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ALL STAR ISSUE

THE MAGAZINE OF

Fantasy AND Science Fiction

SPECIAL 10th ANNIVERSARY ISSUE

The new

HEINLEIN

novel

STARSHIP SOLDIER

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THEODORE STURGEON

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Damon Knight, BOOK EDITOR — *Isaac Asimov*, CONTRIBUTING SCIENCE EDITOR

J. Francis McComas, ADVISORY EDITOR — *Ruth Ferman*, CIRCULATION DIRECTOR

In this issue . . .

. . . Ferdinand Feghoot makes his 19th appearance, and his fan mail increases with each one. Many readers, in fact, have sent in their own Feghoot adventures, and Mr. Briarton professes to have been much pleased with a few of them—with the result that we have instituted something new: Any Feghoot idea which pleases Mr. Briarton will be written up by him and published here, with proper credit and a year's subscription to F&SF given to the person who first submits the idea. One condition—all such Feghoot submissions must be accompanied by a note to the effect that the above terms are acceptable.

Damon Knight's book column is again missing, this time for reasons of space only. It will appear next month, and in all likelihood more regularly thereafter. Many readers have expressed a desire to see Mr. Knight cover more books, even if that means devoting less space to each, and Mr. Knight—a most agreeable and pleasant chap when not scourging a novel that does not strike his fancy—plans to do so.

Coming next month . . .

Announced for this issue but not appearing here are Robert Nathan and Howard Fast—much to our regret. The difficulty was that in order to publish Robert A. Heinlein's novel in two installments instead of three, we were forced to leave out other long pieces, and the pieces by Mr. Nathan and Mr. Fast are both novelet size. The situation will not be greatly eased next month, since the concluding installment of "Starship Soldier" will occupy a fair number of pages—however, Mr. Fast's "The Martian Shop" will definitely be included, and Mr. Nathan will be along in the December issue.

Also planned for the November issue is "After the Ball," by John Collier—a delightful fantasy somewhat in the vein of last August's popular "Pact," by Winston P. Sanders. And early next year, incidentally, we will bring you another Collier tale of quite a different sort—an original novelet concerning the adventures of a man who devotes his fortune and all his energies to cruising the oceans of the world in search of a sea serpent. We won't attempt to tell you more about it, beyond saying that it possesses all of Mr. Collier's special brand of deft persuasiveness. . . .

The following is the first in a series promised us by the bearded one with the bright blue eyes. As is often true of Mr. Sturgeon's stories, it is nearly impossible to describe simply; we will say only this: good as the first reading may be, a second reading is almost mandatory.

THE MAN WHO LOST THE SEA

by Theodore Sturgeon

SAY YOU'RE A KID, AND ONE DARK night you're running along the cold sand with this helicopter in your hand, saying very fast *witchy-witchy-witchy*. You pass the sick man and he wants you to shove off with that thing. Maybe he thinks you're too old to play with toys. So you squat next to him in the sand and tell him it isn't a toy, it's a model. You tell him look here, here's something most people don't know about helicopters. You take a blade of the rotor in your fingers and show him how it can move in the hub, up and down a little, back and forth a little, and twist a little, to change pitch. You start to tell him how this flexibility does away with the gyroscopic effect, but he won't listen. He doesn't want to think about flying, about helicopters, or about you, and he most especially does not want explanations about anything by anybody. Not now. Now, he wants to think about the sea. So you go away.

The sick man is buried in the cold sand with only his head and his left arm showing. He is dressed in a pressure suit and looks like a man from Mars. Built into his left sleeve is a combination time-piece and pressure gauge, the gauge with a luminous blue indicator which makes no sense, the clock-hands luminous red. He can hear the pounding of surf and the soft swift pulse of his pumps. One time long ago when he was swimming he went too deep and stayed down too long and came up too fast, and when he came to it was like this: they said, "Don't move, boy. You've got the bends. Don't even *try* to move." He had tried anyway. It hurt. So now, this time, he lies in the sand without moving, without trying.

His head isn't working right. But he knows clearly that it isn't working right, which is a strange thing that happens to people in shock sometimes. Say you were that kid, you could say how it was, because once you woke up lying in the gym office in high school and asked what had happened. They explained how you tried something on the parallel bars and fell on your head. You understood exactly, though you couldn't remember falling. Then a minute later you asked again what had happened and they told you. You understood it. And a minute later . . . forty-one times they told you, and you understood It was just that no matter how many times they pushed it into your head, it wouldn't stick there; but all the while you *knew* that your head would start working again in time. And in time it did. . . . Of course, if you were that kid, always explaining things to people and to yourself, you wouldn't want to bother the sick man with it now.

Look what you've done already, making him send you away with that angry shrug of the mind (which, with the eyes, are the only things which will move just now). The motionless effort costs him a wave of nausea. He has felt seasick before but he has never *been* seasick, and the formula for that is to keep your eyes on the horizon and stay busy. Now! Then he'd better get busy—now; for there's one place especially not to be seasick in, and that's locked up in a pressure suit. Now!

So he busies himself as best he can, with the seascape, landscape, sky. He lies on high ground, his head propped on a vertical wall of black rock. There is another such outcrop before him, whiptopped with white sand and with smooth flat sand. Beyond and down is valley, salt-flat, estuary; he cannot yet be sure. He is sure of the line of footprints, which begin behind him, pass to his left, disappear in the outcrop shadows, and reappear beyond to vanish at last into the shadows of the valley.

Stretched across the sky is old mourning-cloth, with starlight burning holes in it, and between the holes the black is absolute—wintertime, mountaintop sky-black.

(Far off on the horizon within himself, he sees the swell and crest of approaching nausea; he counters with an undertow of weakness, which meets and rounds and settles the wave before it can break. Get busier. *Now.*)

Burst in on him, then, with the X-15 model. That'll get him. Hey, how about this for a gimmick? Get too high for the thin air to give you any control, you have these little jets in the wingtips, see? and on the sides of the empennage: bank, roll, yaw, whatever, with squirts of compressed air.

But the sick man curls his sick

lip: oh, git, kid, git, will you?—that has nothing to do with the sea. So you git.

Out and out the sick man forces his view, etching all he sees with a meticulous intensity, as if it might be his charge, one day, to duplicate all this. To his left is only starlit sea, windless. In front of him across the valley, rounded hills with dim white epaulettes of light. To his right, the jutting corner of the black wall against which his helmet rests. (He thinks the distant moundings of nausea becalmed, but he will not look yet.) So he scans the sky, black and bright, calling Sirius, calling Pleiades, Polaris, Ursa Minor, calling that . . . that . . . Why, it *moves*. Watch it: yes, it moves! It is a fleck of light, seeming to be wrinkled, fissured, rather like a chip of boiled cauliflower in the sky. (Of course, he knows better than to trust his own eyes just now.) But that movement . . .

As a child he had stood on cold sand in a frosty Cape Cod evening, watching Sputnik's steady spark rise out of the haze (madly, dawning a little north of west); and after that he had sleeplessly wound special coils for his receiver, risked his life restringing high antennas, all for the brief capture of an unreadable *tweetle-cep-tweetle* in his earphones from Vanguard, Explorer, Lunik, Discoverer, Mercury. He knew them all (well, some people collect match-covers, stamps) and he knew especially that unmistakable steady sliding in the sky.

This moving fleck was a satellite, and in a moment, motionless, uninstrumented but for his chronometer and his part-brain, he will know which one. (He is grateful beyond expression—without that sliding chip of light, there were only those footprints, those wandering footprints, to tell a man he was not alone in the world.)

Say you were a kid, eager and challengeable and more than a little bright, you might in a day or so work out a way to measure the period of a satellite with nothing but a timepiece and a brain; you might eventually see that the shadow in the rocks ahead had been there from the first only because of the light from the rising satellite. Now if you check the time exactly at the moment when the shadow on the sand is equal to the height of the outcrop, and time it again when the light is at the zenith and the shadow gone, you will multiply this number of minutes by 8—think why, now: horizon to zenith is one-fourth of the orbit, give or take a little, and halfway up the sky is half that quarter—and you will then know this satellite's period. You know all the periods—ninety minutes, two, two-and-a-half hours; with that and the appearance of this bird, you'll find out which one it is.

But if you were that kid, eager

or resourceful or whatever, you wouldn't jabber about it to the sick man, for not only does he not want to be bothered with you, he's thought of all that long since and is even now watching the shadows for that triangular split second of measurement. *Now!* His eyes drop to the face of his chronometer: 0400, near as makes no never mind.

He has minutes to wait now—ten? . . . thirty? . . . twenty-three?—while this baby moon eats up its slice of shadowpie; and that's too bad, the waiting, for though the inner sea is calm there are currents below, shadows that shift and swim. Be busy. Be busy. He must not swim near that great invisible amoeba, whatever happens: its first cold pseudopod is even now reaching for the vitals.

Being a knowledgeable young fellow, not quite a kid anymore, wanting to help the sick man too, you want to tell him everything you know about that cold-in-the-gut, that reaching invisible surrounding implacable amoeba. You know all about it—listen, you want to yell at him, don't let that touch of cold bother you. Just know what it is, that's all. Know what it is that is touching your gut. You want to tell him, listen:

Listen, this is how you met the monster and dissected it. Listen, you were skin-diving in the Grenadines, a hundred tropical shoal-water islands; you had a new blue snorkel mask, the kind with face-plate and breathing-tube all in one, and new blue flippers on your feet, and a new blue spear-gun—all this new because you'd only begun, you see; you were a beginner, aghast with pleasure at your easy intrusion into this underwater otherworld. You'd been out in a boat, you were coming back, you'd just reached the mouth of the little bay, you'd taken the notion to swim the rest of the way. You'd said as much to the boys and slipped into the warm silky water. You brought your gun.

Not far to go at all, but then beginners find wet distances deceiving. For the first five minutes or so it was only delightful, the sun hot on your back and the water so warm it seemed not to have any temperature at all and you were flying. With your face under the water, your mask was not so much attached as part of you, your wide blue flippers trod away yards, your gun rode all but weightless in your hand, the taut rubber sling making an occasional hum as your passage plucked it in the sunlit green. In your ears crooned the breathy monotone of the snorkel tube, and through the invisible disk of plate glass you saw wonders. The bay was shallow—ten, twelve feet or so—and sandy, with great growths of brain-, bone-, and fire-coral, intricate waving sea-fans, and fish—such fish! Scarlet

and green and aching azure, gold and rose and slate-color studded with sparks of enamel-blue, pink and peach and silver. And that *thing* got into you, that . . . monster.

There were enemies in this otherworld: the sand-colored spotted sea-snake with his big ugly head and turned-down mouth, who would not retreat but lay watching the intruder pass; and the mottled moray with jaws like bolt-cutters; and somewhere around, certainly, the barracuda with his undershot face and teeth turned inward so that he must take away whatever he might strike. There were urchins—the plump white sea-egg with its thick fur of sharp quills and the black ones with the long slender spines that would break off in unwary flesh and fester there for weeks; and filefish and stonefish with their poisoned barbs and lethal meat; and the stingaree who could drive his spike through a legbone. Yet these were not *monsters*, and could not matter to you, the invader churning along above them all. For you were above them in so many ways—armed, rational, comforted by the close shore (ahead the beach, the rocks on each side) and by the presence of the boat not too far behind. Yet you were . . . attacked.

At first it was uneasiness, not pressing, but pervasive, a contact quite as intimate as that of the sea: you were sheathed in it. And also there was the touch—the cold inward contact. Aware of it at last, you laughed: for Pete's sake, what's there to be scared of?

The monster, the amoeba.

You raised your head and looked back in air. The boat had edged in to the cliff at the right; someone was giving a last poke around for lobster. You waved at the boat; it was your gun you waved, and emerging from the water it gained its latent ounces so that you sank a bit, and as if you had no snorkel on, you tipped your head back to get a breath. But tipping your head back plunged the end of the tube under water; the valve closed; you drew in a hard lungful of nothing at all. You dropped your face under; up came the tube; you got your air, and along with it a bullet of seawater which struck you somewhere inside the throat. You coughed it out and floundered, sobbing as you sucked in air, inflating your chest until it hurt, and the air you got seemed no good, no good at all, a worthless de-vitalized inert gas.

You clenched your teeth and headed for the beach, kicking strongly and knowing it was the right thing to do; and then below and to the right you saw a great bulk mounding up out of the sand floor of the sea. You knew it was only the reef, rocks and coral and weed, but the sight of it made you scream; you didn't care what you knew. You turned hard left to

avoid it, fought by as if it would reach for you, and you couldn't get air, couldn't get air, for all the unobstructed hooting of your snorkel tube. You couldn't bear the mask, suddenly, not for another second, so you shoved it upward clear of your mouth and rolled over, floating on your back and opening your mouth to the sky and breathing with a quacking noise.

It was then and there that the monster well and truly engulfed you, mantling you round and about within itself—formless, borderless, the illimitible amoeba. The beach, mere yards away, and the rocky arms of the bay, and the not-too-distant boat—these you could identify but no longer distinguish, for they were all one and the same thing . . . the thing called unreachable.

You fought that way for a time, on your back, dangling the gun under and behind you and straining to get enough warm sunstained air into your chest. And in time some particles of sanity began to swirl in the roil of your mind, and to dissolve and tint it. The air pumping in and out of your square-grinned frightened mouth began to be meaningful at last, and the monster relaxed away from you.

You took stock, saw surf, beach, a leaning tree. You felt the new scend of your body as the rollers humped to become breakers. Only a dozen firm kicks brought you to where you could roll over and double up; your shin struck coral with a lovely agony and you stood in foam and waded ashore. You gained the wet sand, hard sand, and ultimately with two more paces powered by bravado, you crossed high-water mark and lay in the dry sand, unable to move.

You lay in the sand, and before you were able to move or to think, you were able to feel a triumph—a triumph because you were alive and knew that much without thinking at all.

When you *were* able to think, your first thought was of the gun, and the first move you were able to make was to let go at last of the thing. You had nearly died because you had not let it go before; without it you would not have been burdened and you would not have panicked. You had (you began to understand) kept it because someone else would have had to retrieve it—easily enough—and you could not have stood the laughter. You had almost died because They might laugh at you.

This was the beginning of the dissection, analysis, study of the monster. It began then; it had never finished. Some of what you had learned from it was merely important; some of the rest—vital.

You had learned, for example, never to swim further with a snorkel than you could swim back without one. You learned never to burden yourself with the un-

necessary in an emergency: even a hand or a foot might be as expendable as a gun; pride was expendable, dignity was. You learned never to dive alone, even if They laugh at you, even if you have to shoot a fish yourself and say afterwards "we" shot it. Most of all, you learned that fear has many fingers, and one of them—a simple one, made of two great a concentration of carbon dioxide in your blood, as from too-rapid breathing in and out of the same tube—is not really fear at all but feels like fear, and can turn into panic and kill you.

Listen, you want to say, listen, there isn't anything wrong with such an experience or with all the study it leads to, because a man who can learn enough from it could become fit enough, cautious enough, foresighted, unafraid, modest, teachable enough to be chosen, to be qualified for—

You lose the thought, or turn it away, because the sick man feels that cold touch deep inside, feels it right now, feels it beyond ignoring, above and beyond anything that you, with all your experience and certainty, could explain to him even if he would listen, which he won't. Make him, then; tell him the cold touch is some simple explainable thing like anoxia, like gladness even: some triumph that he will be able to appreciate when his head is working right again.

Triumph? Here he's alive after . . . whatever it is, and that doesn't seem to be triumph enough, though it was in the Grenadines, and that other time, when he got the bends, saved his own life, saved two other lives. Now, somehow, it's not the same: there seems to be a reason why just being alive afterwards isn't a triumph.

Why not triumph? Because not twelve, not twenty, not even thirty minutes is it taking the satellite to complete its eighth-of-an-orbit: fifty minutes are gone, and still there's a slice of shadow yonder. It is this, *this* which is placing the cold finger upon his heart, and he doesn't know why, he doesn't know why, he *will* not know why; he is afraid he shall when his head is working again . . .

Oh, where's the kid? Where is any way to busy the mind, apply it to something, anything else but the watchhand which outruns the moon? Here, kid: come over here—what you got there?

If you were the kid, then you'd forgive everything and hunker down with your new model, not a toy, not a helicopter or a rocketplane, but the big one, the one that looks like an overgrown cartridge. It's so big, even as a model, that even an angry sick man wouldn't call it a toy. A giant cartridge, but watch: the lower four-fifths is Alpha—all muscle—over a

million pounds thrust. (Snap it off, throw it away.) Half the rest is Beta—all brains—it puts you on your way. (Snap it off, throw it away.) And now look at the polished fraction which is left. Touch a control somewhere and see—see? it has wings—wide triangular wings. This is Gamma, the one with wings, and on its back is a small sausage; it is a moth with a sausage on its back. The sausage (click! it comes free) is Delta. Delta is the last, the smallest: Delta is the way home.

What will they think of next? Quite a toy. Quite a toy. Beat it, kid. The satellite is almost overhead, the sliver of shadow going —going—almost gone and . . . gone.

Check: 0459. Fifty-nine minutes?, give or take a few. Time eight . . . 472 . . . is, uh, 7 hours 52 minutes.

Seven hours fifty-two minutes? Why, there isn't a satellite round earth with a period like that. In all the solar system there's only . . .

The cold finger turns fierce, implacable.

The east is paling and the sick man turns to it, wanting the light, the sun, an end to questions whose answers couldn't be looked upon. The sea stretches endlessly out to the growing light, and endlessly, somewhere out of sight, the surf roars. The paling east bleaches the sandy hilltops and throws the line of footprints into aching relief. That would be the buddy, the sick man knows, gone for help. He can not at the moment recall who the buddy is, but in time he will, and meanwhile the footprints make him less alone.

The sun's upper rim thrusts itself above the horizon with a flash of green, instantly gone. There is no dawn, just the green flash and then a clear white blast of unequivocal sunup. The sea could not be whiter, more still, if it were frozen and snow-blanketed. In the west, stars still blaze, and overhead the crinkled satellite is scarcely abashed by the growing light. A formless jumble in the valley below begins to resolve itself into a sort of tent-city, or installation of some kind, with tube-like and sail-like buildings. This would have meaning for the sick man if his head were working right. Soon, it would. Will. (Oh . . .)

The sea, out on the horizon just under the rising sun, is behaving strangely, for in that place where properly belongs a pool of unbearable brightness, there is instead a notch of brown. It is as if the white fire of the sun is drinking dry the sea—for look, look! the notch becomes a bow and the bow a crescent, racing ahead of the sunlight, white sea ahead of it and behind it a cocoa-dry stain spreading across and down toward where he watches.

Beside the finger of fear which

lies on him, another finger places itself, and another, making ready for that clutch, that grip, that ultimate insane squeeze of panic. Yet beyond that again, past that squeeze when it comes, to be savored if the squeeze is only fear and not panic, lies triumph—triumph, and a glory. It is perhaps this which constitutes his whole battle: to fit himself, prepare himself to bear the utmost that fear could do, for if he can do that, there is a triumph on the other side. But . . . not yet. Please, not yet awhile.

Something flies (or flew, or will fly—he is a little confused on this point) toward him, from the far right where the stars still shine. It is not a bird and it is unlike any aircraft on earth, for the aerodynamics are wrong. Wings so wide and so fragile would be useless, would melt and tear away in any of earth's atmosphere but the outer fringes. He sees then (because he prefers to see it so) that it is the kid's model, or part of it, and for a toy, it does very well indeed.

It is the part called Gamma, and it glides in, balancing, parallels the sand and holds away, holds away slowing, then settles, all in slow motion, throwing up graceful sheet-fountains of fine sand from its skids. And it runs along the ground for an impossible distance, letting down its weight by the ounce and stingily the ounce, until *look out* until a skid *look out* fits itself into a bridged crevasse *look out, look out!* and still moving on, it settles down to the struts. Gamma then, tired, digs her wide left wingtip carefully into the racing sand, digs it in hard; and as the wing breaks off, Gamma slews, sidles, slides slowly, pointing her other triangular tentlike wing at the sky, and broadside crushes into the rocks at the valley's end.

As she rolls smashing over, there breaks from her broad back the sausage, the little Delta, which somersaults away to break its back upon the rocks, and through the broken hull, spill smashed shards of graphite from the moderator of her power-pile. *Look out! Look out!* and at the same instant from the finally checked mass of Gamma there explodes a doll, which slides and tumbles into the sand, into the rocks and smashed hot graphite from the wreck of Delta.

The sick man numbly watches this toy destroy itself: what will they think of next?—and with a gelid horror prays at the doll lying in the raging rubble of the atomic pile: *don't stay there, man—get away! get away! that's hot, you know?* But it seems like a night and a day and half another night before the doll staggers to its feet and, clumsy in its pressure-suit, runs away up the valley-side, climbs a sand-topped out-

crop, slips, falls, lies under a slow cascade of cold ancient sand until, but for an arm and the helmet, it is buried.

The sun is high now, high enough to show the sea is not a sea, but brown plain with the frost burned off it, as now it burns away from the hills, diffusing in air and blurring the edges of the sun's disk, so that in a very few minutes there is no sun at all, but only a glare in the east. Then the valley below loses its shadows, and like an arrangement in a diorama, reveals the form and nature of the wreckage below: no tentcity this, no installation, but the true real ruin of Gamma and the eviscerated hulk of Delta. (Alpha was the muscle, Beta the brain; Gamma was a bird, but Delta, Delta was the way home.)

And from it stretches the line of footprints, to and by the sick man, above to the bluff, and gone with the sandslide which had buried him there. Whose footprints?

He knows whose, whether or not he knows that he knows, or wants to or not. He knows what satellite has (give or take a bit) a period like that (want it exactly?—it's 7.66 hours). He knows what world has such a night, and such a frosty glare by day. He knows these things as he knows how spilled radioactives will pour the crash and mutter of surf into a man's earphones.

Say you were that kid: say, instead, at last, that you are the sick man, for they are the same; surely then you can understand why of all things, even while shattered, shocked, sick with radiation calculated (leaving) radiation computed (arriving) and radiation past all bearing (lying in the wreckage of Delta) you would want to think of the sea. For no farmer who fingers the soil with love and knowledge, no poet who sings of it, artist, contractor, engineer, even child bursting into tears at the inexpressible beauty of a field of daffodils—none of these is as intimate with Earth as those who live on, live with, breathe and drift in its seas. So of these things you must think; with these you must dwell until you are less sick and more ready to face the truth.

The truth, then, is that the satellite fading here is Phobos, that those footprints are your own, that there is no sea here, that you have crashed and are killed and will in a moment be dead. The cold hand ready to squeeze and still your heart is not anoxia or even fear, it is death. Now, if there is something more important than this, now is the time for it to show itself.

The sick man looks at the line of his own footprints, which testify that he is alone, and at the wreckage below, which states that there is no way back, and at the white

east and the mottled west and the paling fleck-like satellite above. Surf sounds in his ears. He hears his pumps. He hears what is left of his breathing. The cold clamps down and folds him round past measuring, past all limits.

Then he speaks, cries out: then with joy he takes his triumph at the other side of death, as one takes a great fish, as one completes a skilled and mighty task, rebalances at the end of some great daring leap; and as he used to say "we shot a fish" he uses no "I":

"God," he cries, dying on Mars, "God, we made it!"

Authors of last month's "Quintet"

Last month we published a feature we called "Quintet" which consisted of five stories and poems written by, or in the manner of, children under 12. At least one of the contributions, we told you, was written by a child, and at least one was written by a professional writer as he or she imagined a child might write—and we suggested that you try to figure out which was which. Here are the actual bylines:

"The Black Nebulae," by Sonny Powell—Alfred Bester

"Up, Down, and Sideways," by John Cunnington (age 10)

"Witch's Charm," by Nina Pettis (age 11)

"The Man Who Told Lies," by Billy Watson—Theodore Sturgeon

"Night Thought," by Mary Austin—Jane Rice

John Cunnington, who recently turned 11, requested that his contribution be signed "by John Cunnington and Mrs. Allen." Mrs. Allen, however, writes: ". . . actually the whole tale came as something quite new and fresh to me and I deserve no credit whatever." Nina Pettis' sophisticated poem was submitted by her married sister—who commented: "A new generation is coming along thinking dark thoughts, to replace Idris Seabright and the other murky minded (I mean it as a compliment) writers of today."

It is indeed heartening to see signs of a new generation with a proper sort of orientation. How much more wholesome it is for our young people to be concerned with flying teseracs and newts' eyes and a sea-toy's blood than with bushy sideburns and rock-and-roll! May John Cunnington and Nina Pettis and their tribe flourish, we say, and prosper!

We have thoughtfully reserved this discussion of the heat of hot and the cold of cold for an intermediate season of the year. On the other hand, if it is still warm where you are, learning just how hot it might be may be helpful.

THE HEIGHT OF UP

by Isaac Asimov

Most of us would consider the surface of the sun to be pretty hot. Its temperature, as judged by the type of radiation it emits, is about 6,000° K. (with "K." standing for the Kelvin scale of temperature).

However, Homo sapiens, with his own hot little hands, can do better than that. He has put together nuclear fission bombs which can easily reach temperatures well beyond 100,000° K.

To be sure, though, nature isn't through. The sun's corona has an estimated temperature of about 1,000,000° K. and the center of the sun is estimated to have a temperature of about 20,000,000° K.

Ah, but man can top that, too. The hydrogen bomb develops temperatures of about 100,000,000° K.

And yet nature still beats us, since it is estimated that the central regions of the very hottest stars (the sun itself is only a middling warm one) may reach as high as 2,000,000,000° K.

Now two billion degrees is a tidy amount of heat even when compared to a muggy day in New York, but the question arises: How long can this go on? Is there any limit to how hot a thing can be?

Or to put it another way: How hot is hot?

That sounds like asking, How high is up? and I wouldn't do such a thing except that our Twentieth

Century has seen the height of upness in some respects scrupulously defined.

For instance, in the good old days of Newtonian physics there was no recognized limit to velocity. The question: How fast is fast? had no answer. Then along came Einstein and advanced the notion, now generally accepted, that the maximum possible velocity is that of light, which is equal to 186,272 miles per second; or, in the metric system, 299,776 kilometers per second. *That* is the fastness of fast.

So why not consider the hotness of hot?

One of the reasons I would like to do so is that I once promised our kindly editor that I would take up the question of the various temperature scales and their interconversions, and the subject now under discussion affords an excellent opportunity for it.

For instance, why did I specify the Kelvin scale of temperature in giving the figures above? Would there have been a difference if I had used Fahrenheit? How much and why? Well, let's see.

The measurement of temperature is a modern notion, not more than 350 years old. In order to measure temperature, one must first grasp the idea that there are easily observed physical characteristics which vary more or less uniformly with change in the subjective feeling of "hotness" and "coldness." Once such a characteristic is observed and reduced to quantitative measurement, we can exchange a subjective, "Boy, it's getting hotter," to an objective, "The thermometer has gone up another three degrees."

One applicable physical characteristic, which must have been casually observed by countless people, was the fact that substances expand when warmed and contract when cooled. The first of all those countless people, however, who tried to make use of this fact to measure temperature was the Italian physicist, Galileo Galilei. In 1603, he inverted a tube of heated air into a bowl of water. As the air cooled to room temperature, it contracted and drew the water up the tube. Now Galileo was ready. The water level kept on changing as room temperature changed, being pushed down when it warmed and expanded the trapped air, and being pulled up when it cooled and contracted the trapped air. Galileo had a thermometer (which, in Greek, means "heat measure.") The only trouble was that the basin of water was open to the air and air pressure kept changing. That also shoved the water level up and down, independently of temperature, and queered the results.

By 1654, the Grand Duke of Tuscany, Ferdinand II, evolved a

thermometer which was independent of air pressure. It contained a liquid sealed into a tube and the contraction and expansion of the liquid itself was used as an indication of temperature change. The volume change in liquids is much smaller than in gases, but by using a sizable reservoir of liquid which was filled so that further expansion could only take place up a very narrow tube, the rise and fall within that tube, for even tiny volume changes, was considerable.

This was the first reasonably accurate thermometer and is also one of the few occasions when the nobility contributed to scientific advance.

With the development of accuracy, there slowly arose the notion that, instead of just watching the liquid rise and fall in the tube, one ought to mark off the tube at regular intervals so that an actual quantitative measure could be made. In 1701, Isaac Newton suggested that the thermometer be thrust into melting ice and that the liquid level so obtained be marked as 0, while the level attained at body temperature be marked off as 12, and the interval divided into 12 equal parts.

The use of a 12 degree scale for this temperature range was logical. The English had a special fondness for the duodecimal system (and need I say that Newton was English?). There are 12 inches to the foot, 12 ounces to the Troy pound, 12 shillings to the pound, 12 units to a dozen and 12 dozen to a gross. Why not 12 degrees to a temperature range? To try to divide the range into a multiple of 12 degrees, say into 24 or 36 degrees, would carry the accuracy beyond that which the instrument was then capable of.

But then, in 1714, a German physicist named Gabriel Daniel Fahrenheit made a major step forward. The liquid that had been used in the early thermometers was either water or alcohol. Water, however, froze and became usless at temperatures that were not very cold, while alcohol boiled and became useless at temperatures that were not very hot. What Fahrenheit did was to substitute mercury. Mercury stayed liquid well below the freezing point of water and well above the boiling point of alcohol. Furthermore, mercury expanded and contracted more uniformly with temperature than did either water or alcohol. Using mercury, Fahrenheit constructed the best thermometers the world had yet seen.

With his mercury thermometer, Fahrenheit was now ready to use Newton's suggestion, but in doing so, he made a number of modifications. He didn't use the freezing point of water for his zero (perhaps because winter temperatures below that point were common

enough in Germany and Fahrenheit wanted to avoid the complication of negative temperatures). Instead, he set zero at the very lowest temperature he could get in his laboratory, by mixing salt and melting ice.

He then set human body temperature at 12, following Newton, but that didn't last either. Fahrenheit's thermometer was so good that a division into 12 degrees was unnecessarily coarse. Fahrenheit could do eight times as well, so he set body temperature at 96.

On this scale, the freezing point of water stood at a little under 32 and the boiling point at a little under 212. It must have struck him as fortunate that the difference between the two should be about 180 degrees, since 180 was a number that could be divided evenly by a large variety of integers including 2, 3, 4, 5, 6, 9, 10, 12, 15, 18, 20, 30, 36, 45, 60 and 90. Therefore, keeping the 0 point where it was, Fahrenheit set the freezing point of water at exactly 32 and the boiling point at exactly 212. That made body temperature come out (on the average) 98.6°, which was an uneven value, but this was a minor point.

Thus was born the Fahrenheit scale which we, in the United States, use for ordinary purposes to this day. We speak of "degrees Fahrenheit" and symbolize it as "° F." so that the normal body temperature is written 98.6° F.

In 1742, however, the Swedish astronomer, Anders Celsius, working with a mercury thermometer, made use of a different scale. He worked downward, setting the boiling point of water equal to 0 and the freezing point to 100. The next year this was reversed because of what seems a natural tendency to let numbers increase with increasing heat and not with increasing cold.

Because of the hundred-fold division of the temperature range in which water was liquid, this is called the Centigrade scale, from Latin words meaning "hundred steps." It is still common to speak of measurements on this scale as "degrees Centigrade" symbolized as "° C." However, a couple of years back, it was decided, at an international conference, to call this scale after the inventor, following the Fahrenheit precedent. Officially, then, one should speak of the "Celsius scale" and of "degrees Celsius." The symbol remains "° C."

It was the Celsius scale that won out in most of the civilized world. Scientists, particularly, found it especially convenient to bound the liqiud range of water by 0° at the freezing end and 100° at the boiling end. Most chemical experiments are conducted in water and a great many physical experiments, involving heat, make use of water. The liquid range of water is therefore the

working range, and as scientists were getting used to forcing measurements into line with the decimal system (soon they were to adopt the metric system which is decimal throughout) 0 and 100 were just right. To divide the range between 0 and 10 would have made the divisions too coarse and division between 0 and 1000 would have been too fine.

However, the English had adopted the Fahrenheit scale, and they stuck with it and passed it on to the colonies who, after becoming the United States of America, stuck with it also.

Of course, part of the English loyalty was the result of their traditional traditionalism, but there was a sensible reason, too. The Fahrenheit scale is peculiarly adapted to meteorology. The extremes of 0 and 100 on the Fahrenheit scale are reasonable extremes of the air temperature in west Europe; temperatures in the shade of less than 0° F. or more than 100° F. were unusual indeed. The same temperature range is covered on the Celsius scale by the limits —18° C. and 38° C. These are not only uneven figures but include the inconvenience of negative values as well.

So now the Fahrenheit scale is used in English-speaking counties and the Celsius scale everywhere else (including those English-speaking countries that are usually not considered "Anglo-Saxon." What's more, scientists everywhere, *even* in England and the United States, use the Celsius scale.

If an American is going to get his weather data thrown at him in degrees Fahrenheit and his scientific information in degrees Celsius, it would be nice if he could convert one into the other at will. There are tables and graphs that will do it for him, but one doesn't always carry a little table or graph on his person. Fortunately, a little arithmetic is all that is really required.

In the first place, the temperature range of liquid water is covered by 180 equal Fahrenheit degrees and also by 100 equal Celsius degrees. From this, we can say at once 9 Fahrenheit degrees equal 5 Celsius degrees. As a first approximation, we can then say that a number of Celsius degrees multiplied by 9/5 will give the equivalent number of Fahrenheit degrees. (After all, 5 Celsius degrees multiplied by 9/5 does indeed give 9 Fahrenheit degrees.)

Now how does this work out in practice? Suppose we are speaking of a temperature of 20° C., meaning by that a temperature that is 20 Celsius degrees above the freezing point of water. If we multiply 20 by 9/5 we get 36, which is the number of Fahrenheit degrees covering the same range; the range, that is, above

the freezing point of water. But the freezing point of water on the Fahrenheit scale is at 32. To say that a temperature is 36 Fahrenheit degrees above the freezing point of water is the same as saying it is 36 plus 32, or 68 Fahrenheit degrees above the Fahrenheit zero; and it is degrees above zero that is signified by Fahrenheit reading. What we have proved by all this is that 20° C. is the same as 68° F., and vice versa.

This may sound appalling, but you don't have to go through the reasoning each time. All that we have done can be represented in the following equation, where F represents the Fahrenheit reading and C the Celsius reading:

(Equation 1)
$$F = 9/5\ C + 32$$

To get an equation that will help you convert a Fahrenheit reading into Celsius with a minimum of thought, it is only necessary to solve Equation 1 for C, and that will give you:

(Equation 2)
$$C = 5/9\ (F - 32)$$

To give an example of the use of these equations, suppose, for instance, that you know that the boiling point of ethyl alcohol is 78.5° C. at atmospheric pressure and you wish to know what the boiling point is on the Fahrenheit scale. You need only substitute 78.5 for C in Equation 1. A little arithmetic and you find your answer to be 173.3° F.

And if you happen to know that normal body temperature is 98.6° F. and want to know the equivalent in Celsius, it is only necessary to substitute 98.6 for F in Equation 2. A little arithmetic again and the answer is 37.0° C.

But we are not through. In 1787, the French chemist, Jacques Alexandre César Charles discovered that when a gas was heated, its volume expanded at a regular rate, and when it was cooled, its volume contracted at the same rate. This rate was 1/273 of its volume at 0° C. for each Celsius degree change in temperature.

The expansion of the gas with heat raises no problems, but the contraction gives rise to a curious thought. Suppose a gas has the volume of 273 cubic centimeters at 0° C., and it is cooled. At −1° C. it has lost 1/273 of its original volume, which comes to 1 cubic centimeter so that only 272 cubic centimeters are left. At −2° C. it has lost another 1/273 of its original volume and is down to 271 cubic centimeters. The perceptive reader will see that if this loss of 1 cubic centimeter per degree continues, then at −273, the gas will have shrunk to zero volume and will have disappeared from the face of the earth.

Undoubtedly Charles and those after him realized this, but didn't worry. Gases on cooling do not, in actual fact, follow Charles's Law (as this discovery is now called) exactly. The amount of decrease slowly falls off, and before the —273 point is reached, all gases (as was guessed then and as is known now) turn to liquids, anyway, and Charles's Law does not apply to liquids. Of course, a "perfect gas" may be defined as one for which Charles's Law works perfectly. A perfect gas would indeed contract steadily and evenly, would never turn to liquid, and would disappear at —273. However, since a perfect gas is only a chemist's abstraction and can have no real existence, why worry?

Slowly, through the first half of the Nineteenth Century, however, gases came to be looked upon as composed of discrete particles called molecules, all of which were in rapid and random motion. The various particles therefore possessed kinetic energy (i.e. "energy of motion"), and temperature came to be looked upon as a measure of the kinetic energy of the molecules of a substance under given conditions. Temperature and kinetic energy rise and fall together. Two substances are at the same temperature when the molecules of each have the same kinetic energy. In fact, it is the equality of kinetic energy which our human senses (and our inhuman thermometers) register as "being of equal temperature."

The individual molecules in a sample of gas do not all possess the same energies, by any means, at any given temperature. There is a large range of energies which are produced by the effect of random collisions that happen to give some molecules large temporary supplies of energy, leaving others with correspondingly little. Over a period of time and over all the molecules present, however, there is an "average kinetic energy" for every temperature, and this is the same for molecules of all substances.

In 1860, the British mathematician, Clerk Maxwell, worked out equations which expressed the energy distribution of gas molecules at any temperature and gave means of calculating the average kinetic energy.

Shortly after, a British scientist named William Thomson (who had just been raised to the ranks of the nobility with the title of Baron Kelvin) suggested that the kinetic energy of molecules be used to establish a temperature scale. At 0° C., the average kinetic energy per molecule of any substance is some particular value. For each Celsius degree that the temperature is lowered, the molecules lose 1/273 of their kinetic energy. (This is like Charles's Law, but whereas the decrease of

gas volume is not perfectly regular, the decrease in molecular energies—of which the decrease in volume is only an unavoidable and imperfect consequence—*is* perfectly regular.) This means that at —273° C., or, more exactly, at —273.12° C., the molecules have zero kinetic energy. The substance—any substance—can be cooled no further, since negative kinetic energy is inconceivable.

The temperature of —273.12° C. can therefore be considered an "absolute zero." If a new scale is now invented in which absolute zero is set equal to 0 and the size of the degree is set equal to that of the ordinary Celsius degree, then any Celsius reading could be converted to a corresponding reading on the new scale by the addition of 273.12. (The new scale is referred to as the absolute scale or, more appropriately, in view of the convention that names scales after the inventors, the Kelvin scale; and degrees on this scale can be symbolized as either "° A." or "° K.') Thus, the freezing point of water is 273.12° K. and the boiling point of water is 373.12° K.

In general:

(Equation 3)
$$K = C + 273.12$$

(Equation 4)
$$C = K - 273.12$$

You might wonder why anyone would need the Kelvin scale. What difference does it make just to add 273.12 to every Celsius reading? What have we gained? Well, a great many physical and chemical properties of matter vary with temperature. To take a simple case, there is the volume of a perfect gas (which is dealt with by Charles's Law). The volume of such a gas, at constant pressure, varies with temperature. It would be convenient if we could say that the variation was direct; that is, if doubling the temperature meant doubling the volume.

If, however, we use the Celsius scale, we cannot say this. If we double the temperature from, say, 20° C. to 40° C., the volume of the perfect gas does *not* double. It increases by merely 1/11 of its original volume. If we use the Kelvin scale, on the other hand, a doubling of temperature does indeed mean a doubling of volume. Raising the temperature from 20° K. to 40° K., then to 80° K., then to 160° K., and so on, will double the volume each time.

In short, the Kelvin scale allows us to describe more conveniently the manner in which the universe behaves as temperature is varied; more conveniently than the Celsius scale, or any scale with a zero point anywhere but at absolute zero, can.

Another point I can make here is that in cooling any substance,

the physicist is withdrawing kinetic energy from its molecules. Any device ever invented to do this succeeds in withdrawing only a fraction of the kinetic energy present, however little the amount present may be. Less and less energy is left as the withdrawal step is repeated over and over, but the amount left is never zero.

For this reason, scientists have not reached absolute zero and do not expect to, although they have done wonders and reached a temperature of 0.00001° K.

