

# PLANET STORIES



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T. T. SCOTT, President

JACK O'SULLIVAN, Editor

MALCOLM REISS, Mgr. Editor

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# OUT OF THE IRON WOMB!

By POUL ANDERSON

*Behind a pale Venusian mask lay hidden the arch-humanist, the anti-tech killer . . . one of those who needlessly had strewn Malone blood across the heavens from Saturn to the sun. Now—on distant Trojan asteroids—the rendezvous for death was plainly marked.*

**T**HE most dangerous is not the outlawed murderer, who only slays men, but the rebellious philosopher: for he destroys worlds.

Darkness and the chill glitter of stars. Bo Jonsson crouched on a whirling speck of stone and waited for the man who was coming to kill him.



There was no horizon. The flying mountain on which he stood was too small. At his back rose a cliff of jagged rock, losing its own blackness in the loom of shadows; its teeth ate raggedly across the Milky Way. Before him, a tumbled igneous wilderness slanted crazily off, with one long thin crag sticking into the sky like a grotesque bowsprit.

There was no sound except the thudding of his own heart, the harsh rasp of his own breath, locked inside the stinking metal skin of his suit. Otherwise . . . no air, no heat, no water or life or work of man, only a granite nakedness spinning through space out beyond Mars.

Stooping, awkward in the clumsy armor, he put the transparent plastic of his helmet to the ground. Its cold bit at him even through the insulating material. He might be able to hear the footsteps of his murderer conducted through the ground.

Stillness answered him. He gulped a heavy lungful of tainted air and rose. The other might be miles away yet, or perhaps very close, catfooting too softly to set up vibrations. A man could do that when gravity was feeble enough.

The stars blazed with a cruel wintry brilliance, over him, around him, light-years to fall through emptiness before he reached one. He had been alone among them before; he had almost thought them friends. Sometimes, on a long watch, a man found himself talking to Vega or Spica or dear old Beetle Juice, murmuring what was in him as if the remote sun could understand. But they didn't care, he saw that now. To them, he did not exist, and they would shine carelessly long after he was gone into night.

He had never felt so alone as now, when another man was on the asteroid with him, hunting him down.

Bo Jonsson looked at the wrench in his hand. It was long and massive, it would have been heavy on Earth, but it was hardly enough to unscrew the stars and reset the machinery of a universe gone awry. He smiled stiffly at the thought. He wanted to laugh too, but checked himself for fear he wouldn't be able to stop.

*Let's face it, he told himself. You're scared. You're scared sweatless.* He wondered if he had spoken it aloud.

There was plenty of room on the asteroid. At least two hundred square miles, probably more if you allowed for the rough surface. He could skulk around, hide . . . and suffocate when his tanked air gave out. He had to be a hunter, too, and track down the other man, before he died. And if he found his enemy, he would probably die anyway.

He looked about him. Nothing. No sound, no movement, nothing but the streaming of the constellations as the asteroid spun. Nothing had ever moved here, since the beginning of time when moltenness congealed into death. Not till men came and hunted each other.

Slowly he forced himself to move. The thrust of his foot sent him up, looping over the cliff to drift down like a dead leaf in Earth's October. Suit, equipment, and his own body, all together, weighed only a couple of pounds here. It was ghostly, this soundless progress over fields which had never known life. It was like being dead already.

Bo Jonsson's tongue was dry and thick in his mouth. He wanted to find his enemy and give up, buy existence at whatever price it would command. But he couldn't do that. Even if the other man let him do it, which was doubtful, he couldn't. Johnny Malone was dead.

Maybe that was what had started it all—the death of Johnny Malone.

**T**HERE are numerous reasons for basing on the Trojan asteroids, but the main one can be given in a single word: stability. They stay put in Jupiter's orbit, about sixty degrees ahead and behind, with only minor oscillations; spaceships need not waste fuel coming up to a body which has been perturbed a goodly distance from where it was supposed to be. The trailing group is the jumping-off place for trans-Jovian planets, the leading group for the inner worlds—that way, their own revolution about the sun gives the departing ship a welcome boost, while minimizing the effects of Jupiter's drag.

Moreover, being dense clusters, they have attracted swarms of miners, so that Achilles among the leaders and Patroclus in the trailers have a permanent boom town atmosphere. Even though a spaceship and equip-

ment represent a large investment, this is one of the last strongholds of genuinely private enterprise: the prospector, the mine owner, the rockhound dreaming of the day when his stake is big enough for him to start out on his own—a race of individualists, rough and noisy and jealous, but living under iron rules of hospitality and rescue.

The Last Chance on Achilles has another name, which simply sticks an "r" in the official one; even for that planetoid, it is a rowdy bar where Guardsmen come in trios. But Johnny Malone liked it, and talked Bo Jonsson into going there for a final spree before checkoff and departure. "Nothing to compare," he insisted. "Every place else is getting too fantangling civilized, except Venus, and I don't enjoy Venus."

Johnny was from Luna City himself: a small, dark man with the quick nervous movements and clipped accent of that roaring commercial metropolis. He affected the latest styles, brilliant colors in the flowing tunic and slacks, a beret cocked on his sleek head. But somehow he didn't grate on Bo, they had been partners for several years now.

They pushed through a milling crowd at the bar, rockhounds who watched one of Achilles' three live ecdysiasts with hungry eyes, and by some miracle found an empty booth. Bo squeezed his bulk into one side of the cubicle while Johnny, squinting through a reeking smoke-haze, dialed drinks. Bo was larger and heavier than most spacemen—he'd never have gotten his certificate before the ion drive came in—and was usually content to let others talk while he listened. A placid blond giant, with amiable blue eyes in a battered brown face, he did not consider himself bright, and always wanted to learn.

Johnny gulped his drink and winced. "Whiskey, they call it yet! Water, synthetic alcohol, and a dash of caramel they have the gall to label whiskey and charge for!"

"Everything's expensive here," said Bo mildly. "That's why so few rockhounds get rich. They make a lot of money, but they have to spend it just as fast to stay alive."

"Yeh . . . yeh . . . wish they'd spend some of it on us." Johnny grinned and fed the dispenser another coin. It muttered to itself and slid forth a tray with a glass. "C'mon, drink up, man. It's a long way home, and

we've got to fortify ourselves for the trip. A bottle, a battle, and a wench is what I need. Most especially the wench, because I don't think the eminent Dr. McKittrick is gonna be interested in sociability, and it's close quarters aboard the *Dog*."

Bo kept on sipping slowly. "Johnny," he said, raising his voice to cut through the din, "you're an educated man. I never could figure out why you want to talk like a jumper."

"Because I am one at heart. Look, Bo, why don't you get over that inferiority complex of yours? A man can't run a spaceship without knowing more math and physical science than the average professor on Earth. So you had to work your way through the Academy and never had a chance to fan yourself with a lily white hand while somebody tootled Mozart through a horn. So what?" Johnny's head darted around, bird-like. "If we want some women we'd better make our reservations now."

"I don't, Johnny," said Bo. "I'll just nurse a beer." It wasn't morals so much as fastidiousness; he'd wait till they hit Luna.

"Suit yourself. If you don't want to uphold the honor of the Sirius Transportation Company—"

Bo chuckled. The Company consisted of (a) the *Sirius*; (b) her crew, himself and Johnny; (c) a warehouse, berth, and three other part owners back in Luna City. Not exactly a tramp ship, because you can't normally stop in the middle of an interplanetary voyage and head for somewhere else; but she went wherever there was cargo or people to be moved. Her margin of profit was not great in spite of the charges, for a space trip is expensive; but in a few more years they'd be able to buy another ship or two, and eventually Fireball and Triplanetary would be getting some competition. Even the public lines might have to worry a little.

