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MOONWALK

BY H. B. FYFE

ILLUSTRATED BY ORBAN



The radio operator stopped sending out his call and slumped back in the folding chair of canvas and aluminum. Concern showed through the impassivity of his broad, Mexican features.

The footsteps in the corridor outside the radio room pattered lightly because of the Lunar gravity, but with a haste that suggested urgency. Two men entered. Like the operator, they wore dungarees and heavy sweaters, but the gray-haired man had an air of authority.

"Dr. Burney wanted to check with you himself, Mike," said the youth with him.

The operator shrugged.

"Tractor One is okay, Doctor," he reported, "but as Joey must have told you, we've lost Two."

"When was the last time they called in?" asked Burney.

Mike gestured at the map on the side wall, and the elder man stepped over to study it. The area shown was that surrounding the fifty-mile-wide crater of Archimedes.

"The blue line is One and the red is Two," said Mike. "I guess you know the planned routes. Well, the little x 's show the positions reported and the times."

Burney glanced briefly at the blue line. From the black square near the northern side of the crater that represented the first major base on Luna, it climbed

slantingly over the ringwall. After zig-zagging down the broken outer slope and skirting a ridge of vein mountains, the line swept in a wide curve north of Aristillus and Autolycus, the next largest craters of the region, and moved into that sub-region of the *Mare Imbrium* whimsically christened "Misty Swamp." Thereafter, the blue trail led toward possible passes through the Lunar Apennines to the *Mare Serenitatis*.

"I could expect to lose One," muttered the operator, "in spite of our tower here. But Two shouldn't be blocked by anything yet."

The red line was more direct. Parting from the blue north of the ringwall of Archimedes, it pushed out across the level plain, avoiding isolated mountain ridges and the seven-mile craters of Kirch and Piazza Smyth. After something like three hundred miles, it passed the towering lonely Mt. Pico and probed a dotted delta of possible routes up the ringwall of Plato. This route was x 'ed almost to Pico.

"They were supposed to report before attempting the descent," mused Burney. "Maybe the depression of the *Mare Imbrium* isn't quite what we estimated. The normal curvature would put a lot of rock between us, in that case. An awful lot of rock."

"Maybe they went over the ringwall in a hurry," suggested Joey.

Burney considered that in a short silence. He ran a hand absently over his balding temple. His lean face became a mask of lines as he puckered up his eyes in thought.

"Number Two has Hansen driving, hasn't it? And Groswald, the mechanic . . . Van Ness, the astronomer . . . and who else?"

"Fernandez from Geology," said Joey.

The entire personnel of the base numbered scarcely fifty. They were just beginning their surface exploration projects after completing the low domes of their buildings. With such scanty resources, Burney was naturally worried about four men and one of the precious tractors.

"They were with us an hour ago," said Mike, fingering his microphone. "Their set must have gone sour."

When no one replied, he hitched around to face his own controls.

"Or else, they're in trouble—"

On the ledge atop the ringwall of Plato, Hansen teetered and tried to maintain his balance by pressing a gauntleted hand against an outcropping of gray

Lunar rock. The thermal-eroded surface crumbled slightly beneath the metal-tipped mitten.

In his bulky spacesuit, he found it difficult to lean very far forward, but he could not bear not seeing. The landship tumbled down the inner slope of the ringwall with horrible deliberation.

"I told them 'Don't move her till I find a way down!'" Hansen muttered. "I told them, I *told* them!"

He was hardly conscious of speaking aloud. Somewhere in the churning mass was the vacuum tractor in which he had driven from Archimedes. Inside, unless it had already been split open, were Van Ness, Groswald, and Fernandez.

The collection of loose rock and dust passed out of sight for a moment over the edge of a terrace. It reappeared further down. Once, Hansen thought he saw a glint of bright metal, but the slide almost immediately plunged down another sheer drop.

The phase of Luna being closer to "new" than to "first quarter," the sun was far too low on the horizon to light the floor of the crater, or even the three mountain peaks on the ringwall to Hansen's right front. The light from the gibbous Earth, however, was bright enough for him to see quite clearly the surface around him.

The slide finally reached the bottom, at this point nearly 3,000 feet below the man's precarious position. He breathed deeply and tried to straighten the ache from his shoulders.

"Must have taken five minutes," he murmured, realizing that he had frozen in a cramped position as he stared.

It had seemed more like an hour. In the dim shadows of the crater floor, the dust settled rapidly because of the lack of air, but the debris remained heaped at an angle much steeper than would have been possible on Earth. Even the slight vibration Hansen had felt through his boots ceased.

He was alone in the dead silence of a world for eons dead.

He stood there, a spot of color in the chrome yellow of the protective chafing suit. The transparent faceplate of his unpainted helmet revealed a blond young man, perhaps twenty-six, with a lean, square-jawed face. Against the tanned skin, his eyebrows were ludicrously light, but the gray eyes under them were wide with horror.

He was of medium height, but the bulkiness of the suit hid his welterweight trimness; and the pack of oxygen tank and batteries for powering radio, heat pads, and air-circulator increased the appearance of stub-

biness.

The quiet hiss of the air being circulated through his suit finally aroused him. With painstaking care, he climbed from the ledge to the level terrace on which the tractor was to have remained while he scouted the route down. A hundred yards away, a great bite seemed to have been snapped out of the ridge.

"All the way from Archimedes, and we didn't even get a look at the floor," he whispered.

For a moment, following the raw scar of the slide with his eye, he considered climbing all the way down and venturing out onto the crater floor to examine the ground. For centuries, the floor of Plato had been reported by Earth observers to darken with the rising sun until at noon it was nearly black. Occasionally, there were stories of misty clouds obscuring the surface, and of shifts in the pattern of light streaks and spots.

One of the expedition's first assignments, therefore, had been the investigation of Plato, to check the unlikely possibility that there might be some primitive, airless form of life present. But the present sortie was clearly ended.

"Not one damn' chance," Hansen told himself as he squinted

downward. "None of them had a suit on when I got out."

On a terrace about a third of the way down lay an object with an oddly regular shape. It gleamed in the blue-green earth-light, and Hansen peered more intently. It looked like one of the spare oxygen cylinders that had been carried on top of the tractor.

Hansen abruptly became sensitive about the supply of his suit tank. Before he did anything, even sitting down to think the situation over, he wanted to get down there and find out if the cylinder was full.

Despite his eagerness, he held back until he thought he had spied a reasonable path. It involved going two or three hundred feet out of his way, but Hansen managed to work his way down to the lower level without serious difficulty. Once or twice, he slithered a few feet when loose rock shaled off under his grip, but even with his suit and equipment, he weighed little over forty pounds. As long as he did not drop very far, he could always stop himself one-handed.

He walked back along the level strip which was about fifty yards wide at this point, until he approached the path of the landslide. Near it, apparently having been scraped off as the tractor rolled, lay the cylinder.

He checked it hurriedly.

"Whew! Well, that's some help, anyway," he told himself, discovering that the tank had not been tapped.

He left the cylinder and walked over to the inner limit of the level band. Scanning the steep slope and the debris of the slide, he thought he could pick out two or three scraps of twisted metal. There was nothing to be done.

"I'd better get back up and think this out," he decided.

He took the broken chain that had held the tank to the tractor and hooked a broken link through it to make a sling. For the time being, he contented himself with using it as a handle to drag the lucky supply of oxygen after him.

After regaining his original position, the going was easier to the top of the ringwall. They had come over one of the several passes crossing the southern part of the cliffs, and Hansen walked through in a few minutes. The thickness of the ringwall here was only a mile or so, although at the base it probably approached ten miles.

He came out onto a little plateau, and the dim plain of the *Mare Imbrium* spread out before him. Hansen suddenly felt tiny, lost, and insignificant

"What am I gonna do?" he asked himself.

For the first time, he had admitted his predicament to himself. His gauntlet crept up to his chest where the switch of his radio protruded through the chafing suit.

"Hello Base! Tractor Two to Base! Tractor Two to Base! Over."

He waited several minutes, and repeated the call five or six times. He screwed his eyes shut to throw every ounce of concentration into listening.

No human voice broke into the quiet hissing of the earphones. Hansen sighed.

"Never reach them, of course!" he grumbled. "This set is made to reach about your arm's length."

He remembered that Van Ness had complained about the reception the last time they had called in, and asked Hansen to maneuver to the top of a ridge of vein mountains near the hulking silhouette of Pico. Hansen was higher now, but also much farther from home.

"Mike Ramirez and Joey Friedman aren't the kind to miss a call," he muttered. "It seems to me, Paul E. Hansen, my boy . . . that you are . . . on your own!"

The radio had been but a faint hope, inspired by his height and

tales of freak reception. He was not too disappointed. Looking down the rough outer slope of the ringwall, he saw that it was not by any means as steep as the inner, and that fact settled it.

"Guess I'd better see how far I can get," Hansen decided. "When they don't get the regular report over the tractor radio, they'll probably send out another crew to follow the trail. If I can meet them out a way, maybe even as far as Pico, it'll save that much time."

