

ODIN'S SPEAR

Steve Bein

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Namsing Lopje Sherpa's voice rang out loud in the domed chamber as he shut the airlock behind him: "Bad news, Rono."

There was no immediate response. Namsing kicked off and floated above the towers of crates in search of a better vantage point. In Callisto's feeble gravity he soared seven meters off the floor and, just before he began his descent, seized one of the many long plastic handles mounted on the curving ceiling. His muscled forearm did not strain in the least as he dangled one-handed from the dome's apex, scanning the many boxes of climbing gear and provisions for some sign of his partner. "Hey," he called out in Tibetan, their only shared language. "Where are you, Rono?"

Hearing no reply, Nam swung hand over hand to the far side of the room to the closet-sized crate where they kept the Tenzings. He caught a glimpse of them as he passed over the crate. The Tenzing suits were large, thickly padded bodysuits the same ruddy brown as Martian soil. Nam's hung on its hanger; Rono's lay prone on the floor.

Each Tenzing was bedecked with gear few people in the solar system would recognize. The carabiners and ice axes hanging from the primary waist harness were the easiest to figure out. Rectangles mounted on the forearms were harder to identify unless one looked inside the sleeves to see the IV connectors for the internal syringes. The Diamox-IX in the syringes would have been an enigma to anyone but extreme-altitude mountaineers and a handful of doctors.

“Rono!” Nam was surprised his partner wasn’t with the Tenzings. Rono’s suit had been damaged the day before when they were descending from their last scouting run on the route. The ice underfoot had given way and Rono had plunged ten meters into a crevasse. The accident had been touched by both sides of fortune. Nam had arrested the fall in time to keep Rono from breaking both legs on the bottom of the chasm, but the back of Rono’s Tenzing scraped the ice the whole way down. Virtually every component on his back was destroyed, and although they had brought plenty of replacement parts to Callisto, this was not the first time a fall had claimed important equipment. The telemeter and line retractor were inessential, but the damaged external thermometer made it impossible for Rono’s Tenzing to regulate internal temperature, and this had been their last spare. They had been lucky the accident had occurred within a hundred meters of base camp; any further and Rono could have frozen to death.

“Rono! Where are you?”

“I should be asking where *you* were,” replied a voice from down the hall. Rono Niyongabo’s coffee-dark face came into view, scowling above an armful of electronics repair equipment. He dumped the gear in front of the insulated boots of his Tenzing and looked up at Namsing. “I’ve been working on this dorsal unit all day. I looked at the connectors for the thermograph mounted on the weather station outside dome four, but they’re not compatible and we don’t have the gear to rig up a converter.”

“You went out?”

“Had to. Only right outside the door; the inside of my Tenzing hardly even iced up. Getting back out of it would have been easier with you here, by the way, to say nothing of lugging around all this gear. Where’ve you been?”

“Comm center,” answered Nam. He pushed off the ceiling, slapped the top of one of the boxes to decelerate, and came to a graceful landing at Rono’s feet. He leaned back against a huge carton of protein bars and looked his partner in the eye. Namsing was quite tall by Sherpa standards, but Rono was half Kenyan, and all the Kenyans who had grown up working the Mars trade had grown tall in the weaker gravity. Rono even favored his Sherpa mother and he still stood twenty centimeters taller than Nam. Rono’s skin was almost as dark as his father’s, but his narrow eyes and round cheeks were all Nepalese. Facially the two men were rather similar, but the short tight curls crowning Rono’s head could not have been more different from Nam’s own mane of black bristle-brush hair.

“What could take four hours at the comm center?” asked Rono.
“Ganymede’s occluded and we’re half a billion kilometers from the next nearest shadow of civilization. How many transmissions could there possibly be?”

“I got some and we got some,” said Namsing. “The one for us is the one you’ll be more interested in. We need to step up our schedule.”

Rono looked behind him at the heavily insulated encounter suits. “Step it up? No way. My Tenzing’s not going anywhere until we can get a new thermometer or figure out what kind of gear we need to jury-rig one of the thermographs from outside. And that’s assuming they’ll have what we need on Ganymede. It’ll take a hell of a lot longer if we have to send for gear from Mars. Our schedule’s going to step back, Nam, not forward.”

“It’s going to have to,” said Namsing. He hopped up to sit on the crate. “The observatory on Tharsis says there’s a meteorite on trajectory to hit Callisto some time within the next forty days.”

