, a cow swollen with milk, a bee whirling in the mad frenzy of the mating swarm . . .

SPRING!

Spring on Scrag. The frenzied time, the surge of life after the long freeze!

I was Leeba. No, I was myself, inside her head. I saw through her eyes and felt with her emotions. The shape of her body enveloped me, the weight of breasts on my chest, the heaviness of hip and thigh.

We sit in a grove, Leeba and I. Giant trees arch four hundred feet overhead, their massive trunks a rust-red color, like crinkled metal. The sunlight filters down through the yellow leaves and falls on thick blue-green grass. A blue-scaled lizard flaps his red leathery wings and flies over the clearing with his long yellow crest flowing out behind him. Other boys and girls lie about the clearing, some dressed in leaves and skirts of grass, some wearing nothing at all.

I sensed a calmness in Leeba's mind, also a pleasant fatigue. All day she has worked in the forest to build her bower: set the green saplings so they would arch over, then tied them together and laid the matted *gelo* vines on top. She has spread the floor with a soft *puka* moss and laid a carpet of blossoms at the entrance; hung scented herbs from the roof and buried the aphrodisiac root of the *bakaka* beneath the threshold. Tonight after the mating dance, she will lead a young man across the threshold.

She wonders who he will be, but feels no anxiety because the outing will last three weeks and the first night is not binding. If she doesn't fall in love with him, she will choose another, and then another, until she

finds a husband. Those who fail to mate during the coming-of-age tour will probably never mate. Another reason she feels no anxiety is that she knows all her would-be suitors; they are boys she grew up with, boys of her own social class.

So she digs her bare toes in the grass and waits for the sun to go down; the roots are cool and love is a warm syrup flowing through her loins

I push my thought into her consciousness:

Remember me, Leeba? At the dance, eight years ago?

Her memory spins back, the years like windows in a lighted train rushing past. *Ah*, there I am, the blond, blue-eyed, graceful lad in leotards. Now the clock runs forward; my shoulders broaden, my legs grow thick and muscular, my cheeks are touched with golden down. I stand behind her, a teasing smile around my mouth, with yellow hair lying on my shoulders.

"Look at me, Leeba."

She turns, and her brain crawls with revulsion. My smile twists into a leer, the twinkling blue eyes glow red, demonic. My teeth become pointed, yellow-stained, my hands curve into claws, my body warps into a grotesque hunched horror

"Is this how you remember me, Leeba?"

Her lips trembled. "The . . . last time you had a needle."

"Not this time, I promise."

She wet her lower lip with her tongue. I saw perspiration dampen her shoulders, and I felt the icy knot of fear in her stomach.

"Go away, please! Just go away."

I tried to bring back the shape of the young man, but I was dissolving like soap foam, flaking away like a peeling coat of paint. The bird-noises in the clearing grew faint and far away, and I thought, *I must take control before she kicks me out again.*

JUMP!

V

The sun was lower. Time had passed. I was the youth again. Grotesquerie was gone. I felt a lusty sense of power. I stood alone in the clearing, wearing a loincloth of woven bark. Where were the others? Oh yes, now I heard the splashing and laughing. I walked toward the sounds, feeling the long muscles slide in my legs, and I drew the air like wine into my lungs.

The pool was clear as crystal, its surface like shattered mirrors reflecting the trees overhead. I looked past the young people splashing in the water, and I saw Leeba, lying on a rock and watching a flower-like animal which clung to a tree and rolled out a long sticky tongue to catch flying insects.

I walked toward her. The green of the rocks and the sun filtering through the leaves tinted her flesh a lemon-yellow. I looked down at her nude body and felt a surge of maleness. I laughed.

She sat up. Her eyes stared, her mouth opened to scream. I felt something in my hand. I looked down and saw a long curved dagger glittering in the sun.

I concentrated, and the dagger became a silver flower. I knelt and held it out to her.

"I told you it wouldn't be like the last time, Leeba."

She searched my eyes; I saw tiny beads of perspiration trapped in the down of her upper lip.

"What is it . . . this time?"

"You can't — can you?"

"If you help me, I can."

"Why should I help you?"

"Because . . . you want me."

I leaned toward her, and her eyes grew large. They were the color of caramel flaked with gold. I smelled the warm salt-tang of sun on flesh and —

— walked along a sidewalk while an icy wind sliced across a barren landscape. A dome rose up in the center of a vast paved court. A girl walked ahead of me huddled in a parka, cradling her books in her arm. I also wore a parka, and fur-lined boots. They clumped as I ran toward her. A dry stick whipped across the sidewalk as I came up beside her, drawing the air into my lungs like icicles.

"May I carry your books, Leeba?"

She turned, her pale oval face peering out of the blue-furred hood. She was about twelve years old. With a flash of her teeth she threw the books at me and ran.

I laughed, then I gathered up the books and started inside —

Inside a warm room. It was full of furry stuffed animals. A little girl played with a blond, curly-haired boy-doll, rocking it in a cradle, pursing her lollypop lips as she crooned.

"Leeba, come out of it," I said with my six-year-old voice. I wore shiny shoes and velvet pants, and my hair hung in blond curls to my shoulders.

"Go away. I didn't invite you."

I took the doll out of the cradle and tore off its head.

"I'm the one you want, Leeba."

Her face screwed up. "Momma! Nurse!"

I jabbed a finger into her ribs. "Don't cry, Leeba," I said, tickling her. "Laugh, Leeba. Laugh, Leeba, Leeba leebaleebaleeba —"

We fell down together, laughing and twisting and rolling on the floor —

— In the forest.

She lay on her stomach with other girls in a circle, talking. I plucked out a blade of grass and brushed it across the pink sole of her foot. Her toes curled, and she looked back over her shoulder.

"I'm always with you," I said and —

— We stood on the stage of an auditorium decorated with paper spaceships and stars. She was perhaps fourteen, reciting a poem about the founding of the colony on Scrag. I walked up behind her and pulled her pigtail. She whirled, her face set in anger.

"Let's go back to the summer, Leeba."

"You . . . can't you stay away?"

"Not when you keep remembering me. So let's go back —"

— In the forest, the young people sat eating, looking into the campfire. I walked up behind her.

"Mind if I sit beside you?"

She answered, looking into the fire. "There are other spaces. Other girls."

"Not for me, Leeba." I put my hand on her shoulder and started to caress her . . .

I stood outside a circle of about thirty boys. One boy was beating a drum in the center, another played a flute. A yellow-haired girl stood inside the circle, facing the line of boys who marched around in time to the music. She wore a dirndl-like costume and a blindfold.

The beat of the music speeded up; the boys danced faster. I saw Leeba waiting with the other girls on the opposite side of the circle.

Suddenly the music stopped. The drummer rose and took the blindfold off the yellow-haired girl. She blinked at the young man who'd stopped in front of her, then laughed and seized his hand. Together they ran into the forest.

Another girl was pushed, giggling, into the center . . . a small girl with glossy black hair who kept giggling as they tied on her blindfold. She was paired with a dark, rawboned youth. Shyly, looking down at the ground, they walked out of the firelight.

Two more girls, then Leeba. She looked wild and wanton. Gold rings gleamed in her ears, red boots came up to her calves and a spangled skirt reached only halfway to her knees. She raised her face for the blindfold, and her bosom swelled above the low blouse. She was the fairest of all, and the drum thumped louder than before, and the dancing boys devour-

ed her with eyes glinting red in the firelight.

I heard the music swell toward crescendo. I ran up and broke into the circle. There were angry shouts behind me, then the music stopped, and they took off her blindfold.

She looked at me and spat one word: "You!"

She whirled and ran, red boots on flashing white legs. I ran after her, bounding over the spongy turf and into the forest. Laughter followed me, along with girlish yelps and shouts of encouragement from the boys.

She tripped on a tasseled boot and fell; I landed on top of her. She writhed and twisted, but I caught her waist between my knees and pinned her wrists to the ground. She stretched her neck and yelled: "Help! Help!"

"They won't come, Leeba."

She went limp and lay panting. "You cheated. You weren't in the dance when they blindfolded me. I looked."

"You cheated. You're supposed to take me to your bower."

"I won't."

"All right. Seems a shame to waste it, but . . ."

I bent down, but the mirror warped, shimmered like a wet windowpane.

"No, Leeba. Not another one of your backward trips. This is the best time, you told me that."

"I hate you. I hate —"

I stopped her words with my lips — and suddenly I knew what hooks the youth-addict. It wasn't memory of the first kiss, it was . . . the first

touch of girl-flesh, the first crackling surge of electricity up my legs, the clutch of my lungs, the runaway thumping of my heart.

It was the same for her. I heard the hiss of air through her nostrils, felt the heat of her face and the soft relaxation of her body. Her arms went hesitantly, then strongly around my back. After a moment I whispered hoarsely:

"Where is your bower?"

She rose and took my hand and led me silently through the forest. Stooping, she led me into the perfumed bower. I heard the soft creak of moss as she lay down, saw the dim glow of her body and the sheen of her golden earrings.

A long time later she asked: "Who are you?"

"Bork."

"How did you get here?"

I put my hand on her forehead. "You brought me, through here. I'm a friend of Clay, your husband."

She sat up suddenly. "That hasn't happened yet."

"For me it has."

"You come from the future?"

"Leeba, you know how it is. Don't you?"

"I want you to tell me, Bork."

VI

I told her about the memorigraf. About my body and hers, lying side by side in the clinic on Earth, a billion billion miles and many years away . . .

". . . But our brains are dying. Yours and mine. You have a month

left, I have a little more. A month there. That's fourteen years here — if you decide to stay."

"Could you stay with me?"

"For awhile. But eventually they'll unhook me. After a few hours, a day at the most. I'd be with you a few months, maybe a year, then I'd be gone."

"But if I remembered you, and you existed in my memory —"

"Don't forget I'm still back there. It's my conscious will that keeps me going. Once they unhook me, I'm out of it. You couldn't keep the illusion going, now that you know it's an illusion."

She was silent a long time, then she said.

"Awhile ago . . . nothing happened, did it?"

"Yes. It happened."

"But not really. I couldn't have a baby."

"Not a real baby, no."

"But — it was so perfect. So frighteningly real and so . . . nice."

"Why wouldn't it be? You made it, with your mind."

"But didn't you have the same—?"

"It was perfect for me too. I made it, with my mind."

"I don't want it that way. Like a dream."

"There's another dream. Maybe you'd like that better."

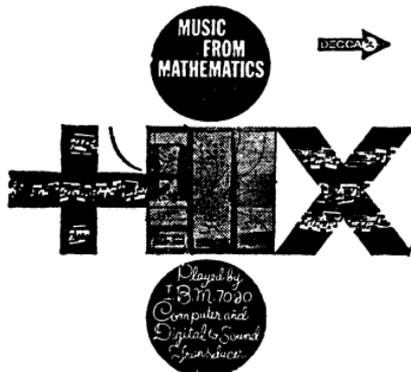
"What is it?"

"You know. The little house, Clay, your husband. He's tall, brown-eyed, honest, upright, faithful, devoted—"

"I don't want him. I want you."

"All right."

"You mean . . . you'd be with me, like we are now?"



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"Like we are now, yes. that's right."

"How?"

"Just relax, Leeba. You're getting sleepy. Close your eyes and let your muscles flow. Trust me. I'll take care of you. I'll always be with you. You'll have Clay, but you'll have me too.

"There'll be no more unhappiness. No more frustration. You'll have a child, too, you and Clay, but I'll be with you all the time. You'll be able to see me, but nobody else can. We'll have to talk silently . . ."

She slept. I visualized the little room, the bare clinic walls. I built up a picture of Clay and the psych sitting there; I saw the wires running from the helmet on my head to the head of Bork on the other cot. Slowly the picture formed, shimmered, and . . . jelled.

I rose . . . Leeba's body rose from the cot. I had to work quickly. Her legs were weak, but I had the advantage of surprise. Clay only gaped at me and said:

"Leeba!"

The doc was starting out of his chair. I reached down and took the scalpel from the sleeve of Bork, and with one last look at the scarred face Pd worn for thirty-six years, slashed with all my strength beneath the stubbled chin.

Blood gushed out over my arm, all over Leeba's filmy nightdress. Then the room started tilting, and

I had my first horrible doubt. Did I figure it wrong? Everything went black and I thought: *I was wrong about her, she kicked me out again and I'm dying . . .*

Then I opened my eyes and looked up into Clay's pale, horror-stricken face.

"Why, Leeba. *Why?*" he said . . . to me.

I looked over and saw Bork lying in a pool of his own blood. He wasn't breathing.

"It doesn't matter, Clay."

"But — Bork saved your life! And you cut his throat!"

"Of course. But it doesn't matter. He was going to die anyway. Ask Doctor Pinwit. Didn't Bork tell you it didn't matter?"

"Yes . . . yes he did, but —"

Then he gasped something about seven years being a long time, and I saw him bending down to kiss me. I gave a loud shout inside my head:

Leeba, wake up.

Sleepy-sounding voice. *What happened?*

It worked. We're back. But you'll have to take over on this.

I felt myself dwindling down. Then I was the young man of the forest again, standing beside the cot and looking down at Leeba, who was being kissed by Clay. She reached up and took my hand and squeezed it tight, and I thought, well, here's to a long and interesting life. END



THE LONG, SLOW ORBITS

by H. H. HOLLIS

Illustrated by FINLAY

*Nice prison! It was a Klein bottle
in orbit — easy to escape from, if
you didn't mind turning inside out!*

I

I was taping indiscretions at a morning reception in the Israeli Embassy when I saw Gallegher hiding behind two experts in nuclear desert reclamation. We exchanged glances and assembled at the bar, where I saw that he had a grotesque pattern of hairline scars cutting whitely into his rusty Martian tan.

"Have you become a consul for some slowly developing nation too poor to afford real diplomats?" I asked.

He laughed. "No, I'm a house guest here, sort of. Why don't you ask me about these scars?"

"You look," I replied, "like a chicken thief who never heard of charged fences. Is that six-inch hexagonal grid all over you?"

Gallegher drew himself as nearly erect as any tramp rocket jockey will (they don't like to be mistaken for space Navy men) and said, "These are the heroic scars of a conductor on the underground railroad."

"On the *what?*"

Just then I was swept away by a loud argument between two diplomats famed for the personal and political enmity, but Galeg shouted, "Lunch!"

Over the second bottle of a sturdy Hock in the Embassy's great public dining hall, Gallegher leaned away from the dead luncheon plates and told me about the chicken wire.

The girl (he said) was an Israeli; that is, a citizen of the Greater Near East Co-Prosperity Sphere. It was the summer after I broke my ankle testing that crazy Englishman's "space bicycle" — you remember? It was going to make servicing the weather and communications satellites so easy? Well, I fell off Tiros Ten while it was in a north-south pass. I cratered in Central Canada, and the Toronto therapists sent me up north to the Arctic Ocean, so I could strengthen my ankle. I was staying at the Hilton T-5, on an ice island about a hundred and fifty miles from the geographic Pole, and hiking a random route over the pack ice every day. The up and down and sliding all were supposed to strengthen up my ankle ligaments.

One day I saw a girl stalking a polar bear. We were both wearing parkas, and I thought she was an Eskimo. The bear had tolerated her, just waving its paw and growling every now and then, but it saw me and decided two human beings on its trail was one too many. It just slid over the edge of the ice and took off for open water — or another ice island, I guess.

Harriet turned and saw me then, and came bounding over the ice, waving her spear and shouting. "You're supposed to help! I would have shared. Now I've lost the sport and you've lost the meat, freeze you!"

She saw the color of my skin just about the time I could see hers, and pulled up short. "Oh," she cried, "you couldn't be an eskimo, not with *that* pelt!"

"No, sweetheart," I replied, "and that Mediterranean profile and black olive complexion of yours never came from Hudson's Bay, either. I'm sorry I spoiled your game."

"Sorry all hagan! Every Earthman thinks he can make anything all right just by saying, 'I'm sorry.'"

That aerated my fuel a little. "As for that, I'm more Mars than Earthman," said I. "And a good day to you, ma'am, for the next two months of it."

She sank the spear point in the ice with pique, and muttered to herself. "She-hagan . . . another iron man — lost in space without a hot tube and a computer to bring him home."

Then I knew who she was, from the newstapes. "So-ho, you're the little Yemenite sailor-girl who made a fool out of Space Admiral Rogosovsky?"

She smiled a bit at that. "Oh, well, rockets can hardly deal with a craft like mine. A sun sailor moves with the organic forces of the universe . . . and besides, the light quanta pushes it so slowly a rocket is useless when it matches speed to the *Sunbeam*."

"Is that the name of your tube?"

"She's no tube. There's not even an auxiliary aboard. When I shove off from an asteroid and spin out *Sunbeam's* sail to the solar wind, I'm on my own." Her hood was thrown back now, and she smiled a real primitive grin, all over her face.

"Tricky navigation?" I asked.

"Oh well! You have to know how to do it. There's so much real estate in the Ring, though, that you can always make a landfall somewhere; unless you're fool enough to sail right up from the sun out of the Ring. Then you might broach to and let that old fireball blow you right up to Pluto."

It pleased me that she thought of that direction as "up." I've always felt myself it was "up" to Mars and "down" to Earth instead of "out" and "back."

You don't need to know all we said after she realized I was an old space hand. By the time we tramped back into the village, we were old bear-hunt mates, and she set out to recruit me for her crusade.

I wouldn't have believed her story, written out, but I couldn't disbelieve it when I was looking at her. She wore an anklet of those blue ceramic beads. After that first day, it might as well have been around my neck.

You remember the public part of it. Harriet appeared on the vidcasts when she was discovered sailing a long, serene track well inside the orbit of Mars. Admiral Rogossovsky reacted like the clockwork bureaucrat he is and made a heroine out

of her when she defied him and his whole Navy couldn't catch her.

Between the public's chuckling and the professionals' pleased appraisal of her antiboarding devices, Tojo Rogossovsky lost every round. It was bad enough that every time one of those hot Navy tubes would damp the flame down enough to match velocities with Harriet's *Sunbeam*, she'd float one of those glass bottles with a firecracker in it over and blow the Navy's matching trajectory into a Riemann parallel; but when the Old Man ordered his greenjackets to get out of their pipes and use their zot-guns to capture Harriet, they wouldn't do it. Who wants a firecracker in a glass globe up against his faceplate? And it's an all-volunteer service anyway, so . . . I should have known there was something about a girl who could think up a device like that. But she was only five foot two, about a hundred and twenty pounds, raven-wing hair that she could sit on when it was undone, and a way of hanging on to my parka and looking up into my face that made me feel I was somebody special.

She was somebody special, and her specialty was to subvert the economy of the Asteroids. Harriet was running an escape route for cyborgs.

That's why the sailing trip. She had chased down that asteroid with the eccentric orbit that brings it inside the orbits of the inner planets, and left there a half-living machine that she had stolen. She was actually leaving the inner solar system

when Admiral Rogossovsky and his radar techs picked her up.

I see you're shocked by the idea of cyborgs. You know they're illegal down here and on Mars. Don't forget there's *no* law in the Asteroids. By law, the Ring has been left free to find its own economy.

Just you remember this: anything that technology *can* do . . . at a profit . . . *will* be done, somewhere.

II

Harriet explained to me how it got started.

First thing, they have a lot of freak accidents in the Ring. One of the freakish aspects is that an accident is often catastrophic but not fatal. What's to be done, then, with a basketful of viable organs, missing only eyes and limbs, say, to be a person? Down here where it happens so much more rarely, we bany the pieces and throw away the personality. When we use the replacement parts, we have to suppress immunity reactions and put up with the fact that the pieces are the wrong size and all that. But we've got people running out of our ears. We can afford to discard personalities.

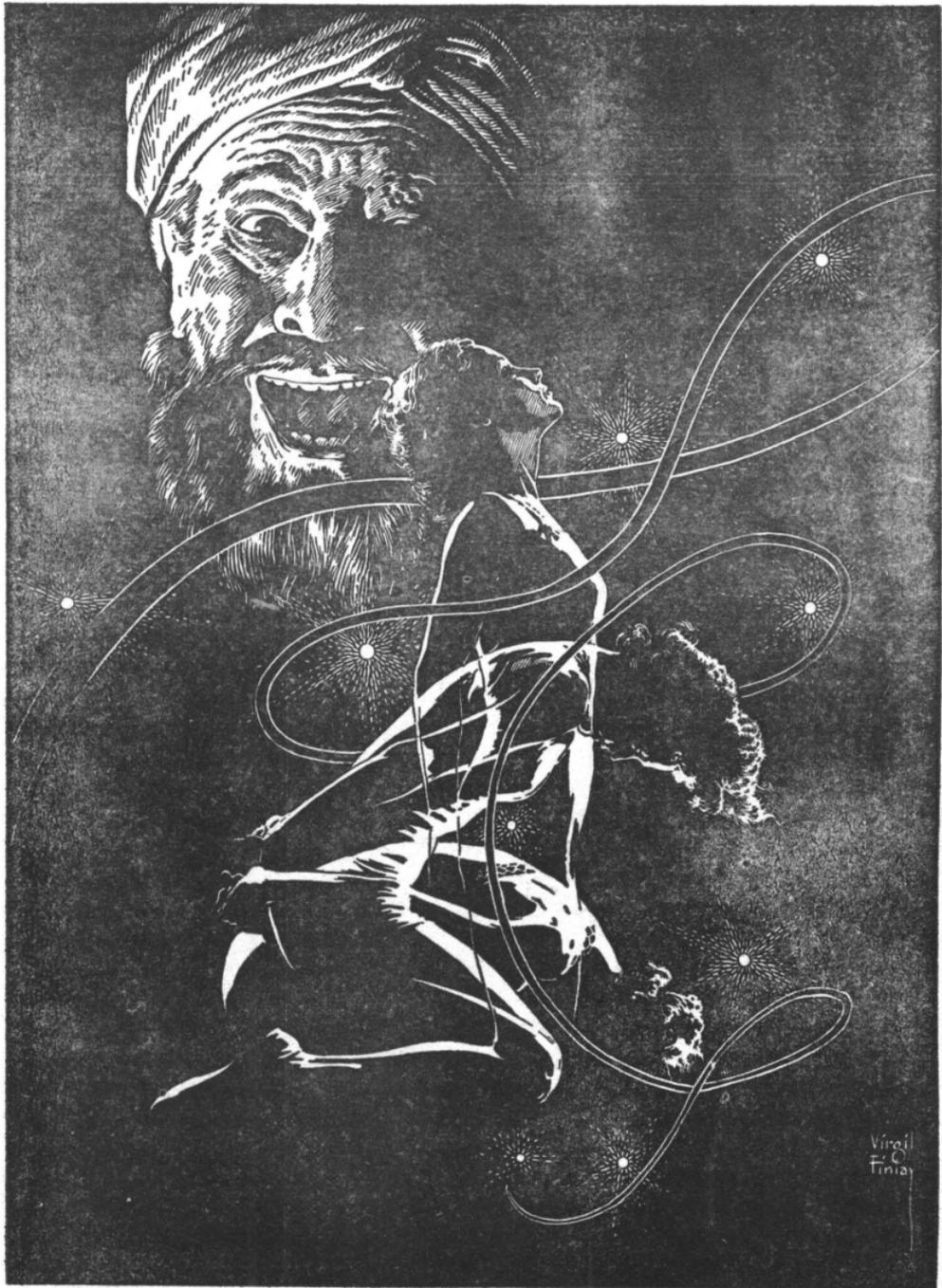
In the Ring, it's the other way 'round. They're few on people and many on machines; and a remnant really adapts better to nylon and platinum and stainless steel prosthesis than the individual organs do to being life-grafted onto somebody else. After the operations, you may have a something/somebody that's

just right for riding a big chunk of ore round and round the Ring, operating the smelter by being wired right into it, and dropping a load straight "down" to Earth when the two orbits are right.