After considerable fumbling, he balanced the large cylinder on his back atop the other equipment with the chair sling across his chest. He started along the series of gentle slopes the tractor had climbed earlier. Deliberately, he pushed to the back of his mind the possibility he would have to face sometime: Base might decide the crew had been too eager to negotiate the ringwall to call back before being blanked out by the mass of rock.

He had to restrain a temptation to rush headlong down to the plain across miles of rough grades. Even with his tremendous load of equipment, he might still travel in twenty-foot bounds in Lunar gravity; but he had no desire to plunge all the way to the bottom with one misstep.

"It'll be easy enough going down," he murmured. "And after that, I can judge the direction well enough from Earth."

He looked up at the brightness of the planet. Earth was rather high in the Lunar sky, although not overhead because of his position far north. It would indicate roughly his southerly course towards Archimedes. As he looked, he noticed that much of the eastern coast of North America, which to his view was almost centered on the hemisphere, was blanketed in clouds.

"Wish I was there right now," he sighed. "Rain and all!"

He wondered about the next step as he worked his way around ridges radiating from the sizable minor craterlet in Plato's ringwall. He still had a good view of the gray plain at the foot of the heights. Although reasonably flat—probably leveled by the colossal flow of lava that had formed the *Mare Imbrium*, filling older craters and melting down or inundating existing mountains until merely their crests showed—it contained many hills and irregularities that would be even more apparent to a man on foot than from the tractor.

He worked past the craterlet, leaving it to his right. Whenever he struck a reasonably level

stretch, he moved at a bounding trot. The first time he tried this, he tumbled head over heels and gave himself a fright lest he rupture the spacesuit on a projecting rock. Thereafter, he was more careful until he got used to being so topheavy because of the huge oxygen tank.

Finally, scrambling down the last ridges of old debris, he found himself on the level floor of the "Sea of Showers," in the region between Plato and the jutting, lonely Mt. Pico. Off to his right, an extension of the ringwall behind him thrust out to point at the group of other peaks known as the Teneriffe Mountains, which were somewhat like a flock of lesser Picos. The ground on which he stood had perhaps once been part of another crater, twin in size to Plato; but now only detectable by faint outlines and vein mountains. In the past, some astronomers had called it Newton, before deciding upon a more worthy landmark for Sir Isaac.

It had taken Hansen nearly half an hour, and he paused now to catch his breath.

"I feel pretty good," he exclaimed with relief. "I'm carrying quite a lot to go at that speed, but I don't seem to get tired." He thought a moment, and warned himself, "You'd bet-

ter not, either!"

He turned partly to look at the ringwall towering behind him. It loomed grimly, scored with deep shadows of cracks into which the rays of Earth, seventy times brighter than moonlight it received from Luna, could not penetrate.

Hansen turned away hastily. The mountainous mass made him uneasy; he remembered how easily a landslide had started on the inner slope.

"I'd better get moving!"

He struck out at a brisk, bounding pace, a trot on Luna without the effort of a normal trot. The ground was fairly level, and he congratulated himself upon making good time. Once or twice, he staggered a little, having overbalanced; but he soon got into the rhythm of the pace and the load on his back ceased to bother him. He bore slightly to the right, toward the jutting point of the ringwall.

The footing was like powdery gray sand. Alternating extremes of temperature during the two-week Lunar day or night had cracked the rock surface until successive expansions and contractions had affected the crystalline structure of the top layers. When these had flaked off, the powder had formed an insulating layer, but the result as far as Hansen was concerned was

that he trotted on a sandy footing. When he looked back, he could see the particles kicked up by his last few steps still above the surface. They fell rather neatly, there being no air to whirl them about.

Gradually, he realized that the unobstructive noises of his space-suit had risen a notch in tone. The clever little machines were laboring to dispel the effects of his faster breathing. He dropped down to an easy walk, which was still a goodly pace in the light gravity.

"Guess I'm sweating more, too," he told himself. "Now that I think of it, my mouth's a little dry."

He twisted his neck until he could get his lips on the thin rubber hose sticking up to the left of his chin. He closed his teeth on the clamp, and sucked up a few swallows of water from his tank. It was not particularly tasty, but at least it was cool. It would have been a lot colder if carried uninsulated, he reflected. The night temperature of Luna was something like minus one-fifty Centigrade, and it dropped like a shot as soon as the surface was shaded from the sun.

Refreshed, he started out again at a bounding run, exhilarating in his strength. He felt

as if he were just jogging along, but the ground rolled back under his feet swiftly. Had he been on such a bleak desert on Earth, he knew he would be slogging ankle-deep in sand—if he could move at all. His own weight was between a hundred and fifty and a hundred and sixty pounds. With what he was wearing and carrying, he was probably close to three hundred. It did not bother him here.

"It isn't bad at all," he thought with satisfaction. "Feels like jogging around the track in school, warming up for a race. One . . . two . . . three . . . four—still got pretty good form! Not even breathing hard!"

It occurred to him that it resembled a footrace in one other particular. He was deliberately putting off consideration of the finish while he still felt good.

"Oh, I'll meet them somewhere along the way," he said aloud, despite a momentary doubt that he was talking too much to himself. "Pretty soon, I'll cross the tractor trail. I'll follow it out maybe as far as Pico and wait for them to pick me up. The relief crew can't miss a landmark like that. It's damn' near nine thousand feet high, straight up out of the flat plain."

He slowed down somewhat to

scrutinize a ridge ahead. It turned out to be an easy grade and he skimmed over it easily. Otherwise, however, he was beginning to lose his recent feeling of satisfaction. Now that he moved out into the flat, empty plain, the essential grimness of Lunar landscape was more apparent than when disguised by the majesty of the view from atop of the ringwall. It was a study in gray and black, the powdery sand and the deep shadows groping toward him as he trotted into the earthshine. Above was the deep black of an airless sky, lit by the bright Earth and chilly stars.

Gray, black, green, white—and all of it cold and inhospitable.

"I feel like I'm not wanted here," Hansen thought. "Well, that makes it mutual, I guess!"

He looked back, and was amazed at the distance he had covered. Already, Plato looked more like a range of towering mountains than it did like a barrier of cliffs.

"This won't take so long," he reassured himself. "I must have covered five miles, running like this. Maybe almost ten."

He circled a tiny craterlet, or "bead," a few hundred yards across. In the precise center, it had a tiny peak, corresponding to the central mountain masses

found in nearly half the craters of Luna. For the first time, Hansen regretted the camera that had gone down with the tractor.

"Too busy driving to take any pix on the way," he growled, "and now that I come across a perfect miniature, I have no camera. A fine spare photographer for an expedition this size!"

He diverted himself for a few minutes by considering what a fool he was to come to Luna in the first place. He had not really wanted to, and he was sure there were plenty of others who would have been better qualified and better pleased at the opportunity. Still, it was strange sometimes how a man would do things he did not want to because someone else was doing them.

He glanced up at Earth, and kept moving southward with the shining globe on his left front.

Mike and Joey sat before their radio, on folding chairs and empty crate respectively, maintaining whenever not directly addressed an almost sullen silence. Their tiny cubicle was becoming entirely too crowded to suit them.

Dr. Burney paced up and down before the wall map of the *Mare Imbrium*, Opposite him, the lower section of the radiomen's double bunk—canvas and alum-

inum like their single chair—had collected an overload of three. Dr. Sherman, the chief astronomer, sat between Bucky O'Neil and Emil Wohl. Besides heading the geologists, Wohl was Burney's second in command; and O'Neil was present in case it was decided to send out a rocket to photograph the Plato region.

"Ya'd think they could use their own rooms," Joey whispered into Mike's ear. "All but Bucky got singles. How we gonna catch an incoming call with all this racket?"

The "racket" at the moment consisted mostly of sighs, finger-drumming, and a tortured semi-whistle from where Sherman sat staring at the map with his chin cupped in one hand.

"There's little doubt of the general location," repeated Burney, once more reaching a familiar impasse. "But I hate to hold up the other work to send out a crew when we cannot with any certainty agree that something has gone wrong."

"Let's see," said Wohl, "there was some difficulty, was there not, the last time they communicated?"

When no one answered, Mike finally repeated his previous testimony.

"Van Ness said they drove up a sort of mountain to get us. Complained a little about recep-

tion, He might've been getting to the limit."

"Then," said Wohl, "there is really no reason for alarm, is there? They could just as well have decided that continuing the mission was more important than running around looking for a good radio position, couldn't they?"

Mike considered that glumly.

"It's funny they didn't back up far enough to make *one* call to let me know they were going out of reach," he grumbled. "The speed they make in that rig, it wouldn'ta taken them long."

"That would have been the proper action," admitted Burney, "but we must not demand perfect adherence to the rules when a group is in the field and may have perfectly good reasons for disregarding them. No, I think we had best—Who's that coming?"

Bucky O'Neil bounded up from the end of the bunk and stuck his head out the door. When he looked around, his freckled face was unhappy.

"Johnny Pierce from the map section," he announced. "He's got Louise with him. I guess you don't need me any more."