“You’re kidding! Where?”

“Difficult to say. Probably somewhere within the rings of Asgard.”

Asgard was the name given three hundred years ago to the second largest impact crater on this, the second largest of all of Jupiter’s moons. Breaking from the tradition of using Latin names to describe geological features, it was decided long ago that Jupiter’s largest moons would each be charted using names from various mythological traditions. The sagas of the Norsemen were used to name Callisto’s features, and Asgard and Valhalla were the names given to the huge impact craters on the moon’s northern hemisphere. The concentric rings of Valhalla spanned two thousand kilometers in every direction, broad enough to fit neighboring Asgard within them twice over.

Rono and Namsing were entrenched on the far side of Valhalla, their base camp resting between Huginn and Muninn, two minor peaks of the Gladheim range on Callisto’s equator. Gladheim was said to be the domain of Odin, and all the summits in these mountains had been named with him in mind. In the original Nordic myths, Gladheim meant ‘home of gladness’. These mountains were anything but. External temperatures on Jupiter’s moons were never far from absolute zero, so Namsing and Rono’s base camp had been bored out thirty meters below Callisto’s icy crust. It was in effect a series of snow caves, almost an homage to the mountaineers of old were it not for the terrible necessity of such accommodations on Callisto.

Callisto was as inhospitable a place as humans had yet inhabited. In fact it was difficult to claim that humans had indeed inhabited this place, as Nam and Rono were the only two to have done so, and they had only stayed here on and off for the past three years. The first observers of this place were called Voyagers. The next observers would not arrive until two hundred and fifty years later. Unlike the Voyager satellites, these were manned vessels, but like the Voyagers they merely passed by with cameras on their way to farther destinations. Ganymede was larger, denser, and warmer than Callisto, and even there the outposts maintained a tenuous hold at best. The only useful commodity on Callisto was water ice, and that was readily available elsewhere. For any right-thinking person, the frozen ball known as Callisto held no interest whatsoever.

Yet when Namsing Lopje Sherpa proposed to establish a base camp at the foot of Callisto's Mount Gungnir, Rono Niyongabo jumped at the chance. They had first met on the sandy slopes of Olympus Mons. Nam was employed in the capacity his people had been performing for centuries: guiding climbers up the highest of mountains. Olympus Mons was almost three times the height of Chomolungma, his people's ancestral home, but it was a far easier climb. Climbers on Mars were subject to only one third of the gravity found on Chomolungma—what the Westerners called Everest—and while it was possible to climb Chomolungma without the use of supplemental oxygen, no such feat would ever be possible on Olympus Mons.

Rono Niyongabo had been equally dissatisfied with Olympus. Though it stood over 25,000 meters high, the mountain was over half the size of Kenya itself. Walking uphill across half of Kenya was not easy, but nor would Rono call it mountaineering. It was a shield volcano, its slopes so gentle it hardly warranted carrying technical climbing gear. The only daunting challenge, a six thousand meter escarpment near Olympus's summit, was taller than any peak in Africa, but in Martian gravity he could almost climb it one-handed. Rono came to Olympus as Namsing's client, but the two of them left as partners with a shared vision: to find a peak more challenging than any on Earth.

At last that peak had been found. Callisto's Mount Gungnir was a mighty pinnacle reaching almost ten thousand meters above what on a warmer world could have been called sea level. Not even half as high as Olympus Mons, Gungnir still stood fully a thousand meters taller than the highest peak on Earth. Gungnir was a blade of ice, formed when two huge meteorites crashed almost simultaneously into Callisto's frozen surface. The outermost waves of their impact craters pushed together with such force that they melted and refroze together, each one supporting the other. Callisto was the most crater-studded body in the

solar system, but somehow Gungnir remained sturdy, proudly defying meteoric assault for the past million years.

At least until now. Callisto's sheath of ice responded very differently to meteoric impact than would a lithosphere. Even relatively small collisions produced lasting ripples, as the concentric circles of both Asgard and Valhalla bore witness to. "Sometime within the next forty days?" asked Rono. "That's the best they could give us?"

"You know how it is. Nobody cares what happens to an unpopulated moon. We're lucky they saw anything at all."

"How big is it?"

