Ayo lost all sense of time: the white roaring was her world, the avalanche was her only orientation, and every heartbeat came as a surprise. When the world stopped moving, it was like being born to a new reality.

Slowly, she came back to herself, and the world turned to sense again.

She was on her back. At an angle—steep. Most of her view up was obscured by glacier, luminous with reflected Saturnlight. The black sky beyond it was a ribbon, whereas before it had been a wide plane.

Braced across that ribbon, a purer white than the ice around it, stood the centipede.

She groaned. "Am I alive?"

The centipede's head turned toward her, which caused its foremost segment to shift in counterbalance. Ayo braced herself; ice was still falling in haphazard cascades in her peripheral vision. The ice under her body felt solid, though. The centipede's legs had dug into it, and didn't seem to be slipping.

Ayo's question made its way into the centipede's CPU, where it was parsed, matched to the nearest semantic rubrics, evaluated, and turned into an answer. ((Your biomonitors aren't reporting any injuries. Your exoskeleton reports no major damage. Do you feel okay?))

She hadn't been inside the centipede when the quake hit. Stupid, maybe, but the centipede's interior hadn't been designed for passengers in any case: The interior was supposed to haul cargo, the manual cockpit at the head was just big enough to sit in if you didn't care about leg cramps, and the medical pods fitted in the rear segments made those segments visibly oversized just so a patient could be immobilized lying straight.

Everyone in Search & Rescue got the speech about remaining in their vehicle while traversing the terrain. And everyone who was assigned a centipede for their vehicle quietly decided that they knew better, and requisitioned an exoskeleton to go with it.

Ayo flexed her fingers, swiveled her ankles. The exoskeleton had protected her limbs and her spine. The helmet had protected her skull. A leaden feeling rested in the pit of her stomach, but that was no injury—that was just her, and the situation, and she

ignored it as best she could. No suit integrity warnings appeared in her HUD, just as the centipede said. She felt shaken, physically disoriented, maybe on the edges of a concussion, but mostly clear-thinking.

"Status," she said. Her mask picked it up, fed it to the centipede, and caught the reply.

((I'm uninjured. I've lost contact with Carpenter Base, though.))

Ayo squinted. The centipede sounded petulant, which bothered her. In theory, its emotional inflections were supposed to increase the density of information it relayed: If its voice sounded scared, the operator didn't need to know percent chances of damage, calculated likelihood of injury—all the dry, bloodless details that were challenging for a human intelligence to weigh. If it fidgeted its many legs and strained to go forward on the landscape, the operator didn't have to go down a list of subsystems status and topographical charts; she'd just know they were good to go.

But while Ayo had no trouble reading actual human people, she couldn't stop second-guessing the programmed humanity of the centipede. What the hell was petulance supposed to tell her? Or was she misreading it, missing something else? Was it concerned? Afraid? Reluctant to go on?

She'd rather have the dry data, honestly. Between herself and the centipede, one of them was actually supposed to have feelings about all this, and those were more than enough to deal with.

"What about Parker?"

The centipede moved. Its mandibles opened, revealing the backup radio receiver it held protected there. Its head swayed from side to side, scanning the landscape.

((I've still got Parker's automated signal. Nothing personal.))

Nothing to indicate that the target of this little expedition was conscious and trying to communicate, then. Hell, he could be dead already, for all she knew.

Dead, or lying unconscious, or lying injured. No conclusive evidence either way. Her job was to take the evidence she had and treat it as actionable.

Ayo reached out, and the centipede gave her one of its forward articulator arms to help her up. The exoskeleton she wore compensated for her own unsteady balance, bracing her until she found the faint pull of real gravity. It ran counter to the absurdly tilted landscape.

"I thought this area was supposed to be glaciologically stable," Ayo said, shaking out

one leg, then the other. Her imagination, or were the knee joints on the exoskeleton stiff? Were her own knees?

The centipede didn't have a canned response to that. And without a connection back to Carpenter, it couldn't build one from a report. It remained silent.

Ayo turned, carefully, looking for the bright spot on her HUD which indicated Parker's signal. One hip ached, but dully. The topography spread down below her, crisscrossed with new rills and ridges and crevices; off in the distance, a plume of ice and vapor rose kilometers into the sky, ever feeding vapor into Saturn's rings. Enceladus was a moon in the long process of bleeding itself away.

