

# THE TENTH WORLD

John W. Campbell, Jr.

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A  
Novelette  
of Scientific  
Exploration

# THE TENTH WORLD

By John W. Campbell, Jr.

Author of "The Immortality Seekers," "The Double Minds,"  
etc.

Penton and Blake, Space Roving Team, Meet Up with the  
Super-Evolved, Eternal Inhabitants of a Planet More Distant  
and Colder Than Pluto!

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## CHAPTER I

### *Shleath vs. Pipeline*

Cautiously, Penton looked around the corner of the building. In the west, Jupiter was setting; here on Ganymede, complete darkness would come in a few moments.

"No one in sight," he whispered. "For God's sake, don't start concentrating, Blake. Those boys are catching on to telepathy too fast. If they don't hear us, they may telepath us if you think so blasted hard. Hurry up."

Blake hitched his pack into a more comfortable position, and the two set off hurriedly, noiselessly down the broad, deserted avenue. Two blocks they passed silently, to turn down a narrow, rubbish-choked alley. Jupiter's light faded altogether, and they had to pick their way with utmost care. Six blocks they traversed without disturbance—then abruptly a squeaking flurry of shuffling, running steps darted out from under some rubbish. Dim light reflected from the clouded sky overhead showed a two-foot, glistening mass of evilly furious protoplasm racing down the alley toward them, squealing in helpless fury.

Behind it, silent as death, but with a broad grin of eagerness on its homely face, came a six-legged creature built on the general lines of a dachshund. The protoplasm darted under some rubbish; the six-legged dog clawed after it, the piled boards exploding in a dozen directions, to fall with a furious clatter.

There was a moment of savage squalling, and sodden gulping sounds, while the two men shrank back into protecting shadows. Somewhere a window went up, and a Lanoor's voice shrilled curses into the silence of the night.

The six-legged animal came out from the mass of rubbish presently, its head high, walking with a slow, rather labored step. Its belly had expanded miraculously, until the six short legs barely held it from the ground. Its keen nose detected the man, and for a moment it sniffed at them briefly, tail wagging, before it went on about its business. Two more of the animals trotted down the alley alertly, paused a moment to watch the first, and turned away disappointed.

"One of Pipeline's innumerable progeny can make more noise chasing down a *shleath*, than any single animal I ever before encountered," Blake said with intent bitterness. "Can we move now, do you think?"

"It isn't the hexapeds, it's the *shleath* that do the squalling," Penton reproved him.

"It wasn't the *shleath's* idea to throw that lumber around. From what I saw, its primary interest was getting under there and staying, very quiet and peaceable."

"Shut up and move. Somebody may come to see if the *shleath* were all eaten, or only part. We have to get out of here while we can—" Penton turned down the next intersecting street; together they dodged through the sleeping city. Half a mile they went, then gradually, as they neared the airport, more life appeared. Ships from cities half around the world, and still in daylight, were active, and the air-force crew had to be up.

"Man, what I'd give for some of those sleep-gas bombs they used on us the first time we landed," sighed Penton. "There's a dozen Civil Guards standing about our space ship."

"You said you'd get through somehow." Blake shrugged. "Get going. It's almost light."

Penton glowered at him, and sat down in the shadow of a low, spreading, bushlike tree. From the knapsack he carried he pulled a number of small metal chips and cuttings, piled them on the sidewalk before him, and added a handful of filings. Then two waxy white cylinders half an inch through and three inches long. He rose to his feet and nodded toward Blake.

"All right, guy, get moving."

A flash of electric current snapped from an atomic flashlight in his hand, touched the metal chips, and they burst into sudden, intense flame. Penton ran hastily into deeper shadows in the direction of the airport. The flare built up to a colossal, intolerable glare; voices over at the airport shouted, and gangling, seven-and-a-half-foot Lanoor Civil Guardsmen were racing toward the strange beacon.

Penton and Blake raced in the opposite direction. Every eye was focused on the weirdly brilliant flare Penton had just made. Windows were clattering open in nearby houses, curious voices calling out. The Earthmen slipped down the side of the huge hangar, rounded a turn, and jumped to their ship. In an instant, Penton had the lock-door open, and was struggling at the inner door.

The combination dial delayed him, slow turns that must be accurate.

"The flare's burned out," Blake said softly. "They—" A sudden new shout went up, and the Civil Guards were streaming back across the field toward them, their arms waving frantically. From the nearer barracks, a score of Guardsmen burst out, half-dressed and holding up dragging clothes with one hand, blunt weapons waving in the other.

A monstrous eye winked lazily, redly across the field at them, then opened fully in a blinding pencil of light that pinned them like insect specimens on the broad, blue-green turf of the flying field.



The inner door opened as Penton threw a lever. Simultaneously the outer door swung shut on rubber grommets. A score of men shouting outside were suddenly silenced. Penton dived through the widening crack, twisted up the main corridor to the control room.

A moment later the atomic engines *tchked* twice in gentle reproof as relays closed, and began to sing softly of empty spaces. The ship trembled slightly, and when Blake reached the window, a patchwork field was dwindling swiftly below. A dozen, then a score of great beams of light laced across the city, swinging back and forth in slow majesty.

Penton settled back in the pilot seat comfortably, with a deep sigh. He snapped on the automatic controls, and hauled the knapsack off his back.

"Was I mistaken, or did I see Pipeline making a mad dash to join us just before we left?"

Blake chuckled.

"You weren't mistaken, but I guess the borax did the trick. The greedy little hog couldn't leave to follow us until he had eaten it all. But I told you he'd find where we were going."

Penton smiled. "Maybe," he punned, "a hexaped can trail a man by his sense the way a bloodhound trails a man by his scents. They have telepathic power."

Blake looked at him sourly.

"Lousy, if I may say so. Are any planes trying to follow us?"

Penton shook his head.

"Not now. We're about fifty miles up, and going farther rapidly—ah, there's the sun." A burst of light struck through the control window as the space ship shot out of the shadow of Ganymede. "Poor P'holkuun. In some ways it seems like a sort of dirty trick. The poor guy's been sweating for three days over that speech thanking us for exterminating the *shleath*."

