

# Sisters Under the Skin:

A SciFi Caving Novella

By E.C. Stever

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## **Sisters Under the Skin**

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## Chapter 1: Intruder

There was an intruder in the cave.

Cordi's hopbot squawked its warning, startling her just as she pulled herself up to the rocky ledge. Cordi lost her grip on the wall and fell backwards, swinging on the rope, twisting in the harness so her headlamp illuminated the cave floor twenty meters below her.

The fist-sized hopbot flexed its artificial muscle and bounded out of the entryway crawl, onto the gypsum floor of the breakdown room beneath her. A second hopbot from the swarm overreacted to the warning call and rolled past its sister, plopping into the cave stream. That bot floated out of the cave, screeching in protest.

*If I lose any more of those, this whole damn survey is going bankrupt,* Cordi thought.

She descended quickly, burning her hand against the rope. It was bad enough she'd wasted the last hour losing an argument with her bladder. Now someone was interrupt—

But Cordi's annoyance fizzled. She stopped her descent.

No one besides Professor Sutter knew she was here. And the supply drop wasn't due for another two days.

*Was her secret finally out? Had someone guessed?*

Cordi's palm felt slick against the rope. Her shortened legs, both amputated just above the knee, dangled in the harness.

*It could be anyone.*

Professor Sutter, she hoped, or more likely one of Sutter's students since the professor never left her office these days. But they wouldn't barge in this way.

It could be a newbie prospector or some retreating idealists from the *Etsai* movement, armed and stupid enough to take hostages. But they never ventured this far from the Habs, and besides, who would pay Cordi's ransom? The University? Not likely. Not for half an old woman.

No, there was only one kind of person who'd sneak into her cave, way out here in the Akelarre wastes. It had to be claim jumpers. And the violent ones travelled in packs.

*Time to move. Now!*

Cordi had to get to a high spot, quickly. In the years since her accident, she'd learned a few modifications. Without her lower legs, she couldn't ascend the rope at full speed. Instead, Cordi used the stronger of her two legs as a pivot in the loop where her foot would have gone. The grooved caps she wore on the end of her thighbone made this almost painless.

Her belt ascender was engaged, so Cordi flung herself up the rope, rather than stepping into the loop and pushing herself up. It took a lot of arm strength, but then again, she was lighter than most other people. The modification worked fine.

She stopped her ascent just below the lip of the ledge. Below her, Cordi heard the clunk of a carbon-polymer helmet, the scrape of cloth against gravel. The intruder was rushing... or clumsy.

No one that sloppy was a caver from the University. Claim jumpers? Maybe. But she only heard one.

Cordi snapped up the line with three quick movements. She mistimed the kick off of the wall, and the ledge scraped the inside of her wrist, leaving a long red burn, but not drawing blood. Cordi dug both of her elbows into the gypsum rock and, with a grunt, levered her body onto the ledge. She was safe.

Cordi rolled over and winced as a fractured formation pressed into her mid-back. Her breath was ragged, her heart pounded in her temples, strong enough to tremble the strap of her helmet.

Her time was up. Cordi always knew that the claim jumpers would show up eventually. Knew their automated sifters would see through the lies in her last data dump. Now they'd come for her, armed with information and weapons, and would demand she tell them what she had found here. Cordi's secret might be stolen out from under her. She was so close! Days away.

But there was no more time to ponder. The intruder was already birthing into the cave.

Cordi tapped a simple rhythm on her helmet, and doused all of her lights. The headlamp and auxiliaries clicked off as one. She pulled up on the rope, piling it next to her in a loop. Then Cordi rolled to the edge and peered below her, into the dark.

A young woman crawled into the breakdown room.

She stumbled as she stood up and stretched her lower back. Her Grebaker series headlamp raked twelve-thousand lumens across the off-white walls. The woman pulled an expensive cave bag from the crawlspace behind her, and slung it over her shoulder. Cordi could see where the cave had clawed at it, marking the gaudy lime green bag with brown and white stripes of mud.

*Expensive gear for a claim jumper.*

The intruder blew on five Sua-globes in her palm, sending them spinning into the cave's interior. Cordi covered even the faint illumination from her helmet control panel, for fear of disrupting the Sua-globes' pattern as they set up in a grid across the cave. No reason to give her position away. The woman would notice the rope and bolts soon enough.

*Five globes! And a new Grebaker headlamp? This wasn't the Etsai idealists or a normal claim jumper. They wouldn't be so wasteful. Was it a newbie prospector? Way out here?*

She met these types from time to time back in the Habs of the Western Lava Tubes. The hopeful prospector, loaded with half-baked ideas, hoping to bag the big-riches and find a microorganism that turned human waste into palladium, or some other fairytale nonsense. Akelarre's surface radiation killed optimism just as well as it killed humans. If the threat of radiation sickness didn't quell their excitement, the cancerous sores usually did the job.

The young woman fumbled with her headlamp, clicking through all of its settings twice before finally turning it off. The second-to-last click threw a beam of light directly at one of the Sua-globes, and it slammed against the nearest wall, and fell dark.

Cordi smelled the citrus-zinc from the woman's over-applied skin paste. It overwhelmed the pleasant mustiness of the cave. The yellow of the Sua-globes made the gray-white gypsum walls seem garish, like an over-lit Hab back in the Lava Tubes.

Cordi watched as the young woman took out a lighter and flicked it, using the flame to gauge the air. Only a newbie would do that. *But how had she found this cave?*

"Hello? Cordi?" the young woman called out.

Cordi said nothing. It would be a simple thing to learn Cordi's name if you poked

around at the University data files.

Still, the young woman seemed disoriented. Maybe Cordi should confront her now, while she had the advantage.

"Identify yourself," Cordi said, patching the vocals through one of her hopbots. It sounded as if Cordi was in another part of the cave.

"Identify? What are you talking about? I'm Rhin. Professor Sutter sent me. We met last year at the first-year mixer."

"Where's your ID?" Cordi asked.

"What?"

"Show me ID or I'll disappear into the cave. I can wait you out. I'll disappear like a spider."

Rhin opened her bag, fumbled with a small case, but then cursed, loudly. "I forgot it. And I don't need an ID to get into a cave. We've met."

"Right. And I'm supposed to believe you walked here through a hundred kilometers of surface radiation? Get the hell out of my cave, whoever you are. Tell your friends it didn't work."

With her last statement, the communication patching failed, and Cordi's words were marred by a blast of feedback.

Damn it, she'd just given away her location.

Rhin looked up at the ledge where Cordi hid. "I got a ride."

"A ride? That far? A shielded ride?" Cordi asked. *Who had that kind of money?*

"Yes, a shielded ride!" Rhin yelled. "Do you need to repeat everything I say? The cave already has echoes. Doesn't need more."

Cordi waited a beat. It was logical but implausible. "I don't believe you."

In a practiced motion, Rhin pulled out a sleek weapon from her bag, trained it on Cordi. The red dot from the sight-laser jittered on the ledge just below her. *A blister-ray?*

"Then we got that in common. 'Cause I don't believe *you*. Adjunct Professor Cordi Akelarre is expecting me. You're not her. Come on out where I can see you. Then I'll know who *you* are."

A second—then a third—warning flashed across Cordi's heads-up display. Another intruder? No, this time there were two. And both were already *inside* the cave.