That's were the Ring-wallahs make money: on the shipping. Costs are next to nothing. Gathering the stuff is expensive; and going up for a load after it falls into orbit around Earth costs money; but the low mass everywhere in the Ring makes shipping as cheap as vacuum. When the computer says, "Push," you can push a load with your hand or with one of those firecrackers — Tojo Rogo cocktails, they call 'em? — *in the right direction*, and that's all it takes.

Now, you turn half or three-quarters of the gathering over to a half-live machine that runs on a barrel of vitamins, a little greenhouse to recycle the oxygen and the wastes, and a yearly maintenance call to replace a few transistors and vacuum tubes, and hook the device into a "cyborg central" by radio, helio and teevee; and instead of a hole in the fuel tank, you've got a fuel breeder. Money's money, everywhere in the universe, even in enterprises that are theoretically cooperative, like a kibbutz.

So you see what happened, don't you? In the blurred legal nowhere of the Ring, it ended up so that who paid for the surgical operations owned the hardware; and *sad* to say, Mrs. Stowe and Uncle Tom to the contrary notwithstanding, when you own a being's body, you also own its/his soul.



And Harriet, poor Harriet, her clan hadn't even been moved out of Yemen until after the Greater Near East Co-Prosperity Sphere imploded from the war against the Pakistani Dictatorship. When she was thirteen years old, she was literally jetted a thousand years, from a pre-feudal patriarchy into a bustling industrial nation.

It was all a little much for her, and when she was eighteen, she shipped over to a mining kibbutz in the Ring.

The only person who kicked out to it with her was a boy from her clan. He was only fourteen or fifteen, so she was leader. Even in the kibbutz, though they cooperated cheerfully with its system of absorbing immigrants, the two of them constituted a kind of irreducible fraction. The kibbutz itself was breaking up under the pressure of the new economic conditions in the Asteroid Belt; every day a little less of a cooperative and a little more of a competitive enterprise.

Then her friend got hurt.

Oh, "Mordecai" was saved. "He" came out about the size of an IBM 00701, with bellows pumping and gauges registering, and three kinds of light receptors to see different bands of the spectrum; but not exactly adapted any more to wandering off to the shady side of a rock chunk and talking philosophy. He was anchored to a million-ton drift of cinnabar with a hotel room full of auxiliary machines. Then he started reducing the ore to flasks of mercury isotopes.

At that time, "Mordecai" could see and talk and had tracks on which he could move. However, it wasn't long until he got into an argument with the mine operator who owned his hardware. This man was a curious, cruel sort, well on his way to becoming the dominant force in the Ring. His methods were fast becoming any act by pointing to the competition. Harriet always called him "The Sheik," which ought to give you some idea of his attitudes toward people . . . and people/machines.

How can a machine feel cruelty, you ask. So did I. I hadn't stopped to think that these machines are sentient. The owner could switch one out of the television circuit, you see, for a mild punishment; or disconnect the light receptors, a little worse; or cut one out of the voice radio and restrict it to Morse. At the last, when the one rotter got really rotten, he would cut off everything except the restricted senses needed for the mine or the smelter.

The cyborg would just drift in darkness for a year or more, working without knowing when or if anything else was going to happen, not able to ward off meteors or monitor the sunlight.

The Sheik had lost the whole point, you see, and was indulging in cruelty for cruelty's sake. Originally, he promised incentives for more production or better shipping. He was going to go to color teevee for real producers. There was going to be rotation on the jobs, to break the monotony. A teevee band would

be left free for experimental drama and dance by cyborgs. Typewriters would be added to the circuitry of any cyborg that came up with a usable suggestion. Oh, he talked a machine dream, for a while.

None of these promises ever materialized, but he began to exact penalties of the milder kind: sight and sound. Fear followed . . . both ways.

The more he punished his cyborgs, the more he feared them, until at last his cruelties — lowering their available oxygen, shutting down their senses to the level of mechanical efficiency, beating them (get that bright and sharp on your mind's teevee, would you) so some of their mechanical members were bent, making it hard for them to work — his cruelties came to be done to exact *respect* and to, "keep the steel-colored sonofamarches in their place," rather than in any rational attempt to raise production.

Production was dropping, of course. The Ring was not a place for a slave economy.

He lost a couple of the half-living by shutting them down to machine status. Meteors smashed the greenhouse on one, and a sunstorm cooked the vegetation in another. He saw to it that the carcasses were displayed on the video. "Example to the insolent."

Worse than these calculated cruelties were the wanton ones. The Sheik carried a fifty-inch screwdriver to reach and tighten connections that otherwise would have required extensive dismantling, and

sometimes he would lay it across two or three exposed terminals, producing a shower of sparks. "Remind 'em who's boss," he would say, while the poor devil shook with oscillation, trying to restore the electric equilibrium.

He even wired his office record handler so that she shocked herself in handling the routine work load. Played hagan with the records, of course, but the Sheik didn't care. "Gussie loves me," he would say. "Don't you, you steel-colored old bucket of bolt?"

And if she didn't answer, "Yes sir!" cheerfully, he would punch in a sequence that always shorted her out.

Not all this madness was apparent. Harriet automatically suspicious, a little paranoid about herself because of her own history, telescoping years and light-years, you might say. She was a loner even when "Motl" had been fully human and fully movable. Her paranoia was fed by his accident, and that's when she began sailing.

While she was out there riding the winds of the sun in total isolation, hung in the center of that great main sheet, a single layer of molecules thick, she was anxiety free. Like a rich man sitting on a park bench, she could see in every direction. Nobody could sneak up on her.

Technically, or politically, Harriet was a full cooperative member of the kibbutz. Sun jamming was a popular sport, and nobody questioned her solitary sailing. Nobody realized, either, that she was hunt-

ing Mordecai. The way she told me, it would have been impossible to establish that his location was being concealed. But every set of coordinates the Sheik's "Gussie" gave her was wrong.

The second time it happened, she realized something more than a misplaced datum was operating. After that, she was too cautious to ask the office cyborg again and began to sail around the Ring in a series of exploratory curves that would have made a tight spiral around the "regular" Asteroid Belt if she'd had to complete it.

Lucky Harriet made a landfall on Mordecai's cinnabar eddy within a month or two of the time she started her purposeful search. Sure enough, the Sheik had cut him out of everything but the Morse circuit, deprived him of all light reception below ultraviolet and removed his tracks. There he was, not much more than a sophisticated monitor, when she began talking encouragement into his sound sorters. They worked out a plan that required he stay there and sweat bolts while she stole and roused enough of the others to tip the battle against the Sheik.

But she needed another hand.

She told me all this in her igloo. The blubber pile in mine was pretty rank because somebody had put a bar of perfumed soap in it, and the flavor of every piece in the pile was affected; but Harriet's was all nicely rotted seal, whale, and bear meat; so we were mostly in her place when we were inside.

Doesn't the whole story open up your seams? I tell you, she had

me oscillating in sympathy with those poor half-live coggers. There! I'm sorry I said that. She made me realize it's an opprobrious term; but it's hard to get out of old bad habits.

III

I helped her. I'm proud of that. Me, that never stole a machine in his life, not so much as an in-ear radio. I helped that chunky, spunky little girl cognap every shape and size of half-life you could imagine. "Coggerstealers" was the kindest thing the owners called us when they realized what was happening. We gloried in the name. We made ourselves as feared as oxygen pirates.

For a long time, we kept the operators in the dark about who we were. We had put up an awful good smokescreen by having become apparent lovers on the ice island. I moved into her igloo. I'd have almost done it just to get her blubber pile, but of course it's nice to have somebody to talk to. Before I realized her sympathy was reserved for the prosthetically extended, I told her a routine precautionary romance about how a tornado of cosmic rays had caught me over Mars on a cargo pipe and altered my gene structure so that I couldn't ever marry.

So it never occurred to her that a brother and sister, can't-tell-the-boy-from-the-girl-without-a-program kind of relation wasn't suiting me fine. I never could get the proper emphasis on the second day's in-

stallment of *my* story because she was so well launched into *hers* by that time, grinning and crying and acting out all the parts. She understood nothing had been altered about me but my genetic code. She just didn't think it was important. Harriet was accommodating enough; she was a nicely brought up girl; but there was no emotional investment.

I was ready to light the flame and get out of there in a few days and start rescuing the slave machines; but she felt we had to stay around for a couple of weeks to let our "love affair" become pretty well known. For a girl, she was mighty crafty.

I don't believe I ever really got her attention until the third or fourth day after I moved in with her. You've stayed in igloos, haven't you? Well, you know the heat comes from your own body and a little oil lamp, a soapstone bowl of whale oil with a moss wick. You wear those everlasting pants and boots and parkas all the time. Eskimos don't; but they like it cold; and there are always a lot of people in an eskimo igloo. I saw more of Harriet by the hotel pool than I ever did in the igloo.

But about sleep time the third or fourth day, I said to her, "How about blowing this lamp out? I've learned to savor the taste of blubber, but I can't learn to like the smell of it burning." Harriet giggled and said she'd only left the wick alight because she thought I wanted it. I snorted the flame out, and it was totally dark.

When I woke up, I wanted a light so I could see to get the wick burning again. I had a little old hand-squeezed generator flashlight — you remember, with the works visible through plastic sides? and you squeeze a little plunger handle? When you've got the armature turning fast enough, it generates enough electricity to light a little wire filament bulb. Gives about as much light as a second magnitude star peeking in a cave entrance.

About the second or third squeeze, I had enough light to see Harriet in midair. The flash had startled her out of a dream of sun-sailing alone.

Whatever the world's record is for the lying down high jump, she broke it. Turned over the blubber lamp too, so I had to keep squeezing the dag-blagged little machine to get enough light try to comfort her. Her irrational fright reaction had jarred my gyro too, and I couldn't think to crawl over and pull back the skins at the entrance tunnel. You don't get much light that way, but with the sun "up" twenty-four hours a day, you get enough to see objects.

Believe me, putting your arms around a fairly athletic girl clad in loose skin garments while she's running around the walls of an igloo in the dark, cursing and praying in the South Arabian Peninsula Hebrew dialect of her childhood, and you're squeezing a hand generator for what little light you can get, is a unique experience. Every time my hand would run down, she'd start hollering, "Ohr! Ohr!"



(Light, you know), and I'd have to start pumping some more.

I knew then what my grandfather meant when he gave me that little old antique. He was a New York politician, did you know that? and he kept that flashlight to help him home in the power failures. He laughed when he gave it to me and said that he'd always been safe in the blackout because he was a politician; he could see his way home just by shaking hands all the way. And my hand was as sore the next day as if I'd been elected President of the Federated U. N.

When I finally got her quieted down, we were a whole lot better friends than we'd been before. I wasn't so much in awe of the heroine who'd fought and sailed her way through the middle of Tojo Rogo's whole space navy. She'd had a new look at me, as somebody who didn't quit just because the seams were opening up. A woman always thinks more of a man who's lived through a helping of hysteria with her.

The one part of the happening that ought to have been significant to me, but wasn't, was Harriet's reaction when I wouldn't make her a gift of granddaddy's generator. She thought it was just a toy, you see; but when I told her the story and explained why I couldn't give the little momento away, she softened up and all at once.

She pulled me back in under the bed skins with her, and said, "Oh-h, you're a real person, after all. Bring your grandfather's little machine in here with you. I would never have guessed you are so sentimental."

I remembered that when it was too late to do me any good.

We finally shoved off to our work. If I ever have a honeymoon, I want to take it in a two-place sunjammer. Unfortunately, Harriet's little vessel (a loose fit for one) was snugger than the fat man's spacesuit in the story for two. We had to work out a kind of drill by the numbers even to work the direction finder or swing the sail. So we had to take a hot pipe to the deep space cosmological research station beyond Mars and launch our little candy wrapper from there.

Even so, I fell in love with sun-sailing. Barring the storms (and you know about them when they start up from Old Sol), almost nothing deflects you from a well plotted course. You spin the sail out to full circle, set your course by using two hand-wound gyros, and then you can switch off every device that makes noise aboard. You coast out there in that golden breeze of light quanta as unconcerned and easy as if you were in the womb of the universe, waiting for the first big bang. The sail's big enough to be washed by varying waves of sunlight, and it really does ripple, or seem to, anyway. You go outside and hook a mile of that monofilament line onto the after handling cleat, turn your toes down to the sun, and let the sail carry the ship up from you. The only noise you hear is your own blood stream, still counting Earth time . . . maybe your own digestive tract, con-

verting something or moving it . . . I tell you, you own the solar system.

You can't get lost. There's Sol at your feet and straight up over your head, there he is again, multiplied in a great shimmering mirror. One day I took a ten-mile hank of that line out. After all, how much mass has it got? Each fiber is just one long molecule, for practical purposes. They only make it up to the diameter of a blonde hair so you can see it. The strength of the line doesn't require that thickness.

I lay out there so peacefully I went to sleep and paid out the whole coil. When I woke up, for as much as a minute I believed I was alone, and the whole universe was just my idle daydream. Luckily for all the rest of you, I didn't change any of the apparent laws of our time and space before I came all the way awake.

Believe me, climbing a ten-mile line hand over hand, taking it up as you go, is a lot of exercise. You have to keep pulling, too, slow and easy. If you try to do it all in one jerk, your hand orientation may pull you a course half a mile from the craft. Then when you suddenly notice, you're about to pierce the sail, you've got to brace up so hard on the line that you impart a new direction to the vessel along a vector you can't even calculate because of the peculiar way you achieved it. When you get back aboard, you've got to switch on the direction finder and take on all that static that goes with it. Your eardrums aren't used to it any more, and it seems

somehow to shrink the solar system right down around your shoulders.

I was worn out when I got back in from that ten-mile gymnasium climb; but Harriet was furious. I thought at first she wasn't going to let me in. Believe me, the way we had to pull that little craft up around our hips to fit just so, I couldn't get in *unless* she let me.

I had got bored, hauling in, and pulled too hard and at irregular intervals. The peculiarity I had imparted to our course would have taken us right out the top of the solar system. Yes sir! Almost right-angled to the plane of the ecliptic. Well, we wouldn't have *gone*, because we were still in the plane; but our sail was edge on to the sun and beginning to crumple.

I was tired when I got inboard; but by the time we finished hand-cranking those two gyros to turn that little sun witch back ninety degrees into the true course and got the sail spun back out to the full circle, I was perishing.

By that time, Harriet was laughing at me, but she couldn't help me anyway. We'd had to go in and out to get the sail round rigged again, so we were full suited, helmet and all. When she blew out the air letting me in, we had exhausted one bank of air producers, and Harriet was laughing so hard she couldn't get the connections changed, and that was a job that only she could do, the way we fitted in. I had water in the suit, but no food. Who knew there was going to be a crisis?

I nearly starved before she calmed down and got the air pressure up to where I could rip off my helmet and ingest a couple of food bulbs. After all, I have moved and controlled enough mass to be equivalent to about a week of decathlons in high gravity.

That was the last of our high jinks on the trip. Somehow, when the dogs on the hatches were tight and we were back on course, we both got to thinking about the grim rock chunks to which we were bound; and although the rest of the voyage was just beautiful and we were just as isolated as before, something about the fact that we were bent on an illegal purpose made us feel that we were being watched and spied on. We both got a little twitchy.

When we were twenty-four hours down the plane from the administrative asteroid of her kibbutz, Harriet furled the sail. She went about it with great precision, and very quickly, but with an air of abstraction and watchfulness. When we were coasting, slowly closing on the big asteroid, and sure our course was true, she came back in, aired the chamber up full and rich, as thick as at sea level on Earth, took off her helmet, shook out her hair and laid her head on my shoulder.

In a minute, the collar of my suit liner was wet.

I did what I could, but I didn't know why she was crying. She called me a pet name, never mind what. "I never cared if it was just me . . . but I can't bear to think you might be killed; it's not your fight."

I had to lay on the nobility. I believe "the cause of all mankind" is what I called the crusade for cyborg civil rights. I wasn't ashamed to say it then, and I'm not ashamed to say it now. Finally, Harriet smiled and tossed her hair so it floated round her head in a black flame. She dogged down the inner ports to shut out the light on which we'd travelled so many knots. The instrument lights gave us about a foot-candle of dimness, and she grinned like a fourteen-year-old getting ready to kiss her first man. "I'm sorry," she said, "that I haven't got a blubber lamp for perfume."

But I didn't miss it.

IV

When we undogged the ports, a hot little rocket from the big asteroid was putting off to tow us in. We debarked, gave our identifying blood samples, put up with the single entendre comments of the "customs officer," and filed a "vacation sailing plan." "Vacation" meant we didn't have to stay in the communications net, as working sunjammers did; and I see you see that meant we could be anywhere. Nobody would know for certain. In fact, we were free to range the Ring committing our immoral thieveries of property for the moral purpose of freeing personalities from bondage.

If you can think of a better life than technically flouting one set of society's rules in order to adhere to another, more fundamental set of the same laws, and doing it in the company of a beautiful, intelli-

gent, accessible woman, tell me about it; because I can't.

Between forays, I enjoyed watching Harriet play the game in the kibbutz social hall. She was radiantly beautiful then, with her arm in mine, talking everybody's talk about us getting a couple of mines going and settling down. Then she'd wrinkle her nose and call for some old tune from the youngster who played the accordion, and in a minute she'd have the place in an uproar, doing a hora. Skipping and stomping in a circle where gravity isn't a hundredth of Earth's is something you have to participate in to believe. Within a minute after it starts, the line is up on the walls, and then the dome itself, and pretty soon your hora is spherical instead of circular.

Somebody, (Harriet, usually) would grab the accordion player and sling him into the center, about twenty feet off the floor. He was a sweet-natured boy, and he'd stay there indefinitely, turning in the air and working that stomach Steinway for all its worth, while the rest of us stomped and glided and shouted over and around him like a swarm of bees. Harriet would keep the dance going until people collapsed and she was nearly crying from laughing so much.

Next morning, we'd out sail and tack down the sun wind and steal another machine from some of the people we'd been dancing with. We were kept in orbit by feeling like liberators.

After the first few months, we would switch on the radio and

listen to the steady official tide of horror and revulsion at our piratical acts, and laugh a while. Then we'd switch out, turn in each other's arms, and coast down the eddies of the sun to our next raid.

We'd sail in on some poor devil who'd been deprived of most of his senses. He wouldn't know who we were, but our landing would joggle the fluids in his machine parts, and his dials and gauges would start to spin and tremble in fear that he was going to be shocked or have his senses turned down yet another notch. If we had been made of metal ourselves, we would have wept.

We'd connect up his sensors in a hurry, sight first, then sound and touch, so he could see right away we weren't owners, and hear our revolutionary slogans; and then have the pleasure of touching human flesh that wasn't hostile. We'd splice in a private voice line, one to Harriet and one to me, because sometimes they had physical needs (as distinguished from mechanical) that they were modest about discussing.

One of them was a woman at least a hundred years old, counting from her "human" life too. Her reconstruction dated from the first experimental days. The job wouldn't be done that way now, but the surgical engineer who patched her up had good, human instincts, all the same. The small of her back, with skin intact, had been saved along with the organs in front of and above it. The back section was in the construct next

to the greenhouse and there was a sphincter through the top of the greenhouse and another through one wall. Part of the maintenance routine printed on her casing was to stroke that piece of hide and give it a few pats every year. She told Harriet in a whisper that she was just itching for the touch of a man's hand. Too shy to tell me, you see. Didn't know what kind of man I was.

Harriet promised I wouldn't pinch or pound, and then I had to wrestle with those sphincters and with my glove, for my suit wasn't really set up for that sort of thing. I would have risked frostbite a half inch deep to make good on a promise Harriet had made.

The result was more than worth it. A man doesn't understand what gratitude can be until he runs his fingertips down a few spinous processes poking up against a few inches of skin and feels ten tons of machinery under him begin to purr. A sonofamarch who would deny that simple pleasure to a half-live must have had a corkscrew twist in every neurone.