"Hard telling. On Tharsis they saw one asteroid collide with another, close enough to us to worry the folks on Ganymede. Turns out they're safe; they were worried about a hail of smaller meteorites, but it seems the two just bounced off each other. I know, I know: what are the chances, right? Anyway, Ganymede's got nothing to worry about, but the smaller asteroid is now on course for us. Like I said, we're lucky: if it hadn't been likely to hit someone else, they might never have noticed we were a likely target."

"You're holding something back. How big is it?"

"They didn't think to make a precise measurement. Nice of them, wasn't it?"

Rono crossed his arms. "Come on, Nam."

"They ... they made computer models," Namsing said, his eyes turning downward. "They don't think it's big enough to kill us. But it's probably big enough to crumble Gungnir."

Rono looked at Namsing for a long, silent moment. Then he shook his head. "No. It can't. Gungnir's too stable."

"It's ice, Rono. It's got to fall eventually."

"No way. It'll hold."

"Suppose it does," Nam said. "The impact could still shake our supply caches off the ridge. The route has to be sent now or it may never be sent at all."

Rono pounded his pale palm on the wall. “Horseshit! You’re trying to put up a first ascent! You’re using my damaged suit as an excuse to solo the route and steal the glory! I’m not letting you do it, Nam.”

Namsing boosted himself off the box and drifted to the ground. “You have no choice. You want to see a Gungnir ascent as badly as I do. If it doesn’t happen now, there might be no Gungnir to ascend. It has to be done now, and that means I have to do it solo.”

Rono threw himself in the air and grabbed one of the dome handles like a basketball rim. His muscles tensed angrily and he flung himself back to the ground. It was impossible to pace in low gravity, dangerous to vent any frustration with physical gestures. In vain he curled his long fingers into fists. “How long did you say it was until the damn thing hits?”

“Forty days max, Martian standard.”

“A shuttle from Ganymede could make it here—”

“In twenty days at best. We couldn’t even send a request until Ganymede escapes occlusion from Jupiter and catches up with us. That won’t be for another eight and a half days; I checked it out.”

“What about a signal to Mars? We could send ours now and they could send it back to Ganymede as soon as they get a clear line.”

Namsing’s face was doubtful. “Even if they have all the parts we need, a shuttle pilot would still have to skim pretty close to Jupiter to make it here in the kind of time you’re talking about. And that’s not leaving any time for us to acclimatize. You can’t get to ten thousand meters in twenty days, Rono.”

“Not everyone, no, but you and I could do it. We’re good, Nam. There’s no one better.”

The little Sherpa shook his head. “Suppose we did it. Suppose everything went our way. Say the meteorite gets here in forty days and not twenty-five or thirty. Say they do have the parts we need on Ganymede. There’s a shuttle available, and for some reason the pilot is willing to risk Jupiter’s gravity well to get us our parts on time. He skims the clouds and makes it here in eight or nine days flat. We send a route that’s never been sent, and not only that, but we do it in unthinkable time. Now we’re on the summit of Gungnir when the meteorite

comes down and maybe cracks the whole mountain at its foundation. We die, every trace of our being here is buried, and after a few hundred years maybe some ice miner finds our bodies.

“Think about it, Rono. This miner finds us loaded like yaks with climbing gear and wonders why the hell we have it, because clearly there’re no mountains anywhere near here to climb. Just a big icefall with a couple of fools frozen in it. That’s not the way to send the hardest route in the history of mountaineering. We stick to plan, we send the damned thing, and someone lives to tell about it.”

The two men sat in silence for several minutes, the cold air pressing in on them. They had not been warm since coming to Callisto, had endured uncountable hardships in getting here, countless more in scouting and supplying their chosen route to the summit. Both men had climbed Gungnir to 8,850 meters, the height of Chomolungma itself. They had vowed to ascend no further until the day of their summit bid, and now it seemed that day would be denied them.

“There is another way,” Rono said at last.

“Is there?”

The taller man nodded. “We could do it without EGC.”

Namsing’s face hovered somewhere between shock and revulsion. “You can’t mean that.”

“We could do it faster, Nam. We could send it in ten, twelve days without EGC, and get back down in no time. Or boost the air mixture. Screw acclimatization. Still do it under EG conversion, but increase the O2 flow. Get up, get down, get back home before the big bang.”