A hopbot reported motion in *Mudrable*, a miserable muddy slog, about fifty minutes from the entrance. A second hopbot picked up motion near *The Pockmarks*, a wide swath of pools and shelfstones along the cave stream. That was only fifteen minutes away, depending on your agility. Both intruders were working their way toward Cordi and Rhin.

Who else was in her cave? *If I'da known that I was hosting, I'da baked a cake.*

Cordi tapped on her helmet, but the hopbot she'd placed at the surface entrance to the cave did not respond. The fuzzed out beep told her it couldn't connect. Her front door was wide open!

Cordi laughed bitterly. "You don't trust me?" She rolled away from the edge. "Who cares? You can't hit me from down there."

"Yeah, well, I'm not much for games of trust," Rhin said. Her voice sounded hard, professional. "But in a cave you don't have to be accurate to cause shrapnel damage."

The business end of the blister-ray shook on the wall above Cordi. *Damn it, she was right.*

Rhin continued. "Why don't you come down *spider*, so I can make sure you're really Cordi."

"Why would I?" Cordi called out.

Rhin charged the blister-ray with a click and a whine. "Because I know what you found. Your secret is out. So come down. Sutter thought you'd want to talk to me."



## Chapter 2: Identity

If she stayed on the ledge Cordi couldn't get the weapon away from the girl. So *what the hell*. She had at least fifteen minutes before the other two intruders got to them. Maybe she could do it.

Cordi had an Obs knife strapped to her thigh, plus a few other tricks in her cave bag too, if she could get to it. Maybe she could lull Rhin, by pretending to be helpless, play up her disability. She'd plod along, act dull, and wait.

Cordi stood up slowly, clicked-in her harness, then yelled, "On Rope!" She tossed the rope casually off the ledge, half-hoping it would hit Rhin.

She walked backwards over the ledge, and smoothly slid down the rope, keeping one hand free and relaxed, the other managing her speed with her belt descender.

Cordi landed softly in the gypsum sand, but she jangled her bolts and clips so Rhin would hear her. She started to detach her harness, keeping her eyes shut.

Rhin whirled, her overstuffed side-pack carrying her a bit further than she expected, causing her to stumble. Her headlamp blared on, and she shone it directly into Cordi's face.

Cordi waved for her to turn it off, then opened her eyes and finished taking off her harness.

"Oh Cheeze! It really is you!" Rhin exhaled. She lowered her blister-ray.

"It's nice to be so popular all of a sudden," Cordi said. She kept her tone neutral, her face slack.

"You were supposed to meet me outside," Rhin said. Her voice had softened.

*Who is this?*

"Yeah I must have missed that message," Cordi said absently. "You always come armed into a cave?"

"You always ID?"

"Way out here, yeah," Cordi said. "Nobody's your friend when you stake a claim."

"Nice one. Maybe you should write ads for PharmaTech instead of scurrying around in the dark," Rhin said. "I didn't know where you were, so what was I supposed—"

"Ah so that's why you barged in here unannounced, then threatened to shoot me.

I'd hate to see what happens if a guy stands you up for a date."

Rhin snorted. "Calm down. I thought this was part of the test. Something about cave safety or 'the young novice must knock three times'. You know, that old crap." She gestured with her blister-ray, but did not put it down.

Cordi's heart rapped in her chest. She could take the blister-ray away from Rhin. She just had to get a little closer.

"So you pulled a weapon on me?" Cordi bent over at the waist, shuffled forward. If she went for her knife now—no, that would be too obvious.

"Well you weren't coming out. I started to think...We are *way the hell out here* in the middle of nowhere. In a cave. Maybe you were somebody else. Maybe one of the bad guys got to you. I wasn't sure it was you until I saw your legs—"

Cordi grimaced, scooped up a handful of cave dust and threw it in Rhin's face.

Rhin staggered backwards, and Cordi leapt at her, hand scrabbling for the weapon. She jammed her thumb into the soft nerve-bundle in Rhin's wrist and twisted.

Rhin cried out, loosened her grip on the blister-ray. Her breath came in harsh gasps.

Cordi slapped at her hand, sent the weapon skidding off into the dust. She pushed away from Rhin, who was still wiping at her eyes, then scooped the blister-ray off the cave floor.

*She had it.*

Cordi pointed the blister-ray at Rhin for an instant, then lowered it. She started to laugh. "It's a survey laser."

Rhin stopped coughing, stopped wiping her face. "I had to improvise," she said shrugging. "Nice attack moves, by the way."

Cordi nodded. Her laughter petered out. She was trembling slightly, from the exertion, from nerves, probably both. *She's not so useless after all. Still too big in the hips to survey caves, but not useless. Who is this?*

And then it clicked. They had met once. And it had been one of those awkward hopeful mixers that start each school year. This was Sutter's student, come two days early. This was Rhin, the girl she was supposed to meet. She'd forgotten.

Cordi twisted her face into a wry smile, then threw the survey laser onto Rhin's cave

bag.

Rhin was as described. Early twenties, doughy, primed, soft as the sugar-puffs Cordi had eaten as a child. She was part of Professor Sutter's cadre, but the weakest part, and Sutter wanted Rhin gone.

*Give her something to think about*, Sutter had said. Cordi knew what that meant. Wear her ass out, just before a difficult examination. Make Rhin quit the exploration program.

It would be easy now that her adrenaline was up. Cordi felt a little ashamed of her fear, but that was dwarfed by a dull throbbing anger. The girl could have announced herself before entering the cave.

"That line about shrapnel sounded convincing," Cordi said shakily.

Rhin smiled. "It's from that vid about Boston's first cave trip to Europa. 'A Frozen Dark', remember?"

Cordi didn't. She didn't have a twenty-something's luxury of vid binging.

"You were supposed to show up in two days," Cordi said.

"Dad's money paid for the shielded ride, but this was the only daytrip I could schedule. Sutter told me where the drop-off was, and I hiked the rest of the way. Rhin brushed the cave dust off of her cheek. I sent you a Meet-Me change request. You never replied."

Cordi smirked. "Commo reception must not be great in here today. Weird."

Now that she was closer, Cordi could see why they wanted to kick out Rhin. The girl was big. Heavy certainly, but even if she lost weight, her frame was large, not ideal for cave exploration. She was pretty, but in all the ways opposite to current fashion: long jaw, tall, wide hiped. She'd tower over Cordi, even if Cordi had her legs back. Why did Rhin want to explore?

"And you came alone?" Cordi asked. She watched Rhin's face intently. There was still that mystery. Rhin was who she claimed to be. But all of a sudden there were three people in Cordi's cave. Or had they been hiding inside already?

"I got a ride, but besides the driver, yeah just me. He sped back to the Habs as soon as my bags hit the sand."

Cordi turned her head and used her audio channels to check in with her hopbots.

None had reported motion. Yet. The original alarms could have been a glitch, or her own damn jittery nerves. Someone had been pointing a survey laser at her, after all.

Her fingers fluttered across her helmet, rerouting two more hopbots to the front entrance just to be sure. What had happened to the others? Or was that a glitch too?

"So you think you figured out my little data problem here. Or was that a line too?" Cordi asked. She scratched the nearest roof spall, rubbed the grit from the gypsum under her fingernail.