Blake groaned.

"Farewell—come again—we've been glad to see you.' That's all right. But when an orator works himself into a foaming frenzy and calls us the 'saviors of our civilization' and 'the destroyers of the tyrannous Shaloor overloads,' to wind up in a burst of rhetorical glory on 'the greatest, the final blessing, the gift of the hexapeds which have freed us from the terrible menace of the *shleath*'—I quit. Personally, I'll bet P'holkuun was glad to be quit, too. I like that guy, blue-haired beanpole or not, and I'll bet he was no happier trying to prepare that speech than we were trying to work up nerve enough to sit through it. I—hey—we're on the daylight side of Ganymede."

Penton rose a bit in his seat, and looked down through the window thoughtfully.

"So we are. Also, if you observe carefully, getting further toward that side. I'm going to step up to a full Earth-normal acceleration, so grab hold."

The ship was suddenly pulling harder, as the acceleration increased from only slightly more than the equal of Ganymedian gravity to equal Earth's gravitational acceleration.

"My Lord, I'm heavy," Blake grunted. His feet seemed strangely stuck to the floor, and as he walked across the room, his motions were curiously jerky. "Three months on that light world plays hell with your sense of timing.

"But look—we're on the *daylight* side of Ganymede. And Jupiter off there, and there's Callisto and the rest—well, for where are we bound?"

Penton looked at him for a moment, frowning, then a light seemed to dawn. His expression showed only annoyed disgust.

"For the love of space. Now I get it. The Tenth World, of course."

"Which," Blake pointed out, "is outside of Pluto's orbit—further from the Sun. Since we started from the night side of Ganymede, and are now on the day side, we're heading *toward* the sun, not away from it. Or, to bring up an old stickler, was Loshthu a thushol, not a real Martian—"

"In either case he'd be a real Martian, since a thushol is just as truly a Martian animal as is the centaur," Penton pointed out, "but you are just slightly off the track. We are headed toward the sun. Jupiter and the Tenth World are on opposite sides of the sun at the particular moment, if those Martian records weren't wrong, and I haven't made too many slips covering the transformations."

"Oh," said Blake softly. "Did you find out just where and what it was? You didn't tell me much."

"You were too busy playing with the food for the ship. The Martian expedition to Pluto first spotted it—the two planets happened to be nearly in conjunction then, and they have a good orbit calculation. It's in terms of Martian days, hours, minutes, and years, though. I don't know what day, hour and minute it is on Mars. I made rough calculations, and know about where the planet is, which is what we will have to go on. It was never visited, but it's five and two-thirds billions of miles out."

Blake whistled.

"I'm gonna get out my asbestos pants—and not because I am afraid of heat. What will the temperature be?"

"The Martians figured it to be about ten to twelve degrees above zero."

"*Above zero!*" Blake exclaimed. "What is it, radioactive heat, or what?"

"No, solar heat. The zero, however, is zero absolute. Minus which there is no minus, which is why that planet's not minus."

"I like swimming, so maybe an asbestos bathing suit for swimming in liquid hydrogen is called for," Blake grinned.

"You'll need something more than asbestos; you'll need an anti-gravity swimming suit. Liquid hydrogen is so light a liquid that nothing either solid or liquid will float in it, and even some gases would sink."

"Say, I just thought. If it's the far side of the sun we are headed for, how long is it going to take? Half a billion miles from Jupiter's satellites to the sun, and then ten times farther out to Ten."

"Not long. Sixty days or so. We'll be busy, I think, making over the space suits for atomic heating and so forth, checking over the ship, which hasn't had an overhaul since we started out, and so on. Also—"

"At Earth gravity acceleration, make it in sixty days? When will we stop moving, though?"

"That includes stopping. Thirty days or so accelerating, thirty slowing. If you use Earth-acceleration for thirty days, my lad, you build up a most unholy velocity. If it weren't that we'll be well out in the edges of the Solar System when we hit our top, I wouldn't dare.

"But you go on and take an off-shift now. I'll wake you in eight hours, and you can take over, I want to check my lines

and accelerations anyway."

Blake rose with a sigh.

"O.K., Ted. Nothing I can do for you now? Want some coffee—sandwiches—something like that?"

"Thanks, no. Go ahead, sleep."

## CHAPTER II

### *The Tenth Planet*

Blake looked at the gadget doubtfully.

"Proton projector—so that's what you were trying to do? But what in blazes do you want it for now you have made it? It kicks like a steer."

Penton nodded, ruefully rubbing a sore wrist.

"It isn't quite that bad. I just forgot—it's easy to think a ray-gun won't kick."

"It's a wonder to me that you didn't electrocute yourself. I still don't see why you don't wind up with an electron charge that'd be enough to make a lightning bolt say 'please.'"

Blake raised the clumsy-looking weapon, pointed it toward the heavy steel target plate and pressed the discharge button skeptically. The air cleft opened before the mad flight of the protons driven forth, glowing in a path reaching toward the steel plate. Simultaneously the heavy pistonlike weapon kicked back under the drive that shot forth the massive protons at close to 100,000 miles a second.

Abruptly, the steel plate glowed with a hazy, violet light. Ripping static discharges smashed down from it, and the metal hissed like water suddenly touched by a red-hot iron. The steel vaporized into gas, glowing with an intolerable light that faded away gradually.

Blake lowered the weapon.

"Not too bad. Knowing the kick was coming, it didn't bother much more than an extra-heavy .45, but I still don't see the advantage. Half a mile range in air, while the UV pistol doesn't kick, fires continuously, and has a five mile range. The dis gun has a seven mile range, doesn't kick, and allows no argument—anything that tries to argue simply ceases to exist. Why this?"

Penton grinned.

"In about two hours we are going to land on Planet Ten. First men to do so, and we ought to learn a little about its rocks, etc. What strange minerals form at  $-265^{\circ}$  C.? What elements are available?"