He edged out the door as two others of the Base staff came in. The one who acted as if he had business there was a lean, bespectacled man who managed to

achieve a vaguely scholarly air despite rough clothing.

Trailing him was a girl who looked as if the heating economy that necessitated the standard costume of the Base also had the effect of cheating the male personnel of a brightening influence. The shapeless clothing, however, did not lessen the attractiveness of her lightly tanned features or lively black eyes. She wore her dark hair tucked into a knit cap that on Earth probably would have been donned only as a joke.

"We've looked at the photo maps," Pierce reported in a dry, husky voice. "They might very well be out of range. Lots of curvature in that distance, even with the depression caused by a mass of lava like that *Mare Imbrium*."

Burney accepted this with an expression of relief.

"I heard them talking about the Plato crew," the girl put in. "What's going on?"

Her voice was warm and, like a singer's, stronger than her petite outline would have suggested.

"Oh . . . just checking the radio reception," said Burney. "You can get the details from Mike, I suppose, if you have time off from the observatory. The rest of us are through here."

Mike scowled, and the girl

looked puzzled; but Burney, Wohl, and Sherman crowded through the door as if intent upon some new project. Sherman muttered something about the problem of erecting a transparent dome for direct observations, and the voices receded down the corridor. Pierce slipped out after them.

"Did I say something?" inquired Louise. "I only thought there might be news."

"I guess they're just busy, Louise," Mike said. He turned to the radio, unplugged the speaker, and donned a set of earphones. "You know how it is. Why don't you catch Bucky? *He's* got nothing to do for a while."

Louise had started to show her even white teeth in a smile which now faded. Joey picked up his empty crate and busily moved it around to the other side of the radio set-up.

"Sorry," said the girl, her dark eyes beginning to smolder. "I'll ask somebody else."

They listened to her footsteps as they faded away in the corridor. Mike looked at Joey and shrugged.

"What was I gonna tell her?" he asked. "That her husband either forget to call in—or got himself quick-frozen when something in his tractor popped?"

Joey shook his head sympathetically. "Tough on her."

"Dunno why she had to come to Luna in the first place," Mike complained. "I can see a nurse like Jean doin' it, and a typewriter pusher like old Edna oughta be classed expendable. But a babe like Louise!"

"It's her science," said Joey. "She wants to see the stars better."

"We got enough astronomers now. She's a smart girl, all right—can't take that away from her. But if she was *my* woman, she wouldn'ta come up here!"

"If she was mine," countered Joey, "I wouldn'ta taken a second-rate job just to follow her up here either! But you're dreaming about the past, Boss."

"Uh-unh," grunted Mike, plugging in the speaker again. "I just believe in equal rights for men. How'd you like to be married to a dame like that and have to trail her to a place where there's three women to forty-eight men?"

"Ask me how I'd like to be married to a dame like that period!" Joey invited him.

Mike adjusted the shade on the light so as to shadow half the room. He straightened the blanket where the three visitors had sat, appropriated the one from the upper bunk to cover himself, and lay down.

"Your watch," he announced coldly. "Wake me up if anything

comes in!"

The rope lacing of the canvas creaked as he settled himself; then Joey was left with only the quiet hiss of the radio. He leaned back in the folding chair and relaxed.

Hansen paused and turned to survey the ground he had covered in the past half hour. The hiss of his air-circulator and the whine of the tiny motors within his suit were a comfort in the face of his bleak surroundings.

He had found himself trotting along at such an easy pace that he had kept going past Mt. Pico. Now he wondered if he ought to stop.

"Might as well go on," he muttered. "Now that I've picked up the tractor trail from Archimedes, I can hardly be missed by the relief crew."

He eyed the twin tracks in the gray sand. Flanked by his own wide-spaced footprints, they stretched away into the dim distance. As a sign that man had passed, they did little but accentuate the coldness of the scene.

"Maybe I'll stop at the big triple peak," Hansen planned. "That's about thirty-five or forty miles . . . they ought to be along by then if they started right away."

Careful not to admit to himself that relief might be slow

in starting from Archimedes, he took a last look at Pico. Rearing starkly upward, it projected a lonely, menacing grandeur, like a lurking iceberg or an ancient monument half-buried in the creeping sands of a desert. In the light of the nearly full Earth, it was a pattern of gray angles and inky black patches—not a hospitable sight.

"Come on, come on!" Hansen reproved himself. "Let's get moving! You want to turn into a monument too?"

He had stopped just before reaching Pico to replenish his suit tank from the big cylinder, and still felt good at having managed the valves without the mishap he had feared. He did not feel like a man who had traveled seventy miles.

"Why, on Earth," he thought, "that would be a good three-day march! I feel it a little, but not to the point of being tired."

He looked up at Earth as he started out again. The cloudy eastern coast of North America had moved around out of sight in the narrow dark portion. Hansen guessed that he had been on the move for at least four or five hours.

"I'd like to see their faces when they meet me way out here," he chuckled.

It occurred to him that he might be more tired than he

thought, and as he went on he tried to save himself by holding his pace to a brisk walk. He found that if he got up on his toes a bit, he could still bound along that way.

The gray sand flowed under his feet, relieved occasionally by a stretch of yellowish ground. Hansen kept his eyes on his path and avoided the empty waste. When he did glance into the distance, he felt a twinge of loneliness. It was like the wide plainland of the western United States, but grimly bare of anything so living as a wheat field.

He tried to remember as he moved along where it was that they had driven the tractor up a mountain ridge. He decided that he would rather avoid the climb, and kept an eye open for the chain of vein mountain beyond Pico.

"It ought to be faster to go around the end of them," he thought. "I can always pick up the tracks again."

When he finally sighted the rise ahead, he bore to his right. He remembered from the maps he had studied that the mountains curved somewhat toward another isolated peak, and he watched for that. As far as he knew, it had no name, but although only half the height of Pico, it was an unmistakable

landmark.

The mountains on his left gradually dwindled into ragged hills and sank beneath the layer of lava. Hansen turned toward the last outcroppings as the triple mountain he sought came into sight. He climbed onto a broad rock and started to sit down.

The end of the big cylinder slung across his back clanged on the back of his helmet. Hansen lost his balance and tumbled over the side of the rock. Under his groping hands, the heat-tortured surface of it flaked away, and he bounced once on the ground before sprawling full length.

"Goddamn!" he grunted. "When'll I learn to watch my balance with this load?"

He picked himself up and unslung the tank. Then, allowing for the normal bulk of his back pack of tank and batteries, he backed against the outcropping until he was resting at a comfortable angle.

"Maybe I ought to relax a few minutes," he told himself. "Give the air-circulator time to filter out some of the sweat. Then, too, I don't want to get tired and miss them when they come along."

He idly scanned the arc between the peak toward which he was heading and Mt. Pico, still

easily visible off to his right. The northern part of the *Mare Imbrium* drew his gaze coaxingly into the distance until he felt an insane desire to thrust his head forward. It almost seemed that if he could get beyond double glass of his insulated faceplate, if he could escape from the restraint of his helmet, he might perceive his bleak surroundings with a better, more real sense of proportion.

There was nothing out there, of course, he forced himself to realize. Except for shadows of craterlets that looked like low mountains, there was nothing to see for fifty miles, and nothing even then more noteworthy than a couple of minor craters.

"Then what the hell are you looking for?" Hansen snapped. "You want it to get on your nerves? And quit talking to yourself!"

He suppressed, however, the sudden urge to spring up and break into a run. Instead, he hitched around to stare along the ridge at whose end he sat.

He was far enough south to be able to see the side lit by earth-light. The ridge climbed higher the further it went, like the back of some sea monster rising from placid waters. Several miles away, a spur seemed to project out to the south; and Hansen thought he could remember a

mile-wide crater on the maps.

He was a bit more comfortable inside his suit by now. He shifted his position to expedite the drying of the coveralls he wore under the spacesuit. Then he raised his arms and tried to clasp his hands behind his neck, but found that his garb was not that flexible.

"Shouldn't kick, I guess," he thought. "Without plenty of springs in the joints, I wouldn't be able to bend anything, considering the pressure difference."

He spent a minute admiring the construction of the suit that alone stood between him and instant extinction. That led him to think of the marvelous mechanism of the vacuum tractor that had carried him so comfortably—though he had not appreciated it at the time—across the Lunar plain. That, logically, recalled the men who had come with him and now were buried beneath one of Plato's many landslips.

"Talk about borrowed time!" he thought. "I wonder how long I'll stay lucky? Any little thing might do it—"

He had already taken three or four tumbles, or was it more? On any one of them, had he rolled the wrong way perhaps, he might have cracked that faceplate on a projecting rock. It was made as tough as possible, true,

but if he even cracked the outer pane, the insulating sheet of air would spurt out to leave him with a slow leak. The inner plate would lose heat and cloud up from his breath, so that he would end up without even knowing where he was dying.

Or if he had slid over a surface jagged enough to tear through his yellow chafing suit, and then to rip the tough material of the inner suit—

A puncture here would be a real blowout!