Electro-Gravitonic Conversion was the lynchpin of their entire ascent strategy, and one of the two features of their plan that made the whole endeavor incomprehensible to anyone who was not a mountaineer. Gravito-Electric Conversion engines had existed well before the colonization of Mars, back when scientists were still seeking a solution to the Earth’s energy problems. When it was discovered that the gravitonic pull between two objects could be converted to electricity, those problems were solved. Gravitonic attraction turned out to be a perpetually renewing source of energy. A GEC engine therefore did two things: it produced small amounts of electricity indefinitely, and it floated for as long as it continued to run.

That a person interested in climbing mountains would want a gravity-defying engine was no surprise to anyone. Indeed, it was not long after the development of GEC engines that Terran tourists were flitting about all the major peaks of the globe in insulated flight suits with self-contained air supplies. That a mountaineer would be interested in climbing with a gravity-*enhancing* engine baffled every engineer Namsing and Rono had approached to build one.

Electro-Gravitonic Conversion engines were not uncommon elsewhere, particularly on Mars, where the effects of low gravity on the kidneys, muscles, and bones over prolonged periods were a constant danger. Generally EGC devices took the form of beds, not bodysuits, but if a GEC flight suit was possible, in principle there was no reason why an EGC suit would not be. The question all the engineers posed was why someone would want one.

Still more bewildering was Nam and Rono's request for a breathing apparatus that would progressively restrict the flow of oxygen as the climber gained altitude. On a world without an atmosphere, oxygen levels were identical at every altitude, for a person always breathed from the same bottle. This made altitude a non-issue in off-Terran climbing, which was fitting since one could not even use a conventional altimeter in the absence of an atmosphere. Rono and Namsing had devised a laser triangulation system that turned out to be far more accurate than a barometric altimeter, but then baffled their engineers by demanding that it be connected to an oxygen regulator that would constrict as the lasers registered gains in elevation.

"We designed the Tenzings together," Nam said. "We planned this expedition together. A climb to top any climb on Earth: that was the goal. If Gungnir is going to be sent, it's going to be under the same conditions Tenzing Norgay climbed Chomolungma with Hillary: full gravity, limited oxygen. That was always the goal. You can't back out on me now."

"Back out on *you*?" Rono punched the Tenzing crate so hard he had to stabilize himself with his other hand to avoid drifting away. "*You're* the one who's talking about climbing without *me*! I don't want to turn off the EGC! I don't want to cheat with the airflow! But you're going to rob me of a first ascent on the boldest climb in the history of mountaineering! Better than K2! Better than Chomolungma! Better than the whole damn Himalaya, and you're talking about soloing! What did you think I was going to do, just sit back and watch you?"

"No," said Namsing. "I was hoping you'd manage base camp for me."

"That's bullshit."

“I know.” Namsing’s voice fell almost to a whisper. “I wish I could wait.”

A strange look fell over his face, one Rono could not identify despite the fact that for three years running the two had not been apart for the space of an afternoon. There was a pregnant, silent air about Namsing before he spoke again. “We can’t wait, Rono. We have to stick to the original plan. We’re here *now*, we’ve trained our bodies to climb it *right now*. All the work we’ve done scouting the route—I don’t want to see that come to nothing. I know you want to go, and you know I’d rather climb with you. We’d stand a better chance of success climbing as a team. But the fact is you can’t go right now and right now is when I have to go. If we stick to the original timetable, we need a thirty-day window and that window starts this minute. Stick to the plan and one of us is sure to live to tell the tale. Please, don’t back out.”

Namsing’s face was as stern as the ice that surrounded them. His logic was just as cold. Too much of their lives had been staked on making this climb a possibility. No threat to its success could be countenanced. It had to go through.

And yet Namsing’s words didn’t quite ring true. “When you say we stick to the plan,” said Rono, “you don’t mean ‘we’. You mean ‘you’. The original plan never involved me baby-sitting a radio.”

“I can’t tell you what to do,” said Nam. “I can only ask.”

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Rono scowled at the display screens for the hundredth time that morning. *Morning*, he thought disdainfully. There were no mornings here, no evenings, no nights. No summers or winters either. It was always dark and cold. Using the ice sheath for natural insulation was better than relying on the man-made insulation alone, but that only marked the difference between habitable and lethal. Comfortable was still a long way off.