At any rate, here is another limit established and the question: How cold is cold? is answered.

But the limit of cold is a kind of "depth of down" as far as temperature is concerned, and I'm after the "height of up," the question of whether there is a limit to hotness and, if so, where it might be.

Let's take another look at the kinetic energy of molecules. Elementary physics tells us that the kinetic energy (E) of a moving particle is equal to $\frac{1}{2}mv^2$, where "m" represents the mass of a particle and "v" its velocity. If we solve the equation $E = \frac{1}{2}mv^2$ for "v", we get:

(Equation 5)

$$v = \sqrt{2E/m} = 1.414 \sqrt{E/m}$$

But the kinetic energy content is measured by the temperature (T); as I've already said. Consequently, we can substitute "T" for the "E" in Equation 5 (and I will also change the numerical constant to allow the figures to come out correctly in the units I will use). We can then say that:

(Equation 6)

$$v = 0.158 \sqrt{T/m}$$

Now, then, if, in Equation 6, the temperature (T) is given in degrees Kelvin, and the mass (m) of the particle is given in atomic units, then the average velocity (v) of the particles will come out in kilometers per second. (If the numerical constant were changed from 0.158 to 0.098, the answer would come out in miles per second.)

For instance, consider a sample of helium gas. It is composed of individual helium atoms, each with a mass of 4, in atomic units. Suppose the temperature of the sample is the freezing point of water (273 K.). We can therefore substitute 273 for "T" in Equation 6 and 4 for "m." Working out the arithmetic, we find that the average velocity of helium atoms at the freezing point of water is 1.31 kilometers per second (0.81 miles per second).

This will work out for other values of "T" and "m." The velocity of oxygen molecules (with a mass of 32) at room temperature (300° K.) works out as $0.158 \sqrt{300/32}$

or 0.48 kilometers per second. The velocity of carbon dioxide molecules (with a mass of 44) at the boiling point of water (373° K.) is 0.46 kilometers per second, and so on.

Equation 6 tells us that at any given temperature, the lighter the particle the faster it moves. It also tells us that at absolute zero (where $T = 0$) the velocity of any atom or molecule, whatever its mass, is zero. This is another way of looking at the absoluteness of absolute zero. It is the point of absolute atomic or molecular rest.

But now if a velocity of zero is a lower limit, is there not an upper limit to velocity as well? Isn't this upper limit the velocity of light, as I mentioned at the beginning of the article? When the temperature goes so high that "v" in Equation 6 reaches the speed of light and can go no higher, have we not reached the absolute height of up, the ultimate hotness of hot? Let's suppose all that is so, and see where it leads us.

Let's begin by solving equation 6 for "T." It comes out:

(Equation 7)
$$T = 40\ mv^2$$

where the factor, 40, holds only when we use units of degrees Kelvin, and kilometers per second.

Let's set the value of "v" (the molecular velocity) equal to the maximum possible, or the 299,776 kilometers per second which is the velocity of light. When we do that, we get what would seem to be the maximum possible temperature (T_{max}):

(Equation 8)
$$T_{max} = 3{,}600{,}000{,}000{,}000\ m$$

But now we must know the value of "m" (the mass of the particles involved). The higher the value of "m," the higher the maximum temperature.

Well, at temperatures in the millions, all molecules and atoms have broken down to bare nuclei. At temperature of hundreds of millions and into the low billions, fusion reactions between simple nuclei are possible, so complicated nuclei can be built up. At still higher temperatures, this must be reversed and all nuclei must break apart into simple protons and neutrons.

Let's suppose, then, that in the neighborhood of our maximum possible temperature, which is certainly over a trillion degrees, only protons and neutrons can exist. These have a mass of 1 on the atomic scale. Consequently, from Equation 8, we must conclude that the maximum possible temperature is 3,600,000,000,000° K.

Or must we?

For alas, I must confess that in all my reasoning from Equation 5 on, there has been a fallacy. I have assumed that the value of "m" is

constant; that if a helium atom has a mass of 4, it has a mass of 4 under all conceivable circumstances. This would be so, as a matter of fact, if the Newtonian view of the universe were correct; but then, in the Newtonian universe there is no such thing as a maximum velocity and therefore no upper limit to temperature.

On the other hand, the Einsteinian view of the universe, which gives an upper limit of velocity and therefore seems to offer the hope of an upper limit of heat, does not consider mass a constant. The mass of any object (however small under ordinary conditions, as long as it is greater than zero) increases as its velocity increases, becoming indefinitely large as one gets closer and closer to the velocity of light. (A shorthand way of putting this is: "Mass becomes infinite at the velocity of light.") At ordinary velocities, say of no more than a few thousand kilometers per second, the increase in mass is quite small and need not be worried about except in the most refined calculations.

However, when we are working near the velocity of light, or even at it, as I was trying to do in Equation 8, "m" becomes very large and reaching toward the infinite, regardless of the particle being considered. And so, consequently, does "$T_{max.}$"

Thus, there is no maximum possible temperature in the Einsteinian universe—anymore than in the Newtonian—and in this particular case, there is no definite height to up.

ADDENDUM

If you wish to amuse yourself with the various temperature scales, you can try answering the following three questions, which can be handled easily, using Equations 1 through 4:

1—At what temperature is the numerical reading on the Celsius and Fahrenheit scales identical?

2—At what temperature are the numerical readings on the Kelvin and Fahrenheit scales identical?

3—What is the temperature of absolute zero on the Fahrenheit scale?

If you want a slightly fancier exercise, let me tell you that a French physicist named René Antoine Ferchault de Réaumur invented a temperature scale somewhat before Celsius did, one that is still used, I understand, in parts of Central Europe. In the Réaumur scale, the freezing point of water is set at 0 and the boiling point at 80. This is enough information for you to be able to set up equations for the interconversion of the Réaumur with either the Celsius or the Fahrenheit scales. Care to try?

You'll find my answers below, printed upside down.

ANSWERS

$R = \frac{4}{5} C \qquad C = \frac{5}{4} R$

$R = \frac{4}{9} (F - 32) \quad F = \frac{9}{4} R + 32$

As for the interconversions of the Réaumur scale (R):

1) −40 (either C. or F.)
2) 574.47 (either K. or F.)
3) −459.62° F. is absolute zero

(This by no means exhausts the interesting angles of temperature. For instance, how do you differentiate temperature and heat? It is possible for something to have an extremely high temperature and not be hot at all, whereas, on the other hand, you can pour heat into a body without changing its temperature. I hope to go into this and a few other allied matters in a future column, but I think I'll wait a few months for a cool day.)

Through Time and Space with Ferdinand Feghoot: XIX

To the despair of his crew, Ferdinand Feghoot remained on the planet Chroma from 3357 to 3361.

"*Please*, sir," they begged. "We know how fine it must be to see all those Chromatid ladies come marching in with their cute little egg-sacs for the Communal Hatch every five years. We know that each generation is all of one color—fuchsia or mauve or dark green, or whatever—and that bright, solid colors are especially esteemed; and we'd like to be in on the betting. But all of it's only biology, sir. What'll become of us when we go back to Earth without having made any cultural discoveries?"

It was futile. When the great Hatch took place, Feghoot shouted his joy as loudly as any Chromatid in the stadium as an unprecedentedly lovely new generation burst out of its shells.

He collected his winnings, returned directly to Earth, and was straightway summoned before the Gardener-General.

"Feghoot!" roared the ruler, whetting his prunining-hook. "How can my garden grow without art, without culture? In five years, you have seen no new painting, no new sculpture, not even any new taxidermy! I must prune you!"

"You are misinformed, Verdant Majesty," said Ferdinand Feghoot. "I was present at the Birth of the Blues."

(*with thanks to Charles G. Leedham*)

—GRENDEL BRIARTON

A vacation in the mountains, the eyes of a child who saw everything fresh, everything new—and something that really couldn't happen . . . but did.

And a Little Child . . .

by Zenna Henderson

I HAVE ARRIVED AT AN AGE—WELL, an age that begins to burden my body sometimes, but I don't think I'd care to go back and live the years again. There're really only a few things I envy in the young—one thing, really, that I wish I had back—and that's the eyes of children. Eyes that see everything new, everything fresh, everything wonderful, before custom can stale or life has twisted awry. Maybe that's what Heaven will be—eyes forever new.

But there is, sometimes, among the children, another seeingness—a seeing that goes beyond the range of adult eyes, that sometimes seem to trespass even on other dimensions. Those who can see like that have the unexpected eyes . . . the eerie eyes . . . the Seeing eyes.

The child had Seeing eyes. I noticed them first when the Davidsons moved into the camping spot next to ours on the North Fork. The Davidsons we knew from previous years, but it was our first meeting with their son Jerry, and the wife and child he had brought home from overseas. One nice thing about camping out is that you don't have to be bashful about watching other people settle in. In fact, if you aren't careful, you end up fighting one of their tent ropes while someone else hammers a peg, or you get involved in where to toe-nail in a shelf on a tree, or in deciding the best place for someone else to dip wash-water out of the creek without scooping gravel or falling in. Even being a grandmother twice over doesn't exempt you.

It was while I was sitting on my favorite stump debating whether to change my shoes and socks or let them squelch themselves dry. that I noticed the child. She was hunched up on a slanting slab of rock in the late afternoon sunshine, watching me quietly. I grinned at her and wiggled a wet toe.

"I suppose I ought to change," I said, "It's beginning to get cold."

"Yes," she said. "The sun is going down." Her eyes were very wide.

"I've forgotten your name," I said. "I have to forget it four times before I remember." I peeled off one of my wet socks and rubbed a thumb across the red stain it had left on my toes.

"I'm Liesle," she said gravely. "Look at the funny hills." She gestured with her chin at the hills down the trail.

"Funny?" I looked at them. They were just rolling hills humping rather abruptly up from the trail in orderly rows until they merged with the aspen thicket. "Just hills," I said, towelling my foot on the leg of my jeans. "The grass on them is kind of thick this year. It's been a wet spring."

"Grass?" she said. "It looks almost like—like fur."

"Fur? Mmm, well, maybe." I hopped over to the tent and crawled in to find some dry socks. "If you squint your eyes tight and don't quite look at it." My voice was muffled in the darkness of the tent. I backed out again, clutching a rolled pair of socks in my hand. "Oh, geeps!" I said. "Those gruesome old purple ones. Well, a few more years of camping out and maybe they'll go the way of all flesh."

I settled back on my stump and turned to the child, then blinked at the four eyes gravely contemplating me. "Well, hi!" I said to Annie, the child's mother. "I'm just forgetting Liesle's name for the last time."

Liesle smiled shyly, leaning against her mother. "You're Gramma," she said.

"I sure am, bless Pat and Jinnie. And you're wonderful to remember me already."

Liesle pressed her face to her mother's arm in embarrassment.

"She has your eyes," I said to Annie.

"But hers are darker blue." Annie hugged Liesle's head briefly. Then "Come, child, we must start supper."

"'Bye, Gramma," said Liesle, looking back over her shoulder. Then her eyes flickered and widened and an odd expression sagged her mouth open. Annie's tugging hand towed her a reluctant step, then she turned and hurriedly scooted in front of Annie, almost tripping her. "Mother!" I heard her breathless voice. "Mother!" as they disappeared around the tent.

I looked back over my own shoulder. Liesle's eyes had refocused themselves beyond me before her face had changed. Something back there—?

Back there the sun was setting in pale yellow splendor and purple shadows were filling up the hollows between the hills. I've climbed little hills like those in-

numerable times—and rolled down them and napped on them and batted gnats on them. They were gentle, smooth hills, their fine early faded, grassy covering silver against the sun, crisply tickly under the cheek. Just hills. Nothing could be more serene and peaceful. I raised an eyebrow and shrugged. You meet all kinds.

That night Davidsons came over to our campfire and we all sat around in the chilly, chilly dark, talking and listening—listening to the wind in the pines, to the Little Colorado brawling its way down from Baldy, the sounds of tiny comings and goings through the brush—all the sounds that spell summer to those of us who return year after year to the same camping grounds.

Finally the fire began to flicker low and the unaccustomed altitude was making us drowsy, so we hunted up our flashlights and started our before-bed trek across the creek to the Little Houses hidden against the hillside. Men to the left, girls to the right, we entertained briefly the vision of tiled bathrooms back home, but were somehow pleasured with the inconvenience because it spelled vacation. We females slithered and giggled over the wet log-and-plank bridge across the creek. It still had a grimy ghost of snow along its sheltered edge and until even as late as July there would be a ragged snowbank up against the hill near the girls' Little House, with violets and wild strawberries blooming at its edge. Things happen like that at 9000 feet of elevation. We edged past the snowbank—my Trisha leading the group, her flashlight pushing the darkness aside imperiously. She was followed by our Jinnie—Pat is a goat and goes to the left—then came Mrs. Davidson, Annie and Liesle, and I was the caboose, feeling the darkness nudging at my back as it crowded after our lights.

Since the Little House accommodates only two at a time, the rest of us usually wait against an outcropping of boulders that shelters a little from a south-east wind which can cut a notch in your shin-bones in less time than it takes to tell it.

I was jerkily explaining this to Annie as I stumbled along the semi-overgrown path—it hadn't received its summer beating-down yet. I was reaching out to trail my hand across the first boulder, when Liesle gasped and stumbled back against me, squashing my toe completely.

"What's the matter, child?" I gritted, waiting for the pain to stop shooting up my leg like a hot fountain. "There's nothing to be afraid of. Your mommie and I are here."

"I wanna go back!" she suddenly sobbed, clinging to Annie. "I wanna go home!"

"Liesle, Liesle," crooned Annie, gathering her up in her arms. "Mother's here. Daddy's here. No one is home. You'll have fun tomorrow, you'll see." She looked over Liesle's burrowing head at our goblinesque flashlighted faces. "She's never camped before," she said apologetically. "She's homesick."

"I'm afraid! I can't go any farther!" sobbed Liesle. I clamped Jinnie's arm sharply. She was making noises like getting scared, too —and she a veteran of cradle-camping.

"There's nothing to be afraid of," I reiterated, wiggling my toe hopefully. Thank goodness, it could still wiggle. I thought it had been amputated. Liesle's answer was only a muffled wail. "Well, come on over here out of the wind," I said to Annie. "And I'll hold her while you go." I started to take Liesle, but she twisted away from my hand.

"No, no!" she cried. "I can't go any farther!" Then she slithered like an eel out of Annie's arms and hit off back down the trail. The dark swallowed her.

"Liesle!" Annie set off in pursuit and I followed, trying to stab some helpful light along the winding path. I caught up with the two of them on the creek bridge. They were murmuring to each other, forehead to forehead. Annie's voice was urgent, but Liesle was stubbornly shaking her head.

"She won't go back," said Annie.

"Oh, well," I said, suddenly feeling the altitude draining my blood out of my feathery head and burdening my tired feet with it. "Humor the child tonight. If she has to go, let her duck out in the bushes. She'll be okay tomorrow."

But she wasn't. The next day she still stubbornly refused to go that last little way to the Little House. Jerry, her father, lost patience with her. "It's utter nonsense!" he said. "Some fool notion. We're going to be up here for two weeks. If you think I'm going to dig a special—

"You stay here," he said to Annie. He grabbed Liesle's arm and trotted her briskly down the path. I followed. I make no bones about being curious about people and things—and as long as I keep my mouth shut, I seldom get a door slammed in my face. Liesle went readily enough, whimpering a little, half running before his prodding finger, down the path, across the bridge, along the bank. And flatly refused to go any farther. Jerry pushed and she doubled down, backing against his legs. He shoved her forward and she fell to her hands and knees, scrambling back along the path, trying to force her way past him—all in deathly panting silence. His temper flared and he pushed her again. She slid flat on the path, digging her fingers into the weedy

grass along the edge, her cheek pressed to the muddy path. I saw her face then, blanched, stricken —old in its fierce determination, pitifully young in its bare terror.

"Jerry—" I began.

Anger had deafened and blinded him. He picked her up bodily and started down the path. She writhed and screamed a wild, despairing scream, "Daddy! Daddy! No! It's open! It's open!"

He strode on, past the first boulder. He had taken one step beyond the aspen that leaned out between two boulders, when Liesle was snatched from his arms. Relieved of her weight, his momentum carried him staggering forward, almost to his knees. Blankly, he looked around. Liesle was plastered to the boulder, spread-eagled above the path like a paper doll pasted on a wall—except that this paper doll gurgled in speechless terror and was slowly being sucked into the rock. She was face to the rock, but as I gaped in shock, I could see her spine sinking in a concave curve, pushing her head and feet back sharper and sharper.

"Grab her!" I yelled. "Jerry! Grab her feet!" I got hold of her shoulders and pulled with all my strength. Jerry got his hands behind her knees and I heard his breath grunt out as he pulled. "Oh, God in Heaven!" I sobbed. "Oh, God in Heaven!"

There was a sucking, tearing sound and Liesle came loose from the rock. The three of us tumbled in a tangled heap in the marshy wetness beyond the trail. We sorted ourselves out and Jerry crouched in the muck rocking Liesle in his arms, his face buried against her hair.

I sat there speechless, feeling the cold wetness penetrating my jeans. What was there to say?

Finally Liesle stopped crying. She straightened up in Jerry's arms and looked at the rock. "Oh," she said. "It's shut now."

She wiggled out of Jerry's arms. "Gramma, I gotta go." Automatically I helped her unzip her jeans and sat there slack-jawed as she trotted down the path past the huge boulder and into the Little House.

"Don't ask me!" barked Jerry suddenly, rising dripping from the pathside. "Don't *ask* me!"

So I didn't.

Well, a summer starting like that could be quite a summer, but instead everything settled down to a pleasant even pace and we fished and hiked and picknicked and got rained on and climbed Baldy, sliding back down its snow-slopes on the seats of our pants, much to their detriment.

Then came the afternoon some of us females were straggling down the trail to camp, feet soaked as usual and with the kids clutching grimy snow-balls sal-

vaged from the big drift on the sharp north slope below the Salt House. The last of the sun glinted from the white peak of Baldy where we had left the others hours ago still scrabbling around in the dust looking for more Indian bone beads. We seemed to be swimming through a valley of shadows that were almost tangible.

"I'm winded." Mrs. Davidson collapsed, panting, by the side of the trail, lying back on the smoothly rounded flank of one of the orderly little hills near the creek.

"We're almost there," I said. "If I get down, I won't get up again short of midnight."

"So let it be midnight," she said, easing her shoulders back against the soft crispness of the grass. "Maybe some robins will find us and cover us with strawberries instead of strawberry leaves. Then we wouldn't have to cook supper."

"That'd be fun," said Liesle, hugging her knees beside Mrs. Davidson.

"Oh, Liesle!" Jinnie was disgusted. "You don't think they really would, do you?"

"Why not?" Liesle's eyes were wide.

"Oh, groan!" said Jinnie, folding up on the ground, "You'd believe anything! When you get as old as I am—"

"What a thought!" I said, easing my aching feet in my hiking boots. "Do you suppose she'd *ever* be ten years old?" I looked longingly at the cluster of tents on the edge of the flat. "Oh, well," I said and subsided on the hill beside the others. I flopped over on my stomach and cradled my head on my arms. "Why! It's warm!" I said as my palm burrowed through the grass to the underlying soil.

"Sun," murmured Mrs. Davidson, her eyes hidden behind her folded arm. "It soaks it up all day and lets it out at night."

"Mmmm." I let relaxation wash over me.

"They're sleeping a long time," said Liesle.

"Who?" I was too lax for conversation.

"The beasts," she said. "These beasts we're on."

"What beasts?" It was like having a personal mosquito.

"These ones with the green fur," she said and giggled. "People think they're just hills, but they're beasts."

"If you say so." My fingers plucked at the grass. "And the green fur grew all around, all around—"

"That's why it feels warm," said Liesle. "Don't pull its fur, Gramma. It might hurt it. 'nen it'd get up. And spill us on the ground. And open its big mouth . . . and stick out its great big teeth—" She clutched me wildly. "Gramma!" she cried, "Let's go home!"

"Oh, botheration!" I said, sitting up. The chill of the evening was like a splash of cold water. "Say, it *is* getting cold. We'll catch our death of live-forevers if we lie out here much longer."

"But it's so warm and nice down here," sighed Mrs. Davidson.

"Not up here," I shivered. "Come on, younguns, I'll race you to the tent."

The moonlight wakened me. It jabbed down through a tiny rip in the tent above me and made it impossible for me to go back to sleep. Even with my eyes shut and my back turned, I could feel the shaft of light twanging almost audibly against my huddled self. So I gave up, and, shrugging into a fleecelined jacket and wriggling my bare feet into my sneakers, I ducked through the tent flap. The night caught at my heart. All the shadow and silver of a full moon plus the tumble and swell, the ivory and ebony of clouds welling up over Baldy. No wonder the moonlight had twanged through the tent. It was that kind of night —taut, swift, far and unfettered.

I sighed and tucked my knees up under the jacket as I sat on the stump. There are times when having a body is a big nuisance. Well, I thought, I'll stay out long enough to get thoroughly chilled, then I'll surely sleep when I crawl back into my nice warm sleeping bag. My eyes followed the dark serrated treetops along the far side of the creek to the velvety roll of the small hills in the moonlight upstream, the thick silver-furred beasts-who-slept-so-long. I smiled as I thought of Liesle.

Then there she was—Liesle—just beyond the tent, her whole body taut with staring, her arms stiffly flexed at the elbows, her fingers crooked, her whole self bent forward as though readying for any sudden need for pursuit—or flight.

She made an abortive movement as though to go back into the tent, and then she was off, running towards the hills, her bare white feet flashing in the moonlight. I wanted to call after her, but something about the stillness of the night crowded the noise back into my throat, so I took after her, glad of a good excuse to run, fleet-footed and free, through the crispness of the silver night. A little farther, a little faster, a little lighter and I wouldn't even have had to touch the ground.

I lost sight of Liesle, so I leaned against a tree and waited for my breath to catch up with me. Then I saw her, a whisp of darkness in her worn flannel pajamas, moving from one small hill to another, softly tiptoeing away across them until the shadow of the aspen grove on the slope above swallowed her up. There was a pause as I wondered if I should follow, then she reappeared with the

same soft, careful step. She stopped just a few feet from me and plumped herself down between two rounded knolls. She shivered in the icy air and snuggled down tight in the curving corner. I could hear her talking.

"Move over, you. Keep me warm. There's eight of you. I counted. I like you in the night, but I'm scared of you in the day. You don't belong in the day." She yawned luxuriantly and I saw that she was sinking slowly between those two grassy hills. "You really don't belong in the night, either." Liesle went on. "You better go back next time it's open." Only her head was visible now. She was all but swallowed up in the—in the what?

"Liesle!" I hissed.

She gasped and looked around. Suddenly she was sprawling out in the open again on the sloping hillside, shivering. She glanced back quickly and then began to cry. I gathered her up in my arms. "What's going on here, Liesle?"

"I had a dream!" she wailed.

I carried her back to the camp, sagging a little under her weight. Just before I dumped her down in front of her tent, I swear she waved over my shoulder, a furtive, quick little wave, back at the little sleeping hills.

Next day I determinedly stayed in camp when everyone else galloped off into the far distance toward Katatki to look for arrowheads. I had to make a noise like elderly and weary, and I know my children suspected that I was up to some mischief, but they finally left me alone. The dust had hardly settled on the curve downcreek before I was picking my way among the beast-hills.

I caught myself tiptoeing and breathing cautiously through my mouth, startled by the crunch of gravel and the sudden shriek of a blue jay. I sat down, as nearly as I could tell, between the same two hills where Liesle had been. I pulled up a tuft of grass with a quick twinge of my thumb and fingers. Grass—that's all it was. Well, what had I expected? I unlimbered my short prospector's pick and began to excavate. The sod peeled back. The sandy soil underneath slithered a little. The pick clinked on small rocks. I unearthed a beer cap and a bent nail. I surveyed my handiwork, then shoved the dirt back with the head of the pick. Sometimes it's fun to have too much imagination. Other times it gets you dirt under your fingernails.

I trudged back towards camp. Half way there I stopped in midstride. Had I heard something? Or felt something? A movement as of air displacing? I turned and walked slowly back to the hillside.

Nowhere, nowhere, could I find the spot where I'd been digging. I

knelt down and picked up the only loose object around. A rusty beer cap.

The Davidsons' vacation was nearly over. We had another week after they were to leave. I don't know how it happened—things like that are always happening to us—but we ended up with Liesle and Jinnie jumping up and down ecstatically together as all grown-ups concerned slowly nodded their heads. And I had an extra grandchild for the next week.

Of course, Liesle was a little homesick the first night after her folks left. After Jinnie had fallen asleep, she looked over at me in the glow of the Coleman lantern, with such forlornness that I lifted the edge of my sleeping bag and she practically flung herself into it. It was a tight squeeze, but finally she was snuggled on my shoulder, the crisp spray of her hair tickling my chin.

"I like you, Gramma," she said. "You're warm."

"You're warm, too," I said, feeling heat radiating from the wiry little body. I don't know what prompted my next question. Maybe it was that I *wanted* there to be something in Liesle's play-pretend. "Am I as warm as the beasts?"

I felt her startled withdrawal. It was like having a spring suddenly coil beside me.

"What are they going to do when it starts snowing again?" I asked into the awkward silence.

"I don't know," said Liesle slowly. "I don't know any beasts. Besides their fur would keep them warm."

"It looks like just grass to me," I said. "Grass withers when cold weather comes."

"It's 'sposed to look like grass," said Liesle. "So's no one will notice them."

"What are they?" I asked. "Where did they come from?"

"I don't know any beasts," said Liesle. "I'm going to sleep."

And she did.

Liesle might as well have gone on home for all the outdoor activity she got that week with us. Bad weather came pouring through the pass in the mountains, and we had rain and fog and thunder and hail and a horrible time trying to keep the kids amused. My idle words had stuck in Liesle's mind and festered in the inactivity. She peered incessantly out of the tent-flap asking, "How long will it rain? Is it cold out there? It won't snow will it? Will there be ice?"

And when we had a brief respite after a roaring hail storm and went out to gather up the tapioca-sized stones by the buckets-full, Liesle filled both hands and, clutching the hail tightly, raced over to the small hills. I caught up with her as she skidded to a stop on the muddy trail.

She was staring at the beast-hills, frosted lightly with the hail. She turned her deep eyes to me. "It's ice," she said tragically.

"Yes," I said, "Little pieces of ice."

She opened her hands and stared at her wet palms. "It's gone," she said.

"Your hands are warm," I explained.

"Warmness melts the ice," she said, her eyes glowing. "They're warm."

"They could melt the little ice," I acknowledged, "But if it really froze—"

"I told them to go back," said Liesle. "The next time it's open."

"What's open?" I asked.

"Well," said Liesle. "It's down the path to the Little House. It's the rock—it's a empty—it's to go through—" She slapped her hand back and forth across her pants legs, ridding them of the melted hail. Her bottom lip was pouted, her eyes hidden. "It doesn't go into any place," she said. "It only goes through." Anger flared suddenly and she kicked the nearest hill. "Stupid beasts!" she cried. "Why didn't you stay home!"

We started packing the day before we were to leave. Liesle scurried around with Jinnie, getting under foot and messing things up generally. So I gave them a lot of left-over odds and ends of canned goods and a box to put them in and they spent hours packing and unpacking. I had dismissed them from my mind and submerged myself in the perennial problem of how to get back into the suitcases what they had originally contained. So I was startled to feel a cold hand on my elbow. I looked around into Liesle's worried face.

"What if they don't know the way back?" she asked.

"Of course they know the way back," I said. "They've driven it a dozen times."

"No, I mean the beasts." She clutched me again. "They'll die in the winter."

"Winter's a long way off," I said. "They'll be all right."

"They don't count like we do," said Liesle. "Winter's awful close."

"Oh, Liesle, child," I said, exasperated. "Let's not play that now. I'm much too busy."

"I'm not playing," she said, her cheeks flushing faintly, her eyes refusing to leave mine. "The beasts—"

"Please, honey lamb," I said. "You finish your packing and let me finish mine." And I slammed the suitcase on my hand.

"But the beasts—"

"Beasts!" I said indistinctly as I tried to suck the pain out of my fingers. "They're big enough to take care of themselves."

"They're just baby ones!" she cried. "And they're lost, 'relse'n they'd have gone home when it was open."

"Then go tell them the way," I said, surveying dismally the sweat shirt and slacks that should have been in the case I had just closed. She was out of sight by the time I got to the tent door. I shook my head. That should teach me to stick to Little Red Ridinghood or The Gingerbread Boy. Beasts, indeed!

Late that evening came a whopper of a storm. It began with a sprinkle so light that it was almost a mist. And then, as though a lever were being steadily depressed, the downpour increased, minute by minute. In direct proportion, the light drained out of the world. Everyone was snugly under canvas by the time the rain had become a downpour—except Liesle.

"I know where she is," I said with a sigh, and snatched my fleece-lined jacket and ducked out into the rain. I'd taken about two steps before my shoes were squelching water and the rain was flooding my face like a hose. I had sploshed just beyond the tents when a dripping wet object launched itself against me and knocked me staggering back against a pine tree.

"They won't come!" sobbed Liesle, her hair straight and lank, streaming water down her neck. "I kept talking to them and talking to them, but they won't come. They say it isn't open and if it was they wouldn't know the way!" She was shaking with sobs and cold.

"Come in out of the wet," I said, patting her back soggily. "Everything will be okay." I stuck my head into the cook tent. "I got 'er. Have to wring her out first." And we ducked into the sleep tent.

"I told them right over this way and across the creek—" her voice was muffled as I stripped her T shirt over her head. "They can't see right over this way and they don't know what a creek is. They see on top of us."

"On top?" I asked, fumbling for a dry towel.

"Yes!" sobbed Liesle. "We're in the middle. They see mostly on top of us and then there's us and then there's an underneath. They're afraid they might fall into us or the underneath. We're all full of holes around here."

"They're already in us," I said, guiding her icy feet into the flannel pajama legs. "We can see them."

"Only part," she said. "Only the Here part. The There part is so'st we can't see it." I took her on my lap and surrounded her with my arms and she leaned against me, slowly warming, but with the chill still shaking her at intervals.

"Oh, Gramma!" Her eyes were big and dark. "I saw some of the There part. It's like—like—like a Roman candle.

"Those big heavy hills like Roman candles?" I asked.

"Sure," her voice was confident. "Roman candles have sticks on them don't they?"

"Look, Liesle." I sat her up and looked deep into her eyes. "I know you think this is all for true, but it really isn't. It's fun to pretend as long as you know it's pretend, but when you begin to believe it, it isn't good. Look at you, all wet and cold and unhappy because of this pretend."

"But it isn't pretend!" protested Liesle. "When it was open—" She caught her breath and clutched me. I paused, feeling as though I had stepped off an unexpected curb, then swiftly I tucked that memory away with others, such as the rusty beer cap, the slow ingestion of Liesle by the hills—

"Forget about that," I said. "Believe me, Liesle, it's all pretend. You don't have to worry."

For a long rain-loud moment, Liesle searched my face, and then she relaxed. "Okay, Gramma." She became a heavy, sleepy weight in my lap. "If you say so."

We went to sleep that last night to the sound of rain. By then it had become a heavy, all-pervading roar on the tent roof that made conversation almost impossible. "Well," I thought drowsily, "this is a big, wet, close-quotes to our summer." Then, just as I slipped over into sleep, I was surprised to hear myself think, "Swim well, little beasts, swim well."

It may have been the silence that woke me, because I was suddenly wide awake in a rainless hush. It wasn't just an awakening, but an urgent push into awareness. I raised up on one elbow. Liesle cried out and then was silent. I lay back down again, but tensed as Liesle muttered and moved in the darkness. Then I heard her catch her breath and whimper a little. She crawled cautiously out of her sleeping bag and was fumbling at the tent flap. A pale watery light came through the opening. The sky must have partially cleared. Liesle whispered something, then groped back across the tent. I heard a series of rustles and whispers, then she was hesitating at the opening, jacket over her pajamas, her feet in lace-trailing sneakers.

"It's open!" she whimpered, peering out. "It's open!" And was gone.

I caught my foot in the sleeping bag, tried to put my jacket on upsidedown, and got the wrong foot in the right shoe, before I finally got straightened up and staggered out through an ankle-deep puddle to follow Liesle. I groped my way in the wet greyness halfway to the Little House before I realized there was no one ahead of me in the path. I nearly died. Had she already been sucked into that treacherous grey rock! And inside me a voice mockingly chanted, "Not for true, only pretend—"

"Shut *up!*" I muttered fiercely, then, turning, I sploshed at full staggering speed back past the tents. I leaned against my breathing tree to stop my frantic gulping of the cold wet air, and, for the dozenteenth time in my life, reamed myself out good for going along with a gag too far. If I had only scotched Liesle's imagination the first—

I heard a tiny, piercingly high noise, a coaxing, luring bird-like sound, and I saw Liesle standing in the road, intent on the little hills, her right hand outstretched, fingers curling, as though she were calling a puppy.

Then I saw the little hills quiver and consolidate and Become. I saw them lift from the ground with a sucking sound. I heard the soft tear of turf and the almost inaudible twang of parting roots. I saw the hills flow into motion and follow Liesle's piping call. I strained to see in the half light. There were no legs under the hills —there were dozens of legs under —there were wheels—squares—flickering, firefly glitters. . . .

I shut my eyes. The hills were *going*. How they were going, I couldn't say. Huge, awkward and lumbering, they followed Liesle like drowsy mastodons in close order formation. I could see the pale scar below the aspen thicket where the hills had pulled away. It seemed familiar, even to the scraggly roots poking out of the sandy crumble of the soil. Wasn't that the way it had looked?

I stood and watched the beast hills follow Liesle. How could such a troop go so noiselessly? Past the tents, through the underbrush, across the creek—Liesle used the bridge—and on up the trail toward the Little House. I lost sight of them as they rounded the bend in the trail. I permitted myself a brief sigh of relief before I started back towards the tents. Now to gather Liesle up, purged of her compulsion, get her into bed and persuaded that it had all been a dream. Mockingly, I needled myself. "A dream? A dream? They were there, weren't they? They are gone, aren't they? Without bending a blade or breaking a branch. Gone into what? Gone into what?"

"Gone into nothing," I retorted. "Gone through—"

"Through into what?" I goaded. "Gone into what?"

"Okay! *You* tell *me!*" I snapped. Both of us shut up and stumbled off down the darkened path. For the unnumberedth time I was catapulted into by Liesle. We met most unceremoniously at the bend in the trail.

"Oh, Gramma!" she gasped. "One didn't come! The littlest one didn't come! There were eight, but only seven went in. We gotta get the other one. It's gonna close! Gramma!" She was towing me back past the tents.

"Oh, yipes!" I thought dismally. "A few more of these shuttle runs and I *will* be an old woman!"

We found the truant huddled at the base of the aspens, curled up in a comparatively tiny, grass-bristly little hillock. Liesle stretched out her hands and started piping at the beast-hill.

"Where did you learn that sound?" I asked, my curiosity burning even in a mad moment like this one.

"That's the way you *call* a beast-hill!" she said, amazed at my ignorance, and piped again, coaxingly. I stood there in my clammy, wet sneakers, and presumably in my right mind, and watched the tight little hillock unroll and move slowly in Liesle's direction.

"Make him hurry, Gramma!" cried Liesle. "Push!"

So I pushed—and had the warm feeling of summer against my palms, the sharp faint fragrance of bruised grass in my nostrils, and a vast astonishment in my mind. I'll never get over it. Me! Pushing a beast-hill in the watery chill of a night hour that had no number and seemed to go on and on.

Well, anyway, between Liesle's piping and my pushing, we got the Least-one past the tents (encore!) across the creek and down the trail. Liesle ran ahead. "Oh, Gramma! Gramma!" Her voice was tragedy. "It's closing! It's closing!"

I hunched my shoulders and dug in with my toes and fairly scooted that dumb beast down the path. I felt a protesting ripple under my hands and a recoil like a frightened child. I had a swift brief vision of me, scrabbling on the trail with a beast-hill as Jerry had with Liesle, but my sudden rush pushed us around the corner. There was Liesle, one arm tight around a tree trunk, the other outstretched across the big grey boulder. Her hand was lost somewhere in the Anything that coalesced and writhed, Became and

dissolved in the middle of the grey granite.

"Hurry!" she gasped. "I'm holding it! Push!"

I pushed! And felt some strength inside me expend the very last of itself on the effort. I had spent the last of some youthful coinage that could never be replenished. There was a stubborn silent moment and then the beast-hill must have perceived the opening, because against my fingers was a sudden throb, a quick tingling and the beast-hill was gone—just like that. The boulder loomed, still and stolid as it had been since the Dawn, probably—just as it always had been except—Liesle's hand was caught fast in it, clear up past her wrist.

"It's stuck." She looked quietly over her shoulder at me. "It won't come out."

"Sure it will," I said, dropping to my haunches and holding her close. "Here, let me—" I grasped her elbow.

"No." She hid her face against my shoulder. I could feel the sag of her whole body. "It won't do any good to pull."

"What shall we do then?" I asked, abandoning myself to her young wisdom.

"We'll have to wait till it opens again," she said.

"How long?" I felt the tremble begin in her.

"I don't know. Maybe never. Maybe—maybe it only happens once."

"Oh, now!" I said and had nothing to add. What *can* you say to a child whose hand has disappeared into a granite boulder and won't come out?

"Liesle," I said. "Can you wiggle your fingers?"

Her whole face tightened as she tried. "Yes," she said. "It's just like having my hand in a hole but I can't get it out."

"Push it in, then," I said.

"In?" she asked faintly.

"Yes," I said. "Push it in and

wiggle it hard. Maybe they'll see it and open up again."

So she did. Slowly she pushed until her elbow disappeared. "I'm waving hard!" We waited. Then—"Nobody comes," she said. And suddenly she was fighting and sobbing, wrenching against the rock, but her arm was as tight-caught as her hand had been. I hugged her to me, brushing my hand against the rock as I quieted her thrashing legs. "There, there, Liesle." Tears were wadding up in my throat. I rocked her consolingly.

"Oh God in Heaven," I breathed, my eyes closed against her hair. "Oh God in Heaven!"

A bird cried out in the silence that followed. The hour that had no number stretched and stretched. Suddenly Liesle stirred. "Gramma!" she whispered. "Something touched me! Gramma!" She straightened up and pressed her other hand against the boulder. "Gramma! Somebody put something in my hand! Look, Gramma!" And she withdrew her arm from the gray granite and held her hand out to me.

It overflowed with a Something that Was for a split second, and then flaked and sparked away like the brilliance of a Roman candle, showering vividly and all around to the ground.

Liesle looked at her hand, all glittering silver, and wiped it on her pajamas, leaving a shining smudge. "I'm tired, Gramma," she whimpered. She looked around her, half dazed. "I had a dream!" she cried. "I had a dream!"

I carried her back to the tent. She was too exhausted to cry. She only made a weary moaning sound that jerked into syllables with the throb of my steps. She was asleep before I got her jacket off. I knelt beside her for a while, looking at her—wondering. I lifted her right hand. A last few flakes of brilliance sifted off her fingers and flickered out on the way to the floor. Her nails glowed faintly around the edges, her palm, where it was creased, bore an irregular M of fading silver. What had she held? What gift had been put into her hand? I looked around, dazed. I was too tired to think. I felt an odd throb, as though time had gone back into gear again and it was suddenly very late. I was asleep before I finished pulling the covers up.

Well! It's episodes like that—though, thank Heaven, they're rather scarce—that make me feel the burden of age. I'm too set in the ways of the world to be able to accept such things as normal and casual, too sure of what *is* to be seen to really see what is. But events don't have to be this bizarre to make me realize that sometimes it's best just to take the hand of a child—a Seeing child—and let them do the leading.

Damon Knight's book coumn will appear next month; to make up for its absence this month, Mr. Knight offers this tale of a novelist and a reader of his who is insatiable, singularly determined, and most helpful. Also, tragically, a boor.

TO BE CONTINUED

by Damon Knight

ROBERT MANGOR WAS STANDING BY the fence in his back garden in the late afternoon, watching the shadows stream out from the pine woods across the meadow, when he noticed a figure toiling up the slope toward the house.