Johnny put away another couple of shots and rose. Alcohol cost plenty, but it was also more effective in low-gee. "Scuse me," he said. "I see a target. Sure you don't want me to ask if she has a friend?"

Bo shook his head and watched his partner move off, swift in the puny gravity—the Last Chance didn't centrifuge like some of the tommicker places downtown. It was hard to push through the crowd without weight to help, but Johnny faded along and edged

up to the girl with his highest-powered smile. There were several other men standing around her, but Johnny had The Touch. He'd be bringing her back here in a few minutes.

Bo sighed, feeling a bit lonesome. If he wasn't going to make a night of it, there was no point in drinking heavily. He had to make the final inspection of the ship tomorrow, and grudged the cost of anti-hangover tablets. Besides what he was putting back into the business, he was trying to build a private hoard; some day, he'd retire and get married and build a house. He already had the site picked out, on Kullen overlooking the Sound, back on Earth. Man, but it was a long time since he'd been on Earth!

A sharp noise slashed through the haze of talk and music. Bo looked up. There was a tall black haired man, Venusian to judge by his kilts, arguing with Johnny. His face was ugly with anger.

Johnny made some reply. Bo heaved up his form and strode toward the discussion, casually picking up anyone in the way and setting him aside. Johnny liked a fight, but this Venusian was big.

As he neared, he caught words: "—my girl, dammit."

"Like hell I am!" said the girl. "I never saw you before—"

"Run along and play, son," said Johnny. "Or do you want me to change that diaper of yours?"

That was when it happened. Bo saw the little needler spit from the Venusian's fingers. Johnny stood there a moment, looking foolishly at the dart in his stomach. Then his knees buckled and he fell with a nightmare slowness.

The Venusian was already on the move. He sprang straight up, slammed a kick at the wall, and arced out the door into the dome corridor beyond. *A spaceman, that. Knows how to handle himself in low-gee.* It was the only clear thought which ran in the sudden storm of Bo's head.

The girl screamed. A man cursed and tried to follow the Venusian. He tangled with another. "Get outta my way!" A roar lifted, someone slugged, someone else coolly smashed a bottle against the bar and lifted the jagged end. There was the noise of a fist meeting flesh.

Bo had seen death before. That needle wasn't anesthetic, it was poison. He knelt in the riot with Johnny's body in his arms.

## II

**S**UDDENLY the world came to an end. There was a sheer drop-off onto the next face of the rough cube which was the asteroid. Bo lay on his belly and peered down the cliff, it ran for a couple of miles and beyond it were the deeps of space and the cold stars. He could dimly see the tortured swirl of crystallization patterns in the smooth bareness. No place to hide; his enemy was not there.

He turned the thought over in a mind which seemed stiff and slow. By crossing that little plain he was exposing himself to a shot from one of its edges. On the other hand, he could just as well be bushwhacked from a ravine as he jumped over. And this route was the fastest for completing his search scheme.

The Great Bear slid into sight, down under the world as it turned. He had often stood on winter nights, back in Sweden, and seen its immense sprawl across the weird flicker of aurora; but even then he wanted the spaceman's experience of seeing it from above. Well, now he had his wish, and much good it had done him.

He went over the edge of the cliff, cautiously, for it wouldn't take much of an impetus to throw him off this rock entirely. Then his helpless and soon frozen body would be just another meteor for the next million years. The vague downward sensation of gravity shifted insanely as he moved; he had the feeling that the world was tilting around him. Now it was the precipice which was a scarred black plain underfoot, reaching to a saw-toothed bluff at its farther edge.

He moved with flat low-gee bounds. Besides the danger of springing off the asteroid entirely, there was its low acceleration to keep a man near the ground; jump up a few feet and it would take you a while to fall back. It was utterly silent around him. He had never thought there could be so much stillness.

He was halfway across when the bullet came. He saw no flash, heard no crack, but suddenly the fissured land before him ex-

ploded in a soundless shower of chips. The bullet ricocheted flatly, heading off for outer space. No meteor gravel, that!

Bo stood unmoving an instant, fighting the impulse to leap away. He was a spaceman, not a rockhound; he wasn't used to this environment, and if he jumped high he could be riddled as he fell slowly down again. Sweat was cold on his body. He squinted, trying to see where the shot had come from.

Suddenly he was zigzagging off across the plain toward the nearest edge. Another bullet pocked the ground near him. The sun rose, a tiny heatless dazzle blinding in his eyes.

Fire crashed at his back. Thunder and darkness exploded before him. He lurched forward, driven by the impact. Something was roaring, echoes clamorous in his helmet. He grew dimly aware that it was himself. Then he was falling, whirling down into the black between the stars.

There was a knife in his back, it was white-hot and twisting between the ribs. He stumbled over the edge of the plain and fell, waking when his armor bounced a little against stone.

Breath rattled in his throat as he turned his head. There was a white plume standing over his shoulder, air streaming out through the hole and freezing its moisture. The knife in him was not hot, it was cold with an ultimate cold.

Around him, world and stars rippled as if seen through heat, through fever. He hung on the edge of creation by his fingertips, while chaos shouted beneath.

**T**HEORETICALLY, one man can run a spaceship, but in practice two or three are required for non-military craft. This is not only an emergency reserve, but a preventive of emergencies, for one man alone might get too tired at the critical moments. Bo knew he wouldn't be allowed to leave Achilles without a certified partner, and unemployed spacemen available for immediate hiring are found once in a Venusian snowfall.

Bo didn't care the first day. He had taken Johnny out to Helmet Hill and laid him in the barren ground to wait, unchanging now, till Judgment Day. He felt empty then,

drained of grief and hope alike, his main thought a dull dread of having to tell Johnny's father when he reached Luna. He was too slow and clumsy with words; his comforting hand would only break the old man's back. Old Malone had given six sons to space, Johnny was the last; from Saturn to the sun, his blood was strewn for nothing.

It hardly seemed to matter that the Guards office reported itself unable to find the murderer. A single Venusian should have been easy to trace on Achilles, but he seemed to have vanished completely.

Bo returned to the transient quarters and dialed Valeria McKittrick. She looked impatiently at him out of the screen. "Well," she said, "what's the matter? I thought we were blasting today."

"Hadn't you heard?" asked Bo. He found it hard to believe she could be ignorant, here where everybody's life was known to everybody else. "Johnny's dead. We can't leave."

"Oh . . . I'm sorry. He was such a nice little man—I've been in the lab all the time, packing my things, and didn't know." A frown crossed her clear brow. "But you've got to get me back. I've engaged passage to Luna with you."

"Your ticket will be refunded, of course," said Bo heavily. "But you aren't certified, and the *Sirius* is licensed for no less than two operators."

"Well . . . damn! There won't be another berth for weeks, and I've got to get home. Can't you find somebody?"

Bo shrugged, not caring much. "I'll circulate an ad if you want, but—"

"Do so, please. Let me know." She switched off.

Bo sat for a moment thinking about her. Valeria McKittrick was worth considering. She wasn't beautiful in any conventional sense but she was tall and well built; there were good lines in the strong high boned face, and her hair was a cataract of spectacular red. And brains, too . . . you didn't get to be a physicist with the Union's radiation labs for nothing. He knew she was still young, and that she had been on Achilles for about a year working on some special project and was now ready to go home.

