

S T A R
S P L I T T E R

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For those who ask what might have been

That telescope was christened the Star-Splitter,
Because it didn't do a thing but split
A star in two or three the way you split
A globule of quicksilver in your hand
With one stroke of your finger in the middle.
It's a star-splitter if there ever was one,
And ought to do some good if splitting stars
'Sa thing to be compared with splitting wood.
We've looked and looked, but after all where are we?
Do we know any better where we are,
And how it stands between the night tonight
And a man with a smoky lantern chimney?
How different from the way it ever stood?

— FROM "THE STAR-SPLITTER,"
ROBERT FROST

S T A R

S P L I T T E R

1 — OS *Liverpool*, Earth's orbit

BEFORE

I DON'T CARE HOW MANY PREP CLASSES YOU TAKE, or how many counseling sessions you go through, or how many waivers you sign, none of it actually prepares you to be burned apart by a laser, atom by atom. But Jessica Mathers was one of the most prepared travelers I ever had the privilege to meet. Not eager, but prepared.

I've seen pretty much the full spectrum of human reaction to teleportation and talked countless travelers through their emotional and psychological barriers. I have a pretty spectacular record, too, with a voluntary abort rate of 8.2 percent; my department average usually hovers near fifteen. Some people just can't be talked into the machine come departure time.

I've been a traveler liaison with ISTA for eleven years, and each year, the job gets harder and busier. As more and more destination ships reach their targets, interstellar teleportation goes up. Last year I sent 322 passengers a combined distance of nearly 6,500 light-years. I admit I don't remember them all. But some travelers stay with you. You find yourself thinking about them years later, wondering where they are and what they're doing out there among all those pinpricks of light. For me, Jessica Mathers was one of those passengers.

She was an unaccompanied minor, back when I was assigned to the OS *Liverpool*. I was late meeting her in the reception area at the shuttle dock because it had taken thirty extra minutes to coax a twitchy

atmospheric engineer into the teleporter. I hate being late, because it often makes my job harder. If I'm not there to put the traveler at ease right away, their mind goes to work. Stress and anxiety go up. I have to spend time bringing them back down to baseline, or I can almost guarantee they'll abort their trip.

But Jessica Mathers wasn't anxious. She just looked mad.

At first I wondered if she might be mad at me. Anger is a common stress response.

"I apologize for being late," I said, extending my hand. "And I apologize for the cold fingers. Blood doesn't circulate as well up here, with only partial Earth gravity."

She stayed seated as we shook, but her scowl softened. "It's fine."

"How was the trip up from the surface?"

"Just what the brochure promised." She stood to face me and smiled, appearing and sounding completely at ease. "Are you my liaison?"

"I am," I replied, somewhat taken aback by her sudden calm. The anger I'd seen on her face had vanished, like she'd put it away somewhere for safekeeping, and I realized it hadn't been directed at me. It was just something she carried around. I puzzled over who or what could make her mad enough that it seemed to distract her from any fears she had. "My name is Jim Kelly."

"And you're here to keep me from freaking out?" she said.

"If I can. I'll be at your side for the next two hours. It's a pleasure to meet you, Jessica."

She nodded.

I gestured toward my office. "This way. And watch your step. The simulated gravity takes some getting used to."

When we got there, she took a seat in one of the chairs facing my desk. Instead of sitting down opposite her, with the desk of authority between us, I sat down next to her.

"So is this the point of no return?" Jessica asked.

“Not yet.” I pulled out my tablet. “You’ll know that point when it arrives.”

“Then I already passed it. Back when my parents signed me up for this.” Her tone hardened, and in that moment the reason for her earlier anger became clearer.

“I take it this trip wasn’t your idea?” I asked.

“No. It was not.” She cocked her head, and her auburn hair fell to one side. “Do you meet a lot of seventeen-year-olds who want to leave their life on Earth behind to live on a barren rock?”

“Carver 1061c isn’t barren. It’s simply coming out of a global extinction event.” I paused. “But I realize that’s not your point.”

“You’re right. That’s not my point.”

“Your parents are scientists, correct?” I pulled up her file on my tablet. “Your mom’s a geologist, and your dad’s a biologist?”

She sighed. “Yep.”

“And you take after them? Your math and science grades are excellent.”

She shrugged. “I guess.”

“I’ve spoken to them, you know. Your parents. They’ll meet you in orbit above Carver 1061c. I believe they’re coming from the New Beijing colony? They should complete their teleportation right about the time you do. They seem very excited to finally have you with them.”

“They’re excited about having a free research assistant.”

I thought about letting that go, but I also worried her resentment might still interfere with her willingness to travel. “Is that the story you tell yourself?”

“It’s the truth.”

“That’s not the impression they gave me when—”

“Look, Mr. Kelly, I—”

“Jim.”

“Okay, Jim.” She leaned toward me. Her green eyes had streaks of

blue in them, and her lips were a bit dry and chapped, indicating that she would need some rehydration before departure. “I know what your job is, and family therapy isn’t part of it. So don’t feel like you have to say something to make me feel better about my parents, or leaving all my friends. You’re here to get me into the teleporter. You don’t need to worry about anything else. I’ll be fine.”

I felt taken aback by her for the second time, and all I could say was “Okay.”

She nodded and leaned away. “Thanks.”

So far, her emotional and verbal responses had been so atypical, I began to doubt my usual script, so while I figured out how best to approach her and her teleportation, I defaulted to the formalities of paperwork.

“Your parents have already signed most of the necessary documents,” I said. “I know you’re ready to go, but I do need to review a few things with you.”

“Sure. Let’s do that.”

“Some of this—probably most of this—you’ll already know from your pre-travel counseling sessions. But I have to review it anyway. For legal purposes.”

“I get it.”

“Okay. Can you state your full name for me, please?”

“Jessica Havilland Mathers.”

“Date of birth?”

“May fourth, 2182.”

“The names of your guardians who authorized this travel?”

“Which guardians? My grandparents that I live with? Or my parents?”

“Your parents.”

“Sharon Havilland and Stephen Mathers.”

“And your final destination?”

“The extremely fascinating and once-in-a-lifetime research opportunity that is Carver 1061c.”

I smiled. “Thank you.” Then I took a breath, looked down at the tablet, and set it aside. “Everything necessary for your teleportation is prepared. The destination ship is ready to receive your data. We have your complete pre-scan loaded. The machine will use it as a map for the final bio-scan, and everything has been double-checked and triple-checked and quadruple-checked. Teleportation remains a vastly safer form of travel than even low-atmosphere aircraft or ground vehicles.”

“Got it.”

“Once you’re comfortable inside the teleporter, the sedative will put you into stasis. It’s important that you try to be as calm as possible leading up to that, because you’ll arrive at your destination in the same state of mind you left. A calm departure means a calm arrival.”

She nodded. “Okay.”

“Remember, when you arrive, you will be you. You’ll feel like you. You’ll think like you, with all your memories and personality intact. You’ll be exactly who you are now, down to the atom.”

She inhaled and looked away, the first slip in her confidence that I’d noticed. “Right.”

“You will step into the machine here, and nine days from now, after your body has been established at your destination, you’ll step out of the printer on the . . .” I checked her forms. “The DS *Theseus*. Another liaison, like me, will be waiting for you the moment you wake up. Possibly your parents, too. Then, a year from now, the OS *Clarke* will enter orbit around Carver 1061c and pick you up. I went through training with the liaison on that ship, Jason Lau. Ask him to tell you about his cat. He’ll set up your scan and send you back here. The process of both scans will destroy your reference body. Do you understand and accept this?”