"Do you remember, my lad, the famous analytical work you pulled on Venus? We'd used up most of our salt, because I forgot to pack that fifty pound bag before we started. And so we were going to collect some on Venus.

"And you announced that the salt of the sea Water contained no poisonous elements, but was nearly all sodium chloride. Bright lad. We used some, innocently, and by good luck used it while in the ship. How many hours was it we spent in dreamland? And oh, man, were you utterly soused when you did wake up! Staggered like a run-down gyroscope, talked like a guy who'd lost his false teeth. Sodium chloride, you said. No poisonous elements. And treated us to a quintuple dose of sodium bromide!"

"Well, damn it, bromide and chloride act so darned much alike; I wasn't the first man to get fooled. I said it was only qualitative—answered all those tests—"

"Sure it did. Except it put us in dreamland for thirty-six hours straight. And we wound up with bromide intoxication it took us four days more to get over. It was lucky we had some salt left.

"I'm not blaming you," Penton disclaimed. "I'm just explaining. It wasn't until we tried the spectroscope that we caught on to just what was the matter. As chemists and geologists, we're hams, but, by the gods, we can read a spectrum. You can't analyze with a UV gun because it messes all the lines hopelessly. You can't analyze with a disintegrator, because it doesn't leave anything to analyze.



Hence this gadget; the iron vapor it raised just then was swell material for a spectroscope."

"But look; this planet's about 15,000 miles in diameter, I believe. We're headed now for the equatorial, the hot zone. It must be all of  $5^{\circ}$  above absolute zero there. Helium may be a gas, but everything else in the Universe is a solid at that temperature. Suppose you start your breakfast, and my lunch, and I'll finish checking the decelerations. We seem to be heading for an immense plain, which may make landing easier. Did you notice this planet had a moon? It's 1,000,000 miles out, and 2,000 miles in diameter."

Blake turned for the galley as Penton put a few last touches on the proton gun, and put away the tools. Three times while Blake was trying to get the meal, Penton sounded the acceleration change warning, and Blake had to cram things hastily into the non-spilling acceleration containers. Once however, he chased a fried egg about the galley with a frying pan for half a minute before a violent acceleration brought it to roost. In bitter silence he removed it from his chest, and opened another into the pan.

Beyond the lock-door lay the utterly bleak surface of the Tenth World. A dim, frozen plain stretched out to a far horizon lost in the pressing darkness of this far, raveling edge of the Solar System. Low in the east, the rising sun was a brighter star, an intolerably brilliant, dimensionless point of light, casting a light that seemed little brighter than

moonlight on Earth. But it was bleak, utterly cheerless light. And it was cold, cold.

Barely visible to one side was a lake of clear, sparkling, slightly bluish liquid. Tiny, starlit waves danced and glittered on its surface, moved by some thin, cold wind of this frozen outcast world.

A chill finger from Death's homeland reached into the lock, and Blake shivered violently. He advanced the heat control at his belt.

"Great God, it's cold!" he exclaimed, teeth chattering.

Penton's laughter ticked metallically in his radio transceiver.

"Step out, brother Blake, step out into the breeze. Into the warm sunlight and the bright and warm starlight."

Blake rounded the hull of the ship resting on a smooth patch of sparse, blue sand over black, angular pebbles. There was an end to the plain here. The lake nestled almost at the foot of an immense, chalky cliff that towered into star-lit dimness overhead. Off to the north, a river wound its way slowly, tortuously through a narrow gorge, and vanished, heading, as they knew, to a greater river, part of a yet greater one that emptied finally into a huge, inland sea.

Around the curve of the ship, from the peak of the chalky cliff, a stream of liquid was arching downward, spraying, breaking into flying droplets in the thin air of the frozen world, an air consisting only of helium, and the vapors of this

liquid—hydrogen. Nearly a thousand feet it hurled itself down, to smash in glittering foam on broken debris fallen from the huge cliff.

Off to the right, a vein of dark rock shot up at an angle through the cliff, and broke off sharply. A thinner vein of a grey stone lay beneath it. Near the base of the cliff in that direction the tumbled debris lay on the bluish, sandy beach, jumbled, rounded rock, jet black in the light of a five-and-three-quarters-billion-mile distant sun.

The great cliff stretched off, off to the right for unending distances, lost in the dimness that shrouded forever the far reaches of this dead world.

"Magnificent," sighed Penton, "but not beautiful. Let's go over toward that dark part of the cliff."

Two miles they followed the little lake's shore, then a quarter of a mile down the meandering stream that led from it. The little stream split, and split again in passing a group of tiny islands of the gritty, blue sand, subdivided in a series of streams less than three feet wide. Cautiously Penton tested the solidity of the sandy stuff under his booted foot. Then he stepped across, stepped again, and once more.

"Come ahead, Blake. It's easy enough."

"Catch," called Blake, and heaved the camera across to Penton. He followed Penton's cautious steps. "Hey, what in blazes is this sand? It doesn't feel right." Safely on the other

aide, he bent to pick up a handful in his thick gloves. Slowly, as he watched, it vanished.

"That," said Penton, "is solid oxygen, I believe. Just what that chalky cliff is, I am not sure, but nitrogen is my guess. Glaciers of it. The sand out across the way is also, I suspect, solid oxygen. The darker rock under it is just plain, ordinary rock."

The black rock glinted under the faint silver light of an immensely distant, heatless sun.

"That light is just strong enough to show how bleak this place is. There isn't even snow to cover its bare bones."

Penton nodded.

"It rains quite frequently, I imagine. Rains liquid hydrogen. In the course of ages, that rain has washed all the snow into the rivers and oceans, and now it's piled up in mountain ranges. Like that." His head nodded grotesquely in his transparent helmet, bowing toward the chalky cliff of frozen nitrogen. "I'm going to test that black rock."

Penton set up the camera with Blake's help, then leveled the proton gun and fired at the huge vein of black rock that jutted up. The rock flamed into an inferno of heat, swirled madly in tornadoes of protons, and relapsed into scintillating vapor. Penton pressed the trigger of the camera with a clumsy, gloved finger.