Rhin nodded. "It's a gypsum cave, obviously, so it's soluble. This cave stream's too unreliable for sustained use, and too distant for heavy filtering. The water shows occasional spikes of particulates, but no pattern tied to sudden rainfall. That's your big secret I'd guess, a filtering mechanism for the particulate spike. But if you figure it out, PharmaTech will buy it, right?"

*Not exactly.*

Despite dozens of tests, Cordi hadn't identified why the water was bad, unfilterable for drinking. Akelarre was a dry planet, so PharmaTech kept her going on a trickle of funding. But pretty soon, she would need some progress to report.

She didn't care. Cordi had some real ideas about the problem, of course, but had hidden or altered the data from the tests that mattered. What she surmised, was that the spike was tied to native organics. Microbial alien life. In her cave. Under her staked claim. She'd be rich.

All Cordi had to do was find it. Which meant keeping the nosy students away from the real problem, and making sure they stayed focused on the rabbit hole: The particulate spike.

"Yep. Any ideas?"

"Hundreds," Rhin said. "But I haven't had a chance to look over all your data. Second-Term examinations start in a few days. I can't believe Sutter would send me out here... right now I mean."

*Petulant and slow. Sutter was going to pay her double for this one.*

"What causes have you eliminated?" Cordi asked, in a bored tone. All the students ran the same tests, had the same answers. They were like weak copies of whatever professor they studied under.

"I've just told you I haven't seen the data."

"Rhin... right now your job is to help me with this field problem. It's an assignment, and you'll be graded on it. When you're in my cave you need to focus."

Cordi caught Rhin staring at her leg caps.

"Let's get this over with," Cordi said. She pointed at her leg, dangling one in the air. "Blood clots. Back when we didn't have space-worthy cave suits."

Next, Cordi pointed at her short graying hair, "Convenience, not sexual orientation. If I want to color it, I do an overnight in a manganese cave."

Finally she held out her hand. "And this is what I use to write up your evaluation for today. You do good, you stay in. You do poorly, it's back to the hydroponics-farm or wherever it is you're from."

Rhin smiled, but it was perfunctory. Her eyes glittered in the light of the Sua-globes. "Nice. Since you have no friends, you must have time to practice. Let me try."

Rhin pointed at her wide hips. "Got this from my Grandmother. Great for popping out babies, not so good for cave exploration."

"I don't need—"

Rhin ignored her. She pointed at her stomach, which strained against her coveralls. "Flonuts, they're tasty. No matter what I eat it turns to fat. May as well taste good."

Rhin bent at the waist, so her face was level with Cordi's. "And you don't need to tell me you're a hard-ass bitch that can run me into the ground. You live in a cave by yourself and drink stream water. You're a goddamn *spider*."

"If you want to be a microbiologist—"

"—I am a microbiologist," Rhin interrupted.

"If you want to be one on a survey crew," Cordi said, "then you have to pass my field course. We both know the field's where the discoveries are made. Not in the lab."

Rhin looked away. "We both know they'd never take me."

That tore down Cordi's next attack.

Rhin was right. Her transcripts would mark her as bright but *non-efficient*. They both knew what that meant. After Cordi's accident, she was put in the same dusty box. Diligent, qualified, but non-efficient. Sutter was the only one who'd considered Cordi's application.

"They'll look for a reason to say no as soon as they see us," Cordi said. "People like you and me, we have to be the best. We have to be better than any *efficient* person. That's all you can control."

"Control? You're a spider now," Rhin spat. "You scurry around in the dark. You've been here a year without figuring out the water problem."

Cordi stiffened. "I like the dark," she said. "In the dark, you are only ever yourself." Her words drifted along the cool air of the stream and were carried out of the cave.

She looked at Rhin. "The data-logger in the stream is the first test. I'll show you where it is."

Rhin replied, sullen. "Ok, but before we start I have to go to the bathroom, where's the porta-toilet?"

Cordi smiled. Everyone hated this part of the field test, even her.

"Bag or bottle?"

## Chapter 3: Muons and a Message

Cordi had primed the firing cap on her first new bolt when she noticed something was wrong.

They had finished with the stream monitor quickly, and Rhin had found nothing new. The more advanced tests showed a knot of complexities with particulates, potassium ions, organic material, and of course, gypsum in solution, skewing the results. It all amounted to the same: the water was unreliable for commercial purposes.

Next was the Hodoscope. Rhin had struggled with the rope climb to the main alcove where the muon detector was set up. She'd made it, but her arms shook with the effort.

The girl didn't trust her own equipment. And her shoulder and arm muscles had paid for her fear.

*No wonder Sutter wants you to quit. You wouldn't last one day on a real trip.*

Rhin would run through all the basic diagnostics now. Cordi knew the type. The stubborn proto-scientist who thinks only they can run the standard tests correctly.

*So let her.* Cordi could bolt in a new climbing route and build up a sweat while Rhin, happy to be left alone, would come away with some data they already had, probably just enough to follow a tentative conclusion with the weak adverbial, "Possibly, but more data is needed."

Pass or fail, Cordi didn't care. After Rhin left, Cordi could get back to exploring. The microbial colonies were somewhere above the water. She had a good lead in the Pock-

A movement below her, caught Cordi's attention. She paused the firing mechanism for the self-applying bolt. Had she imagined it? Was it just one of the Sua Globes drifting off course?

No, something was wrong. She smelled... coffee?

Yes, definitely, coffee. She knew the smell, had been going without for the last few months to save money. Was Rhin taking another break? *To brew coffee?*

*How useless could one proto-scientist be?*

Rhin spoke, her words echoing off of the alcove walls.

"Huh, that's weird."

*That's weird*, was the siren call of science. Nobody ever said, "Of course," or "I've

figured it out." Rhin had found something.

Cordi placed the self-applying bolt back in her waist belt, and climbed back to the alcove. She unhooked her harness, then crawled over to the Hodoscope station, clearing a boulder by flinging her body over it.

She found Rhin frowning over the confusing readouts. But Cordi knew what the problem was. Rhin had set up the Hodoscope backwards.

"I'm getting muons but, more weirdness," Rhin said. "The particles indicate a large void. But they're flowing anti-sunward." Rhin pointed behind her.

Cordi laughed, then flipped the Hodoscope up, at less of an oblique angle. She heard the muon detector panels whir in response to the shift.

"You don't get reliable data when you measure *through* the planet's center."

Rhin frowned again, then a smile crossed her face. "The diagram was backwards, not me. And the angle wasn't that severe. It's not through the planet. Look. It's showing a void, 283 degrees strike, 40 meters above us."

"With a C-time of fifteen minutes? Who cares?" Cordi said. "Probably just a push of noise from *Great-Stars*. More radiation or something."

An alert pinged on Cordi's helmet.

*More motion? No. A message. Eroded, but discernable.* The stupid hopbots had picked it up twenty minutes ago, and shunted it in a low-level queue. Only now was it getting routed to her.

Cordi opened the message, by tapping on her helmet. She keyed the audio down, so only she could hear it. Two men were talking.

- **She's suspicious.**
- **–Yeah they both are.**
- **Don't worry. I'll take care of it.**
- **–Be quick, they might–**

That was all. The message faded.

Cordi requested all hopbots to make a report, but several of them failed to respond. The two she'd placed at the entryway were missing.