She was human enough, had been to most of the officers' parties and danced and laughed and flirted mildly, but even the

dullest rockhound gossip knew she was too lost in her work to do more. Out here a woman was rare, and a virtuous woman unheard-of; as a result, unknown to herself, Dr. McKittrick's fame had spread through more thousands of people and millions of miles than her professional achievements were ever likely to reach.

Since coming here, on commission from the Lunar lab, to bring her home, Bo Jons-son had given her an occasional wistful thought. He liked intelligent women, and he was getting tired of rootlessness. But of course it would be a catastrophe if he fell in love with her because she wouldn't look twice at a big dumb slob like him. He had sweated out a couple of similar affairs in the past and didn't want to go through another.

He placed his ad on the radinews circuit and then went out to get drunk. It was all he could do for Johnny now, drink him a final wassail. Already his friend was cold under the stars. In the course of the evening he found himself weeping.

He woke up many hours later. Achilles ran on Earth time but did not rotate on it; officially, it was late at night, actually the shrunken sun was high over the domes. The man in the upper bunk said there was a message for him; he was to call one Einar Lundgard at the Comet Hotel soonest.

The Comet! Anyone who could afford a room to himself here, rather than a kip in the public barracks, was well fueled. Bo swallowed a tablet and made his way to the visi and dialed. The robo-clerk summoned Lundgard down to the desk.

It was a lean, muscular face under close cropped brown hair which appeared in the screen. Lundgard was a tall and supple man, somehow neat even without clothes. "Jons-son," said Bo. "Sorry to get you up, but I understood—"

"Oh, yes. Are you looking for a spaceman? I heard your ad and I'm available."

Bo felt his mouth gape open. "Huh? I never thought—"

"We're both lucky, I guess." Lundgard chuckled. His English had only the slightest trace of accent, less than Bo's. "I thought I was stashed here too for the next several months."

"How does a qualified spaceman happen to be marooned?"

"I'm with Fireball, was on the *Drake*—heard of what happened to her?"

Bo nodded, for every spaceman knows exactly what every spaceship is doing at any given time. The *Drake* had come to Achilles to pick up a cargo of refined thorium for Earth; while she lay in orbit, she had somehow lost a few hundred pounds of reaction-mass water from a cracked gasket. Why the accident should have occurred, nobody knew . . . spacemen were not careless about inspections, and what reason would anyone have for sabotage? The event had taken place about a month ago, when the *Sirius* was already enroute here; Bo had heard of it in the course of shop talk.

"I thought she went back anyway," he said.

Lundgard nodded. "She did. It was the usual question of economics. You know what refined fuel water costs in the Belt; also, the delay while we got it would have carried Earth and Achilles past optimum position, which'd make the trip home that much more expensive. Since we had one more man aboard than really required, it was cheaper to leave him behind; the difference in mass would make up for the fuel loss. I volunteered, even suggested the idea, because . . . well, it happened during my watch, and even if nobody blamed me I couldn't help feeling guilty."

Bo understood that kind of loyalty. You couldn't travel space without men who had it.

"The Company beamed a message: I'd stay here till their schedule permitted an undermanned ship to come by, but that wouldn't be for maybe months," went on Lundgard. "I can't see sitting on this lump that long without so much as a chance at planetfall bonus. If you'll take me on, I'm sure the Company will agree; I'll get a message to them on the beam right away."

"Take us a while to get back," warned Bo. "We're going to stop off at another asteroid to pick up some automatic equipment, and won't go into hyperbolic orbit till after that. About six weeks from here to Earth, all told."

"Against six months here?" Lundgard laughed; it emphasized the bright charm of his manner. "Sunblaze. I'll work for free."



"No need to. Bring your papers over tomorrow, huh?"

The certificate and record were perfectly in order, showing Einar Lundgard to be a Spacetech 1/c with eight years' experience, qualified as engineer, astronaut, pilot, and any other of the thousand professions which have run into one. They registered articles and shook hands on it. "Call me Bo. It really is my name . . . Swedish."

"Another squarehead, eh?" grinned Lundgard. "I'm from South America myself."

"Notice a year's gap here," said Bo, pointing to the service record. "On Venus."

"Oh, yes. I had some fool idea about settling but soon learned better. I tried to farm, but when you have to carve your own land out of howling desert— Well, let's start some math, shall we?"

They were lucky, not having to wait their turn at the station computer; no other ship was leaving immediately. They fed it the data and requirements, and got back columns of numbers: fuel requirements, acceleration times, orbital elements. The figures always had to be modified, no trip ever turned out just as predicted, but that could be done when needed with a slipstick and the little ship's calculator.

Bo went at his share of the job doggedly, checking and re-checking before giving the problem to the machine; Lundgard breezed through it and spent his time while waiting for Bo in swapping dirty limericks with the tech. He had some good ones.

The *Sirius* was loaded, inspected, and cleared. A "scooter" brought her three passengers up to her orbit, they embarked, settled down, and waited. At the proper time, acceleration jammed them back in a thunder of rockets.

Bo relaxed against the thrust, thinking of Achilles falling away behind them. "So long," he whispered. "So long, Johnny."

### III

**I**N ANOTHER minute, he would be knotted and screaming from the bends, and a couple of minutes later he would be dead.

Bo clamped his teeth together, as if he would grip consciousness in his jaws. His hands felt cold and heavy, the hands of a

stranger, as he fumbled for the supply pouch. It seemed to recede from him, down a hollow infinite corridor where echoes talked in a language he did not know.

"Damn," he gasped. "Damn, damn, damn, damn, damn."

He got the pouch open somehow. The stars wheeled around him. There were stars buzzing in his head, like cold white fireflies, buzzing and buzzing in the enormous ringing emptiness of his skull. Pain jagged through him, he felt his eardrums popping as pressure dropped.

The plastic patch stuck to his metal gauntlet. He peeled it off, trying not to howl with the fury ripping in his nerves. His body was slow, inert, a thing to fight. There was no more feeling in his back, was he dead already?

Redness flamed before his eyes, red like Valeria's hair blowing across the stars. It was sheer reflex which brought his arm around to slap the patch over the hole in his suit. The adhesive gripped, drying fast in the sucking vacuum. The patch bellied out from internal air pressure, straining to break loose and kill him.

Bo's mind wavered back toward life. He opened the valves wide on his tanks, and his thermostatic capacitors pumped heat back into him. For a long time he lay there, only lungs and heart had motion. His throat felt withered and flayed, but the rasp of air through it was like being born again.

Born, spewed out of an iron womb into a hollowness of stars and cold, to lie on naked rock while the enemy hunted him. Bo shuddered and wanted to scream again.

Slowly he groped back toward awareness. His frosted back tingled as it warmed up again, soon it would be afire. He could feel a hot trickling of blood, but it was along his right side. The bullet must have spent most of its force punching through the armor, caromed off the inside, scratched his ribs, and fallen dead. Next time he probably wouldn't be so lucky. A magnetic-driven .30 slug would go right through a helmet, splashing brains as it passed.

He turned his head, feeling a great weariness, and looked at the gauges. This had cost him a lot of air. There was only about three hours worth left. Lundgard could kill him simply by waiting.

It would be easy to die. He lay on his back, staring up at the stars and the spilling cloudy glory of the Milky Way. A warmth was creeping back into numbed hands and feet; soon he would be warm all over, and sleepy. His eyelids felt heavy, strange that they should be so heavy on an asteroid.

He wanted terribly to sleep.

There wasn't much room in the *Sirius*, the only privacy was gained by drawing curtains across your bunk. Men without psych training could get to hate each other on a voyage. Bo wondered if he would reach Luna hating Einar Lundgard.