This time, her answer came after a slight hesitation. “I do.”

Hesitations almost always mean reservations, which are better addressed sooner rather than later. “Do you have any questions or concerns you would like to bring up at this time?”

“No.”

But I knew there was something on her mind, and I knew which question had put it there. I decided to press that button again, just to see how sensitive it was, and whether it could be a problem later. “After your reference body has been destroyed, your complete scan will be maintained in a secure data facility until your next teleportation. At that point, the new scan will replace the old one. If the worst should happen out there, we can always reestablish you here using the backup. You will only lose the memories and experiences since your last scan.”

She nodded, but absently. “Uh-huh.”

The safety of her data didn’t seem to be the source of her agitation. But I still had the impression that her thoughts were circling something to do with her reference body. “Any concerns about the scan itself?”

She looked at me and bit down on her chapped lip.

I shrugged and leaned back in my chair, settling in. “It’s better to bring it up now. Trust me on that.”

She glanced at the framed image on my desk. The one I keep oriented so travelers can see it.

“Do you get to see your family often?” she asked.

“Probably more than my kids want. I spend three days a week up here. Travel takes up a day. Then I’m home for three.”

“So you’re away a lot like my parents. Except they’ve been gone for six years.”

She said it flatly, without blinking. I already knew that from her file, of course. I couldn’t imagine being away from my kids that long. “That’s quite a sacrifice,” I said. “It shows their dedication to humanity’s future.”

“It does show what they’re dedicated to,” she said.

I shifted in my seat. It wasn’t necessary, nor was it my job, to venture

deeper into this minefield of childhood abandonment with her. And she was right. I wasn't a therapist, and I tried to think of a way to get us back into safer territory. But then she did it for me.

"Will it hurt?" she asked.

I sighed. "Oh. You mean the scan."

"Yes."

"No, it won't hurt." That was a fairly common question, but one that should have been answered before she got this far. "You'll be in chemical stasis. You won't remember—"

"No, not me . . . her."

"Who?"

"My reference body." Her eyes flicked up to the ceiling and back. "This body."

It was the first time someone had ever asked me that question.

People wonder all the time if it will hurt *them* to undergo the scan. They still think of the reference body as *their* body. But Jessica Mathers had already made the Big Leap. Not the leap of teleportation, which is a common misunderstanding of the term by people outside the industry, but the mental leap that is in some ways even harder than interstellar travel. The Big Leap is the moment when you accept that you are not defined by that one specific body in which you were born. That consciousness is a quantum expression simply housed in a brain. Those who voluntarily abort their teleportation usually do so because they can't make the Big Leap. Those who go through with it usually don't complete the Big Leap until they wake up safely at their destination, feeling just like themselves.

But somehow, Jessica Mathers had already made the Big Leap and landed on the other side. But she did worry about the suffering of the vessel she would leave behind.

"The reference will be in stasis during the scan," I said. "Insensate. No pain."

"But how do you know?"

“What do you mean?”

“I mean, no one has ever asked a reference body if it hurts, because there’s nothing left to ask. They get burned up by the scan.”

“That’s true. But we monitor neurological activity the entire time. If we detect activity in the brain, we abort. We can’t scan active neurons. And besides, we scan the brain first, before we process data from the rest of the body, so even if the body were vulnerable to pain, there would be no brain to receive the signal.”

She nodded, appearing only somewhat reassured, and since it was my first time answering that question, I didn’t have any other responses prepared; I wasn’t sure what more I could offer.

“I hope you’re right,” she finally said.

I used my confident tone. “I am.”

“Okay.” She shrugged, and I saw doubt in it, but also acceptance. “Any more legal stuff we need to cover?”

I decided to let the matter go. “There are a couple of disclosures I have to run through. First, we guarantee that your teleportation will comply with all the requirements of the International Clone Regulation Treaty. Because of that, if we discover any medical anomalies during your scan—”

“You can’t fix it.”

I nodded. “We’ll notify your parents, of course. But we do not engage in medical alteration or treatment. You’ll be reestablished at your destination exactly as you are now. Additionally, the technology that makes teleportation possible is highly regulated by legal, ethical, and moral standards and procedures. At ISTA, we comply in every respect. Throughout the process, your body will never be in a simultaneous condition. In any given moment, there will only ever be one of you. In the extremely unlikely event that a duplicate is created through human or technical error, we follow international statutes to resolve the redundancy.”

She nodded again. "Got it."

"That concludes the legalities. Do you have any other questions for me?"

"I don't think so."

"Then let's get you hydrated. Are you hungry?"

"A little."

"I can offer you the best reconstituted food available anywhere in high-earth orbit."

"Sounds delicious."

I led her from my office toward the cafeteria. She seemed to have adjusted fairly quickly to the *Liverpool's* centripetal gravity. "I believe Carver 1061c has a slightly greater mass than Earth, doesn't it?"

"That's what my parents tell me," she said. "But they are very quick to add that it's within the 'adaptable' range on the Human Gravity Index." She used air quotes. "So I guess I'll get used to it."

"You will."

"And if I ever get back to Earth, I'll be super strong."

"If you ever get back to Earth?" We'd arrived at the cafeteria, and I swiped my badge to open the hatch. "Your parents said it's only a one-year survey."

"Right. And they were only supposed to be gone for two years." She stepped through the hatch.

I found myself wondering how two years had turned into six as I ushered her over to the counter, where she picked out some food with disinterest, and I made sure to load her up with fluids and electrolytes. We talked about life with her grandparents, Gram and Pop-Pop. We talked about her school, her friends. She mentioned a girl she liked, someone named Annie, I think. Or maybe it was Abbie. I'm not sure, but I kept things light until it was time for her to go. She walked with me to the teleporter room without any apparent reluctance and used one of the changing rooms to put on her magnetized teleportation suit.

“So, this is the point of no return,” Jessica said after she was all prepped. “The one you were talking about.”

“Yup, this is it. You okay?”

“I haven’t gone spacey yet.”

“I hope not. You haven’t even left Earth orbit. It’s called Deep Space Syndrome for a reason.”

“I guess that means I’m still okay.”

And she was. I could see her breath had become more rapid. I’m sure her blood pressure and her heart rate had risen, too. But she wasn’t even close to panic. I was impressed, and I told her so. Then I opened the hatch, and we entered the zero-gravity environment of the teleporter room. Jessica laughed with delight as we pushed off and floated over to the scanning chamber. It was a common response to zero gravity, but not necessarily for a first-timer in the moments before teleportation.

She climbed into the machine without any hesitation, and I helped her get into position.

“Thanks, Jim,” she said. “This wasn’t as bad as I thought it would be. Believe it or not, I was pretty nervous about it.”

“I couldn’t tell. Maybe I’ll see you when you come back through?”

“Maybe.”

“You ready?”

She took a deep breath and then let it out. She nodded. “Ready.”

“Safe travels.”

I pushed off from the machine before she could change her mind, or ask any last-second questions, or ask for a glass of water, which I have actually had grown adults do. But Jessica said nothing as I sailed away from her, and a moment later I was through the hatch, back in the *Liverpool’s* artificial gravity. Then I closed the hatch and hit my comm to let the engineers know their traveler was prepared, and they took over

from there. Through the narrow window I saw the scanning chamber engage. Jessica couldn't see me, but I watched her face for any signs of fear as the clamshell closed around her. Her eyes were open wide, her breathing still heavy, but otherwise, she seemed ready. More ready than almost anyone I had put in that machine before, or since.