"It's pretty clear," Rhin said, oblivious to Cordi's other problem. She patted the display which showed a map of the supposed new find in the cave. According to the uncorrected data from the muon detector there was a small crawlway, no more than a line on the display, which led to a giant void a hundred times larger than the breakdown room below them.

Cordi felt as if she were falling. *Who was in her cave? Were they with Rhin? Did she know?* Cordi had to figure that out.

"I pushed that crawl already," Cordi said, fiddling with the display. "It dead-ends."

Had she? The muddier crawls up here had bad air if you disturbed them. She hadn't explored all of them fully when she'd gotten smogged out. It was possible. But who was in her cave?

"Well that's the direction the stream flows from," Rhin insisted. "It would intersect the water table. Maybe you hit some mud."

"Stream? With a void that size you'd have a lake. But listen Rhin, I just picked up something on my audio...."

*A lake?*

A lake suitable for hydroponics. They'd be set for life.

Even better, a lake indicated new ecosystems. There would be new species of macro and microorganisms. Lots to discover, and probably a few to sell to PharmaTech.

Cordi thought about it. She hadn't dug out any of those crawls, not with the smoggy mud. She recognized the passage now, the upsloping curve that bent sharply down before widening and then corkscrewing downward.

Cordi tapped her helmet, bringing up the HUD display with the cave maps the hopbots had compiled. She flicked through the first dozen and found the match: Corkscrew #4.

That crawl started only a fifteen minute hike from this alcove. It ended not in mud, but in a tight squeeze that she hadn't been brave enough to push by herself.

This was it. Damn it, now she'd have to share the discovery with Rhin. But maybe she could bluff the girl, get her out of the cave.

"Rhin, I can't be sure, but we might be in danger."

Rhin tapped the display with her bloated clumsy fingers. "I'm not that dumb Cordi.

This is the chance of a lifetime. If we don't go, somebody else will. Sutter will see this data, and we'll both be pushed off the project. The smart and the beautiful will triumph again. Tell you what, if you get me there I'll name the lake after you. I promise."

Cordi stared hard at the display not wanting to look at Rhin. Could Rhin make it? Would her hips pass through—

An explosion reverberated through the cave, flinging dust across the Hodoscope display. At first, Cordi thought she had left a self-applying bolt in its hole, but the noise was too loud and besides—

Another explosion, then a flash of energy weapons discharged at close range. There was a flurry of weapons fire from beneath them, melding into the roar of the explosion, and then, nothing. Just a ringing in her ears.

Cordi heard them first.

Lyrical words, belying their intent. She heard several men and women in the breakdown room below them, the whine of weapons being charged. It was the Etsai. Nobody else spoke that language. Nobody brought weapons on a caving expedition.

"It's Etsai," Rhin said. She covered her head lamp. "The Sua-globes... they'll know we're here."

*Etsai? Who were they shooting at?*

Cordi looked behind her, then at Rhin. "They already know we're here," she said. She fluttered her fingers against her helmet. Along the stream, a few hopbots now emanated light and thrashed about. That would confuse them, mask Cordi's location.

Did the Etsai see the rope already? They must. Cordi heard them echoing down through the breakdown room.

Lights slashed against the ceiling outside the alcove. The Etsai were fearless free climbers, but it would take a while. They'd use the rope to get up here if they could.

She bounded over to the formation where the rope was tied in a Wrap-3 anchor, then took her knife from its sheath. Her hand shook when she thought about the last time she'd used it in an emergency. Back then, the blood had made the handle slick—

Cordi sawed two-thirds of the way through the rope, leaving only the rope's covering and a fraction of the core intact.

"If they're dumb enough to trust unknown ropes, then let them." Cordi grimaced as

her leg caps scraped against the gypsum rock. "Did you tell anyone you were coming here?"

Rhin paused. Shook her head. "No, only Sutter. But how could they..."

Cordi powered down the Hodoscope, purged its memory, then grabbed her cave bag. Most of her good equipment was below in the main breakdown room. Rhin had a smaller day-bag with her, overstuffed with snacks and various electronics.

"We'll head to the void. No one knows about it," Cordi said. "Once we're out of the main rooms, they'll have a hard time finding us. We'll have water there at least. We'll wait them out. Days if we have to."

The plan wasn't as sure as she made it sound. But Rhin was panicking and that wasn't the best mindset to have when crawling into a small space. Reality could come later.

She led Rhin to the crawl entrance, keeping her red light partially covered as they picked their way through the cave.

An opaque shelfstone vibrated from their footsteps as they passed. The pockmarked floor, divots formed by long dead microbial colonies, made for slow going.

Corkscrew #4 was one of several honeycombed entrances, formed when a thermal event had sluiced up and poked fingers through the soft gypsum. Even if the Etsai had seen their lights, they'd never know which of these crawls they were in.

"You go first," Cordi said, calculating. "I'll tell you what to do."

"What about our gear?"

"Push it in front of you for now. When we reach a wider spot, we'll ditch what we don't need. Otherwise they'll know we were right here."

A cry of pain echoed across the cave, followed by harsh laughter.

"The Etsai just found out about our rope. We need to move."

They gathered up their gear, and Rhin scraped into the small crawlspace, pushing the bag in front of her, inches at a time.

Cordi paced, wanting nothing more than to enter the crawl, to escape. She knew the real reason she'd told Rhin to go first.

If Rhin got stuck, Cordi could still back out and be kidnapped. And kidnapping would be better than waiting for Rhin's body to decay.

Cordi reached down and adjusted the caps on the end of her legs.

She'd already watched that happen once.

And once in a lifetime was enough.

## Chapter 4: Into the Dark

They crawled slowly and kept their lights off.

Cordi loved the dark. The absolute lack of one sense didn't sharpen others, as some said it did. Instead she was more aware of her vision, more aware of the way her eyes cast about for anything to look at, to right herself, to anchor into the world. Without vision she felt unmoored. She could be anyone.

Cordi was aware of the bright scrape of rock against her back. The gray fog of bad air in her nostrils. They had to be careful in this crawl, and not kick up too much mud. Because they'd smog up the air pretty quick. Because—

Cordi touched the place where her legs used to be. The knot of muscle, there, just below her thigh bone. You had to be careful, because sometimes you lose.

Ahead, she heard the crunch of the gear bag, the corresponding grunting as Rhin used her toes to thrust her body forward. Cordi had no such ability. Her movement was all core and arm strength, first pushing her bag ahead, then grasping with her gloved hand and pulling her body forward.

Periodically she asked if Rhin was okay, and Rhin answered in a muffle, not words Cordi could make out, but the tone was okay. Tired yes, but okay.

Cordi added to her assessment of Rhin: not especially brilliant, and slow, but also dogged. She'd known low-ranking scientists like that, people who disappeared for decades to study the minutiae no one else bothered with. After many years, those obscure scientists returned to report one small ledge of knowledge, one new facet to examine the jewel. Sometimes that small ledge led others to new rooms of insight, sometimes to celebrated formations of information. Look at the microbial revolution. That had started with a suddenly corroded headlamp.

Obscure facts changed the world. Rhin was tough. Out of shape and weak, but tough. She'd gather those facts. She'd make a good scientist. If they survived.

It was at least an hour before they came to a bend where both women could sit up. Cordi could have gotten through faster, but the slow grind was easier on her shoulders, which were numb and tingling. She'd need a muscle relaxant if she got out of here. Maybe a jug of wine and a hired companion to pour it for her too.