The man was competent, a willing worker, tempering his cheerfulness with tact, always immaculate in the neat blue and white of the Fireball Line which made Bo feel doubly sloppy in his own old gray coverall. He was a fine conversationalist with an enormous stock of reminiscence and ideas, witty above a certain passion of belief. It seemed as if he and Valeria were always talking, animated voices like a sound of life over the mechanical ship-murmurs, while Bo sat dumbly in a corner wishing he could think of something to say.

The trouble was, in spite of all his efforts, he was doing a cometary dive into another bad case of one-sided love. When she spoke in that husky voice of hers, gray gleam of eyes under hair that floated flaming in null-gee, the beauty he saw in her was like pain. And she was always around. It couldn't be helped. Once they had gone into free fall he could only polish so much metal and tinker with so many appliances; after that they were crowded together in a long waiting.

"—And why were you all alone in the Belt?" asked Lundgard. "In spite of all the romantic stories about the wild free life of the rockhound, it's the dullest place in the System."

"Not to me," she smiled. "I was working. There were experiments to be done, factors to be measured, away from solar radiation. There are always ions around inside the orbit of Mars to jumble up a delicate apparatus."

Bo sat quiet, trying to keep his eyes off her. She looked good in shorts and half-cape. Too good.

"It's something to do with power beam-

ing, isn't it?" Lundgard's handsome face creased in a frown. "Afraid I don't quite understand. They've been beaming power on the planets for a long time now."

"So they have," she nodded. "What we're after is an interplanetary power beam. And we've got it." She gestured to the baggage rack and a thick trunk full of papers she had put there. "That's it. The basic circuits, factors, and constants. Any competent engineer could draw up a design from them."

"Hmmm . . . precision work, eh?"

"Obviously! It was hard enough to do on, say, Earth—you need a *really* tight beam in just the right frequencies, a feedback signal to direct each beam at the desired outlet, relay stations—oh, yes, it was a ten-year research project before they could even think about building. An interplanetary beam has all those problems plus a number of its own. You have to get the dispersion down to a figure so low it hardly seems possible. You can't use feedback because of the time lag, so the beams have to be aimed *exactly* right—and the planets are always moving, at miles per second. An error of one degree would throw your beam almost two million miles off in crossing one A. U. And besides being so precise, the beam has to carry a megawatt at least to be worth the trouble. The problem looked insoluble till someone in the Order of Planetary Engineers came up with an idea for a trick control circuit hooked into a special computer. My lab's been working together with the Order on it, and I was making certain final determinations for them. It's finished now . . . twelve years of work and we're done." She laughed. "Except for building the stations and getting the bugs out!"

LUNDGARD cocked an oddly sardonic brow. "And what do you hope for from it?" he asked. "What have the psychotechs decided to do with this thing?"

"Isn't it obvious?" she cried. "Power! Nuclear fuel is getting scarcer every day, and civilization is finished if we can't find another energy source. The sun is pouring out more than we'll ever need, but sheer distance dilutes it below a useful level by the time it gets to Venus.

"We'll build stations on the hot side of Mercury. Orbital stations can relay. We can

get the beams as far out as Mars without too much dispersion. It'll bring down the rising price of atomic energy, which is making all other prices rise, and stretch our supply of fissionables for centuries more. No more fuel worries, no more Martians freezing to death because a converter fails, no more clan feuds on Venus starting over uranium beds—" The excited flush on her cheeks was lovely to look at.

Lundgard shook his head. There was a sadness in his smile. "You're a true child of the New Enlightenment," he said. "Reason will solve everything. Science will find a cure for all our ills. Give man a cheap energy source and leave him forever happy. It won't work, you know."

Something like anger crossed her eyes. "What are you?" she asked. "A Humanist?"

"Yes," said Lundgard quietly.

Bo started. He'd known about the anti-psychotechnic movement which was growing on Earth, seen a few of its adherents, but—

"I never thought a spaceman would be a Humanist," he stammered.

Lundgard shrugged wryly. "Don't be afraid. I don't eat babies. I don't even get hysterics in an argument. All I've done is use the scientific method, observing the world without preconceptions, and learned by it that the scientific method doesn't have all the answers."

"Instead," said Valeria scornfully, "we should all go back to church and pray for what we want rather than working for it."

"Not at all," said Lundgard mildly. "The New Enlightenment is—or was, because it's dying—a very natural state of mind. Here Earth had come out of the World Wars, racked and ruined, starving and chaotic, and all because of unbridled ideology. So the physical scientists produced goods and machines and conquered the planets; the biologists found new food sources and new cures for disease; the psychotechs built up their knowledge to a point where the socio-economic unity could really be planned and the plan worked. Man was unified, war had sunk to an occasional small 'police action,' people were eating and had comfort and security—all through applied, working science. Naturally they came to believe reason would solve their remaining problems. But this faith in reason was itself an emotional

reaction from the preceding age of unreason.

"Well, we've had a century of enlightenment now, and it has created its own troubles which it cannot solve. No age can handle the difficulties it raises for itself; that's left to the next era. There are practical problems arising, and no matter how desperately the psychotechs work they aren't succeeding with them."

"What problems?" asked Bo, feeling a little bewildered.

"Man, don't you ever see a newscast?" challenged Lundgard. The Second Industrial Revolution, millions of people thrown out of work by the new automata. They aren't going hungry, but they are displaced and bitter. The economic center of Earth is shifting to Asia, the political power with it, and hundreds of millions of Asians are skeptical about this antiseptic New Order the West has been bringing them: cultural resistance, and not all the psychotechnic propaganda in the System can shake it off. The men of Mars, Venus, the Belt, the Jovian moons are developing their own civilizations—inevitably, in alien environments; their own ways of living and thinking, which just don't fit into the neat scheme of an Earth-dominated Solar Union. The psychotechs themselves are being driven to oligarchic, unconstitutional acts; they have no choice, but it's making them enemies.

"And then there's the normal human energy and drive. Man can only be safe and sane and secure for so long, then he reacts. This New Enlightenment is really a decadent age, a period where an exhausted civilization has been resting under a holy status quo. It can't last. Man always wants something new."

"You Humanists talk a lot about 'man's right to variability,'" said Valeria. "If you really carry off that revolution your writings advocate you'll just trade one power group for another—and more fanatic, less lawful, than the present one."

"Not necessarily," said Lundgard. "After all, the Union will probably break up. It can't last forever. All we want to do is hasten the day because we feel that it's outlived its usefulness."

Bo shook his head. "I can't see it," he said heavily. "I just can't see it. All those people—the Lunarites, the violent clansmen on

Venus, the stiff correct Martians, the asteroid rockhounds, even those mysterious Jovians—they all came from Earth. It was Earth's help that made their planets habitable. We're all men, all one race."

"A fiction," said Lundgard. "The human race is a fiction. There are only small groups with their own conflicting interests."

"And if those conflicts are allowed to break into war—" said Valeria. "Do you know what a lithium bomb can do?"

There was a reckless gleam in Lundgard's eyes. "If a period of interplanetary wars is necessary, let's get it over with," he answered. "Enough men will survive to build something better. This age has gotten stale. It's petrifying. There have been plenty of shake-ups in history—the fall of Rome, the Reformation, the Napoleonic Wars, the World Wars. It's been man's way of progressing."

"I don't know about all those," said Bo slowly. "I just know I wouldn't want to live through such a time."

"You're soft," said Lundgard. "Down underneath you're soft." He laughed disarmingly. "Pardon me. I didn't mean anything personal. I'll never convince you and you'll never convince me, so let's keep it friendly. I hope you'll have some free time on Luna, Valeria. I know a little grill where they serve the best synthosteaks in the System."