It was a strange way for anyone to come walking—nothing in that direction but twenty miles of pine and spruce, a lot of it second growth, and no place for a stroll.

Mangor felt more annoyed than alarmed. He had been just getting into the mood for writing something: the long golden afternoon was sinking into him and settling, melting, compounding with old ghosts of memory, down there where ideas came from. In another minute, he might have had the story clear in his mind. . . . Why couldn't people leave him alone?

He stuffed his cold pipe into his pocket and leaned over the fence to watch with a scowl. The man advanced slowly up the slope, hidden almost to his waist by the tall grasses. He had a tubby shape, wider in the middle than at the shoulders, and his head looked wide and round. He was making straight for Mangor, coming on at a steady pace. He might be some fool camper from over on Lake Wallenpaupack, lost God knows how coming over the ridge . . . or a wanted criminal? An aviator?

The man was dressed, he could see now, in a startling two-piece outfit of baby blue silk or nylon. All right, then, a camper for sure —but why did he look so cool and well-groomed after a twenty-mile walk over the mountains?

The man raised one hand in a curious, self-contained gesture, a wave, a salute, or something in between. "Mr. Mangor, good evening," he called.

Mangor started, and looked harder. No, it was no one he recognized, not even anyone he had

met briefly at his publishers'. It couldn't be anybody from the old days, the Marines or San Francisco: not with that "Mr. Mangor," in a fluting, cultured voice.

He said, "That's my name, but who are you?"

"Benedict Leblang," said the man with a formal smile, holding out his hand as he came up. His face was round but hard-looking, not fat; his bald head was massive and broad. Mangor took his hand tentatively: it was a firm, dry grip —one squeeze and release, like a politician's. "Excuse my dropping in like this; I was certain I would find you at home."

"Yes?" said Mangor warily. A little tingle of uneasiness crawled up his back. Leblang's clothes were immaculate and of an obviously expensive cut. Except for a fine dew of perspiration on his forehead—and he might have got that, a man of his weight, just in coming up the slope—there was not a sign on him of exertion or fatigue. Where *had* he come from?

Leblang's expression was hard to read, with the sun behind him. With a casual gesture, he held up a flat, oblong package, neatly wrapped in paper. "I believe you are interested in books," he said.

Mangor had recognized the shape instantly. He took the package automatically, but again felt that tingle of uneasiness.

"What is it?" he said.

"Open it and see."

Mangor shrugged, and tore the paper open. His irritation made him use more force than was necessary; the paper tore raggedly, and he pulled it off like a husk.

The book lay sensuously in his hand; the leather was smooth and soft as a woman's skin. It was white calf, gold tooled in a diamond pattern, a kind of work you hardly ever saw any more. This must be a limited collectors' edition, all hand-work and hideously expensive. The title, worked in gold at the top of the cover and on the spine, was "The Outcast," by Garret N. Broome.

Mangor opened it. The pages were of heavy, calendered, book stock, oddly out of key in a binding like this—a brownish, rather than a bluish white, the edges marbled in red and brown. The text was set in what looked like a modified Bodoni—small, about ten point, but very clear and readable.

The contents seemed to be fiction—a novel. But it was a thick, heavy book. Mangor turned to the last page and looked at the folio. Over six hundred pages, about three times the length of an ordinary modern novel.

He felt an inexplicable excitement. "Where did you get this?" he demanded.

"The owner commissioned me to show it to a few collectors," said Leblang. "Do you like the binding?"

"It's beautiful work," Mangor said. He turned to the title page and read at the bottom, "Sandys and Ullman, Venusberg, 203 A.B."

He read it twice, with growing irritation. In the first place, the thing should have had a "Printed for . . ." notice; this one was in the style appropriate to a commercially published book. In the second place— He looked again. That "203" was obviously meant to be "1203," although the book was brand new and was printed in modern English; and then a second blunder in the same line, "A.B." for "A.D."

Who would go to all the trouble of mounting a crude joke so elaborately, and then get it wrong to boot?

"The story itself," said Leblang delicately, "is of some interest. Just look into it, if you will, Mr. Mangor."

Mangor riffled over a few pages, more for the pure pleasure of handling the book than for anything else, and glanced at the text. He disliked sampling books he was not going to finish; it left chaotic and cloudy impressions in the mind. Nevertheless, he read a paragaph, standing in silence at the fence, while the last sunlight glimmered orange through the woods.

The first few words touched a responsive chord in him. The language was direct and colorful; the moods and images themselves were things Mangor had felt, but somehow had never managed to express. The style was decently rhythmic, too; Mangor hated the staccato idiom of most modern novels.

He looked up, with the sense of something wrong tingling along his nerves. "It's damned good," he said warily. "Will you sell it, or rent it, or what?"

He could hardly see Leblang's face in the gathering darkness, but he clearly heard the words, "The book is for sale."

Then he was standing, entirely alone, blinking in the sunshine, at the fence in his back garden. There was no one on the slope below him, no one in the garden behind him, no one in sight at all. But the book was still in Mangor's hands.

Mangor carried it incredulously back into the house, sat down, and read it from beginning to end.

The room was full of pale sunlight when he finished. He had read, utterly absorbed, without noticing the passage of time. The book was a wild, picaresque novel about an adventurer named Kor—half Viking, half Mandan—and his wanderings in pre-Columbian America. It was just such a free-wheeling romance as Mangor himself had often dreamed of writing; in fact, he had been thinking half-consciously about something of the kind, that same

afternoon, when the round man came up the slope. . . .

A fanciful thought nagged at him: If he had been left alone that late afternoon, to stew in his own juices, would he eventually have written *this* book?

He turned back to the title page. "Sandys and Ullman, Venusberg, 203 A.B." Just suppose that were a real place, and a real date . . . a date in the future. Crazy as it sounded, wouldn't that fit, wouldn't it explain everything?

Suppose Venusberg was a mountain on the planet Venus . . . and "A.B." meant something like "after Blowup" Suppose civilization on Earth were going to bang itself to hell—which Mangor considered more than likely—but not before a colony had been established on Venus. Then this might be a book he had written—was going to write—

It got too complicated for him suddenly, and he knuckled his head in a fit of temper. How could he write a book he had just read? That would be copying, not composition. And if the book was his, why "Garret N. Broome"?

At any rate, he had the book: it was no illusion, it was here, solid and real. Abruptly he felt sleep tugging at him. He put the book down, set the lamp on top of it to make sure, and went to bed.

In the morning, the book was gone.

He searched everywhere, tested the locks on doors and windows. No one had entered the house. The book was not there, and there was no trace of its ever having been there.

But he *remembered* it. He could have written down a synopsis of the plot in twenty minutes. He recalled all the principal scenes, much of the dialogue. He felt that he could reconstruct the book if he had to; it was all there, not word for word, but in essence.

The itch to try to do it was so strong that he couldn't concentrate on any other work. There it was: he wanted to write an imaginary book, or else copy one that had somehow drifted back from centuries in the future.

June was almost over. He had to have a book started—some book, any book. For the first time in ten years, he was without an idea that would come to life.

He sat and sweated in front of the typewriter. Mail piled up, unanswered. He began to neglect his gardening and housekeeping. When friends called up, he was irritable, and swore at them over the telephone, and they left him alone.

One morning he woke up with a crazy idea. He couldn't write the book of his vision: even now, it was too clear, too circumstantial. He could not be sure that book did not already exist somewhere, sometime, as the work of another

writer. If he wrote it, it would be plagiarism or piracy.

If he didn't write it, then that in itself would prove that the book was *not* his own, and he therefore shouldn't write it.

Thinking like this made his head swim, but one thing he was reasonably sure of: there was no law or moral obligation against writing a *sequel* to an imaginary book . . . or even a book still to be written by somebody else.

If there was a Garret N. Broome, either he was going to write his book as a precursor to Mangor, or else Mangor's book was not going to survive . . . it would be lost in the Blowup.

"The Outcast" cried for a sequel. Packed with incident as it was, it covered only a few months in Kor's life. Kor himself was a fascinating figure, a little larger than life, but with enough human faults to make you feel a curious blend of pity and admiration for him. His career was obviously not ended when he left Machu Picchu: a man like that had a long history of struggle and adventure behind him, and more of the same ahead.

What was going to happen to Kor when he left the city in the Andes? Mangor thought he knew.

He plotted it in five days, started writing on the sixth. It was like nothing else he had ever written: it poured out, it went like lightning. When he read it over in the evenings, it gave him goosebumps, it was so good. This was the jackpot, the big one, the book he had been training himself to write.

A month passed. By now Mangor had a big map of the Americas on the wall, surrounded by action charts, lists of characters, scribbled notes, drawings, all the pinned-up litter that meant he had a novel in full swing. Then he hit a snag.

The plot called for Kor to return to the Temple of the Sun in Cuzco for an intrigue involving the Inca's daughter and the chief priest, both characters who had appeared in "The Outcast." Mangor couldn't remember their names.

It was an idiotic point, but he couldn't get past it. Nobody but himself would know the difference if he gave them other names; but when he tried it, the story lay down and died in the typewriter.

It was the afternoon of a long, trying day. Mangor sat at his desk surrounded by wadded-up pages. He had been at it ever since breakfast, grimly writing bad copy and throwing it on the floor, and it was getting to be the time of day now when, if he didn't get the work started, it wouldn't go at all.

Mangor became suddenly aware of how still the day was, outside the drawn blinds of the study. He listened, and could hear nothing but the faint hum of his fluorescent lamp.

He turned his head, and saw the

book, lying on the corner of the desk.

He touched it incredulously: it was there, real and solid. He opened it and flipped through the pages until his eye fell on a familiar passage: " 'Send to the virgin Pachacla,' said Rocapac, 'and tell her my lord commands . . .' "

He shouted with released anger. He snatched up a marking crayon and scrawled the two names in thick black letters across the wall map.

He looked at the book again: solid, not an illusion. You could break a nose with it; whatever it was, it was real, and wherever it had been, it was here.

Anger was piling up in him again. He cleared a space for the book in the top drawer of his desk, found the key, and locked it. After some thought, he went to the medicine cabinet, tore off a broad strip of adhesive tape, and taped the key to his chest. Anybody who could get that off without his noticing was welcome to it. Still not satisfied, he cut some scrap pine into thin wedges, dipped them in glue, and forced them in under all three desk drawers. When the glue set, it would take a keyhole saw or a wood chisel to get those drawers open.

All the same, in the morning the tape was gone from his chest, leaving not a mark; the drawers were innocent of wedges or glue; the book was missing.

He gave it up, in baffled anger, and went back to the typewriter. The novel claimed his full attention again; he sank himself deep in the work of writing it.

Fall came and went. The first snow flurries of the year were whipping around the windows of the house when Mangor typed the words: "Kor stood grimly motionless at the parapet, gazing down at the sea of faces in the torchlight. A wind sighed out of the north; midnight was coming. 'O Kor,' came a howl from below, 'what are you going to do now?' "

He stopped and hit the linespacer a few times. He stared at the unfinished page. Then he wrote, "I WANT AN EXPLANATION."

He got up and walked away from the desk.

The rest of the story was in his head, about two thousand words, maybe three. He knew exactly how the book was going to end, but he had never written it down. Unless something happened, he promised himself, he never would write it down. It would mean scuttling the novel, probably hurting his career badly. If it came to that, he would quit writing—go back to the West Coast, get a berth on a freighter again. He had pulled up all his roots before, often enough; he could do it again.

For three days he loafed around the house, reading and watching television, letting dust gather on

the pile of manuscript beside the typewriter.

On the fourth day, he was sitting in front of the picture window with the drapes pulled back, looking down the long snow-covered slope toward the county road, when he became aware that a dark figure was toiling up the path.

He crumpled his newspaper slowly and put it down beside the easy chair. His heart was beating hard, with anger or fear. He stayed where he was, without moving. The figure came slowly nearer; it was a round figure, wider at the belly than at the shoulders. White puffs of vapor appeared briefly over its head.

Mangor waited until he could see the face clearly, and then he went to the door.

The round man raised one hand in that curious abbreviated salute, as he climbed the last rise to the house. His face was pink and smooth over the fur collar of his jacket. He was wearing a little flat hat or cap, that looked absurd on his round head.

Mangor opened the door, feeling the chill air flood in around his body. It was a day of clear, hard cold, close to zero by the porch thermometer; but the round man, in his thin fur-collared jacket and hat, did not seem uncomfortable. Smiling, unembarrassed, he walked up the steps.

Mangor stood aside.

"Thank you, sir," said the round man affably, and walked into the house.

Mangor closed the door and turned. Leblang was waiting for him politely in the middle of the living room, looking curiously out of place there with the bookshelves and the fireplace behind him. It was something about his clothes, maybe— The thought dwindled away, and Mangor let it go.

His fists were clenching, more or less by themselves. He said curtly, "Sit down. Do you want a drink?"

Leblang bowed slightly and sat in the easy chair, laying a thick, oblong parcel on the arm as he did so. He put his cap on top of it, and opened his jacket by running one hand down the center seam. He leaned back, entirely at his ease, and said, "A drink, perhaps later. We have business to discuss, Mr. Mangor."

"If you call that business," Mangor said. He pulled up a straight chair and sat facing Leblang, leaning forward tensely, elbows on his knees. "Let's start with an easy one. Who are you? Where do you come from?"

"My name you know," said Leblang; "I am a native of New Dublin, U.V.S., but I make my home in Venusberg."

"Where's that?" Mangor demanded.

Leblang looked at him with

kindly amusement. "My dear sir, you know perfectly well where it is. On the planet Venus, five hundred years in your future."

Mangor's jaw knotted. "And?" he said.

"Mr. Mangor, it happens that you wrote a book which was one of the few works of fiction carried to my planet by the original settlers. I read it in my youth; I have reread it many times since. I think I may say that I have the honor to be your most enthusiastic admirer."

"What book was that?" Mangor asked.

"It was called 'The Outcast.'"

Mangor was on his feet. "But I didn't write it!" he said. "I had the feeling all along that it was my style, my slant on everything, my tricks of plotting and pace, but I never wrote a word of it! I wrote that one instead!" He waved toward the open study door.

"I understand," said Leblang in a placating tone. "But look at it in this way, if you will. If I had not prevented you by introducing myself as I did, you *would* have written 'The Outcast.' In a time-line parallel to this one, you *did*. Time is like this, Mr. Mangor." He held up one chubby hand, with the fingers spread. "There are many worlds, many Robert Mangors, all alike or only slightly different. If I may say so, the cosmos is bountiful, to those who understand her mysteries."

Mangor said, "You disappeared, that first time. You went out like *that*." He snapped his fingers. "And then the book—when I went to sleep it was here, and when I woke up it was gone."

Leblang was nodding placidly. "If I had let you think it was a book like any other book, Mr. Mangor, you would not have written the sequel as I desired. To make you think I, myself, was a dream, was also helpful. So I played one or two little tricks—"

"What tricks—how?"

"Try to understand that a time-line may be crossed or tangled with one that lies beside it. You may visualize them as pieces of string, perhaps: ordinarily they lie straight and separate. But if in crossing over from one to the other, I take a piece of the first one with me—do you see now? While you stood watching me that day, Mr. Mangor, I transferred myself to another time-line. Later, when you so thoroughly locked away the volume I gave you, I waited until you had gone to sleep, and then I transferred you to another line—one in which you had *not* taken the book apart. You see, in principle, it is quite simple."

"Let me get this straight," said Mangor. "I don't know if I follow that time-line business or not, but if I get it, you knew I was going to write that book. You came along and stopped me. You threw a block into me. Why?"

"What would you do," asked Leblang, "in my position? If you had, let us say, a very long life expectancy, and the power to alter time as you choose?"

Mangor looked at him appraisingly. There was something about Leblang that kept bothering him, and now, as his anger faded, he tried consciously to identify it. He was trained to read people's characters in their expressions and attitudes; staring at Leblang, he thought automatically, *Here's a guy who's never worked a day with his hands, or had to worry about his next meal. . . . He's tubby, but harder than he looks, say two-eighty, and he's about—Forty? Sixty? Eighty? A hundred?*

That was it, he realized: he could not tell how old Leblang was.

A chill went up his back. He said gratingly, "I suppose I'd stop a couple of wars, for a starter. Then there was a guy I knew in San Francisco, about fifteen years ago. He stepped in front of a truck."

Leblang was shaking his head patiently. "No, Mr. Mangor. I tried all those things, and I assure you there is never any end to them. Things never stay mended. I found that I was not God."

"All right, what then?" said Mangor.

"You might have chosen differently. I decided to become a collector of unwritten books. In particular, yours, Mr. Mangor. I wanted a sequel to 'The Outcast.' You never wrote one, in any natural time-line that I could discover. This was your year for writing books about Kor. The conditions favored it. Afterwards, you were busy with other things. . . . Incidently, I don't know if it was apparent to you, but the original book was half the length of the one you saw—the one I gave you. That was really 'The Outcast' and its first sequel, bound together under one title. You have just written the third book of the series. Mr. Mangor; and may I say I look forward to reading it with delight?"

Mangor sat down slowly. "The series . . ." he said.

"Just so. Now then, sir," said Leblang, rising, "you have had the explanation you asked for. In addition, I am leaving you a little bonus—an expression of my gratitude."

"That?" said Mangor, nodding toward the parcel on the arm of the chair.

"This," answered Leblang, touching it firmly. "And now I must go. You may look into the parcel now, if you wish, but of course, you will not read it until you have finished your manuscript." He shrugged his jacket together; the edges met and clung for no reason that Mangor could see. He clapped his absurd little hat on his head and went briskly to the door.

"Good-by, Mr. Mangor: it has been a real pleasure." He nodded cheerfully and went out. Through the window, Mangor watched him trudging vigorously down the path and along the white road until he finally disappeared around the bend.

Mangor turned and picked up the parcel. He hefted it, then tore loose the paper at one end. There were two calf-bound volumes nestling together in the paper, each with the same gold-tooled design. The lettering on the spines read "The Outcast" and "The Return of Kor." The author's name was Robert E. Mangor.

Standing there, he had a vision of time as a series of transparent corridors, each with its bustling figure of Leblang, each with its angry Mangor. With the third book as bait, Leblang would get a fourth written, and with the fourth, a fifth . . .

With the books in his hands, Mangor swore bitterly. The library Leblang could have, if he wanted it! The lost plays of Sophocles and Aeschylus, Sappho's poems, the unfinished novels of Stevenson, the unwritten work of Stephen Crane . . .

Mangor didn't know the reason for his sudden anger—whether it was the nagging suspicion that there was something wrong with Leblang's taste, or the feeling that he had let treasure slip through his hands. He lifted the two somehow cheap-looking books, and slammed them down hard on the table.

Another fable, done in Mr. Finney's usual taut, gem-like style, of Manacle, Arizona. What would you *do if you had a shrike, a gila monster, and a stock of aphrodisiacs?*

The Gilashrikes

by Charles G. Finney

KNOX COPJE of MANACLE, ARIZONA, herbalist and healer of sorts, mused in his patio as he prepared to feed his pets. One pet was a gila monster, to which he fed hens' eggs. The other was a shrike; to it he fed liver. Disparate as pets go, they were nevertheless fond of each other, for the butcher bird was wont to peck affectionately now and again at the lizard, and Copje had observed the lizard, as affectionately, caress the bird's feathers with its thick purple tongue.

Their friendliness, thought Copje, was not too strange. Both were outcasts, the monster because of its poisonous fangs, the shrike because of its habit of impaling young birds on thorn tree spines. Mankind loved them not, and animal kind distrusted them. Hence, they sympathized with each other. Could, wondered Copje, that sympathy be turned into an even more meaningful thing? Bird and lizard, biologically, were not too far apart. A feather was only a modified scale. A wing only a modified leg. The shrike's hooked beak was startlingly reptilian. Shrike and gila alike laid eggs. If these affinities of theirs were abetted—scientifically—what were the potentialities?

Herbalist Knox Copje went into his laboratory and examined his stock of aphrodisiacs. From a selected batch of them he distilled a subtle drop or two.

One drop he injected into the monster's daily egg. Another drop he introduced into the shrike's dollop of liver. He fed his pets, then prudishly vacated himself from the patio for the rest of the day.

Two weeks later he observed the gila monster painfully trying to climb the Balm of Gilead tree. She had a twig in her mouth. Copje made a long, not too slant-

ing ladder from the ground up to the branches. Gratefully, she wagged her thick tail at him, seized her twig again, mounted the ladder, chose a secure place among the lower branches and began to build a nest. In a matter of minutes the butcher bird was there to help her; in addition to other twigs he brought pieces of bright yarn. Together they constructed a stout and remarkably handsome nest. The two-foot-long lizard curled her plump orange and black body into it and sighed with contentment. There the shrike fed her, bringing her baby mice, baby pack rats, baby birds. She thanked him with her gentle little eyes and nibbled daintily. What she did not eat he hung on branches around her.

She laid three eggs. When she needed exercise or a drink of water, the shrike sat upon the eggs while she made her way down the ladder and attended to her wants in the patio. Copje said afterward he had never seen a more loving couple in all his days.

It was a hot summer in Manacle that year, and the eggs hatched in two weeks. The butcher bird celebrated by singing for three hours in his fierce, triumphant voice.

The chicks, like their lizard mother, had four legs, but the legs were longer and more slender than hers. They had their father's short, powerful wings. Each wing had a hook on its joint, as does the wing of a hoatzin or bat. Their heads, featherless and with reptilian scales, resembled gila monster heads with butcher bird beaks. The beaks, in turn, were equipped with gila monster fangs. The chicks' tails were like their mother's, thick and heavy—but covered with downy gray feathers. The general color of the young things was black and orange, suitably interspersed with an almost rosy gray.

As active as newborn reptiles but as diffident as newborn birds, they left the nest quickly but remained for a week in the protective branches of the Balm of Gilead tree. With their four legs and wing hooks, they could climb with wonderful facility and, besides, their father was always there to watch. The mother lizard, who had left the nest, stood guard beneath the tree.

One day their father decided it was time they learn to fly. As their mother watched fearfully from the ground, he took the little things one by one in his hawklike beak and tossed them into the air. They flapped their thick little wings and, feet and tails hanging down like the underpinning of ancient airplanes, winged their way around and around the patio. They landed in a tumbling cluster beside their mother. She hissed at them in delight.

Copje noted that they could

crawl up the concrete block side of his patio as easily as a Sonoran skunk, that they could dig with skill and rapidity, and that they were not averse to taking dips in his swimming pool where they held their wings high to keep from wetting them while they paddled around speedily with their four feet. As do chuckawallas, they had the ability to inflate their bodies so that they floated like pontoons.

Copje also noted that their parents, after a relatively few days, took little interest in them, and after three weeks none at all. The chicks were then six inches long, and they were growing with astonishing rapidity.

Though they spent their days together, they chose to sleep apart at night. One dug itself a snug burrow and slept there. The second roosted upsidedown in the Balm of Gilead tree as does a bat. The third slept on a doll bed in the play house.

Despite their fierce looks and poison teeth, they preferred canned dog food to any other kind of fodder. Copje fed them from a wide, shallow pan. They perched upon its rim with their hind legs and fed themselves carefully with their front talons.

For want of anything better he named them Eaque, Minos and Rhadamante which all sapient people know as the names of the sooty judges of Hell.

Copje could never decide whether they were shrikegilas, gilashrikes or butchmonsters, but settled on the middle term as being the most euphonious.

In that neighborhood lived many cats and, concomitantly, few birds. The cats, mostly alley with a sprinkling of Persian and Siamese, were adepts at waylaying and pouncing upon their feathered friends; and the feathered friends, after many such decisive incidents, took heed and avoided the felines' hunting grounds.

Eaque, Minos and Rhadamante, having attained full stature, one day appointed themselves guardians of the birds. Copje, who liked birds and despised cats, saw them undertake their first police job.

A purple grackle, unaware of the cat menace, had chosen to land first on Copje's bird bath and next to alight on the ground and peck at things. Under a nearby Texas Ranger bush, tense and ready to spring, crouched a feral Siamese tabby. Copje was about to shout a warning at the grackle, when, dive-bombing down upon the Siamese, came Eaque, Minos and Rhadamante. Each at that time was about two feet long and as fearsome as a cockatrice. They attacked the cat from all angles, two seizing its ears and digging in, the third seizing its tail and dig-

ging out. As was that of their gila monster mother's, their poison apparatus consisted of fangs which were channeled rather than hollow. But, unlike their mother's, their venom was not deadly. Instead, it acted as a powerful narcotic. The Siamese tabby put up a brief struggle, then, as its chastisers drew off to watch the effect of their handiwork, slunk away like a cat in a dream, found a sheltered place in which to lie down, and promptly went to sleep. The grackle, which had taken interested refuge on a telephone wire, returned to the pickings in Copje's patio.

The gilashrikes thereafter made it their daily business to dive on cats that were out after birds. They extended their operations from Copje's immediate patio to cover the whole neighborhood. Word got around among the birds that they were safe in the area again. Word got around among the cats that *they* were not. The feathered friends returned in swarms. The sullen grimalkins left them alone. To see that order was maintained, Eaque, Minos and Rhadamante maintained vigil awing and from the tops of telephone poles.

One day the stern trio perceived a large bully dog about to attack a small, cringing Chihuahua. Just as the bully dog bared his teeth, the gilashrikes struck him and buried him in a mass of orange and black fury. Chewing on his ears, they gave him a particularly strong dose of their weird sedation. He managed to get only to the corner before he lay down and went to sleep.

Next, the gilashrikes turned their attention to dogs that barked at mailmen, meting them the same treatment they had meted the bully dog which had bared its teeth at the Chihuahua. Finally, they began to punish dogs which yelled and howled at night when people were trying to sleep.

They imposed their discipline so rigorously that soon no cat or dog in that neighborhood dared to take one step beyond the bounds of propriety lest Eaque, Minos or Rhadamante catch him at it and descend upon him like the plague.

The strictness of their policing policy knew no bounds. When Halloween neared and little trick-or-treaters took to the streets at night to ring people's doorbells and solicit sweets, fruits and cookies, the gilashrikes put up with it for ten minutes only and then began systematically to herd the tots back to their respective households.

Furthermore, Eaque, Minos and Rhadamante did not approve of young couples parking in the school lot and smooching. Many a maiden, in the sweet arms of temptation, heard a rustle of wings, saw a flash of orange and

black, heard her escort yell, and watched bewildered as he fell fast asleep after a sharp munch on the ear.

Window-peeping, though never an openly acknowledged nighttime sport in that area, did exist. The modest bather, immersed in her ablutions, sometimes heard footsteps outside her window—particularly when the venetian blinds were partly open. The disrobing housewife sometimes saw eyes peering at her from the blackness outside the windowpane. Eaque, Minos and Rhadamante quickly put a stop to all that nonsense. For a while it seemed as if an epidemic had struck certain young men, an epidemic which unaccountably made them fall asleep in their neighbors' yards around midnight.

People who overlooked arising in time to go to church on Sunday —it made no difference what denomination—very shortly found that when they were on the verge of oversleeping, there came a most outlandish and insistent clatter from their rooftops. It was either Eaque or Minos or Rhadamante telling them it was time to go to worship. The gilashrikes, by that time, had developed a command of language which rivaled that of the smarter parakeets.

Knox Copje, though no alcoholic, did enjoy a drop now and then, particularly in his patio in the late afternoon. It was then that he relaxed his nerves. It was then that he dreamed his dreams. It had been upon such a time that he had thought up the idea of mating butcher bird with gila monster.

Having cleaned up the cat situation, having scourged and tamed the bully dogs and the postman-baiting dogs, having disciplined the trick-or-treaters and the neckers, the oversleepers and the window-peepers, the three moralists which Copje had, in a sense, created, turned their attention to him. Did he attempt that first cool, lovely drink in his patio, one of them came buzzing in like a giant, infuriated hornet and knocked it out of his hand. Did he slink into the confines of his house and attempt a secret sip, one of them was sure to be hiding near the bottle only too eager to bite him on the hand and put him to sleep.

Copje philosophized: These beings act the way they do because their parents were such bad citizens. Everybody hates gila monsters, and everybody hates shrikes. Hence, these chicks of theirs, knowing the odium in which their parents were held, resolved to erase that fulsome censure by the rigid probity of their own lives and actions. They chose the role of neither bird nor lizard. Instead, they chose to be admonitory and avenging angels, hoping in that way to wipe out the opprobrium attached to their birth. Their zeal

I presume, must be called commendable.

Thus philosophizing, Copje reached for his bourbon. Three orange and black fantasies attacked him from three sides. But Copje, no fool, was ready for them this time.

He wore stout screen netting over his head and thick leather gloves upon his hands. He wrung their necks.

Guided Tour

Please keep close—
We enter by this new pale arch of hours
Into the greystone corridor of years,
Which at this end is still under construction.
Please note the stained glass windows which depict
A number of historic episodes.
A legal green here—further back they're purple—
Before that, bright iron, bronze, and last—grey flint,
From which the hall drives its general tone.
One legend goes that at the furthest part,
Where it begins, there're only two small stones
Placed one on top the other for a start
By some half-animal—but others think
The whole was laid out from the very first
By some big architect whose spirit still
Directs construction. Well, you take your pick.
. . . And now, I thought I heard somebody ask
About our future thoughts for building on.
Well, there's now building quite a fine addition
Of plastic, steel and glass, all air-conditioned,
Also there's planned a nucleonic part
Built up from force-fields. But beyond *its* end
We butt, unfortunately, on a space—
A pit, or void, through which the right of way
May be disputed, and is still in doubt. . . .

—Gordon R. Dickson

Poul Anderson first appeared in F&SF, with the memorable "Interloper," in April, 1951 . . . and between that story and this there have been (including a few collaborations) 30 other contributions from him. They have been extraordinarily various in style and content, and of consistent high quality; and we couldn't agree more with the selection of Mr. Anderson as Guest of Honor at this year's World Science Fiction Convention. . . .

operation incubus

by POUL ANDERSON

"No," I SAID TO MY BRIDE'S BUSINESS associate. "You are not coming along on the honeymoon."

He laid back his ears. "Mneowrr!" he said resentfully.

"You'll be quite all right by yourself in this apartment for a month," I told him. "The superintendent has promised to feed you every evening, the same time as he sets out the milk for the Brownie. And don't forget, when the Brownie comes in here, you are not to chase him. The last time you did that, the Good People sweetened our martinis three days in a row."

Svartalf glowered yellow-eyed and switched his tail. I suppose that was cat for, Well, dammit, anything the size of a mouse, which scuttles like a mouse, has got to expect to be treated like a mouse.

"He'll be here to dust and change *your* litterbox," I reminded Svartalf in my sternest voice. "You've got the run of the place, and you can fly up the chimney on the whiskbroom anytime you want fresh air. But the Brownie is off limits, bucko, and if I come back and hear you've been after him, I'll take wolf shape and tree you. Understand?"

Svartalf jerked his tail at me, straight upward.

Virginia Graylock, who had now for an incredible few hours been Mrs. Stephen Matuchek, entered the living room. I was so stunned by the view of tall slenderness in a white dress, straight aristocratic features and red hair shouting down to her shoulders, that the voice didn't register except as a symphonic accompaniment. She had to repeat: "Darling, are you absolutely sure we can't take him? His feelings are hurt."

I recovered enough to say, "His feelings are made of tool steel. It's okay if he wants to share our bed when we get back, I guess—within reason—but fifteen pounds of black witchcat on my stomach when I'm honeymooning is out of reason. Besides, what's worse, he'd prefer your stomach."

Ginny blushed. "It will be so odd without my familiar, after all these years. If he promised to behave—"

Svartalf, who had been standing on a table, rubbed against her hip and purred. Which was not a bad idea, I thought. However, I had my foot down and wasn't about to lift it. "He's incapable of behaving," I said. "And you won't need him. We're going to forget the world and its work, aren't we? I'm not going to study any texts, nor visit any of my fellow theriomorphs, even that were-coyote family down at Acapulco who inivited us to drop in. You're not going to cast any spells nor attend any covens. It's going to be just us two, and we don't want any pussy—" I braked as fast as possible. She only sighed a little, nodded, and stroked a soothing hand across the cat's back.

You might think a successful, high-salaried New York witch would be anything but innocent. Certainly Ginny had a temper and her own kind of sophistication. However, quite apart from a stubbornly loyal and clean personality, she had hitherto practiced those branches of the Art which require maidenhood. She would have to relearn a great many aspects of her own trade, now she was married. Which was one reason we were going to college together: I for an engineering degree (getting straight A's in Shamanistics and Differential Equations, but having some trouble with Arcane Languages and Electronics) and she for a doctorate in thaumaturgy (plus instruction in those techniques she would have to know to compensate for being wedded).

In short, my fire-and-ice girl had become, temporarily, only another bride. And what's so only about that?

"All right, dear," she said. With a flick of her earlier self: "Enjoy wearing the family pants while you can."

"I intend to do so all the time," I bragged.

She cocked her head. "*All* the time?" Hastily: "We'd best be on our way. Everything's packed."

"Check, mate," I agreed. She stuck out her tongue at me. I patted Svartalf. "So long, chum. No grudges, I trust?" He bit a piece out of my hand and said he supposed not. Ginny hugged him, seized my arm, and hurried me out.

The home to which we'd be coming back was a third-floor

apartment near Trismegistus University. Our wedding this morning had been quiet, a few friends at the church, a luncheon afterward at somebody's house, and then we made our farewells. But Ginny's connections in New York and mine in Hollywood have money. Several people had clubbed together to give us a Persian carpet: a somewhat overwhelming present, but show me the bridal couple that doesn't like a touch of luxury.

It lay on the landing, its colors aglow in the sun. Our baggage was piled in the rear. We snuggled down side by side on cushions of polymerized sea foam. Ginny murmured the command words. We started moving so smoothly I didn't notice when we were airborne. The carpet wasn't as fast or flashy as a sports-model broomstick, but the hundred dragonpower spell on it got us out of the city in minutes.

Midwestern plains rolled green and enormous beneath us, here and there a river like argent ribbon; but we were alone with birds and clouds. The force screen was so well designed that we never felt the wind of our passage. Ginny slipped off her dress. She had a sunsuit beneath it, and now I understand transistor theory—the absence of material has as real an existence as the presence. We sunbathed on our way south, stopped at twilight to have supper at a charming little restaurant in the Ozarks, but decided not to stay in a broomotel. Instead, we flew on. The carpet was soft and thick and roomy. I started to raise the convertible top, but Ginny said we'd keep warm enough if we flew low, and she was right. Stars crowded the sky, until a big yellow Southern moon rose to drown half of them, and the air was murmurous, and we could hear crickets chorus from the dark earth below, and nothing else is any of your business.

I knew exactly where I was bound. A wartime friend of mine, Juan Fernandez, had put his Army experience to good use. He'd been in the propaganda section, and done many excellent scripts. These days, instead of nightmares, he was broadcasting one of the most popular dream series on the West Coast, and his sponsors were paying him accordingly. In fact, everyone loved Fernandez except the psychoanalysts, and they're obsolete now that scientific research has come up with some really efficient antipossession techniques. Last year he had built a lodge in the country of his ancestors. It stood all by itself on the Sonora coast, at one of the loneliest spots on Midgard and one of the most beautiful. Fernandez had offered me the use of it this month for our honeymoon.

We glided down about noon the next day. Westward, the Gulf of California burned blue and molten white. Surf broke on a wide strip of sand beach, then cliffs raised tier after tier, finally the land itself rolled off to the east, dry, stark, and awesome. The lodge made a little spot of green, perched on the lowest bluff just above the strand.

Ginny clapped her hands. "Oh! I wouldn't have believed it!"

"You Easterners don't know what big country is," I said smugly.

She shaded her eyes against the sun-dazzle and pointed. "But what's that?"

My own gaze traveled no further than her arm, but I remembered well enough. Atop a cliff, about a mile north of the lodge and several hundred feet higher, crumbling walls surrounded a rubbleheap; the snag of one tower stood at the northwest angle, to scowl among winds. "La Fortaleza," I said. "It's Spanish work, Seventeenth Century. Some Don had an idea he could exploit this area for profit. He erected the castle as a strong point and residence, even brought a wife here from Castile. But everything went wrong and the place was soon abandoned."

"Can we explore it?"

"If you like."

Ginny laid a hand on my shoulder. "What's wrong, Steve?"

"Oh . . . nothing. I don't care for the Fortaleza myself. Even as a human by daylight, I sense wrongness. I went over there once after dark, wolf shape, and then it stank. Not so much in a physical way, but — Oh, forget it."

She said soberly: "The Spaniards enslaved the Indians in those times, didn't they? I imagine a lot of human agony went into that castle."

"And left a residuum. Yeah, probably. But hell, it was long ago. We'll have a look around. The ruins are picturesque, and the view from there is tremendous."

"If you really are worried about ghosts—"

"Forget it, darling! I'm not superstitious!"

And then we landed at the lodge and did indeed forget it.

The place was built in cloister style, white walls and red-tile roof enclosing a courtyard where a fountain played. But there was also a garden surrounding the outside, green with leaves and grass, red and white and purple and gold with flowerbeds. We were quite alone. The grounds were elementalized for Earth and Water, so they needed no attendants; the other two elemental forces kept the house air-conditioned, and there was also an expensive cleanliness spell on it. Ginny prepared a Mexican lunch from the supplies we'd brought

along. She was so beautiful in shorts, halter, and frilly apron that I hadn't the heart to offer to teach her to cook. She exclaimed aloud when the dirty dishes floated back to the kitchen and followed to watch them dive into soapy water and frisk around. "It's the most up-to-date automatic dishwasher I've ever seen!" she cried.

So we had plenty of time for an afternoon of surfbathing. At sunset we climbed back up a stairway hewn from the yellow rock, ravenous, and I prepared steaks by introducing them to a charcoal fire but allowing no further conversation. Afterward we moved out on a patio overlooking the sea. We sat in deck chairs, holding hands, and the stars came out to greet us.

"Let's Skinturn at moonrise and frolic a bit," I suggested. "You'd make a delightful lady wolf. Or, hm, I wou— Never mind!"

She shook her head. "I can't, Steve, dear."

"Sure, you can. You'd need a T-spell, of course, but—"

"That's just it. You have lycanthropic genes; all you need to change species is polarized light. But for me it's a major transformation, and . . . I don't know . . . I don't feel able to do it. I can't even remember the formulas. I guess I'm not able, any more. All my professional knowledge has gotten even fuzzier than I expected. I'll need refresher courses in the most elementary things."

I sighed. I'd been looking forward to wolfing it. You don't really know the world till you've explored it with animal as well as human sense, and Ginny was certainly a part of the world— Whoa, there! "Okay," I said. "Next year, when you're an adept again."

"Of course. I'm sorry, darling. If you want to run off by yourself, werewise, go ahead."

"Not without you."

She chuckled. "You might get fleas, anyhow." She was leaning over to nibble my ear when we both heard the footsteps.

I rose to my feet, muttering inhospitable things. A form, shadowy under the velvet sky, approached us over a path which snaked inland. Who the devil? I thought. Someone from the village, ten miles hence? But—My nose in human shape is dull by my wolf standards, but suddenly there was a smell I didn't like. It wasn't unpleasant; indeed, its pungency seemed all at once to heighten Ginny's half-visible beauty to an unbearable degree. And yet something in me bristled.

I stepped forward as the stranger reached our patio. He was medium tall for a Mexican, which made him shorter than me. He moved so gracefully, no more loudly than smoke, that I wondered if he could be a werecougar. A dark cape over an im-

maculate white suit garbed the supple body. His wide-brimmed hat made the face obscure, till he took it off and bowed. Then light from a window touched him. I had never seen so handsome a man, high cheekbones, Grecian nose, pointed chin, wide-set eyes of a gold-flecked greenish gray. His skin was whiter than my wife's, and the sleek hair was ash-blond. I wondered if he was even a Mexican national, let alone of native stock.

"*Buenas noches, señor,*" I said curtly. "*Pardón, pero no hablamos español.*" Which was not quite true, but I didn't want to make polite chitchat.

The voice that answered was tenor or contralto, I couldn't decide which, but music in any case. "I' faith, good sir, I speak as many tongues as needful. I pray forgiveness, but having observed from afar that this house was lighted, methought its master had returned, and I did but come with neighborly greeting."