Cordi clicked once on her red light, covering it with a glove. Rhin sat with her head resting against the rock, her hair plastered across her forehead. She'd unzipped her coveralls to examine her stomach. It was not bleeding, but scraped raw.

"I don't think they saw us," Cordi said.

Rhin nodded, but did not speak.

"We can wait it out here, a few hours, then I'll crawl back and see if they're still there. After a while, someone will come for us."

Rhin flicked her lighter on once, but the weak flame wavered then went out. That meant low oxygen.

"I lied to you," Rhin said. Her throat was full of phlegm. "I did tell someone I was coming here. I had to. And that's why the Etsai aren't going to quit trying."

Cordi turned off her light. Sometimes it was easier to talk this way. Without the person looking away. Without an accusing glare of light.

Out of the corner of her eye, Cordi saw a faint glow of yellow. The Etsai were already in this crawl. They were gaining.

"So you sent the Etsai a MeetMe request too?" she asked, a lame attempt at humor. "It's just bad luck. It happens."

"No, I called my father. He's Minister of Agro," Rhin said. "Belka, you heard the name? The return weapons fire you heard was my security. They..."

Cordi surprised herself by replying calmly. "Then they'll rescue us."

"No, only two men," Rhin said. "Good guys. Uncles almost. But they know nothing about caving, and besides they're dead. If the Etsai made it in here then they're dead. The Etsai must have been waiting for me."

Then that's who was shooting *back* at the Etsai. They'd died to give Rhin a warning, a chance at escape. She wondered if the security agents had been the ones inside her cave, setting off her alarms. But if so, then why two alarms in two different parts of the cave?

Surely at least one of Rhin's security would be stationed near the entrance. Why would they go so deep into the cave, slog fifty miserable minutes all the way to the *Mudrable*? Had the Etsai been here all along?

Rhin started to whimper. Cordi placed her ungloved hand on Rhin's arm, feeling the

cold of the girl's skin. She sometimes wished a cave could dampen sound too, so she could be free of all of this human nonsense. She clicked her light back on.

"Then we know that they won't kill us," Cordi said. She was scrambling to find an emotional foothold, some angle that would work for her, give her leverage. If Rhin lost control in this crawl, they'd both be caught. *Calm*. She had to pretend to be calm and hope that Rhin followed her lead.

"But we need to keep moving. Eventually Akelarre Security will come for us. Your security detail must have been due to check in with them. Right?"

Rhin nodded, her eyelids looked pink. Her lower lip trembled. "Yes... Yes, that's true."

Cordi had a few seconds before Rhin lost it. She'd said the men were like uncles to her. Maybe—

"Your uncles died to keep you safe, Rhin. To honor them—" Cordi squeezed Rhin's neck, "—you can't get captured. So we'll fight those Etsai *sizzle-sticks* the best way we can."

"But we don't have any weapons."

Cordi unzipped her bag, and took out her last pack of hopbots. She unsnapped all eight of the fist-sized bounders, then inflated them. It would be enough if they swarmed.

Her fingers fluttered across her helmet control panel, and then the bots were arranged in two parallel lines. Cordi had already passed them their instructions, but Rhin needed a morale-boost.

"What were their names?" Cordi asked. "Your uncles?"

"Davel and Maartinesk."

"Davel," she said. Half of the hopbots bounced up into the air, and then mostly landed in the same place. "Davel, your job is to head back down the tunnel to that big stinking mud crawl. I want a full air sample from that mud, so that means jump up and down, and disturb it."

"But that will kick up the CO<sub>2</sub> right there. We might not be able to breathe—"

"And any Etsai will have the same problem," Cordi answered. "Now for Maartinesk." The other four hopbots bounded up. "Your job is simple. There are some wild creatures behind us. If you sense any movement, I want you to swarm, try to scare them off. Don't

stop swarming, no matter what."

"What? Will that work?" Rhin was half-smiling now.

"I've gotten a black eye from a helpful hopbot, and that was at half power. Now they're set to maximum swarm. The first Etsai will have a broken nose and teeth, at least. They're tough little bugs."

Rhin guffawed. "I was right, you really are a hard-ass bitch." She smiled, the strain on her face lessened. "I think Davel and Maartinesk would have liked you."



## Chapter 5: A Surprise Encounter

The Etsai's panicked screams made Cordi smile. After a few minutes, a burst of weapons fire echoed down the tunnel and the hopbots on her HUD disappeared.

*They didn't like our trick,* she thought. But there was no time to gloat.

Cordi led the crawl, and she told herself it was because she might need to expand the tight squeeze that was coming up. That was partly true. But a harder truth lay just beneath the surface.

From behind them, the Etsai's light grew closer. Cordi pushed the bags in front of her, scraped forward. She repeated the motion, dozens of times, and at last found the *squeeze*. Cordi hadn't tried to get through this tight spot a few months ago. But back then, she hadn't had the motivation of armed terrorists chasing her, or the promise of great biopharm riches just beyond it.

Cordi slid into the squeeze without thinking.

But now, Cordi lay halfway through the squeeze, both bags in front of her, arms outstretched. She'd wiggled her shoulders through, then rotated her head to the right to avoid the spot where the ceiling and floor constricted.

Panic or pain squeezed her bowels, but she quashed that fear with sheer momentum. She kept moving, kept shimmying her body for thirty cold seconds, and then, she was free, dragging her legs through the tight spot. She shoved her bag too hard as she exited, and something inside of it shattered.

Rhin's voice was dulled, barely audible. "Can I make it?"

Cordi ignored her. *Something's wrong.*

There was nothing different about this part of the cave. The walls, rounded, drab gray-white. The floor muddier, but now sloping downward. It was not the cave that was wrong. It was Cordi.

She wanted to go alone. Cordi felt her gut telling her a cold truth. That Rhin would need a boost from behind. That even then, the awkward wide-hipped girl could never make it through the squeeze.

*Why give up the discovery of a lifetime?*

And it wasn't as if Cordi had brought the terrorists here in the first place. So they'd

take Rhin—the girl's father was rich. She'd be ransomed, then returned, and the political game would continue. The eco-terrorists against the government against the colonists. What would Cordi get out of it? After the hopbot tricks and the sabotaged rope, they might kill her.

*Just go.*

Cordi's breath came hard, but she dare not move.

Unwillingly, her mind flashed back to her last real exploration trip. Her last real expedition, on that distant moon. How could Cordi forget it? It was the day she'd lost her legs.

She hadn't amputated her own legs, no matter what the students whispered. She'd waited for help, watched her friend die, and then....

*Her gloved hand, wet with blood, slipping on the knife's haft. The ache in her wrist, as she sawed through...the body. Her arms like pistons, keeping time with the warning beep of her oxygen monitor. She would not think about this later, because there might not be a later.*

*At last, finally, the clunk of his head--the severed helmet--rolling past her, into the dark. She moved the body. The sting in her legs, once sharp, now faded. Blood clots? Oxygen deprivation? She had to escape. Had to find help.*

Back then Cordi had done what she had to, had cut through her dead friend to escape. Was this any different? Now all she had to do was keep going. The Etsai would take Rhin away, ransom her, save her. All Cordi had to do was move.