He reminded himself to be careful about stepping into shadows, especially if they were more or less straight-edged. He did not remember encountering on the way out any of the canyon-like rills that ran like long cracks straight through all other surface features of Luna—except occasional small craters slammed into the rock after the rill had been formed—but there was always the chance that he might step into some other kind of a hole.

Fortunately, the earthlight shone into his face, so that he should be able to tell a shadow resulting from some elevation ahead of him.

"I'm getting the jitters squatting here," Hansen thought. "It won't do any harm to move on a little way. At least out past that mountain, where I'll have a

good view towards Archimedes."

He arose and slung the big cylinder over his back again, jiggling on the toes of his boots to jockey it into place. With one last look over his shoulder at the trail of his footprints splotched in the ashy sand, he started off.

He was surprised to discover that the rest had stiffened him slightly, but that soon worked out. As soon as he was warmed up, he moved out in a brisk walk which on Luna sent him bounding along with fifteen-foot strides. Swinging his arms to keep his balance, he concentrated upon the footing ahead of him. Once more he was alone with the hissing and humming of his suit and the sound of his own breathing, undisturbed by either memory or anticipation.

Mike Ramirez stirred on his bunk with the change of the quiet hissing of the radio. Something more than the occasional crackle or creak of Joey's chair or footfall in the corridor brought him up with eyes still half-closed. To his sleep-drugged mind, it seemed that nothing had existed until a second ago, when a faint, dreamlike voice had started to speak.

He started to push back his blanket—Joey's blanket—and said, "Joey! You got a call!"

". . . to Archimedes Base.
Hello Base! Over."

"I hear him, Goddammit!" snarled Joey. "Go back to sleep!"

He pushed his switch and the rushing noise that had partly muffled the weak voice gave way before the surge of his own transmitter.

"Archimedes Base to Tractor One!" Joey answered, and Mike leaned back on one elbow and sighed.

He did not listen while Joey took the message, but swung his feet to the floor and sat up. Wiggling his toes uncomfortably, he wished he had taken off his shoes; but he had expected to lie down only half an hour or so. Until the call came in, he had been sound asleep.

Joey acknowledged the message and turned to Mike after dropping his pencil.

"The *Serenitatis* bunch," he said. "They left two of them at Linné to take photos and poke around while the other pair brought the tractor back through between the Apeninness and Caucasus to call in."

"Everything okay?"

"Yeah, they're on the way back already, but they say Linné didn't look as if it was ever a volcano after all."

"Very true if interesting," said Mike. "Okay, take it to Burney. I'll bend an ear a while."

He tossed the blanket back onto the upper bunk and walked over to the chair. He stretched, and sat down as Joey's footsteps departed down the corridor.

He sat there, staring moodily at the softly lighted dials of the radio, wishing he had a cigarette. That was one habit he had had to cut off short when joining the expedition.

"I think I'm getting over it some," he congratulated himself. He looked up at the sound in the corridor, thinking that Joey had made good time to Burney's compartment and back. He raised an eyebrow as Louise entered.

"I just saw Joey go by," she announced hastily. "Did some news come in?"

"Tractor One reported—just routine. What are you doing, picketing this dive?"

"I—I just happened to be passing the Junction, and I saw the paper in Joey's hand."

"Uh-huh," grunted Mike.

What the members of the expedition had come to call the "Junction" was an intermediate dome equipped with the main airlock. The other buildings connected with it through safety doors so as to localize any danger or air loss in the event of a rupture in one of the domes. It was, in effect, the front hall of the whole Base.

And if you stand there long enough, thought Mike, *everyone you know on Luna will pass by, and you'll find out everything that's going on.*

"Where is number Two now?" demanded Louise quietly.

Scared, thought Mike, noting the over-controlled tenseness of her voice.

"I don't know for sure," he answered, not looking at her. "It's time they were inside Plato, and we can't expect to hear them from in there."

Louise walked jerkily to the bunk and sat on the foot of the lower section. She crossed her legs. Seeing the nervous manner in which she twitched her foot, Mike turned to his radio.

After a moment, she spoke again, and his shoulders quivered at the agonized harshness of her tone.

"Don't string me along, Mike! I want to know! You were worried about them hours ago, weren't you?"

Mike licked his lips.

"That don't mean anything," he muttered.

"The others backtracked to report, didn't they? To call in, I mean. Something happened to number Two, didn't it?"

"Now, take it easy, Louise!" Mike squirmed in his chair, then forced himself to sit still. It was not the sort of furniture

that would stand much squirming. "Burney kinda considered that as a possibility, but in the end they decided things were probably okay."

"Then why did they have Bucky in here?" she demanded.

"Just in case they thought it worth the trouble of scouting the Plato region. Nothing special."

Louise bounced up from the bunk. She stood beside it, stiff, with her little fists clenched tightly at her sides.

"They wouldn't let this long a time go by without calling in and you know it!" she declared. "Even if they did, there ought to be a tractor on the way to check."

"You might have a point there," admitted Mike.

"It could always be called back."

"It's probably been thought of," said Mike. "Look, Louise, why don't you calm down and let the worryin' get done by the people supposed to do it?"

She did not look at him. The darkness of her eyes surprised him, and he realized how she had paled beneath her tan.

"I can't help it," she said. "It's my fault, in a way. He only came along because I got so excited about the expedition I couldn't stay down on Earth. He didn't want to come, and now he's out



there—”

Mike rose and shoved his chair aside with his foot. He thought the girl was going to faint. Watching her narrowly, he reached out to put his hand on her arm.

He sighed with relief as he heard Joey whistling outside. Louise straightened and moved away from his hand as the younger operator entered.

“Why don’t you go see Burney?” suggested Mike. “He’ll explain how he figures the odds; or if you want to argue, it’s more sense to do it with him than me. I got nothing to do with it.”

The girl pulled herself together with a visible effort.

“I know, Mike. Thanks for listening, anyway.”

“Joey, go along with her to Burney’s quarters!”

“That’s all right,” said Louise. “I can find my way further than that.”

They watched her leave, and Joey turned to his chief with a cynical glance.

“You looked pretty chummy there, when I come in!” he kidded Mike. “Don’t you even wait till the bodies get cold?”

“Ah, shut up!” grunted Mike, jerking his thumb at the radio as he walked over to the bunk.

He added a profane order for a rather startling procedure.

“Can’t,” grinned Joey good-humoredly. “I ain’t a contortionist.”

Once more, he took the chair before the set and the pair of them sat in glum silence. The ventilation system came to life in one of its efforts to homogenize the Base atmosphere, and its sigh partly drowned out the hiss of the radio.

“You know something, Joey?” grunted Mike.

“What?”

“I got a feelin’ we’re not gonna see those guys again.”

“Hope you’re wrong,” said Joey. “It’s awful tough digging around here, after the first few inches.”

Hansen trotted along steadily with the four thousand foot mountain rising in a sheer sweep out of the lava “sea” over to his right. There were three distinct peaks, he knew, but they ran in a line away from him so that the whole thing appeared one towering mass to him. Most of it, from his position, was black with the deepness of Lunar shadows, although he was gradually reaching a location where he could see the splashes of earthlight on the tortured rocks.

“Pretty soon I’ll be out in the real flat, with nothing but a scattering of little craters to steer by,” he reflected. “If I don’t want

to stop, how had I better head?"

Just in case the problem should arise, he began to estimate the direction he should take and the sort of ground he would find.

The first thing would be to bear slightly left until he picked up the trail of the tractor once more. Then he could expect a region of fairly frequent craterlets, leading up to Kirch, a modest but respectable seven miles in diameter. If he passed to the right of Kirch, he would be kept from wandering aimlessly out into the *Mare Imbrium* by a range of vein mountains. He might go farther astray by passing Kirch to the left, but there the going would probably be easier.

"Then what?" he murmured, trying to recall the map and the journey in the tractor.

There was another open area, he seemed to remember, and then the forty-mile string of peaks called the Kirch Mountains, bordered on the right by an even longer ridge of vein mountains which might once have been part of the range.

And then, another thirty miles or so would bring him to the ringwall of Archimedes!

Hansen shook his head.

"That would be going a little too far," he muttered.

His voice sounded husky to his

own ears, and he paused to suck up a few swallows of water through the hose. He must have been half-hypnotized by the steady streaming of the gray surface under his feet, for he suddenly realized that he had gone considerably beyond the triple peak.

Without his steady forward speed, he found it difficult for a moment to stand erect. He braced against the movement of the big tank on his back, and turned around to look back.

He stared at the dark, earthlit ground over which he had been trotting. With the looming mountain in the foreground, and the upthrust ringwalls of smaller craterlets here and there above the level, aseptic fridity of the plain, it was a scene of complete desolation. It was more naked of life or any kind of softness than any desert on Earth; yet to Hansen, it did not really seem like a desert. There was some further overtone plucking at the fringe of his consciousness.

Then it came to him.

"It's like an *ocean!*" he exclaimed. "There's something about it that's like . . . like a cold, gray, winter sea smashing in on a rocky coast!"