But the process was long enough for people to set down on the surface, make bases there, make the place home. Ignore the moon's long attrition, interspersed with its sudden violence.

Humans would colonize anything.

She turned again, surveying the way back, taking inventory of the aches in her skull. Her HUD still provided a dot for Carpenter Base, but without a signal, it was greyed out—an approximation. Line-of-sight was blocked by the vast wall of ice that reared up behind her, which jutted out above her. It looked looser than Ayo was comfortable with. Looser than the ice underfoot; certainly looser than could support, say, a centipede crawling up its underside.

"What do I do?" she muttered, mostly to herself.

She was surprised when the centipede answered.

((I don't like this. I think we should go home.))

Irrationally—because she'd had the same thought, after all—Ayo felt a surge of anger. She was out here, and she wasn't complaining. What right did this idiot piece of equipment have?

But it wasn't programmed to complain. It was programmed to make a threat assessment and deliver it in an emotionally-relatable way.

"We can't go home without Parker," she said.

She turned back to the beacon in her HUD. No change; no response. Parker might be dead, she thought. Then she was angry for thinking it.

"Okay," she said, and turned her attention to the centipede. "What's your impression of

the landscape? What's the fastest route back into contact with Carpenter?"

It thought about that. ((A lateral path, about a kilometer and a half. That will get us to an upward grade which should be stable. Assuming there's no further activity.)) Seismic activity, it meant. ((The longer we're out, the more risk.))

"Any pattern to the shocks?" She walked around the centipede's head, hands spread for balance, even though the exoskeleton was perfectly capable of balancing her on its own. Technology could augment human instinct all it wanted; the instincts themselves held on, stubbornly vestigial.

((I'd guess that Parker's incident was a foreshock. If this quake was the main shock, the aftershocks might be less severe. If not, it may get worse. In any case, I don't think the sequence is over.))

Ayo let out a gust of air. Her suit was too well-regulated for it to cloud her HUD, but she could still feel the air hitting the screen and rolling back around her face, as though the screen itself shared in her frustration.

I'd guess. If. Might. Don't think. She'd have to build her response on a bed of no good information. "What's the best route to Parker?"

The centipede definitely sounded unhappy about that. ((Down. We can follow one of the valleys to a plain, and traverse that. It might take another hour.))

An hour in which anything can happen. Ayo nodded, trying to trick herself into feeling more confidence than she felt. What's the trade?

Best case, they got to Parker and brought him home alive. Two lives preserved. Bad case, they got to Parker and he was dead already, and Ayo took the centipede home. Worse case, they got to Parker and got stuck there, or were taken out en route: two lives in extremis or lost already. Worst case: They foundered out here and another S&R team was dispatched to find them.

Best case for turning around: They got home. One life preserved. One abandoned, dead body forgotten or living body left to die on the ice sheets. And one more failure to rob Ayo's sleep.

"We have to try."

((I don't think this is a good idea.))

"Centipede..." Ayo scowled. "Cease emotive feedback. Shut up."

The centipede's next words were flat, machinelike. ((Emotive feedback suspended.))

It made Ayo unaccountably angrier.

Maybe I'm jealous that I can't turn my own emotions off.

Maybe I just wonder why we bother giving the things survival instincts if we're going to ignore them anyway?

The sky above Enceladus was black.

The sky above Enceladus was always black. The moon didn't have enough atmosphere to scatter light or capture it, and the sun was far away. Saturn, of course, cast its own reflected glow, frosting the landscape. But it wasn't like Earth. No one would ever mistake this place for Earth.

On most days, that suited Ayo just fine. She preferred a landscape which didn't lull her into thinking it was made for humans, it was hospitable, it was safe. She wanted to see the landscape's teeth.

Now, it was all teeth: the walls of rills and canyons towering up around her, gnashing at the sky. The ground shivered underneath her boots a few times, as though to remind her that the threat might not be over. The centipede remained obediently silent. Parker, frustratingly so.

For half an hour, now, she'd just felt the crunch of ice underfoot; heard that vibration translate up her suit as sound.