I waited until she was in stasis, wondering how the reunion with her parents would play out. I sure as hell didn't know what I would do or say if I had left my kids for six years. Later, I got the alert on my comm that her reference body had been scanned, and she was on her way.

2 — H a d e s

A F T E R

I WAS THE FIRST THING I REMEMBERED.

Me.

I was me.

And I was there. In a tube of glass, lying naked on a warm, contoured metal plate.

Then I remembered the moment just before that, back in the teleportation room on the *Liverpool*. Jim had just tucked me in, and then the scanning chamber had closed. The stasis drugs had obviously started working almost immediately, because I had no other memories until I opened my eyes in the body printer, and I remembered myself.

The DS *Theseus* didn't look how I expected it to. What I could see of it through the glass, anyway. The room was dark, except for three rays of light punching through the portholes. It seemed I was alone, too, which meant my destination liaison was late, just like Jim, and I guessed my parents hadn't been fully established yet, either. I thought it was strange that I didn't see any medical staff, or at least an engineer or two. I also really wanted to get dressed. But all I could do was cover myself with my hands and wait.

As I lay there, I took inventory of my body, flexing each of my muscles, one at a time. Even all the little muscles around my eyes, my lips, my fingers, my toes. My teleportation counselor had said repeatedly that it was impossible for there to be any errors in the transmission, but I still worried that between the scan of my reference body and the printing of this one, they might have misplaced an appendage, or an organ. But everything seemed present and accounted for.

Except for my liaison. Or anyone else. Which seemed stranger with each moment that passed in darkness and silence.

“Hello?” I called. My voice echoed loudly inside the confines of the body printer. “Can anyone hear me? Maybe come let me out?”

No one came. No one answered me over a comm. The room stayed dark.

I waited a few more minutes, until my breath fogged against the curved glass, and I decided that I had somehow been forgotten. Then I pushed against the chamber’s lid.

It didn’t budge.

I pushed harder. I even lifted my knees up and strained against the glass, smearing the condensation, but I couldn’t open the printer. Greta had tested me for claustrophobia before I left, and I had passed, but we hadn’t covered a scenario like that.

“Hello!” I banged on the glass, and panic tightened the air in the chamber. “Somebody help me! Let me out!”

Still no one came, and that was the point when I started to worry that things weren’t just strange. Something was wrong. I was on a ship in deep space, orbiting a planet 13.82 light-years from Earth. People don’t just forget about the body of the girl they’ve been printing for the past nine days. Someone had to be running the machine, or I wouldn’t be lying there in it. But that someone wasn’t around, and the room was dark, and I was stuck.

I decided I had to find my own way out, and it didn’t seem like I’d be able to open the lid by force. So I closed my eyes and took deep breaths and thought back to the safety videos they’d shown me during my orientation. That was when I finally remembered the emergency lever, the one they’d told me I’d never have to use, and I felt stupid for freaking out.

I felt for the lever at my side, and a couple of moments later I found it. When I pulled it, the lid released with a dull pop and a hiss of air, and

then the glass shell opened easily. I sat up in the darkness and squinted to get a better look at the room around me.

The place had been trashed.

Panels were torn from the walls, exposing bundles of tangled wires, and some of the ship's guts had been ripped out. Cables hung from the openings and snaked across the floor. The few scattered pieces of equipment I could see looked dented and damaged. Even the bulkheads appeared crooked, their edges no longer perfectly joined in the corners.

Then I saw the bed on the floor.

A chill crawled across my shoulders and down my back. It looked like a nest between an outer wall and a control console. There were blankets and a few other random items, like a flashlight and a pile of empty food ration packages. It smelled like a bed, even from across the room. Not terrible, just the familiar, musty odor of sheets that needed to be changed. But that only made it creepier, because it meant that someone had been living in there with me while I was being printed.

That wasn't how destination ships were supposed to run. This was not how a destination ship was supposed to look. I wondered if there had been a mistake, and they'd sent me to the wrong place, some abandoned or derelict ship, possibly light-years from where I was supposed to be. That could explain the awareness spreading through every newly printed cell of my body that something was off, physically. Something I couldn't quite identify.

I looked for anything close by that I could use to cover myself, and right next to the body printer, on a narrow table that pulled down from a bulkhead, I saw underwear, a tank top, and a jumpsuit. Someone had folded them neatly and left them there. For me. A pair of utility boots waited in the shadow of the pull-down table, along with a pair of compression socks.

I slid down from the body printer to the floor, where I felt and heard the gritty scrape of sand beneath my bare feet. There wasn't supposed

to be dirt on a spaceship, either. But I hurried, shivering, to pull on the underwear and tank top, then snatched up the jumpsuit and unfolded it with a shake. It wasn't the most comfortable thing, but it was durable because, like all things brought into space, it was meant to be used for a very long time. After I'd put it on, I tugged on the itchy socks and the boots and looked down at myself, toward the floor, and I froze.

The gravity felt wrong. There was too much of it. That was what I had been sensing. It wasn't until I was standing that I was able to identify the slight but persistent pressure on my feet, the pull on my spine. Stronger gravity could only mean one thing, and I scrambled to the nearest porthole in a panic to look outside.

I saw hills. Low, jagged hills covered in purple vegetation.

I wasn't in space. I was somehow on the surface of another planet, but which planet, I had no idea. It could be Carver 1061c, assuming Carver 1061c had purple plants. I'd been way too angry to read any of the material my parents had sent me, so I didn't know for sure.

I looked around again at the chamber, at the bedding and the rations. It wasn't just a very weird destination ship. It was a planetary habitat. Or at least, that's how it was being used. But it sure as hell didn't look like the habitats I'd seen in my parents' pictures. I had no idea where they were, but I needed them to find me and tell me what was going on. Or I needed to find them.

The room only had a single hatch. I moved toward it, and through its window I glimpsed a narrow passageway that looked a lot like the corridors back on the *Liverpool*. Except this one curved away into darkness, illuminated only by its dim red emergency lights. I looked at the control panel to my right, and after a moment of hesitation, I used it to open the hatch.

The air in the passage felt looser and smelled less stale, and now I could hear deep, metallic groans and distant pops from elsewhere in the ship.

I called out. “Hello?”

My voice echoed down the passageway. No one answered.

I held my breath and slipped through the doorway, then eased along the corridor one careful step at a time, listening and squinting in the rusty light. Several panels there had also been torn away from the walls, baring the ship’s innards. I saw deep gouges in the metal and plastic. I passed three open hatches on my right, but the rooms were pitch-dark and empty, or at least I hoped they were as I hurried by them.

The corridor eventually ended at another closed hatch. When I reached for the control panel, I noticed a few dabs of dark stain on the buttons, and a partial, ruddy handprint on the wall. I stared for a moment, feeling a prickle at the nape of my neck, before finally opening the door.

Natural light poured over me into the passageway. Not ship light, sunlight. I shielded my eyes for a moment, and after my vision adjusted, I found I had reached a juncture where my corridor met with three others. The one to my left seemed like an external air lock. Then I noticed the walls, and my throat tightened.

Handprints painted the panels of the juncture in reddish-brown smears that definitely looked like dried blood. Leathery, crackled puddles of it covered the floor, as if a body or bodies had broken right there, at that spot. I smelled decay in the air and swallowed, finding it hard to breathe as I tried not to imagine the violence that must have taken place there, hoping my parents were okay, wanting suddenly to get out of there.