Thoughts like this had been surfacing with alarming frequency in the weeks since the little Sherpa had gone. Other thoughts had disturbed Rono as well. The fact that he was much stronger than Namsing came to mind from time to time. So did the very real possibility that, though Namsing was by far the better climber when they had met, Rono had trained so hard since then that he might have surpassed his mentor. His bigger lungs and longer strides had always been an advantage. Now his technical abilities had grown to rival Namsing’s and his willpower had done the same. The idea that the superior climber was sitting at

base camp grated at him like a mosquito bite, itching all the worse every time he scratched it, and every minute he spent by himself was another opportunity to claw at it.

He was not completely alone, of course. A single word would activate the microphone that would put him in contact with Namsing up on the ridge, and a glance at the monitors told him everything Namsing was going through. Nam's current heart rate was 110, abnormally low for anyone but a Sherpa. He was making steady upward progress at a rate of 5.5 meters a minute on a fifty-two degree slope. External temperature was a constant 164 degrees Kelvin, but inside the Tenzing suit Namsing was enjoying a balmy ten degrees Centigrade. He was sweating, then, and the Tenzing was compensating for that. He was moving well, and according to their laser triangulation system he had just pushed above the seven thousand meter mark. Carbon dioxide levels were normal; the Tenzing was allowing him to inhale just as much air as would have been available had he been standing at seven thousand meters above sea level on Earth—higher than the highest peak of every continent save Asia. The last display showed the EGC was performing according to specs as well; Namsing was experiencing this climb as similarly as possible to how it would have taken place on Earth.

"Talk," Rono said, vocally activating the microphone. "Namsing, do you copy?"

A deep inhalation preceded Nam's response. "Copy, Rono. Something wrong?"

"No. Monitors are all fine. How's the ice holding up?"

This had been one of their concerns from the beginning. Climbing under Earth-normal conditions wore on the climber, but it also wore on the mountain. Gungnir was formed under Callistan conditions and stood in defiance of Callistan gravity. On Callisto Namsing's weight was that of an infant in Nepal; bringing his full adult weight down on Gungnir's delicate ice structures ran the risk of crumbling the ridge.

"My crampons are biting pretty deep," Namsing answered, "but the ice is holding up okay. So far, so good."

So far, Rono repeated in his mind. "You feeling all right?"

"I'd better be. Still another twenty-nine hundred meters to go."

Rono heard the crack of an ice axe sinking into the mountain. Next came the twin crunches of Namsing planting both crampons. The sounds duplicated themselves again with only three breaths between them. At this altitude under these conditions, a rate of three breaths per step was remarkably fast.

Rono let the rhythm of cracks and crunches ring in the dim light of the dome until the speakers on his system counted up to their five-minute default and turned themselves off. The silence that followed prompted him to glance down at the monitors again. "Talk. Namsing?"

"Yeah," came the panting voice.

"My display says you're moving at eight meters a minute. What's the hurry?"

"Just ... keeping a steady pace." Nam was forcing the words out between breaths.

"Have you reached cache ten yet? The computer says you should be just about on top of it now."

"Passed it a minute ago."

Rono furrowed his eyebrows. "Sorry, didn't copy that. Did you say you passed it?"

"Yeah."

Rono took another look at his display. On one monitor a bright orange line traced the toothy ridge that was Mount Gungnir. Glowing white points represented the fourteen water, air, and provision caches they had positioned along the route. Number ten was a double cache, as their plan for the summit bid had included an overnight stay at that point. Namsing's position, a red dot on the screen, was indeed twenty meters higher than the cache's position.

"Something wrong with the water there, Nam? Doesn't suit your taste?"

"I'm pushing ... higher," he replied. "Sleeping at eight thousand tonight."

"Eight thousand?! I guess the word 'acclimatization' doesn't mean much to you?"

The Sherpa responded with a weak chuckle. "Have to do it, Rono. Have to keep moving."

Rono bit back a curse. Nam was being stupid, but yelling at him wouldn't change his resolve. "I have to tell you this isn't going to improve your chances to summit. Pulmonary edema has a wicked way of slowing a guy down."

More labored breathing accompanied the cracks and crunches through the speakers. Rono listened closely for any burbling sounds in the exhalations. He heard none. "Namsing? You still there?"

"Yeah. Pushing on. Talk to you later. Over."