I got caught up in the thing along about this time, you see. I started out, I guess, sort of humoring Harriet and maybe with visions of her and me on a big asteroid of our own with a few diggers and smelters supporting us in a family orbit. The cyborgs were still just things to me. But when I felt that old skin ripple under my hand and later, when I joined — hands? — with Harriet and a boss-smelter and danced rings around the rock after

we gave him back his treads, I began to feel for — no, not for, *with* these entities. Harriet had been programmed full of that wild Hebrew humanism when she was being rewired into today, and she could phrase it: in the time it takes a gram of fuel to explode, instead of "I-it," the relation became "I-thou."

And it was true. Before that, I had to watch myself to keep from calling them coggers; but after that, the opprobrious term never came easy to my lips in the Ring.

I guess the reunion of Harriet and Mordecai was the most touching and the most satisfying, too. For strategic reasons, we didn't go to him early; and for navigational reasons, we couldn't get to him at the time we wanted to; and he was completely out of the communications net. When we did home on him, the plot for our attack on the administrative asteroid was almost ripe.

Mordecai had a very sharp brain in his black box, he was a very sophisticated machine, and he was very young. All that made his sensory deprivations more poignant. He was designed to smelt and ship that huge drift of cinnabar; and to keep it together until he could extract the last kilo of quicksilver, he had been equipped with gravitators. He even had propulsion, so he could speed up the drift or slow it down to preserve a favorable shipping point in its orbit. All this had been robbed from him, as if he were dying again.

That boy was a fighter, let me

tell you. When we sailed in on him, there was little more function left than an egg candler or a bottle capper might have had, but he was still managing to sabotage the operation. He was breaking containers, overfilling them, and failing to move an empty into place when one was filled. There were wasted, contaminated globules of mercury floating all around him like silver buckshot. Some of them were half-ton globes. What defiance! What a mess, having one of those things plate out all over you!

We were an asteroid week working in to him and getting him to understand we were friends. Then, as we rewired him and threw the switches that turned his senses back on, it was like raising a child from a brat to a Ph.D. in six hours.

An affectionate Ph.D.

Harriet was crying, of course, and calling him pet names. "Motl, darling!" and "Muttie, raise the driver on your port forward quarter. That's it, sweetheart!" As for him, it was, "My sister! My dove; My white pouter pigeon!" and so on, all in the voice of a rock-crusher needing oil.

"Mordecai," I finally said, "raise all your grasping appendages. Good. Touch them together, over your greenhouse. Good. Please move each in a series. Good boy! you're cured. You can do anything you're big enough to do."

He swiveled a light receptor around toward me and said, in a very controlled thrum-m-m, "Mr. Gallegher, I am grateful for what you have done for me, and for my

fellows. But I think, after what I have lived through, and died through, I am not a 'boy.' Could you manage not to call me 'boy' again? That would be something nice for me, and it would not cost you much effort, I think."

"I saluted with a wrench. "Yes sir! What else can I do for you?"

I'll swear that seeing lens winked. "Hook me back into the 'iron grapevine,'" he said. "I'm ready to call on your war."

"Oh, now, wait a minute, Reb Mordecai," I temporized. "The instant I put that transistor case back in place and you energize that radio link, every telltale in the Sheik's office is going to go off. Let alone that he'll be hot-tailing it in here with a hardhead rocket to bust your greenhouse, the first thing he'll do is glide into that office and punch poor old Gussie into psychosis. No sir!

"You'll blow the whole thing just when we're at the gravity flip point. It'll all be down from here, if you just keep your lever off the jets for a minute."

"I won't stay here where Arful Abdul can find me," he rumbled back. "Anyway, I can cut on the radio myself. I just wanted you to feel good about one more thing. Let's pick an orbit outside the Ring from which I can drop back down when I'm needed."

Mercury Muttie! I believe he was the most arrogant hunk of metal I ever knew. I should have let him go ahead and cry havoc, though. Nothing could have been worse for me than what happened.

Harriet and I sailed straight back into the Sheik's arms. In the last minute, Gussie came screaming onto the radio to warn us. She had two lifeboats fueled and ready to flame, but she only got one off to us.

I shoved Harriet into it. She kicked and yelled, but it was her revolution. I was just there in the role of expendable hero. "Get my name in the history books," I hollered and then battened down to repel boarders.

Deep down, I was hoping Gussie wasn't dead, although that last, long, loud scream made me know she was. I cut the capsule loose from the sail, which went drifting on down to the big asteroid, while I broached to, hoping I could drift behind some rock and hide. If Gussie or Harriet didn't come back for me, I'd starve, eventually; but it would take months for that to happen.

Did you ever notice that a man can be crazy as hagan and still smart as a rocket? Well, that blooming Sheik just booted himself back down almost to the surface of his planetoid, took a perpendicular orientation to my sail, lit his flame for one short kick and came rifling up through the hole I'd left when I jettisoned the sail. There I was, near dead of humiliation at being caught as easy as a cold in winter. A-a-h!

He wasn't going to come within zot-gun distance of *me*; because he wasn't sure what I could do. We'd met socially, but he was afraid I

had a gram of high vol sewed into my jaw that I could explode by grinding my teeth, or something. Tyrants fear fanatics, you know.

I had one last laugh, even though it was the last for a good many days. The Sheik spangled a magnetic grapple on the bow of my capsule, meaning to tow me; but my little sailing cap was non-ferrous (saves constant correcting around large iron core masses), and his grapple wouldn't cling. So he had to get the rest of his night riders to come up with a net and gentle me down to the asteroid.

I was caught.

There was no pretense of trial. Those iron-haters snipped open my suncraft, took one look at my face, nodded all around and started me for prison, all in about the time it takes to throw a toggle switch assisted by a solenoid.

Now, you have to learn a little history. I only learned it after I nearly lost my mind. Constitutionally speaking, this organization was a kibbutz, which is something more than just a cooperative; and when they first exploded into the Ring, they had neither time nor manpower nor inclination for jails.

What they did have was a topological engineer, a real, genuine, fur-bearing, wild talent who dreamed he was a penological pioneer. What he built for his comrades to remember him by was a cluster of Klein bottles, made of transparent teflon spun over a frame of energy in hexagonal vortices.

Uh-huh! you may well glance at

these scars. All the same, to me they meant life and not death, though it took me a while to realize that. The Israeli feel some kind of responsibility about the whole thing, so I'm here, in hospital, you might say, while one of their celebrated skin-planers shaves these scars off me.

You know what a Klein bottle is? That's right, sort of a crookneck squash, with the neck growing back into the bulb, and the bulb opening out into a bell mouth which curves back and is the bulb. It's all one shell, you understand, and the result of its construction is that it's a quote hollow unquote object which has only one side. That is, it has neither inside nor outside. That is — hagan hagan, if you didn't learn all that like everybody else while you were still in rompers, I can't teach it to you now.

The point is that once you're *in* one of them things, you can't get *out*, because you're not *in* it anyway. I know you remember all this theory from headstart school, but you've got to realize the thing I'm talking about is not a little blown-glass artifact you can hold in your hand and shatter with a thumb snap, but a container of nearly pure energy that holds *you*, and that you can't get at, no matter how hard you try.

Pure energy the hagan, it's pure terror. Never in my life was I so punished. They left me suited up, so the sun wouldn't fry me right off. But they took my helmet. Then they fired me into the thing from an ejaculator with a blast of air,

and . . . there . . . I . . . was, tumbling end over end and holding my breath, and then gasping, wondering what I was breathing and why my blood hadn't already boiled out my eyeballs. I can't stand that feeling of disorientation that goes with not understanding what I'm happening to. In the worst saloon fight, even if I'm at the bottom of the pile, at least I know I'm *there*. The floor's on one side of me and the feet and fists on the other, all familiar and friendly.

But floating all alone in that abstraction! The vigilantes had ridden away in full halloo and left me to puzzle out what they'd done to me. I would have blessed them for killing me.

In a rotation or two, I saw three other bottles.

What was in each of them was a skeleton. They were my constant companions for what seemed a terrible time. I know now it was only a few objective days, but it seemed like a full revolution of the Ring around Sol.

I could not get out. In fact, I couldn't even touch the wall. If I jetted with my breath, the only means of propulsion I had, as I approached the skin, it simply receded. I could *see* the hexagons growing behind me when I looked over my shoulder until they seemed a mile on a side. Then I could turn my head back and way behind me, where I'd come from, I could see the energy lines pulled down so small I could hardly see between them. When I gave up and lay inert, the

— bubble? — would slowly flow around me until the system was at equilibrium again, with me in the dead center. Dead center was what I expected it to be, too.

There was no food and no water. Nothing but air.

I can't calculate the volume of air in there with me. It must have been cubic kilometers. My suit worked after a fashion, but it was no longer a closed system because the posse had taken my helmet, so I was eternally conscious of losing moisture to that giant volume of air.

I say giant, but there were no reference points, and sometimes I was sure the whole lash-up, me included, was very small. Hand size, lab size, above-picture-full-size size. That feeling was pretty bad, but there was worse. Subjectively, I was inside. Only when I thought, I knew I wasn't inside anything. There is no "inside" to a Klein bottle.

The horror came when I realized (or thought I realized) that if I should subjectively put myself "outside", the air would woosh off and I'd boil and freeze in the same blink of a beta ray. I would wake up with a jerk and a gargle from a dream where I was safe on Mars, and I'd have to shut my eyes and put my head against my knees, whispering over and over, "I'm inside. I'm inside."

The jerking and gargling came from the fact that when I slept, my own moisture and used air would ball around me, so that I was drowning and asphyxiating in my own water and CO₂.

I would shut my eyes, pull myself into the foetal position, and think, "There are convection currents here, because sunlight is here. I will sleep, and the convection currents will carry off my breath wastes. I cannot strangle." In a few minutes, I'd be fighting for breath and cursing the Sheik and his cohorts.

Much good it did me. I couldn't even commit suicide by staying in one place and drowning in spent breath. When I passed out, my reflexes would snap, crackle and pop me out of my ball of halitosis.

It was a bad time. And no radio — they had my helmet. I couldn't know whether our plot for a cyborg uprising had hatched itself properly, whether Harriet and Mordecai were winning, losing, compromising, or what. I made myself a promise. If Harriet came for me, I swore, I'd kill the flame for the last time, make one good planetfall and never straddle a hot pipe again.

I practiced my proposal forty thousand times, I guess. I'd offer to take her to Earth. I'd offer to marry on Mars. Sometimes I'd even promise to stay in the Asteroid Belt if I could just stay on just one, with a solid dome over me.

That was my best dream. The other two were putting on my helmet again and hearing all those cyborgs on the radio, cheering me in twenty languages and forty gears; and planning meals. But the ones with Harriet were best: I could propose and be accepted, marry and live through the honeymoon to the first

quarrel before I'd open my eyes and see that abstract impossibility turning around me and the other three nearby, each with its grinning reminder of what I was to be.

Grandfather's flashlight was around my neck on a string, sort of a good luck charm, and sometimes it would float up out of my neck opening and bump me. I was so machine tolerant by then that I would have believed it was trying to tell me something if it had been a little more complicated. I would squeeze the generator reflectively, and watch the filament glow, but I never got an idea from it.

As a matter of fact, I was looking at that little filament, half hypnotized, when the rescue party arrived.

VI

I didn't even see them galloping up until I heard Harriet shrieking thinly. She was riding on Mordecai's upper casing. Even then I thought it was a dream until I heard his bass rumbling with her.

The big cyborg did as good a job as he could of explaining to me what I was in, but I could see he was annoyed at having to put up with a mind that wasn't hooked up to even a simple computer. The key point I understood, though. He and Harriet couldn't come to me — because if they touched the system in which I was imprisoned, they would be imprisoned too, even though they were "outside" it. Once they touched the bottle, they would be bound to that endless plane.

So they were going to ship me down to Sol Three for a dreamer mathematician to uncork the bottle, but they needed the size reduced so they could crate it, with me. "Pull it in," they kept saying.

Finally they went at it the same way you would with the three-year-old in the bathroom. They came up to the "bell" and began talking in soothing tones. They told me the revolution was won and the Sheik and his gang mostly dead or fled; and they petted and praised me 'til it was almost as good as one of my dreams. Only I had to be modest about it all, which I hadn't had to in the dream.

Then Harriet said, "Look. It'll be easier if you get out of that suit. You're a part of the bottle *now*, and it of you, but you can't realize it. So you're not pulling it down around you small enough for us to get a teflon crate around it and shove the whole thing with you inside. We're going to drop you straight down the fastest curve we can make. Otherwise you'll starve before we get you there. Now. Come on. Roll out of that suit, baby, and push it right out the bell."

It worked, you know. That suit drifted straight away when I shoved it and right out the bell. Only it went inside out when it passed "from" the bottle. That gave me a turn. I was ready to panic again, but she cried, "There! Now you *know* it can be manipulated. You can control the Klein bottle as easily as you control your breathing.

"Now, one more demonstration, and then you'll do it."



"I've got nothing left to shove out," I cried.

"Yes, you have. And it's something you have to give me anyway. Take that flashlight off and pitch it out the bell."

She'd always wanted it, remember? I remembered then, but what could I do?

I flung the flashlight, and it looped out of the bottle and right into her hand. The reaction tumbled me heels over head, so I saw what happened in flashes, as I revolved. When the flashlight hit her hand, she snatched up an electric line that lay near her as she sat on top of Mordecai, clipped it and wired the two ends into the terminals of that little generator. I could see Mordecai reaching for her with wires, gauges on flexible tubes, pressure cuffs, every loose appendage he had, in fact, until she began to squeeze the plunger handle that turned the armature.

That big machine shuddered and flashed a few lights. "Turtle dooove!" he cried. "That hurrts!"

"Don't you forget it, big iron daddy," Harriet replied. "Next time I ask you to loosen up a pressure cuff, you do it, lover."

Suddenly I saw, with horror, that some of Mordecai's wires and fluid lines *weren't* loose. They ran right in under her skin. "Harriet! Harriet!" I shouted. "Harriet!"

She raised her head from where she had been staring into one of his light receptors, and smiled . . . smiled! "Oh, well, Galeg," she said.

"Motl and I are a *thing*. We always were."

I could *see* their thing-ness, and suddenly I didn't want her/them/it looking at me. I turned *in* on myself, and the next instant, the Klein bottle fell into my skin, and I flowed out along its unbounded plane. For an endless period, I was totally displayed, inside out, outside in, and then consciousness collapsed. The last thing I heard was Harriet snickering and Mordecai chuckling in duet with her. He sounded like a diesel engine at a mine head. "Did you *ever*," she asked him, "see such a weird *liver*?"

Gallegher shook his head sadly. "The next thing I knew," he said, "I was here, with these scars all over me from where the energy net and my skin fused. That melted teflon wasn't any beauty treatment, either."

I drank the last of the Hock, and said, "Well, they'll soon sand your skin down to its pristine state. But your heart, I suppose . . . still, better to have loved and lost. . . ."

Just then a blonde young woman in the sandalled uniform of the Greater Near East Co-Prosperity Sphere came up to us and said to Galeg, ignoring me, "Doctor's ready for you." As she swiveled away I saw an anklet of blue ceramic beads dancing with each stride.

Galeg stood up to go. With a wink, he said, "Whatever they do to me here, at least I ain't going to wake up soldered to anybody."

END

THE HOLE

by B. K. FILER

*Somebody was waging war against
fossils a million years extinct!*

Russell's legs surprised him by aching in a new place tonight. He eased back onto his heels and reached for his canteen. Noticing his light dimming he closed the arc a bit, glancing around the Gohole as it brightened.

The broad, low cavern was whale-shaped. Reasonable enough when its sole function was to permit the excavation of a pre-teleost's fossil. The partially unearthed skeleton stretched from where Russell knelt to where Al was working sixty feet uphill. Then the ceiling enveloped it. The creature's skull was on the next level, where Cassidy guarded it as if it were his own.

"Al, you want a drink?"

"Uh. Bring it here, will you? There's something you should see here anyway."

Russell lay aside the toothed scalpel and stood up, hearing his

knees crackle in the silent room. He stepped gingerly across the million-year-old carcass and edged up the grade with extreme care. Russell was a fair eocene biologist; he was an excellent digger.

"What've you got here, Al?" — as he handed the latter the canteen.

"Nerve center, I think. Maybe the Blob here has a secondary system like the earlier air-breathers."

Russell bent and stared closely at a group of vertebrae, wishing he knew more about primitive anatomy. It was the shoulder group T31 through C7, all right. The inflected gross curve and taper told him that. But the thing was so — so primitive. The vertebrae seemed abnormally large, too, which would indicate that this long-dead creature had the motor section of his brain within him. Yet the whole thing looked odd, somehow.

"Are you sure these are clean?"

"Rather. But you can check. Should I go tell Cassidy?"

"Maybe. Better safe than sorry, and you know how edgy he's been lately. All these blunders will cost him his job."

"Come on, Russ. You don't really think they're blunders."

"Hate to admit it, but you're right. The brain cage on that last one, both brains on that Trike on level 1007. It's just too much coincidence."

"But what motive, Russ, for messing up a fossil? Sloat's a little jealous of Cassidy's Gohole, perhaps?" Al stood up, dusting his knees.

"Could be. I've known Sloat for a couple of years though, and I doubt it. He's cranky and ambitious, but too much of a professional to destroy the best digs of his career, even to get Cassidy's job. Al, I'm going to have to prod these a bit. Give me your two-power glass and soft brush. You might as well tell Cassidy while I'm at it."

Al left. Russell bent to his work. He thrust half a dozen needles under a feather-thin layer of rock covering the group of joints. Dropping a magnetic blanket over them, he energized it. Careful fingers lifted the blanket and rock off together cleanly.

"Detritus, sure enough. Not bone." Russell repeated the process several times, eventually working down to the true anatomy of his as yet unnamed specimen. The vertebrae were normal in size beneath the shale mantle they'd worn.

He was a bit disappointed that Al should have erred on so obvious a point and then began to wonder what he was going to tell Cassidy.

"Oop," he muttered, "here they are; Cassidy and three guards." He stood up.

"Hello, Russ. What's this young Allen tells me?"

"Hello, Dr. Cassidy, boys. I'm afraid we were a bit premature. No nerve bundle here. Al got down to a fairly anatomical detritus, but the real bone is what you see now." He wondered where Al was at the moment and then saw him drop through the pressure lock behind his visitors.

"Really," said Cassidy. "I thought you were more careful than that. You know how sensitive we are on the issue of — ah — well. It won't happen again, eh?"

"No sir. No more false alarms." He was piqued that Al should straggle in late enough to avoid confronting Cassidy. Russell bore the old man's mild reprimand alone, after which the two diggers were left alone.

"Al!"

"Now look, Russ"

"Don't 'now look' me. A mistake's a mistake but"

The loudspeaker interrupted them. "Alarm; alarm! All men remain on station. Security guards converge on level 1020. Repeat: Security"

"That's only one level up!"

"Yeah. Somebody's been at the skull."

The dormitory was on level 1000. They'd base-camped every hun-

dred levels all the way down. Russell gazed steadily at the bottom of the bunk above him and tried to sort things out.

Al did it. Why?

A meteorite had started everything two years ago. People saw it coming and got out of the way. It hit hard, eliminating half of Cleanthe, New Hampshire, and sank. It was discovered a quarter mile down resting on very very soft earth.

Cassidy, of New Hampshire Geological, postulated the explanation of the "Gohole": The first ice age had sent immense glaciers through New Hampshire. They plowed furrows miles deep which later became the subfloors of her modern valleys. The ice rivers carried all before them, scooping artifacts and tag-ends of the preceding ages as they went along. These were deposited in odd places, at old depths, in the same way that auto tires and arrowheads are left by a river. With one exception. There was just one hell of a pothole left around Cleanthe.

Then the second ice age had come along and, instead of smoothing things out as would be expected, actually reinforced the condition. This glacial pool bore at increasing depths artifacts of increasing age, dating back to the eons of ferns and lichens before biology even was. Or so Cassidy expounded. Not a M-hole, a Geo-hole. A Gohole.

It was a tremendously romantic idea, and the public loved it. A meteor strikes, breaks through a thin shell and reveals man's history to man: *Deus ex machina!* Cassidy

was enough of a showman to foster the feeling of wonder the hole awoke in most people. He let his hair grow and wore thicker glasses. He went on television and did everything but quote Nostradamus. At the end of half a year of foolfaraw, Cassidy had a government grant and priority to dig down in the meteor's wake. He was a devoted digger, despite his theatrical leanings, and assembled the best paleontologists in the U.S. to help him.

So Russ was there. Al was there, and thirty others. Each well acclaimed in their own circles, but all equal here. Men that had led expeditions in Egypt broke fingernails on stubborn trowels for Cassidy and loved it. These were the greatest and most significant digs there had ever been.

Cassiday was right. The hole was precisely what he thought — twenty-six and a quarter miles of earth history — starting at 2012 A.D. on the surface and working downward to 0.0000. His crew unearthed early men far more sophisticated than Cro-Magnon but from a far earlier time. Scholars were already chewing that one over. Digging further, they found man-ape connections that must have made Darwin sigh, vindicated at last in no uncertain terms. Deeper and earlier went the digging. Men and animals overlapped, then animals and lizards. Lizards were reduced back to fish at level 800, and finally, at level 1009, fish reduced to Blobs.

The uncovering of the Blobs seemed to precipitate the funny business.

Al did it. Why? Russell rolled uneasily in his cot. It was warm — or he was. Blobs were animals, but barely so; the absolute precursors of biology. Like amoebae, only bigger. Some were the grandparents of fish. Some had spines and fins. Some had neither, leaving only weird-shaped holes in the rock as fossils. Some had brains, or at least major nerve centers.

Which Al had methodically destroyed.

Russell was wide awake and sweating. Al was his friend. Russ would never have suspected him of being the anthropophobic saboteur that plagued the expedition. "No doubt after that last one," he murmured. It had been done in crude haste. Nothing had been fabricated to simulate an accident. The skull was a natural masterpiece of a million years' fabrication as each atom of limestone replaced each atom of bone. It had simply been kicked apart. Why Al?