His pronunciation was as archaic as the phrasing: the vowels, for instance, sounded Swedish, though the sentences didn't have a Swedish rhythm. At the moment, however, I was surprised by the words themselves. "Neighbor?"

"My sister and I have made abode within yon ancient castle."

"What? But— Oh." I stopped. Fernandez hadn't mentioned anything like this, but then, he himself hadn't been here for months. The Fortaleza and grounds belonged to the Mexican government, from which he had purchased a few acres for his hideaway. "Did you buy it, then?"

"A few rooms were made a right comfortable habitation for us, sir," he evaded. "I hight Amaris Maledicto." The mouth, so cleanly shaped that you scarcely noticed how full it was, curved into an altogether charming smile. Had it not been for the odor in my nostrils, I might have been captivated. "You and your fair lady are guests, then, of Señor Fernandez? Be welcome."

"We've borrowed the lodge." Ginny's voice was a little breathless. I stole a glance, and saw by the yellow window-light that her eyes were full upon his, and brilliant. "Our . . . our name . . . Virginia. Stephen and Virginia . . . Matuchek" I thought, with a cold sort of puzzlement, that brides were supposed to make a great show of being Mrs. So-and-So, not play it down in that fashion. "It's very kind of you to walk all this way. Did your . . . your sister . . . come too?"

"Nay," said Maledicto. "And truth to tell, however glad of your society, 'tis belike well she was spared the sight of such loveliness as is yours. 'Twould but excite envy and wistfulness."

From him, somehow, unbeliev-

ably, in that flowering night above the great dim sea, under stars and sheer cliffs, that speech to another man's wife wasn't impudent, or affected, or anything except precisely right. Even by the half-illumination on the patio, I saw Ginny blush. Her eyes broke free of Maledicto's, the lashes fluttered birdlike, she answered confusedly: "It's so kind of you . . . yes . . . won't you sit down?"

He bowed again and flowed into a chair. I plucked at Ginny's dress, drew her back toward the house and hissed furiously: "What the devil are you thinking of? Now we won't get rid of this character for an hour!"

She shook free with an angry gesture I remembered from past quarrels. "We have some cognac, Señor Maledicto," she said. It would have been her best smile she gave him, slow and sideways, except that the faintest tremble was still upon her lips. "I'll get it. And would you like a cigar? Steve brought some Perfectos."

I sat down as she bustled inside. For a moment I was too outraged to speak. Maledicto took the word. "A charming lass, sir. A creature of purest delight."

"My *wife*," I growled. "We came here for privacy."

"Oh, misdoubt me not!" His chuckle seemed to blend with the sea-murmur. Where he sat, in shadow, I could make him out only as a white and black blur; and yet those oblique eyes glowed at me. "I understand, and shall not presume upon your patience. Mayhap later 'twould please you to meet my sister—"

"I don't play bridge."

"Bridge? Oh, aye, indeed, I remember. 'Tis a modern game with playing cards." His hand sketched an airy dismissal. "Nay, sir, our way is not to force ourselves unwanted. Indeed, we cannot visit save where some desire for us exists, albeit unspoken. 'Twas but . . . how should a man know aught from our dwelling, save that neighbors had arrived? And now I cannot churlishly refuse your lady's courtesy. But 'tis for a short time only, sir."

Well, that was as soft an answer as ever turned away wrath. I still couldn't like Maledicto, but my hostility was eased enough so I could analyze my motives. Which turned out to be largely reaction to a third wheel. Something about him, maybe the perfume he used, made me desire Ginny more than ever before.

But my rage came back as she hovered over him with the cognac, chattered too loudly and laughed too much and insisted on having the Maledictos to dinner tomorrow! I hardly listened to their conversation. He talked smoothly, wittily, never quite answering any questions about himself. I sat and rehearsed what I'd say after he left.

And finally he rose. "I must not keep you," he said. "Moreover, 'tis a stony path to the Fortaleza, one with which I am not yet familiar. So I must go slowly, lest I lose my way."

"Oh! But that could be dangerous." Ginny turned to me. "You've been over the trail, Steve. Show him home."

"I'd not afford you that much trouble," demurred Maledicto.

"It's the least we can do. I insist, Amaris. It won't take you long, Steve. You said you felt like a run in the moonlight, and look, the moon is almost due to come up."

"Okay, okay, okay!" I snapped, as ungraciously as possible. I could, indeed, turn wolf on the way back, and work some of my temper off. If I tried to argue with her now, the way I felt, our second night would see one Armageddon of a quarrel. "Let's go."

He kissed her hand. She said goodnight in a soft, blurry voice, like a schoolgirl in love for the first time. He had a flashlight; it made a small bobbing puddle of radiance before us, picking out stones and clumps of sagebrush. The moonglow on the eastern ridges grew stronger. I felt it tingle along my nerves. For a while, as we wound over the mountainside, only the scrunch of our shoes made any noise.

"You brought no torch of your own, sir," he said at last. I grunted. Why should I tell him I'd been given witch-sight in the Army—to say nothing of the fact that I was a werewolf who in my alternate species had no need of flashlights? "Well, you shall take mine back," he continued. "The way were perilous otherwise."

That I knew. An ordinary human would blunder off the trail, even in bright moonlight. It was such a dim, nearly obliterated path, and the land was so gnarled and full of shadows. If he then got excited, the man would stumble around lost till dawn—or, quite probably, go off a precipice and smash his skull.

"I will call for it tomorrow evening." Maledicto sighed happily. "Ah, sir, 'tis rare good you've come. New-wedded folk are aye overflowingly full of love, and Cybelita has long been as parched as Amaris."

"Your sister?" I said.

"Yes. Would you care to meet her this eventide?"

"No."

Silence fell again. We dipped into a gut-black ravine, rounded a crag, and could no more see the lodge. Only the dim sheen of waters, the moonglow opposite, the suddenly very far and cold stars, lit that country. I saw the broken walls of the Fortaleza almost over my head, crowning their cliff like teeth in a jaw. Maledicto and I might have been the last living creatures on Middle Earth.

He stopped suddenly. His

flashlight snapped out. "Goodnight, Señor Matuchek!" he cried, and his laughter was evil and beautiful.

"What?" I blinked bewildered into the murk that clamped on me. "What the hell do you mean? We're not at the castle yet!"

"Nay. Proceed thither if thou will. And if thou canst."

I heard his feet go back down the path. They didn't crunch the gravel any more. They were soft and very rapid, like the feet of a bounding animal.

Back toward the lodge.

A moment I stood as if cast in lead. I could hear the faintest movement of air, rustling dry sagebrush, the ocean. Then my heartbeat shook all other noises out of me.

"Ginny!" I screamed.

I whirled and raced homeward. My toes caught a rock, I pitched over, bloodied my hands with the fall. I staggered up, the bluffs and gullies flung my curses back to me, I went stumbling down a slope through brush and cactus. When at last I stopped, panting, to glare around, I'd lost sight of the castle and hadn't yet spied the lodge. I'd lost my way.

My gaze swept down the slope to the dropoff. The sea was a wan glimmer beyond. A little sense came back. Maledicto had adroitly removed me from the scene, perhaps murdered me: if I were the untrained, unspecial Homo Sapiens he assumed. But I had a little more in reserve than he knew, such as witch-sight. I mumbled the formula and felt the retinal changes. And then I could see for miles. The view was blurred, of course; the human eyeball can't focus infra-red wavelengths very well; but I could recognize landmarks. I set a general course and made for home.

With nightmare slowness. Maledicto had gone faster than human.

Then the moon broke over the hills.

The change was on me before I had even consciously willed it. I certainly didn't stop to undress, bundle my clothes and carry them in my mouth. My wolf-jaws ripped everything to rags except the elastic-banded shorts, and I went shadow-swift over the mountainside. If you think a bobtailed two-hundred-pound wolf in shorts is ridiculous, you're probably right; but it didn't occur to me at that moment.

I couldn't see as far with lupine eyes. But I could smell my own trail, in bruised vegetation, vivid as a cry. I found the path again and drank another scent. Now I knew what the undertone of Maledicto's odor had been.

Demon.

I'd never caught that exact whiff before now, and my wolf brain wasn't up to wondering

about his species. It didn't even wonder what he desired of Ginny. There was only room in my narrow skull for hate, and for hurrying.

The lodge came into view. I sprang onto the patio. No one was about. But the master bedroom faced the sea, its window open. I went through in a leap.

He had her in his arms. She was still pressing him away, resisting, but her eyes were closed and her strength faded. "No," she whispered. "No, help, don't, Amaris, Amaris, Amaris." Her hands moved to his throat, slid to his neck, drew his face towards hers. They swayed downward together in the gloom.

I howled, once, and sank my teeth in him.

His blood did not taste human. It was like liquor, it burned and sang within me. I dared not bite him again. Another such draught and I might lie doglike at his feet, begging him to stroke me. I willed myself human.

The flow of transformation took no longer than he needed to release Ginny and turn around. Despite his surprise, he didn't snarl back at me. A shaft of moonlight caught his faerie visage, blazed gold in his eyes, and he was laughing.

My fist smashed forward with all my weight behind it. Poor, slow man-flesh, how shall it fight the quicksilver life of Air and Darkness? Maledicto flickered aside. He simply wasn't there. I caromed into a wall and fell down, my knuckles one crumple of anguish.

His laughter belled above me. "And this puling thing should deserve as lively a wench as thee? Say but the word, Virginia, and I whip him to his kennel."

"Steve . . . " She huddled back in a corner, not coming to me. I reeled onto my feet. Maledicto grinned, put an arm about Ginny's waist, drew her to him. She shuddered, again trying to pull away. He kissed her, and she made a broken sound and the motions of resistance started once more to become the motions of love. I charged. Maledicto shoved with his free hand. I went down, hard. He put a foot on my head and held me.

"I'd liefer not break thy bones," he said, "but if thou'rt not gentle enough to respect the lady's wishes—"

"*Wishes?*" Ginny broke from him. "God in Heaven!" she wailed. "Get out!"

Maledicto chuckled. "I must needs flee the holy names, if a victim of mine invoke them in full sincerity," he murmured. "And yet thou seest that I remain here. Thy inmost desire is to me, Virginia."

She snatched up a vase and hurled it at him. He fielded it expertly, dropped it to shatter on

me, and went to the window. "Oh, aye, this time the spell has been broken," he said. "Have no fear, though. At a more propitious hour, I shall return."

There was a moment's rippling, and he had gone over the sill. I crawled after him. The patio lay white and bare in the moonlight.

I sat down and held my head. Ginny flung herself sobbing beside me. A long time passed. Finally I got up, switched on the light, found a cigaret and slumped on the edge of the bed. She crouched at my knees, but I didn't touch her.

"What was it?" I asked.

"An incubus." Her head was bent, I saw only the red hair flowing down her back. She had put on her frilliest nightgown while we were gone—for whom? Her voice came small and thin. "He . . . it . . . it must haunt the ruins. Came over with the Spaniards. . . . Maybe it was responsible for their failure to—"

I dragged smoke into my lungs. "Why hasn't it been reported?" I wondered aloud, dully. And then: "Oh, yeah, sure. It must have a very limited range of operation. A family curse on a family now extinct, so it could only haunt the home and lands of that old Don. Since his time, no one has been here after dark."

"Until we—" Her whisper trailed off.

"Well, Juan and his wife, with occasional guests." I smoked more fiercely. "You're the witch. You have all the information. I barely know that an incubus is an erotic demon. Tell me, why did it never bother the Fernandez'?"

She began to weep afresh, deep, hopeless gasps. I thought that despair had combined with the earlier loss of witch-power to drive her thaumaturgic training clean out of reach. My own mind was glass-clear as I continued: "Because it did speak the truth, I suppose, about holy symbols being a shield for people who really want to be shielded. Juan and his wife are good Catholics. They wouldn't come here without hanging crucifixes in every room. And neither of them wishes to be unfaithful to the other."

The face she raised was wild. "Do you think that I—"

"Oh, not consciously. If we'd thought to put up some crosses when we arrived, or just to offer a prayer, we'd have been safe too. We'd never even have known there was an incubus around. But we had too much else to think about, and it's too late now. Subconsciously, I suppose, you must have toyed with the idea that a little vacation from strict monogamy could do no one any harm—"

"Steve!" She scrambled stiffly to her feet. "On my honeymoon! You could say such a thing!"

"Could and did." I ground out

the cigaret, wishing it were Maledicto's face. "How else could it lay a spell on you?"

"And you—Steve—Steve, I love you. Nobody else but you."

"Well, you better rev up the carpet," I sighed. "Fly to, oh, I imagine Guaymas is the nearest town big enough to have an exorcist on the police force. Report this and ask for protection. Because if I remember my demonology, it can follow you anywhere, once you've come under its influence."

"But nothing happened!" She cried it as if I were striking her; which, in a sense, I was.

"No, there wasn't time. Then. And, of course, you'd have been able to bounce any demon off with a purely secular spell, if you'd possessed your witch-powers. But those are gone for the time being. Until you relearn them, you'll need an exorcist guard, every hour of the day you aren't in a church. Unless— I stood up too.

"What?" She caught me with cold frantic hands. I shook her off, blinded by the double hurt to my manhood—Maledicto had whipped me in fight and almost seduced my bride. "Steve, what are you thinking?"

"Why, that I might get rid of him myself."

"You *can't!* You're no warlock, and he's a demon!"

"I'm a werewolf. It may be a fair match." I shuffled into the bathroom, where I began to dress my wounds. They were superficial, except for swollen knuckles. She tried to help, but I gestured her away from me

I knew I wasn't rational. There was too much pain and fury in me. I had some vague idea of going to the Fortaleza, whither Maledicto had presumably returned. In wolf shape, I'd be as fast and strong as he. Of course, I dare not bite . . . but if I could switch to human as occasion warranted, use the unarmed combat techniques I'd learned in the Army. . . . It was as hopeless a plan as ever men coughed forth, but my own demon was driving me.

Ginny sensed it: that much witchcraft remained to her, if it were not simply inborn. She was quite pale in the unmerciful glare of the saintelmo, she shivered and gulped, but after a while she nodded. "If you must. We'll go there together."

"No!" The roar burst from my gullet. "Be off to Guaymas, I said! Haven't I troubles enough? Let me alone till I can decide if I want you back!"

Another instant she stared at me. May I never again see such eyes. Then she fled.

I went out on the patio and became a wolf. The demon stench was thick on the air. I followed it over the mountainside.

The earth was a dazzle of moonlight. My nose caught smells of dust, sage, cactus, kelp and iodine more remotely; my ears heard a bat's sonar squeak, the terrified scuttering of a jackrabbit; my pelt tingled with sensations for which men have no words. I felt none of my human torture now. The lupine brain could only hold clean, murderous carnivore thoughts. It was like being reborn. I understand that some psychiatrists have gotten good results by turning their patients temporarily into animals.

Presently the old watchtower lifted its corroded outline across the moon. I entered what had been a gateway, every nerve abristle for attack. The courtyard lay empty around me. Sand had blown in during the centuries, weeds thrust between the flagstones, only a shard of paving jutted here and there. Near the center was a heap which had once been a building. Cellars lay underneath. I'd explored them a little, once, but not deeply enough to come on the lair of the incubus.

I bayed at the moon, to challenge him.

It rustled in the tower door. A white form stepped out. My heart made one leap, and I crouched back. I thought wildly, could I slash his jugular on the first bite, it wouldn't matter how much of that drug-blood I got, he would be dead in the flesh and his essense must return from this plane of reality. . . .

Laughter ran around me on soft little feet. She made another stride outward, so that she could stand under a cataract of moonlight, impossibly white against the black moldering walls. "Good even, fair youth," she said. "I had not hoped for this much fortune."

Her scent entered my lungs and my blood. I growled, and it turned into a whine. I wagged the stump of my war-casualty tail. She came up and scratched me behind the ears. I licked her arm; the taste was dizzying. Somewhere in a thunderful wilderness, I thought it was no use remaining lupine. The currents of change ran through me. I stood up a man.

She was as tall and ripplesome as Amaris, and she had the same strange pointed face and eyes that fluoresced under the moon. But the pale hair fell past her waist in a cloud, and she wore a gown obviously woven by stingy spiders, on a figure that— Oh, well, I won't try to describe it. I suppose half the fun was simply in the way it moved.

"Cybelita . . . I presume?" I managed to husk.

"And thou art Stephen." A slender hand fell upon mine and lingered. "Ah, welcome!"

I wet my lips. "Er . . . is your brother at home?"

She swayed closer. "What matters that?"

"I—uh—" I thought crazily that one can't very well explain that one's business with a lady's brother is to kill him. And after all, well, anyhow— "Look here," I blurted. "You, he, you've got to leave us alone!"

Cybelita smiled yieldingly. "Ah, thy grief is mine, Stephen. And yet, canst thou not find it in thy heart to pity us? Knowest thou what damnation in truth consists of? To be a creature in whom the elements exist unblent—Fire of love, Air of impulse, Water of wantonness, and the dark might of Earth—to be of such a nature, and then doomed to slink like a rat in these ruins, and howl to empty skies, and hunger and hunger for three hundred years! If thou wert starving, and two folk passing by spread a feast, wouldst thou not take such few crumbs as they could well spare?"

I croaked something about the analogic fallacy.

"'Til not malignancy," she pleaded. She drew close, her arms reached up to my shoulders and her bosom nudged mine. "'Tis need which forces us. And after all, Stephen, ye mortals are not so perfect. Were ye saints with never an impure thought, no demon could venture near. We are drawn by that in ye which is akin to ourselves."

"Uh, well, yes," I choked. "You have two points there . . . a point, I mean. Yes."

Cybelita laughed again. "But la, sweet youth! Here I stand in moonlight, my arms about the most beautiful unclothed lad this world has ever seen—"

"Oh, my God!" I remembered that my outfit was a pair of skivvies. Since she didn't shrink away, my exclamation must not have counted as a prayer.

"—and discourse on metaphysic! Nay, now thou'rt all a-blush." Cybelita pirouetted from me. "I'd not have the advantage of thee. That's not true friendship. So let us be alike in garb." She snapped her fingers and the gown vanished. Not that it made a very big difference, except morally, and by that time morals seemed irrelevant.

"And now, come, come, my darling. My wolf, thou'rt the first *loup-garou* that e'er I met—had I suspected so new a wonder, no time would have been wasted on the woman— Come!" She threw herself against me. I don't know exactly what made me respond to her kiss. It was like being caught in a rose-colored cyclone.

Somehow I found a last resting place in the fragments of my willpower. "No! I have a wife!"

Cybelita laughed less pleasantly. "Ha! Where thinkest thou Amaris has been since the moment thou left the wench alone?"

I made one garroted sound.

"'Tis happened now," she purred. "What's done can ne'er be

undone. Blame not thy wife. She is but mortal. Shouldst thou be more?"

I previewed Purgatory for about a minute. Then, hardly aware what was happening, I snatched Cybelita to me. My kisses broke her lips a little and I tasted the demon blood. "Come," she crooned, "my lover, my lover, bear me to the tower . . ."

I picked her up and started across the courtyard.

"Steve!"

Ginny's scream was a knife driven through me.

I dropped my burden. Cybelita landed on her lovely tocus and said a most unlovely word. I gaped at Ginny. She crouched on our Persian carpet, it hovered over the broken gateway, her red hair tumbled past her bare shoulders and I knew, in that moment when I had already lost her to Amaris (for it could nevermore be the same between us two), that she was all I would ever want.

Cybelita got up. She looked bleached in the moonlight. I had no further desire for her. To hell with her.

To Hell with her.

She sneered upward toward Ginny, turned back and opened her arms to me. I said: "Defend yourself!" and became a wolf.

Cybelita skipped back from my lunge. I heard Ginny cry out again, as if from another existence. My attention was all on the succubus. Cybelita's body pulsed, grayed, suddenly she was a wolf too. She grinned shamelessly at me and her femaleness hit me like a club.

I didn't take the offer. I went for her throat. We rolled over and fought. She was tough, but hadn't been trained in combat lycanthropy. I know the judo breaks for my animal shape, too. I got under her jaws and clamped my own teeth exactly where I wanted them.

The demon blood was sweet and horrible to taste. But this time it couldn't rouse my wishes. The powers in me of Love, for my wife, and Hate, for the thing I fought, were too strong. Or, if you insist on outmoded terms, my glands were now supplying enough testosterone and adrenalin to swamp whatever hormone was in that ichor.

I killed her.

I lay by the body, gasping. A part of me heard the shriek of the foul spirit, disincarnated again, its Schrödinger function changing mathematical form to put it back in the Low Continuum where it belonged. The wolf corpse writhed horribly through shapes of woman, man, horned and tailed satanoid; then its last cohesive forces were spent and it puffed away in gas.

Piece by tattered piece, my wits returned. I lay across Ginny's dear lap. Moonlight poured cool

over us, under friendly stars, down to a castle which was nothing but piled stones. Ginny laughed and wept and held me close.

I became a man again and drew her to me. "It's okay, darling," I breathed. "Everything's okay. I finished her. I'll get Amaris next."

"What?" Her wet face lifted from my breast toward my lips. "Don't you n-n-n-know? You have!"

"Huh?"

"Yes. A little of my education c-c-came back to me . . . after you'd gone." She drew a shaking breath. "Incubi and succubi are identical. They change their sex as . . . as . . . indicated. . . Amaris and that hussy were the same!"

"Then she didn't—he didn't—you didn't—" I let out a yell which registered on seismographs in Baja California. And yet that noise was the most fervent prayer of thanks which Our Father had ever gotten from me.

Not that I hadn't been prepared to forgive my dearest, having had some experience of the demon's power. But learning that there wasn't anything which needed to be forgiven was like a mountain off my back.

"Steve!" cried Ginny. "I love you too, but my ribs aren't made of iron!"

I climbed to my feet. "It's over with," I whispered, incredulous. In a moment: "More than over with. We even came out ahead of the game."

"What do you mean?" she asked, still timid, but with a sunrise in her eyes.

"Well," I said, "I guess we've had a useful lesson in humility. Neither of us turned out to own a more decorous subconscious mind than the average person. But in what counts, I learned how you care for me. You followed me here, not knowning what might be waiting, when I'd told you to run for safety—"

Her tousled head rubbed against my shoulder. "I learned the same about you, Steve. It's a good feeling."

We walked onto the carpet. "Home, James," I said. After a second, when James was airborne: "Uh, I suppose that you're dead tired."

"Well, actually not. I'm still too keyed up. But you, poor darling—"

"I feel fine," I grinned. "We can sleep late tomorrow."

"Mister Matuchek! What are you thinking?"

"The same as you, Mrs. Matuchek."

I suppose she blushed in the moonlight. "So I see. Very good, sir."

Which turned out to have been a prophecy.

Hassoldt Davis, explorer, author of WORLD WITHOUT A ROOF *and other Book-of-the-Month Club selections, captain in the French Foreign Legion, and wonderful conversationalist, here gives us a delightful morality which, needless to say, is not intended as historical or religious comment, but as an offbeat sort of jotting on men and—bless them!—women. . . .*

The Pleasant Woman, Eve

by Hassoldt Davis

THERE WAS, THEN, A LONG AND ancient and angular man, whose name was Isaac, a good man who wandered. One of his friends—he had only three of them—was God. Isaac was born old, in a world very young, and God was earnest and young and dictatorial, as you had to be then.

God had only three friends too, who were Isaac and Adam and the pleasant woman, Eve.

It wasn't much of a world, said old Isaac, walking with God upon a friendly road, but it would do for the shaping of things to come. And Adam and Eve were unripe little people, but they too might serve if they had a future in them.

So said Isaac, grumbling, to God.

And God said, "Old Isaac, however I created you I've no notion of, and where you've been wandering I don't know, but this is my world and these are my people, and I'll handle them as I please. Have you any suggestions?" he added.

And Isaac said, leaning forward on his stick, "Take them or leave them; it's none of my affair. I'll wander in your woods, or go a-walking between your little stars —with your permission—but I hate to see your eyes becoming lined with loneliness, at your age too."

And God said, "Old Isaac—" and his smile was thin— "Old Isaac," said he, "I'm tired as time, and what in the world would you have me do?"

Isaac was wandering back and forth, banging down his stick.

"I'm no one, perhaps," he said, "to give advice, but we need people here, and also something which I've invented, and I call love. Maybe it's no good—maybe your world isn't either—but I've

thought about it seriously, and even dreamed of it sometimes."

"Love?" said God.

"Love," said Isaac. "Which is very difficult to define, but I think it will save you trouble. Why should you be worrying to make these youngsters happy, young Adam and young Eve, and wearing wrinkles into you as you wonder how you ever are going to populate this world?

"It has occurred to me," said Isaac, putting his stick upon his shoulder, "that they might manage it themselves. Let them not be friends, but lovers. And it would save you a lot of time. Let them find themselves desirable, and their good bodies more attractive to each other than they are to trees or vipers, and particularly," said he with a growl, "that viper who talks to them from their favorite apple tree."

Isaac was so old he had forgotten that maybe it was the viper, and not himself, who had invented love.

"First of all, young God," he said, "young father God, you created the wandering Jew, and at my age too, for what good I can't imagine, and I'm so old that I'm sometimes disagreeable, and if you make others in my image the historians will confound us, and we'll never be popular at all. And then you built these children, young Adam and Eve, who, I'm afraid, won't thank you for it."

He forgot the course of his thoughts for a moment, and watched a falling star, his stick held before him in both gnarled hands.

"I should tell you about love," he said, and he told him. "And I've also a project for its continuance; a formality, but a durable one, perhaps."

God listened attentively.

"Even I might like it a little," said old Isaac.

God took Isaac's stick from him and sighted along it toward another shooting star, as if to shoot a dream before it fell.

"I've never been married myself," said God.

There were horse-chestnuts, tough ones, all over the road where they were walking, and when Isaac finally got his stick back he would lean down toward them, to make sure they weren't frogs or mushrooms, for these too were newly created, and he would biff them with the stick.

"I'll think it over," said young father God.

"Me, I'm off on a trip again," said Isaac, "but I'll tell you first of how your world will run, if you'll believe in me and your Adam and your Eve.

"That viper," he said, "you can't count on. You can't count on him for any good at all."

God walked on stolidly, thinking. That viper was a notion of his own.

Isaac thought seriously, too, and at last he said, "He might even be a woman viper . . . mean . . ."

"You don't like women much," said God, taking the stick again and giving a chestnut a hell of a wallop. It was he who had invented women.

"I do and I don't," said Isaac, "but I'll have our young Eve happy, and Adam too, or I'll ask your permission to discontinue giving you my fine advice, and to leave this thing you've made, and go a-wandering somewhere else."

"Isaac," said God, "my old Isaac, you wouldn't abandon me. You're my son and my father both. Will you talk sense, or must I make that magic again?"

"Magic!" said Isaac. "You've not known your world as I have. You don't know love; you're a practical man; and without love, lad, there's no magic at all, at all!

"Listen," he said then, "will you listen to me?"

God said he would.

Isaac was distraught, for he was envisioning love, which he believed he had invented, and for quite a while he pointed his beard toward a thin cloud, pondering.

God whacked another chestnut, and mumbled, "It might be too much fun."

"Fun be damned," said Isaac. "You're always thinking about fun, and worrying about it."

God spoke in an imperious way. "Will you tell me your story then?"

Not even God could perturb old Isaac, who stepped out smartly to the cadence of his tale. "It's like this," he said, "or it should be. There they are, the innocents, the living human creatures beneath the apple tree; and they've a viper giving them suggestions, which are not, by God—forgive me—at all the invention I have made. You ought to make a mate for that viper, to clean up its dirty mind."

God picked a berry and ate it, to see if it was good.

And Isaac said, "Look you lad, you go cook your magic quickly, and cool it, and spill it on their grass. And Eve will reach up slowly to tickle her viper's tail."

God glanced at him.

"And Eve sits there beside young Adam, and Adam gives her a look, a long look too, a wondering look, for it seems to him that she's more beautiful and not so friendly as before. And this night is a cooler one, with a fine moon in it, and Adam sees the curving warmth of Eve, but he's timid and he moves shyly to her side."

"'Eve,' he says, 'my Eve; you are my Eve,' and he gives her a hug, for that's all he knows till now. 'This is a strange grass we lie upon, and cold with dew.' He gives her a hug again. 'My Eve,' says he, 'you're warmer than I, and so I will hug you so.'

"Now Eve, of course, you made of a rib from Adam's side, and she should be the younger, but probably she is older than Adam, and older than me. So Eve puts an elbow behind her and leans upon it, and turns her head away while she makes a remark about Adam's laziness which is responsible for their not having any clothes to wear."

"Clothes!" God said. "They get dirty, and they hide you!"

Isaac replied impatiently, "Who was it who manufactured seasons, and made a decent weather sometimes hot and sometimes cold? Will you then listen to my story at all?"

God said yes, but he made a wry face saying it.

"Then there they are," said old Isaac, "and in a fine quandary, each of them wondering what the other ought to do. But it's cold as Heaven there, with your dew upon the grass; and while their love is wandering, just like me, your Jew, there they are sliding close together upon the dewy grass."

"There's sure to be fun in this," said God. "I'd intended a serious world."

Isaac got his stick back and banged it down again. He pulled at his beard, which hurt him, and he marched down the road, very smartly for an aged man, leaving God quite a distance behind.

He talked over his shoulder, indifferently.

"There's a moon," he said, "and Adam makes a sweet rhyme of it, pointing it out to Eve so she can see what he means. But she has him in her arms by now, and his poetry is growing thin."

"I can make a poet of him!" said God, behind.

"It's unimportant. He's too shy to make a good poet, anyway. What is good and what is just and what will save your world, is a simple little cloud across the moon."

God caught up with him finally. "Isaac," he said, "you're my friend, and you know my economy. Can I spare a cloud across the moon?"

Isaac offered him his stick, to calm him.

Isaac said, "You can spare the cloud, and you can spare the love which I've invented; for you can surely see them, our Adam and Eve, and the viper with his tail down, twining the hair of Eve."

God said he could.

"And Adam," said Isaac, "he reaches up and he pinches the viper's tail. And he turns over gently from the side where his ribs are sore, and he is warmed at last, with Eve who is no friend of his, but his great darling. And quick as a wink, or almost, your world is won, by the pleasant woman."

except—
each
different *is* fresh
more
The stories of Alfred Bester are difficult to describe
than
the
driving *one* pyrotechnic
before

THE PI MAN

by Alfred Bester

How to say? How to write? When sometimes I can be fluent, even polished, and then, *reculer pour mieux sauter*, it takes hold of me. Push. Force. Compel.

Sometimes

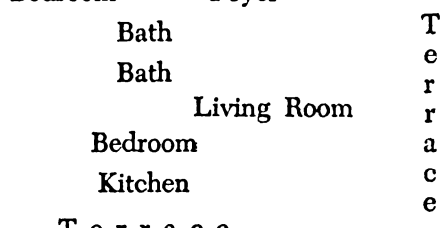
I
must
go
back
but
not
to

jump; no, not even to jump better. I have no control over self, speech, love, fate. I must compensate. Always.

But I try anyway.

Quae nocent docent. Translation follows: Things that injure, teach. I am injured and have hurt many. What have we learned? However. I wake up the morning of the biggest hurt of all wondering which house. Wealth, you understand. Dammel Mews cottage in London, villa in Rome, pent-

house in New York, rancho in California. I awake. I look. Ah! Layout of this place I am in is familiar. Thus:



Oh-oh! I am in penthouse in New York; but that bath-bath back-to-back. Pfui. All rhythm wrong. Balance off. Pattern painful. I telephone downstairs to janitor-mans. At that moment I lose my English. (You must understand I speak in all tongues. A goulash. I am compelled. Why? Ah!)

"Pronto. Ecco mi, Signore Storm. No. Forced to *parlato Italiano.* Wait. I call back in *cinque minuti."*

Re infecta. Latin. The business being unfinished, I shower body, teeth, hairs, shave face, dry everything and try again. *Voila!* The English, she come. Back to invention of A. G. Bell ("Mr. Watson, come here, I need you."). On telephone I speak to janitor. Nice chap. Gets a job of work done in two twos.

"Hallo? Abraham Storm here, again. Yes. Right. Chap in the penthouse. Mr. Lundgren, be my personal rabbi and get some workmen up here this morning. I want those two baths converted into one. Yes. I'll leave five thousand dollars on top of the refrigerator. Thanks, Mr. Lundgren."

Wanted to wear grey flannel this morning, but had to put on the sharkskin. Damnation! African nationalism has queer side-effects. Went to the back bedroom (See diagram) and unlocked the door which was installed by National Safe Co. Inc. I went in.

Everything broadcasting beautifully. Up and down the electromagnetic spectrum. Visual off from ultra violet and jamming toward the infra red. Ultra short wave screaming. Alpha, beta and gamma radiation hearty. And the interuptors innn tt errrr up ppp ttttinggggg at random and comfortably. I am at peace. Christ Jesus! To know even a moment of peace!

I take subway to office in Wall Street. Chauffeur too dangerous;

might become friendly. I don't dare have friends. Best of all, morning subway jam-packed, mass-packed; no patterns to adjust, no shiftings and compensatings required. Peace! I buy all morning papers; because of the patterns, you understand. Too many *Timeses* being read; I must read *Tribune* to balance pattern. Too many *Newses;* I read *Mirror.* &tc.

In subway car I catch a glimpse of an eye; narrow, bleak, grey-blue, the possession of an anonymous man who conveys the conviction that you've never seen him before and will never again. But I picked up that glance and it rang a bell in the back of my mind. He knew it. He saw the flash in my eye before I could conceal it. So I was being tailed again? But by whom? U.S.A.? U.S.S.R.? Matoids?

I blasted out of the subway at City Hall and gave them a false trail to the Woolworth Building, in case they were operating double-tails. The whole theory of the hunters and the hunted is not to avoid being spotted . . . no one can escape that . . . but to lay so many trails for them to follow that they become over-extended. Then they're forced to abandon you. They have so many men for so many operations. It's a question of diminishing returns.

City Hall traffic was out of sync (as it always is) and I had to walk on the hot side of the street to compensate. Took elevator up to 10th floor of bldg. There I was suddenly seized by something from sss ome wwwhh ere. SS—ommme tth inggg b addd. I began to cry, but no help. An elderly clerk emerge from office wearing alpaca coat, carry papers, gold spectacles.

"Not him," I plead with nowhere. "Nice mans. Not him. Please."

But I am force. Approach. Two blows; neck and gut. Down he go, writhing. I trample spectacles. Remove watch from pocket and smash. Shatter pens. Tear papers. Then I am permitted to get back into elevator and go downstairs again. It was ten-thirty. I was late. Damned inconvenient. Took taxi to 99 Wall Street. Tipped driver ten dollars. Sealed one thousand in envelope (secretly) and sent driver back to bldg to find and give to clerk.

Routine morning's work in office. Market jumpy; big board hectic; hell to balance and compensate, even though I know the patterns of money. I am behind by the sum of $109,872.43 by eleven-thirty; but, *a pas de geant* the patterns put me ahead $57,075.94 by half-past twelve o'clock noon, Daylight Saving Time, which my father used to call Woodrow Wilson time.

57075 makes nice pattern, but that 94¢. Pfui. Made the whole

balance sheet look lopsided, ugly. Symmetry above all else. Only 24¢ in my pocket. Called secretary, borrowed 70¢ from her and threw sum total out window. Felt better as I watched it chime down to the street, but then I caught her looking at me with surprise and delight. Very bad. Very dangerous.

Fired girl on the spot.

"But why, Mr. Storm? Why?" she asked, trying not to cry. Darling little thing. Freckled face and saucy, but not so saucy now.

"Because you're beginning to like me."

"What's the harm in that?"

"When I hired you I warned you not to like me."

"I thought you were kidding."

"I wasn't. Out you go. Beat it."

"But why?"

"I'm afraid I might start liking you."

"Is this a new kind of pass?" she asked.

"God forbid."

"Well, you don't have to fire me," she flared. "I hate you."

"Good. Then I can go to bed with you."

She turned crimson and opened her mouth to denounce me, the while her eyes twinkled at the corners. A darling girl. I could not endanger her. I put her into her hat and coat, gave her a year's salary for a bonus, and threw her out. *Punkt.* Made memo: Hire nothing but men, preferably married, misanthropic and murderous. Men who could hate me.

So, lunch. Went to nicely balanced restaurant. Tables attached to floor. No moving them. All chairs filled by patrons. Nice pattern. No need for me to compensate and adjust. Ordered nicely patterned luncheon for self:

Martini Martini

Martini

Croque M'sieur Roquefort

Salad

Coffee

But so much sugar being consumed in restaurant, I had to take my coffee black, which I dislike. However, still a nice pattern. Balanced.

$\times^2 + \times + 41 =$ prime number.

Excuse, please. Sometimes I'm in control and see what compensating must be done. Other times it's forced on me from God only knows where or why. Then I must do what I'm compelled to do, blindly, like speaking the gibber-

ish I speak; sometimes hating it, like the clerk in the Woolworth Building. Anyway, the equation breaks down when $x = 40$.

The afternoon was quiet. For a moment I thought I might be forced to leave for Rome (Italy), but something adjusted without needing me. The A.S.P.C.A. finally caught up with me for beating my dog to death, but I'd contributed $10,000 to their Shelter. Got off with a shaking of heads. I penciled moustaches on posters, rescued a drowning kitten, saved a woman from a mugging, and had my head shaved. Normal day for me.

In the evening to the ballet to relax with all the beautiful patterns, balanced, peaceful, soothing. Then I take deep breath, quash my nausea, and force myself to go to *Le Bitnique,* the Beatnik joint. I hate *Le Bitnique,* but I need a woman and I must go where I hate. That freckled girl I fire . . . so slender and full of delicious mischief, and making eyes at me. So, *poisson d'avril,* I advance myself to *Le Bitnique.*

Chaos. Blackness. Sounds and smells a cacaphony. One 25 watt bulb in ceiling. One maladroit pianist play Progressive. Against L. wall sit Beatnik boys, wearing berets, black glasses, and pubic beards, playing chess. Against R. wall is bar and Beatnik girls with brown paper bags under arms containing toilet articles. They are shuffling and manuevering for a pad for the night.

Those Beatnik girls! All skinny . . . exciting to me tonight because too many American men dream about over-stuffed women, and I must compensate. (In England I like over-stuff because England like women skinny.) All wear tight slack, loose sweater, Brigitte Bardot hair, Italian make-up . . . black eye, white lip . . . and when they walk they make with the gait that flipped that Herrick cat three centuries ago when he split and wrote:

> *Next, when I lift mine eyes and see*
> *That brave vibration each way free;*
> *Oh how that glittering taketh me!*

I pick one who glitter. I talk. She insult. I insult back and bug drinks. She drink and insult[2]. I hope she is lesbian and insult[8]. She snarl and hate, but helpless. No pad for tonight. The pathetic brown paper bag under her arm. I quell sympathy and hate back. She does not bathe. Her thinking patterns are jangles. Safe. No harm can come to her. I take her home to seduce by mutual contempt. And in living room (see diagram) sits slender little freckly-face secretary, recently fired, now waiting for me.

I
now
write
part of
s p
t a
o r
r i
y in s
.Capitol of France

Address: 49b is Avenue Hoche. Paris, 8eme, France.

Forced to go there by what happened in Singapore, you understand. It needed extreme compensation and adjustment. Almost, for a moment, I thought I would have to attack the conductor of the *Opera Comique*, but fate was kind and let me off with nothing worse than indecent exposure under the *Petite Carousel*. And I was able to found a scholarship at the *Sorbonne* before I was taken away.

Anyway, she sat there, my little one, in my penthouse now with one (1) bathroom, and $1,997.00 change on top of the refrigerator. Ugh! Throw $6.00 out window and am soothed by lovely 1991 remaining. She sat there, wearing a basic black cocktail dress with tight skirt, sheer black stockings, black opera pumps. The freckly skin gleamed reddish rose from embarrassment. Also red for danger. Her saucy face was very tight from the daring thing she thought she was doing. Damme! I like that.

I also like the nice even curve of the legs, and the bosom. Balanced, you understand? * * Like so; but not too thrusting. Tactful. Also her cleavage.) (Like so; and just as rosy as her face, despite desperate powdering to make her skin milky. That powder; a nuisance. I go to kitchen and rub burnt cork on shirt-front to compensate.