Rhin's words were deadened by the rock between them.

"Cordi, can I make it?"

Cordi was afraid even to speak. She didn't want to be a spider. She didn't want to be cruel. But she was. It had served her. If she left now, she'd gain it all: the lake, the new ecosystem, all of it. She'd be set for life.

Rhin spoke again, determined. "I'm coming through."

"Stop!" Cordi yelled. And then she had decided. She crawled back through the squeeze, and chipped away at the floor with one of her bolts, widening it. She scooped the flecks of rock, as if frantically uncovering her conscience. Cordi was the *senior* caver. She had a responsibility to those she led.

*I'm not leaving.*

Hadn't she gotten the same help on the day she'd lost her legs? The team had stayed on that moon, parceling their oxygen, searching for her. Cordi had still needed rescue. And now it was her chance to repay that debt. She'd free the girl, get her to safety, win the scientific prize. She'd do it all because Cordi really was a hard-ass bitch, and Rhin was hers to protect. The Etsai couldn't have her.

Cordi scooped another pile of chipped rock away, then hustled through the squeeze, using muscle memory to align her body in just the right way. She popped out of the squeeze, and saw the slash of lights from the Etsai. They were close.

"Go Rhin," Cordi whispered. "Shoulders through, then turn your head to the right. You can make it."

Rhin started to push her body through the squeeze, her large ass somehow conforming to the shape of the passage.

Cordi looked behind her. She could see the pale red light bobbing up and down as the Etsai crawled nearer. She had two minutes, maybe less.

Rhin paused. She said something, but Cordi couldn't make it out. The girl had done well so far, her young back could still bend in ways Cordi's couldn't. But she was stuck, probably at the end of the squeeze where you needed to shimmy your arms and shoulders. Cordi heard the scrape of Rhin's helmet, almost a sawing sound as she moved it back and forth.

*The sawing...the blood.*

The Etsai yelled, startling her. Cordi shone her light down the crawl, and saw it was an older man, haggard and bleeding. He wore not a cave suit, but normal street clothes. His arms and torso were terribly scratched. Cordi looked behind him. The other lights were faint. So this one was alone, for now.

Her attention turned back to Rhin. The girl hadn't moved, she was saying something and kicking her feet.

Cordi yelled down the hole. "Tap your foot twice if you want me to push, and make sure your head is turned to the right."

Rhin kicked her right foot several times. Cordi flipped her light to its brightest setting and shone it into the Etsai's eyes, hiding their movements.

*Why doesn't he just shoot me now?*

She wedged her body against the cave passage wall, and pushed her leg caps into the sole of Rhin's foot. For a long while there was only the sound of her grunting, and the Etsai's labored breathing, and then at last, Rhin popped forward. She paused for just a second, then pulled herself through the crawl.

But it was too late for Cordi. She dove into the squeeze head first, and wiggled furiously to the halfway point. The Etsai grabbed at her and pulled on her leg, cursing loudly in his lyrical language.

Cordi slid backwards. She pinned her left arm against the constriction, trying desperately to find a handhold. He'd seen her legs. The Etsai would know that she wasn't the girl he was after.

The wedge of rock pushed deep into her back, tracing her scapula with strong fingers. She rotated her arm left, and the pain lessened. Her triceps shook as the Etsai pulled her backwards, out of the squeeze.

Then she felt more arms, trembling but solid, pulling her forward, through the crawl. Cordi dipped her head to the right, just before she would have slammed it into the constriction. Then, she was free.

Rhin had saved her.

"You're bleeding," Rhin yelled.

But there was no time for that.

"Down the corkscrew first, go!" Cordi yelled.

Rhin was startled but did as she was told. The floor was muddy, so she slid quickly down the curved passage.

Cordi turned back to the squeeze. The Etsai wouldn't stop, and if he got through, they'd be caught.

Cordi had to do something, to stop him and the others that were coming. Her hand went to her knife, then fell away. There were too many for that.

She opened her cave bag and picked out the small metal rod with the focused explosive on its proximal end. The self-applying bolt felt heavy in her hand. She flipped off the safety and waited.

The Etsai burst through the crawl, arms in front, grasping for purchase. There was

no other way to get through. His hands slapped at her, but this was what she wanted.

Cordi held the bolt to the Etsai's forearm, and activated it. For a few seconds, the world slowed. His bloodshot eyes met hers, and he smiled uncertainly. He was attacking her, he wasn't—

There was a clink, a roar, a spray of salty blood, as the self-applying bolt exploded into the man's arm.

The world sped up. The Etsai's screams were lost in the ringing. Cordi had been thrown back, either from the force of the bolt, or her own horror. She might be deaf, but she'd done it. Cordi had bolted his arm in place.

The Etsai screamed louder when she approached him with more bolts, but Cordi was no sadist. Killing him would only make it easier for the rest. Instead, she placed the bolts in a criss-cross pattern across the narrowest part of the squeeze and fired those into place.

Cordi had constructed a gate. It would take many hours, perhaps days to cut through those bolts, and all the while this Etsai would be screaming, making it harder to work. By then Cordi and Rhin would be safe, or dead from some other treachery.

Cordi patted the Etsai's head, feeling the grit of gypsum and sweat in his hair. As an afterthought, she put a small packet of water near his face where he could reach it.

"Don't worry," she cooed.

She pulled the Etsai up by his hair, so their eyes met. "I'm sure this time, the environment will save *you*."

## Chapter 6: Barren Promise

The stream must have brought in the fresh air. Cordi could hear water tinkling somewhere in the vast cavern, smell the moisture as it weaved through the large featureless mud flat beyond them.

There was no lake, and no exotic alien creatures. Just mud. They had come this far for mud.

Rhin took out her lighter again and tested the air. It was clean.

"You were right about the cavern's size," Cordi said. She pressed her leg into the edge of the mud flats, then pulled it out with a *thwuck*. "It used to be a lake at least."

Rhin stood up. She wiped her muddy hands onto the equally muddy legs of her coveralls. "We could hide in here for days and nobody would find us. We'll find something. We have time."

Cordi squinted, uncertain. There still could be scientific riches in here, perhaps a cave pool, a slime colony with unique microbes. *Somewhere*. She looked again at the endless squelching mud. Yeah, they had time to investigate. But they'd have to stay dry if they wanted to survive.

"We should hang by the entrance," Cordi said. "I don't think we can find our way back."

Rhin put her hands on her hips. "Then I wait here for someone to save me? I don't think so."

"It's not safe." Cordi's mouth felt dry. Her ears were still ringing from the explosion. Had she hit her head? Probably.

Rhin whirled on her. "I know it's not safe! It's caving!"

"I didn't say we do *nothing*." Cordi licked her lips. She was beyond thirsty. "I said we keep near the entrance. We'll explore what we can, but without reliable light sources we can't just hike into the unknown."

Rhin reached into her bag and released several Sua-globes. They spun into the air, and then settled, floating in a slow revolving circle over their heads.

She smirked at Cordi. "I got food too. Fat girls come prepared."

"You can't use those!" Cordi yelled. "They'll give away our position. What if the Etsai

see it, and capture you?"

"Capture me? Do you know what will happen when this is over?"

Cordi shook her head. In the light of the Sua-globes the divots in the mud surrounding them looked almost like footprints. She leaned closer. What if....