Russell arose, slid out from his four-tiered womb and disappeared down the cramped corridors to the adjacent dormitory cell. Red lights guided his way, but after eleven months underground he could probably have made it had they gone out. Diggers have pupils as big as pennies.

He stepped into Al's cell and shook him gently. Al awoke, saying nothing, and followed where beckoned. Fifteen minutes and one pressure lock later they had descended from Level 1000 to Level 1017. Finding themselves alone, Al risked conversation.

"Where're we going?"

"Ten-twenty. They've quit guarding it since the damage is done, and I want to take a look at that skull." They tramped down three more levels. No one was there, as Russ had anticipated, but the ruined fossil had been cordoned off.

"Al, ol' buddy, you made this mess. Why?"

"I did it! You've gone claustro! You —"

"Calm down. I know you did it; no one else had the chance. You faked that nerve center find on 1021, left me there to check it like a prize boob, and went up to 'tell' Cassidy. Cassidy panicked and came right down, with his guards. You lagged behind and squashed the skull. It's altogether obvious, and inside of a day, Cassidy'll figure it out and nab you. But Al, why?"

Allen was silent. The cordoned skull, scattered in eerie disarray, looked at them through broken eyes. Their helmet lamps threw surrealistic shadows on the rock.

"I did it just to do it," Al murmured softly. "For power.

"I've been sick all my life, Russ, paranoid, megalomaniacal. I've fought it for a long time, since long before you knew me. But it finally blew. You say it's obvious now, huh? Suppose you're right. Damn."

"It is. Al," Russ continued in less aggressive tones, "you did the others too?"

"Yeah. The triceratops on 1007 and the fish-Blob on 1016." Al looked past Russell's eyes.

"We've been friends too long for

me to play cop, Al, but you've got to go. You just can't go on destroying priceless paleontological evidence to vent a psychosis. Go kick dogs or write on bathroom walls, but get the hell out of these digs!"

Al's face went blank in the hissing light for an instant, then cleared. "No. I've got to redeem myself. The only way is to contribute as much to this expedition as I've destroyed. And I can do it, Russ, because I know something valuable. There's a big find near the Northwest of 1021. The survey crew missed it, but I noticed a fissure in the rock that leads off in that direction. The spine of another Blob is evident in the fissure. If we could dig it out tonight, present it to Cassidy"

His enthusiasm faded with his voice. He noticed Russell's face, cautious, guarded.

Russ tried not to let his suspicion show. Al's defense of psychosis looked thin to begin with. Cassidy had foreseen such contingencies and taken pains to screen the nuts out of his expedition. Nonetheless Russ had pretended to believe the man out of personal loyalty and offered him a way out besides. As long as Al would get out, he figured, no more damage could be done the expedition. The milk had been spilt three times, okay, but Russ was not vengeful.

Yet Al refused. He wanted to stick around, even knowing of his inevitable capture. Why? And now the sudden story of the find on 1021 which should have been reported the minute it was suspected.

Russ decided to play it straight and find out more.

"Let's go down and see. If you're not kidding about this new find I'll help you dig it out and reinstate yourself."

They dropped down through the pressure lock, closed it and felt the pumps reduce the pressure of their subterranean depth. These locks occurred every twenty levels all the way up to the surface. Over fifty of them stood between Russ and the sunlight he hadn't seen for almost a year.

Al led the way around the carcass they'd been working earlier in the day. He pointed to a faint line between two dissimilar sedimentary boulders in the wall. It broadened to a vee near the bottom, which was of a lightish color. Russ ran the forefinger of a practiced hand across the interface.

"Mmmm. Quartzite-sandstone-quartzite. It's an extension of the level all right. The Gohole is broader here than they surveyed it to be. Now where's the fossil in the sandstone?"

Al played his lamp on the lighter region and pointed to a tiny fleck of white. Russ scraped it gently. "Limestone, in an organic matrix." It was indeed fossilized bone.

"Okay, Al, get the tools. We've got four and a half hours before the first shift gets here. If this is a real find we'll know by then. Maybe Cassidy'll let you off, maybe not."

So Russ spoke.

What he thought, however, was far less coherent.

They dug. Two hours passed. The upper thoracic processes of another pelagic Blob appeared, very similar to the creature Al had mutilated. Though it was obviously an incomplete specimen it did appear to include the skull. Russ worked feverishly with his hands and his mind.

If Al's phony explanation and phony plea for redemption were to be disbelieved, why had he led the way to a new find? The trowel in Russell's hand shook for a moment as the answer became very, very clear. Destruction! Al seemed determined to destroy the nerve centers of these primitive fossils, and now he had limited time. So he had once again made Russ an accomplice in a final act of destruction before being caught. The only question remaining was why?

Their little cave grew to washtub size as they traced the creature's upper vertebrae to its skull. It was hot. Al was wide-eyed and breathing raggedly beside him. They swept loose flakes of shale away from the ancient whale's lower mandible. In moments the skull would be bare. In moments Al would complete a cycle of mad, motiveless acts. Russ took a deep breath.

"Stop."

"Eh?" Al panted.

"Stop right there. Leave it. Cassidy isn't blind; he'll believe you."

"But Russ, we're almost done!"

His eyes were brilliant, but unreadable.

"No."

Al sunk his hand to the wrist in the stone chips behind him and,

whirling, flung them into Russell's face. As Russ clawed at his eyes Al picked up the spade and bent toward the skull. He raised the bludgeon but it never fell.

Blind or not, Russell could fight. He flailed in Al's general direction with big knuckles and heavy boots. In a dugout no bigger than a barrel there was no dodging. When hot tears cleared the dirt from his eyes, Al was laid out, but conscious.

"All right, you lying S.O.B." he growled. "I'll give you thirty seconds for a straight story! Or I'll kick your ribs in even more and *then* I'll go get Cassidy!"

A stream of blood was flowing from Al's scalp diagonally toward the bridge of his nose. He was dazed as he sat up. Al's bright, nervous eyes were dim now.

"Russ, you've done me harm enough." He slumped, then straightened, but as his head dipped Russ noticed with horror the soft depression there.

Russ leaned over his one-time friend's knees to retrieve his helmet and still-burning arc-lamp. Al leaned against the side of the little burrow and began:

"I'm going to die. It isn't really your fault, Russ, because it seemed inevitable when I began. I don't want you to carry it on your conscience, especially since you've got to finish my work for me." Al's words were slurred, and the echoes were dull in the cavern.

"We've two hours left. *You've* two hours left to convince yourself of what must be done, so dig. Dig while I talk. You must destroy that

skull. It could be, praise God, the last one."

Russell dug and listened.

"I got started in paleontology because the Schlesinger asphalt pits were discovered two miles from my father's farm in Utah. This was back in '93. I was fifteen. I hung around and watched those magnificent bones come up out of the ground and was hooked for life. Well, when Schlesinger's party finished and moved out, I began. I scraped the tarpools down to rock with my father's caterpillar and found new digs below the tar. Fossils, mostly broken up, little stuff. Oddly enough there were chunks of chrome steel, copper oxide and — I swear it — plastic." Al coughed, and the rivulet on his brow freshened.

"That isn't all. I came back from college every year and dug in secret . . . Russ, I found *machines* down there. Oh, they were nearly indistinguishable with age and decay. Only the shapes remained. Square, round, some even faintly organic looking, but very definitely machines.

"I broadened the digs, destroying as much as I saved in all haste. Surrounding the pit of machinery were the carcasses of Blobs, Russ. Early early animal life. Spineless, vertebrate, flying, swimming; all kinds. Al arrayed there in the most unnatural way. *All* of our biological patriarchs, every animal from which man could possibly derive a root.

"Each of them had been tampered with. Each had had its nerve cen-

ters altered. That place was a laboratory."

Al's words were quick but weak. Yet Russ was so attuned to the fantastic monologue that he missed nothing. He dug fiercely, roughly, with less and less care.

"What do you know about eugenics, Russ? Cross a peanut and a plum to get an almond? Not quite. You get the great, great, great grandfather of something like an almond. To get the species you want at the top of the pyramid you work with the entire broad base, and take lots of time.

"What do you know about biomedical engineering Russ? Do you think we'll ever put a living bond between metal and flesh? Do you think we'll ever analyze enough E.E.G.'s to know the mechanism of thought?

"Don't you see? Someone came to earth a very long time ago. They 'edited' the wildlife and then departed."

There was blood in Al's eyes, fear in Russell's. "You're telling me someone came to begin a eugenic chain? That they knew enough electrobiology to rebuild a brain? That they were trying to . . ."

Al broke in. "When I learned that the Gohole went back to about the same period as my own digs the implications were obvious. If what I knew became common knowledge there would be disastrous results." Al paused, raising a sleeve weakly to wipe his gory cheek. "Oh, God, the shame of it!

"Before I crushed those fossils upstairs I gave them a good looking

over. The brain pan of the later one was too geometrical to be purely natural, but it was subtle. The mechanicity had been bred out to some degree. The biological tampering wouldn't have been noticed ad hoc. But I noticed, and I crushed it.

"The Blobs here are earlier, closer to the date of the initial tampering. This fossil would tell the whole tragic story of man's origin. It must be destroyed."

Al was gasping. His eyes were glossy under half-closed lids. The blood from the wound had dried and his face was caked with hideous brown. Russ turned after a moment, expecting the narrative to continue, but found his friend was dead.

He bent once more to the skull. His mind was incandescent with wild, panicked thoughts.

His impetuous fingers jammed through two eye sockets and secured a grip. He half rose to his feet, got his knees under his chest, grimaced and heaved. It came. The

sharp edge of his spade laid the bony horror open with a single blow.

Within was a weird angularity. Half animal, half mechanical, nearly gone with age.

Russ crashed it. He reduced the bony mask to an indistinguishable gravel. He had thirty minutes left. When the first shift came down there was nothing to see. The little dug-out was filled back in, with Al and his discovery inside.

Russ spent several days learning to think and behave normally again. That he made it through those days without going completely berserk is a credit to his stability. He never told.

It wouldn't do for men to know their origin. That they were carefully evolved robots, destined to do another creature's bidding. That they had no will, no individuality not ordained by another, older race of beings. It wouldn't do just now. Not until that one final day when everyone would know, when the masters came.

END



The Road to the Rim

by A. BERTRAM CHANDLER

Illustrated by Morrow

*Grimes was battling against
an enemy without . . . and an
even more deadly foe within!*

XII

At one time, before differentiation between the mercantile and the fighting vessel became pronounced, merchant vessels were built to carry a quite considerable armament. Today, the mounting of weapons on a merchantman presents its problems.

After his tour of inspection Grimes was obliged to admit that

Captain Craven had made cunning use of whatever spaces were available—but Craven, of course, was a very experienced officer, with long years of service in all classes of spacecraft. Too—and, perhaps, luckily—there had been no cannon among the Survey Service ordinance that had been requisitioned, so recoil had not been among the problems.

What Has Gone Before—

Ensign John Grimes, Federation Survey Service, was no ground-hog. He had shipped across the starways before, and felt ready for anything Space could throw at him — but this!

"This" was merchant vessel *Delta Orionis*. To begin with, discipline was slack. To go on with, the officers treated him like a green-horn. And to end with — all too many officers were female!

So Grimes resigned himself to a messy cruise, his only consolation that like everything else it would have an ending. But his dreams of planetfall were interrupted by a distress call from another space freighter — attacked by pirates, and wrecked in midspace.

To Grimes it was a welcome change, but just as he was getting ready for action he discovered that *Delta Orionis's* captain, speeding to the wrecked freighter, was not so much interested in rescuing it as he was in piracy of his own — with Grimes ordered to take part in it, or face a court-martial for mutiny!

When he was finished, Grimes returned to the control room. Craven was still there, and with him was Jane Pentecost. They had, obviously, been discussing something. They could, perhaps, have been quarrelling; the girl's face was flushed, and her expression sullen.

"Yes?" snapped the captain.

"You've made a good job, sir. She's no cruiser, but she should be able to defend herself."

"Thank you. Then we'll be on our way."

"Not so fast, sir. I'd like to wire up my control panel properly before we shove off."

Craven laughed. "You'll have time, Mr. Grimes. I have still a few last duties to discharge aboard *Delta Orionis*. But be as quick as you can."

He left the compartment, followed by Jane Pentecost. She said, over her shoulder, "I'll send Mr. Baxter to help you, John."

The Rim Worlder must have been somewhere handy; in a matter of seconds he was by Grimes' side, an already open tool satchel at his belt. As he worked, assisting deftly and then taking over as soon as he was sure of what was required, he talked. He said, "Mum wanted to come along, but I soon put the damper on that. But I was bloody amazed to find *you* here."

"Were you?" asked Grimes coldly.

"Too right I was. Never thought you were cut out to be a bloody pirate." He cursed briefly as a spatter of hot metal from his sizzling soldering iron stung his hand. "A

cold weld'd be better, but it's take too much time. But where was I? Oh, yes. The shock to me system when I saw you comin' aboard this wagon."

"I have my quite valid reasons," Grimes told him stiffly.

"You're tellin' me. Just as my Missus had quite valid reasons for wantin' to come with me. But she ain't a gunnery expert." He added proudly, "Thank Gawd."

"And I am one," said the ensign, trying to change the drift of the conversation before he lost his temper. "Yes, that's right. Just stick to the color code. The blue wiring's the ALGE . . ."

"I know," Baxter told him. "Tell me, is it any good?"

"Yes. Of course, if an enemy held us in her beams for any prolonged period we should all be cooked, but as far as it goes it's effective enough."

"Hope you're right." He made the last connections, then replaced the panel on the open, shallow box. "Here's yer magic cabinet, Professor. All we have ter see now is what rabbits yer can pull outer the hat."

"Plenty, I hope," said Captain Craven, who had returned to Control. "And are you ready now, Mr. Grimes?"

"Yes, sir."

"Good. Then we'll make it stations. If you will take the co-pilot's chair, while Mr. Baxter goes along to look after his rockets . . ."

"Will do, Skipper," said the engineer, packing away his tools as he pulled himself towards the exit hatch.

The ship's intercom came to life, in Jane Pentecost's voice. "Connection between vessels severed, Airlock door closed."

"We're still connected," grumbled Craven. "*Delia O'Ryan* still has her magnetic grapnels out." He spoke into the transceiver microphone, "*Epsilon Sextans* to *Delta Orionis*. Cast off, please. Over."

"*Delta Orionis* to *Epsilon Sextans*. Casting off." Through a viewport Grimes could see one of the bright mooring wires snaking back into its recess. "All clear, Captain."

"Thank you, Captain Kennedy." And in a softer voice, "And I hope you keep that handle to your name, Bill."

"Thank you, sir. And all the best, Captain, from all of us, to all of you. And good hunting."

"Thanks. And look after the old *Delia*, Captain. And yourself. Over — and out."

"*Delia Orionis* to *Epsilon Sextans*. Over — and out."

There was something very final, thought Grimes, about those "outs."

He was aware that the ships were drifting slowly apart. Now he could see all of *Delta Orionis* from his viewport.

He could not help recalling the day on which he had first seen her, at the Woomera spaceport. So much had happened since that day. (And so much still to happen — he hoped.) He heard Craven say into the intercom, "Stand by for temporal precession. We're desynchronizing." Then there was the giddiness and the off-beat whine of the Mann-

chenn Drive that pierced his eardrums painfully, and beyond the viewports the great, shining shape of the other ship shimmered eerily, was suddenly warped into the likeness of a monstrous Klein flask — then vanished. Where she had been (where she still was, in Space but not in Time) shone the distant stars, the stars that in this distorted continuum were pulsing spirals of iridescence.

"Mannschenn Drive. *Cut!*"

The thin, high keening died abruptly. Outside, the stars were glittering points of light, piercingly bright against the blackness.

"Mr. Grimes!" Craven's voice was sharp. "I hope that you take more interest in gunnery than you do in ship handling. In case it has escaped your notice, I would remind you that you are second in command of this vessel and in full charge in the event of my demise."

"Sorry, sir," stammered Grimes. Then, suddenly bold, "But I'm not your second in command, sir. I've signed no Articles."

"Surprisingly, Craven laughed. "A spacelawyer, yet! Well, Mr. Grimes, as soon as you get this vessel on course we'll attend to the legal formalities. Meanwhile, may I request your close attention to what I am doing?"

"You may, sir."

"Thereafter he watched and listened carefully. He admired the skill with which Craven turned the ship on her directional gyroscopes until the redglowing target star was centered exactly in the cartwheel sight. He noted that the captain

used his reaction drive at a longer period and at a higher rate of acceleration than usual, and, said as much. He was told, the words falling slowly and heavily in the pseudo-gravity, "They . . . will . . . expect . . . us . . . to . . . be . . . in . . . a . . . hurry. We . . . must . . . not . . . disappoint . . . them . . ."

Speed built up, fast; but it was a velocity that, in the context of the interstellar distances to be traversed, was no more than a snail's crawl. Then — and the sudden silence was like a physical blow — the thunder of the rockets ceased. The screaming roar had died, but the ship was not quiet. The whine of the Mannschenn Drive pervaded her every compartment, vibrated through every member of her structure. She was falling, falling through Space and Time, plunging through the warped continuum to her rendezvous with Death . . .

And whose Death? wondered Grimes.

He said, "I should have asked before, sir. But how are . . . how are *they* going to find us?"

"I don't know," said Craven. "I don't know. But they've found other ships when they've wanted to. They've never used the old, piratical technique of lying in wait at breaking-out points. A Mass Proximity Indicator? Could be. It's theoretically possible. It could be for a ship under Mannschenn Drive what radar is for a ship in normal Space-Time. Or some means of homing on a temporal precession field? That's more like it, I think, as this

vessel was able to escape when she went random.

"But if they want us — and they will — they'll find us.

"And then . . ." He looked at Grimes, his blue gaze intense. "And then it's up to you, Ensign."

"To all of us," said Grimes.

XIII

She was undermanned, was *Epsilon Sextans*, but she functioned quite efficiently. Craven kept a control room watch himself, and the other two watchkeepers were Grimes and Jane Pentecost. Four on and eight off were their hours of duty — but there was plenty of work to be done in the off-duty periods.

The captain, of course, was in overall charge and was trying to bring his command to the pitch of efficiency necessary for a fighting ship. Jane Pentecost was responsible for meals — although these, involving little more than the opening of cans, did not take up too much of her time. She had also taken over biochemist's duties, but called now and again upon Grimes to help her with the ATREG unit. Its operation was simple enough, but it was inclined to be temperamental and, now and again, allowed the carbon dioxide concentration to reach a dangerous level. Grimes' main concern was his armament. He could not indulge in a practice shoot — the expulsion of mass by a ship running under interstellar drive is suicidal; even the employment of laser weapons is dangerous. But there were tests that he could

make; there was, in the ship's stores, a spare chart tank that he was able to convert to a battle simulator.

Craven helped him, and they set up targets in the tank, glowing points of light that were destroyed by the other sparks that represented Grimes' missiles. After one such drill he said, "You seem to know your stuff, Ensign. Now, what's your grasp of the tactical side of it?"

Grimes considered his words before speaking. "Well, sir, we *could* use a laser with the Drive in operation — but we haven't got a laser. The pirates have. They can synchronize and just carve us up at leisure. This time, I think they'll go for the interstellar drive engineroom first, so that we can't get away by the use of random precession . . ."

"Yes. That's what they'll do. That's why I have that compartment literally sealed in a cocoon of insulation. Oh, I know it's not effective, but it will give us a second or so of grace. No more."

"We can't use our reflective vapor," went on Grimes. "That'd be almost as bad, from our viewpoint, as losing off a salvo of missiles. But, sir, when this ship was first attacked there must have been a considerable loss of mass when the atmosphere was expelled through the rents in the shell plating. The Drive was running. How was it that the ship wasn't flung into some other Space-Time?"

"Come, come, Mr. Grimes. You should know the answer to that one. She was held by the powerful temperal precession fields of the drive units of the two pirates. And then,

of course, when the engineers managed to set up their random precession there was no mass left to be expelled."

"H'm. I see. Or I think I see. Then, in that case, why shouldn't I use my ALGE as soon as we're attacked?"

"No. Better not. Something might just go wrong—and I don't want to become one of my own ancestors."

"Then . . . ?"

"You tell me, Mr. Grimes."

"Cut our Drive . . . ? Break out into the normal continuum? Yes, it could work." He was becoming enthusiastic. "And then we shall be waiting for them, with our missile batteries, when *they* break out."

"We'll make an admiral of you yet, young Grimes."

With watchkeeping and with off-watch duties time was fully occupied. And yet there was something missing. There was, Grimes said to himself, one hell of a lot missing. Jane Pentecost had her own watch to keep and her own jobs to do when she was not in the control room, but she and Grimes had some free time to share. But they did not share it.

He broached the subject when he was running a test on the artificial chlorophyl in the ATREG. "Jane, I was hoping I'd see more of you."

"You're seeing plenty of me."

"But not enough."

"Don't be tiresome," she snapped. Then, in a softer voice, "Don't . . ."

". . . spoil everything?" he finished for her sardonically.

"You know what I mean," she told him coldly.

"Do I?" He groped for words. "Jane . . . Damn it all, I hoped . . . After what happened aboard the *Delia O'Ryan* . . ."

"That," she said, "was different." Her face flushed. "I tell you this, Grimes, if I'd known that you were coming along with us it never would have happened."

"No?"

"NO!"

"Even so . . . I don't see any reason why we shouldn't . . ."

"Why we shouldn't what? Oh, all right, all right. I know what you mean. But it's out of the question. I'll tell you why, in words of one syllable. In a ship such as *Delia Orionis* descreet fun and games were permissible, even desirable. No shortage of women — both crew and passengers. Here, I'm the only female. Your friend Mr. Baxter has been sniffing after me. And Mr. Wolverton the Interstellar Chief. And his Second. And even, be-reaved though he is, the Bearded Bastard. *He* might get away with it—the privileges of rank and all that. But nobody else would, most certainly not yourself. How long would it remain a secret?"