There was the same monstrous, chilling power, the same

effect upon the beholder that here was a massive, half-sentient entity against whose callous strength and cruelty nothing human could stand. It was a *thing* to observe from a safe distance, to cower from lest it somehow become aware of the puny structure of bone, blood, and flesh spying upon it. Then there would be no escape, no withstanding the crushing force of its malice. But he was on no safe cliff. He was down *in* the sea.

He looked around. Gray everywhere, mottled with inky shadows. Gray ash underfoot, gray-and-black lumps thrusting up from the surface like colossal vertebrae, gray distance in all directions.

"Been going for hours," he thought, "and there's no sign, really, that I'll ever get anywhere! I might as well be in the middle of the far side of Pluto!"

The huge mountain towered behind him, like a hulking beast from some alien world stalking the only object in all its frozen world that dared to move. Hansen suddenly could not bear to have his back turned to it. He faced it and edged clumsily away. The helmet that reduced his field of vision was his prison. If that black-shadowed mass of rock chose to topple over, it would easily reach him, and

more. He would be ground under countless tons of weight, mangled and frozen in one instant—

Hansen whirled about and bolted.

On his first stride, he caught the toe of his right foot in the sand and sprawled forward with flailing arms. He plowed into the ground, throwing up spurts of sand like a speedboat tossing spray.

Somehow, he was up immediately, running in long, wobbling, forty-foot bounds. His eyes bulged and the breath rasped between his lips as he strove desperately to keep his balance.

It was like running in a dream, the nightmare come true. More than once, until he adapted to the pace, he found himself churning two or three steps at the zenith of his trajectory, too impatient to wait for the touch of boot on sand. There was sudden, dynamic power in his tiring muscles. All his joints felt loose.

His chest began to labor and he stumbled slightly. With a quick spasm, he blew his lungs and sucked in a deeper breath. After a few repetitions, he felt a trifle easier. In a minute he began to get his second wind. All this came like a half-perceived process of instinct, while he concentrated narrowly upon

speeding ahead.

He flew up a slight grade and took off in a soaring leap to the next crest of an undulating stretch of pale yellow ash. The next thing he knew, he was rushing upon a long shadow that barred his path.

A hasty glance each way warned him there was no use trying to skirt it, for the shadow or hole or whatever it was ran for hundreds of yards right and left. Hansen stamped hard at the near edge and kicked off for at least sixty feet. Something seemed to snap in his right knee, but he came down all right and kept running, well clear of the shadow.

How long he ran, dodging this way and that to avoid hills and shadows obstructing his path, he did not know. In the end, the tiny motors of his suit fell behind the rate at which he consumed oxygen and gave off carbon dioxide and copious moisture.

When he began to feel like an underwater swimmer reaching his limit with writhing chest, Hansen gave up. He stopped.

That felt worse. He moved on at a gentle walk, accomplishing it mostly by motion from the ankles down. Amid the stifling warmth and stickiness inside his spacesuit, it was borne in upon

him how badly he had lost his head.

He looked back, panting. Where was the mountain? Then, following the trail of isolated scars on the surface beyond where they faded into the gray distance, he saw a small knob of gray against the star-dotted black of the horizon.

"I guess . . . I've . . . really been traveling!" he panted. "Twenty minutes or half an hour—wonder how fast I went to put a mountain out of sight? Of course . . . I was well past when I started."

That reminded him of his bolt, and he closed his eyes in a paroxysm of shame.

The sweat beading his forehead began to trickle down his cheekbones or nose. Now and then, a drop rolled into his eye, despite efforts to shake his head inside the confines of the helmet. It stung, but he was too blown to get excited over that.

"Why did I have to go and do that?" he groaned inwardly.

He remembered how level-headed he had been in the first minutes of the catastrophe. Calmly, he had judged the odds of there being any survivors; calmly, he had climbed down for the prime requisite, the tank of oxygen; calmly, he had started off by a well-chosen route that led him accurately to landmarks

so plain that they could be spotted from Earth with a good pair of field glasses.

He had intended to go only as far as Pico, or perhaps the triple peak. Or had he?

Somewhere back there, he remembered, he had begun planning a further march. There could be no reason for that except—

Except that he was secretly aware that he could count upon no help to reach him in time!

“Why should they send anybody out yet?” he asked himself. “For all they know, we’re still inside Plato, camping on the nice level lava floor. I *must* have been thinking that, underneath, when I was figuring which side to pass Kirch.”

He had been skating on thin ice and should have expected a crack-up. For a moment, he considered the possibility that it would have been better had he broken down on the spot. But then he might have quit while still on the ringwall of the great crater.

“As it is,” he said aloud, “I’ll at least get the most possible mileage out of this suit. If I live long enough, I might even walk in on them at Base, for a surprise.”

He grinned a bit as he considered that pleasant fantasy:

“Hi, Paul; where you been?”

“Oh, just out for a little walk on the moon.”

“And where did you go on your little moon walk?”

“Took a turn around Plato. Pretty boring but ‘*toujour gai*, *whatthehell whatthehell!*”

He managed a deeper breath as his equipment caught up somewhat to his physical needs. The half-grin on his lean features faded, and he stepped up his plodding pace.

“Like hell!” he snorted. “Why kid myself? I’m just about scared senseless! And I’ve got a right to be!”

Bucky O’Neil, as the pilot who was to take the scouting rocket, occupied the only extra chair in Dr. Burney’s headquarters room. Burney sat across from him at the folding table and circled the proposed search area continuously with the butt of his pencil. Both men eyed the map reflectively. Burney looked as if he were trying to guess the precise location of his tractor crew. O’Neil, tracing his route with a blunt forefinger, was obviously attempting to estimate where he would have to punch his flare release in order to have his camera working by the time he whipped across Plato.

“Just to save us the wait,”

said Burney, leaning back in the silent, crowded room, "report by radio as soon as you loop back. Have you checked your set with Mike?"

The radio operator, standing to the rear of the little group, spoke up, "Joey's checking with the field now."

"Good!" approved Burney. "Does anyone have anything to add?"

He looked about. Sherman whistled quietly and tonelessly. Wohl shook his head. Johnny Pierce hovered, waiting to get his hands on his photomap again. Louise leaned against one wall near the door, worrying a pencil end between her white teeth.

"All right, then," said Burney, "you can go get into your suit, Bucky. Good luck!"

The gathering broke up. Burney signaled for Wohl and Dr. Sherman to stay behind, and forestalled Johnny's move to reappropriate the map.

"We may want to consider further," he offered as an excuse, and Pierce left with Mike.

Outside, they watched Louise follow Bucky in the opposite direction.

"Wonder how it feels to have her man out there and maybe not coming back?" murmured Johnny.

His long face looked sad.

"What do you think their

chances are?" he persisted after a brief pause as they turned a corner in the corridor.

Mike shrugged.

"Tractor One is starting back already," he said simply.

Hurrying along the other end of the corridor, Bucky was unable to shake off the following footsteps without putting on an obvious burst of speed. It sounded like Louise, and he wanted to think about his flight plan.

Finally, as he passed through the safety door—a double mounting that could be used in an emergency as an airlock—he had to pause long enough to acknowledge her presence.

"Do you mind if I ask you something, Bucky?" Louise inquired.

"Of course not, but I have to—"

"I know; I won't take more than a minute. The thing I don't like is that they just want you to photograph Plato."

Bucky released the door which swung shut automatically. He looked puzzled.

"Don't you think it's worth doing?" he asked.

"Oh, yes! Yes, I do. But how about all the other places?"

The pilot fidgeted.

"I can't take shots of the whole *Mare Imbrium*, Louise."

"You might take a few of the section this side of Plato, though.

How do we know they ever reached the crater? If tracks show up on your pictures, we'll know how far they got."

"That's a good point," admitted Bucky, scratching his head. "But why didn't you bring it up in the meeting?"

Louise looked away. She shrugged slightly.

"Well, maybe Burney would have talked you out of it," Bucky conceded. "We all know you're worried."

"I know what everybody thinks," Louise replied. "I'm getting excited because one of the four happens to be my husband. I'm not thinking calmly about what's best for the Base as a whole, whether it's worth taking people off other jobs to play hide and seek out on the surface. I probably shouldn't have come to Luna in the first place."

Bucky looked around, but there was no one passing through the Junction. Louise stepped closer and put a trembling hand on his arm.

"All right, Bucky, it's true enough. I'm frightened. I wish I'd never thought of coming here and making Paul feel he had to trail along! Are you married, Bucky, or engaged?"

"Well, there's a little blonde waiting down there for me—I hope. She'd better wait."

"How would you like it if *she* were out there?"

"Ummm," murmured the pilot. "I see what you mean."

He saw more than that. He saw how close she was to losing her grip, how she was keeping back the tears with an effort, trying to use every ounce of self-discipline so as to keep from being ignored as hysterical. Getting a few little things done, like influencing him to take extra photos, was all she could do at the moment to look out for her man. He remembered hearing from Pierce that Burney had refused her offer to take out a tractor herself.