"All right," she smiled. "It's a date."

Bo mumbled some excuse and went aft. He was still calling her Dr. McKittrick.

#### IV

**Y**OU can't just lie here and let him come kill you.

There was a picture behind his eyes; he didn't know if it was a dream or a long buried memory. He stood under an aspen which quivered and rustled as if it laughed to itself softly, softly, when the wind embraced it. And the wind was blowing up a red granite slope, wild and salt from the Sound, and there were towering clouds lifting over Denmark to the west. The sunlight rained and streamed through aspen leaves, broken, shaken, falling in spatters against the earth, and he, Bo Jonsson, laughed with the wind and the tree and the far watery glitter of the Sound.

He opened his eyes, wearily, like an old man. Orion was marching past, and there was a blaze on crags five miles off which told of the rising sun. The asteroid spun swiftly; he had been here for many of its days now, and each day burdened him like a year.

Got to get out of here, he knew.

He sat up, pain tearing along his furrowed breast. Somehow he had kept the wrench with him, he stared at it in a dull wonder.

Where to go, where to hide, what to do?

Thirst nagged him. Slowly he uncoiled the tube which led from the electrically heated canteen welded to his suit, screwed its end into the helmet nipple, thumbed down the clamp which closed it, and sucked hard. It helped a little.

He dragged himself to his feet and stood swaying, only the near-weightlessness kept him erect. Turning his head in its transparent cage, he saw the sun rise, and bright spots danced before him when he looked away.

His vision cleared, but for a moment he thought the shadow lifting over a nearby ridge was a wisp of unconsciousness. Then he made out the bulky black-painted edge of it, gigantic against the Milky Way, and it was Lundgard, moving unhurriedly up to kill him.

A dark laughter was in his radio ear-phones. "Take it easy, Bo. I'll be there in a minute."

He backed away, his heart a sudden thunder, looking for a place to hide. Down! Get down and don't stand where he can see you! He crouched as much as the armor would allow and broke into a bounding run.

A slug spat broken stone near his feet. The powdery dust hung for minutes before settling. Breath rattled in his throat. He saw the lip of a meteoric crater and dove.

Crouching there, he heard Lundgard's voice again: "You're somewhere near. Why not come out and finish it now?"

The radio was non-directional, so he snapped back: "A gun against a monkey wrench?"

Lundgard's coolness broke a little; there was almost a puzzled note: "I hate to do this. Why can't you be reasonable? I don't want to kill you."

"The trouble," said Bo harshly, "is that I want to kill you."

"Behold the man of the New Enlightenment!" Bo could imagine Lundgard's grin. It would be tight, and there would be sweat on the lean face, but the amusement was genuine. Didn't you believe sweet reasonableness could solve everything? This is only the beginning, Bo, just a small preliminary hint that the age of reason is dying. I've already converted you to my way of thinking, by the very fact you're fighting me. Why not admit it?"

Bo shook his head—futile gesture, looked in darkness where he lay. There was a frosty blaze of stars when he looked up.

It was more than himself and Johnny Malone, more even than the principle of the thing and the catastrophe to all men which Lundgard's victory meant. There was something deep and primitive which would not let him surrender, even in the teeth of annihilation. Valeria's image swayed before him.

Lundgard was moving around, peering over the shadowy tumble of blackened rock in search of any trace. There was a magnetic rifle in his hands. Bo strained his helmet to the crater floor, trying to hear ground vibrations, but there was nothing. He didn't know where Lundgard was, only that he was very near.

Blindly, he bunched his legs and sprang out of the pit.

THEY found the asteroid where Valeria had left her recording instruments. It was a tiny drifting fragment of a world which had never been born, turning endlessly between the constellations; the *Siren* moored fast with grapples, and Valeria donned a spacesuit and went out to get her apparatus. Lundgard accompanied her. As there was only work for two, Bo stayed behind.

He slumped for a while in the pilot chair, letting his mind pace through a circle of futility. Valeria, Valeria, Valeria—O strong and fair and never to be forgotten, would he ever see her again after they made Luna?

*This won't do, he told himself dully. I should at least keep busy. Thank God for work.*

He wasn't much of a thinker, he knew that, but he had cleverness in his hands. It

was satisfying to watch a machine come right under his tools. Working, he could see the falseness of Lundgard's philosophy. The man could quote history all he wanted; weave a glittering circle of logic around Bo's awkward brain, but it didn't change facts. Maybe this century was headed for trouble; maybe psychotechnic government was only another human self-limitation and should be changed for something else; nevertheless, the truth remained that most men were workers who wished no more than peace in which to create as best they could. All the high ideals in the universe weren't worth breaking the Union for and smashing the work of human hands in a single burst of annihilating flame.

*I can feel it, down inside me. But why can't I say it?*

He got up and went over to the baggage rack, remembering that Lundgard had dozens of book-reels along and that reading would help him not to think about what he could never have.

On a planet Bo would not have dreamed of helping himself without asking first. But custom is different in space, where there is no privacy and men must be a unit if they are to survive. He was faintly surprised to see that Lundgard's personal suitcase was locked; but it would be hours, probably, before the owner got back: dismantling a recorder setup took time. A long time, in which to talk and laugh with Valeria. In the chill spatial radiance, her hair would be like frosty fire.

Casually, Bo stooped across to Lundgard's sack-hammock and took his key ring off the hook. He opened the suitcase and lifted out some of the reels in search of a promising title.

Underneath them were neatly folded clothes, Fireball uniforms and fancy dress pajamas. A tartan edge stuck out from below, and Bo lifted a coat to see what clan that was. Probably a souvenir of Lundgard's Venusian stay—

Next to the kilt was a box which he recognized. L-masks came in such boxes.

How the idea came to him, he did not know. He stood there for minutes, looking at the box without seeing it. The ship was very quiet around him. He had a sudden feeling that the walls were closing in.

When he opened the box, his hands shook, and there was sweat trickling along his ribs.

The mask was of the latest type, meant to fit over the head, snug around the cheeks and mouth and jaws. It was like a second skin, reflecting expression, not to be told from a real face. Bo saw the craggy nose and the shock of dark hair, limp now, but—

Suddenly he was back on Achilles, with riot roaring around him and Johnny Malone's body in his arms.

No wonder they never found that Venusian. There never was any.

Bo felt a dim shock when he looked at the chronometer. Only five minutes had gone by while he stood there. Only five minutes to turn the cosmos inside out.

Very slowly and carefully he repacked the suitcase and put it in the rack and sat down to think.

What to do?

Accuse Lundgard to his face—no, the man undoubtedly carried that needler. And there was Valeria to think of. A ricocheting dart, a scratch on her, no! It took Bo a long time to decide; his brain seemed viscous. When he looked out of a port to the indifferent stars, he shuddered.

**THEY** came back, shedding their space-suits in the airlock; frost whitened the armor as moisture condensed on chilled surfaces. The metal seemed to breathe cold. Valeria went efficiently to work, stowing the boxed instruments as carefully as if they were her children. There was a laughter on her lips which turned Bo's heart around inside him.

Lundgard leaned over the tiny desk where he sat. "What y' doing?" he asked.

"Recalculating our orbit to Luna," said Bo. "I want to go slow for a few million miles before going up to hyperbolic speed."

"Why? It'll add days to the trip, and the fuel—"

"I . . . I'm afraid we might barge into Swarm 770. It's supposed to be near here now and, uh, the positions of those things are never known for sure . . . perturbations . . ." Bo's mouth felt dry.