"I suppose you're right, but . . ."

"But what? Oh John, John, you are a stubborn cow . . ."

"Cow?"

"Sorry. Just Rimworldsese. Applicable to both sexes."

"Talking of sex . . ."

"Oh, shut up!"

"I'll not." She looked desirable standing there. A small smudge of

grease on her flushed cheek was like a beauty spot. "I'll not," he said again. She was close to him, and he was acutely conscious that beneath the thin uniform shirt and the short shorts there was only Jane. He had only to reach out. He did so. At first she did not resist — and then she exploded into a frenzy of activity. Before he could let go of her a hard, rough hand closed on his shirt collar and yanked him backwards.

"Keep yer dirty paws off her!" snarled a voice. It was Baxter's. "Keep yer dirty paws off her! If we didn't want yer ter let off the fireworks I'd do yer, here an' now."

"And keep *your* dirty paws off me!" yelled Grimes. It was meant to be an authentic quarterback bark, but it didn't come out that way.

"Let him go, Mr. Baxter," said Jane, adding, "please."

"Oh, orl right. If yer says so. But I still think we should run him up ter the Old Man."

"No. Better not." She addressed Grimes, "Thank you for your help on the ATREG, Mr. Grimes. And thank *you*, Mr. Baxter, for your help. It's time that I started looking after the next meal."

She left, not hastily, but not taking her time about it either. When she was gone Baxter released Grimes. Clumsily the ensign turned himself around, with a wild flailing motion. Unarmed combat had never been his specialty, especially unarmed combat in Free Fall conditions. But he knew that he had to fight, and the rage and the humiliation

boiling up in him made it certain that he would do some damage.

But Baxter was laughing, showing all his ugly, yellow teeth. "Come orf it, Admiral! An' if we must have a set-to — not in here. Just smash the UV projector — an' bang goes our air conditioning! Simmer down, mate. Simmer down!"

Grimes simmered down, slowly. "But I thought you were out for my blood, Mr. Baxter."

"Have ter put in a show for the Sheilas now an' again. Shouldn't mind puttin' on another kind o' show *with* her. But not in public, like you was goin' to. But it won't do. It just won't do, not until the shootin' is over, anyhow. An' even then . . . So, Admiral, it's paws off as far as you're concerned. An' as far as I'm concerned, *an'* the Chief Time Twister, an' his side-kick. But, if yer can spare the time, I propose we continue the conversation in my palatial dogbox."

Grimes should have felt uneasy as he followed the engineer to his accommodation — but, oddly enough, he did not. The rough friendliness just could not be the prelude to a beating up. Nor was it.

"Come in," said Baxter, pulling his sliding door to one side. "Now yer see how the poor live. This is . . ."

"No," protested Grimes. "No."

"Why? I was only goin' to say that this is me 'umble 'umpy. An' I'd like yer to meet a coupla friends o' mine, and there's more where they came from."

The "friends" were two drinking bulbs. Each bore proudly no less

than four stars on its label. The brandy was smooth, smooth and potent. Grimes sipped appreciatively. "I didn't know that we had any of this aboard *Delia O'Ryan* . . ."

"An' nor did we. You'll not find this tittle in the bar stores of any merchantman, nor aboard any of yer precious Survey Service wagons. Space stock for the emperor's yacht, this is. So here's ter the Waverly taxpayers!"

"But where did you get this from, Mr. Baxter?"

"Where d'yer think? I've had a good fossick around the holds o' this old bitch, an' there's quite a few things too good to let fall inter the hands o' those bloody Waldegrenese."

"But that's pillage."

"It's common sense. Mind yer, I doubt if Captain Craven would approve, so yer'd better chew some dry tea—that's in the cargo too—before yer see the Old Man again. All the bleedin' same, it's no worse than him borrowing your Survey Services stores an' weapons from *his* cargo."

"I suppose it's not," admitted Grimes. All the same, he still felt guilty when he was offered a second bulb of the luxurious spirit. But he did not refuse it.

XIV

He was a good fossicker, was Baxter.

Two days later, as measured by the ship's chronometer, he was waiting for Grimes as he came off watch. "Ensign," he announced

without preamble, "I've found somethin' in the cargo."

"Something new, you mean?" asked Grimes coldly. He still did not approve of pillage, although he had shared the spoils.

"Somethin' that shouldn't be there. Somethin' that's up *your* alley, I think."

"There's no reason why equipment for the Waverley Navy shouldn't be among the cargo."

"True enough. But it wouldn't be in a case with *Beluga Caviar* stencilled all over it. I thought I'd found somethin' to go with the vodka I half inched . . . But it won't."

"Then what is it?"

"Come and see."

"All right." Briefly Grimes wondered if he should tell Craven, who had relieved the watch, then decided against it. The Old Man would probably insist on making an investigation in person, in which case Grimes would have to pass another boring hour or so in the control room.

The two men made their way aft, until they came to the forward bulkhead of the cargo spaces. Normally these would have been pressurized, but, when *Epsilon Sextans'* atmosphere had been replenished from *Delta Orionis'* emergency cylinders, it had seemed pointless to waste precious oxygen. So access was through an airlock, outside which was a locker in which suits, ready for immediate use, were stowed.

Grimes and Baxter suited up, helping each other as required. Then the engineer put out his gloved hand

to the airlock controls. Grimes stopped him, bent forward to touch helmets. He said, "Hang on. If we open the door it'll register on the panel in Control."

"Like hell it will!" came the reply. "Most of the wiring was slashed through during the piracy. I fixed the hold lights — but damn all else." Grimes, through the transparency of the visors, saw the other's grin. "For obvious reasons."

Grimes shrugged, released Baxter. Everything was so irregular that one more, relatively minor regularity hardly mattered. With the engineer he squeezed into the small airlock, waited until the atmosphere it held had been pumped back into the body of the ship, then he himself pushed the button that actuated the mechanism of the inner valve.

This was not the first time that he had been in the cargo spaces. Some of the weapons "borrowed" from *Delta Orionis'* cargo had been mounted in the holds. When he had made his inspections, it had never occurred to him that the opening and closing of the airlock door had not registered in Control.

He stood back and let Baxter lead the way. The engineer pulled himself to one of the bins in which he had been foraging. The door to it was still open, and crates and cartons disturbed by the pillager floated untidily around the opening.

"You'll have to get all this restowed," said Grimes sharply. "If we have to accelerate there'll be damage." But he might as well have been speaking to himself. The suit

radios had not been switched on; and, in any case, there was no air to carry sound waves, however faintly.

Baxter had scrambled into the open bin. Grimes followed him, saw him standing by the case, its top prized open, that carried the lettering, BELUGA CAVIAR. PRODUCE OF THE RUSSIAN SOCIAL DEMOCRATIC REPUBLIC. Baxter beckoned. Grimes edged his way past the drifting packages to join him.

There was something in the case, but it was not jars or cans of salted sturgeon's eggs. It looked at first like a glittering, complex piece of mobile statuary, although it was motionless. It was a metal mismatching of gyroscope and Moebius Strip. It did not look wrong—nothing functional ever does—but it did look *odd*.

Grimes was standing hard against Baxter now. Their helmets were touching. He asked, "What . . . what is it?"

"I was hopin' you'd be able ter tell me, Admiral." Then, as Grimes extended a cautious hand into the case, "Careful! Don't touch nothin'!"

"Why not?"

"'Cause this bloody lot was booby-trapped, that's why. See that busted spring? An' see that cylinder in the corner? That's a thermite bomb, or somethin' worse. Shoulda gone orf when I pried the lid up, but luckily I bugged the firin' mechanism with me bar when I stuck it inter just the right crack. But I think it's deloused now."

"It looks as though it—whatever it is—is hooked up to one of the electrical circuits . . ."

"Yair. An' it's not the lightin' circuit. Must be the airlock indicators . . ."

"Must be." As a weapons expert, Grimes could see that the thermite bomb—if that was what it was—had been rendered ineffective. It hadn't been an elaborate trap, merely a device that would destroy the . . . the *thing* if the case housing it were tampered with. Baxter had been lucky, and, presumably, those who had planted the—what the hell was it?—unlucky.

With a cautious finger he nudged the rotor.

It turned, and he was reminded of those other rotors, the ever-precessing gyroscopes of the Mannschenn Drive.

He remembered, then. He remembered a series of lectures at the Academy on future weapons and navigational devices. Having decided upon his specialty he had been really interested only in the weapons. But there had been talk of a man called Carlotti, who was trying to develop a device that would induce temporal precession in radio signals, so that instantaneous communications would be possible throughout the galaxy without ships and shore stations having to rely upon the tempermental and unreliable telepaths. And beacons, employing the same principle, could be used for navigation by ships under interstellar drive.

So this could be one of Signor

Carlotti's gadgets. Perhaps the Empire of Waverly had offered him a higher price than had the Federation. But why the BELUGA CAVIAR? To deter and confuse industrial spies? But *Epsilon Sextans*' possessed excellent strongrooms for the carriage of special cargo.

And why was the thing wired up?

Suddenly it was obvious. Somehow, the Duchy of Waldgren possessed Carlotti equipment. This . . . this beacon had been transmitting, unknown to anybody aboard the ship, during the voyage. The frigates had homed upon her. When, inadvertently, its power supply had been shut off the victim, using random precession, had been able to make her escape.

So, if the pirates were to make a second attack it would have to be reactivated.

"We'd better throw this lot on to the Old Man's plate," said Grimes.

Captain Craven listened intently as Grimes and Baxter told their story. They feared that he was going to lose his temper when told of the engineer's cargo pillaging, but he only remarked, in a dry voice, "I guess that the consignees can afford to compensate us for our time and trouble. Even so, Mr. Baxter, this practice must cease."

And then, when Grimes described the device, he said, "Yes, I have heard of Carlotti's work. But I didn't think that he'd got as far as a working model. But the thing could have been developed by Waldgrenese scientists from the data in his published papers."



GARY HALLORAN

"So you agree, sir, that it is some kind of beacon upon which the pirates can home?"

"What else can it be? Now, gentlemen, we find ourselves upon the horns of a dilemma. If we don't reactivate the bloody thing, the chances are that we shall deliver ship and cargo intact, at no great risk to ourselves, and to the joy of the underwriters. If we *do* reactivate it, then the chances are that we shall have to fight our way through. And there's no guarantee that we shall be on the winning side."

"I was shanghaied away here as a gunnery officer," said Grimes.

"Shanghaied — or press-ganged?" queried Craven.

"The technique was more that of the shanghai," Grimes told him.

"Indeed?" Craven's voice was cold. "But no matter. You're here, and you're one of my senior officers. What course do *you* recommend?"

Grimes replied slowly and carefully. "Legally speaking, what we're involved in isn't a war. But it *is* a war, of sorts. And a just war. And, in any case, the master of a merchant vessel has the legal right to resist illegal seizure or destruction by force of arms. Of course, we have to consider the illegal circumstances attending the arming of this ship . . ."

"Let's not get bogged down in legalities and illegalities," said Craven, with a touch of impatience. "The lawyers can sort it all out eventually. Do we reactivate?"

"Yes," said Grimes.

"And you, Mr. Baxter. What do you say?"

"We Rim Worlders just don't like Waldegren. I'll not pass up a chance to kick the bastards in the teeth. Reactivate, Skipper."

"Good. And how long will it take you to make good the circuit the beacon's spliced in to?"

"Twenty minutes. No more. But d'yer think we oughter put the whole thing to the vote first?"

"No. Everybody here was under the impression that we should be fighting. With one possible exception, they're all volunteers."

"But I *did* volunteer, sir," objected Grimes.

"Make your mind up, Ensign. You were telling me just now that you'd been shanghaied. All right. Everybody is a volunteer. So we just rebait the trap without any more yapping about it. Let me know as soon as you're ready, Mr. Baxter. Will you require assistance?"

"I'll manage. Skipper."

When he was gone Craven turned to Grimes. "You realize, Ensign, that this puts me in rather a jam. Let me put it this way. Am I justified in risking the lives of all my officers to carry out a private act of vengeance?"

"I think that you can take Mr. Baxter and myself as being representative, sir. As for the others — Miss Pentecost's a Rim Worlder, and her views will coincide with Baxter's. And the original crew members, they're just as entitled to vengeance as you are. I know that if I'd been an officer of this ship at the time of the original piracy, I'd enjoy getting revenge."

"You would. Yes. Even if, as now, an alternative suddenly presented itself. But . . ."

"I honestly don't see what you're worrying about, sir."

"You wouldn't. It's a matter of training. But, for all my reserve commission, I'm a merchant officer. Oh, I know that any military commander is as responsible for the lives of his men as I am, but he also knows that those lives, like his own, are expendable."

"It's a pity that Baxter found the beacon," said Grimes.

"It is — and it isn't. If he hadn't found it, I shouldn't be soliloquizing like a spacefaring Hamlet. And we should have brought the ship in intact and, like as not, all been awarded Lloyd's Medal. On the other hand, if he hadn't found it we — or I? — should have lost our chance of getting back at the pirates."

"You aren't Hamlet, sir." Grimes spoke with the assurance of the very young, but in later years he was to remember his words and to feel neither shame nor embarrassment, but only a twinge of envy and regret. "You aren't Hamlet. You're Captain Craven, Master under God. Please, sir, for once in your life do something you want to do and argue it out later with the Almighty if you must."

"And with my Owners?" Grimes couldn't be sure, but he thought he saw something like a smile beneath Craven's full beard. "And with my Owners?"

"Master Astronauts' certificates aren't all that common, sir. If the worst comes to the worst, there's

always the Rim Worlds. The Sun-downer Line, isn't it?"

"I'd already thought of that." There was no doubt about it. Craven was smiling. "After all that you've been saying to me, I'm surprised that you don't join forces with our Miss Pentecost."

"Go out to the Rim, sir? Hardly."

"Don't be so bloody sure, young Grimes. Anyhow, you'd better get Miss Pentecost up here now so that we can see how friend Baxter is getting on. There's always the risk that he'll find a few more things among the cargo that aren't nailed down."

XV

Grimes called Jane Pentecost on the intercom; after a minute or so she made her appearance in Control. Craven told her what Baxter had discovered and what he, Craven, intended doing about it. She nodded in emphatic agreement. "Yes," she said. "The thing's here to be used — and to be used the way that we want to use it. But I don't think that we should make it public."

"Why not, Miss Pentecost?"

"I could be wrong, Captain, but in my opinion there are quite a few people in this ship who'd welcome the chance of wriggling out of being the cheese in the mousetrap. When there's no alternative they're brave enough. When there's a face-saving alternative . . ."

Baxter's voice came from the intercom speaker. "Chief Reaction Drive Engineer to Control. Repairs completed. Check your panel."

Yes, the circuit had been restored. The buzzer sounded, and on the board a glowing red light showed that the outer door to the cargo hold airlock was open. How much of the failure of the indicators was due to battle damage and how much to Baxter's sabotage would never be known. Craven's heavy eyebrows lifted ironically as he looked at Grimes, and Grimes shrugged in reply.

Then, the watch handed over to the girl, the two men made their way aft from the control room. Outside the airlock they found Baxter, already suited up save for his helmet. There had been only two suits in the locker, and the engineer had brought another one along for the captain from somewhere.

The little compartment would take only two men at a time. Craven and Grimes went through first, then were joined by Baxter. There was no longer any need for secrecy, so the suit radios were switched on. The only person likely to be listening in was Jane Pentecost in the control room.

Grimes heard Craven muttering angrily as they passed packages that obviously had been opened and pilaged, but the captain did no more than mutter. He possessed the sense of proportion so essential to his rank, and a few bulbs of looted liquor were, after all, relatively unimportant.

They came to the bin in which the case allegedly containing caviar had been stowed, in which some secret agent of Waldegren had tapped the circuit supplying power to

the beacon. Inside the box the gleaming machine was still motionless. Craven said, "I thought you told me the current was on."

"It is, Skipper." Baxter's voice was pained. "But I switched it off before I fixed the wiring." He extended a gloved finger, pressed a little toggle switch.

And nothing happened.

"Just a nudge . . ." whispered the engineer.

The oddly convoluted rotor turned easily enough, and as it rotated it seemed almost to vanish in a mist of its own generating—a mist that was no more than an optical illusion.

It rotated, slowed and stopped.

Baxter cast aspersions upon the legitimacy of its parenthood. Then, still grumbling, he produced a voltmeter. Any doubt that power was being delivered to the machine was soon dispelled. Power was being delivered—but it was not being used.

"Well, Mr. Baxter?" demanded Craven.

"I'm a fair mechanic, Skipper, but I'm no physicist . . ."

"Mr. Grimes?"

"I specialized in gunnery, sir."

Craven snorted, the sound unpleasantly loud in the helmetphones. He said sarcastically, "I'm only the captain, but I have some smatterings of Mannschenn Drive maintenance and operation. This thing isn't a Mannschenn Drive unit—but it's first cousin to one. As I recall it, some of the earlier models couldn't be started without the employment of a small, temporal precession field initiator. Furthermore, these initiators, although there is no

longer any need for them, are still carried as engineroom spares in the Commission's ships."

"And that gadget'll start *this* little time-twister, Skipper?" asked the engineer.

"It might, Mr. Baxter. It might. So, Mr. Grimes, will you go along to the Mannschenn Drive room and ask Mr. Wolverton for his initiator? No need to tell him what it's for."

Wolverton was in the Mannschenn Drive room, staring moodily at the gleaming complexity of precessing rotors. Grimes hastily averted his eyes from the machine. It frightened him, and he didn't mind admitting it. And there was something about the engineer that frightened him, too. The tall, cadaverous man, with the thin strands of black hair drawn over his gleaming skull, looked more like a seer than a ship's officer, looked like a fortune-teller peering into the depths of an uncannily mobile crystal ball. He was mumbling, his voice a low, guttural muttering against the thin, high keening of his tumbling gyroscopes. The ensign at last was able to make out the words.

"Divergent tracks . . . To be, or not to be, that is the question . . ."

Grimes thought, *This ship should be renamed the "State of Denmark."* *There's something rotten here.* He said sharply, "Mr. Wolverton!"

Slowly the Chief Interstellar Drive Engineer turned his head, stared at Grimes unseeingly at first. His eyes came into focus. He whispered, "It's you."

"Who else, Chief? Captain's compliments, and he'd like to borrow your temporal precession field initiator."

"He would, would he? And why?"

"An . . . An experiment . . ." said Grimes, with partial truth. The fewer people who knew the whole truth the better.

"An experiment?"

"Yes. If you wouldn't mind letting me have it now, Chief . . ."

"But it's engineroom stores. It's the Commission's stores. It's a very delicate instrument. It is against the Commission's regulations to issue it to unqualified personnel."

"But Mr. Baxter is helping with the . . . experiment."

"Mr. Baxter! That letter-off of cheap fireworks. That . . . *Rim Runner!* No. No. Mr. Baxter is not qualified personnel."

"Then perhaps you could lend us one of your juniors . . ."

"No. No, I would not trust them. Why do you think that I am here, Mr. Grimes? Why do you think that I have been tied to my gyroscopes? Literally tied, almost. If I had not been here, keeping my own watch, when the pirates struck, this ship would have been utterly destroyed. I *know* the Drive, Mr. Grimes . . ." He seized the ensign's arm, turned him so that he was facing the gleaming, spinning rotors, endlessly precessing, endlessly tumbling down the dark dimensions, shimmering on the very verge of invisibility. Grimes wanted to close his eyes, but could not. "I *know* the Drive, Mr. Grimes. It talks to me. It shows me things. It warned me, that Time,

that Death was waiting for this ship and all in her. And now it warns me again. But there is a . . . a divergence . . .”

“Mr. Wolverton, please! There is not much time.”

“But what is Time, Mr. Grimes? What *is* Time? What do you know of the forking World Lines, the Worlds of If? I’ve lived with this machine, Mr. Grimes. It’s part of me—or am I part of *it*? Let me show you.” His grip on the ensign’s arm was painful. “Let me show you. Look. Look into the machine. What do you see?”

Grimes saw only shadowy, shimmering wheels and a formless darkness.

“I see you, Mr. Grimes,” almost sang the engineer. “I see you—but not as you *will* be. But as you might be. I see you on the bridge of your flagship, your gold uniform gold-encrusted and medal-bedecked, with commodores and captains saluting you and calling you ‘sir’ . . . But I see you, too, in the control room of a shabby little ship, a single ship, in shabby clothes, and the badge on your cap is one that I have never seen, is one that does not yet exist . . .”

“Mr. Wolverton! That initiator. Please!”

“But there is no hurry, Mr. Grimes. There is no hurry. There is Time enough for everything—for that is, that has been, that will be and that might be. There is Time to decide, Mr. Grimes. There is Time to decide whether or not we make our second rendezvous with Death.

The initiator is part of it all, Mr. Grimes, is it not? The initiator is the signpost that stands at the forking of the track. You weren’t here, Mr. Grimes, when the pirates struck. You did not hear the screams, you did not smell the stench of burning flesh. You’re young and foolhardy; all that you want is the chance to play with your toys. And all that I want, now that I know that alternatives exist, is the chance to bring this ship to her destination with no further loss of life.”

“Mr. Wolverton . . .”

“Mr. Grimes!” It was Captain Craven’s voice, and he was in a vile temper. “What the hell do you think you’re playing at?”

“Captain,” said Wolverton, “I can no more than guess at what you intend to do, but I have decided not to help you to do it.”

“Then give us the initiator. We’ll work it ourselves.”

“No, Captain.”

“Give me the initiator, Mr. Wolverton. That’s an order.”

“A *lawful* command, Captain? As lawful as those commands of yours that armed this ship?”

“Hold him, Grimes!” (And who’s supposed to be holding whom? wondered the ensign. Wolverton’s grip was still tight and painful on his arm.) “Hold him, while I look in the storeroom!”