One of the few things I did know about Carver 1061c—if I was on Carver 1061c—was that it had a breathable atmosphere, and I stumbled toward the air lock. I had no idea what waited for me outside, but I knew I didn’t want to stay on the ship, so I opened the internal hatch, entered the air lock, and then opened the external hatch.

A warm breeze rushed in, smelling faintly of old pennies and moss,

but clean, and it brushed a few grains of sand against my cheek. I inhaled, able to breathe clearly again, and stepped over the threshold onto dark, alien dirt flecked with gold and green.

The broken and uneven landscape spread out in all directions. Brown hills rose and fell in sharp folds, covered in patches of the purple vegetation that I'd seen through the portholes. They reminded me of ferns. I took a few steps away from the hatch, wanting to get a better look at the ship from the outside, hoping for a clue to figure out where I was and how I got there, but then I saw the volcano, and I had the answer to the first question.

Mount Ida. The killer of Carver 1061c.

I couldn't tell how far away it was. With something that big, normal scale doesn't apply. Its base spread over most of the horizon. Its volcanic slopes rose through several layers of clouds, reaching an altitude so high that I had to crane my neck to see its conical peak. The mountain ruled over the landscape so completely that it seemed to have its own demanding gravity, and I found it hard to pull my eyes away from it, back to the ship.

When I did, I discovered I was right before. It wasn't the DS *Theseus*. At least, not all of it.

The large letters on the battered skin of the vessel told me I had emerged from the port side of one of the *Theseus's* landers, but huge chunks of it seemed to have been ripped off. Other parts had been caved in, deforming its teardrop shape with massive dents. The areas of its belly that I could see bore the scorch marks of atmosphere re-entry, and some of the heat shielding had been torn away. Whatever had brought it down here from orbit, the trip hadn't been easy. It didn't even look like the landing gear had deployed.

I looked up at the sky and wondered if the lander's parent ship was still in orbit, and if my parents were still on it. I stared into that blue void so long my eyes watered, and I got dizzy running through the

reasons an evacuation of the *Theseus* might have been necessary. An emergency of some kind, for sure, but something very, very bad. There weren't that many possibilities, according to the safety presentation on high-orbit and deep-space ships that ISTA had made me watch. Externally, an asteroid strike or a solar flare could do it. Internally, one of the main systems would have to malfunction in a catastrophic way, like a reactor failure.

I looked down at my hands. If something had gone wrong with the reactor, the body that had just been made for me might have been bathed in radiation while it was still being printed. I had no idea what that would mean, but my guesses ranged from cancer to mutant monster, even though I looked and felt fine.

A cloud passed in front of the sun. I figured that's what I might as well call the star in the sky. The deep shade gave me chills as it glided over me, the lander, the ground, and then the sun came back. I decided to circle the lander, just to see if I could find any more clues about the catastrophe that had brought it down, and I moved toward the rear of the ship.

As I came around the back, I saw the deep furrow the lander had carved in the skin of Carver 1061c as it crashed. That trench must have been a mile long, and I had to climb down into it and back out again, pulling against the planet's extra gravity to reach the opposite side of the ship. The damage there looked a lot like what I had seen on the first side, but I found the greatest destruction at the front, where the cockpit had been completely crushed. I knew the pilot's body couldn't have survived the impact.

As I returned to the side of the lander I had come out of, something caught my eye a short distance away. It looked like a mound of soil, but its shape was too regular to be natural. I moved toward it, already somewhat out of breath from the walking I'd been doing. The planet's gravity had been slowly getting to me, growing more insistent. My feet

felt heavier. My whole body felt heavier, and I moved more slowly because of it.

When I approached the mound, I saw three more just like it nearby. Each was about a meter wide, and about two meters long, the dirt dry and packed hard. Then I noticed the signs, and my stomach turned. Someone had attached name badges, like the patches on uniforms, to pieces of scrap metal from the ship and placed one at the head of each mound. Each grave.

I made myself read them.

Rebecca Sharpe

Evan Martin

Elizabeth Kovalenko

Amira Kateb

Alberto Gutiérrez

The last plaque was different from the others. No badge, no mound, just a name scratched into a piece of metal, marking a flat patch of dirt next to the others. I sighed, relieved that none of the names belonged to my parents, and that none sounded familiar. Then I felt a bit guilty, because even though I didn't know those people, someone had cared enough about their broken bodies to bury them.

"What happened to you?" I whispered.

I shivered and turned away. Cemeteries had always freaked me out because graves were for your last body. They were terminal. I hurried back toward the broken nose of the lander, but as I moved around it and down the side of the ship, something rustled the purple ferns on my right.

I jumped and spun to face it but saw nothing except the plants swaying a few meters away. Their stalks only came as high as my knees, so whatever was out there, it was low to the ground.

I kept my back against the lander, watching the ferns as I slowly inched toward the hatch. Not that I wanted to go back inside the ship, but that seemed better than staying outside it with some kind of alien. I'd never seen an extraterrestrial life-form before, but I *had* just seen five graves, so it was easy to imagine something deadly lurking out there. Something with fangs. Or claws. Or venom. Or all three. Or something completely alien and far worse.

Or it could be totally safe, like a puppy. If I had read the shit my parents had sent me, I might have known what it was. But I hadn't read the shit my parents had sent me, so I crept away from it, refusing to blink or breathe, watching.

I'd moved a few meters when the thing burst through the ferns toward me. I almost bolted, but then it stopped, still hidden in the vegetation, clearly able to see me or sense me in some way.

I tried to reassure myself that its behavior might not be hostile. It might instead be evidence of curiosity, or even its fear of me, and its need to observe me in case I was the kind of threat I feared it to be. But since I had no way of knowing its intent, I continued to hurry down the side of the ship toward the hatch, expecting it to follow me.

But the ferns didn't move, and I wondered if the alien was still watching me, or if it had simply decided that I was neither interesting nor a threat. Then something stirred the plants much closer, directly in front of me, scratching in the dirt and snapping stems and fronds.

There were two of them.

"Stay back!" I shouted, without even knowing if the things had ears. "Both of you!"

"There's only one of them."

I flinched at a very familiar voice. An impossible voice.

She stood in the doorway to the air lock, one foot in, one foot out. She wore the same boots I wore, and she wore the same type and size of

jumpsuit, though her clothes were dirtier than mine. She wore my face, though it was dirtier, too. She wore my hands, and my body.

She was me.

Not metaphorically. She didn't look like me. She *was* me.

A horrified shock immobilized every muscle, my mouth stuck in the open position. In that moment I lost every thought that had been in my head. I lost Carver 1061c, and I lost the alien somethings. I lost myself, even as I was looking at myself.

"They live underground," she said with my voice, nodding toward the ferns. "Come inside. I'll explain everything else."

3 — DS *Theseus*

BEFORE

I AM THE FIRST THING I REMEMBER.

Me.

I am me.

And I'm here. In a tube of glass, lying naked on a warm, contoured metal plate.

Then I remember the moment just before that, back in the teleportation room on the *Liverpool*, when Jim tucked me in, and the scanning chamber closed. The stasis drugs obviously went to work almost immediately, because I don't remember anything else. Now I'm here in the body printer, remembering myself.