"You've got a megamile of safety margin or your orbit would never have been approved," argued Lundgard.

"Hell damn it, I'm the captain!" yelled Bo.

"All right, all right . . . take it easy, skipper." Lundgard shot a humorous glance at Valeria. "I certainly don't mind a few extra days in . . . the present company."

She smiled at him. Bo felt ill.

His excuse was thin; if Lundgard thought to check the epimeris, it would fall to ruin. But he couldn't tell the real reason.

An iron-drive ship does not need to drift along the economical Hohmann "A" orbit of the big freighters; it can build up such furious speed that the sun will swing it along a hyperbola rather than an ellipse, and can still brake that speed near its destination. But the critical stage of acceleration has to be just right, or there will not be enough fuel to stop completely; the ship will be pulled into a cometary orbit and run helpless, the crew probably starving before a rescue vessel can locate them. Bo dared not risk the trouble exploding at full drive; he would drift along, capture and bind Lundgard at the first chance, and then head for Earth. He could handle the *Sirius* alone even if it was illegal; he could not handle her if he had to fight simultaneously.

His knuckles were white on the controls as he loosed the grapples and nudged away from the asteroid with a whisper of power. After a few minutes of low acceleration, he cut the rockets, checked position and velocity, and nodded. "On orbit," he said mechanically. "It's your turn to cook, Ei . . . Einar."

Lundgard swooped easily through the air into the cubbyhole which served for a galley. Cooking in free fall is an art which not all spacemen master, but he could—his meals were even good. Bo felt a helpless kind of rage at his own clumsy efforts.

He crouched in midair, dark of mind, a leg hooked around a stanchion to keep from drifting.

When someone touched him, his heart jumped and he whirled around.

"What's the matter, Bo?" asked Valeria. "You look like doomsday."

"I . . . I . . ." He gulped noisily and twisted his mouth into a smile. Just feeling a little off.

"It's more than that, I think." Her eyes were grave. "You've seemed so unhappy the

whole trip. Is there anything I can do to help?"

"Thanks . . . Dr. McKittrick . . . but—"

"Don't be so formal," she said, almost wistfully. "I don't bite. Too many men think I do. Can't we be friends?"

"With a thick-headed clinker like me?" His whisper was raw.

"Don't be silly. It takes brains to be a spaceman. I like a man who knows when to be quiet." She lowered her eyes, the lashes were long and sooty black. "There's something solid about you, something so few people seem to have these days. I wish you wouldn't go feeling so inferior."

At any other time it would have been a sunburst in him. Now he thought of death, and mumbled something and looked away. A hurt expression crossed her face. "I won't bother you," she said gently, and moved off.

The thing was to fall on Lundgard while he slept—

The radar alarm buzzed during a dinner in which Lundgard's flow of talk had battered vainly against silence and finally given up. Bo vaulted over to the control panel and checked. No red light glowed, and the autopilot wasn't whipping them out of danger, so they weren't on a collision course. But the object was getting close. Bo calculated it was an asteroid on an orbit almost parallel to their own, relative speed only a few feet per second; it would come within ten miles or so. In the magnifying periscope, it showed as a jagged dark cube, turning around itself and flashing hard glints of sunlight off mica beds—perhaps six miles square, all crags and cracks and fracture faces, heatless and lifeless and kindless.

## V

LUNDGARD yawned elaborately after dinner. "Excuse," he said. "Unless somebody's for chess?" His hopeful glance met the grimness of Bo and the odd sadness of Valeria, and he shrugged. "All right, then. Pleasant dreams."

After ten minutes—*now!*

Bo uncoiled himself. "Valeria," he whispered, as if the name were holy.

"Yes?" She arched her brows expectantly.

"I can't stop to explain now. I've got to

do something dangerous. Get back aft of the gyro housing."

"What?"

"Get back!" Command blazed frantically in him. "And stay there, whatever happens."

Something like fear flickered in her eyes. It was a very long way to human help. Then she nodded, puzzled but with an obedience which held gallantry, and slipped out of sight behind the steel pillar.

Bo launched himself across the room in a single null-gee bound. One hand ripped aside Lundgard's curtain, the other got him by the throat.

What the hell—"

Lundgard exploded into life. His fist crashed against Bo's cheek. Bo held on with one hand and slugged with the other. Knuckles bounced on rubbery muscle. Lundgard's arm snaked for the tunic stretched on his bunk wall; his body came lithely out of the sack. Bo snatched for that wrist. Lundgard's free hand came around, edged out to slam him in the larynx.

Pain ripped through Bo. He let go and sailed across the room. Lundgard was pulling out his needler.

Bo hit the opposite wall and rebounded—not for the armed man, but for the control panel. Lundgard spat a dart at him. It burst on the viewport over his shoulder, and Bo caught the acrid whiff of poison. Then the converter was roaring to life and whining gyros spun the ship around.

Lundgard was hurled across the room. He collected himself, catlike, grabbed a stanchion, and raised the gun again. "I've got the drop," he said. "Get away from there or you're a dead man."

It was as if someone else had seized Bo's body. Decision was like lightning through him. He had tried to capture Lundgard, and failed, and venom crouched at his back. But the ship was pointed for the asteroid now, where it hung gloomily a dozen miles off, and the rockets were ready to spew.

"If you shoot me," said Bo, "I'll live just long enough to pour on the juice. We'll hit that rock and scatter from hell to breakfast."

Valeria emerged. Lundgard swung the needler to cover her. "Stay where you are!" he rapped.

"What's happening?" she said fearfully.

"I don't know," said Lundgard. "Bo's gone crazy—attacked me—"

Wrath boiled black in the pilot. He snarled, "You killed my partner. You must'a been fixing to kill us too."

"What do you mean?" whispered Valeria.

"How should I know?" said Lundgard. "He's jumped his orbit, that's all. Look, Bo, be reasonable. Get away from that panel—"

"Look in his suitcase, Valeria." Bo forced the words out of a tightened throat. "A Venusian shot my partner. You'll find his face and his clothes in Lundgard's things. I'd know that face in the middle of the sun."

She hung for a long while, not moving. Bo couldn't see her. His eyes were nailed to the asteroid, keeping the ship's nose pointed at it.

"Is that true, Einar?" she asked finally.

"No," said, "Of course not. I do have Venusian clothes and a mask, but—"

"Then why are you keeping me covered too?"

Lundgard didn't answer at once. The only noise was the murmur of machinery and the dense breathing of three pairs of lungs. Then his laugh jarred forth.

"All right," he said. "I hadn't meant it to come yet, or to come this way, but all right."

"Why did you kill Johnny?" Tears stung Bo's eyes. He never hurt you."

"It was necessary." Lundgard's mouth twitched. "But you see, we knew you were going to Achilles to pick up Valeria and her data. We needed to get a man aboard your ship, to take over when her orbit brought her close to our asteroid base. You've forced my hand—I wasn't going to capture you for days yet. I sabotaged the *Drake's* fuel tanks to get myself stranded there, and shot your friend to get his berth. I'm sorry."

"Why?" Horror rode Valeria's voice.

"I'm a Humanist. I've never made a secret of that. What our secret is, is that some of us aren't content just to talk revolution. We want to give this rotten, over-mechanized society the shove that will bring on its end. We've built up a small force, not much as yet, not enough to accomplish anything lasting. But if we had a solar power beam it would make a big difference. It could be adapted to direct military uses, as well as

supplying energy to our machines. A lens effect, a concentration of solar radiation strong enough to burn. Well, it seems worth trying."

"And what do you intend for us?"