"Oh-so," I say. "Me-fella be ve'y happy ask why you-fella chop-chop invade along my apa'-tment. Excep' mus' now speak pidgin-English. Ve'y much embarass along me. Excuse, please, until change come."

"I bribed Mr. Lundgren," she blurted. "I told him you needed important papers from your office."

"*Entschuldigen Sie, bitte.*

Meine pidgin haben sich geaendert. Sprachen Sie Deutsch?"

"No."

"Dann warte ich."

The Beatnik turned on her heel and bounced out, her brave vibration each way freee. I caught up with her in front of the elevator, put 101 (perfect pattern) into her hand, and said goodnight in Spanish. She hated me. I did a naughty thing to her * * (no excuse) and returned to the apartment when my American-English returned to me.

"What's she got?" the Freckle ask.

"What's your name?" I indict.

"My God! I've been working in your office for three months. You don't know my name? You really don't?"

"No, and I don't want to know it now."

"I'm Lizzie Chalmers."

"Go away, Lizzie Chalmers."

"So that's why you always called me 'Miss.' Why did you shave your head?"

"Trouble in Vienna."

"It's chic," she said judgematically, "but I don't know. You remind me of a movie star I loathe. What do you mean, trouble in Vienna?"

"None of your business. What are you doing here? What do you want from me?"

"You," she said, blushing fiery.

"Will you, for God's sake, go away!"

"What did she have that I don't?" Lizzie Chalmers demanded. Then her face crinkled. "Don't? Is that right? What. I. She. Have. That. I. Do. Not. Yes, right. I'm going to Bennington. They're strong on aggression, but weak on grammar."

"What do you mean, you're going to Bennington?"

"Why, it's a college. I thought everybody knew."

"But *going?*"

"I'm in my junior year. They drive you out with whips to acquire experience in your field."

"What's your field?"

"It used to be economics. Now it's you. How old are you?"

"One hundred and nine thousand eight hundred and seventy-two."

"Oh, come on! Forty?"

"Thirty."

"No! Really?" She nodded contentedly. "That makes ten years difference between us. Just right."

"Are you in love with me, Lizzie?"

"Well, I'm trying to get something going."

"Does it have to be me?"

"I know it sounds like a notion." She lowered her eyes. "And I suppose women are always throwing themselves at you."

"Not always."

"What are you, blasé, or something? I mean . . . I know I'm not staggering, but I'm not exactly repulsive."

"You're lovely."

"Then why don't you touch me?"

"I'm trying to protect you."

"I can protect myself when the time comes."

"The time is now, Lizzie."

"The least you could do is offend me the way you did that girl in front of the elevator."

"You snooped?"

"Sure I snooped. You didn't expect me to sit here on my hands, did you? I've got my man to take care of."

"*Your* man?"

"It happens," she said in a low voice. "I never believed it, but it happens. You fall in and out of love, and each time you think it's for real and forever. And then you meet somebody and it isn't a question of love any more. You just know he's your man, and you're stuck. I'm stuck."

She raised her eyes and looked at me . . . violet eyes, full of youth and determination and tenderness, and yet older than twenty years . . . much older. And I knew how lonely I was, never daring to love, always compelled to live with those I hated. I could fall into those violet eyes and never come up.

"I'm going to shock you," I said. I looked at the clock. 1:30 A.M.. A quiet time. Please God the American tongue would stay with me a while longer. I took off my jacket and shirt and showed her my back, cross-hatched with scars. Lizzie gasped.

"Self-inflicted," I told her. "Because I permitted myself to like a man and become friendly with him. This is the price I paid, and I was lucky. Now wait here."

I went into the master bedroom where my heart's shame was embalmed in a silver case hidden in the righthand drawer of my desk. I brought it to the living room. Lizzie watched me with great eyes.

"Five years ago a girl fell in love with me," I told her. "A girl like you. I was lonely then, as always. Instead of protecting her from myself, I indulged myself. Now I want to show you the price *she* paid. You'll loathe me for this, but I must show you . . ."

A flash caught my eye. Lights in a building down the street going on. I leaped to the window and stared. The lights in the building three down from me went off . . . five seconds eclipse . . . then on. It happened to the building two down, and then to the one next door. The girl came to my side and took my arm. She trembled slightly.

"What is it?" she asked. "What's the matter?"

"Wait," I said.

The lights in my apartment went out for five seconds and then came on again.

"They've located me," I told her.

"They? Located?"

"They've spotted my broadcasts by d/f."

"What's D.F.?"

"Direction-finder. Then they turned off the current in each building in the neighborhood for five seconds . . . building by building . . . until the broadcast stopped. Now they know I'm in this house, but they don't know which apartment." I put on my shirt and jacket. "Goodnight, Lizzie. I wish I could kiss you."

She clamped her arms around my neck and gave me a smacking kiss; all warmth, all velvet, all giving. I tried to push her away.

"You're a spy," she said. "I'll go to the chair with you."

"I wish to Heaven I were a spy," I said. "Goodbye, my dearest love. Remember me."

Soyez ferme. A great mistake letting that slip. It happen, I think, because my American slip, too. Suddenly talk jumble again. As I run out, the little devil kick off opera pumps and rip slit in cocktail skirt up to thigh so she can run. She is alongside me going down the fire stairs to the garage in basement. I hit her to stop, and swear at her. She hit back and swear worse, all the time laughing and crying. I love her for it. Damnation! She is doomed.

We get into car, Aston-Martin, but with left-hand drive, and speed west on 53rd Street, east on 54th Street, and north on First Avenue. I am making for 59th Street bridge to get off Manhattan island. I own plane in Babylon, Long Island, which is always ready for this sort of awkwardness.

"*J'y suis, J'y reste* is not my motto," I tell Elizabeth Chalmers, whose French is as uncertain as her grammar . . . an endearing weakness. "Once they trapped me in London at post office. I received mail at General Delivery. They sent me a blank letter in a red envelope, and that's how they followed me to 139 Piccadilly, London W-1. Telephone Mayfair 7211. Red for danger. Is your skin red all over?"

"It's not red!" she said indignantly.

"I meant rosy."

"Only where the freckles merge," she said. "What is all this escape? Why do you talk so funny, and act so peculiar? Are you sure you're not a spy?"

"Only positive."

"Are you a being from another world who came on an Unidentified Flying Object?"

"Would that horrify you?"

"Yes, if it meant we couldn't make love."

"What about conquering earth?"

"I'm only interested in conquering you."

"I am not and have never been a being from another world who came on an Unidentified Flying Object."

"Then what are you?"

"A compensator."

"What's that?"

"Do you know dictionary of Misters Funk & Wagnalls? Edited by Frank H. Vizetelly, Litt. D., LL. D.? I quote: One who or that which compensates, as a device for neutralizing the influence of local attraction upon a compass-needle or an automatic apparatus for equalizing the pressure of gas in the– Damn!"

Litt. D. Frank H. Vizetelly does not use that bad word. Is my own because road-block now faces me on 59th Street bridge. Should have anticipated. Should have felt patterns, but too swept up with this darling girl. Probably there are road-blocks on all bridges and tunnels leading out of this $24 island. Could drive off bridge but might harm my angelic Elizabeth Chalmers which would make me a *brute figura* as well as sadden me beyond redemption. So. Stop car. Surrender.

"*Kammerade,*" I pronounce, and ask: "Who you? Ku Klux Klan?"

Hard-faced mans say no.

"White Supremacists of the World, Inc.?"

No agains. I feel better. Always nasty when captured by lunatic fringes looking for figureheads.

"U.S.S.R.?"

He stare, then speak. "Special Agent Krimms from the F.B.I.," and show his badge. I enthuse and embrace him in gratitude. F.B.I. is salvation. He recoil, wonder if I fairy. I don't care I kiss Elizabeth Chalmers and she open mouth under mine to mutter: "Admit nothing; deny everything. I've got a lawyer."

Brilliant lights in the office in Foley Square. The chairs are placed just so; the shadows arranged just so. I have been through this so often before. The anonymous man with the bleak eyes from the subway this morning is questioning me. His name is S. I. Dolan. We exchange a glance. His says: I goofed this morning. Mine says: So did I. We respect each other, and then the grilling starts.

"Your name's Abraham Storm?"

"The nickname is 'Base.'"

"Born December 25th?"

"I was a Christmas baby."

"1929?"

"I was a depression baby."

"You seem pretty jaunty."

"Gallows humor, S. I. Dolan. Despair. I know you'll never convict me of anything, and I'm desperate."

"Very funny."

"Very tragic. I want to be convicted . . . but it's hopeless."

"Home town San Francisco?"

"Yes."

"Grand High School. Two years at Berkeley. Four years in the Navy. Finished at Berkeley. Majored in statistics."

"Yes. Hundred percent American boy."

"Present occupation, financier?"

"Yes."

"Offices in New York, Rome, Paris, London?"

"Also Rio."

"Known assets from bank deposits, stock and bond holdings, three million dollars?"

"No, no, no!" I was agonized. "Three million, three hundred and thirty-three thousand, three hundred and thirty-three dollars and thirty-three cents."

"Three million dollars," Dolan insisted. "In round numbers."

"There are no round numbers; there are only patterns."

"Storm, what the hell are you up to?"

"Convict me," I pleaded. "I want to go to the chair and get this over with."

"What are you talking about?"

"You ask and I'll explain."

"What are you broadcasting from your apartment?"

"Which apartment? I broadcast from all of them."

"In New York. We can't break the code."

"There is no code; only randomness."

"Only what?"

"Only peace, Dolan."

"Peace!"

"I've been through this so often before. In Geneva, Berlin, London, Rio. Will you let me explain it my own way, and for God's sake trap me if you can?" I beseeched.

"Go ahead."

I took a breath. It's always so difficult. You have to do it with metaphore. But it was 3:00 A.M. and my American would hold for a while. "Do you like to dance?"

"What the hell . . . ?"

"Be patient. I'm explaining. Do you like to dance?"

"Yes"

"What's the pleasure of dancing? It's a man and woman making rhythms together . . . patterns. Balancing, anticipating, following, leading, co-operating. Yes?"

"So?"

"And parades. Do you like parades? Masses of men and women co-operating to make patterns. Why is war a time of joy for a country, although nobody admits it? Because it's an entire people co-operating, balancing and sacrificing to make a big pattern. Yes?"

"Now wait a minute, Storm . . ."

"Just listen, Dolan. I'm sensitive to patterns . . . more than dancing or parades or war; far more. More than the ¾ pattern of day and night, or the ¼ pattern of the seasons . . . far, far more. I'm sensitive to the patterns of the whole spectrum of the universe . . . sight and sound, gamma rays, groupings of peoples, acts of hostility and benign charity, cruelties and kindnesses, the music of the spheres . . . and I'm forced to compensate. Always."

"Compensate?"

"Yes If a child falls and hurts itself, the mother kisses it. Agreed? That's compensation. It restores a pattern. If a man beats a horse, you beat him. Yes? Pattern again. If a beggar wrings too much sympathy from you, you want to kick him, don't you? More compensation. The husband unfaithful to the wife is never more kind to her. All wives know that pattern, and dread it. What is sportsmanship but a compensating pattern to off-set the embarrassment of winning or losing? Do not the murderer and murderee seek each other to fulfill their patterns?

"Multiply that by infinity and you have me. I have to kiss and kick. I'm driven. Compelled. I don't know how to name my compulsion. They call Extra Sensory Perception, Psi. What do you call Extra Pattern Perception? Pi?"

"Pie? What pie?"

"Sixteenth letter of the Greek alphabet. It designates the relation of the circumference of a circle to its diameter. 3.14159+. The series goes on endlessly. It is transcendental and can never be resolved into a finite pattern; and it's agony to me . . . like pi in printing, which means jumbled and confused type, without order or pattern."

"What the hell are you talking about?"

"I'm talking about patterns; order in the universe. I'm compelled to keep it and restore it. Sometimes I'm compelled to do wonderful and generous things; other times I'm forced to do insane things . . . talk garbage languages, go to strange places, perform abominable acts . . . because patterns which I can't perceive demand adjustment."

"What abominable acts?"

"You can pry and I can confess, but it won't do any good. The patterns won't permit me to be convicted. They won't let me end. People refuse to testify. Facts will not give evidence. What is done becomes undone. Harm is transformed into good."

"Storm, I swear you're crazy."

"Maybe, but you won't be able to get me committed to an asylum. It's been tried before. I even tried committing myself. It didn't work."

"What about those broadcasts?"

"We're flooded with wave emissions, quanta, particles, and I'm sensitive to them, too; but they're too garbled to shape into patterns. They have to be neutralized. So I broadcast an anti-pattern to jam them and get a little peace."

"Are you claiming to be a Superman?"

"No. Never. I'm just the man *Simple Simon* met."

"Don't clown."

"Im not clowning. Don't you remember the jingle? *Simple Simon met a Pieman, going to the*

fair . . . ? For Pee-cye-ee-man, read Pee-eye-man. I'm the Pi Man."

Doland scowled. At last he said: "My full name is Simon Ignatius Doland."

"I'm sorry. I didn't know. Nothing personal implied."

He glared at me, then threw my dossier down. He sighed and slumped into a chair. That made the pattern wrong and I had to shift. He cocked an eye at me.

"Pi Man," I explained.

"All right," he said. "We can't hold you."

"They all try," I said, "but they never can."

"Who try?"

"Governments, thinking I'm in espionage; police, wanting to know why I'm involved with so many people in such cockeyed ways, politicos in exile hoping I'll finance a counter-revolution; fanatics, dreaming I'm their rich messiah; lunatic fringes; religious sects; flat-worlders; Forteans . . . They all track me down, hoping they can use me. Nobody can. I'm part of something much bigger. I think maybe we all are, only I'm the first to be aware of it."

"Off the record, what's this about abominable acts?"

I took a breath. "That's why I can't have friends. Or a girl. Sometimes things get so bad somewhere that I have to make frightful sacrifices to restore the pattern. I must destroy something I love. I— There was a dog I loved. A Labrador Retriever . . . I don't like to think about him. I had a girl once. She loved me. And I— And a guy in the navy with me. He— I don't want to talk about it."

"Chicken, all of a sudden?"

"No, damn you; I'm accursed! Because some of the patterns I must adjust to are out-world rhythms . . . like nothing you ever felt on earth. 29/51 . . . 108/303 . . tempi like that. What are you staring at? You don't think that can be terrifying? Beat a 7/5 tempo for me."

"I don't know music."

"This has nothing to do with music. Try to beat five with one hand and seven with the other, and make them come out even. Then you'll understand the complexity and terror of those strange patterns that are coming to me."

Suddenly Dolan's face lit up. "You mean like homing instinct?"

"Homing instinct?"

"The patterns that help birds and animals find home from anywhere. No one knows how."

"That's it; only bigger."

"You belong in a lab, Storm. Where does it all come from?"

"I don't know. It's an unknown universe, too big to comprehend; but I have to beat the tempi of its patterns and make them come out even . . . with my actions, reactions, emotions, senses, while those giant pressures

push
and reverse me
back
and turn me
forth inside
and out
back . . ."

"The other arm now," Elizabeth said firmly. "Lift."

I am on my bed, me. Thinking upheaved again. Half (½) into pajamas; other half (½) being wrestled by freckly girl. I lift. She yank. Pajamas now on, and it's my turn to blush. They raise me prudish in San Francisco.

"*Om mani padme hum,*" I said. "Translation follows: Oh, the jewel in the lotus. Meaning you. What happened?"

"You passed out," she said. "Keeled over. Mr. Dolan had to let you go. Mr. Lundgren helped carry you into the apartment. How much should I give him?"

"*Cinque lire. No. Parla Italiano, gentile Signorina?*"

"Mr. Dolan told me what you told him. Is that your patterns again?"

"*Si.*" I nod and wait. After stop-overs in Greece and Portugal, American-English finally returns to me. "Why don't you get the hell out of here while the getting's good, Lizzie Chalmers?"

"I'm still stuck," she said. "Get into bed . . . and make room for me."

"No."

"Yes. You can marry me later."

"Where's the silver case?"

"Down the incinerator."

"Do you know what was in it?"

"I know what was in it."

"And you're still here?"

"It was monstrous, what you did. Monstrous!" The saucy little face was streaked with mascara. She had been crying. "Where is she now?"

"I don't know. The checks go out every quarter to a number-account in Switzerland. I don't want to know. How much can the heart endure?"

"I think I'm going to find out," she said. She put out the lights. In the darkness came the sound of rustling clothes. Never before have I heard the music of one I love undressing for me . . . for me. I make one last attempt to save this beloved.

"I love you," I said, "and you know what that means. When the patterns demand a sacrifice, I may be even crueler to you, more monstrous . . ."

"No," she said. "You never were in love before. Love creates patterns, too." She kissed me. Her lips were parched, her skin was

icy. She was afraid, but her heart beat hot and strong. "Nothing can hurt us now. Believe me."

"I don't know what to believe any more. We're part of a universe that's big beyond knowledge. What if it turns out to be too gigantic for love?"

"All right," she said composedly. "We won't be dogs in the manger. If love is a little thing and has to end, then let it end. Let all the little things like love and honor and mercy and laughter end . . . if there's something bigger beyond."

"But what can be bigger? What can be beyond?"

"If we're too small to survive, how can we know?"

She crept close to me, the tips of her body like frost. And so we huddled together, breast to breast, warming ourselves with our love, frightened creatures in a wonderous world beyond knowing . . . fearful

and yet an tic ceip ppat inggg.

In 2063 She Ceased to Be

When first I thought I saw her, on that day
I was half glad—then I recalled, she's gone.
That arm held so—illusion, and dismay
Replaced warm feeling. Thus, when later on
The eye (the left one) stared straight into mine—
With question? recognition?—then glanced past,
I was disquieted. Her voice came toward the last:
The very accent, the remembered chime
Of laughter. After, in each throng that passed
I fancied that I saw—foot—arm—or ear—
Or caught a quirk of thought in words I'd hear.
I never, never should have sold her parts;
Disassembling her was all that I could bear,
And my exacerbated spirit starts
Each day anew, each day repeatedly,
To hear or see, or think I hear or see
Herself in part, in gesture, word, or stare,
Reproaching me.

—J. J. COUPLING

Avram Davidson has a particular talent for bringing to absolutely convincing life all sorts of milieus. Some of them, of course, he has known, as this one—he spent three months in Peking during the last war—but some of them he has only read about, and some of them he has only dreamed of. Which last, come to think of it, might apply here, too.

DAGON

Avram Davidson

Then the Lords of the Philistines gathered together to rejoice before Dagon their god, and behold, the image of Dagon was fallen upon its face to the ground, with both his face and his hands broken off, and only the fishy part of Dagon was left to him . . .

THE OLD CHINESE, HALF-MAGICIAN, half-beggar, who made the bowl of goldfish vanish and appear again, this old man made me think of the Aztecs and the wheel. Or gunpowder. Gunpowder appeared in Western Europe and Western Europe conquered the world with it. Gunpowder had long ago been known in China and the Chinese made firecrackers with it. (They have since learned better.) When I was free, I heard men say more than once that the American Indians did not know the use of the wheel until Europeans introduced it. But I have seen a toy, pre-Conquest, fashioned from clay, which showed that the Aztecs knew the use of the wheel. They made toys of it. Fire-crackers. Vanishing goldfish.

Noise.

Light and darkness.

The bright lotos blossoms in the dark mire. Lotos. Plural, lotoi? Loti? That is a coincidence. On October 12, 1900, Pierre Loti left at Taku the French naval vessel which had brought him to China, and proceeded to Peking. Part of that city was still smoking, Boxers and their victims were still lying in the ruins. On October 12, 1945, I left the American naval vessel which had brought me and my fellow-officers to China, and proceeded to Peking—Peiping, as they called it then. I was not alone, the whole regiment came; the people

turned out and hailed and glorified us. China, our friend and partner in the late great struggle. The traffic in women, narcotics, stolen goods, female children? Merely the nation's peculiar institution. Great is China, for there I was made manifest.

Old, old, old . . . crumbling temples, closed-off palaces, abandoned *yamens*. Mud-colored walls with plaster crumbling off them reached a few feet over a man's head and lined the alleys so that if a gate was closed all that could be seen was the rooftop of a one-story building or the upper lineage of a tree, and if a gate was open, a tall screen directly in front of it blocked the view except for tiny glimpses of flatstone-paved courtyards and plants in huge glazed pots. Rich and poor and inbetween and shabby genteel lived side by side, and there was no way of knowing if the old man in dun-colored rags who squatted by a piece of matting spread with tiny paper squares holding tinier heaps of tea or groups of four peanuts or ten watermelonseeds was as poor as he and his trade seemed, or had heaps of silver taels buried underneath the fourth tile from the corner near the stove. Things were seldom what they seemed. People feared to tempt powers spiritual or temporal or illegal by displays of wellbeing, and the brick screens blocked both the gaze of the curious and the path of demons—demons can travel only in straight lines; it is the sons of men whose ways are devious.

Through these backways and byways I used to roam each day. I had certain hopes and expectations based on romantic tales read in adolescence, and was bound that the Cathayans should not disappoint. When these alleys led into commercial streets, as they did sooner or later, I sought what I sought there as well. It is not too difficult to gain a command of spoken Mandarin, which is the dialect of Peking. The throaty sound which distinguishes, for example, between *lee-dza*, peaches, and *lee'dza*, chestnuts. I soon mastered. The more southerly dialects have eleven or nineteen or some such fantastic number of inflections, but Pekingese has only four. Moreover, in the south it is hot and steamy and the women have flat noses.

In one of my wanderings I came to the ponds where the carp had been raised for the Imperial table in days gone by. Strange, it was, to realize that some of the great fish slowly passing up and down among the lily-pads must have been fed from the bejeweled hands of Old Buddha herself—and that others, in all likelihood (huge they were, and vast), not only outdated the Dowager but may well have seen—like some strange, billowing shadow above the water-sky—Ch'ien Lung the Great: he

who deigned to "accept tribute" from Catherine of Russia—scattering rice-cake like manna.

I mused upon the mystery of fish, their strange and mindless beauty, how—innocently evil—they prey upon each other, devouring the weaker and smaller without rage or shout or change of countenance. There, in the realm of water, which is also earth and air to them, the great fish passed up and down, growing old without aging and enjoying eternal growth without the softness of obesity. It was a world without morality, a world without choices, a world of eating and spawning and growing great. I envied the great fish, and (in other, smaller ponds) the lesser fish, darting and flashing and sparkling gold.

They speak of "the beast in man," and of "the law of the jungle." Might they not (so I reflected, strolling underneath a sky of clouds as blue and as white as the tiles and marble of the Altar of Heaven), might they not better speak of "the fish in man?" And of "the law of the sea?" The sea, from which they say we came . . . ?

Sometimes, but only out of sociability, I accompanied the other officers to the sing-song houses. A man is a fool who cannot accommodate himself to his fellows enough to avoid discomfort. But my own tastes did not run to spilled beer and puddles of inferior tea and drink-thickened voices telling tales of prowess, nor to grinning lackeys in dirty robes or short sessions in rabbit warren rooms with bodies which moved and made sounds and asked for money but showed no other signs of sentient life.

Once, but once only, we visited the last of the Imperial barber-eunuchs, who had attended to the toilet of the Dowager's unfortunate nephew; a tall old man, this castrate, living alone with his poverty, he did for us what he would for any others who came with a few coins and a monstrous curiosity.

I mingled, also, officially and otherwise, with the European colony, none of whom had seen Europe for years, many of whom had been born in China: Such jolly Germans! Such cultured Italians! Such pleasant spoken, *çi-devant* Vichy, Frenchmen! How well-dressed and well-kept their women were, how anxious, even eager, to please, to prove their devotion to the now victorious cause—and to the young and potent and reasonably personable officers who represent it.

After many an afternoon so well spent, I would arise and take a rickshaw to one of the city gates to be there at the sunset closing, and would observe how, when half the massy portal was swung shut, the traffic would increase and thicken and the sound of

cries come from far down the road which led outside the city and a swollen stream pour and rush faster and faster—men and women on foot and clutching bundles, and carriers with sedan chairs, and families leading heavy-laden ox-carts and horses, children with hair like manes, trotting women swollen in pregnancy, old women staggering on tiny bound feet, infants clinging to their bent backs. The caravans alone did not increase their pace at this time. Slow, severe, and solemn, wooly, double-humped, padfooted, blunt, their long necks shaking strings of huge blue beads and bronze bells crudely cast at some distant forge in the Gobi or at the shore of Lop Nor, the camels came. By their sides were skull-capped Turkomen, or Buryat Mongols with their hair in thick queues.

My eyes scanned every face and every form in all this, but I did not find what I looked for.

Then I would go and eat, while the gates swung shut and the loungers dispersed, murmuring and muttering of the *Bah Loo,* the said-to-be-approaching-slowly-but-steadily-and-as-yet-undefeated-Bah *Loo,* the Communist Eighth Route Army; and the air grew dark and cold.

One afternoon I chose to visit some of the temples—not the well-frequented ones such as those of Heaven, Agriculture, Confucious, and the Lamas—the ones not on the tourist lists, not remarkable for historical monuments, not preserved (in a manner of speaking) by any of the governments which had held Peking since the days of "the great" Dr. Sun. In these places the progress of decay had gone on absolutely unchecked and the monks had long ago sold everything they could and the last fleck of paint had peeled from the idols. Here the clergy earned corn meal (rice in North China was a delicacy, not a staple) by renting out the courtyards for monthly fairs and charging stud fees for the services of their Pekinese dogs. Worshippers were few and elderly. Such, I imagine, must have been the temples in the last days of Rome while the Vandal and Goth equivalents of the Eighth Route Army made plans to invest the city at their leisure.

These ancients were pleased to see me and brought bowls of thin tea and offered to sell me dog-eared copies of pornographic works, poorly illustrated, which I declined.

Later, outside, in the street, there was an altercation between a huge and pockmarked rickshaw "boy" and a Marine. I stepped up to restore order—could not have avoided it, since the crowd had already seen me—and met the Man in Black.

I do not mean a foreign priest.

The coolie was cuffed and sent his way by the Man in Black, and

the Marine told to go elsewhere by me. The Man in Black seemed quite happy at my having come along—the incident could have gotten out of hand—and he stuck to me and walked with me and spoke to me loudly in poor English and I suffered it because of the Face he would gain by having been seen with me. Of course, I knew what he was, and he must have known that I knew. I did not relish the idea of yet another pot of thin tea, but he all but elbowed me into his home.

Where my search ended.

The Civil Police in Peking were nothing, nothing at all. The Japanese Army had not left much for them to do, nor now did the Chinese Nationalist Army nor the U.S. Forces, M. & S. P. So the Peking Police force directed traffic and cuffed recalcitrant rickshaw coolies and collected the pittance which inflation made nothing of.

Black is not a good color for uniforms, nor does it go well with a sallow skin.

She was not sallow.

I drank cup after cup of that vile tea, just to see her pour it.

Her nose was not flat.

When he asked her to go and borrow money to buy some cakes, not knowing I could understand, I managed to slip him money beneath the table: he was startled and embarrassed and this was well. After that, the advantage was even more mine.

She caught my glance and the color deepened in her cheeks. She went for the cakes.

He told me his account of woes, how his father (a street-mountebank of some sort) had starved himself for years in order to buy him an appointment on the police force and how it had come to nothing at all, salary worth nothing, *cumshaw* little more. How he admired the Americans—which was more than I did myself. Gradually, with many diversions, circumlocutions, and euphuisms, he inquired about the chances of our doing some business.

Of course, I agreed.

She returned.

I stayed long; she lit the peanut oil lamps and in the stove made a small fire of briquets fashioned from coal dust and—I should judge, by a faint but definite odor—dung.

After that I came often, we made plans, I named sums of money which caused his mouth to open, a sight to sell dentifrice, indeed. Then, when his impatience was becoming irritating, I told him the whole thing was off—military vigilance redoubled at the warehouses, so on. I made a convincing story. He almost wept. He had debts, he had borrowed money (on his hopes) to pay them.

No one could have been more sympathetic than I.

I convinced him that I wished only to help him.

Then, over several dinner tables I told him that I was planning to take a concubine shortly. My schedule, naturally, would leave less time for these pleasant conversations and equally pleasant dinners. The woman was not selected yet, but this should not take long.

Finally, the suggestion came from *him,* as I had hoped it would, and I let him convince me. This was the only amusing part of the conversation.

I suppose he must have convinced *her.*

I paid him well enough.

There was the apartment to furnish, and other expenses, clothes for her, what have you. Expenses. So I was obliged to some business after all. But not, of course, with *him.* The sulfa deal was dull enough, even at the price I got per tablet, but the thought of having sold the blood plasma as an elixir for aging Chinese vitality (masculine) was droll beyond words.

So my life began, my real life, for which the rest had been mere waiting and anticipation, and I feel the same was true of her. What had she known of living?

In the end he became importunate and it was necessary to take steps to dispense with him. Each state has the sovereign right, indeed, the duty, to protect its own existence; thus, if bishops plot against the Red governments or policemen against the Kuomintang government, the results are inevitable.

He had plotted against *me.*

The curious thing is that she seemed genuinely sorry to hear that he'd been shot, and as she seemed more beautiful in sorrow, I encouraged her. When she seemed disinclined to regard this as the right moment for love, I humbled her. In the end she came to accept this as she did to accept everything I did, as proper, simply because it was I who had done it.

I.

She was a world which I had created, and Behold, it was very good.

My fellow officers continued, absurdly, sponsoring impecunious students at the Protestant university, or underwriting the care of orphans at the local convent schools. I even accompanied my immediate superior to tea one afternoon and gravely heard the Anglican bishop discuss the moral regeneration of mankind, after which he told some capital stories which he had read in Punch several generations ago. With equal gravity I made a contribution to the old man's Worthy Cause of the moment. Afterwards she and I went out in my jeep and had the chief lama show us the image of a djinn said to be the superior of rhinoceros horn in the amorous pharmacopiea, if one only indulged him in a rather high priced votive lamp which burned butter.

The old Tibetan, in his sales talk, pointed out to us the "Passion Buddha's" four arms, with two of which he held the female figure, while feeding her with the other two; but neither this, nor the third thing he was doing, interested me as much as his head. It was a bull's head, huge, brutal, insensate, glaring. . . .

If I am to be a god, I will be such a god as this, I thought; part man and part . . . bull? No—but what? Part man and—

I took her home, that she might worship Me.

Afterwards, she burned the brass butter lamps before Me, and the sticks of incense.

I believe it was the following day that we saw the old Chinese. We were dining in a White Russian restaurant, and from the unusual excellence of the food and the way the others looked at Me I could sense that awareness of My true Nature, and Its approaching epiphany, was beginning to be felt.

The persimmons of Peking are not like the American persimmons, they are larger and flattened at each end. In order for the flavor to be at its best, the fruits must have begun to rot. The top is removed and cream is put on, heavy cream which has begun to turn sour. This is food fit for a god and I was the only one present eating it.

There was an American at the next table, in the guise of an interfering angel, talking about famine relief. The fool did not realize that famine is itself a relief, better even than war, more selective in weeding out the unfit and reducing the surfeit of people from which swarming areas such as China and India are always suffering. I smiled as I heard him, and savored the contrast between the sweet and the sour on My spoon, and I heard her draw in her breath and I looked down and there was the old Chinese, in his smutty robe and with some object wrapped in grimed cloth next to him as he squatted on the floor. I heard her murmur something to him in Chinese; she greeted him, called him *lau-yay*—old master or sir—and something else which I knew I knew but could not place. The air was thick with cigarette smoke and cheap scent. The fool at the next table threw the old man some money and gestured him to begin.

His appearance was like that of any beggar, a wrinkled face, two or three brown teeth showing when he smiled in that fawning way. He unwrapped his bundle and it was an empty chinaware bowl and two wooden wands. He covered the bowl with cloth again, rapped it with wands, uncovered it, and there was a goldfish swimming. He covered, he rapped and rapped and whisked away the cloth and the bowl was gone. I darted My foot out to the place

where it had been, but there was nothing there.

The American at the next table spread out a newspaper on the floor, the old man rolled his sleeves up his withered, scrannel, pallid-sallow arms; he spread the cloth, struck it with his sticks, and then removed it, showing a much larger bowl with the goldfish, on top of the newspaper. So it had not come from some recess in the floor, nor from his sleeve. I did not like to see anyone else exercising power; I spoke roughly to the old man, and he giggled nervously and gathered his things together. The fools opposite began to protest, I looked at them and their voices died away. I looked at *her,* to see if she would still presume to call him *old master;* but she was My creation and she laughed aloud at him.

My powers increased, with drops of ink I could kill and I could make alive. The agents of the men of Yenan came to Me at night and I wrote things for them and they left offerings of money on the table.

Infinitely adaptive, I, polymorphous, porphyrogenitive, creating iniquity, transgression, and sin.

But sometimes at night, when they had left and we had gone to bed and I pretended to sleep as others, sometimes there was a noise of a faint rattling and I saw something in the room turning and flashing, like a flash of gold, and the shadows loomed like the shadow of an old man. And once it came to Me—the meaning of the Chinese words she had used once. They meant *father-in-law,* but I could not remember when she had used them, though distantly I knew she had no more husband. I awoke her and made her worship Me and I was infinitely godlike.

When was this? Long ago, perhaps. It seems that I do not remember as well as formerly. There is so little to remember of present life. I have withdrawn from the world. I do not really know where I now am. There is a wall of some sort, it extends everywhere I turn, it is white, often I press my lips against it. I have lips. I do not know if I have hands and feet, but I do not need them. The light, too, has an odd quality here. Sometimes I seem to be in a small place and at other times it seems larger. And in between these times something passes overhead and all goes dark and there is a noise like the beating of heavy staves and then it is as if I am nothing . . . no place . . . But then all is as before and there is light once more and I can move freely through the light, up and down; I can turn, and when I turn swiftly I can see a flashing of gold, of something gold, of something gold, and this pleases and diverts Me.

But when I am still I cannot see it at all.

In 1954, F&SF serialized Robert A. Heinlein's newest novel—which turned out to be a bi-annual event. That first novel was STAR LUMMOX, *and it was followed in 1956 by* THE DOOR INTO SUMMER, *and in 1958 by* HAVE SPACESUIT—WILL TRAVEL. *Since we—and F&SF's readers, too, judging by our mail—consider Mr. Heinlein's superb mixture of solid science, imaginative extrapolative thinking, and gripping narrative technique to be a prime example of what science fiction should be, we are delighted at this present indication that the event may now be annual.*

STARSHIP SOLDIER

by Robert A. Heinlein

(First of two parts)

I

"Come on, you apes! You wanta live forever?"
—unknown platoon sergeant, 1918

I ALWAYS GET THE SHAKES before a drop. The ship's psychiatrist has checked my brain waves and asked me silly questions and he tells me that it isn't fear—it's just like the trembling of an eager race horse in the starting gate.

I couldn't say; I've never been a race horse. But the fact is: I'm scared silly, every time.

At D-minus-thirty, after we mustered in the drop room of the *Rodger Young*, our platoon leader inspected us. He wasn't our regular platoon leader, because Lieutenant Rasczak had bought it on our last drop; he was really the platoon sergeant, Career Ship's Sergeant Jelal. Jelly is a Finno-Turk from Iskander around Proxima—a swarthy little man who looks like a clerk, but I've seen him tackle two berserk privates so big he had to reach up to grab them, crack their heads together

Acknowledgments: The stanza from "The 'Eathen" by Rudyard Kipling, at the head of chapter VII, is used by permission of Mr. Kipling's estate; Quotations from the lyrics of the ballad "Rodger Young" are used by the permission of the author, Frank Loesser.

like cocoanuts, step back while they fell.

Off duty he wasn't bad—for a sergeant. You could call him "Jelly" to his face. Not recruits, of course, but anybody who had made at least one combat drop.

But right now he was on duty. We had each inspected our combat equipment (it's your own neck—see?), the acting platoon sergeant had gone over us after he mustered us, and now Jelly went over us again, face mean, eyes missing nothing. He stopped by the man in front of me, pressed the button on his belt that gave readings on his physicals. "Fall out!"

"But, Sarge, it's just a cold. The Surgeon said—"

Jelly interrupted. "'But Sarge!'" He snapped. "The Surgeon ain't making no drop—and neither are you, with a degree and a half of fever. You think I got time to chat? *Fall out!*"

Jenkins left us, looking sad and mad—and I felt bad, too. Because of the Lieutenant buying it and people moving up, I was an assistant section leader this drop, and now I was going to have a hole and no way to fill it. That's not good; it means a man can run into something sticky, call for help and have nobody to help him.

Jelly didn't down-check anybody else. Presently he stepped out in front, looked us over and shook his head. "What a gang of apes!" he growled. "Maybe if you'd all buy it this drop, they could start over and build the kind of outfit the Lieutenant expected you to be. But probably not—with the sort of recruits we get these days." He suddenly straightened up, shouted, "I just want to remind you apes that each one of you has cost the gov'ment, counting weapons, armor, ammo, instrumentation, and training, everything, including the way you over-eat—has cost, on the hoof, better'n half a million. Add in the thirty cents you are worth and that runs to quite a sum." he glared at us. "So bring it back! We can spare you, but we can't spare that fancy suit you're wearing. I don't want any heroes in this outfit; the Lieutenant wouldn't like it. You got a job to do, you go down, you do it, you keep your ears open for recall, you show up for retrieval on the bounce and by the numbers. Get me?"

He glared again. "You're supposed to know the plan. But some of you ain't got any minds to hypnotize so I'll sketch it out. You'll be dropped in two skirmish lines, calculated two thousand yard intervals. Get your bearing on me as soon as you hit, get your bearing and distance on your squad mates, both sides, while you take cover. You've wasted ten seconds already, so smash-&-destroy whatever's at hand until the flankers hit

dirt." (He was talking about me—as assistant section leader I was going to be left flanker, with nobody at my elbow. I began to tremble.)

"Once they hit—straighten out those lines!—equalize those intervals! Drop what you're doing and do it! Twelve seconds. Then advance by leap frog, odd and even, assistant section leaders minding the count and guiding the envelopment." He looked at me. "If you've done this properly—which I doubt—the flanks will make contact as recall sounds . . . at which time, home you go. Any questions?"

There weren't any; there never were. He went on, "One more word— This is just a raid, a demonstration of fire power and frightfulness. Our mission is to let the enemy know that we could have destroyed their city—but didn't—but that they aren't safe even though we refrain from total bombing. You'll take no prisoners. You'll kill only when you can't help it. But the entire area is to be smashed. I don't want any of you loafers back aboard here with unexpended bombs. Get me?" He glanced at the time. "Rasczak's Roughnecks have got a reputation to uphold. The Lieutenant told me before he bought it to tell you that he will always have his eye on you every minute . . . and that he expects your names to *shine!*"

Jelly glanced over at Sergeant Migliaccio, first section leader. "Five minutes for the Padre," he stated. Some of the boys dropped out of ranks, went over and knelt in front of Migliaccio, and not necessarily those of his creed; whoever wanted a word with him before a drop, he was there. I've heard tell that there used to be outfits whose chaplains did not fight alongside the others, but I've never been able to see how that could work. I mean: how can a chaplain bless anything he's not willing to do himself? In any case, in the Mobile Infantry, *everybody* drops and *everybody* fights—chaplain and cook and the Old Man's writer. Once we went down the tube there wouldn't be a Roughneck aboard—except Jenkins, of course, and that not his fault.

I didn't go over. I was always afraid somebody would see me shake if I did, and, anyhow, the Padre could bless me just as handily from where he was. But he came over to me as the last stragglers stood up and pressed his helmet against mine to speak privately. "Johnnie," he said quietly, "this is your first drop as a noncom."

"Yeah." I wasn't really a noncom, any more than Jelly was really an officer.

"Just this, Johnnie. Don't buy a farm. You know your job; do it. Just do it. Don't try to win a medal."

"Uh, thanks, Padre. I shan't."

He added something gently in a language I don't know, patted me on the shoulder, and hurried back to his section. Jelly called out, "Tenn . . . *shut!*" and we all snapped to.

"Pla*toon!*"

"Sec*tion!*" Migliaccio and Johnson echoed.