The room beyond the glass is filled with a gentle light that isn't too warm or too cold. I can see people moving around at the edges of my vision, maybe doctors, or technicians, and I cover myself with my hands. At that point, one of the figures turns, then approaches me and smiles down through the glass. She presses a button on the controls, and I hear her voice through a speaker near my head.

"Jessica, welcome to the DS *Theseus*. My name is Amira Kateb, and I'll be your liaison." She speaks with a slight French accent, looks like she's in her late twenties, and has gorgeous skin. She's wearing a white jumpsuit, her name embroidered on a patch in blue. "I'm going to open the printer so you can get dressed, okay?"

I nod, grateful.

There's a gentle pop, and the hiss of releasing air, and then the glass lid lifts away. Amira helps me sit up and wraps a blanket around me. I'm not cold, but I'm glad to not be sitting there naked, even though the

other woman and two men in the room don't seem to be paying any attention, their faces lit by harsh computer screens and consoles that are much more interesting than me, apparently. Then again, they've been watching my body printing from the inside out for the last nine days. Not much left to see after that.

This room, with its sleek walls the color of ash, is much smaller than the scanning chamber on the *Liverpool*. But the technology to read my data is completely different from the technology needed to turn that data into a living body. In addition to the printer that established me here, there are three others. They're empty.

Amira supports me as I climb out, and my bare feet touch the cold, smooth floor. With my first steps I realize the gravity here is still only partial-Earth, but I manage to walk to a narrow changing booth without stumbling too much. Inside, I find underwear, a tank top, and a jumpsuit like Amira's, all of which I put on. The suit isn't comfortable, but it's durable, a quality I should probably get used to out here.

When I'm dressed, Amira finds me some boots in my size.

"How do you feel?" she asks.

"Fine," I say. "Like . . . myself. I assume that's a good thing."

She chuckles. "Yes. That is a very good thing."

"Where are my parents?" I glance at the empty printers. "I thought they were supposed to be here."

"Yes, your parents." She nods and tries to usher me toward one of the hatches. "There has been a delay."

I don't budge. "A delay?"

"Everything is fine—I assure you. No cause for alarm. The scanning chamber at New Beijing needed a minor repair before they—"

"A repair? For what?" A few of the techs finally look up at me.

"Only a minor technical issue. They didn't elaborate. The point is, your parents are now on their way, and they should be established here in two days."

“Where are they now?”

“We used the printers on the *Theseus*’s landers, to spare you seeing their bodies before full arrival. It can be . . . upsetting.”

She’s probably right.

“They will be here soon,” she adds. “In the meantime—”

“It’s your job to keep me entertained.” I smile, remembering Jim. “I get it.”

“Entertained?” She shakes her head with a slight frown. “No, not quite. It is my job to show you around and make sure you have what you need. I’m sure you’ll be glad not to have a babysitter.”

I am, and yet, I’m not sure what I’ll do with myself for two days on board a strange ship until my parents arrive, especially as Amira gives me the tour and I realize how small the *Theseus* is, even with the two landers that function as living space when they’re attached to the ship like barnacles. But we don’t enter those, for obvious reasons.

The corridors are tight, the ceilings are low, and the rooms are cramped. Amira shows me my cabin, and it’s not much bigger than the bed that pulls down from the wall. The only place on the ship I can really stretch out is the common room, where the tour ends.

“This is where the crew and passengers heat their food,” she says. “And we gather here to socialize.”

I see they have an entertainment console. The shows and the games are probably old, but the menu lists a shooter I liked a few years ago, so at least I’ll have that to play.

Amira crosses to one of the common room’s far walls and presses a button. I hear the hum of a motor, and then several large panels slide up toward the ceiling, revealing an array of wide windows.

I gasp and step my nose up to the glass. “Whoa!”

Outside the ship, I see the forward length of the *Theseus* stretching ahead into space, like a rocket taking off. It’s spinning, and the stars are rotating with it in a slow arc. Then my perspective shifts as I realize I’m

the one who's moving, with the ship's gravity-simulating rotation. The *Theseus* is basically a barrel rolling around a central axle, and I'm standing at the edge of the inside lip, staring into the endless space that lies beyond the end of the ship. The view is breathtaking and dizzying.

"Whoa," I repeat, mouth open.

Amira nods. "The stars have inspired both awe and terror since the beginnings of humanity." Then she tilts slightly in my direction. "My educational background is anthropology and psychology."

"Why were the windows closed?"

She shrugs. "Some people find the motion gives them vertigo. Most rooms don't have windows, and those that do can be closed, if it bothers you."

"It doesn't," I whisper.

She nods and then turns her back on the view to face the common room. "All the crew come and go here, so I am sure you will meet everyone before too long."

"How many are there?"

"On the ship? Fifteen. There's a command crew, an engineering crew, and a few scientists. You already saw Dr. Gutiérrez. He was there when you came out of the printer, along with two of his technicians, David and Liz."

I glance down at myself. "Yeah, I was kinda trying not to make eye contact."

"Naturally." She bows her head. "Our captain is Rebecca Sharpe."

The name is familiar to me, and then I remember it from a novel I read in English class.

"You might be interested to know her son is with her," Amira adds.

"So I guess I'm not the only space brat out here."

"No." She seems unamused by the term. "His name is Duncan. He's about your age, sixteen."

I wonder if this Duncan guy's mom gave him a choice about living

on a spaceship, or if he chose to come out here. I hope he isn't weird. He'll be the only person my age I get to talk to for a year.

"You'll find food here, when you're hungry." Amira shows me the cupboards where they keep the ration packs. "Try to limit yourself to three meals a day, plus a snack."

"Okay."

"The lighting on the ship creates an artificial twenty-four-hour cycle of day and night. We're set to SST, and . . ." She looks at the comm on her wrist. "It's just after three in the afternoon. Do you have any other questions?"

"Yeah. Where's the planet?"

"Carver 1061c? It's on the other side of the *Theseus*. We face most of the living space away from it."

"Why?"

"A fixed object that large can make the vertigo worse." She draws a spiral in the air with her finger. "The best way to observe the planet is from the ship's hub, in microgravity."

"I'm allowed to go there?"

"Yes. You're allowed anywhere on the ship except for the Belfry and the reactor module at the rear of the ship."

"The Belfry?"

"The forward command module. And for the time being, I think it would be wise to avoid the landers."

"Yeah, you don't have to worry about that."

"I didn't think so. Oh, you can use any of the computer terminals here in the common room, in addition to the smaller unit in your quarters. All the files you wanted to bring with you are here. Do you remember the username and password you set up?"

"Yes." But that reminds me of something. "Amira, what—"

"Ms. Kateb, please."

“Oh.” So not a first-name-basis kind of liaison. “Okay, Ms. Kateb, what if I want to send a message back home?”

“We open the Tangle twice a day, at midnight and noon. If you wish to send a message, simply get it queued before those times.”

“Okay, thanks.”

She nods in a final kind of way and checks her comm again. It seems she’s eager to be rid of me. Jim might have been eager to get rid of me, too, but he didn’t show it. I don’t know why her impatience irritates me, but it does. After all, I’ve just traveled almost fourteen light-years, my parents aren’t here yet, and I’m all alone on a strange ship.

“Am I keeping you from something?” I ask.

“Actually, there is another matter that requires my attention. Do you need anything else from me?”

“A bedside manner?” I say, but not quite far enough under my breath.

“Excuse me?”

I pause, then shrug. “Never mind.”