“Captain! Get away from that door! You’ve no right . . .”

Wolverton relinquished his hold on Grimes, who, twisting with an agility that surprised himself, contrived to get both arms about the engineer’s waist. In the scuffle the

contact between their magnetic shoe soles and the deck was broken. They hung there, helpless, with no solidity within reach of their flailing limbs to give them purchase. They hung there, clinging to each other, but more in hate than in love. Wolverton's back was to the machine; he could not see, as could Grimes, that there was an indraught of air into the spinning, shimmering complexity. Grimes felt the beginnings of panic, more than the mere beginnings. There were no guardrails; he had read somewhere why this was so, but the abstruse physics involved did not matter—all that mattered was there was nothing to prevent him and Wolverton from being drawn into the dimension-twisting field of the thing.

He freed, somehow, his right hand, and with an effort that sprained his shoulder brought it round in a sweeping, clumsy and brutal blow to the engineer's face. Wolverton screamed, and his grip relaxed. Violently, Grimes shoved away.

Craven emerged from the storeroom, carrying something that looked like a child's toy gyroscope in a transparent box. He looked around for Grimes and Wolverton at deck level and then, his face puzzled, looked up. He did not, as Grimes had been doing for some seconds, vomit; but his face, behind the beard, went chalk-white. He put out his free hand and, not ungently, pulled Grimes to the deck.

He said, his voice little more than a whisper, "There's nothing we can do. Nothing, except to get a pistol and finish him off . . ."

Grimes forced himself to look again at the slimy, bloody obscenity that was a man turned, literally, inside-out—heart (if it was the heart) still beating, intestines still writhing.

After a spasm of painful retching he gasped, "He kept his own rendezvous with Death!"

XVI

It was Grimes, who went for a pistol, fetching a Minetti from the weapons rack that he, himself, had fitted up in the control room. He told Jane Pentecost what he wanted it for. He made no secret of either his horror or his self-blame.

She said, "But this is a war, even if it's an undeclared one. And in a war you must expect casualties."

"Yes, yes. I know. But *I* pushed him into the field."

"It was an accident. It could easily have been you instead of him. And I'm glad that it wasn't."

"But you haven't seen . . ."

"And I don't want to." Her voice hardened. "Meanwhile, get the hell out of here and back to the Mannschenn Drive room. If you're so sorry for the poor bastard, do something about putting him out of his misery."

"But . . ."

"Don't be such a bloody coward, Grimes."

The words hurt, mainly because there was so much truth in them. Grimes was dreading having to see again the twisted obscenity that had once been a man, was dreading having to breathe again the atmo-

sphere of that compartment, heavy with the reek of hot oil, blood and faecal matter. But, with the exception of Craven, he was the only person in the ship trained in the arts of war. He recalled the words of a Surgeon-Commander who had lectured the midshipmen of his course on the handling of battle casualties and recalled, too, how afterwards the young gentlemen had sneered at the bloodthirstiness of one who was supposed to be a professional healer. "*When one of your ship-mates has really had it, even if he's your best friend, don't hesitate a moment about finishing him off. You'll be doing him a kindness. Finish him off—and get him out of sight. Shockingly wounded men are bad for morale.*"

"What are you waiting for?" demanded Jane Pentecost. "Do you want *me* to do it?"

Grimes said nothing, just hurried out of the control room.

Craven was still in the Mannschenn Drive room when Grimes got back there. With him were two of the interstellar drive engineers—the second and the third. Their faces were deathly white, and the second's prominent Adam's apple was working spasmodically, but about them was an air of grim resolution. The third—how could he bear to touch that slimy, reeking mess?—had hold of the *thing's* shoulders (white, fantastically contorted bone gleaming pallidly among red convolutions of flesh) while the second, a heavy spanner in his hand, was trying to decide where to strike.

The captain saw Grimes. "Give me that!" he snapped and snatched the pistol from the ensign's hand. Then, to the engineers, "Stand back!"

The little weapon rattled sharply and viciously. To the other smells was added the acidity of burned propellant. What had been Wolverton was driven to the deck by the impact of the tiny projectiles and adhered there. There was surprisingly little blood, but the body had stopped twitching.

Craven handed the empty pistol "You stay here, Mr. Grimes, and organize the disposal of the body." He went to the locker where he had put the initiator, took out the little instrument and, carrying it carefully, left the Mannschenn Drive room. Neither of the engineers, still staring with horrified fascination at their dead chief, noticed.

"How . . . How did it happen?" asked the second, after a long silence.

"He fell into the field," said Grimes.

"But how? How? He was always getting on to us about being careless and telling us what was liable to happen to us, and now it's happened to him . . ."

"That's the way of it," contributed the third, with a certain glum satisfaction. "Don't do as I do, do as I say . . ."

"Have you a box?" asked Grimes.

"A box?" echoed the Second.

"Yes. A box." Now that he was doing something, doing something useful, Grimes was beginning to feel a little better. "We can't have a fun-

eral while we're running under interstellar drive. We have to . . . to put him somewhere." *Out of sight*, he mentally added.

"That chest of spares?" muttered the second.

"Just the right size," agreed the third.

"Then get it," ordered Grimes.

The chest, once the spares and their packing had been removed and stowed elsewhere, was just the right size. Its dimensions were almost those of a coffin. It was made of steel, its bottom magnetized, and remained where placed on the deck while the three men, fighting down their recurring nausea, handled the body into it. All of them sighed audibly in relief when, at last, the close-fitting lid covered the remains. Finally, the third ran a welding torch around the joint. As he was doing so the lights flickered.

Was it because of the torch? wondered Grimes. Or was it because the beacon in the hold had been reactivated? Somehow he could not feel any real interest.

Cleaned up after a fashion, but still feeling physically ill, he was back in the control room. Craven was there, and Baxter was with him. Jane Pentecost had been relieved so that she could attend to her duties in the galley. "Not that I feel like a meal," the captain had said. "And I doubt very much that Mr. Grimes does either."

"Takes a lot ter put *me* off *me* tucker," the engineer declared cheerfully as he worked on the airlock door's tell-tale panel.

"You didn't see Mr. Wolverton, Mr. Baxter," said Craven grimly.

"No, Skipper. An' I'm not sorry I didn't." He paused in his work to rummage in his tool bag. He produced bulbs of brandy. "But I thought you an' the ensign might need some o' this."

Craven started to say something about cargo pillage, then changed his mind. He accepted the liquor without further quibbling. The three men sipped in silence.

Baxter carelessly tossed his squeezed empty bulb aside, continued with what he had been doing. The Captain said to Grimes, "Yes. We got the bloody thing started again. And we've improved upon it."

"Improved upon it, sir? How?"

"It's no longer only a beacon. It's also an alarm. As soon as it picks up the radiation from the similiar pieces of apparatus aboard the enemy frigates, the buzzer that Mr. Baxter is fitting up will sound; the red light will flash. We shall have ample warning . . ."

"She'll be right, Skipper," said the engineer.

"Thank you, Mr. Baxter. And now, if you don't mind, I'd like a few words in private with Mr. Grimes."

"Don't be too hard on him, Skipper."

Baxter winked cheerfully at Grimes and left the control room.

"Mr. Grimes," Craven's voice was grave. "Mr. Grimes, today, early in your career, you have learned a lesson that some of us never have to learn. You have killed a

man — yes, yes, I know that it was not intentional — and you have been privileged to see the end result of your actions.

“There are many of us who are, who have been killers. There are many of us who have pushed buttons but who have never seen what happens at the other end of the trajectory. Perhaps people slaughtered by explosion or, laser beam do not look quite so horrible as Wolverton — but, I assure you, they often die as slowly and as agonizingly.

“You know, now, what violent death looks like, Mr. Grimes.

“Tell me, are you still willing to push your buttons, to play pretty tunes on your battle organ?”

“And what did the bodies in this ship look like, Captain?” asked Grimes. Then, remembering that one of the bodies had belonged to the woman whom Craven had loved, he bitterly regretted having asked the question.

“Not pretty,” whispered Captain Craven. “Not at all pretty.”

“I’ll push your button for you,” Grimes told him.

And for Jane Pentecost, he thought. And for the others. And for myself? The worst of it all is that I haven’t got the excuse of saying that it’s what I’m paid for . . .

XVII

Down the dark dimensions fell *Epsilon Sextans*, falling free through the warped continuum.

But aboard the ship Time still possessed meaning, the master chron-

ometer still ticked away the seconds, minutes and hours; the little, man-made world was still faithful to that puissant god of scientific intelligences everywhere in the Universe — the Clock. Watch succeeded watch in the control room and engineroom. Meals were prepared and served on time. There was even, towards the end, a revival of off-duty social activities; a chess set was discovered and brought into use, playing cards were produced and a bridge school was formed.

But there was one social activity that, to Grimes’ disappointment, was not resumed — the oldest social activity of them all. More than once he pleaded with Jane, and every time she laughed away his pleas. He insisted; and that made matters worse. He was (as he said) the donkey who had been allowed one nibble of the carrot and who could not understand why the carrot had been snatched away. He was (she said) a donkey. Period.

He should have guessed what was happening, but he did not. He was young and inexperienced in the ways of women — of men and women. He just could not imagine that Jane would spare more than a casual glance for any of the engineers or for the flabby, pasty youth who was the psionic radio officer. And in this he was right.

Epsilon Sextans was, for a ship of her class, very well equipped. In addition to the usual intercom system she was fitted with closed-circuit television. In the event of emergency the captain or watch officer, by the flip of a switch, could see

what was happening in any compartment of the vessel. Over the control panel, in big, red letters, were the words: **EMERGENCY USE ONLY**. Grimes did not know what the penalty for improper use of the apparatus in the Merchant Navy, but he did know that in the Survey Service officers had been cashiered and given an ignominious discharge for this offense. The more cramped and crowded the conditions in which men—and women—work and live, the more precious is privacy.

It was Grimes' watch.

When he had taken over, all the indications were that it would be as boring as all the previous watches. All that was required of the watch-keeper was that he stay awake. Grimes stayed awake. He had brought a book with him into Control, hiding it inside his uniform shirt, and it held his attention for a while. Then, following the example of generations of watch officers, he set up a game of three-dimensional noughts and crosses in the chart tank and played, right hand against left. The left hand was doing remarkably well when a buzzer sounded. The ensign immediately cleared the tank and looked at the airlock indicator panel. But there were no lights on the board, and he realized that it was the intercom telephone.

“Control,” he said into his microphone.

“P.R.O. here. I . . . I'm not happy, Mr. Grimes . . .”

“Who is?” quipped Grimes.

“I . . . I feel . . . smothered . . .”

“Something wrong with the ventilation in your shack?”

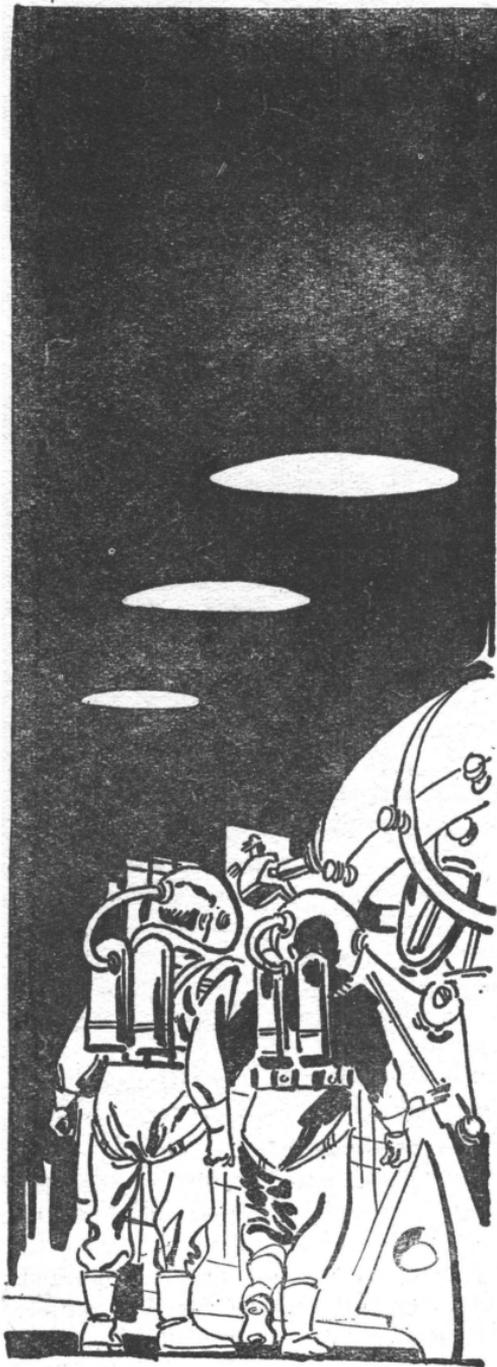
“No. *NO*. It's like . . . it's like a heavy blanket soaked in ice-cold water. You can't move . . . You can't shout . . . You can't hear . . . It's like it was before . . .”

“Before *what?*” snapped Grimes, and then as the other buzzer sounded, as the additional red light flashed on the tell-tale panel, he realized the stupidity of his question.

At once he pressed the alarm button. This was it, at last. **Action Stations!** Throughout the ship the bells were shrilling, the klaxons squawking. Hastily Grimes vacated the pilot's chair, slipped into the one from which he could control his weapons and from which he could reach out to other controls. But where was the Old Man? Where was Captain Craven? This was the moment that he had longed for, this was the consummation toward which all his illegalities had been directed. Damn it all, *where was he?*

Perhaps he was floating stunned in his quarters, starting up hurriedly from sleep he could have struck his head upon some projection, knocked himself out. If this were the case he, Grimes, would have to call Jane from her own battle station in the Sick Bay to render first aid. But there was no time to lose.

The ensign reached out, flipped the switches that would give him the picture of the interior of the captain's accommodation. The screen brightened, came alive. Grimes stared at the luminous presentation in sick horror. Luminous



it was with that peculiar luminosity of naked female flesh. Jane was dressing herself with almost ludicrous haste. Of the Captain there was no sign — *on the screen.*

Craven snarled, with cold ferocity, "You damned, sneaking prurient puppy!" Then, in a louder voice, "Switch that bloody thing off! I'll deal with you when this is over."

"But, sir . . ."

"Switch it off, I say!"

Cheeks burning, Grimes obeyed. Then he sat staring at his armament controls, fighting down his nausea, his physical sickness. Somehow he found time to think bitterly, *So I was the knight, all set and ready to slay dragons for his lady. And all the time, she . . .* He did not finish the thought.

He heard a voice calling over the intercom, one of the engineers. "Captain, they're trying to lock on! Same as last time. Random precession, sir?"

"No. Cut the Drive!"

"Cut the Drive?" incredulously.

"You heard me. *Cut!*" Then, to Grimes, And what the hell are *you* waiting for?"

The ensign knew what he had to do; he had rehearsed it often enough. He did it. From the nozzles that pierced the outer shell spouted the cloud of reflective vapor, just in time, just as the enemy's lasers lashed out at their target.

It seemed that the ship's internal temperature rose suddenly and sharply — although that could have been illusion, festered by the sight

of the fiery fog glimpsed through the viewports before the armored shutters slammed home.

There were targets now on Grimes' fire-control screen, two of them, but he could not loose a missile until the tumbling rotors of the Drive had ceased to spin, to precess. The use of the antilaser-vapor screen had been risky enough. Abruptly the screens went blank, which signified that the temporal precession rates of hunted and hunters were no longer in synchronization, that the fields of the pirates had failed to lock on. In normal Space-Time there would be no need to synchronize, and then the hunters would discover that their quarry had claws and teeth.

Aboard *Epsilon Sextans* the keenest note of the Drive died to a whisper, a barely audible murmur, fading to silence. There was the inevitable second or so of utter disorientation when, as soon as it was safe, the engineers braked the gyroscopes.

Craven acted without hesitation, giving his ship headway and acceleration with Inertial Drive. He was not running — although this was the impression that he wished to convey. He was inviting rather than evading combat; but if the Waldegren captains choose to assume that *Epsilon Sextans* was, as she had been, an unarmed merchantman (after all, the anti-laser screen could have been jury rigged from normal ship's stores and equipment) taking evasive action, that was their error of judgment.

Grimes watched his screen intently. Suddenly the two blips reappear-

ed, astern, all of a hundred kilometers distant, but closing. This he reported.

"Stand by for acceleration!" ordered Craven. "Reaction Drive — stand by!"

It was all part of the pattern — a last, frantic squandering of reaction mass that could do more than delay the inevitable. It would look good from the enemy control rooms.

"Reaction Drive ready!" reported Baxter over the intercom.

"Thank you. Captain to all hands, there will be no count-down. *Fire!*"

From the corner of his eye Grimes saw Craven's hand slam down the key. Acceleration slammed him brutally back into his chair.

There was a roar that was more like an explosion than a normal rocket firing, a shock that jarred and rattled every fitting in the control room.

Craven remarked quietly, "That must have looked convincing enough — but I hope that Baxter didn't really blow a chamber . . ."

There was only the Internal Drive now, and the two blips that, very briefly, had fallen astern, were now creeping up again, closing the range.

"Anti-laser," ordered Craven briefly.

"But, sir, it'll just be wasting it. They'll not be using laser outside twenty kilometers."

"They'll not be expecting a gunnery specialist aboard this wagon, either."

Once again the nozzles spouted, pouring out a cloud that fell rapidly astern of the running ship.

Craven looked at his own screens, frowned, muttered, "They're taking their bloody time about it . . . Probably low on reaction mass themselves . . ." He turned to Grimes. "I think a slight breakdown of the I.D.'s in order."

"As you say, sir." The ensign could not forget having been called a damned, sneaking, prurient puppy. Let Craven make his own decisions.

"Stand by for deceleration," ordered the captain quietly. The steady throbbing of the Inertial Drive faltered, faltered and ceased. There were two long minutes of Free Fall, of weightlessness, and then, for five minutes, the Drive came back into operation. *A breakdown, the enemy must be thinking. A breakdown, and the engineers sweating and striving to get the ship under way again. A breakdown . . .* It would not be surprising after the mauling she had endured at the first encounter.

She hung there, and although her actual speed could be measured in kilometers a second she was, insofar as her accelerating pursuers were concerned, relatively motionless. Grimes wondered why the warships did not use their radio, did not demand surrender. *Epsilon Sextans'* transceiver was switched on, but no sound issued from the speaker but the hiss and crackle of interstellar static. He voiced his puzzlement to Craven.

Craven laughed grimly. "They know who *we* are — or they think that they know. And they know that we know who are *they* are. After what happened before, why should we expect mercy? All that

we can do now — they think — is to get the Mannschenn Drive going again. But with that comic beacon of theirs working away merrily they'll be able to home on us, no matter how random our presession." He laughed again. "They haven't a care in the world, bless their little black hearts . . ."

Grimes watched his screens. Forty kilometers . . . Thirty . . . "Sir, the ALGE?" he asked.

"Yes. It's your party now."

For the third time reflective vapor gushed from the nozzles, surrounding the ship with a dense cloud. Craven, who had been watching the dials of the external temperature thermometers, remarked quietly, "They've opened fire. The shell plating's heating up. Fast."

And in the control room it felt hot — and hotter. Grimes pressed the button that unmasked his batteries. The gas screen, as well as affording protection from laser, hid the ship from visual observation. The enemy would not be expecting defence by force of arms.

He loosed his first salvo, felt the ship tremble as the missiles ejected themselves from their launching racks. There they were on the screens — six tiny sparks, six moronic mechanical intelligences programmed to home upon and destroy, capable of countering evasive action so long as their propellant held out. There they were on the screens — six of them, then four, then one. This last missile almost reached its target — then it, too, blinked out. The Waldegren frigates were now using

their laser for defence and not attack.

"I don't think," remarked Craven quietly, "that they'll be missiles. Not yet, anyhow. They want our cargo intact . . ." He chuckled softly. "But we've got them worried."

Grimes didn't bother to reply. The tell-tale lights on his panel told him that the six AVM launchers were reloaded. The AMM's — the anti-missile missiles — had not yet been fired. Dare he risk their use against big targets? He carried in his magazines stock sufficient for three full salvos only — and with no laser for antimissile work, dare he deplete his supply of this ammunition?"

He had heard the AMM's described as "vicious little brutes." They were to the Anti-Vessel Missiles as terriers are to mastiffs. Their warheads were small, but this was compensated for by their greater endurance. They were, perhaps, a little more "intelligent" than the larger rockets — and Grimes, vaguely foreseeing this present contingency, had made certain modifications to their "brains."

He pushed the button that actuated his modifications, that overrode the original programming. He depressed the firing stud. He felt the vibration as the war-rockets streaked away from the ship and on his screens watched the tiny points of light closing the range between themselves and the two big blips that were the targets. They were fast, and they were erratic. One was picked off by laser within the first ten seconds, but the others carried

on, spurting and swerving, but always boring in towards their objectives.

Grimes could imagine the enemy gunnery officers flailing their lasers like men, armed only with sticks, defending themselves against a horde of small, savage animals. There was, of course, one sure defence — to start up the Mannschenn Drive and to slip back into the warped continuum where the missiles could not follow. But, in all probability, the Waldegren captains had yet to accept the fact, emotionally, that this helpless merchantman had somehow acquired the wherewithal to strike back.

Two of the AMM's were gone now, picked off by the enemy laser. Three were still closing on the target on *Epsilon Sextans'* port quarter, and only one on the target abaft the starboard beam. Grimes loosed his second flight of AMM's, followed it with a full salvo of AVM's. Then, knowing that the protective vapor screen must have been thinned and shredded by his rocketry, he sent out of replenishing gush of reflective gas.

He heard Craven cry out in exultation. The three AMM's of the first flight had hit their target, the three sparks had fused with the blip that represented the raider to port. The three sparks that were the second flight were almost there, and overtaking them were the larger and brighter sparks of the second AVM salvo. The Anti-Missile Missiles would cause only minor damage to a ship — but, in all probability, they

would throw fire control out of kilter, might even destroy laser projectors. In theory, one only AVM would suffice to destroy a frigate; a hit by three at once would make destruction a certainty.