"By sections—port and starboard—prepare for drop!"

"Sec*tion!* Man your capsules! *Move!*"

"Squad!—" I had to wait while squads four and five manned capsules and moved on down the firing tube before my capsule showed up on the port track and I could climb into it. I wondered if those old-timers got the shakes as they climbed into the Trojan Horse? Jelly checked each man as he was sealed in and sealed me in himself. As he did so, he leaned toward me and said, "Don't goof off, Johnnie. This is just like a drill."

The top closed on me and I was alone. "Just like a drill" he says! I began to shake uncontrollably.

Then, in my ear phones, I heard Jelly from the centerline tube: "Bridge! Rasczak's Roughnecks . . . ready for drop!"

"Seventeen seconds, Lieutenant!" I heard the ship captain's cheerful contralto replying—and resented her calling Jelly "Lieutenant." To be sure, our lieutenant was dead and maybe Jelly would get his commission . . . but we were still "Rasczak's Roughnecks."

She added, "Good luck, boys!"

"Thanks, Captain."

"Brace yourselves! Five seconds."

I was strapped all over—belly, forehead, shins. But I shook worse than ever.

It's better after you unload. Until you do, you sit there in total darkness, wrapped like a mummy against the accelerations, barely able to breathe—and knowing that if the ship gets hit before they fire you, you haven't got a prayer, you'll just die there, unable to move, helpless. It's that endless wait in the dark that causes the shakes—thinking that they've forgotten you . . . the ship has been hulled and has stayed in orbit, dead, and soon you'll buy it, too, unable to move, choking. Or it's a crash orbit and you'll buy it that way, if you don't roast on the way down.

The the ship's braking program hit us and I stopped shaking. When a female pilot handles a ship there is nothing comfortable about it; you're going to have bruises every place you're strapped. Yes, I know they make better pilots than men do; their reactions are faster and they can tolerate more gee. They get in faster, get out faster, and thereby improve everybody's chances, yours as well as theirs. But that

still doesn't make it fun to be slammed against your spine at ten times your proper weight.

But Captain Deladrier knows her trade. There was no fiddling around once the *Rodger Young* stopped braking. At once I heard her snap, "Centerline tube . . . *fire!*" and there were two recoil bumps as Jelly and his acting platoon sergeant unloaded—and immediately: "Port and starboard tubes—*automatic fire!*" and the rest of us started to unload.

Bump! and your capsule jerks ahead one place—*bump!* and it jerks again—precisely like cartridges feeding into the chamber of an oldstyle automatic weapon. Well, that's what we were . . . only the barrels of the gun were twin launching tubes built into a spaceship troop carrier and each cartridge was a capsule big enough to hold an infantryman with all field equipment.

Bump!— I was used to number-three spot; now I was Tail-End Charlie, last out after three squads. It makes a tedious wait, even with a capsule fired every second; I tried to count the bumps —*bump!* (twelve) *bump!* (thirteen) *bump!* (fourteen—with an odd sound to it, the empty one Jenkins should have been in) *bump!*—

And *clang!*—it's my turn as my capsule slams into the firing chamber—then *WHAMBO!* the explosion hits with a force that makes the Captain's braking maneuver feel like a love tap.

Then suddenly nothing.

Nothing at all. No sound, no pressure, no weight. Floating in darkness . . . free fall, maybe thirty miles up, above the effective atmosphere, falling weightlessly toward the surface of a planet you've never seen. But I'm not shaking now; it's the wait beforehand that wears. Once you unload, you can't get hurt—if anything goes wrong it will happen so fast that you'll buy it without noticing you're dead, hardly.

Almost at once I felt the capsule twist and sway, then steady down so that my weight was on my back . . . weight that built up quickly until I was at my full weight (0.87 gee, we had been told) for that planet as the capsule reached terminal velocity for the thin upper atmosphere. A pilot who is a real artist (and the Captain was) will approach and brake so that your launching speed as you shoot out of the tube places you dead in space relative to the rotational speed of the planet at that latitude. The loaded capsules are heavy; they punch through the high, thin winds of the upper atmosphere without being blown too far out of position—but just the same a platoon is bound to disperse on the way down, lose some of the perfect formation in which it unloads. A

sloppy pilot can make this still worse, scatter a strike group over so much terrain that it can't make rendezvous for retrieval, much less carry out its mission. An infantryman can fight only if somebody else delivers him to his zone; I suppose pilots are just as essential as we are.

I could tell from the gentle way my capsule entered the atmosphere that the Captain had laid us down with as near zero lateral vector as you could ask for. I felt happy—not only a tight formation when we hit and no time wasted, but also a pilot who puts you down properly is a pilot who is smart and precise on retrieval.

The outer shell burned away and sloughed off—unevenly, for I tumbled. Then the rest of it went and I straightened out. The turbulence brakes of the second shell bit in and the ride got rough . . . and still rougher as they burned off one at a time and the second shell began to go to pieces. One of the things that helps a capsule trooper live long enough to draw a pension is that the skins peeling off his capsule not only slow him down, they also fill the sky over the target area with so much junk that radar picks up reflections from dozens of targets for each man in the drop, any one of which could be a man, or a bomb, or anything. It's enough to give a ballistic computer nervous breakdowns —and does.

To add to the fun, your ship lays a series of dummy eggs in the seconds immediately following your drop, dummies that fall faster because they don't slough. They get under you, explode, throw out "window," even operate as transponders, rocket sideways, and do other things to add to the confusion of your reception committee on the ground.

In the meantime your ship is locked on the beacon of your platoon leader, ignoring the radar "noise" it has created and following you in, computing your impact for future use.

When the second shell was gone, the third shell automatically opened my first ribbon chute. It didn't last long but it wasn't expected to; one good, hard jerk at several gee and it went its way and I went mine. The second chute lasted a little bit longer and the third chute lasted quite a while; it began to be rather too warm inside the capsule and I started thinking about landing.

The third shell peeled off when its last chute was gone and now I had nothing around me but my suit armor and a plastic egg. I was still strapped in, unable to move; it was time to decide how and where I was going to ground. Without moving my arms (I couldn't) I thumbed the switch for a proximity reading and read it when it flashed on in the instru-

ment reflector inside my helmet in front of my forehead.

A mile and eight-tenths— Closer than I liked, especially without company. The inner egg had reached steady speed, no more help to be gained by staying inside it, and its skin temperature indicated that it would not open automatically for a while yet—so I flipped a switch with my other thumb and got rid of it.

The first charge cut all the straps; the second charge exploded the plastic egg away from me in eight pieces—and I was outdoors, sitting on air, and could *see!* Better still, the eight discarded pieces were metal coated (except for the small bit I had taken proximity reading through) and would give back the same reflection as an armored man. Any radar viewer, alive or cybernetic, would now have a sad time sorting me out from the junk nearest me, not to mention the thousands of other bits and pieces for miles on each side, above, and below me. Part of a mobile infantryman's training is to let him see, from the ground and both by eye and by radar, just how confusing a drop is to the forces on the ground—because you feel awful naked up there. It is easy to panic and either open a chute too soon and become a sitting duck (do ducks really sit?) or fail to open it and break your ankles, likewise backbone and skull.

So I stretched, getting the kinks out, and looked around . . . then doubled up again and straightened out in a swan dive face down and took a good look. It was night down there, as planned, but infra-red snoopers let you size up terrain quite well after you are used to them. The river that cut diagonally through the city was almost below me and coming up fast, shining out with a higher temperature than the land. I didn't care which side of it I landed on but I didn't want to land in it; it would slow me down.

I noticed a flash off to the right at about my altitude; some unfriendly native had burned what was probably a piece of my egg. So I fired my first chute at once, intending if possible to jerk myself right off his screen as he followed the targets down. I braced for the shock, rode it, then floated down for about twenty seconds before unloading the chute—not wishing to call attention to myself in still another way by not falling at the speed of the stuff around me.

It must have worked; I wasn't burned.

About six hundred feet up I shot the second chute . . . saw that I was being carried over into the river, found that I was going to pass about a hundred feet up over a flat-roofed warehouse or some such by the river—blew the chute free and came in for a good

enough landing on the roof by means of the suit's jump jets. I was scanning for Sergeant Jelal's beacon as I hit.

And found that I was on the wrong side of the river; Jelly's star showed up inside my helmet far south of where it should have been. I trotted toward the river side of the roof as I took a range and bearing on the squad leader next to me, found that he was over a mile out of position, called, "Ace! dress your line," tossed a bomb behind me as I stepped off the building and across the river. Ace answered as I could have expected—Ace should have had my spot but he didn't want to give up his squad; nevertheless he didn't fancy taking orders from me.

The warehouse went up behind me and the blast hit me while I was still over the river, instead of being shielded by the buildings on the far side as I should have been. It darn near tumbled my gyros. I had set that bomb for fifteen seconds . . . or had I? I suddenly realized that I had let myself get excited, the worst thing you can do on the ground. "Just like a drill," that was the way, just as Jelly had warned me. Take your time and do it right, even if it takes another half second.

As I hit I took another reading on Ace and told him again to realign his squad. He didn't answer but he was already doing it. As long as Ace did his job, I could afford to swallow his surliness—for now. But back aboard ship (if Jelly kept me on as assistant section leader) we would eventually have to pick a quiet spot and find out who was boss. He was a career corporal and I was just a term lance acting as corporal—but he was under me and you can't afford to take any lip under those circumstances.

But I didn't have time to think about it; while I was jumping the river I had spotted a juicy target and I wanted to get it before somebody else noticed it—a lovely big group of what looked like public buildings on a hill. They were miles outside the area we were sweeping, but one rule of a smash & run is to expend at least half your ammo outside your sweep area; that way the enemy is kept confused as to where you actually are—that and keep moving, do everything fast. You're always heavily outnumbered; surprise and speed are what saves you.

I was already loading my rocket launcher while I was checking on Ace and telling him for the second time to straighten up. Jelly's voice reached me right on top of that on the all-hands circuit: "Pla*toon*! By leapfrog! *Forward!*"

My boss, Sergeant Johnson, echoed, "By leapfrog! Odd numbers! *Advance!*"

That left me with nothing to worry about for twenty seconds,

so I jumped up on the building nearest me, raised the launcher to my shoulder, found the target and pulled the first trigger to let the rocket look at its target—pulled the second trigger and kissed it on its way, jumped back to the ground. "Second section, even numbers!" I called out . . . waited for the count in my mind and ordered, *"Advance!"*

And did so myself, hopping over the next row of buildings, and, while I was in the air, fanning the first row by the river front with a hand flamer. They seemed to be wood construction and it looked like a time to start a fire—with luck, some of those warehouses would house oil products, or even explosives. As I hit, the Y-rack on my shoulders launched two small H.E. bombs a couple of hundred yards each way to my right and left flanks but I never saw what they did as just then my first rocket hit—that unmistakable brilliance of an atomic explosion. It was just a peewee, less than two kilotons nominal yield, with tamper and implosion squeeze to produce results from a less-than-critical mass—but who wants to be bunk mates with a cosmic catastrophe? It was enough to clean off that hilltop and make everybody in the city take shelter against fallout. Better still, any of the local yokels who happened to be outdoors wouldn't be seeing anything else for a couple of hours—meaning *me*. The flash hadn't dazzled me; our face bowls are heavily leaded, we wear snoopers over our eyes—and we're trained to duck and take it on the armor if we do happen to be looking the wrong way.

So I merely blinked hard—opened my eyes and stared straight at a local citizen just coming out of the building ahead of me. He looked at me and started to raise something—a weapon, I suppose—as Jelly called out, "Odd numbers! *Advance!*"

I didn't have time to fool with him; I was five hundred yards short of where I should have been by then. I still had the hand flamer in my left hand; I toasted him and jumped over the building he had been coming out of, as I started to count. A hand flamer is primarily for incendiary work but it is a good defensive anti-personnel weapon in tight quarters; you don't have to aim it much.

Between excitement and anxiety to catch up I jumped too high and too wide. It's always a temptation to get the most out of your jump gear—but *don't do it!* It leaves you hanging in the air for seconds, a big fat target. The way to advance is to skim over each building as you come to it, barely clearing it, and taking full advantage of cover while you're down—and never stay in one place more than a second or two, never give them time to target in on you.

Be somewhere else, anywhere. Keep moving.

This one I goofed—too much for one row of buildings, too little for the row beyond it; I found myself coming down on a roof. But not a nice flat one where I might have tarried three seconds to launch another A-rocket; this roof was a jungle of pipes and stanchions and assorted ironmongery—a factory maybe, or some sort of chemical works. No place to land. Worse still, half a dozen natives were up there. These geezers are humanoid, eight or nine feet tall, much skinnier than we are and a higher body temperature; they don't wear clothes and they stand out in snoopers like a neon sign. They look still funnier with your bare eyes but I would rather fight them than the arachnids—those Bugs make me queezy.

If these laddies were up there thirty seconds earlier when my rocket hit, then they couldn't see me. But I couldn't be certain and didn't want to tangle with them; it wasn't that kind of a raid. So I jumped again while I was still in the air, scattering a handful of ten-second fire pills to keep them busy, grounded, jumped again at once, and called out, "Second section! Even numbers! . . . Advance!" and kept on going to close the gap, while trying to spot, every time I jumped, something worth expending a rocket on. I had three more and I certainly didn't intend to take any back. But I had had pounded into me that you *must* get your money's worth with atomic weapons—it was only the second time that I had been allowed to carry them.

I was trying to spot their water works; a direct hit on it could make the whole city uninhabitable, force them to evacuate it without directly killing anyone—just the sort of nuisance we had been sent down to commit. It should—according to the map we had studied—be about three miles upstream from where I was.

But I couldn't see it; my jumps didn't take me high enough, maybe. I was tempted to go higher but I remembered what Migliaccio had said about not trying for a medal. I set the Y-rack launcher on automatic and let it lob a couple of little bombs every time I hit, I set fire to things more or less at random, and tried to find the waterworks, or some other worthwhile target.

Well, there was *something* up there at the proper range—water works or whatever, it was big. So I hopped on top of the tallest building near me, took a bead on it, and let fly. As I bounced down I heard Jelly: "Johnnie! Red! Start bending in the flanks."

I acknowledged and heard Red acknowledge and switched my beacon to blinker so that Red could pick me out for certain—took a range and bearing on his blinker

while I called out, "Second Section! Curve in and envelop! Squad leaders acknowledge!"

Fourth and Fifth squads answered, "Wilco;" Ace said, "We're already doin' it—pick up your feet."

Red's beacon showed the right flank to be almost ahead of me and a good fifteen miles away. Golly! Ace was right; I would have to pick up my feet or I would never close the gap in time—and me with a couple of hundredweight of ammo and sundry nastiness still on me that I just had to find time to use up. We had landed in a V formation, with Jelly at the bottom and Red and myself at the ends of the two arms; now we had to close it into a circle around the retrieval rendezvous . . . which meant that Red and I each had to cover more ground than the others and still do our full share of damage.

At least the leapfrog advance was over with once we started to encircle; I could quit counting and concentrate on speed. It was getting to be less healthy to be anywhere, even moving fast. We had started with the enormous advantage of surprise, reached the ground without being hit (at least I hoped nobody had been hit), and had been rampaging among them in a fashion that let us fire at will without fear of hitting each other while they stood a big chance of hitting their own people in shooting at us—if they could find us to shoot at. (I'm no games-theory expert but I doubt if any computer could have analysed what we were doing in time to predict where we would be next.)

Nevertheless the home defenses were beginning to fight back. I took a couple of near misses close enough to rattle my teeth even inside armor and once I was brushed by some sort of beam that made my hair stand on end and half paralysed me for a moment—as if I had hit my funny bone, but all over. If the suit hadn't already been told to jump, I guess I wouldn't have got out of there.

Things like that make you pause to wonder why you ever took up soldiering—only I was too busy to pause for anything. Twice, jumping blind over buildings, I landed in the middle of a group of them—jumped at once while fanning wildly around me with the hand flamer.

Spurred on this way, I closed about half of my share of the gap, maybe four miles, in minimum time but without doing more than casual damage. My Y-rack had gone empty two jumps back; finding myself alone in sort of a courtyard I stopped to put my reserve H.E. bombs into it while I took a bearing on Ace—found that I was far enough out in front of the flank squad to think about ex-

pending my last two A-rockets. I jumped to the top of the tallest building in the neighborhood.

It was getting light enough to see; I flipped the snoopers up onto my forehead and made a fast scan with bare eyes, looking for anything behind us worth shooting at, anything at all; I had no time to be choosy.

There was something on the horizon in the direction of their spaceport—administration & control, maybe, or possibly a starship. Almost in line and about half as far away was an enormous structure which I couldn't identify. The range to the spaceport was extreme but I let the rocket see it, said, "Go find it, baby!" and twisted its tail—slapped the last one in, sent it toward the nearer target, and jumped.

That building took a direct hit just as I left it. Either a skinny had judged (correctly) that it was worth one of their buildings to try for one of us, or one of my own mates was getting careless with fireworks. Either way, I didn't want to jump from that spot, even a skimmer; I decided to go through the next couple of buildings. So I grabbed the heavy flamer off my back as I hit and flipped the snoopers down over my eyes, tackled a wall in front of me with a knife beam at full power. A section of wall fell away and I charged in.

And backed out even faster.

I don't know what it was I cracked open. A church—a skinny flophouse—maybe even their defense headquarters. All I knew was that it was a very big room filled with more skinnies than I wanted to see in my whole life.

Probably not a church, for somebody took a shot at me as I popped back out—just a slug that bounced off my armor, made my ears ring, and staggered me without hurting me. But it reminded me that I wasn't supposed to leave without giving them a souvenir. I grabbed the first thing on my belt and lobbed it in—and heard it start to squawk.

By sheer chance I had done the right thing. This was a special bomb, issued to us for this mission with instructions to use them if we found ways to make them effective. The squawking I heard as I threw it was the bomb shouting in skinny talk: (free translation) "I'm a thirty-second bomb! I'm a thirty-second bomb! Twenty-nine! . . . twenty-eight! . . . twenty-seven!—"

It was supposed to frazzle their nerves. Maybe it did; it certainly frazzled mine. I jumped, while wondering whether they would find enough doors to swarm out in time.

I got a bearing on Red's blinker at the top of the jump and one on Ace as I grounded. I was falling behind again—time to hurry.

But three minutes later we had

closed the gap; I had Red on my left flank a half mile away. He reported it to Jelly. We heard Jelly's relaxed growl to the entire platoon: "Circle is closed, but the beacon is not yet down. Move forward slowly and mill around, make a little more trouble—but mind the lad on each side of you; don't make trouble for *him*. Good job, so far—don't spoil it. Pla*toon*! By sections . . . *Muster*!"

It looked like a good job to me, too; much of the city was burning and, although it was almost full light now, it was hard to tell whether bare eyes were better than snoopers, the smoke was so thick.

Johnson, our section leader, sounded off: "Second section, call off!"

I echoed, "Squads four, five, and six—call off and report!" The assortment of circuits we had in the new model comm units certainly speeded things up; Jelly could talk to anybody or to his section leaders; a section leader could call his whole section, or his non-coms; and the platoon could muster twice as fast, when seconds matter. I listened to the fourth squad call off while I inventoried my remaining fire power and lobbed one bomb toward a skinny who poked his head around a corner. He left and so did I— "Mill around," the boss man had said.

The fourth squad bumbled the call off until the squad leader remembered to fill in with Jenkins' number; the fifth squad clicked off like an abacus and I began to feel good . . . when the call off stopped after number four in Ace's squad. I called out! "Ace, where's Dizzy?"

"Shut up," he said. "Number six! Call off!"

"Six!" Smith answered.

"Seven!"

"Sixth squad, Flores missing," Ace completed it. "Squad leader out for pickup."

"One man absent," I reported to Johnson. "Flores, squad six."

"Missing or dead?"

"I don't know. Squad leader and assistant section leader out for pickup."

"Johnnie, let Ace take it."

But I didn't hear him, so I didn't answer. I heard him report to Jelly and I heard Jelly cuss. Now look, I wasn't bucking for a medal —it's the assistant section leader's *business* to make pickup; he's the chaser, the last man in, expendable. The squad leaders have other work to do. The assistant section leader isn't necessary as long as the section leader is alive.

Right that moment I was feeling unusually expendable, because I was hearing the sweetest sound in the universe, the beacon the retrieval boat would land on, sounding our recall. The beacon is a robot rocket, fired ahead of the boat, just a spike that buries itself in the ground and starts broad-

casting that welcome, welcome music. The boat homes in on it automatically three minutes later and you had better be on hand, because the bus can't wait and there won't be another one.

But you don't walk away on another cap trooper, not while there's a chance he's still alive—not in Rasczak's Roughnecks. Not in any outfit of the Mobile Infantry. You try to make pickup.

I heard Jelly order: "Heads up, lads! Close to retrieval circle and interdict! On the bounce!"

And I heard the beacon's sweet voice: "*—to the everlasting glory of the infantry, shines the name, shines the name of Rodger Young!*" and I wanted to head for it so bad I could taste it.

Instead I was headed the other way, closing on Ace's beacon and expending what I had left of bombs and fire pills and anything else that would weigh me down. "Ace! You got his beacon?"

"Yes. Go back, Useless!"

"I've got you by eye now. Where is he?"

"Right ahead of me, maybe quarter mile. He's *my* man."

I didn't answer; I simply cut left oblique to reach Ace about where he said Dizzy was.

And found Ace standing over him, a couple of skinnies flamed down and more running away. I lit beside him. "Let's get him out of his armor—the boat'll be down any second!"

"He's too bad hurt!"

I looked and saw that it was true—there was actually a *hole* in his armor and blood coming out. And I was stumped. To make a wounded pickup you get him out of his armor . . . then you pick him up in your arms—no trouble in a powered suit—and bounce away from there. A bare man weighs less than the ammo and stuff you've expended. "What'll we *do*?"

"We carry him," Ace said grimly. "Grab ahold the left side of his belt." He grabbed the right side, we man-handled Flores to his feet. "Lock on! Now . . . by the numbers, stand by to jump—one—*two!*"

We jumped. Not far, not well. One man alone couldn't have gotten him off the ground; an armored suit is too heavy. But split it between two men and it can be done.

We jumped—and we jumped—and again, and again, with Ace calling it and both of us steadying and catching Dizzy on each grounding. His gyros seemed to be out.

We heard the beacon cut off as the retrieval boat landed on it—I saw it land . . . and it was too far away. We heard the acting platoon sergeant call out: "In succession, prepare to embark!"

And Jelly called out, "Belay that order!"

We broke at last into the open and saw the boat standing on its

tail, heard the ululation of its take-off warning—saw the platoon still on the ground around it, in interdiction circle, crouching behind the shield they had formed.

Heard Jelly shout, "In succession, man the boat—*move!*"

And we were *still* too far away! I could see them peel off from the first squad, swarm into the boat as the interdiction circle tightened.

And a single figure broke out of the circle, came toward us at a speed possible only to a command suit.

Jelly caught us while we were in the air, grabbed Flores by his Y-rack and helped us lift.

Three jumps got us to the boat. Everybody else was inside but the door was still open. We got him in and closed it while the boat pilot screamed that we had made her miss rendezvous and now we had *all* bought it! Jelly paid no attention to her; we lay Flores down and lay down beside him. As the blast hit us Jelly was saying to himself, "All present, Lieutenant. Three men hurt—but all present!"

I'll say this for Captain Deladrier: they don't make any better pilots. A rendezvous, boat to ship in orbit, is precisely calculated. I don't know how, but it is, and you don't change it. You *can't.*

Only she did. She saw in her scope that the boat had failed to blast on time; she braked back, picked up speed again—and matched and took us in, just by eye and touch, no time to compute it. If the Almighty ever needs an assistant to keep the stars in their courses, I know where He can look.

Flores died on the way up.

II

"It scared me so, I hooked it off,
Nor stopped as I remember,
Nor turned about till I got home,
Locked up in mother's chamber.
Yankee Doodle, keep it up,
Yankee Doodle dandy,
Mind the music and the step,
And with the girls be handy."

I NEVER REALLY INTENDED TO JOIN up.

Oh, I told Father, late in my senior year in high school, that I was thinking of volunteering for Federal Service. I suppose every kid does, when his eighteenth birthday heaves into sight. Most of them toy with the idea, then do something else—college, or a job. I suppose it would have been that way with me . . . if my chum had not planned to join up.

Carl and I had done everything together—eyed the girls, double-dated, debate team, pushed electrons in his lab. I wasn't much on theory but I'm a neat hand with a soldering gun; Carl supplied skull sweat and I carried out his instructions. Carl's folks didn't have the money Father had, but it did-

n't matter. When Father bought me a Rolls copter for my fourteenth birthday, it was Carl's too; contrariwise, his basement lab was mine.

So when Carl told me that he was not going straight to college but would serve a term first, it gave me pause. He seemed to think that it was natural.

So I told him I was, too.

He gave me an odd look. "Your old man won't let you."

"Huh? How can he stop me?" It's the first completely free choice anybody gets; when a boy or girl reaches his or her eighteenth birthday, he or she can volunteer and nobody has any say in the matter.

"You'll find out." Carl changed the subject.

So I took it up with my father.

He put down his newspaper and stared. "Son, are you out of your mind?"

I muttered that I didn't think so.

"Well, it sounds like it." He sighed. "Still . . . I should have expected it; it's a predictable stage in a boy, when he decides to join up and wear a pretty uniform. Or decides that he is in love and just has to get married. Or both." He smiled grimly. "With me it was both. But I got over them in time not to ruin my life."

"But, Father, I wouldn't ruin my life. Just a term of service—not career."

"Let's table that. Let *me* tell *you* what you are going to do—because you *want* to. This family has stayed out of politics for over a hundred years—I see no reason to break that fine record. I suppose it's the influence of that fellow at your school—what's his name?"

He meant our instructor in History and Moral Philosophy—a veteran, naturally. "Mr. Dubois."

"Hmmph! Foreigner, no doubt. It ought to be against the law to use the schools as undercover recruiting stations. I'm going to write a sharp letter about it—a taxpayer has *some* rights!"

"But, Father, he doesn't! He—" I stopped, not knowing how to describe it. Mr. Dubois acted as if none of us was *good* enough to serve. I didn't like him. "Uh, he discourages it."

"Hmmph! Do you know how to lead a pig? Never mind. You're going to Harvard. After that, you'll travel, meet our distributors, find out how business is done. Then you'll come home and start with the usual menial job—but you'll be an executive before you catch your breath because I'm not getting any younger. As soon as you're able and willing, you'll be boss. How does that strike you?"

None of it was news; I'd thought about it. Father put a hand on my shoulder. "Son, if there were a war, I'd be the first to cheer you on—and to put the business on a war footing. But praise God there

never will be again. We've outgrown wars. So what is this so-called 'Federal Service?' Parasitism, pure and simple. A way for inferior people to live at public expense, then give themselves airs for the rest of their lives. Is that what *you* want to do?"

"Carl isn't inferior!"

"Sorry. He's misguided." He smiled. "Son, I intended to keep something as a surprise. But I'm going to tell you so that you can put this nonsense out of your mind. Can you guess?"

"Uh, no."

He grinned. "A trip to Mars."

I looked stunned. "Golly, Father, I had no idea—"

"I know how you kids feel about travel—though it beats me what anyone sees in it. But this is a good time—by yourself; did I mention that?—because you'll be hard-pressed to get a week on Luna once you take up your responsibilities." He picked up his paper. "Run along—I've got some gentlemen coming. Business."

He thought that settled it . . . and I suppose I did. Mars! And on my own! But I didn't tell Carl; I suspected that he would regard it as a bribe. Instead I told him that my father and I had different ideas.

"Yeah," he answered, "so does mine. But it's my life."

I thought about it during the last session of History and Moral Philosophy. H & M .P. was different from other courses in that everybody had to take it but nobody had to pass it—and Mr. Dubois never seemed to care. He would just point with the stump of his left arm and snap a question. Then the argument would start.

On the last day he seemed to be trying to find out what we had learned. One girl told him bluntly: "My mother says that violence never settles anything."

"So?" Mr. Dubois looked at her bleakly. "The city fathers of Carthage should hear that. Why doesn't your mother tell them? Why don't *you*?"

She said shrilly. "You're making fun of me! Everybody knows that Carthage was destroyed!"

"You seemed unaware of it," he said grimly. "Since you know, wouldn't you say that violence had settled their destinies? However, I was not making fun of you; I was heaping scorn on a silly idea. Anyone who clings to the historically untrue—and thoroughly immoral—doctrine that 'violence never settles anything' I would advise to conjure up the ghosts of Napoleon Bonaparte and of the Duke of Wellington and let them debate it. Hitler could referee, and the jury might well be the Dodo, the Great Auk, and the Passenger Pigeon. Violence, naked force, has settled more issues in history than any other factor, and the contrary opinion is

wishful thinking at its worst. Breeds that forget this basic truth have always paid for it with their lives and freedoms."

He sighed. "One can lead a child to knowledge but one *cannot* make him think." Suddenly he pointed his stump at me. "You. What is the difference between the soldier and the civilian?"

"The difference," I answered carefully, "lies in the field of civic virtue. A soldier accepts responsibility for the safety of the body politic, defending it with his life. The civilian does not."

"The exact words of the book," he said scornfully. "But do you *believe* it?"

"Uh, I don't know, sir."

"Of course you don't! I doubt if any of you would recognize 'civic virtue' if it came up and barked in your face!" He glanced at his watch. "Perhaps we shall meet again under happier circumstances. Dismissed."

Graduation right after and three days later my birthday, followed by Carl's birthday—and I still hadn't told Carl that I wasn't joining up. I simply arranged to meet him the day after his birthday and we went to the recruiting office together.

On the steps of the Federal Building we ran into Carmencita Ibañez, a classmate of ours. Carmen treated us all with equal sweetness and rather impersonally. But I knew her pretty well, as she often used our swimming pool, because it was Olympic length. Mother considered her "a good influence."

She saw us and waited, dimpling. "Hi, fellows!"

"Hello. *Ochee Chyornaya,*" I answered. "What brings you here?"

"Today is my birthday."

"Huh? Happy returns!"

"So I'm joining up."

"Oh . . ." I think Carl was as surprised as I was. But Carmencita was like that; she kept her affairs to herself. "No foolin'?" I added.

"Why should I be fooling? I'm going to be a spaceship pilot—at least I'm going to try."

"No reason why you shouldn't make it," Carl said quickly. He was right. Carmen was small and neat, perfect health and perfect reflexes—she could make a competitive diving routine look easy—and she was quick at mathematics. Me, I tapered off with a "C" in algebra and a "B" in business arithmetic; she took all the math school offered and a tutored course on the side. But little Carmen was so ornamental that you never thought about her being useful.

"We— Uh, I" said Carl, "am here to join up, too."

"And me," I agreed. I hadn't made any decision; my mouth was leading its own life.

"Oh, wonderful!"

"I'm going to buck for pilot, too," I added firmly.

She answered, "Oh, how grand! Perhaps we'll run into each other."

"Collision courses?" asked Carl. "That's a no-good way to pilot."

"Don't be silly, Carl. Are you going to be a pilot, too?"

"*Me?*" Carl answered. "I'm no truck driver. 'Starside R & D' if they'll have me."

"'Truck driver' indeed! I hope you wind up on Pluto and freeze. No, I don't—good luck! Let's go in."

The recruting station was in the rotunda. A fleet sergeant sat at a desk there, in dress uniform gaudy as a circus. But his right arm was off so short that his tunic had been tailored without a sleeve, and, when you came up to the rail, you could see that he had no legs.

It didn't seem to bother him. Carl said, "Good morning. I want to join up."

"Me, too," I added.

He ignored us. "Good morning, young lady. What can I do for you?"

"I want to join up, too."

He smiled. "Good girl! Scoot up to room 201 and ask for Major Rojas, she'll take care of you." He looked her up and down. "Pilot?"

"If possible."

"You look like one. Well, see Miss Rojas." He turned to us, sized us up with no pleasure. "So?" he said. "Labor battalions?"

"Oh, no!" I said. "I'm going to be a pilot."

He simply looked away. "You?"

"I'm interested in the Research and Development Corps," Carl said soberly, "especially electronics. I understand the chances are good."

"They are if you can cut it," The Fleet Sergeant said grimly, "and not if you can't. Boys, have you any idea why they have me out here in front?"

Carl said, "Why?"

"Because the government doesn't care one bucket of swill whether you join or not! Because it has become stylish with too many people to serve a term and earn a franchise and wear a ribbon which says you're a vet'ran . . . whether you've seen combat or not. But if you *want* to serve and I can't talk you out of it, we have to take you; that's your constitutional right. It says that *everybody*, male or female, shall have his born right to pay his service and assume citizenship—but we are getting hard pushed to find things that aren't just glorified K.P. You can't all be military men; most volunteers aren't number-one soldier material. Got any idea what it takes to make a soldier?"

"No," I admitted.

"Most people think that all it takes is hands and feet and a stupid mind. Maybe so, for cannon fodder. But a private soldier today is so highly skilled that he would

rate 'master' in any other trade. So for those who insist—but haven't got what we must have—we've had to think up dirty, nasty, dangerous jobs that will either run 'em home with terms uncompleted . . . or at least make them remember the rest of their lives that citizenship is valuable because they've paid a high price for it. Take that young lady—wants to be a pilot. I hope she makes it; we need pilots. But she may wind up in Antarctica, her pretty eyes red from artificial light and her knuckles calloused from hard, dirty work.

"So they put me here to discourage you. Look at this." He shoved his chair around to make sure we could see that he was legless. "Let's assume that you don't wind up digging tunnels on Luna or playing guinea pig for new diseases; suppose we make a fighting man of you. Look at *me*—this is what you may buy . . . if you don't buy the farm and cause your folks to receive a 'deeply-regret' telegram. Which is more likely because there aren't many wounded. I'm the lucky exception . . . though maybe you wouldn't call it luck."

He added, "Why don't you boys go home? A term isn't a kiddie kamp; it's either real military service, rough and dangerous . . . or a most unreasonable facsimile. Not a romantic adventure. . . . Well?"

Carl said, "I'm here to join."

"Me, too."

"You realize you aren't allowed to pick your service?"

Carl said, "I thought we could state preferences?"

"Certainly. Then the placement officer checks whether there's any demand for left-handed glass blowers. Having reluctantly conceded that there is—he tests you. About once in twenty times everything matches and you get your wish. The other nineteen times he decides that you are just what they need to field-test survival equipment on Titan." He added meditatively, "It's amazing how often experimental equipment fails to work."

"I can qualify for electronics," Carl said firmly.

"So? How about you, bub?"

I hesitated—and suddenly realized that I would wonder all my life whether I was anything but the boss's son. "I'm joining."

"Well, you can't say I didn't try. Got your birth certificates? And let's see your I.D.s."

Ten minutes later we were being prodded and poked and fluoroscoped. I asked one doctor what percentage flunked the physical? He looked startled. "Why, we *never* fail anyone. The law doesn't permit it."

"Huh? I mean 'Excuse me, Doctor?' What's the point of this gooseflesh parade?"

"Why," he answered, hitting me in the knee with a hammer, "to

find out what duties you can perform. But if you came in here in a wheelchair and blind in both eyes they would find a job for you. The only way you can fail is by having the psychiatrists decide that you cannot understand the oath."

"Oh. Doctor, were you a doctor when you joined up?"

"*Me?*" He seemed shocked. "Youngster, I'm a civilian employee."

"Oh. Sorry, sir."

"No offense. Military service is for ants. I see 'em go, I see 'em come back—I see what it's done to them. Youngster, if you've got savvy enough to count ten, you'll back out while you can. Here, take these papers to the recruiting sergeant."

I went back to the rotunda, found Carl there. The Fleet Sergeant said glumly, "One moment while I get witnesses." He punched a button and two clerks came out. He pointed to our physical examinations, birth certificates, and I.D.s, said: "I invite you to examine these exhibits, determine what relation each bears to these men."

They scrutinized every document, took our finger prints—again!—and one put a loupe in her eye and compared prints.

The Fleet Sergeant added, "Did you find exhibits relating to their competence to take the oath?"

"We found," the older one said, "appended to each record a certified conclusion by an authorized board of psychiatrists stating that each is mentally competent to take the oath and that neither is under the influence of alcohol, narcotics, other disabling drugs, nor of hypnosis."

"Very good." He turned to us. "Repeat after me—

"I, being of legal age, of my own free will—"

"'I,'" we each echoed, "'being of legal age, of my own free will—'"

"—without coercion, promise, or inducement of any sort, after having been duly advised and warned of the meaning and consequences of this oath—

"—do now enroll in the Federal Service of the Terran Federation for a term of not less than two years and as much longer as may be required by the needs of the Service—"

(I gulped a little. I had always thought of a "term" as two years; that's how people talk about it. Why, we were signing up for *life*.)

"I swear to uphold and defend the Constitution of the Federation against all its enemies on or off Terra, to protect and defend the Constitutional liberties and privileges of all citizens and lawful residents of the Federation, its associated states and territories, to perform, on or off Terra, such duties of any lawful nature as may be assigned to me by lawful direct or delegated authority—

"—and to obey all lawful orders of the Commander-in-Chief of the Terran Service and of all officers or delegated persons placed over me—

"—and to require such obedience from all members of the Service or other persons or non-human beings lawfully placed under my orders—

"—and, on being honorably discharged at the completion of my full term of active service or upon being placed on inactive retired status after having completed such full term, to carry out all duties and obligations and to enjoy all privileges of Federation citizenship, including but not limited to the duty, obligation and privilege of exercising sovereign franchise for the rest of my natural life unless stripped of honor by verdict, finally sustained, of court of my sovereign peers."

(*Whew!*) Mr. Dubois had analysed the oath in History and Moral Philosophy—but you don't feel the *size* of the thing until it comes rolling over you.

At least it made me realize that I was no longer a civilian, with my shirt tail out.

"So help me, God!" we both ended.

There were more signatures and prints. The Fleet Sergeant finally looked up. "Why, it's 'way past the break for lunch."

I swallowed hard. "Sergeant? Could I flash my folks from here?"

"We can do better than that. You go on forty-eight hours leave now." He grinned. "You know what happens if you don't come back?"

"Uh . . . court martial?"

"Not a thing. Your papers get marked, 'Term not completed' and you never get a second chance. This is our cooling-off period, to shake out overgrown babies who should never have taken the oath." He shoved his chair away from his desk. "So I'll see you at noon day after tomorrow. If I see you. Fetch your personal effects."

It was a crumby leave. Father stormed; Mother took to her bed. When I left, nobody saw me off but the morning cook and the houseboys.

I stopped in front of the Sergeant's desk. He looked up. "Oh. Here are your papers. Take them to room 201."

Two days later I knew I was not going to be a pilot, so I caught four more days of aptitude tests. The thing I did most carefully was to list preferences. I put all Space Navy jobs (other than pilot) at the top; I preferred any Navy job to any Army job.

Next I listed "Intelligence"—then came a long list; psychological warfare, chemical warfare, biological warfare, combat ecology, logistics corps, and a dozen others. Clear at the bottom, I put "K-9 Corps," and "Infantry."

I didn't list non-combatant corps because, if I wasn't picked for combat, I didn't care whether they used me as an experimental animal or sent me as a laborer to Venus.

Mr. Weiss sent for me a week after I was sworn in. He was a retired psychological-warfare major, but he wore mufti and insisted on being called "mister." He had my preferences, and reports on my tests, and was holding my high school transcript—which pleased me, for I had done all right, never flunked any courses and had been a big man around school: swimming team, debate team, track squad, class treasurer, silver medal in the literary contest, chairman of the homecoming committee, stuff like that.

He looked up as I came in. "Sit down, Johnnie. You like dogs?"

"Huh? Yes, sir."

"Did your dog sleep on your bed? By the way, where is your dog?"

"Why, I don't have one now. But when I did—well, no, he didn't sleep on my bed. Mother didn't allow dogs in the house."

"Didn't you sneak him in?"

"Uh—" I thought of trying to explain Mother's Not-angry-but-terribly-terribly-hurt routine when you tried to oppose her. "No, sir."

"Let me tell you how it is with a K-9 team. A neodog is not just a dog that talks."

"Do they really talk?"