"Well . . ." he yielded, "I'll see if I have a chance. I figure to cover the approaches to the ring-wall anyway; maybe I can get a shot out around Pico, or thereabouts."

She did not thank him, but hid her face against his shoulder for a second. Bucky looked around again, touched her lightly on the head with one big, freckled hand, and disengaged himself gently.

When he glanced back over his shoulder, Louise was opening the safety door to go back.

"Heading for Mike and the radio, I bet," he thought. "Wonder when she slept last?"

He reminded himself that he had a job to do which involved delicate judgements at high

speed, and he had no business going into it with hindering worries on his mind. If that girl did not watch herself, she would wind up under the care of Jean and "M. D." McLeod.

"I'm liable to, myself," he muttered, "if I don't snap out of it now! I wonder who'll pick me up if I zig out there when I ought to zag?"

He stopped at a phone connection and called the field control dome to learn if they were ready for him.

Dazzling glints of light flashed here and there from that part of the Pacific Ocean still in bright sunlight as Hansen came in sight of Kirch. The coast of California had faded into the darkness and Asia was partly in view. He estimated that he had been moving for nearly eight hours.

His pace was still a rhythmic lope, but the feeling of having vigorous reserves of strength had worn off. Hansen knew that he must rest soon. In traversing the flat, crater-speckled plain since his panic, he had paused only once when he took a few minutes to recharge the oxygen tank of his suit.

"But I'm due for a good half hour off my feet," he decided.

His legs, he noticed, had lost some of their snap, so that his bounding trot was less exuber-

ant. On the other hand, this resulted in his getting slightly better control of his stride; he no longer broke his rhythm by bouncing too high. The thing that bothered him most was the growing ache across the small of his back.

He skirted the ringwall of the last of a series of small craters and saw the shadowed side of the seven-mile wall. He was approaching the left curve of it, for he had hours ago decided to abandon the tractor tracks when he had crossed them again.

"No use running up the right and getting into the Kirch Mountains," he had muttered. "I'd have to zig-zag through them and I doubt I'll feel like making any extra distance by then."

His guess now, from the angle of Earth in the starry sky, was that he was heading a shade left of his generally southerly route. He reminded himself that he must change after rounding Kirch.

"I'll keep going till I'm past," he promised himself. "Then I'll sit down and relax a while."

He could not see much point in making another few miles out into the empty wasteland beyond Kirch. The crater was a natural goal to mark a section of his journey. About halfway between Plato and Archimedes, it was

further than he had dreamed of going. Even now, after he had seen how fast he could travel in the light gravity, it struck him as almost unbelievable that he would have covered such a distance. It was nearly a hundred and fifty miles.

Yet here he was, not in bad shape at all. He glanced at the outer slope of the ringwall on his right, and mentally catalogued his various irritations. There was, of course, the general clamminess that resulted from spending hours in a spacesuit, plus the fact that his bladder was beginning to bother him and there was nothing he could do about it. The overheating due to his exertions had been partially adjusted when he had discovered during his last halt that he could regulate the heating unit by a small dial in his battery pack, which discovery left him slightly aggrieved at not having had the finer points of the care and handling of spacesuits more exhaustively explained to him.

"But then," he reflected, "I was probably expected to spend a lot of time in the darkroom as a spare photographer."

He could not say he was hungry, although he supposed that sooner or later he would discover feelings of weakness. His

suit seemed to be functioning as well as could be expected, except for something that had given way in the right knee on that one leap. He wondered if a spring were working loose.

"That could end up giving me a beautiful limp," he thought. "With fourteen pounds inside, and no air at all outside, it'd be tough to bend a joint without some mechanical help."

By now, he could see light-streaks along the ringwall, and knew that he was rounding it. The lighting gradually increased as he continued, until when he began to move out into the open plain some time later, the walls were mostly gray with earth-light. Kirch had a "new" appearance, as craters went. Its floor was not lava-filled, nor its ringwall seemingly as long exposed to thermal erosion, so that the probability was that it had been formed after the "sea" around it.

Hansen began to keep an eye out for a suitable place to sit down. Presently, he located a rock the size of an auto.

"Time for a drink, and then I'll pick out a good spot," he sighed.

The second he stopped to grope with his lips for the little hose, he knew he was really tired.

The water, cool from being only partly surrounded by heating coils to protect it from the

exterior cold, refreshed him but slightly. The running had left a thick taste in his mouth.

Hansen unslung the big cylinder he had carried on his back and set it down beside a comfortable indentation in the rock. He then unfastened his back pack of tank and batteries. The metal-covered connection protecting the hose and wires was long enough to permit the pack to be set at his side.

He lowered himself to the fine sand and leaned his back against the rock with a sigh of relief. He squirmed into a more comfortable position.

"Wish I hadn't drunk all that water," he growled.

He leaned the back of his neck against the neckpiece of his suit. It was not uncomfortable except that he found himself staring directly into the light of Earth.

"I'm getting used to it all right, if I think that's too bright," he thought. "Bet my pupils are big as a cat's now."

Ironically, his feet had not started to hurt until his weight was off them. It felt as if he were developing blisters. The coveralls he wore under the spacesuit, moreover, had begun to chafe in a few places—around the armpits as he swung his arms, behind his right knee, on the inside of his thighs.

He also was reminded of the

sweat that had trickled around or into his eyes, for the lids felt sore.

"I want a different view," he grunted, picking himself up. "Facing the other way, maybe I can rest my eyes."

Carrying his back pack, he started around the rock, then prudently went back for his big oxygen cylinder. He could think of no good reason for dragging this with him, but he somehow felt more comfortable with it beside him.

The other face of the rock was blackly shadowed, and he was forced to find a convenient spot by groping about. With a sigh, he settled down, squirmed again into an easy position, and found himself contemplating the ringwall of Kirch a few mites away. The regular sough of air through his suit and the quiet hum of the mechanisms that were keeping him alive were so familiar by now that he hardly noticed them. It was the cessation of movement, not any diminishment of the normal sounds, that lent an impression of quiet to the scene.

He looked at the ringwall, squinting against the sting in his eyes that caused them to water occasionally. The left extremity was dim in the distance, but to the right, he could clearly

see the slope of the wall as it curved to meet the plain. There was no feeling of a towering, insecurely balanced mass like that of the mountain.

"Although a crater at a distance does look like a mountain range," he thought. "Not so close as this; it goes up too steeply."

In a way, it was almost like looking at the skyscrapers of a big city, like looking at Manhattan from across the Hudson River. Except that there were no lights.

He closed his eyes for a moment and tried to visualize the sharp peak a little to his left atop the wall as it might look with a thousand lighted windows gleaming white and yellow.

It was hard to do. The stark fact was that there was only Lunar dimness, relieved by earthlight but tending to be uniform in intensity without the rays of the sun. If the silhouette of Kirch was like that of a city, the metropolis it resembled was a dead one.

A dead city in the midst of a cold, frozen sea of lava. A ghost city that had never lived, yet rose up from the gray sea over which no ship had sailed and whispered and whined ghostly warnings. "Stay with me, Man! I am dry and lonely. There are no people to warm me with light and sound . . . there is none to

see my massive strength and, by seeing, make it into reality . . . stay where you are, Man!"

"But it's dead," thought Hansen. "More than dead—sterile!"

"But you, Man, you too are dead. You are already turning cold. You will slowly congeal . . . become solid . . . a monument . . . a symbol of the tribute brought by folly and life to the sea of coldness and gray death—No, do not shake your head . . . it is too late . . . my shadows are about you . . . you have no light . . . all your prayers and wishes will not turn on a single light. The shadows reach you . . . touch you . . . the pain in your leg is the cold of space . . . you will sit there forever . . . drowned in the gray sea of frozen lava . . . imagining lights for me in the blackness . . . imagining life in me in the noon glare . . . but now there is no light unless you have the force to see it . . . but you are cold . . . cold . . . cold . . . cold . . .

The sky flared with flickering light. It turned black while the image of light still remained in Hansen's eyes. Then a new light, tinier and higher streaked overhead. Hansen awoke with the hairs tingling on his neck and leaped to his feet with a hoarse shout.

"A rocket!"

In the stillness of the radio room, the incoming call from Bucky's rocket made Mike jump in his chair before the set. Hastily, he turned down the volume he had kept in hope of picking up faint calls from Plato.

When he had answered and relayed the message by phone to the landing area, he turned to the others in the room.

Joey had been sleeping in the upper bunk. Louise had asked to stay and Mike had offered his bunk for her to sit on. She had not slept, as far as he knew; but he had turned to the radio and maintained a lengthy silence.

"Maybe I ought to talk to her," he thought, "but what is there to say? Four good guys; but they're awful late checking in."

But when he looked around, they were both watching him; and he had to tell them.

"Bucky's coming in," he said.

"Did he find anything?" demanded Louise.

"Don't know yet," Mike told her. "He said he took a snap of Plato coming and going and three more on the way back."

Louise moved toward the door.

"Thanks a lot, Mike," she said.

Joey slipped down from the bunk as she disappeared into the corridor.

"Never mind," advised Mike.