"Now, the greenish-grey—"

"Penton," said Blake faintly, "did you notice those rounded rocks?"

Ted Penton turned his eyes toward his friend.

"Yes, there are hundreds of 'em—all over. I'm going to test —"

"They moved," stated Blake. "I saw 'em."

Penton looked at him thoughtfully.

"You saw shadows. That swirling gas—"

"They," said Blake pointedly, "are moving."

Penton looked closely toward one of the ten-foot, irregularly rounded boulders. Very, very slowly it was changing its shape. A dozen near it were changing shape. As they changed, they rolled slowly, irregularly toward the dying glow in the rocky cliff-face.

"Great guns!" gasped Penton. "They—they're *alive!*"

Blake yelled and jumped clumsily under the heavier gravity. Penton turned with leveled proton gun, then lowered it slowly. Blake was heading rapidly toward a narrow, deep crevice in the wall of the cliff, a fault between two immense masses of the solid, black rock. Behind him, rolling very slowly over the spot where he had stood, a ten-foot "boulder" stopped indecisively, changed shape slowly, flattening into stability.

"If you must yell, Rod," said Penton sharply, "disconnect your transceiver first. They can't move fast enough to catch anything, so come out of hiding."

Blake came out of the deep crevice sheepishly. "It startled me, damn it. Hell, it's enough of a shock to see a boulder start walking, but when the darned thing suddenly touches you from behind—"

He stopped, then turned and raced madly for the little series of islands giving access to the far side of the stream and lake, where the ship rested. Penton stared, then followed the direction of Blake's eyes.

From out of the dimness beyond the horizon of the vast plain, *something* was coming. Dozens of Things. No creeping slowness, but a savage, swift motion. Immense Things in incredible action on an impossible world. From dimness that stretched to unseen horizons, they rolled up. Already Blake had fled halfway to the tiny islands that served as stepping stones.

"Blake, stop, you won't make it," he warned. "Come back." Blake's labored running slowed to a halt. Then his instinctive, quick-calculating mind summed up the situation. With equal speed he rejoined Penton.

"From the looks of things, let's head for the crevice there," he panted. "And pray God they go for us instead of the ship."

"We're all right, I think. We can wait on this side of the lake. What in God's name are they—I never saw a vehicle like that before."

The vast Things were slowing down somewhat and came into clearer focus now. Sunlight showed them only vaguely, huge things, a hundred feet long and thirty in diameter, immense cylinders of utter, jet black rolling swiftly across the level plain. Their very blackness made them almost invisible against the dark plain. They were black with the blackness of space itself; an utter, total absorption of every ray of light that struck them.

The first rolled up, hitching itself strangely to curve its path.

"The ship," said Penton tensely. "They're after the ship. I wonder—" He leveled the proton projector, and pressed the button. A slim, solid line of glowing light lanced out across the tiny lake, and struck the vast thing of blackness. Instantly it recoiled. A spot of furious incandescence boiled on its side, a spot twenty feet across. It quivered into motionlessness.

A strange limpness came over it, and simultaneously the jet blackness left it, replaced by a slate-blue color. It deflated like a balloon just needled, flattening out until one edge touched the lake of hydrogen. The liquid boiled furiously, hissing violently. Clouds of vapor rolled up, to be whipped away by the thin, keen wind.

The second and third and fourth changed their courses and rolled swiftly, not toward the ship, but toward the slate-blue hulk that slumped like a dropped cylinder of putty on the shore. Black bulks squirmed over it, hiding it.

Half a dozen others had arrived. They squirmed vainly for a place beside the dead thing, and rolled on away toward the ship. Penton's proton gun lanced out again, again—five times. Five huge things writhed, then slumped in death, steaming faintly. Others piled on them. Frantically, Blake joined in the slaughter. Scores, hundreds of the beasts rolled up from dimness, sailing madly, blithely into death and destruction. Wildly they piled against the dead bulks of their brothers, hiding the slaty carcasses under heaving, whale-like masses of jet flesh.

Penton sighed at last and lowered his gun.

"Stop, Blake," he said. "It's useless. There are hundreds more coming and our guns are about exhausted. I get it now. They'll just come from all over that plain. It's heat."

"Heat?"

"They're living animals and they live on it." Penton nodded wearily. "Just pray that the ship's up to it. We built her with a powerful frame, and there's only a certain number of those brutes can touch her at once."

"But—why? They're utterly unafraid—"



"They have nothing to be afraid of—or never have had. They don't understand fear. Look. Ten of them on the ship now. Will it take it—"

The huge bulks squirmed and writhed their way over each other, over the ship. Others pushed and squirmed in faintly audible squealings and gruntings, seeking to reach the warm metal sides of the ship.

"Heat," Penton sighed. "They must live on it. They're warm-blooded—boiling-blooded, you might almost say. Somehow, that black hide of theirs is heat-proof while they're alive but releases its heat when they die. Look, they're leaving that first one we killed. It's frozen solid."

## CHAPTER III

### *Mind Over Matter*

Blake looked thoughtfully toward the huge, shapeless mound that surmounted their little space ship.

"You know, we made that ship strong as blazes. It'll stand an awful strain, but I don't know that it will stand that strain when the metal's been made brittle by this temperature. And—if that ship is broken down— Well, the Martians were the last people even to see this planet, let alone visit it!"

"It won't break," Penton said decisively. "The atomic engines are fueled for about twelve months, and until their power gives out, the currents we established in the walls will prevent it from cooling. That's not what's bothering me, though. What I want to know is how we are going to get in. Just go over and nudge one of those little land whales and say, 'Would you step aside for a moment, sir, while we move in?'"

"We're hot," said Blake, "and I don't mean we're good. If we get anywhere near them, they'll probably start trying to cuddle with us. They—"

"Will," said Penton, looking behind him. "They've spotted us."

A half dozen of the bulks stirred uneasily, switching and moving clumsily. Then, broadside on, they started rolling toward the two men on the most direct line—through the lake of liquid hydrogen.

"They'll drown in that," pronounced Blake.