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Namsing stabbed the pointed haft of his ice axe into the white crust of Mount Gungnir. There was no air to carry the crunch of the ice to his ears, but he felt the tremor through the soles of his feet. He double-checked his waist tether's connection to the axe, then prodded a numb forefinger at the slender raised box mounted on his left forearm. The technology for the Tenzing's insulators was borrowed from Ganymedean miners and was unbelievably efficient, but somehow nothing human beings had ever engineered could both keep fingers warm and allow them to move nimbly. He reminded himself to be thankful that his fingers hadn't blackened and fallen off, but finding the right button on the arm unit was difficult business.

When he finally pushed the proper button, he felt a cold liquid seep through the Tenzing's IV unit in the crook of his left elbow. He knew it was the last dosage in the last syringe. The extra syringe had been the only extra weight he had carried on this journey and now it was part of his own mass, his own blood stream. Thinking of his blood made him think of how hard his kidneys were working at this altitude, and the thought prodded him to drink deeply from the tube inside his facemask.

Beyond the bounds of his mask the galaxy sprawled before him. Jupiter loomed in the sky to his right, and over his left shoulder he could see the setting sun. Though it was visibly bigger than any other star, it was scarcely brighter here than the full moon in a clear sky on Earth. Arcing between the two was a band of the Milky Way, bordered on either side by a million stars stretching off into infinity.

Straight ahead the heights of Gungnir ascended like fingertips meshed

together, uneven, discontinuous, describing no more than an erratic path to the summit. To either side of the ridge the slope fell a thousand meters before it began to level out, giving each side of the mountain the appearance of a massive wave. Callisto's ice was white and blue, just like that of Earth; one had to go to other moons to find ices of methane or nitrogen. The ridge Namsing stood on was firm and white, barely half as wide as he was tall. He did not fear stumbling off of it. There was no wind here to blow him off, and he had the sure feet of his heritage.

Off the left side of the ridge, Namsing could see the rings of Valhalla stretching off into the distance. The sun hit them from just above the horizon, throwing long shadows across the troughs between the frozen waves. The ice atop the rings captured the sunlight so that as the shadows grew longer, thin glowing arcs appeared in a field of silent darkness.

Behind and below, the serrated ridge jogged back and forth on jagged angles toward the twin summits of Huginn and Muninn far below. Between them, in a deep shadow cast by a neighboring peak, flashed a solitary strobe light. It was the beacon light of the base camp where Rono sat in lonesome frustration. If Nam turned off the EGC and jumped, it seemed he could almost land on it.

Namsing took another mouthful from the tube. A push from his tongue caused it to withdraw into its receptacle and left a cold round imprint on the tip of his tongue. The creeping chill in his left arm had largely warmed away and it was time to get moving again. Before yanking his axe free of the ice, he glanced down at the heads-up display on his facemask. Heart rate and CO2 were acceptable, but only barely. He was pushing himself hard and he knew it.

But there was no alternative. He pushed onward up the jagged slope, carefully placing his ice axe, then kicking his crampons into foot-holes he and Rono had already made on route-finding and acclimatization runs. Suddenly his right foothold collapsed. A softball-sized chunk of ice tumbled from under his boot and bounded lazily down the ridge. The little fragments splintering from it like shards of glass were incongruous with its languid, noiseless impacts. When it bounced over the edge and began the slow, thousand meter drift to the bottom, it reminded Namsing that under the influence of the EGC, he would fall ten times that fast. He turned the Tenzing's headlamps on and resolved himself to be more careful in his foot placements.

Namsing pushed himself further. Before long he came to a sheer face of ice a hundred meters high. He and Rono had come this far before and had already fixed a cable to the headwall with ice screws. Nam willed his fumbling fingers to unclip his waist tether from the ice axe and clip it to the cable. With his thumb he

flipped open a small safety cover below the head of his axe and depressed the button beneath it, then watched as the haft telescoped down to half its former length. Now better suited for technical ice climbing, it mirrored the second technical axe Namsing drew from his hip sheath. He leashed both axes to his wrists and began climbing.

“Namsing, do you copy?” Rono’s voice was muted in his earpiece.

“Copy.” The word took more out of his lungs than he’d expected.

“What are you doing?”

“Climbing.” *Thunk-thunk, pak-pak*, the picks and crampons went in.

“You certainly are,” Rono said sardonically “Why?”

“That’s why ... I’m up here.” *Thunk. Pak-pak.* “Isn’t it? To climb?”