"With Louise and Bucky in that

hole they call a darkroom, dodging the photographer's elbows every time he breaths in, they won't have any place for you but up on a shelf."

"I just thought I'd—"

"We'll get told. Now, stay with me, kid, an' make sure *I* don't go wanderin' off to have a look too!"

Hansen stood stiffly by the rock and painfully tried his neck muscles. He searched the sky, but nothing moved among the stars.

"Now, *did* I see something?" he asked himself slowly. "Or was I still dreaming?"

He grimaced, and raised a hand to the back of his head before he remembered that he was still in his spacesuit. His neck was stiff and sore from lying across the rigid neckpiece of his suit, and he was chilled to the bone.

"Must have been asleep quite a while," he thought. "Maybe I ought to turn up the heating again—or should I just warm up as I walk?"

He paused a moment to stare in open-mouthed amazement at the ringwall of Kirch, rearing up three thousand feet toward the stars.

"When am I going to do something right?" he asked. "Why couldn't I stay where I was, facing Earth, and go to sleep

dreaming I was home?"

He went on to wish that he had not gone to sleep at all. The aches that were irritations when he was warm from walking were now centers of agony.

He was sure he had blisters, and the chafed places under the suit jabbed little warnings of tenderness as he tried to move. Reaching for his battery pack, he nearly toppled over because his right leg was asleep. Even after he recovered and took a few steps to restore the circulation, the knee did not feel right.

"I wonder if I pulled a muscle?" he mused. "Or is it in the suit?"

He looked up at Earth. India was moving into the arc of shadow, but he could see Africa, the Mediterranean, and Europe.

When he realized he must have been out for three or perhaps four hours, he immediately checked his oxygen. It was none too soon. He refilled his suit tank and examined the pressure of the big cylinder. He guessed that he could do the trick once more.

"I wonder how long a man can live in a spacesuit?" he muttered. "Hansen, why aren't you dead?"

Groaning with stiffness, he adjusted his battery pack and tank and slung the cylinder atop the load. Although he seemed as wet as ever, he sucked up a drink of

water while he listened to the hiss of his air circulator.

"Wish I wasn't so thirsty," he said. "I'll have to watch it. Beginning to feel lack of food, too."

He started off, moving mincingly to favor his sore muscles, and immediately felt the weakness brought on by hunger. It was hard to believe that a nightmare could last so long, but he remembered that it was almost a full day since he had eaten a sandwich in the tractor.

Gradually, as he moved along, marching away from Kirch into the open wasteland, he began to warm up. The stiffness left his muscles, although the chafing remained annoying. His feet felt sticky in the thick socks, suggesting that he would have trouble. He thought they might be bleeding.

What the hell was the matter with that knee, he wondered.

He thought of stopping to examine it, but the likelihood of his falling over on his face if he bent to feel the joint deterred him. He kept on. In half an hour, it became clear that a spring had snapped.

Not only was the knee harder to bend than it should have been, but something began to dig through his coveralls behind the knee.

"That's not so good," he told

himself, but there was nothing he could think of to do.

He finally mustered the ambition to get up on his toes and bound along at a fairly brisk pace. The miles again floated under his feet, but he found that he could not maintain the trot the way he had earlier. Then, he had congratulated himself on his freshness, but he had come a long way since those few hours of immunity to fatigue.

The end of an hour found him moving at a moderate walk. One more, and he stopped noticing the pace particularly. There were few landmarks about him. He did not even strain ahead to catch a glimpse of the Kirch Mountains.

Finally, the nagging pain behind his knee became bad enough to make him stop.

"This is damn' silly!" he growled. "I can't go along until that point of metal saws through a vein or something! Must be something I can do about it."

He thought it over, but it seemed that there simply was nothing he *could* do. The broken bit of metal was beyond his reach; he could not even feel it through the thickness of the spacesuit and the protective yellow chafing suit. Even if he should remove the latter by some weird contortion, the knee joint, as an obvious trouble spot, was

reinforced by a bulge of metal. He would not be able to pinch or prod through that.

"Of course," he muttered, "I might take it off entirely. That would make things easy right away. A lot easier than just sitting down to wait for my air to run out."

He shook that out of mind with a jerk of his head, and struck out across the plain once more.

He had come to a stretch of gently rolling rises, and he tried to get most of his upward push from his left leg. Coming down the slopes, he hopped stiff-legged on his right. It was not too long before this became more tiring than it was worth.

"To hell with it!" he growled, and grimly drove onward with a more normal gait despite the sharp dig . . . dig . . . dig into his flesh at every stride.

Burney and Bucky again sat across the table in the former's room. Instead of the map they had consulted earlier, they gazed down at the new photographs. The room, as before, was crowded with others who had edged in watch silently. Even "M. D." McLeod, so nicknamed to distinguish him from all the doctors of philosophy and doctors of science among the expedition, lingered with his stethoscope dangling

after giving Bucky a routine, post-flight check.

Johnny Pierce stood lankily behind Burney's shoulder, holding a spare magnifying glass and squinting down at the photos. Sherman, Wohl, and Joey stood around the table with the photographers who had developed and enlarged the pictures. Louise watched from behind Bucky, resting her hands on his shoulders.

Burney nodded slowly, examining the picture of the interior of Plato through his lens.

"I very much fear," he said, tapping a forefinger on the half-lit heap of material at the foot of the ringwall, "that there is only one conclusion. That is a new slide, is it not?"

"It is," said Dr. Sherman, gesturing slightly with an older photograph of the region.

"And it is quite clear that they reached the crater," Burney continued. "These are excellent pictures, and the trail of the tractor treads shows very definitely."

"How about this one, Dr. Burney?" asked Bucky, pushing across another photo.

It showed the region around Mt. Pico, and had been enlarged until tracks of the tractor could be clearly seen. Burney frowned when he looked at it.

"To be perfectly frank," he murmured, "I do not know what

to make of it. Those marks accompanying the trail *could* be footprints, I suppose, as has been suggested. But why . . . or how?"

"A man running could make marks that far apart in this gravity," said Bucky. "I know Johnny estimates those little dots are twenty and thirty feet apart, but it's possible."

"It is also possible that they are nothing of the sort. You notice that they leave the trail after a time."

Louise spoke up.

"That at least rules out one interpretation," she said. "They certainly aren't footprints made by someone on the surface on the way to Plato. Anybody walking beside the tractor would have left a trail starting and ending at the tread tracks."

There was silence. Some of the men looked at her with pity, others stared very hard at the photographs on the table.

Burney prodded another picture with his finger.

"Bucky look this where the tracks passed Kirch," he reminded them. "There are none of these so-called footprints there. I regret to point out the obvious conclusion—"

"But can't you do something to make sure?" Louise burst out. "You aren't just going to leave them out there! You couldn't!"

"Of course not," said Burney, biting his lip uncomfortably. "As soon as the *Serenitatis* crew get a few hours, rest, I shall send them out to recover . . . ah . . . to check. But the time element has already become such that—Well, my dear, there is simply no use in rushing things. Either there is no need, or it is already too late."

There was not much doubt as to which possibility seemed the more likely. The meeting began to break up in unhappy silence.

Hansen trudged along with his chin on the neckpiece of the suit. Every so often, when he lurched in the shifting sand, his forehead bumped against the faceplate of his helmet.

"And that's not so easy to do," he thought foolishly. "Takes a supple neck to accomplish it."

He concentrated for perhaps a hundred paces, and slowly arrived at the corollary.

"Takes a pretty soft and supple head to get out here in the first place. Shoulda stood at home in bed. Should've stayed on Plato and tried to build some kind of a marker. Base'll send out somebody . . . wonder if that was a rocket I saw? Maybe I'd be dead . . . but I'm gonna be dead anyway. Why don't I just sit down and wait? At least, it won't hurt any more. And, I'll be easy."

No arguments to the contrary occurred to him, but some deep impulse refused to let him quit.

He had to pause again; his stops for rest were becoming frequent. He did not sit down.

Never get up again, he realized.

He planted his feet wide apart and stood there, panting and letting his hands hang limply at his sides. His face felt stiff as he bared his teeth against the throb of the cut behind his knee. By now, he was so used to the wetness of the leg that he could not be sure the blood trickled down any faster.

He saw that he was standing on ground lighter than usual, and tinted pale yellow. Remembering passing several such areas, he slowly realized that they must be rays from Aristillus, traces of vaporized minerals blown out across the surrounding territory when the crater had been formed. It meant, for what it might be worth, that he was getting near Archimedes. Some of the rays of Aristillus reached the larger crater.

He gritted his teeth and took the first step forward. A glance to his right assured him that the jagged peaks of the Kirch Mountains were where they should be. Once, as he walked along half awake, he had discovered himself turning away on

a course that would have sent him circling back into the *Mare Imbrium*.

"Sea of Showers," he thought. "I wish there were some. I wish I even had a glass of water to pour over my head. Just a glass of water to rinse out these eyes. I wouldn't even care about a shave."