"Or freeze. I—" Penton stopped. The first one had rolled into the liquid, sending it splashing in rainbow showers of ultra-cold. It rolled smoothly on into the lake, going deeper and deeper, until it was fully twenty feet deep in the stuff. Then, it stopped. Blake stared open-mouthed as the huge, blunt end of the vast cylinder of apparently brainless flesh split. As though hinged, an immense, thick flap of black, leathery hide rolled down, and instead of the leathery,

featureless cylinder-end, a whole assortment of organs appeared.

First was a tube, fully two feet in diameter, that shot out like an elephant's trunk, to dip into that inconceivably frigid lake. The mobile liquid swirled and bubbled, twisting in vortices. With a tremendous smack, audible in even that thin, chill air, the tube broke contact with the surface of the liquid.

"Drinking," gargled Penton, "drinking liquid hydrogen. By the Nine—Ten Tumbling Worlds! It *drinks* the stuff!"

"Did you," asked Blake softly, "say it would freeze?"

The tube dipped again, another monstrous beast joined the first. Two tremendous smacks resounded, bounced against the cliff behind them, and floated off. The first coiled up its huge, sucking tube again, and rolled blithely out of the lake toward the two men.

Blake ran clumsily, Penton close behind him. The huge cylinder chased down toward them at a speed of fully forty miles an hour, rolling like a mad barrel down hill. Madly, the two explorers raced for the deep, narrow crevice in the cliff wall, dived into it as the whole rocky wall jarred to the impact of the rolling brute.

Penton looked back. The crevice was stopped by a jetty flank, jammed against the rocky wall to a height of thirty feet.

"It can't get in, that's sure," he panted.

The flank retreated, jerking, heaving clumsily. It twisted, turned, scraped and bumped. Another huge cylinder came slamming along and bounced against it. Laboriously the first continued its bouncing movements, now end-on to the crevice. The great, blunt end plugged the tiny crevice that sheltered the men.

Penton grunted.

"One at a time, gentlemen, one at a time," he said. "It won't do you any—for—jump!" The black, leathery end split; the coiled, trunk-like member was exposed, also a dozen twenty-foot long tentacular things that whipped out toward them. Penton jumped, Blake before him, back toward the dwindling, narrow end of the crevice. Too slow, the lashing tentacle caught Penton in a thrown noose of leathery strength; an immensely powerful, living rope snapped around his leg, tripped him, and yanked him back.

Jerked through the air helplessly, upside down, he was slammed against the black, wrinkled hide of the huge thing. Instantly, half a dozen tentacles snapped around and against him, forcing him against the black surface.

Supernal, dredging cold sucked the heat from his body. It was a numbing pressure that paralyzed him, forced him into the rubbery, yielding leather of the vast beast. His heat-pack could not offset the awful, unutterable chill of the vast bulk that had pressed him against itself. The blood roared in his

ears as he struggled madly to free his arm, to get a chance to try the proton gun.

A flame of intolerable light burst abruptly somewhere near, a wash of momentary heat, gratefully warming. The huge, living ropes contracted spasmodically against him, but as he was already nearly buried in the blubbery monster's side, little added strain pressed against him. A vast ripple of muscles somewhere beneath the thick hide tossed him suddenly away from the body.

He stumbled dazedly to his feet. A slate-blue mass loomed near him. The ground beneath his feet was rumbling to the charge of half a dozen monsters rolling down toward the warm carcass. Staggering, the man rounded the flattening, squashing bulk, climbed over a nest of still-twitching ropes, and almost fell into the tiny crevice beyond.

"You're tougher than I thought." Blake grinned at his friend. "For a while I thought you were due for permanent residence here."

The dim light of the crevice faded yet further. A black hulk heaved and moved about on top of the cooling corpse at the mouth of the crevice. Penton looked up at it sadly.

"You might go get a dis gun, if you thought you could run fast, and throw those things out of your way. How were we to expect life here? It isn't reasonable. Damn, brainless, mindless things that can't even be frightened."

"Not," said a very peculiar voice in his ears, "brainless. Merely that we have lost control," it added with a distinct note of sadness.

Blake looked slowly toward Penton. "Did you—"

Penton looked at Blake.

"Please," he asked softly, "don't be that way. You said that —"

"No," said the voice, "I did. I. I'm lying on top of Grugth here—the one you just killed."

Penton crawled farther back into the crevice, and looked back toward the mouth. Very dim against a black sky, the black beast bounced its way awkwardly over the hardening, slate-blue carcass.

"I'm sorry, you know," said the voice, plaintively, "but I can't help it. We evolved too far," it added in explanation.

"I hope you hear it, too," said Blake.

"Why? Misery loves company, or do you just want to make sure we're both crazy?" Penton looked unhappily at his friend. "I hear it, and I know I am. It comes right through the radio, and speaks English, which proves it."

"No, not at all. We can't speak by sound here; the air's too thin. On Earth, of course, animals developed sound-

signaling. We developed radio, as you call it. I'm sorry if I disturb you. Would you rather I didn't speak? I would like to explain though, that it isn't maliciousness."

"Much," shuddered Blake. "Much rather you didn't speak. I'd rather die sane."

"No," said Penton. "You speak by radio, I can see how that might be, but *how* do you speak English?"

"Perhaps," said the voice apologetically, "Blake could shut off his receiver, if I disturb him. I hear you speaking, you see, and read minds, too, to a certain extent. I can't broadcast telepathy, but I do receive."

The black bulk heaved, and started to move uneasily.

"Oh, I'm sorry. I'm afraid I'm going away. Maybe one of the others will—"

The black wall of blubbery flesh heaved, humped, and rolled rapidly down. It vanished from their sight behind the other. They heard a new voice.

"Grugth," it said, "is cooling rapidly. I'm afraid I shan't be able to stay much longer. I'd like to, of course, but—" The voice faded as another creature rolled leisurely away.

"Are they, or are we nuts? We must be," stated Blake.

"I don't know," Penton replied hopelessly. "They've all gone away. Suppose we try sneaking over toward the ship."