Rhin continued. "When it's over, everybody will be sorry. First you'll give me a little speech, and apologize because you can't let me do what I want. Then, my father will tell me how sorry he is, but it's not safe, and I have to come home. Then the University will say how sorry they are, but legally they cannot take on the risk, and I'll have to quit the program. So what if you're all sorry? Too bad. I'm going. This might be my only chance."

"Wait." Cordi stared hard at the marks in the mud. The veins in her temples throbbed against her helmet strap. *Impossible*. What she saw was impossible.

"Wait? Wait for what?" Rhin asked. "The Etsai to break through? Akelarre security forces to come in and save the day? More photogenic cavers to steal my discovery? I came this far. I'm going to see it first, even if it's nothing. At least it will be *my nothing*."

"But you're not the first." Cordi shone her light onto the footprints. Thousands of bootprints, heading into the mud flats But only the left foot. There were no right bootprints. It was impossible.

Cordi heard a squeak. Something struggled in the mud a few feet away. She drew back.

Rhin paused, then laughed and strode over to the struggling creature. "Yeah, maybe we did get scooped!"

She dug out the furrowing thing and cradled it in her arms. It was Cordi's hopbot. At least that explained why Cordi didn't have data on this place.

Cordi tried to connect to it, but the hopbot seemed dazed.

*Footprints? Here?*

Worse. Cordi saw her own prints, leading deep into the mud. The caps at the end of Cordi's legs left a distinct crescent impression. She saw them clearly, leading away from the crawl they'd just popped out of. That was the path she needed to take.

*What game is this?*

She looked at Rhin. Had the girl been playing her this entire time? What game was this?

"Cordi, you're shaking. Sit down."

Cordi looked again. The footprints were gone.

"I'm fine..." she started to say. But she wasn't. "Do you see that? Footprints."

"See what Cordi? Yes, those could be footprints. It could just be mud. Sit down."

Cordi found herself sitting in the mud. It was stupid. She had to stay dry. Was she injured? Was this shock? She had that Etsai man's blood on her face. She'd done what she had to do. She'd had to be cruel, to save them both.

Rhin handed her a water packet, and some dried meat. Her stomach gurgled, but she kept it down.

After a long while, Cordi's breathing slowed. The white tinge faded, the ringing diminished.

"Any ideas on where to head first?" Rhin asked.

"We'll head for water, try to find its source," Cordi said. "If we can, we'll test the particulate levels there, see how they match up with what we already have. Look out for slime colonies—" she winced at Rhin's expression, "I mean *biofilms*, set up by the stream. My helmet can track our path now that we have a hopbot."

Rhin insisted on dropping reflective tape where they had come in, and as they walked, she lectured Cordi on the misuse of the term "Slime".

They slogged through the mud for over two hours, with Rhin's Sua-globes guiding them. Each spread out in a line, then flitted to the front as they passed. The cavern was deep; even the blare of Rhin's Grebaker headlamp couldn't illuminate the ceiling.

The mud was soft in spots, though generally stable where it dried out and turned to harder clay. Cordi had less of a problem than Rhin, as her leg caps were easier to manage in the mud than Rhin's boots.

At last they came to a stream. Only twenty meters of open water was visible before it burrowed back into the mud flat. In cross-section, Cordi noted the exposed meter of mud had undifferentiated levels, occasionally streaked with iron, possible manganese. There were no snot-piles, indicators of biofilm colonies. Cordi was beginning to doubt there would be.

Rhin set up a small data-logger, and again insisted on a conductivity test.

Cordi let her. She felt faint, probably a result of the unexpected exertion, and her



now flagging adrenaline. She reached into Rhin's bag, and took out a package of empty calories and fat, labeled "SugaTwist". Cordi chewed the gelatinous concoction, grimacing at the forced strawberry overtones. She ate a second, and then a third. Rhin heard the rattle of wrappers, but said nothing, just continued with the water testing protocols.

Off in the distance, Cordi sensed rushing water. A waterfall? Perhaps, and there was a small chance it led to the surface. They'd head there next.

Cordi's hands started to shake and she dropped one of the SugaTwists into the mud. She picked up the snack and examined it before popping it into her mouth. Better not to waste it. The clay was saltier than she'd expected, almost tasty after so much sugar.

"Huh, even higher levels of potassium ions," Rhin said. "Significantly higher in fact."

She turned to look at Cordi. "Maybe this is what's causing the particulate spike. It's this mud. Just occasional downcutting, nothing mysterious about—"

But whatever was going to be said, was lost in the rumble. Rhin froze, her mouth open.

*A mud quake? Here?*

"Rhin, look out—" Cordi started to say.

But then the mud closed over Cordi like a hungry mouth.

Her world went dark. And cold. And silent.

## Chapter 7: Community

Cordi wanted to jump up, get away, crawl to safety. There wasn't anywhere that would be safe exactly, but the least safe place of all was this open slump where the water was running. She willed her legs to move, but they did not. It was as if the mud had hardened to stone around her. But only for her. Rhin was already up and free.

Cordi was stuck, sealed in place up to her neck.

Rhin crawled over to her. "Don't struggle, you'll fall deeper...I think."

Cordi's panic subsided. Struggle? Why would she struggle? This close to the mud, she almost understood. It wasn't a waterfall she'd heard earlier. It was *music*.

"Don't you hear it?" Cordi asked. Was she speaking? She could barely think with the music so wonderfully loud. And yet, the notes were still vague, indistinguishable. She had to get closer.

Rhin shook her head. "I need to get my bag free. If I can get to my shovel, I'll start digging you out."

The song swelled in Cordi's ears. A welcoming, half-remembered tune from her childhood. It was a warm, beneficent sound; a song of joining. There were no words, or if there were, it wasn't in her language, and yet, Cordi understood. It was an invitation.

Cordi looked down at the surface of the mud inches from her face. There were thin strands of biofilm, like veins or rootlets. They pulsated to the rhythm of the song. They pulsated all around her.

*[Join?] [Food?]*

Cordi sunk lower, pressed her face into the mud. She felt the warm welcome, the joining with the song.

"Cordi, get up!" Rhin screamed. But her words were hollow; just empty vibrations of air. They had no swell, no form to them.

Cordi sighed. If she could just get closer, then she would be certain. She would know.

*[Join?]*

"Yes, I will," Cordi said, answering a question she'd felt, rather than heard. She spoke into the mud, dragging her teeth across it, tasting the salt and nutrients that

passed in tiny rivulets.

Rhin was close, standing over her. But that was a surface thing. Cordi was deep into the dark now.

Rhin pawed at her. Cordi thought Rhin would pull her away, sever the joining, but she felt only a slight tickle on the back of her neck. A clanging swelled in her mind. She smelled something off-key. [*Safe?*]

The song faded and Cordi felt the weight of the cold mud pressing into her, the grit on her tongue. There was an alien smell in this cave. Familiar to her, yes, but impossible. Smoke?

*How could there be smoke? There was nothing to burn in this mudflat, nothing that could ignite it, except—*

Cordi came alive, slapping at her burning hair, choking on a lungful of smoke. She thrashed, and the mud released her. She crawled free, and then stood up.

Rhin stood over her, breathing hard, a dribble of snot running down her nose. She held the lighter in one hand, and the flame trembled.