"They talk. Their mouths can't shape 'b,' 'm,' 'p,' or 'v,' and you get used to equivalents. But a neodog is not a dog; he is an artificially mutated symbiote from dog stock. A trained Caleb is about six times as bright as a dog." Mr. Weiss frowned. "Provided he has his symbiote. Can you imagine being married to a Caleb?"

"Huh?" No, I can't."

"The relationship between the dog-man and the man-dog is closer than most marriages. If the master is killed, we kill the neodog. If the neodog is killed . . . well, we can't kill the man, so we restrain him and slowly put him back together. I don't think we can assign a boy to K-9 who didn't outwit his mother to have his dog sleep with him. Johnnie, why didn't you study something useful in school?"

"Sir?"

"Too late now. Mmm . . . your instructor in History and Moral Philosophy thinks well of you."

"He does?" I was surprised. "What did he say?"

Weiss smiled. "He says that you are not stupid, merely ignorant and prejudiced by environment. That is high praise—I know him."

Why, that stuck-up, stiff-necked old—

"And," Weiss went on, "a boy who gets a 'C-minus' in 'Appreciation of Television' can't be all bad. How would you like to be an infantryman?"

I came out of the Federal Building late that day; it was empty save for stragglers. I ran into a man in the rotunda whose face looked familiar.

He spoke to me. "Evening!" he said briskly. "You haven't shipped out?"

Then I recognized him—the Fleet Sergeant who had sworn us in. My chin dropped; this man was in civilian clothes, was walking around on legs and had two arms. "Uh, good evening, Sergeant," I mumbled.

He smiled easily. "Relax, lad. I don't put on my horror show after working hours. You haven't been placed yet?"

"I just got orders."

"For what?"

"Mobile Infantry."

His face broke into a grin and he shoved out his hand. "My outfit! Shake, son!"

"It's a good choice?" I said doubtfully.

"'A good choice?' Son, the Mobile Infantry *is* the Army. The rest are button-pushers or professors, along merely to hand us the saw; *we* do the work." He added, "Drop me a card—'Fleet Sergeant Ho, Federal Building.' Good luck!" He was off, shoulders back, heels clicking.

I went to the hotel where recruits were billeted and started packing. Carl had shipped out three days earlier, having gotten the R&D assignment he wanted. Little Carmen had shipped out, too, with the rank of "cadet midshipman (probationary)"—she was going to be a pilot, if she could cut it . . . and I suspected she could. My temporary roomie came in while I was packing. "Got your orders?" he asked.

"Yup."

"What?"

"Mobile Infantry."

"The *Infantry?* Oh, you poor clown! I feel sorry for you."

I said angrily, "Shut up! The Mobile Infantry is the best outfit in the Army—it *is* the Army! The rest are just along to hand us the saw—*we* do the work."

He laughed. "You'll find out!"

"You want a mouthful of knuckles?"

III

"He shall rule them with a rod of iron."

—Revelations II 25

I DID BASIC AT CAMP ARTHUR Currie on the northern prairies—and I do mean "Camp," as the only buildings were to shelter equipment. We slept and ate in tents; we lived outdoors. It seemed to me that the North Pole was just north of camp. But exercise will keep you warm and we got plenty of that.

The first morning they woke us before daybreak. A speaker was blaring a military march and a

hairy nuisance came charging down the company street yelling, "*Everybody out! On the bounce!*" He came back just as I pulled the covers over my head, tipped my cot and dumped me on the cold hard ground.

Ten minutes later, in trousers, undershirt, and shoes, we lined up in ragged ranks for setting-up exercises just as the sun looked over the horizon. Facing us was a big, broad-shouldered, mean-looking man. His chin was shaved blue, his trousers were creased, you could use his shoes for mirrors. You got the impression that he never needed sleep—just ten-thousand-mile checkups.

He bellowed, "C'p*nee!* A*tten* . . . *shut!* I am Career Ship's Sergeant Zim, your company commander. When you speak to me, you will salute and say, 'Sir'—you will salute and 'sir' anyone who carries an instructor's baton—" he was carrying a swagger cane and cut a moulinet to show what he meant "—because we don't have enough officers for you to practice on. Who sneezed?"

No answer—

"WHO SNEEZED?"

"I did," a voice answered.

"'I did' *what?*"

"I sneezed."

"'I sneezed,' *SIR!*"

"I sneezed, sir. I'm cold, sir."

"Oho!" Zim strode up to the man. "Name?"

"Jenkins . . . sir."

"'Jenkins . . .'" Zim repeated as if the word were shameful. "Some night on patrol you're going to sneeze just because you've got a runny nose. Eh?"

"I hope not, sir."

"So do I. But you're cold." He pointed. "See that armory?" I looked and could see one building on the skyline.

"Run around it. *Fast!* Bronski! Pace him."

"Right, Sarge." One of the other baton carriers took out after Jenkins, cracked him across his pants with the baton. Zim turned back, looked us over, seemed awfully unhappy. He shook his head and said, to himself but in a voice that carried: "This had to happen to *me!*"

He looked at us. "You apes—No, you don't rate that. You pitiful mob of sickly monkeys . . . you sunken-chested, slack-bellied, drooling refugees from apron strings. I never saw such a disgraceful huddle of momma's spoiled darlings— You, there! Suck up the gut!"

I pulled in my belly, even though I was not sure he meant me. He went on and on, describing our shortcomings in great and insulting detail.

At last he stopped. "I can't *stand* it," he said bitterly. "I've just got to work it off. ALL RIGHT! Is there one of you jungle lice who thinks he can whip me? Is there a *man* in the crowd?"

I didn't have any doubt that he could whip me.

I heard a voice far down the tall end. "Ah reckon ah can . . . suh."

Zim looked happy. "Good! Step out where I can see you." The recruit did so. He was three inches taller than Zim and broader. "What's your name, soldier?"

"Breckinridge, suh—and ah weigh two hundred and ten pounds an' theah aint *any* of it 'slack-bellied.'"

"Any particular way you'd like to fight?"

"Suh, you pick youah own method of dyin'."

"Okay, no rules." Zim tossed his baton aside.

It started—and was over. The recruit was sitting on the ground, holding his wrist. Zim bent over him. "Broken?"

"Reckon it might be . . . suh."

"I'm sorry. You hurried me a little. Jones! Take Breckinridge to the dispensary." As they left Zim said quietly, "Let's try it again in a month."

Zim stepped back and called out, "Okay, we've got one man in this company. Do we have another? Do we have two? Any *two* of your scrofulous toads think you can stand up to me?" He looked along our ranks. "Chicken-livered, spineless— Oh, oh! Yes?"

Two men stepped out together; Zim smiled at them. "Names, for next of kin, please."

"Heinrich."

"Heinrich, *what?*"

"Heinrich, sir. Bitte." He spoke to the other recruit, and added, "He doesn't speak much Standard English, sir."

"Meyer, mein Herr," the second man supplied.

"That's okay, lots of 'em don't speak it much when they get here. Tell Meyer not to worry. He understands what we are going to do?"

"Jawohl," agreed Meyer.

"Certainly, sir. He understands, he just can't speak it fluently."

"All right. Where did you two pick up those face scars? Heidelberg?"

"Nein—no, sir. Königsberg."

"Same thing." Zim had picked up his baton after fighting Breckinridge; he twirled it and asked, "Perhaps you would like to borrow two of these?"

"It would not be fair to you, sir," Heinrich answered carefully.

"Suit yourself. Though I might fool you. Rules?"

"How can there be rules, sir, with three?"

"Well, let's agree that if eyes are gouged out they must be handed back. Start when you like." Zim tossed his baton away.

"You joke, sir. We will not gouge eyes."

"No eye gouging. 'Fire when ready.'"

"Please?"

"Come on and fight!"

The two moved out on each side until they had him flanked but out of contact. Any group is weaker than a man alone unless they are perfectly trained to work together. Zim could have feinted, bounced fast to the other with a disabler, such as a broken knee cap—then finished off the first at his leisure.

Instead he let them attack. Meyer came at him fast, intending to body check and knock him to the ground, I think.

Meyer never reached him. Sergeant Zim whirled to face him, while kicking out and getting Heinrich in the belly—and then Meyer was sailing through the air, helped along with a hearty assist from Zim.

Two German boys were sleeping peacefully, one face down and one face up, and Zim was not even breathing hard. "Mahmud! Let's have the water bucket."

A few moments later the two were conscious, wet, and back in ranks. Zim inquired gently, "Anybody else? Or shall we get on with setting-up exercises?"

I didn't expect anybody else. But from the left where the shorties hung out, a boy stepped out, came front and center. Zim looked down at him. "Just you?"

"Just myself, sir."

"As you say. Name?"

"Shujumi, sir."

Zim's eyes widened. "Any relation to Colonel Shujumi?"

"I have the honor to be his son, sir."

"Ah so! Black Belt?"

"No, sir. Not yet."

"I'm glad you qualified that. Well, Shujumi, are we going to use contest rules, or shall I send for the ambulance?"

"As you wish, sir. But I think that contest rules would be more prudent."

"I don't know how you mean that, but I agree." So help me, they faced each other and bowed.

After that they circled in a half crouch, making tentative passes.

Suddenly they touched—and the little chap was down and Sergeant Zim was flying through the air over his head. But he didn't land with the thud that Meyer had; he was on his feet as fast as Shujumi was and facing him. "Banzai!" Zim yelled and grinned.

"Arigato," Shujumi answered and grinned back.

They touched again almost without pause and I thought the Sergeant was going to fly again. He didn't; he slithered in and when the motion slowed down you could see Zim tucking Shujumi's left foot in his right ear.

Shujumi slapped the ground; Zim let him up. They again bowed.

"Another fall, sir?"

"Sorry. Some other time. I should have told you; your honorable father trained me."

"So I surmised, sir. Another time it *is*."

Zim slapped him on the shoulder. "Back in ranks, soldier. *C'pnee!*"

Then we went through calesthenics that left me as dripping hot as I had been shivering cold. Zim led it, doing it with us and shouting the count. He never led the exercises again, but he did that morning, and when we were all bushed, he led us at a trot to the mess tent, shouting: "Step it up! On the bounce!"

We *always* trotted *everywhere* at Camp Arthur Currie.

Breakfast was all right—there was none of that nonsense some boarding schools have of making your life miserable at the table. The civilian waiters slapped the food around in a fashion that would have made Mother grow pale—but it was hot and plentiful and the cooking was okay. I ate four times what I normally did and washed it down in coffee with cream and lots of sugar.

Corporal Bronski showed up with Jenkins as I was starting on seconds. They stopped where Zim was eating alone, then Jenkins slumped onto a stool by mine. He looked exhausted, his breath rasping. I said, "Let me pour you some coffee."

He shook his head.

"Better eat," I insisted. "Scrambled eggs—they go down easily."

"Can't eat. Oh, that dirty so-and-so." He began cussing Zim in a monotone. "All I asked was to lie down and skip breakfast. Bronski said I had to see the company commander. So I did and *told* him I was sick. He felt my cheek and counted my pulse and told me sick call was nine o'clock. Oh, that rat! I'll catch him on a dark night, I will."

I spooned out eggs for him and poured coffee. Presently Sergeant Zim got up, stopped by our table. "Jenkins."

"Uh? Yes, sir."

"At oh-nine-hundred muster for sick call."

Jenkins' jaw muscles twitched. He answered, "I'll get by. sir."

"Oh-nine-hundred. That's an order." He left.

Jenkins started his chant again. Finally he said "I can't help wondering what kind of a mother produced *that*. Did he *have* a mother?" At the head of our table was one of the instructor-corporals. He had been listening. "Jenkins—"

"Uh—sir?"

"Don't you know about sergeants?"

"Well . . . I'm learning."

"They don't have mothers. Ask any trained private They reproduce by fission . . . like all bacteria."

IV

"*And the LORD said unto Gideon, The people that* are *with thee* are *too many . . . Now therefore go to, proclaim in the ears of the peo-*

ple, saying, Whosoever is fearful and afraid, let him return . . . And there returned of the people twenty and two thousand; and there remained ten thousand. And the LORD said unto Gideon, The people are *yet* too *many; bring them down unto the water, and I will try them for thee there . . . so he brought down the people unto the water: and the LORD said unto Gideon, Every one that lappeth of the water with his tongue, as a dog lappeth, him shalt thou set by himself; likewise everyone that boweth down upon his knees to drink. And the number of them that drank,* putting *their hand to their mouth, there were three hundred men . . .*

And the LORD said unto Gideon, By the three hundred . . . will I save you . . . let all the other *people go—"*

—Judges VII 2-7

"Youse guys think this deleted outfit is a blankety-blank nursery. Well, it ain't! *See?"*

—remark attributed to an Hellenic corporal before the walls of Troy, 1194 B.C.

Two weeks later they took our cots. By then the ground seemed much warmer and quite soft—especially when the alert sounded in the night and we had to scramble out and play soldier. But I could get right back to sleep after those; I learned to sleep any time—sitting up, standing up, even marching in ranks.

I made a discovery at Camp Currie. Happiness is enough sleep. All wealthy, unhappy people take sleeping pills; Mobile Infantrymen don't need them. Give a cap trooper a bunk and time to sack out and he's happy as a worm in an apple.

Theoretically you were given eight hours of sack time, and about an hour and a half after evening chow for your own use. But sack time was subject to alerts, to night duty, to field marches, to acts of God and the whims of those over you, and your evenings, if not ruined by awkward squad or extra duty, were taken up by shining shoes, laundry, swapping haircuts (some got to be fair barbers but a billiard ball cut was acceptable)—not to mention a thousand chores having to do with equipment, person, and the demands of sergeants. We learned to answer morning roll call with: "Bathed!" meaning you had taken a bath since last reveille. A man might lie and get away with it (I did, a couple of times), but at least one got scrubbed with stiff brushes and floor soap by his squad mates while a corporal-instructor made suggestions.

If you didn't have more urgent things to do after supper, you could write a letter, loaf, gossip, discuss the shortcomings of ser-

geants and, dearest of all, talk about the female of the species.

Or you could sleep. This was a choice highly thought of.

I may have given the impression that boot camp was harder than necessary. This is not correct.

It was *as hard as possible* and on purpose.

It was the opinion of every recruit that this was sadism by witless morons.

It was not. It was too efficiently organized to be cruelty for the sick pleasure of cruelty; it was planned like surgery.

That's what it was: surgery. Its immediate purpose was to run out of the outfit those recruits too soft or babyish ever to make Mobile Infantrymen. (They darn near ran *me* out.) Some were allowed to sweat out their terms in noncombatant services; others got Bad Conduct Discharges, Unsatisfactory Performance Discharges, or Medical Discharges.

But, more important than carving away the fat, was the purpose of making sure that no cap trooper ever climbed into a capsule for a combat drop unless he was prepared—fit, resolute, disciplined, and skilled. If he is not, it's not fair to the Federation, it's not fair to his team mates, and worst of all it's not fair to *him*.

But was boot camp more cruelly hard than was necessary?

I can say this: the next time I drop, I want the men on my flanks to be graduates of Camp Currie or its equivalent. Otherwise I'll refuse to enter the capsule.

But I certainly thought it was vicious nonsense at the time. Little things— When we were there a week, we were issued undress maroons. (Dress and full dress came much later.) I took my tunic and complained to the supply sergeant. "Sergeant, my company commander says this tunic fits like a tent. I want one that fits."

He didn't stir. "Sonny boy, there are just two sizes—too large and too small."

"But my company commander—"

"No doubt."

"But what am I going to *do*?"

"Oh, it's *advice* you want! Mmm . . . tell you what. Here's a needle and I'll give you a spool of thread. Now, tight 'em but leave cloth to loose 'em again across the shoulders; you'll need it later."

Sergeant Zim's only comment was: "You can do better. Two hours extra duty."

So I did better.

Those first six weeks were all hardening up and hazing, with lots of drill and route march. Eventually, as files dropped out, we could do fifty miles in ten hours on the level—good mileage for a horse. We rested by changing pace, slow march, quick march, and trot. Sometimes we went full distance, ate field rations, slept in

sleeping bags and marched back the next day.

One day we started out with no bed bags, no rations. When we didn't stop for lunch I wasn't unprepared, as I had learned to sneak sugar and hard bread and such out of the mess, but when we kept on in the afternoon I began to wonder. But I had learned not to ask silly questions.

We halted shortly before dark, formed a parade, marched through it without music, guards were mounted and we were dismissed. I looked up Corporal-Instructor Bronski because I felt some responsibility; I happened to be a recruit-corporal. Boot chevrons didn't mean much—mostly the privilege of being chewed out for whatever your squad did. Zim had tried the older men first and I had inherited a brassard with chevrons when our squad leader had folded up and gone to hospital.

I said, "Corporal Bronski, what's the word? When is chow call?"

He grinned. "I've got a couple of crackers. Want to split 'em?"

"Huh? Oh, no, sir. Thank you." (I had more than a couple of crackers.) "No chow call?"

"Sonny, if I was you, I'd round up my squad and figure things out. Maybe you can hit a jack rabbit with a rock."

"Yes, sir. But— Well, are we staying all night? We don't have bed rolls."

His eyebrows shot up. "Well, I do declare!" He seemed to think it over. "Mmm . . . ever see sheep huddle together in a snow storm?"

"Uh, no, sir."

"Try it." He grinned again.

I saluted and went back to my squad. We divvied up—and I came out with less food than I had started with; some of those idiots hadn't sneaked out anything. But a few crackers and a couple of prunes will do a lot to quiet your stomach.

The sheep trick works, too; our section, three squads, did it together. I don't recommend it, you are either in the outer layer, trying to worm your way in, or you are inside, fairly warm but with everybody else shoving his elbows, feet, and halitosis on you. This makes a night about a hundred years long.

We turned out at dawn to the familiar shout of: "Up you come! On the bounce!" encouraged by batons applied on fundaments sticking out of the piles, and we did setting up exercises. I didn't see how I could touch my toes. But twenty minutes later when we hit the trail I merely felt elderly. Sergeant Zim wasn't mussed and the scoundrel had managed to shave.

The Sun warmed our backs and Zim started us singing—"*Le Regiment de Sambre et Meuse*" and "*Caissons*" and "*Halls of Montezuma*" and then our own "*Cap*

Trooper's Polka" which pulls you into a trot. Zim couldn't carry a tune but Breckinridge had a strong lead and could hold us in the teeth of Zim's terrible false notes. We all felt cocky and covered with spines.

But we didn't feel cocky fifty miles later. Zim chewed us out for the way we looked on parade and several got gigged for failing to shave in the few minutes between the time we fell out and fell back in for parade. Several recruits resigned that evening, and I thought about it.

That night there was a two-hour alert.

I learned to appreciate the luxury of two dozen warm bodies to snuggle up to, because twelve weeks later they dumped me raw naked in the Canadian Rockies and I had to make my way forty miles through mountains. I made it—and hated the Army every inch of the way.

I wasn't in bad shape when I checked in. A couple of rabbits had failed to stay alert, so I didn't go hungry . . . nor entirely naked; I had a nice warm coat of rabbit fat and dirt on my body and moccasins on my feet.

The others made it, too, those who were still around and didn't resign rather than take the test—all but two boys who died trying. We spent thirteen days finding them, working with copters to direct us and the communication gear to help us and instructors in powered command suits to supervise and check rumors—because the Mobile Infantry doesn't abandon its own while there is any hope.

We buried them to the strains of "*This Land Is Ours*" and with the posthumous rank of PFC., the first of our regiment to go that high—because a cap trooper isn't necessarily expected to live (dying is part of his trade) . . . but they care a lot about *how* you die. It has to be heads up, on the bounce, and still trying.

Breckinridge was one, the other was an Aussie boy. They weren't the first to die in training, they weren't the last.

V

"He's *bound* to be *guilty* 'r he
wouldn't be *here!*
Starboard gun . . . *FIRE!*
*Shoot*ing's too *good* for 'im, *kick*
the louse *out!*
Port gun . . . *FIRE!*
—ancient chanty
used to time saluting
guns

BUT THAT WAS AFTER WE left Camp Currie, and a lot happened in between. Combat training, mostly—drill and exercises and maneuvers, using everything from bare hands to simulated nuclear weapons. Hands and feet to start with—and if you think those aren't weapons

you haven't seen Sergeant Zim and Captain Frankel, our battalion commander, demonstrate *la savate*, or had little Shujumi work you over with just hands and a toothy grin—Zim made Shujumi an instructor for that purpose, although we didn't have to salute him and say "sir."

As our ranks thinned, Zim spent more time instructing. He mellowed quite a bit, becoming merely unbearable—he could be quite patient with silly questions.

Once, during a two-minute rest, a kid named Ted Hendrick asked, "Sergeant? This knife throwing—what possible use is it?"

"Well," answered Zim, "Suppose all you have is a knife? Or not even a knife? What do you do? Say your prayers and die? Or wade in and make him buy it? Son, this is *real*—it's not a game."

"But that's what I mean, sir. Suppose you aren't armed? Or just one of these toadstickers, say? And the man you're up against has all sorts of dangerous weapons? He's got you licked on showdown."

Zim said gently, "Son, there's no such thing as a 'dangerous weapon.'"

"Huh? Sir?"

"There are no dangerous weapons; there are only dangerous men. We're trying to teach you to be dangerous even without a knife. Deadly as long as you are alive. Take the case you mentioned. That target behind me—the one you've been missing, number three—is a sentry, armed with everything but an H-bomb. You've got to get him . . . quietly, at once, and without letting him call for help." Zim turned slightly—*thunk!*—a knife he hadn't even had in his hand was quivering in the center of target number three. "You see?" Best carry two knives—but get him you must, even barehanded."

"Uh—"

"Speak up."

"Uh, yes, sir. You said the sentry didn't have an H-bomb. But he *does* have. Well, at least we have and any sentry we're up against is likely to have them, too. I mean the side he's on."

"I understood you."

"Well? If we can use an H-bomb—and, as you said, it's real and nobody is fooling—isn't it ridiculous to crawl around in the weeds, throwing knives and maybe getting killed . . . even losing the war . . . when you've got a weapon that can win? What's the point in risking lives with obsolete weapons when one professor-type can do so much more just by pushing a button?"

Zim said softly, "Are you happy, Hendrick? You can resign, you know."

"I'm not itching to resign, sir."

"Well, the question you asked is one that you shouldn't ask a sergeant. You're supposed to *know* the answer before you join. Did

your school teach History and Moral Philosophy?"

"What? Sure—yes, sir."

"Then you've heard the answer. But I'll give you my views. If you wanted to teach a baby a lesson, would you cut its head off?"

"Why . . . no, sir!"

Sometimes it's as foolish to use an H-bomb as it would be to spank a baby with an ax. War is not simply violence, war is *controlled* violence. Its purpose is to support your government's decisions by force. The purpose is never simply to kill the enemy, but to make him do what you want him to do. But it's never a soldier's business to decide when or where or how—or *why*—he fights; that belongs to statesmen and generals. Statesmen decide why and how much; generals tell us where and when and how. Which is as it should be. If that doesn't satisfy you, I'll get you a chit to talk to the regimental commander. If *he* can't convince you—then go home and be a civilian!"

Zim bounced to his feet. "Up you come, soldiers! On the bounce! Man stations, on target—Hendrick, you first. I want you to throw that knife south of you. *South,* get it? That target is due south of you and I want that knife to go in a southerly direction. I know you won't hit it but see if you can't scare it. Ready—on target! *Let fly!*"

Hendrick missed again.

We trained with sticks and trained with wire (lots of nasty things you can do with wire) and we learned what can be done with modern weapons and how, and to service and maintain them—simulated nuclear weapons, infantry rockets, gas and poison and incendiary and demolition. As well as things best not discussed. But we learned a lot of "obsolete" weapons, too. Bayonets, and guns almost identical with the infantry rifle of the XXth century—much like modern sporting rifles, except that we fired nothing but solid bullets, at targets on measured ranges and at surprise targets on booby-trapped skirmish runs. This was supposed to teach us to use any aimed weapon and to train us to be on the bounce, alert, ready for anything.

We used these rifles to simulate nastier aimed weapons. We used a lot of simulation. An "explosive" bomb or grenade would just put out black smoke; another sort gave off a gas that made you sneeze—nasty enough to make you careful, to say nothing of the chewing out you got.

We got still less sleep; more than half the exercises were at night, with snoopers and radar and audio gear and such.

Rifles were loaded with blanks except one in five hundred rounds at random, which was a bullet. Dangerous? It's dangerous just to

be alive . . . and a non-explosive bullet probably won't kill you unless it hits the head or heart and maybe not them. What that one-in-five-hundred did was to give us a deep interest in taking cover, especially as some were fired by instructors who were trying to hit you—if the round happened not to be blank. They assured us that they would not intentionally shoot a man in the head . . . but accidents happen.

That 500th bullet turned tedious exercises into large-scale Russian roulette; you stop being bored the first time you hear a slug go *wheet!* past your ear.

But we slacked down and word came that if we didn't get on the bounce, the incidence of real ones would be changed to one in a hundred . . . and if that didn't work, to one in fifty. I don't know whether a change was made but we tightened up, because a boy got creased across his buttocks, producing an amazing scar and a lot of half-witty comments and renewed interest in taking cover. We laughed but we knew it could have been his head—or our *own.*

Instructors who were not firing put on white shirts and walked around upright, apparently certain that even a recruit would not shoot an instructor—which may have been overconfidence. Still, the chances were five hundred to one that even a shot aimed with murderous intent would be blank and the safety factor was higher because the recruit probably couldn't shoot well. A rifle is not an easy weapon; it's got no target-seeking qualities—back when wars were fought with rifles it used to take several thousand shots on the average to kill one man. This seems impossible but the histories agree—most shots simply forced the enemy to keep his head down and interfered with *his* shooting.

In any case, no instructors were shot. No trainees were killed by bullets; deaths were from other things—some of which could bite you if you didn't do things by the book. One boy managed to break his neck taking cover too enthusiastically—but no bullet touched him.

However this matter of bullets and taking cover brought me to my lowest ebb. I had been busted out of boot chevrons over something one of my squad did when I wasn't around . . . which I pointed out. Bronski told me to button my lip. So I went to see Zim. He told me I was responsible for my men, regardless . . . and tacked on extra duty besides busting me for speaking to him without Bronski's permission. Then I got a letter that upset me; my mother finally wrote. Then I sprained a shoulder in my first drill with powered armor, and this put me on light duty with too much time to feel sorry for myself.

Because of "light duty" I was

orderly in the battalion commander's office. I was eager at first, trying to make a good impression. I discovered that Captain Frankel wanted me to sit still and not bother him. This left me time to sympathize with myself.

Suddenly, after lunch, Sergeant Zim came in, followed by three men. Zim was smart as usual but his expression was like death and he had a mark on his right eye that looked as if it might be a shiner. Of the other three, the one in the middle was Ted Hendrick. He was dirty, his lip was split, there was blood on his chin and his cap was missing. He looked wild-eyed.

The men on each side of him were boots. They had rifles; Hendrick did not. One was from my squad, a kid named Leivy. He seemed excited and slipped me a wink.

Captain Frankel looked surprised. "What is this, Sergeant?"

Zim spoke as if reciting by rote. "Sir, 'H' Company Commander reports to the Battalion Commander. Discipline. Article nine-one-oh-seven. Disregard of tactical command and doctrine in simulated combat. Article nine-one-two-oh. Disobedience of orders, same conditions."

Captain Frankel looked puzzled. "You are bringing this to *me*, Sergeant?"

I don't see how a man can look so embarrassed and still have no expression. "Sir. If the Captain pleases. The man refused discipline. He insisted on seeing the Battalion Commander."

"I see. A bed-roll lawyer. Well, Sergeant, that's his privilege. What was the tactical command and doctrine?"

"A 'freeze,' sir." I glanced at Hendrick, thinking: Oh, he's going to catch it! In a "freeze" you hit dirt, taking any cover fast, and *freeze*—don't twitch an eyebrow. They tell stories about men hit while in freeze who died slowly without a sound or a move.

Frankel's brows shot up. "Second part?"

"Sir, after breaking freeze, failing to return to it on being so ordered."

Captain Frankel looked grim. "Name?"

Zim answered. "Hendrick, T. C., sir. Recruit Private R-P-seven-nine-six-oh-nine-two-four."

"Very well. Hendrick, you are deprived of all privileges for thirty days and restricted to your tent when not on duty or at meals, subject only to sanitary necessities. You will serve three hours extra duty each day under the Corporal of the Guard, one hour just before taps, one hour just before reveille, one hour at the time of the noonday meal and in place of it. Your evening meal will be bread and water—as much bread as you can eat. You will serve ten hours extra duty each Sunday, the

time to be adjusted to permit you to attend divine services if you so elect."

(I thought: Oh my! he threw the book.)

Captain Frankel went on: "Hendrick, you are getting off lightly because I am not permitted to give you more without convening a court . . . I don't want to spoil your company's record. Dismissed." He dropped his eyes to his desk—

—and Hendrick yelled, "You didn't hear *my* side of it!"

The Captain looked up "Oh. Sorry. You have a side?"

"You darn right I do! Sergeant Zim's got it in for me! He's been riding me, riding me, riding me, all day long! He—"

"That's his job," the Captain said coldly. "Do you deny the charges?"

"No, but— *He didn't tell you I was lying on an ant hill!*"

Frankel looked disgusted. "Oh. You would get yourself killed and your team mates as well because of a few little ants?"

"Not 'just a few'—there were hundreds of 'em. Stingers."

"So? Young man, had it been a nest of rattlesnakes you would have been expected—and required—to freeze." Frankel paused. "Have you anything to say in your defense?"

Hendrick's mouth was open. "I certainly do! He hit me! *He laid hands on me!* The whole bunch strut around with those silly batons, whackin' you across the fanny, punchin' you between the shoulders and tellin' you to brace up—and I put up with it. But he hit me with his *hands*—he knocked me down and yelled, '*Freeze!* you stupid jackass!' How about *that?*"

Captain Frankel looked down, looked up again. "Young man, you are under a misapprehension very common among civilians. You think that your superior officers are not permitted to 'lay hands on you,' as you put it. Under social conditions, that is true—say if we ran across each other in a theater or shop, I would have no more right, as long as you treated me with respect due my rank, to slap your face than you have to slap mine. But in line of duty the rule is entirely different—"

The Captain swung around and pointed at loose-leaf books. "There are the laws under which you live. You can search those books, every court martial case under them, and you will not find *one word* which says, or implies, that your superior officer may not 'lay hands on you' or strike you in line of duty. Hendrick, I could break your jaw . . . and I simply would be responsible to my own superiors as to the necessity. But I would not be responsible to *you*. I could do more than that. There are circumstances under which a superior, commissioned or not, is not only permitted but *required* to

kill an officer or man under him, without delay and perhaps without warning—and, far from being punished, be commended. To put a stop to pusillanimous conduct in the face of the enemy, for example."

The captain tapped his desk. "Now about those batons— First, they denote authority. Second, we expect them to be used to touch you up and keep you on the bounce. You can't be hurt with one, at most they sting a little. But they save thousands of words. Say you don't turn out at reveille. No doubt the duty corporal could wheedle you, inquire if you'd like breakfast in bed—if we could spare a corporal to nursemaid you. We can't, so he gives your bed roll a whack and trots on down the line. Of course he could kick you, which would be just as legal. But the general thinks that it is more dignified, both for the corporal and for you, to snap a late sleeper out of his fog with the impersonal rod of authority. And so do I. Not that it matters what you or I think; this is the way we do it."

Captain Frankel sighed. "Hendrick, it is useless to punish a man unless he knows why. You've been a bad boy—I say 'boy' because you evidently aren't a man, although we'll keep trying—a surprisingly bad boy in view of the stage of your training. Nothing you have said is any defense, nor even mitigation; you don't seem to have any idea of your duty as a soldier. So tell me in your own words why you feel mistreated; I want to get you straightened out. There might be something in your favor, though I cannot imagine what it could be."

Hendrick's expression had gone from blank astonishment to sullenness.

"Speak up!" Frankel added sharply.

"Uh . . . we were ordered to freeze and I hit dirt and found I was on this ant hill. So I got to my knees, to move over, and I was hit from behind and knocked flat and he yelled at me—and I bounced up and popped him one and he—"

"*STOP!*" Captain Frankel was up and standing ten feet tall, though he's hardly taller than I am. He stared at Hendrick.

"You . . . *struck* . . . your company commander?"

"Huh? But he hit me first. From behind, I didn't even see him. I don't take that off of anybody. I popped him and then he hit me again and then—"

"Silence!"

Hendrick stopped. Then he added, "I want out of this lousy outfit."

"We can accommodate you," Frankel said icily.

"Just gimme a piece of paper, I'm resigning."

"One moment. Sergeant Zim."

"Yes, sir." Zim had stood, noth-

ing moving but twitching jaw muscles. I looked at him and it certainly was a shiner!—a beaut. But he hadn't mentioned it and Captain Frankel hadn't asked.

"Have the pertinent articles been published to your company?"

"Yes, sir. Published and logged, every Sunday morning."

"I know. I asked for the record." Before church call every Sunday they lined us up and read aloud the disciplinary articles of the Laws and Regulations of the Military Forces. They were posted, too, outside the orderly tent. Nobody paid much mind. About the only thing we noticed was what we called "the thirty-one ways to crash land," the thirty-one capital offenses. Now and then somebody boasted of having found a thirty-second way—something preposterous and usually obscene.

"Striking a Superior Officer—!"

It suddenly wasn't amusing. Popping Zim? *Hang* a man for that? Why, everybody in the company had taken a swing at Sergeant Zim when he was instructing in hand-to-hand. I once saw Shujumi knock him unconscious. Bronski threw water on him and Zim got up and grinned and shook hands—and threw Shujumi right over the horizon.

Captain Frankel motioned at me. "You. Flash regimental headquarters."

I did, all thumbs, stepped back when an officer's face came on. "Adjutant," the face said.

Frankel said crisply, "Second Battalion Commander's respects to the Regimental Commander. I request and require an officer to sit as a court."

The face said, "When do you need him, Ian?"

"As quickly as possible."

"Right away. I think Jake is in his HQ. Article and name?"

Captain Frankel identified Hendrick and quoted an article number. The Adjutant whistled and looked grim. "On the bounce, Ian. If I can't get Jake, I'll be over—as soon as I tell the Old Man."

Captain Frankel turned to Zim. "This escort—are they witnesses?"

"Yes, sir."

"Did his section leader see it?"

"I think so, sir."

"Get him. Anybody out that way in a powered suit?"

"Yes, sir."

Zim used the phone while Frankel said to Hendrick, "What witnesses do you wish to call?"

"Huh? I don't need witnesses! Just had me a piece of paper—I'm getting out."

"All in good time."

Five minutes later Corporal Jones came bouncing up, carrying Corporal Mahmud in his arms. He dropped Mahmud and bounced away as Lieutenant Spieksma came in. He said, "Afternoon, Cap'n. Accused and witnesses here?"

"All set. Take it, Jake."

"Recorder on?"

"It is now."

"Very well. Hendrick, step forward." Hendrick did so, looking as if his nerve was beginning to crack. Lieutenant Spieksma said briskly: "Field Court Martial, convened by order of Major F. X. Malloy, commanding Third Training Regiment, Camp Arthur Currie, under General Order Number Four, issued by Commanding General, Training and Discipline Command, pursuant to the Laws and Regulations of the Military Forces, Terran Federation. Remanding officer: Captain Ian Frankel, M.I., assigned to and commanding Second Battalion, Third Regiment. The Court: First Lieutenant Jacques Spieksma, M.I., assigned to and commanding First Battalion, Third Regiment. Accused: Hendrick, Theodore C., Recruit Private RP7960-924. Article 9080. Charge: Striking his superior officer, the Terran Federation then being in a state of emergency."

The thing that got me was how *fast* it went. I found myself appointed an "officer of the court" and directed to "remove" witnesses and have them ready. I don't know how I would "remove" Sergeant Zim if he didn't feel like it, but he gathered Mahmud and the boots up by eye and they went outside. In twenty minutes all had testified. Zim wasn't called.

Lieutenant Spieksma said to Hendrick, "Do you wish to cross-examine the witnesses? The Court will assist you, if you so wish."

"No."

"Stand at attention and say 'sir' when you address the Court."

"No, sir." Ted added, "I want a lawyer."

"The Law does not permit counsel in field courts martial. Do you wish to testify in your own defense? You are not required to do so and the Court will take no judicial notice if you choose not to do so. But you are warned that any testimony that you give may be used against you and that you will be subject to cross-examination."

Hendrick shrugged. "What good would it do?"

"The Court repeats: will you testify in your own defense?"

"Uh, no, sir."

"The Court must demand of you one technical question. Was the article under which you are charged published to you *before* the time of the alleged offense of which you stand accused? You may answer: yes, or no, or stand mute—but you are responsible for your answer under article 9167 which relates to perjury."

The accused stood mute.

"Very well, the Court will read the article of the charge aloud to you and again ask you that question. 'Article 9080: Any person in the Military Forces who strikes or

assaults, or attempts to strike or assault—"

"Oh, I suppose they did. They read a lot of stuff, every Sunday morning—a whole list of things you couldn't do."

"Was or was not that particular article read to you?"

"Uh . . . yes, sir. It was."

"Very well. Having declined to testify, do you have any statement to make in mitigation or extenuation?"

"Sir?"

"Do you want to tell the Court anything about it? Any circumstance which you think might possibly affect the evidence already given? Or anything which might lessen the alleged offense? Such things as being ill, or under drugs or medication. You are not under oath at this point; you may say anything at all which you think may help you. What the Court is trying to find out is this: does anything about this matter strike you as being unfair? If so, why?"

"Huh? Of course it is! Everything about it is unfair! He hit me first! You heard 'em!—*he hit me first!*"

"Anything more?"

"Huh? No, sir. Isn't that enough?"

"The trial is completed. Recruit Private Theodore C. Hendrick, stand forth!" Lieutenant Spieksma had been standing at attention the whole time; now Captain Frankel stood up. The place felt chilly.

"Private Hendrick, you are found guilty as charged."

My stomach did a flip-flop. They were going to *hang* Ted. And I had eaten breakfast beside him just this morning.

"The Court sentences you," he went on, while I felt sick, "to ten lashes and Bad Conduct Discharge."

Hendrick gulped. "I want to resign!"

"The Court will not permit you to resign. The Court wishes to add that your punishment is light simply because this Court possesses no jurisdiction to assign greater punishment. The authority which remanded you specified a field court martial—why it so chose, this Court will not speculate. But had you been remanded for general court martial, it seems certain that the evidence before this Court would have caused a general court to sentence you to hang by the neck until dead. You are very lucky—and the remanding authority has been most merciful." Lieutenant Spieksma paused, then went on, "Sentence will be carried out at the earliest hour after the convening authority has reviewed and approved the record, if it does so approve. Court is adjourned. Remove and confine him."

The last was addressed to me, but I didn't have to do anything other than flash the guard tent and then get a receipt for him.

At afternoon sick call Captain Frankel sent me to see the doctor, who sent me to duty. I got back just in time to fall in for parade—and get gigged by Zim for "spots on uniform."

Somebody had set up a post in the parade ground back near the adjutant. When it came time to publish the orders, they published Hendrick's court martial.

Then they marched him out with his hands cuffed in front of him.

I had never seen a flogging. Back home they do it behind the Federal Building—and Father had given me orders to stay away from there.

Once is too many.

The guards lifted his arms and hooked the manacles over a hook high on the post. They took his shirt off—it was fixed so that it could come off. He didn't have an undershirt. The adjutant said crisply, "Carry out the sentence of the Court."

A corporal-instructor from another battalion stepped forward with the whip. The Sergeant of the Guard made the count.

It's a slow count, five seconds between each lash and it seems *much* longer. There was such dead silence that you could hear it whistle, hear the *crack!* Ted didn't let out a peep until the third, then he sobbed. On the seventh he slumped and went limp.

The next thing I knew I was staring up at Corporal Bronski. He was slapping me. He stopped and asked, "Okay? All right, back in ranks. On the bounce; we're about to pass in review." We did and marched back to our areas. I didn't eat much dinner, but neither did a lot of them.

Nobody said a word to me about fainting. I found out later that a couple of dozen of us had passed out.