Carefully Penton climbed over the frozen, dead thing. Fully two thousand of the immense things were grouped about the lake. Most of them were working at the bluish sand that circled the little pool. At one end the blunt cylinder had opened, and the familiar two-foot tube was sucking and smacking at the surface of the lake, drinking deep of the frightfully cold liquid.

The other end of each had also opened. A great, dark cavern had opened inside the protective outer covering of the blunt end, and a dozen ropy tentacles ending in broad, spatulate tips were busy shoveling the bluish, gritty, solid oxygen into the cavern.

"Maybe," said Penton thoughtfully, "we aren't crazy. I can see that, and that's no more possible than a brainless hulk like that learning English in about five minutes. It's eating solid oxygen at one end as fast as it can go, and drinking liquid hydrogen at the other, and with lamentable table manners, too. And except for those doing the same, or playing cuddle-pup with our ship, the whole blasted gang is lying out there sunning themselves in that ultra-dilute sunlight. They're all hanging around the ship, though."

"Sorry," interrupted a soft, slightly accented voice, "I'm afraid I'm coming. You'd better get back in the crevice."

Penton looked and jumped. For all their immense bulk, their softness permitted them to move absolutely soundlessly. A hundred feet away, and coming rapidly, a huge bulk rolled



along the cliff toward them. Together the two men jumped back into the cliff. The ground jarred to the impact of the thing as it smashed against the rock. By momentum it mounted its frozen brother.

"Ah," it remarked pleasantly, "I think I am going to stay—yes, yes, I am. But you had better move back a bit to safety." The thing was heaving and bouncing with an incredible awkwardness, trying to turn end on. "Apparently I am going to turn with my tentacles to reach you. If you will get well back, though, you'll be all right. There, I'm sure I'll stay a long time. This is fine."

The thing turned. Awkwardly, heavily, but it turned. Long,ropy tentacles reached vainly as the two men retreated as far as the dwindling crevice permitted.

"Fine," groaned Blake. "We want to get out of here."

"I know," sighed the creature. "But I really am as helpless as you are. I'd suggest you destroy me as you did Grugth, but it would do no good. The rest of them would come then."

"What," asked Penton, exasperation in his voice, "are you, anyway? You are a brainless, awkward, sluggish bulk. You are the ultimate of mindless matter. But you learn English in minutes, you read minds, you sound intelligent."

"It is bewildering, isn't it? I'd like very much to help you, but I don't know just how. You see, originally we were intelligent creatures, well adapted to this inhospitable world."

"Inhospitable," groaned Blake, "is not an adequate word."

"But we're really very well adapted." The huge bulk heaved and struggled to drive itself into the impossibly narrow crevice. "I seem to be injuring myself trying to crawl in there. Really no sense at all, you see, in this stupid flesh. But it's a very cleverly designed body. The plains, you know. They stretch out for thousands of miles. These are practically the only mountains on the planet, as you may know—I see you do. And there is so little heat. Therefore, to a compact form like a cylinder, with no heat dissipating, narrow legs are advantageous. And, of course, the more bulk, the more volume in proportion to surface. That's why we are so big. Clumsy, of course, terribly awkward things. But we get along nicely on the plains. I do wish I'd stop trying to squeeze in there. I'm just injuring myself.

"Well, why in the name of space don't you?" Blake exploded.

"I can't, you see. I've evolved too much."

## CHAPTER IV

### *Evolution*

Penton stared.

"Evolved too much?"

"Yes. Originally, as I say, we were fairly intelligent animals. This black skin, as you see, passes heat only one way, so we are not cold. We eat oxygen and drink hydrogen, and eat a few other things. Occasionally a *drutheg*. That's one of those round things you thought were boulders. And we sun ourselves."

"What is a *drutheg*?"

"It's—let me see—oh, yes. A sort of plant. It moves around very, very slowly, staying near streams and lakes. Most of them live in streams. They consume water, and nitrogen, and some other things, and sun themselves, and throw out oxygen and hydrogen. There is practically no water on this entire planet; the *drutheg* break it all down to hydrogen and oxygen. All the water there is, is in our bodies; we make it, you understand, from the food we eat."

"But," protested Blake, "that doesn't explain how you come to say you wish you'd stop trying to get in here, but go right on trying."

"As I say, we started as fairly intelligent animals, living on heat and oxygen and hydrogen, but we had to spend all our time, practically, seeking those things. So gradually we developed the ability to think our thoughts while the body took care of itself. You—yes, I see you can walk along while reading a magazine or book. Your mind sort of leaves the body to look after itself for a while. We developed the trick. It took me nearly two hundred years practice—our years—"

"Two hundred of *your* years! That's over 80,000 Earth-years!"

"Yes. Those inner planets do go around the sun at a crazy pace, don't they? As I say—oh, length of life? Well, practically nothing can kill us here on this world and nothing bothers us. We live very peaceful lives, normally. In fact, it is terribly hard to get rid of one's self. We normally live about three thousand years, about a million and a quarter of your years. I'm about a million."

Blake looked at the creature. Black, blunt-ended cylinder, squirming tentacles stretched out to reach them. A million years—

"But I learned the trick, and learned it so well that I spent years on end without paying the slightest attention to my body. Of course, in that time we had developed our language to a considerable extent, and our thoughts. We had deduced nearly all the basic facts concerning space, and began to see the advantages, of mechanisms. We were drawing up plans to build a space ship to visit other worlds in person."

The voice sighed, very sorrowfully. "Then we found our bodies had learned a trick, too. It had been nearly a thousand years since any of us had paid any attention to our bodies. Occasionally it had been annoying to have our bodies roll away from someone we were talking to in order to find food. But now we decided to go to work again. And then we made the sad discovery."

The voice deepened mournfully.

"We had forgotten our bodies so long that they had been forced to develop a certain amount of mental equipment. A sort of secondary mind. They had minds of their own, and we can't control them any more."

Blake gasped. "Can't—control—them any—more?"