She hated it. But she tried to read the cold tension in her gut as safety, because she'd loved it on Earth. And that'd been the problem: she'd been in love with the blue skies and the grey storms, the green grass and the knife-white snow. Search and rescue on Earth felt, more often than not, like an adventure. Serious, of course, but with that tinge of wild romance the Terran natural world still inspired. On Enceladus, the work felt like a punishment. At best, a trudge. A chore.

This was the job: someone was in extremis, and her role was to go out, into a potentially deadly situation, and maybe bring back a corpse. All the skill she could bring to the field, and some part was still a roll of the dice.

And just how loaded were the dice, today?

She'd just cleared a small ledge when her exosuit detected a tremor in the ground, her helmet detected a shiver in the fitful water-vapor atmosphere, and the systems combined to synthesize a meaningful sound: a rolling crash like a sudden waterfall.

A second later, the centipede reported a flat ((Error.))

Ayo spun. The centipede reared up, its body shielding her from a glittering avalanche of scree ice, and she went to her hands and knees and braced on instinct. Two seconds, three, and the avalanche slowed, though the centipede didn't lower itself down again. From this angle, Ayo could see that two of its back legs had actually slid into a crack in the ice wall, which had compressed shut around them when loose ice came down. "Oh, come on!"

Easy enough to get out of: the rest of the centipede provided all the leverage it would need. Whether that would bring the whole wall down around them was the question.

She stood. Walked around centipede, testing each step as she took it, to inspect the other side. "Centipede, enable emotive feedback. How much do you know about glaciology?"

The centipede considered, tried (futilely, once again) to reach the main database at Carpenter, failed, and compiled a response. ((I'm sorry. Not much.)) Without Ayo there to shield, it lowered itself back to the ground.

"You can't tell if deforming the ice here will cause a slide?" Ayo asked.

((No.))

The other side of the centipede was undamaged and unstuck. Ayo put her hands on the exoskeleton joints at her hips.

Inside the centipede would be safer. The centipede could unstick itself, and if there was another ice slide, the ice couldn't crush her. She'd be safe—and cramped, and cut off from what tactile sense of the environment around her her suit and exoskeleton still allowed. Plus, she'd have to remove the exoskeleton and stow it just to fit inside.

She looked up. And up: the ice still glowed with Saturnlight, and the ribbon of the sky had narrowed to a thread. Her heart skipped.

As though sensing that—maybe in response to her biometrics—the centipede said, ((I'm afraid.))

Are you, centipede? Lies. It couldn't feel anything—its systems weren't that advanced. It could only say it could.

Ayo was the one who could feel fear. She was the one who could suffer fear. She was afraid enough for them both.

"Can we make it to Parker's location?" she asked. Leave aside the question of whether or not he was alive down there. Just getting there was proving to be challenge enough.

A pause. A telling one, she was sure. Then, ((With difficulty,)) it admitted.

"We didn't take this job to have it easy," Ayo said. Then she shook her head. "I didn't."

The centipede hadn't had a choice in the matter.

"Disable emotive feedback." She swung wide, looking at the picture from another angle. "All right." This was stupid, more than likely, but quick mental models gave Ayo enough confidence not to label it suicidal. She walked back in, tucking herself under the centipede's forebelly. "Centipede, extract yourself—two meters lateral."

((Brace,)) the centipede warned, flatly. Then its vast white body heaved.

The wall buckled, and another slide of ice shook itself down. Not, though, a catastrophic one: ten, eleven square meters, Ayo estimated, and the centipede shook its body to spill ice down to either side. With her body below it, the centipede's first directive was to protect her: it didn't let them become re-buried.

The scree settled. It gave a few trailing shivers, and her suit interpreted a long groan from some vibration beneath the surface, but soon enough, the muttering stopped. Ayo let out a brief laugh. Not that the situation was funny.

"How are we doing, centipede?"

((No access to Carpenter databanks. Independent calculations estimate successful traversal chance in the low twenty percentile))

One in five that they'd make it to Parker's position. Ayo was hopeful enough, confident enough—no. Stubborn enough to try for it.

Or—no. Afraid enough. Not fear of death; she felt that, yes, but as an abstract. She didn't want to fail. Again.

One in five was still one more than zero. Twenty in a hundred was twenty more than zero, and put that way, it almost seemed like a fighting chance.

"Well, let's go."

If the centipede thought she was an idiot, fortunately, it couldn't say.

The third shake could have killed her.