“You’re at the headwall, aren’t you?”

“Yes.” Namsing unclipped one of the ice screws from the cable and climbed past it. He re-clipped it once his own carabiner was above the screw.

“I have to admit, Nam, I was being optimistic. I thought perhaps you were pushing past seven thousand just to give yourself a workout. I thought maybe you would be walking back down to cache ten to catch some sleep. But turning around once you’re on the headwall is no mean feat. Our game plan was to climb it only once.”

“Still is.” *Thunk-thunk, pak-pak.*

“So you’re serious about sleeping at eight thousand, then?”

“Yeah.” Namsing passed another screw as he did the first one.

“Are your suit monitors functional?”

“Yes.”

“So you do know you’ve just exceeded your recommended limits for heart rate, sweat rate, oxygenization, CO2 emission, and blood toxicity?”

“Yes.” He passed another ice screw.

“Pushing all the limits for cerebral and pulmonary edema? You know, the stuff that’ll kill you unless you can get back down? Which, as you know, you can’t?”

“Yes, yes, and yes.” Namsing paused for air. Luminescent snakes were dancing in his vision. Five breaths were not enough. He took five more.

In the meantime Rono kept talking. “Nam, do I need to remind you what eight thousand meters represents? The Death Zone? You do remember that after eight thousand meters, the body stops cellular growth, right? You’re literally dying: you slough off cells and you don’t grow any new ones. I’m only asking this because altitude can do funny things to a guy’s memory. You do remember all this, don’t you?”

“I’m not that hypoxic. Yet. I remember, all right.”

Rono began to speak again but Nam cut him off. “You know, Rono ... you should be happy ... I’m pushing this hard.” He couldn’t string six words together without needing another breath. “If I don’t send this climb ... first ascent’s all yours.”

Finally a laugh from the other end of the radio. “Maybe so, but like you said before you left, our chances are better if we climb as a team. You know, listen to the other’s advice and such?”

“Point taken. Thing is ... we’re not going to ... climb as a team ... anymore.”

“What?”

Namsing pulled one of his picks out of the ice and sunk it higher up. “You’re a great climber, Rono. Maybe better than me. Wish we could climb ... together again.”

There was enough silence for Nam to make it two steps higher. “What are you talking about, Namsing?”

This time it wasn’t exhaustion that forced Nam to sigh. “I don’t know which ... is going to be harder. Rono ... there is no meteor.”

“Say again?”

“No meteor coming. I lied to you. Had to.”

“Why?”

Namsing’s legs trembled as he punched in his crampons. “I’m dying, Rono. There’s a tumor in my brain. In the comm center ... the day I told you about the meteor ... got a message from Mars. Doctor ... said the tumor is growing. Putting pressure on my brain. Sooner or later ... the pressure will be too great. Said I had ... about thirty days to live.”

“Thirty—? Nam, how long ago was that? How long ago did you tell me about the meteor?”

“Thirty-three ... days ago.”

The Sherpa’s crampons pierced the ice and he pushed himself up. “Namsing, what the hell are you doing up there? Why did you lie to me?”

“Couldn’t wait ... for your Tenzing. Been trying this for too ... too long. Couldn’t die before seeing it done.”

“Why didn’t you tell me?”

“You know what the symptoms are ... for this kind of tumor? Lack of coordination. Failing reflexes. Strength and alertness suffer. Would you have let me ... climb like that?”

There was no need to answer the question. Rono had a different one, though. “Why push so hard, Nam? Why risk edema in addition to the tumor?”

“Have to get above eight thousand meters. Soon as possible.”

Namsing had a full thirty seconds of peace before his partner put it together. “The tumor. The Death Zone. At eight thousand meters it won’t grow anymore.”

“Exactly. Can we stop talking now ... so I can climb?”

Rono’s reply fell on deaf ears. The next swing of Namsing’s axe found a fault line in the headwall. A two-meter wide slab of ice split vertically down the length of the headwall and toppled like a falling tree. Namsing’s crampons both slipped

out and he was airborne.

He fell three times his own height before his carabiner caught on the clip of the next ice screw down. The pillar of ice still loomed above him. Under enhanced gravity he fell faster than everything else and now several tons of ice were tumbling down on him. Desperately he stabbed an ice pick as far left of the cable as he could and pulled himself in that direction. With one crampon he scrabbled at the remaining ice for balance. With the other he kicked at the first piece of the falling slab he could reach. His foot connected solidly, and in the meager Callistan gravity it managed to alter the course of the icefall.