"No. Apparently the nerve-channels connecting the intellectual portion of our minds with the purely physical parts have atrophied. Not one of us has the slightest control. I couldn't be staying here if it weren't that my body feels the heat you radiate and stupidly keeps trying to reach it."

"How," asked Penton, "does that one-way heat transfer of yours work? I'd like to have something like that."

"It works only at low temperatures, with living tissue," the voice explained. "And I can't tell you in your language, and you haven't time to learn mine. We can't control our bodies, but I notice you can't control all your minds either."

"Huh? What do you mean?" asked Blake in surprise.

"Part of your mind is very worried, and very busy trying to find a way to get out of that crack in the cliff. It is particularly worried since it took note of a small click that represented the change from the first to the spare oxygen tank. But you don't seem to be aware of it with your conscious mind."

Blake glanced down. A small gauge in his helmet definitely agreed with the creature. Tank 2 was being exhausted slowly but steadily. Simultaneously, almost, Penton did hear consciously the click that meant his tank-mechanism had switched. One oxygen bottle was exhausted.

"Were those full?" Penton asked Blake quizzically.

Blake nodded dumbly. "Two hours—"

"They should have gone three," Penton pointed out.

"May I help? Your subconscious has already figured it out. This world is heavier, you've been working unusually hard, and all your muscles have to maintain a higher tonic property. They are consuming an unusually large quantity of oxygen. You timed those bottles, I take it, on your moon? Gravity was light there, and your requirements much lower."

"That is the answer, but it doesn't get us more oxygen."

"You have also been wondering about that solid oxygen on the floor. You might try it," the voice suggested. Blake looked down. Bluish, sandy crystals of oxygen swept in by faint winds littered the floor, mingled with tiny particles of rock dust and nitrogen.

"We can try."

Penton unstrapped Blake's tank. Together they swept up the oxygen crystals and poured them into the cylinder's mouth. Nearly five minutes were required to warm them

through liquid to gas; then the tank mechanism in Blake's helmet snapped.

Instantly his hands clawed at the valves, turning them down, switching back to the original. "Phew—it smells. You can't breathe that frightful stuff."

"Oxygen," said the voice sadly, "used to have a very pleasant and distinctive flavor, varying with the type of *drutheg* that produced it. We never taste it any more. We don't even feel the pleasantness of heat any more. And heat was a very pleasant sensation."

"So," sighed Penton, "I notice. That gang around our ship —"

"They are very sorry, but there's nothing at all they can do. They don't have control, you see. Ah—look. I do believe I've seriously injured myself at last."

The tentacles writhed back, the leathery protective membrane snapped back over the cylinder's blunt end, but not completely. The monstrous thing had succeeded in jamming itself into the crevice to a considerable extent, and a sudden wriggle had brought an abrupt collapse of one side of the thing.

A thick, gummy substance was spurting out, to harden instantly as it touched the frightfully chilled rock. "I think," said the voice with an air of pleased surprise, "that I've finally succeeded in killing myself."

"Succeeded—you sound pleased!" Penton stared at the huge thing, flopping erratically now, struggling to get free once more.

"Naturally—oh, yes. The bone was broken, and it's pierced a main blood vessel. That should take about ten minutes. Wouldn't you be pleased to get free of this stupid, useless lump of awkward flesh? Naturally I'm pleased. I know Grugth was immensely satisfied when he succeeded in setting up his force-pattern, after nearly twenty-seven hundred years."

"What," asked Blake, "is a force pattern?"

"I can't quite explain," the voice said rather hurriedly. "I haven't much time. I'll have to start setting up mine. And anyway, your language is strictly limited. I have been working out the basic structure of my pattern for nearly 1,000,000 of your years. Do not mistake; my mentality compares with yours only when speaking your language. I have spent over one million of your years in unending thought and study. I could solve any problem, for you—instruct you in making the weapon you need, or in generating pure force-fields to return you to your home planet, had either your language or your brain the necessary capacity.

"But I must leave you, for this flesh of mine is going rapidly. Good-by. I believe—your subconscious has a solution to—no—water—water—" The voice stopped. A slate-blue tinge crept out from the wounded side of the monster. Slowly, the immense bulk flattened down, the muscular tension that had held it in a round, powerful figure was



dying. Logily it rolled off the cold, dead thing beneath it. The ground shook faintly with the hurried coming of others of the Titan beasts. Coming to feast on the heat escaping from the carcass.

"I think," said Penton softly, "I begin to get it. Mindless flesh, and super-minds, super-minds imprisoned in stupid things. Stupid bodies, however, cleverly designed by the never-ending plans of Nature to survive on this incredibly inhospitable world. Their leathery hide is black because it absorbs all light, all energy that strikes it, and converts it to heat. There's darned little heat, but what there is they absorb, and won't let out. By accumulation, they end up with a very considerable supply. With death, that membrane passes heat both ways, that is, the heat stored escapes. They are, by purely involuntary reaction, attracted toward any source of heat, of course, so they absorb the heat of the dead hulk, as they seek our heat, and the heat of the ship. Quite involuntarily."

"Quite, I assure you," added a new voice. "I'm sorry your weapon is so nearly exhausted. The fuel-wires are almost spent?"

"About three shots left in each, I guess." Blake agreed sorrowfully. "They weren't intended as weapons. We didn't expect any life here."

"There's life on every planet of the System," the speaker assured them. "You will meet most of the important forms."

"Could you tell me how to fix these proton projectors so they'll fire a few more shots? That might give us a better chance to see those other forms of life," Blake suggested bitterly.

"Sorry. Your language isn't up to it. If I could control your bodies, or my own, I might be able to do it. But if I could control my body, you wouldn't need them fixed, and I'd have made up my force-pattern ages ago."

"What is this force-pattern?" Penton demanded. "The last one of you who spoke to us mentioned it."

"At the instant of death, the mind, the pure mentality is released. Thought has power; the fact that one mind can influence another indicates that. If properly managed at the moment of death a vortex in space can be made, and the vortex is stable through eternity, unless the mind desires to break it down. It is utterly free to propel itself where it wills. Stray energies of space give it power if it chooses to increase its intensity. But it can be achieved only by the dissolution of the physical brain.