Her brow descends. “Is there something you need that I haven’t addressed? Have you found my services unsatisfactory in some way?”

“It’s not that.” I don’t know why I’m irritated with her. It’s not her fault I’m here. “Sorry. It’s just . . . my last liaison was different.”

“Jim Kelly, wasn’t it?”

I nod.

“Well.” She folds her arms across her chest. “We don’t all have the luxury of an assignment in Earth orbit with the ability to go home and see our families on a regular basis. I’m sure that would do wonders for my bedside manner, too.”

I hadn’t thought about that. I guess I’d assumed that everyone out here volunteered, like my parents. I feel my cheeks getting hot and drop my eyes to the floor. “I’m sorry.”

“If you need anything else, please don’t hesitate to ask.” Her pleasant tone is a makeup-thin veneer I can see right through. “That is, after all, what I am here for. Now, if you’ll excuse me, there really is something pressing that requires my attention.”

With that, she turns and leaves me alone in the common room, and I stand there for a moment or two feeling like shit. Then I cross to one of the armchairs and slump into it, somewhat awkwardly in the lower gravity, and face the black expanse of the entertainment console’s screen. In its dark reflection, I see myself and the stars behind me. I imagine that I’m looking into a dim parallel universe where a different me is leaving the *Theseus* and heading back to Earth.

But I’m not going anywhere. I’m trapped.

The glass-and-metal skin of the ship suddenly seems very fragile and thin against the void of space, and I feel a growing sense of real panic, the first since I left my grandparents’ house to come here. My teleportation counselor, Greta, talked me through concepts like “identity permanence” and “body transience,” but we never talked about what interstellar travel would actually be like. Now I’m here, orbiting a planet that’s orbiting a star that’s nothing more than a speck of light when seen from Earth. I’m so far from home, my mammal mind still fails to hold the distance and scale in a thought that makes any sense. My heartbeat is fast, and my breathing is shallow. It feels like the time I got lost in a house of mirrors for six whole minutes when I was a little kid, but instead of a carnival tent that Pop-Pop promised would be fun, this is the fucking universe.

Maybe I’m starting to go spacey.

I think about playing a game or watching something to take my mind off everything, but I doubt any show is that good. I’m here, and there isn’t anything I can do to change that, and I can’t even yell at my parents about it. Not for another two days.

The muscles in my legs are restless, wanting to coil up tight. I

bounce my knees, but it's not enough to relieve the stress, maybe because there isn't enough gravity pulling against me. I have to move, so I get up to go explore more of the ship.

On my way out of the common room, I bump into a bald man not much taller than me. He has the build of a tree stump, and his jumpsuit is stained and looks worn out. His name badge reads EVAN MARTIN.

"Pardon me," he says, backing up. Then he moves aside, allowing me into the narrow corridor.

"Thank you."

I slip through the hatch, and when I'm out of the way, he steps half-way into the common room before turning back toward me.

"You're the traveler," he says. "Mathers?"

"I am."

"Your parents are studying the volcano, right? Mount Ida?"

I glance at the ceiling and sigh. "Uh-huh."

"What, you don't like volcanoes?"

"I don't have anything against volcanoes. Unless they are about to blow up. Or they're on an uninhabited planet that my parents want to study."

He grins. "Well, I think volcanoes are magical mountains." Then he winks.

"Uh, okay?" He's acting weird, but his words have nudged a memory.

"You know that game?" he asks.

I do, but I haven't thought about it in years. I used to love it, and I would have played it every night with my parents if they had been willing, which they weren't. But I've never met anyone else who's even heard of it.

"How do you know about that game?" I ask.

"My daughter used to like it. She's about your age. I just appreciated the fact that it was an actual, old-school board game we played sitting around the table. I'm Evan, by the way. Engineer." He pats the bulkhead between us. "I keep this place running."

“Ah, so it’s your fault there wasn’t a malfunction that prevented me from teleporting.”

He holds up his hands. “Hey, don’t blame that on me. Teleportation has its own team. But everything else is mine and my crew’s, from the spheromak to the command console.”

“The sphero-what?”

“Spheromak. The imposed-dynamo current drive. The ship’s nuclear reactor is my responsibility. Along with most everything else. Except for the teleporters.”

“In that case, can you tell me how I get to the ship’s hub? I want to see the planet.”

He leans back out into the corridor and points with his whole arm, like he’s sighting along it. “Go down this passageway until you come to your first intersection. Turn to the right and look for the spoke that connects the drum to the hub. You can’t miss it.”

“Thanks.”

He gives me a flick of a salute with a couple of fingers. “Welcome aboard, Mathers.”

Then he goes into the common room, and I follow the gentle curvature of the corridor’s floor leading down and up away from me. When I reach the first intersection, I turn to the right, and about five meters along that passage, I come to a ladder marked D2, which disappears through an opening in the ceiling. As I step closer to the ladder’s base, I look up into a very, very long tube that can’t be much wider than a meter. From where I’m standing, the far end is little more than a distant dot, and I don’t think a person would need to be claustrophobic to find the tunnel intimidating. I grasp the rung at eye level, take a deep breath, and start climbing.

After I’ve put several meters behind me, the grip of the simulated gravity weakens. I feel myself going weightless, which makes the climbing easier. My breathing echoes up and down the tube, and several

meters later, I'm in microgravity, and this ladder doesn't have an up or a down anymore. I'm just floating, pulling myself along it, gliding and flying like a superhero as I remember the training I had to go through before teleportation. I occasionally catch a rung with the toe of a boot, and that throws off my form, or I bump a shoulder into the side of the tube, but for the most part, I keep it graceful. Before long, I reach the hub at the end of the tunnel, and the vertigo Amira talked about finally hits me.

I'm basically clinging to the inside of a spoke that connects the rolling barrel of the ship to the stationary hub, but this close to the center, I'm whipping around and around like I'm on an amusement park ride. I know that if I just kick off from the ladder and sail into the center of the hub, the world will stop spinning. But this is worse than anything from my training, and my body simply won't let me. I grip the ladder's rungs until the spinning tingles my cheeks and turns my stomach.

"You just have to go for it," I hear someone say. A guy's voice.

I look around for the source, and I glimpse a boy my age just off to the side, around the edge of the hatch inside the hub. As fast as I'm moving, I can't get a good look at him, but I assume he's the other space brat. Duncan, the captain's son. I'm afraid if I open my mouth to answer him, I'll throw up.

"Seriously," he says, "just kick off from the ladder. It's only hard the first time."

I have to do something fast, so I bring my knees up and brace my boots on one of the highest rungs, and then I launch myself like I'm going off a diving board.

I shoot into the hub, but I guess I used too much force, because I fly right past Duncan, through the middle of the ship. I'm about to collide with the opposite wall, close to the edge of the tube I just escaped as it swings around to meet me.

"Fucking inertia!" I shout, flailing, then brace myself with my hands and forearms in front of my face.

Before I smack into the wall, I feel a hand around my ankle, and it gives me a sharp tug. It's enough to slow me down so I don't hit the wall as hard as I would have, and I'm able to stop myself with my hands. I push off and spin around.

Duncan floats nearby, one hand holding on to a rail that runs along the wall. He's not a big guy, but he isn't small, either. He has dark hair and a long face, with a sharp jaw, and blue eyes that are just a bit close together. None of his features are particularly attractive on their own, but they go together pretty well. He's wearing a jumpsuit like mine.