Numb with fear, utterly spent, he watched the slab pass by within centimeters of his facemask. As it crumbled below him in a series of spectacular snowy explosions, he hung limply from his harness and watched for more falling ice.

There was none. He was safe. From the icefall at least. He struggled to regain his balance and restored four points of contact with what remained of the headwall. Below was a junkyard of massive toothy blocks, barely visible under the billowing particles of ice that would remain airborne for many minutes before settling to the ground. Namsing had felt the cable shudder with the force of the avalanche, but the sheer destructiveness was steeped in impenetrable silence. Even after the danger had passed, Namsing felt he should still be able to hear *something*.

“Nam! Nam, all my scopes are going mad. What the hell is going on?”

“Icefall. Big one. I’m fine. Time to climb now. Time to go.” .

* * * *

Twenty-seven hours later Namsing fell to his knees on the summit of Gungnir. The mountain was named for the spear of Odin, described in the lays of the Norsemen as being ‘as strong as it was slender’. Gungnir’s summit was indeed as slender as a blade, and strong enough to support the full Earth weight of Namsing Lopje Sherpa, the first living thing to set foot upon it. His Tenzing’s altimeter read 9,939 meters, more than a kilometer higher than his ancestral home of Chomolungma.

Looking out from the summit, Nam realized that the spear-point of Gungnir pointed directly at the Callistan sunrise. As the brilliant speck climbed over the horizon, it highlighted every scar on the pockmarked surface. The rings of Valhalla

followed each other like waves on a frozen ocean, and from this height Namsing could see more of them than he'd ever seen before. Foremost among them, in the closest ring, was a great broken gap known as Valgrind, Valhalla's outer gate. On Callisto as in Nordic myth, Valgrind opened out onto the mountains of Gladsheim. The realm of gladness.

With something like gladness in his heart Namsing turned his weary eyes to the tiny blinking star still in shadow behind the mountains of Gladsheim. He knew he would never see more of the camp than its beacon light. The sun had risen just high enough to caress the peaks of Huginn and Muninn, standing like sentinels on either side of the beacon. Odin's ravens. In the original tongue their names meant Thought and Memory. Odin sent them to fly over Asgard every morning, seeing the world for him. Every evening he feared Thought would not return to him, and still greater was his fear that Memory might do the same.

Namsing was beyond those worries now. His thoughts were blurred by hypoxia. The Tenzing's computer estimated that at this altitude on Earth the air would bear only nineteen percent of the oxygen it would hold at sea level. That was a third less than was found at the summit of Chomolungma, not nearly enough to piece more than a couple of thoughts together. His memory was equally hazy. For a moment he thought he was standing atop Chomolungma under the full moon. In the next moment he thought he could feel a tiny ball pulsing within the wrinkles of his brain.

With the aid of his axe he pushed himself to his feet, and for three minutes he stood atop the most difficult peak ever attained by man. For the first time on his grueling ascent, he considered violating the design of the climb. It would be all too easy to unlock the panel on his chest plate and twist the dial that would turn off his EGC. With the rest of his strength he could leap from the highest peak in the realm of gladness and soar down toward Valhalla.

Namsing looked down and saw his chest plate was open. If there was still a border between imagination and fact, Namsing could no longer find it. Distractedly he pushed his chest plate shut again and began descending the ridge. To jump from here was not climbing. It was falling.

It did not occur to him to increase his oxygen flow. It would have made little difference had he done so. His body had started dying twenty-seven hours ago, the moment he crested eight thousand meters. That process could no longer be reversed. Maintaining current oxygen levels would lead to death by cerebral edema, and increasing the flow would allow his tumor to metastasize. All of this information lay somewhere in his brain, but Namsing was only distantly aware of

it. He knew only that he was going to die doing what he loved, and that there was no better way to go.

When he collapsed fifty meters below the summit, he barely registered it. Some vague memory told him the sun had just risen, but for some reason the mountain was growing very dark. A familiar voice was speaking to him, weeping to him, and though his brain could no longer register the meaning of the words, he wept at the unadulterated beauty of the emotion they carried. Just before his eyes closed forever he saw a star flashing on and off far below him. "Strange to be above a star," he said. "So beautiful."