"And," the voice was bitterly sorrowful, "I can't control this stupid bulk long enough to destroy it. Any of us would gladly aid you back to your ship if only you would destroy these masses of flesh and release us."

"The only masses of flesh that stand any chance of destruction," Penton pointed out, "are our own. And we are not at all anxious to lose them."

"I know. I am sorry. I'm afraid—I am going." The ground shook slightly. Three immense cylinders rolled awkwardly away across the plain, to feed at the margin of the little lake.

Faintly, a warning came back. "If you step out, I'll have to come back. I—" The voice faded beyond the power of the transceivers.

## CHAPTER V

### *Example*

"What in blazes are we going to do?" Blake demanded. "They are friendly, they're brilliant, no doubt, but they're still stupid, brainless, annihilating Juggernauts."

"Blazes," said Penton softly. "What in blazes. In blazes, of course." He laughed. "Stupid of me. Remarkably."

Blake looked at him silently. Then: "I'm stupider. What about blazes?"

"Hydrogen," said Penton, "a river and a lake of hydrogen. A lake of hydrogen with a beach of solid oxygen. 'Water' was what the one called just before he set up—his force-pattern. They want to die; well, by the gods, of space, they will. They have to go toward heat, whether they like it or not. Hydrogen and oxygen make water—and a hell of a lot of heat."

"Oh," said Blake softly. "So they do." He looked out of their little crevice. Thirty feet away the little stream of liquid hydrogen crept through little islands of solid oxygen.

Penton climbed up on the bulk of the dead, frozen monsters, leveled his proton projector at the rim of the little stream, and pressed the button. A fierce, flaming spot of incandescence exploded both into their primal gases, swirled them violently. Licking lightnings spun and shattered on other crystals and liquid drops.

And the heat died. Two huge cylinders started rolling, but stopped as the last trace of the heat vanished. Liquid hydrogen rained back from the air, solid oxygen snowed down.

Penton stared.

"Blake, it didn't burn!"

Blake looked blankly at his friend.

"It just has to. The laws of chemistry can't be that different. That must have been a freak—a chance, because the stuff is so cold out here. Try again."

Again Penton shot the flaming energy of the protons crashing into the margin, where hydrogen lapped against the solid oxygen. Again the explosive rush of solid and liquid abruptly converted into gas—and again it settled as liquid rain and solid snow.

Penton looked at his friend, and shrugged his shoulders.

"New laws of chemistry, I guess. They won't burn. That's out."

Blake sighed.

"My oxygen tank is getting low. And the valves aren't working right. I had to fuss with them several times. Guess I jammed them when I tried to turn off that damned odor. Maybe that smelly stuff is some kind of catalyst that prevents combustion."

Slowly he turned up the oxygen valve, cursing fluently.

"The valve stuck again, and I nearly passed out. It would have made a lot of difference, wouldn't it?"

"Not much that I can see," admitted Penton. "No weapons. No way to hide. We can't wait until they just wander away. No way of restoring our oxygen. No way of reaching the ship."

Blake only growled and turned up his oxygen a bit. Slowly he got to his feet, his panting stopped by the renewal of the oxygen supply. He walked over toward the dead things, climbed up on the lower one to look across the plain. Near at hand the stubborn stream of hydrogen twisted through new channels between the blasted pits where Penton's protons had exploded shore and stream alike into gas.

Blake reeled slightly.

"Stupid," he muttered. "Shtupid beassh. Stupid hydrushen, stupid oxyshen. Won' burn. Here, shtupid, water. Make thish shtuff." Blake was gloriously drunk; his oxygen control was stuck again, wide open, and he was thoroughly intoxicated by the excess oxygen. Penton looked up and climbed hastily toward him as he unscrewed the water bottle from his space suit, and hurled it out toward the stream. "There, shtupid hydroshen, make 'at shtuff." He raised his proton gun waveringly, and pressed the button.

The explosion sent him flying backward, crashed him into Penton, and sent both tumbling back into the crevice. An immense, mile-high jet of blue flame licked roaring into the black sky, a finger of fire that reached to the stars. The tiny stream of hydrogen vanished in the fiery heat, the oxygen melted, boiled, hissed into shrilling flame. A darting line of flame licked along the brink of the lake, consuming oxygen sand and hydrogen water alike, shouting and howling. In seventeen seconds the lake was ringed by flame, the hydrogen-fall was a cloud of ascending gas.

Two thousand bulks were joyfully, thunderously flinging themselves into the mighty pyre, to explode in sudden death as their tissues boiled. Thundering down slopes to that heat, the brainless bodies reacted only to an instinctive search for heat; never had they met killing heat.

Penton clamped down Blake's oxygen valve, and heaved him to his feet, starting him running. The flames were half a mile away now, a vast circle of fire reaching to the skies. There was neither oxygen sand, nor hydrogen stream here. At the point where it left the lake, the stream was flowing

upward as flaming gas. Only bare, faintly warm rock lay exposed. Blake straightened before they had gone a hundred feet, shook his head and opened his valve slightly.

"Oxy-drunk. My God, what happened?"

"Shut up and move," Penton grunted. "Turn the oxygen a little high, but don't get drunk again. We have to get to the ship before others of those beasts arrive, and before that fire goes out completely. It's almost a mile."

Burdened by their greater weight, they plugged along as best they could. Presently, they arrived at the ship. Penton carried him into the lock, and slammed the great door shut.

"What happened?" gasped Blake weakly, as he opened his eyes.

"Water," Penton grinned. "Water—just as we were warned. It needed a sample, just as you gave it. Hydrogen and oxygen will not unite in the total absence of water. It's old, but I never thought of it. And all those *drutheg* working, and reworking that stuff for that last, ultimate trace of water. It wouldn't burn until your water bottle supplied that trace it needed to start. Let's move into the ship, and clear out for warmer planets."

[The end of *The Tenth World* by John W. Campbell, Jr.]