And so it was.

Seen only on the radar screen, as a picture lacking in detail painted on a fluorescent surface by an electron brush, it was anticlimactic. The blips, the large one, the three small ones and the three not so small, merged. And then there was an oddly shaped blob of luminescence that slowly broke up into a cluster of glowing fragments, a gradually expanding cluster, a leisurely burgeoning flower of pale fire.

Said Craven viciously, "The other bastard's got cold feet . . ."

And so it was. Where she had been on the screen was only darkness, a darkness in which the sparks that was missiles and anti-missiles milled about aimlessly. They would not turn upon each other — that would have been contrary to their programming. They would not, in theory, use their remaining fuel to home upon the only worthwhile target remaining — *Epsilon Sextans* herself. But, as Craven knew and as Grimes knew, theory and practice do not always coincide. Ships have been destroyed by their own missiles.

With reluctance Grimes pushed the DESTRUCT button. He said to the captain, gesturing towards the wreckage depicted on the screen, "Pick up survivors, sir? If there are any . . ."

"If there are any," snarled

Craven, "that's their bad luck. No — we give chase to the other swine!"

XVIII

Give chase . . .

It was easier said than done. The surviving frigate had restarted her Mannschenn Drive, had slipped back into the warped continuum where, unless synchronization of precession rates were achieved and held, contact between vessels would be impossible. The Carlotti Beacon in *Epsilon Sextans'* hold was worse than useless; it had been designed to be homed upon, not as a direction-finding instrument. (In any case, it could function as such only if the beacon aboard the Waldegren ship were working.) Neither Craven nor Grimes knew enough about the device to effect the necessary modifications. The interstellar drive engineers thought that they could do it, but their estimates as to the time required ranged from days to weeks. Obviously, as long as it was operating it would be of value to the enemy only.

So it was switched off.

There was only one method available to Craven to carry out the pursuit — psionic tracking. He went for his psionic radio officer, explained the situation. The telepath was a young man, pasty faced, unhealthy looking, but not unintelligent. He said at once, "Do you think, captain, that the other officers and myself are willing to carry on the fight? After all, we've made our point. Wouldn't it be wisest to carry on, now, for Waverley?"

"Speaking for meself," put in Baxter, who had accompanied June Pentecost to Control, "an' fer any other Rim Worlders present, I say that now the bastards are on the run it's the best time ter smack 'em again. An' hard. An' the tame time twisters think the same as we do. I've already had words with 'em." He glared at the telepath. "Our snoopin' little friend here should know very well what the general consensus is."

"We do not pry," said the communications officer stiffly. "But I am willing to abide by the will of the majority."

"And don't the orders of the master come into it?" asked Craven, more in amusement than anger.

"Lawful commands, sir?" asked Grimes who, until now, had been silent.

"Shut up!" snapped Jane Pentecost.

"Unluckily, sir," the young man went on, "I do not possess the direction-finding talent. It is, as you know, quite rare . . ."

"Then what *can* you do?" demanded Craven.

"Sir, let me finish, please. The psionic damping device — I don't know what it was, but I suspect that it was the brain of some animal with which I am unfamiliar — was in the ship that was destroyed. The other vessel carries only a normal operator, with normal equipment — himself and some sort of organic amplifier. He is still within range, and I can maintain a listening watch . . ."

"And suppose *he* listens to you?"

asked the captain. "Even if you transmit nothing — as you will not do unless ordered by myself — there could be stray thoughts. And that, I suppose, applies to all of us."

The telepath smiled smugly. "Direction-finding is not the only talent. I'm something of a damper myself, although not in the same class as the one that was blown up. I give you my word sir, that this vessel is psionically silent." He raised his hand as Craven was about to say something. "Now sir, I shall be able to find out where the other ship is heading. I know already that her Mannsenn Drive unit is not working at full capacity; it sustained damage of some kind during during the action. I'm not a navigator, sir, but it seems to me that we could be waiting for her when she re-emerges into the normal Continuum."

"You're not a navigator," agreed Craven, "and you're neither a tactician nor a strategist. We should look rather silly, shouldn't we hanging in full view over a heavily fortified naval base, a sitting duck. Even so . . ." His big right hand stroked his beard. "Meanwhile, I'll assume that our little friends are headed in the general direction of Waldegren and set course accordingly. If Mr. Grimes will be so good as to hunt up the target star in the Directory . . ."

Grimes did as he was told. He had made his protest, such as it was, and, he had to admit, he was in favor of continuing the battle. It was a matter of simple justice. Why should one shipload of murderers be

destroyed and the other shipload escape unscathed? He was still more than a little dubious of the legality of it all, but he did not let it worry him.

He helped Craven to line the ship upon the target star, a yellow, fifth magnitude spark. He manned the intercom while the captain poured on the acceleration and then, with the ship again falling free, cut in the Mannschenn Drive. When the vessel was on course he expected that the old Man would give the usual order: "Normal Deep Space routine, Mr. Grimes. But this was not forthcoming.

"Now," said Craven ominously.

"Now *what*, sir?"

"You have a short memory, Ensign. A conveniently short memory, if I may say so. Mind you, I was favorably impressed by the way you handled your armament, but that has no bearing upon what happened before."

Grimes blushed miserably. He knew what the captain was driving at. But, playing for time, he asked, "What do you mean, sir?"

Craven exploded. "What do I mean? You have the crust to sit there and ask me that! Your snooping, sir. Your violation of privacy. Even worse, your violation of the master's privacy! I shall not tell Miss Pentecost; it would be unkind to embarrass her. But . . ."

Grimes refrained from saying that he had seen Miss Pentecost wearing even less than when, inadvertently, he had spied upon her. He muttered, "I can explain, sir."

"You'd better. Out with it."

"Well, sir, it was like this. I knew that we'd stumbled on the enemy — or that the enemy had stumbled upon us. I'd sounded Action Stations. And when you were a long time coming up to Control I thought that you must have hurt yourself, somehow . . . There have been such cases, as you know. So I thought I'd better check . . ."

"You thought . . . You thought. I'll not say that you aren't paid to think, because that's just what an officer *is* paid for. But you didn't think hard enough, or along the right lines." Grimes could see that Craven had accepted his explanation and that all would be well. The captain's full beard could not hide the beginnings of a smile. "Did you ever hear of Sir Francis Drake, Ensign?"

"No, sir."

"He was an admiral — one of Queen Elizabeth's admirals. The first Elizabeth, of course. When the Spanish Armada was sighted he did not rush down to his flagship yelling 'Action Stations!' He knew that there was time to spare, and so he quietly finished what he was doing before setting sail."

"And what was he doing, sir?" asked Grimes innocently.

Craven glared at him, then snapped. "Playing bowls."

Then, suddenly, the tension was broken, and both men collapsed in helpless laughter. In part it was reaction to the strain of battle — but in greater part it was that freemasonry that exists only between members of the same sex, the acknowledgment of shared secrets and shared experiences.

Grimes knew that Jane Pentecost was not for him and wished Craven joy of her and she of the captain. Perhaps they had achieved a permanent relationship, perhaps not — but, either way, his best wishes were with them.

Craven unbuckled his seat strap.

"Deep Space routine, Mr. Grimes. It is your watch. I believe."

"Deep Space routine it is, sir."

Yes, it was still his watch (although so much had happened). It was still his watch, although there were barely fifteen minutes to go before relief. He was tired, more tired than he had ever been in his life before. He was tired, but not unhappy. He knew that the fact that he had killed men should be weighing heavily upon his conscience — but it did not. They, themselves, had been killers — and they had had a far better chance than any of their own victims had enjoyed.

He would shed no tears for them.

XIX

Craven came back to the control room at the change of watch, when Grimes was handing it over to Jane Pentecost. He waited until the routine had been completed, then said, "We know where our friends are headed. They were, like us, running for Waldegren — but they're having to change course." He laughed harshly. "There must be all hell let loose on their home planet."

"Why? What's happened?" asked Grimes.

"I'll tell you later. But, first of all, we have an alteration of course

ourselves. Look up Dartura in the Directory, will you, while I get the Drive shut down."

Epsilon Sextans was falling free through normal Space-Time before Grimes had found the necessary information. And then there was the hunt for and the final identification of the target star, followed by the lining up by the use of the directional gyroscopes. There was the brief burst of acceleration and then, the interstellar drive was cut in.

The captain made a business of selecting and lighting a cigar. When the pungent combustion was well under way he said, "Our young Mr. Summers is a good snooper. Not as good as some people I know, perhaps . . ." Grimes flushed, and Jane Pentecost looked puzzled.

"He's a super-sensitive. He let me have a full transcript of all the signals, out and in. It took us a little time to get them sorted out — but not too long, considering. *Adler* — that's the name of the surviving frigate — was running for home. Her captain sent a rather heavily edited report of the action to his admiral. It seems that *Adler* and the unfortunate *Albatross* were set upon and beaten up by a heavily armed Survey Service cruiser masquerading as an innocent merchantman. The Admiral, oddly enough, doesn't want a squadron of Survey Service battlewagons laying nuclear eggs on *his* base. So *Adler* has been told to run away and lose herself until the flap's over . . ."

"And did they send all that *en clair*?" demanded Grimes. "They must be mad!"

"No, they aren't mad. The signal's weren't *en clair*."

"But . . ."

"Reliable merchant captains," said Craven, "are often entrusted with highly confidential naval documents. There were some such in my safe aboard *Delta Orionis*, consigned to the officer commanding Lindisfarne Base. The officer who delivered them to me is an old friend and shipmate of mine, and he told me that among them was the complete psionic code used by the Waldegren Navy. Well, when I had decided to take over this ship, I'd have been a bloody fool not to have photostatted the whole damn issue.

"So that's the way of it. Herr Kapitan von Leidnitz thinks that he can say what he likes to his superiors without anybody else knowing what he's saying. And all the while . . ." Craven grinned wolfishly. "It seems that there's a minor base, of sorts, on Dartura. Little more than repair yards, although I suppose that there'll be a few batteries for their protection. I can imagine the sort of personnel they have running the show — passed-over commanders and the like, not overly bright. By the time that we get there we shall have concocted a convincing story — convincing enough to let us hang off in orbit until *Adler* appears on the scene. After all, we have their precious code. Why should they suspect us?"

"Why shouldn't we be *Adler*?" asked Grimes.

"What do you mean, Ensign?"

"The Waldegren Navy's frigates

are almost identical, in silhouette, with the Commission's *Epsilon* Class freighters. We could disguise this ship a little by masking the dissimilarities by a rough patching of plating. After all, *Adler* was in action and sustained some damage . . ."

"Complicated," mused the captain. "Too complicated. And two *Adlers* — each, presumably, in encoded psionic communication with both Waldegren and Dartura . . . You've a fine, devious mind, young Grimes, but I'm afraid you've outfoxed yourself on that one."

"Let me talk, sir. Let me think out loud. To begin with, a ship running on Mannschenn Drive can put herself into orbit about a planet; but it's not, repeat not, recommended."

"Too bloody right it's not."

"But we have the heels of *Adler*? Yes? Then we could afford a slight delay to carry out the modifications — the disguise — that I've suggested. After all, forty-odd light-years is quite a long way."

"But what do we gain, Mr. Grimes?"

"The element of confusion, sir. Let me work it out. We disguise ourselves as well as we can. We find out, from intercepted and decoded signals, *Adler's* ETA — and the coordinates of her break-through into the normal continuum. We contrive matters to be more or less in the same place at exactly the same time. And when the shore batteries and the guardships see no less than two *Adlers* slugging it out, each of them

yelling for help in the secret code, they won't know which of us to open fire on."

"Grimes," said Craven slowly, "I didn't know you had it in you. All I can say is that I'm glad that you're on *our* side."

"Am I?" asked Grimes wonderingly, suddenly deflated. He looked at the Captain who, after all, was little better than a pirate, whose accomplice he had become. He looked at the girl, but for whom he would not be here. "Am I? Damn it all, whose side *am* I on?"

"You'd better go below," Craven told him gently. "Go below and get some sleep. You need it. You've earned it."

"Jeremy," said Jane Pentecost to Craven, "would you mind looking after the shop for half an hour or so? I'll go with John."

"As you please, my dear. As you please."

"It was the assurance in the captain's voice that hurt. *It won't make any difference to us, it implied. It can't make any difference. Sure, Jane, go ahead. Throw the nice little doggie a bone. We can spare it.*

"No thank you," said Grimes coldly and left the control room.

But he couldn't hate these people.

XX

After a long sleep Grimes felt better. After a meal he felt better still. It was a good meal, even though the solid portion of it came from tins. Craven's standards were slipping, thought the ensign. He was reasonably sure that such items as

caviar, escargots, pate de foie gras, Virginia ham, Brie, and remarkably alcoholic cherries were not included in the commission's inventory of emergency stores. And neither would be the quite reasonable Montrachet, although it had lost a little by being decanted from its original bottles into standard squeeze bulbs. But if the captain had decided that the laborer was worthy of his hire, with the consignees of the cargo making their contribution towards that hire, that was his privilege/responsibility — call it what you will.

Jane Pentecost watched him eat. As he was finishing his coffee she said, "Now that our young lion has fed, he is required in the Control Room."

He looked at her both gratefully and warily. "What have I done now?"

"Nothing, my dear. It is to discuss what you — we — will do. Next."

He followed her to Control. Craven was there, of course, and so were Baxter and Summers. The captain was enjoying one of his rank cigars, and a limp, roll-your-own cigarette dangled from the engineer's lower lip. The telepath coughed pointedly every time that acrid smoke expelled by either man drifted his way. Neither paid any attention to him, and neither did Grimes when he filled and lit his own pipe.

Craven said, "I've been giving that scheme of yours some thought. It's a good one."

"Thank you, sir."

"Don't thank me. I should thank you. Mr. Summers, here, has been maintaining a careful listening watch. *Adler's* ETA is such that we can afford to shut down the Drive to make the modifications that you suggest. To begin with, we'll fake patching plates with plastic sheets — we can't afford to cannibalize any more of the ship's structure — so as to obscure our name and identification letters. We'll use more plastic to simulate missile launchers and laser projectors; luckily there's plenty of it in the cargo . . ."

"We found more than plastic while we were lookin' for it," said the engineer, licking his lips.

"That will do, Mr. Baxter. Never, in normal circumstances, should I have condoned . . ."

"These circumstances ain't normal, Skipper, an' we all bloody well know it."

"That will do, I say." Craven inhaled deeply, then filled the air of the control room with a cloud of smoke that, thought Grimes, would have reflected laser even at close range. Summers almost choked, and Jane snapped, "Jeremy!"

"This, my dear, happens to be *my* control room." He turned again to the ensign. "It will not be necessary, Mr. Grimes, to relocate the real weapons. They functioned quite efficiently where they are and, no doubt, will do so again. And now, as soon as I have shut down the Drive, I shall hand the watch over to you. You are well rested and refreshed."

"Come on," said Jane to Baxter. "Let's get suited up and get that sheeting out of the airlock."

"Couldn't Miss Pentecost hold the fort, sir?" asked Grimes. He added, "I've been through the camouflage course at the Academy."

"And so have I, Mr. Grimes. Furthermore, Miss Pentecost has had experience in working outside, but I don't think that you have."

"No, sir. But . . ."

"That will be all, Mr. Grimes."

At Craven's orders the Drive was shut down, and outside the viewports the sparse stars became stars again, were no longer pulsing spirals of multicolored light. Then, alone in the control room, Grimes actuated his scanners so that he could watch the progress of the work outside the hull, switched on the transceiver that worked on the spacesuit frequency.

This time he ran no risk of being accused of being a Peeping Tom.

He had to admire the competence with which his shipmates worked.

The plastic sheeting had no mass to speak of, but it was awkward stuff to handle. Torches glowed redly as it was cut and radiated invisibly in the infrared as it was shaped and welded. The workers, in their bulky, clumsy suits, moved with a grace that was in startling contrast to their attire — a Deep Space ballet, thought Grimes, pleasantly surprised at his own way with words. From the speaker of the transceiver came Craven's curt orders, the brief replies of the others. "*This way a little . . . That's it.*" "*She'll do, Skipper.*" "*No she won't. Look at the bend on it!*"

Then Jane's laughing voice, "*Our secret weapon, Jeremy. A laser that fires round corners!*" "*That will do, Miss Pentecost. Straighten it, will you?*" "*Ay, ay, sir. Captain, sir.*" The two interstellar drive engineers were working in silence, but with efficiency. Aboard the ship were only Grimes and Summers, the telepath.

Grimes felt out of it, but somebody had to mind the shop, he supposed. But the likelihood of any customers was remote.

Then he stiffened in his chair. One of the spacesuited figures was falling away from the vessel, drifting out and away, a tiny, glittering satellite reflecting the harsh glare of the working floods, a little, luminous butterfly pinned to the black velvet of the ultimate night. Who was it? He didn't know for certain, but thought that it was Jane. The ship's interplanetary drives — reaction and inertial — were on remote control, but reaction drive was out; before employing it he would have to swing to the desired heading by use of the directional gyroscopes. But the inertial drive was versatile.

He spoke into the microphone of the transceiver. "Secure yourselves. I am proceeding to rescue."

At once Craven's voice snapped back, "Hold it, Grimes. Hold it! There's no danger."

"But, sir . . ."

"Hold it!"

Grimes could see the distant figure now from a viewpoint, but it did not seem to be receding any longer. Hastily he checked with the radar. Range and bearing were not

changing. Then, with relative bearing unaltered, the range was closing. He heard Jane call out, "Got it! I'm on the way back!"

Craven replied, "Make it snappy — otherwise young Grimes'll be chasing you all over the universe!"

Grimes could see, now, the luminous flicker of a suit reaction unit from the lonely figure.

Later, he and the others examined the photographs that Jane had taken.

Epsilon Sextans looked as she was supposed to look, like a badly battle-scarred frigate of the Waldegren Navy.

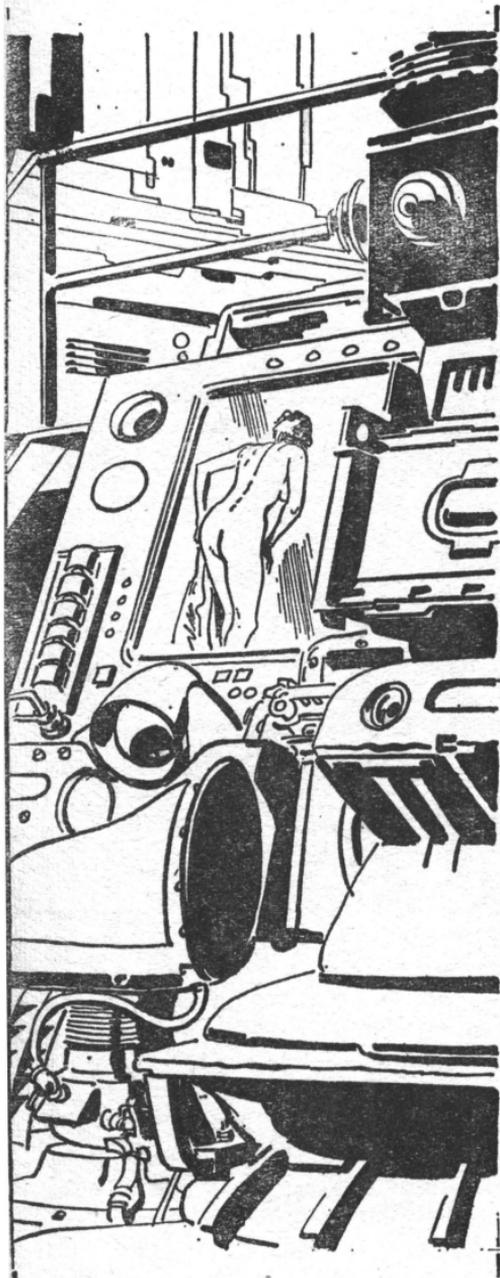
XXI

In terms of Space and of Time there was not much longer to go.

The two ships — one knowing and one unknowing — raced towards their rendezvous. Had they been plunging through the normal continuum there would have been, towards the finish, hardly the thickness of a coat of paint between them, the adjustment of a microsecond in temporal precession rates would have brought inevitable collision. Craven knew this from the results of his own observations and from the encoded position reports, sent at six hourly intervals, by *Adler*. Worried, he allowed himself to fall astern, a mere half kilometer. It would be enough — and, too, it would mean that the frigate would mask him from the fire of planetbased batteries.

Summers maintained his listening watch. Apart from the position reports he had little of interest to tell





the captain. *Adler*, once or twice had tried to get into contact with the main base on *Waldegren*; but, other than from a curt directive to proceed as ordered there were no signals from the planet to the ship. *Dartura Base* was more talkative. That was understandable. There was no colony on the planet, and the base personnel must be bored, must be pining for the sight of fresh faces, the sound of fresh voices. They would have their excitement soon enough, promised *Craven* grimly.

Through the warped continuum fell the two ships, and ahead the pulsating spiral that was the *Dartura* sun loomed ever brighter, ever larger. There were light-years yet to go, but the Drive-induced distortions made it seem that tentacles of incandescent gas were already reaching out to clutch them, to drag them into the atomic furnace at the heart of the star.

In both control rooms, watch succeeded watch; but the thoughts and the anticipations of the watchkeepers were not the same. Aboard *Adler* there was the longing for rest, for relaxation — although *Adler's* captain must have been busy with the composition of a report that would clear him (if possible) of blame for his defeat. Aboard *Epsilon Sextans* there was the anticipation of revenge — insofar as *Craven*, *Baxter*, *Jane Pentecost* and the survivors of the ship's original personnel were concerned. *Grimes*? As the hour of reckoning approached he was more and more dubious. He did not know what to think, what to feel. There was the strong per-

sonal loyalty to Craven — and, even now, to Jane Pentecost. There was the friendship and mutual respect that had come into being between himself and Baxter. There was the knowledge that *Adler's* crew were no better than pirates, were murderers beyond rehabilitation. There was the pride he felt in his own skill as a gunnery officer. (But, as such, was he, himself, any better than a pirate, a murderer? The exercise of his craft aboard a warship would be legal — but here, aboard a merchantman, and a disguised merchantman at that, the legality was doubtful. What had his motives been when he volunteered — and as a commissioned officer of the Survey Service he had had no right to do so—what were his motives now?)