"You'll have to be kept prisoners for a while, of course," said Lundgard. "It won't be onerous. We aren't beasts."

"No," said Bo. "Just murderers."

"Save the dramatics," snapped Lundgard. "I have the gun. Get away from those controls."

Bo shook his head. There was a wild hammering in his breast, but his voice surprised him with steadiness: "No, I've got the upper hand. I can kill you if you move. Yell if he tries anything, Valeria."

Lundgard's eyes challenged her. "Do you want to die?" he asked.

Her head lifted. "No," she said, "but I'm not afraid to. Go ahead if you must, Bo. It's all right."

**BO** FELT cold. He knew he wouldn't. He was bluffing. In the final showdown he could not crash her. He had seen too many withered space drained mummies in his time. But maybe Lundgard didn't realize that.

"Give up," he said. "You can't gain a damn thing. I'm not going to see a billion people burned alive just to save our necks. Make a bargain for your life."

"No," said Lundgard with a curious gentleness. "I have my own brand of honor. I'm not going to surrender to you. You can't sit there forever."

Impasse. The ship floated through eternal silence while they waited.

"All right," said Bo. "I'll fight you for the power beam."

How's that?"

"I can throw this ship into orbit around the asteroid. We can go down there and settle the thing between us. The winner can jump up here again with the help of a jet of tanked air. The lump hasn't got much gravity."

Lundgard hesitated. "And how do I know you'll keep your end of the bargain?" he asked. "You could let me go through the airlock, then close it and blast off."

Bo had had some such thought, but he might have known it wouldn't work. "What



do you suggest?" he countered, never taking his eyes off the planetoid. "Remember, I don't trust you either."

Lundgard laughed suddenly, a hard yelping bark. "I know! Valeria, go aft and remove all the control-rod links and spares. Bring them back here. I'll go out first, taking half of them with me, and Bo can follow with the other half. He'll have to."

"I—no! I won't," she whispered. "I can't let you—"

"Go ahead and do it," said Bo. He felt a sudden vast weariness. It's the only way we can break this deadlock."

She wept as she went toward the engine room.

Lundgard's thought was good. Without linked control-rods, the converter couldn't operate five minutes, it would flare up and melt itself and kill everyone aboard in a flood of radiation. Whoever won the duel could quickly re-install the necessary parts.

There was a waiting silence. At last Lundgard said, almost abstractedly: "Holmgang. Do you know what that means, Bo?"

"No."

"You ought to. It was a custom of our ancestors back in the early Middle Ages—the Viking time. Two men would go off to a little island, a holm, to settle their differences; one would come back. I never thought it could happen out here." He chuckled bleakly. "Valkyries in spacesuits?"

The girl came back with the links tied in two bundles. Lundgard counted them and nodded. "All right." He seemed strangely calm, an easy assurance lay over him like armor. Bo's fear was cold in his belly, and Valeria wept still with a helpless horror.

The pilot used a safe two minutes of low blast to edge up to the asteroid. "I'll go into the airlock and put on my spacesuit," said Lundgard. "Then I'll jump down and you can put the ship in orbit. Don't try anything while I'm changing, because I'll keep this needler handy."

"It won't work against a spacesuit," said Bo.

Lundgard laughed. "I know," he said. He kissed his hand to Valeria and backed into the lock chamber. The outer valve closed behind him.

"Bo!" Valeria grabbed the pilot by the shoulders, and he looked around into her

face. "You can't go out there, I won't let you, I—"

"If I don't," he said tonelessly, "we'll orbit around here till we starve."

"But you could be killed!"

"I hope not. For your sake, mostly, I hope not," he said awkwardly. "But he won't have any more weapon than me, just a monkey wrench." There was a metal tube welded to the leg of each suit for holding tools; wrenches, the most commonly used, were simply left there as a rule. "I'm bigger than he is."

"But—" She laid her head on his breast and shuddered with crying. He tried to comfort her.

"All right," he said at last. "All right. Lundgard must be through. I'd better get started."

"Leave him!" she blazed. "His air won't last many hours. We can wait."

"And when he sees he's been tricked, you think he won't wreck those links? No. There's no way out."

It was as if all his life he had walked on a road which had no turnings, which led inevitably to this moment.

He made some careful calculations from the instrument readings, physical constants of the asteroid, and used another minute's maneuvering to assume orbital velocity. Alarm lights blinked angry eyes at him, the converter was heating up. No more traveling till the links were restored.

Bo floated from his chair toward the lock. Good-bye, Valeria," he said, feeling the bloodless weakness of words. "I hope it won't be for long."

She threw her arms about him and kissed him. The taste of tears was still on his lips when he had dogged down his helmet.

Opening the outer valve he moved forth, magnetic boots clamping to the hull. A gulf of stars yawned around him, a cloudy halo about his head. The stillness was smothering.

When he was "over" the asteroid he gauged his position with a practiced eye and jumped free. Falling, he thought mostly of Valeria.

As he landed he looked around. No sign of Lundgard. The man could be anywhere in these square miles of cosmic wreckage. He spoke tentatively into his radio, in case

Lundgard should be within the horizon: "Hello, are you there?"

"Yes. I'm coming." There was a sharp cruel note of laughter. "Sorry to play this dirty, but there are bigger issues at stake than you or me. I've kept a rifle in my tool-tube all the time . . . just in case. Good-bye, Bo."

A slug smashed into the pinnacle behind him. Bo turned and ran.

## VI

AS HE rose over the lip of the crater, his head swung, seeking his enemy. There!

It was almost a reflex which brought his arm back and sent the wrench hurtling across the few yards between. Before it had struck, Bo's feet lashed against the pit edge, and the kick arced him toward Lundgard.

Spacemen have to be good at throwing things. The wrench hit the lifted rifle in a soundless shiver of metal, tore it loose from an insecure gauntleted grasp and sent it spinning into shadow. Lundgard yelled, spun on his heel, and dove after it. Then the flying body of Bo Jonsson struck him.

Even in low-g, matter has all its inertia. The impact rang and boomed within their armor, they swayed and fell to the ground, locking arms and hammering futilely at helmets. Rolling over, Bo got on top, his hands closed on Lundgard's throat—where the throat should have been, but plastic and alloy held fast; instinct had betrayed him.

Lundgard snarled, doubled his legs and kicked. Bo was sent staggering back. Lundgard crawled erect and turned to look for the rifle. Bo couldn't see it either in the near-solid blackness where no light fell, but his wrench lay as a dark gleam. He sprang for that, closed a hand on it, bounced up, and rushed at Lundgard. A swing shocked his own muscles with its force, and Lundgard lurched.

Bo moved in on him. Lundgard reached into his tool-tube and drew out his own wrench. He circled, his panting hoarse in Bo's earphones.

"This . . . is the way . . . it was supposed to be," said Bo.

He jumped in, his weapon whirling down to shiver again on the other helmet. Lundgard shook a dazed head and countered. The

impact roared and echoed in Bo's helmet, on into his skull. He smashed heavily. Lundgard's lifted wrench parried the blow, it slid off. Like a fencer, Lundgard snaked his shaft in and the reverberations were deafening.

Bo braced himself and smote with all his power. The hit sang back through iron and alloy, into his own bones. Lundgard staggered a little, hunched himself and struck in return.

They stood with feet braced apart, trading fury, a metal rain on shivering plastic. The stuff was almost unbreakable, but not quite, not for long when such violence dinned on it. Bo felt a lifting wild glee, something savage he had never known before leaped up in him and he bellowed. He was stronger, he could hit harder. Lundgard's helmet would break first!