He began to notice his footsteps, besides the hiss of the air-circulator and the laboring of the suit's motors. Through his boots, they had a distant, swishing sound that insidiously lowered his puffed eyelids little by little. His head bumped against the faceplate again.

Hansen jerked upright with a start. Clumsily, he turned to look back. His tracks were long, dragging gashes in the sandy surface.

"Hell! Going to sleep again," he croaked.

With the effort of speaking aloud—it was getting difficult to think clearly otherwise—the corner of his lower lip cracked. He opened his dry mouth, making a face at the morning-after taste, and gently touched the tip of his tongue to the spot. It stung.

No harm in taking a little water, he decided, though he knew it would offer only a fleeting relief. But he needed that.

He turned his head to the left and got the thin rubber tube between his teeth. The cracked lip stung as he sucked on the tube.

The water was cool. His tired eyes closed with the sheer pleasure of the sensation.

On the third swallow, it stopped flowing.

"Oh, *no!*" Hansen groaned..

He drew harder on the hose and eked out another mouthful. That was all. The tank was empty. It was supposed to be partly replenished by moisture removed from the air in the suit, but he had apparently reached the limit. The suit was not designed to be worn for twenty hours. It was a wonder that nothing had yet broken down.

He held the last mouthful without swallowing, letting it roll slowly about his mouth.

"Come on!" he thought. "That's all there is. What are you waiting for?"

He knew it was silly to feel angry at this latest pinprick. His growing rage was a sign of exhaustion, and some part of his mind recognized that fact; but he deliberately let his temper go . . . and drew extra strength from it.

The swallow of water gradually slipped down as he surged forward. With the stiff right knee, he staggered once and came

so near falling flat that he skidded on all fours under him again.

"Godammit!" he raged. "What are they doing at Base? Waiting for a weather report? Anybody with an ounce of brain would know by now things went sour!"

He lurched down a gentle slope and charged the next rise.

"I'll show the bastards!" he grunted. "I don't need them, if they're too chicken to come out for me. I'll get there . . . I don't know how I'll get up the goddamned wall . . . but I'll get to it! I'll get there!"

Mike sat before his radio and looked at the other three in the room.

Pierce looked thoughtful, Joey was frankly excited, and Louise Hansen paced nervously back and forth.

"The crew from Tractor One say they saw no tracks of any kind," he said, "but that doesn't prove a thing. They came nowhere near the line between Plato and Archimedes."

"Then you think we're justified in not waiting for the same crew?" asked Louise.

"Sure," said Mike. "I don't like to sound like I'm egging you on to something I wouldn't do myself, but—"

"Of course, Mike, of course," interrupted Johnny. "One of you has to stay on the radio, or we

couldn't call back. We could get Bucky to take Joey's place, I guess but why wake him up?"

"He did his share," Joey put in quickly.

Mike looked from face to face.

"Well, Joey can say I gave him permission," he said. "I don't know what you will say, but it'd be better if you got going and figured that out on the way back."

The shadowed ringwall loomed up before the yellow speck on the plain. Just enough earthlight reached this face to show where the seven mile wide outer slope was terraced by gentle inclines. Several of these led upward toward the pass used by the scouting expedition. Against the black sky, Hansen could not see the radio tower that had been erected, but he was no longer interested in that. He had jettisoned his radio batteries back on the plain to be rid of their weight as he tackled the long slope leading to Archimedes.

"There you are . . . there you are!" he mumbled. "Eureka, eureka! Damn' near three hundred miles . . . maybe more the way I came. That's navigating, ain't it?"

The ringwall stood passively before him.

"Well, ain't it?" snarled Hansen thickly. "All right, here we

go!"

He lurched forward. Despite having abandoned every bit of excess gear—the empty oxygen cylinder lay back beside the last craterlet he had passed—he could walk no faster than if he had been on Earth. It probably meant that on Earth he would have long since collapsed, but he was beyond thinking of that.

He found he could not climb the first seven-foot ledge he came to, and had to walk along it to a lower spot.

"No time, no time," he muttered against the delay. "You're on your last tankful now . . . in fact, well into it. You get up there . . . now . . . or not ever."

He found a long lateral slope and followed it up several hundred yards. He was cold and sluggish, and it seemed that his heating batteries were close to exhausted.

The ache across his back seemed normal. Even the dull misery of his legs, chafed, cut, rubbed raw, and the soggiess of his bleeding feet had come to be merely part of his general limpness.

He found himself finishing the last few yards of the slope on hands and kness.

"Funny," he croaked. "Don' remember fallin'."

He reached out for an outcropping of rock to pull himself up.

The broken spring twisted in the mangled spot on the back of his thigh as he tried to rise. Getting both hands on the rock, he inched upward little by little.

It took him all of five minutes before he was on his feet again. At first, he thought he was dreaming again. The rock seemed to move under him.

Then he saw, peering blearily upward, that it was part of an old landslide. One slip on his part now might set it off again, and send him crashing down to the bottom of the ringwall again. Hansen groaned and stepped away as carefully as he could.

He was faced by a forty-five degree slope. If he could negotiate it for about thirty feet, he would reach another ramp. He looked down, and wondered if it would be easier to slide down to a lower terrace which would eventually lead higher than his present position.

"No time," he said dazedly.

He began to scabble his way up the incline, not one too difficult to climb on Luna. The sun-powdered rock flaked off beneath his hands, elbows, knees, and feet. He slid back about as fast as he climbed.

With a sob, he lunged for a projection the size of a man's head and got one mitten on it. The rock cracked off and he slid to the foot of the incline.

"Oh, God! It's too much!"

His face twisted up and he expected to feel tears running down his face. Apparently, however, he was too dried out for that.

He sat there dully, staring at the lower ramp and trying to tell himself he could always try that.

He knew better.

"This is the end of the line," he told himself. "Last stop . . . you're done."

Even his conscience did not twitch at his surrender. He only wished he could see Earth and look at North America again where it was centered on the globe once more.

It was too much effort to turn around.

"Wonder if they'll find me," he mumbled. "Dunno if I want to get buried or not. . ."

Something moved to his left. A light.

"I'm seeing things," he muttered. "Not long now."

But the light swung up and down, it lit the slope below him, and it kept moving.

Nothing looked like that but a tractor.

But it would pass a hundred yards below him. The driver would have his eyes glued to the ground ahead, watching for holes or cracks.

Hansen started to laugh and

managed to catch himself.

"The chance after the last chance!" he thought he said aloud, although his lips barely moved.

The effort of pulling himself to his knees brought out sweat he did not know he had left.

He waited for the tractor to reach a point below him. Waited . . . lifting the head-sized rock in both hands.

The tiny weight tired him, and he lowered the stone to his knees. The tractor lumbered along, heading down the slope into the plain.

Hansen swayed where he knelt, but concentrated everything upon estimating the distance.

With a grunt, he raised the rock and thrust it away from his chest, outward over the slope on which he sprawled with the motion.

He raised himself on his elbows and looked to see what happened. The tractor had slid to an abrupt halt.

Dimly, he could see the shattered pieces of his missile bouncing in and out of patches of earthlight below the vehicle. The driver could not have missed it crossing his path.

"Gotta get up . . . up!" Hansen thought desperately.

He did not realize that his air was turning foul, but the simple feat of getting his feet under

him left his heart pounding wildly.

He planted his feet somehow until the light swept up the slope as those in the tractor searched for a possible slide.

Brightness filled his helmet. He was dazzled, and felt himself falling.

"Paul, try to help!"

"Paul, can't you get some grip when I shove you in? I can't keep you from sliding out the airlock. Paul!"

The voice was young and desperate.

When the other man backed away, parting the contact of their helmets, Hansen saw the features of Joey, the radio operator, through the other faceplate.

He stirred feebly.

"That's it, Paul," said the far-away voice as Joey bent to lift him again. "Just a little bit of help till I get you inside the airlock."

Something clanged, leaving him in blackness.

The next thing he knew, he was gulping in sobbing breaths of fresh, oxygen-rich air. His head ached, but he felt better.

Someone was mopping his sweaty face with a wet handkerchief. The handkerchief dripped, and the drops were salty.

He could not see Louise, because she held his head cradled

against her breast, but Joey was looking at him wide-eyed over the back of another seat.

"How long ago did you start?" asked someone else, and Hansen saw that Johnny Pierce was driving.

"Right after we got to Plato," said Hansen. "Everything but me and a tank of oxygen went down in a slide."

"Musta been nearly twenty-four hours ago!" exclaimed Joey.

"Gol-darn!" said Pierce primly. "Three hundred miles, give or take a few!"

"You ain't human, Paul!" said Joey.

"Do you want your suit off now?" asked Louise. "We could only get your helmet loose in this space."

Without seeing her face, he could tell that she had been crying.

"Just leave it on," said Hansen. "Wait till we're in, and I can go right from the suit to a bath."

"We're coming over the crest," announced Johnny. "Louise, you better hold him in case I hit a few bumps."

Hansen relaxed with a sigh as he felt her hands tighten against him.

"Hold tight, Honey!" he whispered as he closed his eyes against the lights in the tractor. "I . . . I'm a little tired."