"How long was I down there?" Cordi patted at the raised throbbing skin, near the nape of her neck.

"I had to," Rhin said. "I couldn't get your attention. And that song you were singing. That song was so... I had to light your hair on fire. I had to."

Cordi's laugh was brittle, teetering on insane. Even now she wanted to shove her face back into the mud, to hear the song of joining. Instead, she grabbed Rhin's hand and encircled it with her own. She pulled down, holding Rhin's hand, and her lighter, inches from the mud.

"It's okay," Cordi said. "Look."

The thin tendrils of biofilm were visible in the flickering light, veins of red and purple and gray.

"The slime colony uses this mud as a superstructure," Cordi said. "They build their bodies inside, their colonies I mean. They were trying to get me to join them. Or maybe they wanted—"

Rhin stared hard at the biofilm that streaked across the mud. She looked at Cordi, her face alight with wonder. "I am standing knee-deep in the middle of the biggest

scientific discovery of my lifetime. And I almost missed it."

"I only saw it because I was low enough," Cordi said. "And...they invited me to join them."

"Join them? These microbes were talking to you?"

Cordi shook her head. "No—I mean yes, in a way. I heard them. Not with sound..."

Rhin held her ear close to the mud, but was careful not to let her bare skin touch it. She frowned.

"So now you're psychic? Any other super-powers I should know about?"

Cordi laughed again. "No quack science needed. I dropped my food in the mud, and I felt this sudden urge to eat it. You know microbial intervention can make hosts do strange things. I think they infected me."

Rhin looked out across the mud flat. "If you already felt the urge, then you were already infected. Before you came here."

Rhin was right. But how?

"I've been drinking the stream water for months now," Cordi answered. "When the particulate levels were low it was safe enough. I must have some microbes inside of me. That's why I haven't left the cave. It was calling me but I couldn't hear what it was saying."

Rhin snorted. "Yeah, that's why you've been so antisocial. And probably why you haven't been dating much too. Let's not blame all of life's problems on the psychic alien slime colony. Okay?"

There was a swell of mud off in the distance, like a rogue wave. It subsided soundlessly.

[*Safe?*]

"It's not *psychic*," Cordi said. "It's communicating with me. Hook up your data-logger, measure the electrical signals again. We need a visual, can I link your Sua lights to mine?"

Rhin put her hands on her hips. "It won't work."

"Then we'll know for sure. This is still a massive biofilm, you'll have your discovery. If I'm wrong, we'll name this species after you."

"You are wrong, but I won't name it after me—or you. We'll name this species to

honor the people who died to protect us. My two—My Uncles: Davel and Maartinesk."

"Agreed."

Cordi's fingers flew across her helmet. She linked the light array to the data-logger, then called the Sua-globes to her, so they drifted in a slow circle around them.

"Okay Sua-globes are the colony's response, our lights are the send, get it?"

"I get that it's a stupid idea," Rhin said. "The data-logger can read and send electrical signals to the slime colony. But that's like saying I can 'communicate' with you, by examining the protein replication inside of your body. It's too fine-grained to be useful."

Cordi didn't argue. She felt the message and said "Join?" just as three of the Sua-globes lit up.

"There, now let's replicate it."

The next few messages were the same, and she predicted the light pattern just before they lit up. Then Cordi said "Food?" and one Sua-globe blinked off and on rapidly. A different pattern.

"That proves nothing," Rhin said. But she sounded unsure.

"Okay now the real test," Cordi said. "Use the data-logger to pass it all of the prime numbers, two through eleven."

"I'm not giving a math test to a slime colony," Rhin protested.

But she did what was asked. It was the standard indicator of intelligence. Would the colony complete the pattern? Could it send and receive? Did it have a need for numbers?

For a moment, Cordi took in the scene: Rhin covered in mud, snot dribbling down her face onto the data-logger. The featureless mudflat, alive, pulsating around them. And Cordi, half sunk into the mud, but staring up at the lights, hoping.

They were sisters under the skin of the world; three sisters trying to communicate in the dark, without a common language. Wasn't that the purpose of science? Wasn't that why people explored caves, planets, each-other? To understand.

And whether it was the terrorists or Akelarre security that found them, that political nonsense wouldn't really matter. They'd have to rip these two scientists from this place. This discovery changed everything. If only—

The colony responded.

For ten full seconds all of the lights glowed at maximum lumens, bright enough that Cordi had to squint. But she did not look away.

"Alien life!" Rhin exclaimed. "Not microbial... not exactly. It's trying..."

"We are going to be super rich," Cordi said. "Amazingly, filthily rich."

"And famous," Rhin said.

"Yes but first, rich. Look, it knows what we're doing. It understands!"

The colony completed the pattern. It understood prime numbers. It was sentient.

The lights above them blinked thirteen times, and then, went out.

THE END

## How to Become a Caver

I got into caving (nobody calls it spelunking anymore) by marrying into it. My wife is a caver and geologist. I have been in a few "wild" caves for fun, for restoration projects (see "Lint Camp" at the Great Basin National Park) and as part of my job as an archaeologist.

There is a distinct difference between my kind of caving, and that of the cave explorer. To figure out what kind of caver you are, go into a cave and examine a very small crevice, that maybe you can push your head through, but probably shouldn't. What do you do?

An "exploratory" minded caver will dive right in, then contort, shimmy, grunt, and scrape backwards before telling you, breathlessly, what they found. A *casual* caver such as myself will peer into the opening rather tentatively, and then decide, "*maybe not*". A scientist-caver will photograph and measure the opening before attempting to fit it into their theory of speleogenesis (how the cave formed).

Anyway, this section is supposed to be about how to get into caving. It's really quite simple. Join the NSS (National Speleological Society). Cavers are a very welcoming bunch. They're not going to take you to their top-secret amazing formations (or anywhere with water and lakes) but they will eventually take you to a safe easy cave to get started. You need help to make sure you have the right equipment (a helmet, lots of lights, knee pads, water, someone to check-in with, etc.), and follow the right safety protocols (including the protocol that keeps the white-nose disease away from uninfected bats).

You could go it alone, but you might not even be able to find the damn cave entrance. So join the NSS, find a local grotto (local caving group), and figure out what kind of caver you are.

It's so fun, it should be illegal.

## Biography



E.C. Stever is an author and archaeologist in Idaho, near the River of No Return.

He was inspired to write this story after attending a caving conference in Nevada, where he learned about the ongoing search for exoplanetary caves, as potential habitation sites for future human colonies. You can find out more on NASA's website <https://exoplanets.nasa.gov/> or by searching online for videos by the inspiring Dr. Penelope Boston.

E.C. is married and insists his children call him by his initials. His hobbies include exploring this world, reading obscure non-fiction books about pencils, and a-hot-tubbin'.

His lawn is immense and terrifying. His family motto is ABM, "Always Be Mowing". Should he sell enough copies of this book, he will buy a riding lawnmower, or better, hire a lawn service. Oh, to dream...

To find out more about his upcoming work (and lawnmower quest), visit [www.ecstever.com](http://www.ecstever.com)

To learn about caving opportunities near you, visit [www.caves.org](http://www.caves.org)

### **Other Books By E.C. Stever:**

Dimension Stones: Real Magic Short Stories

Non Metallic: Near Future Short Stories

Dragon Removal Service: A Fantasy Novel