He, Grimes, was not happy. He had far too much time to ponder the implications. He was an accessory before, during and after the fact. He had started off correctly enough, when he had tried to prevent Craven from requisitioning the Survey Service cargo aboard *Delta Orionis*, but after that . . . After he and Jane . . . (That, he admitted, was a memory that he wanted to keep, always, just as that other memory, of the bright picture of naked female flesh on the screen, he wished he could lose forever.)

He had started off correctly enough — and then, not only had he helped install the purloined armament but had used it. (*And used it well*, he told himself with a brief resurgence of pride.) Furthermore, the disguise of *Epsilon Sextans* had been his idea.

Oh, he was in it, all right. He was in up to the neck. What the final outcome of it all would be he did not care to contemplate.

But it would soon be over. He had no fears as to the outcome of the battle. The element of surprise would be worth at least a dozen missile launchers. *Adler* would never have the chance to use her laser.

Adler, reported Summers, had shut down her Mannschenn Drive and emerged briefly into normal Space-Time to make her final course adjustment. She was now headed not for the Dartura Sun but for the planet itself — or where the planet would be at the time of her final — and fatal — re-emergence into the continuum. The last ETA was sent, together with the coordinates of her planetfall. *Epsilon Sextans* made her own course adjustment — simultaneity in Time and a half kilometer's divergence in Space being Craven's objective. It was finicky work, even with the use of the ship's computer, but the captain seemed satisfied.

The race — the race that would culminate in a dead heat — continued. Aboard the frigate there was, reported Summers, a lessening of tension, the loosening up that comes when a voyage is almost over. Aboard the merchantman the tension increased. The interstellar drive engineers, Grimes knew, were no happier about it all than he was — but they could no more back out than he could. Craven was calm and confident, and Baxter was beginning to gloat. Jane Pentecost assumed

the air of dedication that in women can be so infuriating. Grimes glumly checked and rechecked his weaponry. It passed the time.

Dartura itself was visible now — not as tiny disc of light, but as a glowing annulus about its distorted primary. The thin ring of luminescence broadened, broadened. The time to go dwindled to a week, to days, to a day, and then to hours . . .

To minutes . . .

To seconds . . .

Craven and Grimes were in the control room, the others were at their various stations. From the intercom came the telepath's voice, "He's cutting the Drive . . ."

"Cut the Drive!" ordered the Captain.

In the Mannschenn Drive room the spinning, precessing gyroscopes slowed, slowed, ceased their endless tumbling, assumed the solidity that they exhibited only when at rest. For perhaps two seconds there was temporal confusion in the minds of all on board as the precession field died, Past, Present and Future inextricably mingled. Then there was a gun glaring through the viewports, bright in spite of the polarization — a sun, and, directly ahead, a great, green-orange planet. There was a ship . . .

There were ships — ahead of them, astern, on all sides.

There were ships — and, booming from the intership transceiver, the transceiver that was neither tuned nor switched on (but navies could afford induction transmitters with their fantastic power consumption) came the authoritative voice, "*Inflex-*

ible to Adler! Heave to for search and seizure! Do not attempt to escape, our massed fields will hold you!"

The effect was rather spoiled when the same voice added, in bewilderment, "Must be seeing double. There's two of the bastards . . ." The bewilderment did not last long. "*Inflexible to Adler* and to unidentified vessel. Heave to for search and seizure!"

"Hold your fire, Mr. Grimes," ordered Craven, quietly and bitterly. "It's the Survey Service."

"I know," replied Grimes — and pressed the button.

XXII

He never knew just why he had had done so.

Talking it over afterwards, thinking about it, he was able to evolve a theory that fitted the facts. During that brief period immediately after the shutting down of the Drive, during the short session of temporal disorientation, there had been pre-science, of a sort. He had known that *Adler*, come what may, would attempt one last act of defiance and revenge, just as *Adler's* captain or Gunnery Officer must have known, in that last spit second, that *Nemesis* was treading close upon his heels.

He pushed the button — and from the nozzles in the shell plating poured the reflective vapor, the protective screen that glowed ruddily as *Adler's* lasers slashed out at it.

From the speaker of the dead transceiver, the transceiver that should have been dead, roared the

voice of the Survey Service admiral. "Adler! Cease fire! Cease fire, damn you!" There was a pause, then — "You've asked for it!"

She had asked for it and now she got it. Suddenly the blip on Grimes' screen that represented the Waldegren frigate became two smaller blips, and then four. The roiling fog outside *Epsilon Sextans'* viewports lost its luminosity, faded suddenly to drab grayness. The voice from the transceiver said coldly, "And now you whoever you are, had better identify yourself. And fast."

Craven switched on the communications equipment. He spoke quietly into the microphone. "Interstellar Transport Commission's *Epsilon Sextans*. Bound Waverley, with general cargo . . ."

"Bound Waverley? Then what the hell are you doing here? And what's that armament you're mounting?"

"Plastic," replied the captain. "Plastic dummies."

"And I suppose your ALGE is plastic, too. Come off it, Jerry. We've already boarded your old ship, and although your ex-Mate was most reluctant to talk we got a story of sorts from him."

"I thought I recognized your voice, Bill. May I congratulate you upon your belated efforts to stamp out piracy?"

"And may I deplore your determination to take the law into your own hands? Stand by for the boarding party."

Grimes looked at Craven, who was slumped in his seat. The master's full beard effectively

masked his expression. "Sir," asked the ensign. "What can they do? What will they do?"

"You're the space lawyer, Grimes. You're the expert on Survey Service rules and regulations. What will it be, think you? A medal — or a firing squad? Praise or blame?"

"You know the admiral, sir?"

"Yes. I know the admiral. We're old shipmates."

"Then you should be safe."

"Safe? I suppose so. Safe from the firing squad, but not safe from my employers. I'm a merchant captain, Grimes, and merchant captains aren't supposed to range the spacelanes looking for trouble. I don't think they'll dare fire me; but I know that never can I expect command of anything better than *Delta Class* ships, on the drearier runs.

Grimes saw that Craven was smiling. "But there's still the Rim Worlds. There's still the Sundowner Line, and the chance of high rank in the Rim Worlds Navy when and if there is such a service."

"You have . . . inducements, sir?"

"Yes. There are . . . inducements."

"I thought, once," said Grimes, "that I could say the same. But not now. Not any longer. Even so . . . I'm Survey Service, sir, and I should be proud of my service. But in this ship, this merchant vessel, with her makeshift armament, we fought against heavy odds, and won. And, just now, we saved ourselves. It wasn't the Survey Service that saved us."

"Don't be disloyal," admonished Craven.

"I'm not being disloyal, sir. But . . . Or, shall we say, I'm being loyal. You're the first captain under whom I served under fire. If you're going out to the Rim Worlds I'd like to come with you."

"Your Commission, Grimes. You know that you must put in ten years' service before resignation is possible."

"But I'm dead."

"Dead?"

"Yes. Don't you remember I was snooping around in the Mannschenn Drive room, and I got caught in the temporal precession field. My body still awaits burials; it's in a sealed metal box in the deep freeze. It can never be identified . . ."

Craven laughed. "I'll say this for you. You're ingenious. But how do we account for the absence of the late Mr. Wolverton? And your presence aboard this ship . . ."

"I can hide, sir, and . . ."

"And while you're hiding you'll concoct some story that will explain everything. Oh Grimes, Grimes . . . You're an officer I wish I could always have with me. But I'll not stand in the way of your career. All I can do, all I will do, is smooth things over on your behalf with the admiral. I should be able to manage that."

Jane Pentecost emerged from the hatch in the control room deck. Addressing Craven she said formally, "Admiral Williams, sir." She moved to one side to make way for the flag officer.

"Jerry, you bloody pirate!" boomed Williams, a squat, rugged man the left breast of whose shirt was

ablaze with ribbons. He advanced with outstretched hand.

"Glad to have you aboard, Bill. This is Liberty Hall — you can spit on the mat and call the cat a bastard!"

"Not again!" groaned Grimes.

"And who is this young man?" asked the admiral.

"I owe you — or your Service — an apology, Bill. This is Ensign Grimes, who was a passenger aboard *Delta Orionis*. I'm afraid that I . . . er . . . press-ganged him into my service. But he has been most . . . cooperative? Uncooperative? Which way do you want it?"

"As we are at war with Waldegren — I'd say cooperative, with reservations. Was it he, by the way, who used the ALGE? Just as well for you all that he did."

"At war with Waldegren?" demanded Jane Pentecost. "So you people have pulled your fingers out at last."

The admiral raised his eyebrows.

"One of my Rim Worlders," explained Craven. "But I shall be a Rim Worlder myself shortly."

"You're wise, Jerry. I've got the buzz that the Commission is taking a very dim view of your piracy or privateering or whatever it was, and my own Lords and Masters are far from pleased with you. You'd better get the hell out before the lawyers have decided just what crimes you are guilty of."

"As bad as that?"

"As bad as that."

"And young Grimes, here?"

"We'll take him back. Six months' strict discipline aboard my flagship

will undo all the damage that you and your ideas have done to him. And now, Jerry, I'd like your full report."

"In my cabin, Bill. Talking is thirsty work."

"Then lead on. It's your ship."

"And it's your watch, Mr. Grimes. She'll come to no harm on this trajectory while we get things sorted out."

Grimes sat with Jane Pentecost in the control room. Through the ports, had he so desired, he could have watched the rescue teams extricating the survivors from the wreckage of *Adler*, he could have stared out at the looming bulk of *Dartura* on the beam. But he did not do so, and neither did he look at his instruments.

He looked at Jane. There was so much about her that he wanted to remember — and, after all, so very little that he was determined to forget.

The intercom buzzed. "Mr. Grimes, will you pack whatever gear

you have and prepare to transfer with Admiral Williams to the flag-ship? Hand the watch over to Miss Pentecost."

"But you'll be shorthanded, sir."

"The admiral is lending me a couple of officers for the rest of the voyage."

"Very good, sir."

Grimes made no move. He looked at Jane — a somehow older, tired, a more human Jane than the girl he had first met. He said, "I'd have liked to come out to the Rim with you . . ."

She said, "It's impossible, John."

"I know. But . . ."

"You'd better get packed."

He unbuckled his seat belt, went to where she was sitting. He kissed her. She responded, but it was only the merest flicker of a response.

He said, "Good-by."

She said, "Not good-by. We'll see you out on the Rim, sometime."

With a bitterness that he was always to regret he replied, "Not bloody likely."

END

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Dear Editor:

This is the first time I have written your magazine (or any other!) but since *If* is a Hugo winner I suppose it is the logical place to start.

The strong points of *If* are the serialized novels and the Gree, Retief, Berserker and Niven series. In the first category you have published, in 1966, two first-class novels, *The Moon Is a Harsh Mistress* by Heinlein (best thing ever published in *If*) and *Earthblood* by Brown and Laumer, as well as three other good serials.

To top this off, the editorials, O.M.I.F., and HAC are three of the best features of any magazine. All of these, especially O.M.I.F. deserve to be increased in length. A book reviewer of Budrys's caliber — del Rey or Leiber perhaps — is badly needed for *If*. The only magazine science writer I like is Asimov, although Ley's books are QX. As a special feature could you give a bibliography of Heinlein's work?

If anyone reading this knows of a chess association of SF fans (or would like to form one), please drop me a line. Same with a group of Heinlein devotees.

First move in four-dimensional chess game: King's Knight, level 1, time quanta 1 to King Knight 3, level 2, TQ 1. — J. Robert Voelker, 1150 McIntosh Avenue, Akron, Ohio 44314.

* * *

Dear Editor:

Just a belated letter in tribute to your creative genius. Your editorial on pictures from computers really fascinated me! So logical, so original, so true — for a non-programmer to invent.

You should now be informed that this cartooning sort of thing is very definitely "old-hat" in the field of computer programming. Especially, in the field of military-computer programming, where various symbols and diagrams must be strategically placed upon various scopes, in proper alignment.

An excellent example is the "orientation" program for the Sage System Defense Computer network. When more information (detail) is desired of a certain spot on the scope, a so-called "light-gun" is aimed at that spot, and activates an auxiliary detail-information program sequence. Now, strictly for the visitation of very high brass and

civilians, this "orientation" program has a topless belly dancer swinging a mean grass skirt. And when you fire the light-gun at her navel, off drops the grass skirt!

Since that program, and the other information above, is unclassified, it is legal for me to tell you about it. I wonder whether I should also tell you that I was told—by an executive—that it cost about \$20,000 of taxpayers' money to write and check out that "orientation" program? This was done 10 or more years ago.

Certainly, programming is cheaper than stage shows and movies. The main reason is because programmers are cheaper to hire than actors, stagehands, props, etc. However, large sums of money are still required, since checkout can be very time-consuming—and machine-time is very expensive, at least on the large computers.

However, the process of micro-miniaturization of electronic components should, eventually, reduce the prices of large-scale, high-speed digital computers.

Incidentally, I was told that "DOTTIE," the \$20,000 bellydancer, was available *only* at the original programming contractor's location—and NOT at any of the various computer sites around the country.

On second thought, let's not print this letter. Let's just keep it at the level of information for you. OK?

I have enjoyed your stories, and your magazines, for many years now. But I am selective! I browse through *any* magazine sci-fi or otherwise, before I decide whether or not to buy that particular issue. ● We didn't want to keep this valuable bit of information from you, so we coaxed the author of the

above to let us publish it, and he agreed—**providing** we didn't give his name!—*Editor*.

* * *

Dear Editor:

May I make a suggestion? Each month you publish a First that has never seen print before. Often it is easy to pick out the first, because, all the other writers you've seen before. This is not always true. Could you possibly include this on the page where the story starts? Say the top right corner, opposite the "short story" or whatever?

Talking of firsts, if I'm not mistaken, *On the Shallow Seas* was the first for January '67. I think that it is one of the best you've printed so far and you've printed some good ones in '66. There was Steve Buchanan, H. H. Hollis, A. A. Walde and Gardner Raymond Dozis. All of them from good to great.

I'm glad to see that Budrys decided to come back and write some more and if his new novel is as good all the way through (I have no doubt that it is) as the first part, he'll have next year's Hugo all but wrapped up.

Which brings me to the congratulations. You deserved that Hugo, and I'm betting on you having it ten years at least, or do you think *Galaxy* might grab it?

By the way, when are you going to bring us *Rogue Star*? If not soon then I would suggest you write a story and get it printed fast—if there's one thing this mag lacks, it's stories by you!—Nick Grimshawe, R. R. #2, Alliston, Ontario, Canada.

● Principal reason we don't identify "First" stories at the beginning of the stories themselves is that we feel they must compete for your at-

tention with the other stories by the regular professionals — otherwise we have no business printing them. But there's something to be said for the other way, too, and maybe we ought to try it for a while . . . *Rogue Star* (it now seems) will start in the July issue of *If*. Hope it's been worth waiting for! — *Editor*.

* * *

Dear Editor:

Re Mensa, I found William Turner's letter quite disturbing. Are the members so sure they are not the *bottom 2%* of the population in intelligence? If a man gifted with superior intelligence feels he is a misfit, is his intelligence really superior? If he has so much intelligence he should be able to live with his inferiors with little problem. The "lonely heads" club really has no reason to be in existence.

I appreciate any personal correspondence from readers. — Ronald Weinstock, 20 Sunset Road, Lawrence, New York 11559.

* * *

Dear Editor:

As a long-time RAH fan, I was amused to notice a little point at the end of "*The Moon . . .*". Manuel makes reference to a member of the family, named Hazel, who changes her name to Stone, Hazel Stone. Well, long ago RAH wrote a novel — one of his "juveniles", called *The Rolling Stones*, in which the main character was an old woman named Hazel Stone — and she was an engineer who lived on the moon. I wonder how many of your readers caught this.

Anyway, I hope that there will be many more Heinlein serials in *If*; many, many more.

And while I'm writing, two other things.

First, a complaint about your covers. They never seem to change, and they always look like something from "SUPER-DUPER WHIZ BANG BLOOD AND GUTS ACTION STORIES OF THE SPACELANES". And then inside, a lot of complaints about critics not taking SF seriously. No wonder!

Secondly, a question. I imagine that every fan who's been a fan for more than a year has heard or read the phrase "The Music of the Spheres". Have you any idea whence this haunting term came? — Brian Kappler, 224 Buckingham Drive, Windsor, Ontario, Canada.

● We turned your question over to the eminent classicist Miss Judy-Lynn Benjamin, B.A., noted author of various monographs and papers, editor of the recent and penetrating critique of James Joyce's *Ulysses*, *The Celtic Bull*, etc., and our esteemed Associate Editor. Says Judy-Lynn: "Pythagoras, having ascertained that the pitch of notes depends on the rapidity of vibration, and also observing that the planets move at different velocities through the heavens, concluded that each planet must make a sound in its motion according to its speed; and, as all things in nature are harmoniously made, the different sounds must harmonize. Plato went a step farther by stating that a siren must sit on each planet, carolling a sweet song, agreeing to the motion of her own particular planet yet harmonizing with all the others." So much for the classical view. Since the beginning of radio-telescopy the "sounds" — i.e., the radio waves, which can be read-out as audible frequencies as well as any-

thing else — of various radio-emitting heavenly bodies is sometimes called "the music of the spheres." Only thing wrong, it ain't harmonious! (Sounds like squeaks, hums, putt-putts and squeals.) — *Editor.*

* * *

Dear Editor:

I, and I suppose a multitude of science-fiction fans, want to thank you for drawing our attention to the proposed cancellation of the TV show "Star Trek". For the very first time in my life I sat down and wrote to a network (and an editor) to protest having a show taken off the air. Not that I have any doubt of the outcome of it all: The show will be cancelled, the way the rating-game is played.

It would be gratifying if you could suggest to the writers who contributed to the scripts to put them into book-form. As you probably know, there is an adaption of "Star-Trek" episodes by James Blish on the bookstands, a very poor one. It is one of the rare instances in which a book is far inferior to the show which bears its name. Characterization is non-existent, the relationship of the three main characters toward each other, which makes the show so enjoyable and which, I am sure, is the interpretation intended by the original authors, and which is one of friendship, respect, loyalty and subtle humor, are completely forgotten and ignored in the book version. It is quite unbelievable, as the book has it, that the commander of a starship, who spends years in space to find new civilizations, should feel uneasy and kind of patronizingly amused at the different ways his alien first officer has. Why spend

all that time in space, if you expect to find exactly everything as on Earth? Quite illogical and very provincial.

There is another point which the show also raises, but which I dismissed as nitpicking in view of the overall excellence of the show, but which is very irritating in the book: The supposed absence of any and all emotions in Vulcans. There just is no such thing, anyone like that is a robot. Loyalty, friendship, integrity, courage — all of these attributes Mr. Spock possesses — are emotions. And Mr. Spock is supposed to be the offspring of a Vulcan father and a human mother, so somebody must have loved somebody at some time.

I would love to see "Star Trek" in book form, written by writers who know their craft. — Mrs. Fred Witten, 41-09 41st Street, Long Island City 4, New York.

* * *

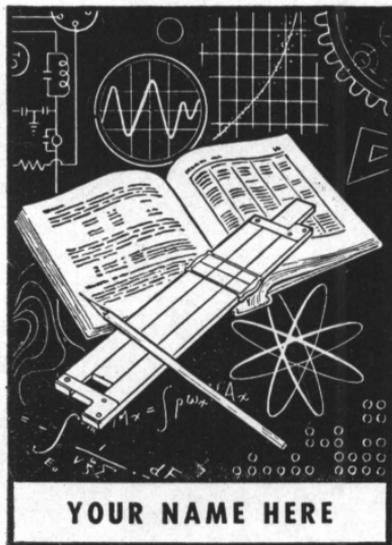
Dear Editor:

I request that you or one of your readers help me. Do you or your readers know of any group preparing for the day when it will be possible to establish either on the Moon or under the sea a society or a group of societies which will be more or less independent of those which now exist? Does anyone have any practical plans to produce a good or perfect society in the near future? (I do not include L.B.J.) — Patrick J. Kelly, Jr., 121 South Wickham Road, Baltimore, Maryland 21229.

● That does it for another month. This issue's "First" story is by B. K. Filer. We think you'll be seeing him again! — THE EDITOR



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Here are some of the famous stories that appeared in *Galaxy* in its first fifteen years. Will the next fifteen years be as good?

Frankly, we don't think so. We think they'll be better!

Baby Is Three
Theodore Sturgeon

*The Ballad of
Lost C'Mell*
Cordwainer Smith

The Big Time
Fritz Leiber

The Caves of Steel
Isaac Asimov

Day After Doomsday
Poul Anderson

The Demolished Man
Alfred Bester

Do I Wake or Dream?
Frank Herbert

The Dragon Masters
Jack Vance

The Fireman
(*Fahrenheit 451*)
Ray Bradbury

Gravy Planet
(*The Space Merchants*)
Pohl & Kornbluth

Here Gather the Stars
(*Way Station*)
Clifford D. Simak

Home from the Shore
Gordon R. Dickson

Hot Planet
Hal Clement

King of the City
Keith Laumer

Mindswap
Robert Sheckley

Med Ship Man
Murray Leinster

The Men in the Walls
William Tenn

The Old Die Rich
H. L. Gold

The Puppet Masters
Robert A. Heinlein

Surface Tension
James Blish

The Visitor at the Zoo
Damon Knight

*Wind between
the Worlds*
Lester del Rey

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