Would have, if the exoskeleton had poorer calibration, if she'd had poorer training. As it was, Ayo's conscious brain was booted from control entirely, as her body reacted on instinct. One second, three, five—she lost track of time. Time returned only slowly, after the world righted itself again.

She was hanging from an exoskeleton-enhanced grip over a crevasse.

She didn't look down to see how deep it was. Above her, the centipede was moving, seemingly erratically—trying to find a stable path to her. She flattened herself to the wall, felt for handholds and footholds, studied the flashing indicators rioting in her HUD. Managed, through effort and no small bit of luck, to get herself up over the lip just as the centipede scrambled to her.

Then she lay there, staring up at the centipede, gasping.

Am I alive?

The centipede didn't answer her unvoiced query. But after a moment, unprompted, it said ((Geologic activity increase of 37 percent over previous incident.))

"It's getting worse." Punctuating her words, a shelf of ice detached from somewhere to Ayo's right, widening the crevasse. She rolled to her hands and knees and distanced herself from the ledge. Even the centipede sidled. "Parker?"

((No signal.))

Well, she hadn't expected one. She swallowed, then swallowed again. A bitter taste climbed the back of her throat. "Chart a course." She was shaking. She could grind that out with action, she was sure. Keep moving. Don't look down. Don't think. Just move. "What's the best path to get us to Parker?"

((No paths are advised.))

Ayo's face twisted. "Calculate it anyway!"

The centipede reared.

Ayo stumbled back, some vestigial part of her brain seeing the sudden motion and interpreting threat, looking for defense, looking for shelter. The centipede towered above her, alien for all its engineered relatability. Then, trembling, it let itself back to the ground.

That hadn't been subtle, in the least. Ayo let out a breath, fanning her annoyance to cover her fear. "Centipede, disable—"

No. That wasn't right. Emotive feedback was already disabled. Had been this entire way.

Ayo stared at the centipede's sensors, so carefully styled to suggest eyes. There was a machine intelligence behind those, no animal intelligence. Nothing with feelings. Not really. Just a lot of software to ape them.

The knowledge didn't stop Ayo from shivering, as though a thread of cold air slipped inside her suit.

As though a thread of cold air could. Her suit was pressurized to one Earth atmosphere—more atmosphere than Enceladus had. A leak in her suit would depressurize the whole thing, not let a cold draft in. It was psychosomatic. A sense memory, maybe: a creeping reminder of a previous failure. Unease slipping in to the tune of—what, a bug in the software? A failsafe she'd never known about? An aberration?

I don't want to be here.

The thought hit her with more force than she expected.

I shouldn't be here. Even the centipede, a machine specifically designed to support rescue efforts in dangerous situations, doesn't want to be here. Look at it. It's afraid.

She took a breath, and it turned into a hiccupping sob.

Swallow it. Ignore it. You've got a job to do out there.

Out, across the shattered landscape, across the uncertain glacier. Down there, across that once-traversable plain, Parker was either dead or alive. If alive, the medical care Ayo could provide for him might or might not keep him alive until they reached Carpenter. If they reached Carpenter. The journey out was only half the battle. It had been a journey she'd undertaken with hope, at the beginning—or, if not hope, a resolve to do all she could. To make a bid for the most favorable trade. One sizable risk on one known human life, winning one potential human life preserved.

What good was human hope against the calculated risk assessment of the centipede? At some point, that human cognitive distortion—that faith that death was something that happened to other people—worked to preserve populations, if not individuals. Ayo's job was to walk out onto that murderous plain. But Ayo's job was also to recognize that one downed surveyor and one downed rescuer was worse than one

downed surveyor and one rescuer who knew when to leave well enough alone. At the end of the day Carpenter would rather have one corpse than two; but they'd rather have zero than one, and what Ayo had to guide her was speculation, bravado, suspicion, and the cold logic of the centipede wrapped up in its emotive tones. She didn't know anything.

Neither did the centipede, of course. But it trembled. Surely she hadn't imagined that. It had trembled.

What's the trade?

The words, when she found them, were already catching in her throat.

"Centipede," she said. One potential life forfeit. One ascertained life preserved. And one—what? Piece of equipment. Virtual life. One centipede out of danger. She wouldn't have turned back, for herself. "Chart the safest course to Carpenter. Maybe we can get ourselves home."