VI

"What we obtain too cheap, we esteem too lightly . . . it would be strange indeed if so celestial an article as FREEDOM should not be highly rated.

—Thomas Paine

THAT NIGHT I REACHED MY LOWEST slump. I couldn't sleep—and you have to have been through boot camp to understand how far down a recruit has to sink before that happens. But my shoulder still hurt and I had that letter from Mother preying on my mind, and every time I closed my eyes I would hear that *crack!* and see Ted slump against the whipping post.

I wasn't fretted about loosing boot chevrons. That no longer mattered because I was ready to resign.

Ted had made one mistake. And it really had been a mistake,

because he had been trying to sweat out his franchise; he meant to go into politics—he talked about how, when he got citizenship, "there will be changes—you wait and see."

Well, he would never be in public office now; he was through.

If it could happen to him, it could happen to me.

Time to admit I was wrong, time to put in that piece of paper and slink home and tell Father that I was ready to go to Harvard and then work in the business—if he would let me. Time to see Sergeant Zim and tell him I'd had it.

Sergeant Zim—

He worried me as much as Ted did. After the court martial, he stayed behind and said to Captain Frankel, "May I speak with the Battalion Commander, sir?"

"Certainly. I intended to ask you to stay for a word. Sit down."

Zim flicked his eyes my way and I faded. There was nobody in the outer office, just civilian clerks. I found a chair behind a row of files and sat down.

I could hear them through the partition I had my head against. BHQ was a "minimum field building"; the partitions weren't much. I doubt if the civilians could hear, as they were bent over typers—besides, they didn't matter.

Zim said: "Sir, I request transfer to a combat team."

Frankel answered: "I can't hear you, Charlie."

Zim: "I'm serious, sir. This isn't my sort of duty."

Frankel said testily, "Wait until we've disposed of duty matters. What in the world happened?"

Zim said stiffly, "Captain, that boy doesn't rate ten lashes."

Frankel answered, "Of course not. You know who goofed."

"Yes, sir. I know."

"Well? You know even better than I do that these kids are wild animals at this stage. You know when it's safe to turn your back. You know the standing orders about article nine-oh-eight-oh—you must *never* give them a *chance* to violate it. Some are going to try—if they weren't aggressive they wouldn't be material for the M.I. They're docile in ranks; it's safe to turn your back when they're eating, sleeping, or sitting on their tails and being lectured. But get them out in a combat exercise, or anything that gets them keyed up, and they're as explosive as a hatful of mercury fulminate. All you instructors know that; you're trained to watch for it, trained to snuff it out before it happens. How was it possible for a recruit to hang a mouse on your eye? You should have knocked him cold when you saw what he was up to. Why weren't you on the bounce? Are you slowing down?"

"I don't know," Zim answered slowly. "I guess I must be."

"Hmm! If true, a combat team

is the last place for you. But it wasn't true the last time you and I worked out together. What slipped?"

Zim was slow in answering. "I think I had him tagged as one of the safe ones."

"There are no such."

"Yes, sir. But he was so doggedly determined to sweat it out—he didn't have any aptitude but he kept trying—that I must have done that, subconsciously." Zim added, "I guess it was because I liked him."

Frankel snorted. "An instructor can't afford to like a man."

"I know it, sir. But they're a nice bunch of kids. Hendrick's only shortcoming was that he thought he knew all the answers. The twerps have gone and those left are eager and on the bounce—as cute as collie pups. A lot of them will make soldiers."

"So *that* was the soft spot. You liked him . . . so you failed to clip him in time. So he winds up with the whip and a B.C.D. Sweet."

Zim said earnestly, "I wish to heaven there were some way to take that flogging myself, sir."

"You'd have to take your turn, I rank you. What do you think I was afraid of when I saw you come in sporting a shiner? I did my best to brush it off with administrative punishment and the young fool wouldn't let me. But I never thought he would be crazy enough to blurt out that he had hung one on you—he's *stupid;* you should have eased him out weeks ago. But blurt it he did, forcing me to take official notice. No way to get it off the record, no way to avoid a court . . . just go through the whole dreary mess and wind up with one more civilian who'll be against us the rest of his days. Because he *has* to be flogged; neither you nor I can take it, even though the fault was ours. Because the regiment has to see what happens when nine-oh-eight-oh is violated. Our fault—but his lumps."

"*My* fault, Captain. That's why I want a transfer. Uh, Sir, it's best for the outfit."

"I decide what's best for my battalion, Sergeant. Charlie, who do you think pulled your name out of the hat? Think back twelve years. You were a corporal, remember? Where were you?"

"Here, as you know quite well, Captain. Here on this same godforsaken prairie—and I wish I had never come back!"

"Don't we all. But it happens to be the most important work in the Army—turning unspanked young cubs into soldiers. Who was the worst unspanked cub in your section?"

"Mmm . . ." Zim answered slowly. "I wouldn't say you were the worst, Captain."

"You wouldn't, eh? You'd have to think hard to name another

candidate. I hated your guts, 'Corporal' Zim."

Zim sounded surprised and hurt. "You did, Captain? I didn't hate you—I rather liked you."

"So? Well, 'hate' is the other luxury an instructor can never afford. We must not hate them, we must not like them; we must teach them. But if you liked me then—mmm, you had strange ways of showing it. Do you still like me? Don't answer; I don't want to know, whichever it is. Never mind; I despised you then and I used to dream about ways to get you. But you were always on the bounce and never gave me a chance to buy a nine-oh-eight-oh. So here I am, thanks to you. Now your request— You used to give me one order that I loathed more than anything else . . . and now I'll return it: 'Soldier, shut up and soldier!' "

"Yes, sir."

"This weary mess isn't all loss; boots need a stern lesson in the meaning of nine-oh-eight-oh. They haven't yet learned to think, they won't read, they rarely listen —but they can *see*. Hendrick's misfortune may save one of his mates, some day, from swinging by the neck until he's dead, dead, dead. But this batallion shall not supply another lesson. Warn your instructors. For about twenty-four hours those kids will be in a state of shock. About Thursday or Friday some boy will start thinking that Hendrick didn't even get the number of lashes for drunken driving . . . then he'll brood that it might be worth it, to take a swing at the instructor he hates worst. Sergeant—*that blow must never land!*

"They must have eyes in the backs of their heads. I want them as alert as a mouse at a cat show. Bronski—clamp down on Bronski; he tends to fraternize."

"I'll straighten out Bronski, sir."

"See that you do. Because when the next kid starts swinging, it's *got* to be stop-punched. The boy must be kicked cold and the instructor must do so without being touched—or I'll damned well break him for incompetence. They've got to teach those kids that it's *impossible* to violate nine-oh-eight-oh . . . that even trying wins a bucket of water in the face, a sore jaw—and nothing else."

"It'll be done, sir."

"It had better be. I will not only break the instructor who slips, I will take him out on the prairie and give him lumps . . . because *I will not have another one of my boys strung up to that whipping post* through sloppiness on the part of his teachers. Dismissed."

"Yes, sir. Good afternoon, Captain."

"What's good about it? Charlie . . . why don't you bring your soft shoes and pads over to officers' row this evening?"

"Yes, sir."

"That's not an order. But if you are slowing down, maybe I'll be able to kick your shoulder blades off."

"Mmm, would the Captain care to put up a small bet?"

"Huh? With me sitting here getting swivel-chair spread? I will not! Charlie, we've had a miserable day and it's going to get worse. If we work up a sweat and swap some lumps, maybe we'll sleep despite all of mother's little darlings."

"I'll be there, Captain. Don't eat too much dinner."

"I'm not going to dinner; I'm going to sweat out this quarterly report—which the regimental commander is graciously pleased to see right after *his* dinner. Go 'way, Charlie. See you later."

Zim left so abruptly that I barely had time to be out of sight. Captain Frankel was shouting, "Orderly! *Orderly! ORDERLY!*—must I call you three times? Put yourself down for an hour's extra duty, full kit. Find the company commanders of 'E,' 'F,' and 'G,' my compliments and I'll be pleased to see them before parade. Then bounce over to my tent and fetch me a clean dress uniform, cap, side arms, shoes, ribbons—no medals. Then make afternoon sick call—if you can scratch with that arm, your shoulder can't be too sore. You've got thirteen minutes—on the bounce!"

I made it, arriving with his uniform as sick call sounded. He growled, "Belay that extra duty. Dismissed." I got home in time to catch extra duty for "Uniform, Untidy in, Two Particulars" and see the sickening end of Ted Hendrick's time in the M.I.

So I had plenty to keep me awake that night. I had known that Sergent Zim worked hard but it never occurred to me that he could possibly be other than smugly self-satisfied. The idea that this invincible robot could feel so deeply disgraced that he wanted to run away, with the excuse that it would be "best for the outfit," shook me even more than seeing Ted flogged.

To have Captain Frankel agree as to the seriousness of his failure, rub his nose in it, chew him out—well! Sergeants don't get chewed out; sergeants do the chewing. A law of nature.

But what Zim had swallowed was so humiliating as to make the worst I had ever heard from a sergeant sound like a love song. Yet the Captain hadn't even raised his voice.

Captain Frankel— Officers we didn't see often. They sauntered over to parade at the last moment; they inspected and that always meant grief for somebody else; they decided each week what company should have custody of the colors. Otherwise they popped up infrequently—creased,

immaculate, remote, and smelling faintly of cologne—and went away. Oh, an officer always went along on route marches and Captain Frankel twice demonstrated *la savate*—but officers didn't *work* and they had no worries because sergeants were *under* them, not *over* them.

Yet it seemed that Captain Frankel worked so hard that he skipped meals and would waste his free time just for exercise. As for worries, he had seemed more upset about Ted Hendrick than Zim had been—yet he hadn't even known Ted's name.

I felt completely mistaken as to the nature of the world I was in; every feature was something wildly different from what it appeared to be.

But I was sure of one thing: if the M.I. was so tough that even officers were unhappy in it, it was too tough for me. How can you keep from making mistakes in an outfit you don't understand? I certainly did not want to hang, nor even risk a flogging—why, none of our family had ever been flogged, nor even accused of crime.

Ted hadn't done anything I hadn't thought about. Why hadn't I done it too? Timid, I guess—I knew that any instructor could beat the tar out of me. No guts—Johnnie. A man with no guts has no business in the Army.

But, even though I lacked the guts to buy a 9080, what day would I make some other mistake—and wind up slumped against the whipping post?

Time to resign, Johnnie, while you can.

My mother's letter simply confirmed my decision. She had written:

"—I must tell you that your father still will not permit your name to be mentioned. But dearest, that is his way of grieving; he cannot cry. You must understand, my darling baby, that he loves you more than life itself and you have hurt him very deeply. He tells the world that you are a man, making your own decisions, and that he is proud of you. But that is the bitter pride of a man wounded by the one he loves best. Juanito, he has not written because he cannot—not until his grief becomes bearable. When it does, I will intercede for you—and we will all be together again.

"Myself? How can anything her baby does anger his mother? You can hurt me but you cannot make me love you the less. Whatever you do, you are always my baby who bangs his knee and runs to my lap for comfort. Little boys never get over needing their mothers' laps—do they, darling? I hope not. I hope that you will write and tell me so.

"But, in view of the terribly long time that you have not writ-

ten, it is best to write to me care of your Aunt Eleanora. She will pass it on to me—without causing more upset. You understand?

"A thousand kisses to my baby,

"Your Mother"

I understood—and if Father could not cry, I could.

At last I got to sleep . . . and was wakened by an alert. The regiment bounced out to the range and ran through an exercise. We had just extended when word came to freeze. We held it for an hour, barely breathing. Something ran over me, a coyote I think; I never twitched. We got awfully cold but I didn't care; I knew it was my last.

I didn't hear reveille and was whacked out of my sack, barely made formation for morning jerks. To resign I had to see Zim first, but he was not at breakfast. I had Bronski's permission to speak to him, but you can't see a man who isn't there. After breakfast we started a route march and I still hadn't laid eyes on him.

It was an all-day hike with lunch fetched by copter; Sergeant Zim came out with the rations and held mail call. I'll say this for the M.I.; they may chop off food, water, sleep, or anything else, but mail is never held up a minute longer than necessary.

But I rarely got mail, so I didn't gather around—no point in letting Zim notice me until we were in reach of headquarters. I was surprised when he called out my name and held up a letter.

Then I was surprised again—it was from Mr. Dubois, my instructor in History and Moral Philosophy. I checked the address and return address, thinking it must be a mistake.

He wrote:

"My dear boy,

"I would have written sooner to express my delight and pride that you had not only volunteered but had chosen my own service. But not to express surprise; it was what I expected—except the very personal bonus that you chose the M.I. Such a consummation makes all a teacher's efforts worthwhile. We sift many pebbles—the rare nugget is the reward.

"It is obvious why I did not write sooner. Many young men, not necessarily through reprehensible fault, are dropped during training; I have waited (keeping in touch through my own connections) until you had 'sweated it out' past the hump (how well we all know that hump!) and were certain, barring accident or illness, of completing your training and term.

"You are now going through the hardest part of your service—not the hardest physically (though physical hardship will never worry you again), but the

hardest spiritually . . . the soul-turning re-evaluations necessary to metamorphize a potential citizen into one in being. No, I should state that you have already gone through the hardest part, despite many hurdles still higher that you must clear. Because it is that 'hump' that counts—and, knowing you, lad, I know that I have waited long enough to be sure that you are past your 'hump'—or you would be home now.

"When you reached that spiritual mountain top you felt something. Perhaps you haven't words for it (I didn't, when I was a boot). So let an older comrade lend you the words, since it often helps to have discrete words. Simply this: the noblest fate that a man can endure is to place his own mortal body between his loved home and the war's desolation. The words are not mine, as you recognize. Basic truths cannot change and once a man of insight expresses one it is never necessary, no matter how much the world changes, to reformulate them. This one is an immutable, true everywhere, throughout all time, for all men and for all nations.

"Let me hear from you, please, if you can spare an old man some of your precious sack time to write an occasional letter. And if you run across any of my former mates, give them my warmest greetings.

"Good luck, trooper! You've made me proud.

"Jean V. Dubois
"Lt. Col., M.I., Rtd."

The signature was as amazing as the letter. Old Sour Mouth a short colonel? Why, our regimental commander was only a major. Mr. Dubois had never used rank around school. We had supposed that he had been a corporal or some such who had been let out when he lost his hand and had been fixed up with a soft job. We knew he was a veteran since History and Moral Philosophy must be taught by a citizen. But an M.I.? He didn't look it. Prissy, faintly scornful, a dancing master type—not one of us apes.

I spent the hike back thinking about his letter. It didn't sound like anything he ever said in class. Oh, it didn't contradict anything, it was just entirely different in tone—since when does a short colonel call a recruit private "comrade?"

When I was in his class he hardly seemed to see me—except once when he got me sore by implying that I had too much money and not enough sense. He had been droning along about "value:"

"The Marxist definition is nonsense. Work will not turn a mud pie into an apple tart; conversely a clumsy cook can turn valuable apples and dough into worthless garbage—whereas a great chef

could make of those same materials a confection of vastly greater value than an ordinary cook could manage, with no more work than the ordinary cook uses to make a commonplace apple tart.

"Thus we demolish the Marxist theory of value—the fallacy underlying the entire magnificent fraud of communism."

Dubois had waved his stump. "Wake up, back there! Nevertheless the disheveled old mystic of *Das Kapital,* confused, neurotic, illogical, unscientific—this pompous old fraud Karl Marx had a glimmering of an important truth. Had he possessed an analytical mind, he might have formulated the correct definition of value and thereby saved this planet endless grief.

"Or might not. Human beings have great talent for arranging grief. You!"

I had sat up with a jerk. "Tell the class," he went on, "whether 'value' is a relative, or an absolute."

I hadn't read the assignment. "An absolute," I answered.

"Wrong," he had said coldly. "'Value' is meaningless other than in relation to living beings. The value of a thing is always relative and different for each person—otherwise trade would be impossible.

"This relationship has two factors for each human being: first, its *use* to him, how he can eat it, wear it, or otherwise enjoy it . . . and second, its *cost,* what he has to do to get it. Both are necessary conditions. There is an old song which says that 'the best things in life are free.' Utterly false! This tragic fallacy caused the collapse of the democracies in the twentieth centuries; these noble experiments failed because people had been led to believe that they could have whatever the majority voted for—without toil, without sweat, without tears.

"Nothing of value is free. Even the breath of life is purchased at birth by gasping effort and pain." Dubois had been looking at me and added, "If you had to sweat for your toys the way a new-born baby has to struggle to live, you would be happier and much richer. As it is, with some of you, I pity the poverty of your wealth. You! I've just awarded you the prize for the hundred-meter dash. Do you value it?"

"Uh, I suppose so."

"No dodging, please. I'll write it out: 'Grand Prize for the Championship, one hundred meter sprint.'" He then came back to my seat and pinned it on my chest. "There! You value it—or don't you?"

First that crack about rich kids—and then this farce. I ripped it off and threw it at him.

Mr. Dubois had feigned surprise. "It doesn't make you happy?"

"You know darn well I placed fourth!"

"Exactly! This prize is worthless, you haven't earned it. But you properly enjoy a modest satisfaction in what you did earn. I fancy that song writer meant that the best things in life must be purchased other than with money—which is *true*—although the song's literal meaning is false. The best things in life are beyond money; their price is agony and sweat and devotion . . . and the price demanded for the most precious of all things in life is life itself—ultimate cost for perfect value."

I mulled over things Mr. Dubois—*Colonel* Dubois—had said, as well as his amazing letter, while we went swinging back. Then I stopped because the band dropped back near our position and we sang, a French group—"*Marseillaise*" and "*Madelon*" and "*Sons of Toil and Danger,*" and then "*Légion Etrangère*" and "*Madamoiselle from Amentières.*"

It's nice to have a band; it picks you up when your tail is dragging the prairie. We hadn't had anything but canned music at first, but the powers-that-be found out who could play, instruments were provided, and a regimental band was organized, all our own—even the director was a boot.

The band didn't get out of anything; they were just encouraged to do it on their own time, practicing evenings and Sundays. A lot of things were run that way. Our chaplain, for example, was a boot. He was older than most of us and was ordained in some little sect I had never heard of, but he put a lot of passion into his preaching and he certainly was in a position to understand the problems of a recruit.

We couldn't take a parade band on route march because they had to carry full kit, same as everybody, so tubas and bass drums had to stay behind. But the M.I. has instruments I've never seen elsewhere, such as an electronic gadget hardly bigger than a harmonica which does an amazing job of faking a big horn. Comes band call when you are headed for the horizon, each bandsman sheds his kit without stopping, his squad mates split it up, and he trots to the column position of the color company and starts blasting.

It helps.

The band drifted aft and we stopped singing.

I suddenly realized that I felt good.

I tried to think why. Because we would soon be in and I could resign? No. This was something else—and no reason for it, that I could see.

Then I knew—*I had passed my hump!*

I was over that "hump" Colonel

Dubois had written about. The prairie was flat as a griddle cake but just the same I had been plodding wearily uphill all the way out and half way back. Then—I think it was while we were singing—I passed the hump and it was all downhill. My kit felt lighter and I was no longer worried.

When we got in, I no longer needed to speak to Sergeant Zim. But he motioned me to him as we fell out. "Yes, sir?"

"This is a personal question . . . so don't answer it unless you wish." I wondered if he knew I had overheard his chewing out.

"At mail call," he said, "you got a letter. I noticed—by accident—the name on the return address. It's a common name, some places, but—this is the question you need not answer—does the person who wrote that letter have his left hand off at the wrist?"

My chin dropped. "How did you know? Sir?"

"I was there when it happened. Then it *is* Colonel Dubois?"

"Yes, sir." I added, "He was my teacher in History and Moral Philosophy."

Zim's eyebrows went up an eighth of an inch. "So? You were extraordinarily fortunate." He added, "When you answer—if you don't mind—you might say that Ship's Sergeant Zim sends his respects."

"Yes, sir. Oh . . . I think he sent you a message, sir."

"What?"

"Uh, I'm not sure." I took out the letter, read just: "—if you run across any of my former mates, give them my warmest greetings.' Is that for you, sir?"

Zim's eyes looked through me, somewhere else. "Eh? Yes, it is. For me among others. Thanks very much." He added briskly. "Nine minutes to parade. And you still have to shower and change. On the bounce, soldier."

VII

"The young recruit is silly—'e thinks o' suicide.
'E's lost 'is gutter-devil; 'e 'asn't got 'is pride;
But day by day they kicks 'im which 'elps 'im on a bit,
Till 'e finds 'isself one mornin' with a full an' proper kit.
"Gettin' clear o' dirtiness, gettin' done with mess,
Gettin' shut o' doin' things rather-more-or-less—"
—Rudyard Kipling

I'M NOT GOING TO TALK MUCH more about boot training. Mostly it was simply work. But I must mention powered suits, partly because I was fascinated by them and also because they led me into trouble.

Powered armor is half the reason we call ourselves "mobile infantry" instead of just "infantry." (The other half are the space-

ships that drop us and the capsules we drop in.) Our suits give us better eyes, better ears, stronger backs, better legs, more fire power, greater endurance, less vulnerability.

A suit isn't a space suit—but it can serve as one. It is not primarily armor—although the Knights of the Round Table were not armored as we are. It isn't a tank—but a single M.I. could take on a squadron of those things. A suit is not a ship but it can fly, a little—and do things that no ship, air, submersible, or space, can do.

There are many ways of delivering wholesale destruction via ships and missiles and such, catastrophes so unselective that the war is over because the enemy ceases to exist. What we do is different. We make war as personal as a punch in the nose. We apply precise pressure at specified points and designated times. We've never been told to kill all left-handed redheads in a particular area, but if they tell us to, we can.

We are the boys who go to a particular place, at H-hour, occupy a designated terrain, stand on it, dig the enemy out, force them then and there to surrender or die. We're the bloody infantry, the doughboy, the foot soldier who goes where the enemy is and takes him on in person. We've been doing it, with changes in weapons but very little change in our trade, at least since five thousand years ago when the foot sloggers of Sargon the Great forced the Sumerians to cry, "Uncle!"

Maybe someday a genius will devise a weapon that can go down a hole, pick out the opposition, force it to surrender or die—without killing any of our own prisoners they've got down there. I wouldn't know; I'm not a genius. In the meantime the M.I. can handle the job.

Maybe someday we'll have that thing we sing about, when "we ain't a-gonna study war no more." Maybe. Maybe the leopard will take off his spots and get a job as a Jersey cow, too. But again, I wouldn't know. When the government sends for me, I go. In between, I catch sack time.

But, while they've not yet built a machine to replace us, they've thought up some honeys to help us—the suit, in particular.

Suited up, you look like a big steel gorilla, armed with gorilla-sized weapons. But if an M.I. swapped hugs with a gorilla, the gorilla would be crushed; the M.I.'s suit wouldn't be mussed.

The "muscles," the pseudo-musculature, get the publicity but it's the control which merits it. The genius in the design is that you *don't* have to control the suit; you just wear it. Any ship you must learn to pilot; it takes new reflexes, an artificial way of think-

ing. Even riding a bicycle demands skill, whereas a space ship —oh, brother! I won't live that long.

But a suit you just wear.

Two thousand pounds, in full kit—yet the first time you are fitted you can walk, run, jump, lie down, pick up an egg (that takes a bit of practice), dance a jig—and jump over a house and come down to a feather landing.

The secret lies in negative feedback and amplification.

Don't ask me to sketch circuitry. I can do field maintenance and check off the three hundred and forty-seven items from "cold" to ready to wear, and that's all a dumb M.I. is expected to do. If my suit gets really sick I call the doctor—a doctor of science (electromechanical engineering) who is a Naval officer, the weapons officer of a troop transport. But here is how a suit works, minus diagrams. The inside is a mass of pressure receptors, hundreds of them. You push with your hand; the suit feels it, amplifies it, pushes with you to take the pressure off the receptors that gave the order to push. That's confusing, but negative feed-back is always confusing even though your body has been doing it ever since you quit kicking helplessly as a baby.

The suit has feed-back which causes it to match *any* motion you make—but with great force.

Controlled force . . . without having to think about it—you jump, that heavy suit jumps, but higher than you can jump in your skin; jump hard and the suit's jets cut in, amplifying what the suit's leg "muscles" did, giving you a three-jet shove the axis of which passes through your center of mass. So you jump over that house next door . . . coming down as fast as you went up . . . which the suit notes by proximity radar and cuts in jets just right to cushion your landing.

And *that* is its beauty; you don't drive, fly, conn, or operate it, you just wear it and it takes its orders directly from your muscles. This leaves you free to handle weapons and note what is around you —which is *supremely* important to an infantryman who wants to die in bed. If you load a mud foot down with gadgets he has to watch, somebody more simply equipped (say with a stone ax) will bash his head in while he is trying to read a vernier.

Your "eyes" and "ears" are rigged to help without bothering, too. Say you have three audio circuits: tactical security is very complex, with each circuit using two frequencies wobbling under the control of a cesium clock—but this is not your problem. To call your squad leader, bite down once; for circuit "B" bite down twice—and so on. The mike is taped to your throat, your ear plugs can't be jarred out—just

talk. Outside mikes listen to your surroundings just as if your head were bare—or you suppress noisy neighbors simply by turning your head.

You use your head—jaw muscles, chin, neck—to switch things and leave your hands free to fight. A chin plate handles displays the way the jaw switch handles audios. Radar gear is above and back of your head and displays are thrown on a mirror in front of your forehead. Your helmet encloses all this and you look like a hydrocephalic ape, but it is very convenient; you flip through displays faster than you can change channels to avoid a commercial—catch a range & bearing, locate your boss, check your flank men, whatever.

Toss your head and infra-red snoopers come down over your eyes; toss it again, they snap up out of the way. Let go your rocket launcher, the suit snaps it back till you need it. No need to discuss water nipples, air supply, gyros, etc.—*all* arrangements leave you free to follow your trade, slaughter.

You practice until picking the right circuit is as automatic as brushing teeth, but simply moving around in a suit requires no practice. You practice jumping because, while it is a natural motion, you jump higher, faster, farther, and stay up longer, and you learn to use those seconds in the air—seconds are jewels beyond price in combat. You can take a range & bearing, talk & receive, fire a weapon, reload, decide not to land and override your automatics to cut in jets—you can do all this in one bounce.

The three main suit types are marauder, command, and scout. Scouts are fast and long range, lightly armed; command suits are fast and jump high and have much more comm & radar gear, plus an inertial dead-reckoner. Marauders are those guys in ranks with the sleepy look—the executioners.

I fell in love with powered armor; any day my section practiced in suits was a big day. The day I goofed I wore simulated sergeant's chevrons as a simulated section leader and was armed with simulated A-bomb rockets to use in simulated darkness against a simulated enemy. That was the trouble; everything was simulated.

We were retreating. An instructor cut the power on one of my men, by radio control, making him a casualty. Per doctrine, I ordered pickup and turned to my next chore: lay down a simulated atomic ruckus to cover our rear. Our flank was swinging; I was supposed to fire diagonally, placing it to trouble the bandits but with spacing to protect my own men. On the bounce, of course. Doctrine required me to locate

exactly, by radar beacon, my mates who would be nearest the center of blast. But it had to be done fast and I wasn't too sharp at reading those little radar displays. So I cheated—flipped up my snoopers and looked, bare eyes in broad daylight.

I could see the only man affected and my "A-bomb" was just a little bitty smoke rocket. So I picked a spot by eye, let fly, and bounced away, feeling smug—no seconds lost.

And had my power cut. This is a delayed action, executed by landing. I grounded and there I stuck, surrounded by a ton of dead metal. I cussed helplessly—I hadn't expected to be made a casualty while leading the problem.

I should have known that Sergeant Zim would monitor the problem leader.

He bounced over, spoke to me on the face-to-face, suggested that I get a job sweeping floors since I was too stupid, clumsy, and careless to handle dirty dishes. He discussed my past and future and ended tonelessly: "How would you like to have Colonel Dubois see what you've done?"

He left, and for two hours I sweated in that Iron Maiden. At last he returned, restored power, and we bounced to BHQ.

Captain Frankel said less but it cut more.

Then he added in that flat voice officers use in quoting regulations: "You may demand trial by court martial if such be your choice. How say you?"

I gulped and said, "No, sir!" I hadn't known just how *much* trouble I was in.

"We'll see what the Regimental Commander has to say. Sergeant, escort the prisoner." We went to RHQ.

Major Malloy said five words to me. After hearing Sergeant Zim, he said three of them: "Is that correct?"

I said, "Yes, sir."

He said to Captain Frankel, "Is there any possibility of salvaging this man?"

Captain Frankel said, "I believe so, sir."

Major Malloy said, "Then we'll try administrative punishment," turned to me and said:

"Five lashes."

They didn't keep me dangling. Fifteen minutes later the doctor had checked my heart and the Sergeant of the Guard had dressed me in that special shirt—zippered down the arms. Assembly for parade sounded. I felt detached, unreal . . .

Zim came into the guard tent as the call ended. He glanced at the Sergeant of the Guard—Corporal Jones—and Jones stepped outside. Zim slipped something into my hand. "Bite on that," he said quietly. "It helps. I know."

It was a rubber mouthpiece such as we use to avoid broken

teeth in hand-to-hand combat drill. Zim left. I put it in my mouth. They handcuffed me and marched me out.

The order read: "—in simulated combat gross negligence which would in action have caused the death of a team mate." Then they peeled off that shirt and strung me up.

Here is a very odd thing: a flogging isn't as hard to *take* as it is to watch. I don't mean it's a picnic. It hurts worse than anything I've ever felt and the waits between strokes are worse than the strokes themselves. But that mouthpiece helped and my only yelp never got past it.

Here's another odd thing: nobody ever mentioned it to me, not even other boots. Zim and the instructors treated me the same afterwards as before. From the instant the doctor painted the marks and sent me to duty it was done with, completely. I even managed to eat a little dinner and pretend to take part in the jawing.

Another thing about administrative punishment: there is no permanent black mark. Those records are destroyed at the end of training and you start clean. The only record is where it counts.

You *don't* forget it.

VIII

"We've got no place in this outfit for good losers. We want tough S.B.'s who will go in there and win!"

—Admiral Jonas Ingram, 1926

WHEN WE HAD DONE ALL THAT A mud foot can do in flat country, we moved into mountains to do rougher things—the Canadian Rockies between Good Hope Mountain and Mount Waddington. Camp Sergeant Spooky Smith was like Camp Currie but smaller. Our regiment was smaller, too—less than four hundred whereas we had started with more than two thousand. "H" Company was a single platoon.

We had more corporal-instructors than we had squads, and Sergeant Zim, with only fifty men on his mind instead of two hundred and sixty, kept his eyes on us all the time—if you goofed, it turned out that he was standing behind you.

However, the chewing-out had almost a friendly quality,—the one-in-five who was left Zim seemed to be trying to make into a soldier, instead of running him over the hill.

Captain Frankel now spent most of his time teaching us. He knew us by name and face and seemed to have a file in his mind of what progress each man made on every weapon, every piece of equipment—not to mention extra-duty status, medical record, and whether you had had a letter from home lately.

I never did figure out which was the better soldier, Zim or Captain Frankel. They were both better than any of the other instructors —but which was best? Zim did everything with precision and style, as if on parade; Captain Frankel did the same thing with dash and gusto, as if it were a game. The results were about the same.

We needed the abundance of instructors. A suit jumps just as easily in the mountains—but it makes a difference to jump up a vertical granite wall, between two close-set fir trees, and over-ride your jet control at the last instant. We had three major casualties in suit practice—two dead, one medical retirement.

At Camp Sergeant Spooky Smith we had liberty. Oh, we had "liberty" at Camp Currie, too; on a Sunday afternoon, if you weren't in the duty platoon, you could check out at the orderly tent and walk as far as you wished, bearing in mind that you had to be back for evening muster. But there was nothing within walking distance —no girls, theaters, dance halls, et cetera.

But at Camp Spooky we could go into town—duty, conduct, etc. permitting. Shuttles ran to Vancouver Sunday morning and came back just before supper and again before taps.

I had no more than stepped out of the shuttle, my first pass, than I realized in part how I had changed. Johnnie didn't fit. Civilian life, I mean. It seemed amazingly complex and untidy.

I'm not running down Vancouver. It's a beautiful city with charming people who make a trooper welcome. They have a social center for us with junior hostesses to dance with and senior hostesses to introduce them. But I didn't go there that first pass. Mostly I stood around and gawked—at beautiful buildings, at display windows filled with all manner of unnecessary things (and not a weapon among them), at people strolling around, doing as they pleased and no two dressed alike—and at girls.

Girls are wonderful. Just to stand on a corner and watch them is delightful. They don't *walk*. I don't know how to describe the way they seemed to me, but it's more complex; everything moves in different directions and all of it graceful.

I might have been standing there yet if a policeman hadn't come by. He said, "Howdy, boys. Enjoying yourselves?"

I read the ribbons on his chest and was impressed. "Yes, *sir*!"

"You don't have to say 'sir' to me. Why don't you go to the hospitality center?" He gave us the address and we started that way —Pat Leivy, "Kitten" Smith, and myself. He called after us, "Have a good time, boys, and stay out of

trouble." Which was exactly what Sergeant Zim had said as we climbed into the shuttle.

But we didn't go there. Pat Leivy had once lived in Seattle and wanted to see his old home town. He had money and offered to pay our fares. I didn't mind; shuttles ran every twenty minutes and our passes were not restricted to Vancouver. Smith went too.

Seattle wasn't as used to M.I. and we picked a poor spot to eat dinner—a bar-restaurant, down by the docks. We weren't drinking. Smith had one beer with his food but he was never anything but friendly and nice. That is how he got his name; the first time we had hand-to-hand drill Corporal Jones had said to him: "A kitten would have hit me harder than *that*!" The nickname stuck.

We were the only uniforms; most customers were merchant marine sailors. I hadn't known it but they don't like us. Part of it is that their guilds have tried to get their trade classed as equivalent to Federal Service—but some of it goes 'way back in history.

There were young fellows there, too—the age to serve a term, only they weren't—long-haired and sloppy and kind of dirty looking. Well, about the way I looked, before I joined up.

Presently we noticed that two of these twerps and two merchant sailors were passing remarks about us.

We didn't say anything. When the remarks got too personal and the laughs louder, Kitten whispered, "Let's get out of here."

I caught Pat Leivy's eye; he nodded. We had no score to settle; it was a pay-as-you-get-it place. We left.

They followed us out.

Pat whispered, "Watch it." We kept on, didn't look back.

They charged us.

I gave my man a side-neck chop as I pivoted and let him fall past me, swung to help my mates. But it was over. Four in, four down. Kitten had handled two and Pat had wrapped the other one around a lamp post.

Somebody must have called the police since they arrived while we were still wondering what to do with the meat—two policemen; it was that sort of a neighborhood.

The senior wanted us to prefer charges, but none of us was willing—Zim had told us to "stay out of trouble." Kitten looked blank and said, "I guess they stumbled."

"So I see," agreed the police officer and toed a knife away from the outflung hand of my man, put it against the curb and broke the blade. "Well, you boys run along."

I was glad that neither Pat nor Kitten wanted to make anything of it. It's mighty serious, civilians assaulting members of the Armed Forces, but what the deuce? They jumped us, they got lumps. All even.

But it's a good thing we *never* go on pass armed . . . and have been trained to disable without killing. I didn't believe they would jump us until they did, and I didn't think at all until it was over.

That's how I learned how much I had changed.

We walked to the station and returned to Vancouver.

We started practice drops as soon as we moved to Camp Spooky—a platoon at a time (a full platoon—a company) would shuttle to Walla Walla field, go aboard, space, make a drop, go through an exercise, and home on a beacon. A day's work. That gave us not quite a drop each week, and then a little more than a drop each week as attrition continued, whereupon drops got tougher—over mountains, into arctic ice, into the Australian desert, and, before we graduated, onto the face of the Moon, where your capsule is placed only a hundred feet up and explodes as it ejects—and you have to look sharp and land with only your suit, and a bad landing can spill air and kill you.

Some attrition was from casualties and some from refusing to enter the capsule—which some did, and that was that; they were just motioned aside and that night they were paid off. Even a man who had made several drops might get the panic and refuse . . . and instructors were gentle with him, treated him the way you do a friend who is ill and won't get well.

I never quite refused—but I certainly learned about the shakes. I was scared silly every time. I still am.

But you're not a cap trooper unless you drop.

Eventually we graduated.

I see I've left out almost everything. Not a word about most weapons, nothing about the time we fought a forest fire for three days, no mention of the practice alert that was a real one . . . nor about the day the cook tent blew away—no mention of weather, and, believe me, weather is important to a doughboy, rain and mud especially.

The regiment started with 2009 men; we graduated 187—fourteen dead, the rest resigned, dropped, transferred, medical discharge, etc. Major Malloy made a speech, we each got a certificate, we passed in review for the last time, and the regiment was disbanded, its colors cased until they would be needed (three weeks later) to tell another couple of thousand civilians that they were an outfit, not a mob.

I was a "trained soldier", entitled to put "TP" in front of my serial number instead of "RP". Big day.

The biggest I ever had.

(To be concluded)

CLIFTON FADIMAN, writer and editor, judge of the Book-of-the-Month Club, writes: *"Each of us has his own special escape-reading. Mine is science fiction. To my mind Fantasy and Science Fiction regularly supplies the finest the field has to offer in the way of short fiction."*

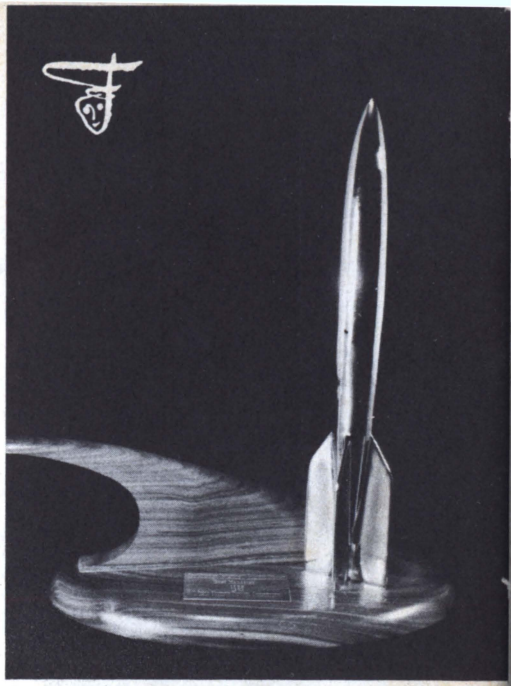
SPRING BYINGTON, famous star of the Broadway stage and motion pictures, now starring in the CBS TV show "December Bride," writes: *"If your imagination is sedentary, getting stiff, inelastic, arthritic, it needs exercise. For this I prescribe one issue a month of Fantasy and Science Fiction. Improvement will be noted after the first dose."*

BASIL DAVENPORT, writer and editor, judge of the Book-of-the-Month Club, writes: *"I have been a fan of science fiction all my life, and of The Magazine of Fantasy and Science Fiction for all its life. F&SF gives us some of the best writing in the field, and the field is one of great importance."*

HUGO GERNSBACK, pioneer in science fiction publishing, writer and editor, writes: *"Plus ça change, plus c'est la même chose—is a French truism, lamentably accurate of much of our latter day science fiction. Not so in the cyclotronic Magazine of Fantasy and Science Fiction which injects sophisticated isotopes, pregnant with imagination, into many of its best narratives."*

ORVILLE PRESCOTT, literary critic and author, Book Review Editor for the *New York Times, writes: "People who think that their literary I.Q. is too high for them to enjoy the Magazine of Fantasy and Science Fiction don't know what they are missing. The number of well-written, ingenious and entertaining stories it regularly publishes is astonishingly high."*

"... The Magazine of FANTASY AND SCIENCE FICTION consistently publishes more stories of high quality than any other science fiction magazine in the world."
Villiers Gerson **NEW YORK TIMES Book Review**



For the readers of* Fantasy and Science Fiction *who did not attend the World Science Fiction Convention held in Los Angeles in 1958, we offer this photo of the handsome Hugo awarded to winners in the various categories. This particular Hugo, we are proud to say, is the one that was awarded to F&SF, as the best professional science fiction magazine of the year.

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