"Next time, a gentle push will do the trick," he says, not laughing at me, but almost. I can tell, and it pisses me off.

"Aren't you the one who told me to just go for it?"

"Not like that."

"I had it under control."

I didn't, but he lets that go. "I'm Duncan."

"Jessica," I say, looking around. "Jess."

The hub is like a dark subway tunnel, about ten meters wide and hundreds of meters long, full of shadows and lit by sharp and infrequent lights. Storage lockers and crates line the walls, all strapped down tight, and the windows near me offer a view of the inside of the ship's barrel as it rolls around us. I would have thought the rotation of the spokes would be noisy, but it just sounds like the *Theseus* is whispering to itself.

"What brings you to the hub?" Duncan asks.

"They told me I could see the planet from here."

"Not here." He points to my right. "You have to go forward, toward the Belfry."

"Thanks." I tip my head to the side. "What about you? What are you doing here?"

"Depends." He pushes off from the wall, sails past me, and lands on the other side, and I think I'm supposed to be impressed. "Usually I just want to be by myself. There aren't a lot of places for that on a ship like this."

I twist and pivot to face him. “How long did you stay mad at your mom? Or are you still mad at her?”

“What do you mean?”

“I mean for dragging you all the way out here.”

He pauses. “She didn’t drag me out here. I asked her to let me come. She actually wanted me to keep living with my dad.”

“Wait.” I close my eyes and shake my head. “You mean you chose to leave Earth and live on a spaceship?”

“Yeah, I did.”

I’m baffled. “Why would you do that?”

He looks equally confused. “Why would you *not* do that?”

The answer to his question is so obvious that I don’t even know how to reply, but before I can, he looks over his shoulder toward the Belfry and says, “Come on.” Then he pushes off, sailing headfirst down the middle of the hub, gliding in and out of the spotlights.

That’s the direction I wanted to go anyway, so I follow him, but not quite as elegantly. He flies a straight line, while I ricochet off the sides, but he doesn’t say anything and barely glances back. It takes a few minutes for me to remember my training and figure out the way my body moves in micro-g. I start to get the hang of it as the hub brightens and we come out from under the shadow of the barrel.

Duncan glides up to land against a window, but when I try to join him, I don’t stop where I plan to and bump hard into his shoulder. Before I can apologize, I look out the window and see Carver 1061c for the first time. I mean, really see it. Because pictures don’t count. They don’t prepare you.

There’s a whole planet down there that isn’t mine. I can see through the swirls and stripes of cloud that it has oceans, and reddish-brown continents, but they’re the wrong shapes, and I’m surprised that I suddenly miss the familiar contours of Earth.

“Just look at that,” Duncan says.

But he doesn't need to say it, because I can't take my eyes away from it.

"Less than one percent of the earth's population gets to see anything like this." His head is close to mine as we both look through the window. "My mom works for ISTA, and that makes me one of the lucky ones. That's why I'm here." He turns to glance at me. "But you're even luckier."

"I am?"

He nods toward the planet. "You get to go down there."

I STOOD THERE OUTSIDE THE LANDER, FROZEN AND confused.

I wondered if I was dreaming, still lying in a body printer on the *Theseus*, not yet fully established and awake. No one had told me whether it was possible to dream during teleportation. I hoped it was, because no other explanation for coming face-to-face with myself would make me feel better about it. But unlike my childhood nightmares, this dream didn't collapse when I woke up. This one kept going.

A moment went by, and when I didn't follow her back through the hatch, she reappeared, and her face jarred me again.

"This isn't a dream," she said. "This is real."

I felt dizzy. "How did you know—"

She sighed, sounding exhausted and impatient. "I'm you. You're me. Now come inside."

She disappeared again, and this time I found myself trudging after her through the hatch. Instead of turning to the right, which would have brought us back to the room with the body printer, she strode down the corridor straight ahead. I walked behind her into unknown ship territory, keeping a safe distance between us, studying her. In a disorienting way, I recognized her walk, the movement of her hips, though I had never seen myself from this angle. I felt self-conscious and tried to walk differently from her.

We passed a few storage lockers and then came to a hatch on the left. She opened it and disappeared into a darkened room.

I stayed outside in the corridor, waiting. No way was I going in

there. But a moment later, she switched on a portable lantern, and I saw that she stood in what appeared to be the lander's narrow galley. I stepped through the open hatch, and the air inside the room was musty and stifling. There was a very small counter for preparing food, and a table in the middle of the space surrounded by chairs, all bolted to the floor. A couple of thick, round columns supported a low ceiling, and two black screens stared at me from the far wall.

"Are you hungry?" she asked, voice flat, then walked toward the counter without waiting for my answer. "There's plenty of food."

I barely understood her question. It was far too normal to fit what was happening, and when I didn't reply, she looked at me for a moment. Then she sighed again.

"Right." She gestured for me to sit. "Let's talk first."

I glanced at the open hatch and corridor a few feet away, then picked the chair closest to the exit and moved slowly and deliberately toward it, keeping my eyes on her as I sat. She took the seat directly across the table from me, and I got my first really good look at her face by the cold light of the lantern between us.

She wasn't exactly like me, after all. Or at least, it wasn't like looking in a mirror. Her nose seemed off, just a little bit. Same with her eyes, which appeared red, maybe from crying or lack of sleep, and her cheeks and forehead bore smudges of dirt and grease. And I noticed a small scar near her hairline that I didn't have.

"It's weird, right?" she said, her voice stale, her words a bit slow. "I've been watching you print for nine days, so I had a head start at getting used to the idea. Sort of."

I still couldn't think of what to say, but I didn't want to talk anyway. It felt as if speaking to her would turn the whole situation into something real.

"You can see it in the nose." She pointed at the middle of her face. "I figured out it's because a mirror actually reverses everything. So right

now we're seeing what other people have always seen when they look at us."

"I . . ." Nothing else came out.

She leaned toward me, propping her folded arms on the polished white table, and waited.

But I had nothing more to give her. Too many questions clawed and competed to be asked, climbing over each other in the nest of my head. *Whats* and *hows* and *whys*, all cutting one another off before I could ask any of them.

"Okay," she said. "How about I just answer some of the questions I know you'll eventually get around to asking. Sound good?" She glanced around the room. "You've probably figured out this is a lander from the *Theseus*. I was established on the *Theseus*, just like I was supposed to be. On schedule. But Mom and Dad were late. So I had to wait around for them a couple of days. Before they finished printing, there was an accident. I'm still not sure exactly what it was. Something to do with the reactor. Evan tried to—" She paused. "Evan was the ship's engineer. He tried to fix the reactor, but he couldn't. So we evacuated. You saw the graves."

I thought back to the name badges and the mounds of dirt, and I nodded slowly.

"Evan's body broke in the crash. He was in the cockpit." She tossed her words on the table like cards, with all the dispassion of a blackjack dealer. "He volunteered for that because he said his body was broken anyway, from the radiation. But everyone else broke, too."

"M—" I cleared my throat, finding my voice at last. "Mom and Dad?"

"They never arrived."

I didn't know if that made me feel better or worse. "So . . . is it just you? You're alone here?"

She nodded.

“That means you buried them.” I tried to imagine myself doing something that daunting and couldn’t.

She paused. Then nodded again.

I thought of the dried blood I had seen, and I knew, however bad I imagined it had been, it was probably worse for her. “I’m sorry.”