The Humanist retreated, using his wrench like a sword, stopping the force of blows without trying to deal more of his own. His left hand fumbled at his side. Bo hardly noticed. He was pushing in, hewing, hewing. Again the shrunken sun rose, to flash hard light off his club.

Lundgard grinned, his face barely visible as highlight and shadow behind the plastic. His raised tool turned one hit, it slipped along his arm to rap his flank. Bo twisted his arm around, beat the other wrench aside for a moment, and landed a crack like a thunderbolt.

Then Lundgard had his drinking hose free, pointing in his left hand. He thumbed down the clamp, exposing water at fifty degrees to naked space.

It rushed forth, driven by its own vapor pressure, a stream like a lance in the wan sunshine. When it hit Bo's helmet, most of it boiled off . . . cooling the rest, which froze instantly.

Blindness clamped down on Bo. He leaped away, cursing, the front of his helmet so frosted he could not see before him. Lundgard bounced around, playing the hose on him. Through the time-coat, Bo could make out only a grayness.

He pawed at it, trying to wipe it off, knowing that Lundgard was using this captured minute to look for the rifle. As he got some of the ice loose, he heard a sharp yell of victory—found!

Turning, he ran again.

Over that ridge! Down on your belly! A slug pocked the stone above him. Rolling over, he got to his feet and bounded off toward a steep rise, still wiping blindness off his helmet. But he could not wipe the bitter vomit taste of defeat out of his mouth.

His breathing was a file that raked in his throat. Heart and lungs were ready to tear loose, and there was a cold knot in his guts. Fleeing up the high, ragged slope, he sobbed out his rage at himself and his own stupidity.

At the top of the hill he threw himself to the ground and looked down again over a low wall of basalt. It was hard to see if anything moved down in that valley of night. Then the sun threw a broken gleam off polished metal, the rifle barrel, and he saw Einar Lundgard walking around, looking for him.

The voice came dim in his earphones. "Why don't you give up, Bo? I tell you, I don't want to kill you."

"Yeh." Bo panted wearily. "I'm sure."

"Well, you can never tell," said Lundgard mildly. "It would be rather a nuisance to have to keep not only the fair Valeria, but you, tied up all the way to base. Still, if you'll surrender by the time I've counted ten—"

"Look here," said Bo desperately, "I've got half the links. If you don't give up I'll hammer 'em all flat and let you starve."

"And Valeria?" The voice jeered at him. He knew his secret was read. "I shouldn't have let you bluff me in the first place. It won't happen a second time. All right: one, two, three—"

Bo could get off this asteroid with no more than the power of his own legs; a few jets from the emergency blow valve at the bottom of an air tank would correct his flight as needed to bring him back to the *Sivian*. He wanted to get up there, and inside warm walls, and take Valeria in his hands and never let her go again. He wanted to live.

"—six, seven, eight—"

He looked at his gauges. A lot of oxygen-helium mixture was gone from the tanks, but they were big and there was still several atmospheres' pressure in each. A couple of hours' life. If he didn't exert himself too

much. They screwed directly into valves in the back of his armor, and—

"—ten. All right, Bo." Lundgard started moving up the slope, light and graceful as a bird. It was wide and open, no place to hide and sneak up behind him.

**F**IGURES reeled through Bo's mind, senselessly. Mass of the asteroid, effective radius, escape velocity only a few feet per second, and he was already on one of the highest points. Brains! he thought with a shattering sorrow. A lot of good mine have done me!

He prepared to back down the other side of the hill, run as well as he could, as long as he could, until a bullet splashed his blood or suffocation thickened it. But I want to fight! he thought through a gulp of tears. I want to stand up and fight!

Orbital velocity equals escape velocity divided by the square root of two.

For a moment he lay there, rigid, and his eyes stared at death walking up the slope but did not see it.

Then, in a crazy blur of motion, he brought his wrench around, closed it on a nut at one side, and turned.

The right hand air tank unscrewed easily. He held it in his hands, a three foot cylinder, blind while calculation raced through his head. What would the centrifugal and Coriolis forces be? It was the roughest sort of estimate. He had neither time nor data, but—

Lundgard was taking it easy, stopping to examine each patch of shadow thrown by some gaunt crag, each meteor scar where a man might hide. It would take him several minutes to reach the hilltop.

Bo clutched the loosened tank in his arms, throwing one leg around it to make sure, and faced away from Lundgard. He hefted himself, as if his body were a machine he must use. Then, carefully, he jumped off the top of the hill.

It was birdlike, dreamlike, thus to soar noiseless over iron desolation. The sun fell behind him. A spearhead pinnacle clawed after his feet. The Southern Cross flamed in his eyes.

Downward—get rid of that downward component of velocity. He twisted the tank, pointing it toward the surface, and cautious-

ly opened the blow valve with his free hand. Only a moment's exhaust, everything gauged by eye. Did he have an orbit now?

The ground dropped sharply off to infinity, and he saw stars under the keel of the world. He was still going out, away. Maybe he had miscalculated his jump, exceeded escape velocity after all, and was headed for a long cold spin toward Jupiter. It would take all his compressed air to correct such a mistake.

Sweat prickled in his armpits. He locked his teeth and refused to open the valve again.

It was like endless falling, but he couldn't yet be sure if the fall was toward the asteroid or the stars. The rock spun past him. Another face came into view. Yes, by all idiot gods, its gravity was pulling him around!

He skimmed low over the bleakness of it, seeing darkness and starlit death sliding beneath him. Another crag loomed suddenly in his path, and he wondered in a harsh clutch of fear if he was going to crash. Then it ghosted by, a foot from his flying body. He thought he could almost sense the chill of it.

He was a moon now, a satellite skimming low above the airless surface of his own midget world. The fracture plain where Lundgard had shot at him went by, and he braced himself. Up around the tiny planet, and there was the hill he had left, stark against Sagittarius. He saw Lundgard, standing on its heights and looking the way he had gone. Carefully, he aimed the tank and gave himself another small blast to correct his path. There was no noise to betray him, the asteroid was a grave where all sound was long buried and frozen.

He flattened, holding his body parallel to the tank in his arms. One hand still gripped the wrench, the other reached to open the

blow valve wide.

The surge almost tore him loose. He had a careening lunatic moment of flight in which the roar of escaping gas boiled through his armor and he clung like a troll to a runaway witch's broom. The sun was blinding on one side of him.

He struck Lundgard with an impact of velocity and inertia which sent him spinning down the hill. Bo hit the ground, recoiled, and sprang after his enemy. Lundgard was still rolling. As Bo approached, he came to a halt, lifted his rifle dazedly, and had it knocked loose with a single blow of the wrench.

Lundgard crawled to his feet while Bo picked up the rifle and threw it off the asteroid. "Why did you do that?"

"I don't know," said Bo. "I should just shoot you down, but I want you to surrender."

Lundgard drew his wrench. "No," he said. "All right," said Bo. "It won't take long."

When he got up to the *Sirius*, using a tank Lundgard would never need, Valeria had armed herself with a kitchen knife. "It wouldn't have done much good," he said when he came through the airlock. She fell into his arms, sobbing, and he tried to comfort her. "It's all over. All taken care of. We can go home now."

He himself was badly in need of consolation. The inquiry on Earth would clear him, of course, but he would always have to live with the memory of a man stretched dead under a wintry sky. He went aft and replaced the links. When he came back, Valeria had recovered herself, but as she watched his methodical preparations and listened to what he had to tell, there was that in her eyes which he hardly dared believe.

Not him. Not a big dumb slob like him.