“Thanks.” She leaned back in her chair. “I’ve been here for two weeks. But I’ve had the lander for shelter, and like I said, there’s plenty of food. The passive water reclamation system is working.” She unfolded her arms and gripped the edge of the table. “What’s not working is the distress beacon. It got damaged in the crash. I thought it was just a power supply problem, so I started going through the ship, trying to see if I could reroute energy to it from another system.”

“You know how to do that?” I asked. I didn’t know how to do that.

“I’ve picked up a few things. But clearly not enough. I blew out the power in some parts of the ship.” She looked down at her hands. “And that did something to the body printer.”

I leaned forward. “What happened?”

“I don’t know for sure. I never used that room, and I wasn’t in there when the power surge hit. The body printer just activated itself and pulled up your data. I think you were about a day and a half into your printing before I discovered you, and I didn’t even know it was you until I figured out how to read the display. That was a few days in.” She reached up and scratched her forehead, still staring down at the table. “It was an accident.”

“It?” I asked. “You mean me. I’m the accident.”

She nodded.

I didn’t feel like an accident. I felt like myself. I was me, and I knew that as surely as I knew I had been on the *Liverpool* with Jim Kelly. But the girl sitting across the table from me had also been on the *Liverpool* with Jim Kelly. Because she was also me. Her time on the *Theseus*, the

evacuation, and everything since the crash, those memories were the only differences between us. A few weeks. That was all.

“The lander’s distress beacon still isn’t working,” she said. “ISTA doesn’t know we’re down here. They may not even know what happened to the *Theseus*.”

I wondered what had happened to the other passengers and crew members, the ones whose graves I hadn’t seen. “And Mom and Dad are . . . ?”

“Like I said, they never arrived.”

“Can we pull up their data? What if we just establish them here?”

“I thought about that, so I checked the printer while you were outside exploring.”

“And?”

“It’s dead. Must have used up whatever power it had printing you.”

I couldn’t tell if she meant for that to sound like an accusation. It felt like one. But I hadn’t asked for this. Who would choose to be a clone? Because that’s what I was. I had come second, so according to the law, I was the simultaneous condition that Jim had said could never happen. I wasn’t supposed to exist.

My chest tightened, and I felt a stabbing pain, right in the center.

“Sorry,” she said. “I know this is a lot.”

My heart raced and skipped, out of control, like it was about to explode. I gasped, unable to breathe, and my vision went blurry at the edges.

“Hey.” She leaned toward me. “Are you—are you okay? You look really pale.”

I couldn’t answer her. I thought I was having a heart attack, my clone body already breaking down. Suffocating. Dying.

She got up from her seat. “Just breathe, okay?” Then she took a step around the table toward me. “I think you’re in shock—”

“Don’t touch me!” I scrambled out of my seat to get away from her. I didn’t want her anywhere near me. I ran through the hatch, almost blind, turned right, stumbled down the corridor to the intersection, and then burst through the air lock.

My boots hit the dirt outside hard, and I skidded to a stop a few paces from the ship. I leaned forward, hands on my knees, sucking air deep into my lungs. Then I turned my face up to the sky, closed my eyes, and counted inhales and exhales, slow and even despite the pounding of my heart in my ears and throat.

The breeze helped to calm me, and the panicked tingling all over my body gradually subsided. After a few moments, I lowered my chin and opened my eyes on the purple ferns.

“It’ll be okay.”

She stood behind, and I spun around to face her. “How can you say that? How can this ever be okay? You and me—” I made a frantic gesture back and forth between us. “This isn’t supposed to happen! Ever!”

“Maybe not,” she said. “But maybe—maybe when you look closely, a star you thought was one star is actually two.”

“What the hell does that mean?”

She shook her head. “I don’t know. Nothing. I just know I thought about this the whole time you were printing, and I am not this body. You are not that body. We’re the same person, like the same flavor of ice cream in two different cones. Our memories are ninety-nine percent the same. We were both mad at Mom and Dad because we didn’t want to come here. We both have a crush on Avery. We were both sad we wouldn’t get to see her unicorn costume for the party, where we had planned to tell her how we feel.”

The mention of Avery grounded me, because no one else in the universe knew how I felt about her. She was going to send me pictures of her costume over the Tangle. She was something real, something from before my teleportation, and it hurt to think about her.

“What about when we go back?” I asked.

“What do you mean?”

“Which one of us gets our life? We can’t both be Jessica. You know that—”

“I don’t know that!” Her sudden anger surprised me, and it seemed to surprise her, too, because she closed her eyes and held still for a moment before continuing. “What I *do* know is that I could have pulled the plug on you.” She took a step toward me and pointed her finger at the middle of my chest. “I could have shut down the printer before it finished establishing you here, and I didn’t.”

“Why not?” I asked.

“Do you really want me to answer that question?”

I didn’t like thinking about not existing, but I said, “Yes, I do.”

She adjusted her stance, folded her arms, and stared hard at me. I knew that look, but it was weird to have it directed at me. It was my look when I wanted someone to know I had made up my mind. “No,” she said.

“What do you mean, *no*?”

“No. I won’t answer that question.”

“Why not?”

“Because I want you to think about it. You’re me. Imagine I’m inside the printer, but my heart is already beating before you realize I’m there. I’m alive. Tell me what you would do.”

So I did. I imagined myself as the sole survivor of a horrific crash, standing over the body printer, watching another me being made, cell by cell, layer by layer of bone, muscle, and skin. I imagined myself doing what needed to be done, putting an end to the process, terminating the life growing inside the machine. That wouldn’t be considered murder by any cop or judge, but somehow it felt like murder to me, which meant I apparently wasn’t as far along in my body dissociation as Greta thought I was.

“Well?” she said. “Would you do it?”

“No,” I said quietly, and thought about my reference body.

“Okay.” Her voice softened. “Then no more of this talk. This subject is banned from Hades.”

“Hades?”

“That’s what I named this planet. It just didn’t feel like a Carver 1061c to me. And also, this place is hell.”

I nodded. “Okay, then. Hades it is.”

“And remember, we are both Jessica. Equally.”

“You mean like half-and-half? Then I get the half with Avery.” I smiled to show I was joking, but I also wasn’t. I knew that whenever we got off that planet, we would have to deal with the fact that we couldn’t both fit in the same life, the same ice cream cone. “So now what?” I asked. “Do you—”

The thing in the ferns rustled again, and I flinched away from the sound. “What *is* that?”

“It’s okay,” she said. “It’s harmless.”

“But what is it?”

“They look like a mix between a mole and a snake. They live underground. I think they eat the worms that live in the roots of the ferns.” She pauses. “They’re big worms.”

I did not like the description of the alien being part snake, or the mention of big worms, and stared into the purple vegetation. “You sure they’re not dangerous?”

“Yeah,” she said. “They’re everywhere, so if they were, I think I would have found out by now.”

I finally lifted my attention from the ferns to the surrounding landscape. “What else have you seen here?”

She shrugged and gazed outward with me. “Not many other life-forms. I think the mole-snake, the ferns, and the worms are all pioneer organisms.”

I didn't know that term. But she did. I looked at her with a frown, wondering about that 1 percent of memories we didn't share.

"Pioneer organisms are the first to bounce back after a mass extinction," she added.

I detected a hint of condescension in her voice, a casual superiority I recognized in the same way I knew her posture. She was doing to me what I'd done to others when I knew something they didn't. But I didn't want her to take any satisfaction from it. "So do you have a plan?" I asked. "What are we supposed to do now?"

"We need to let ISTA know what happened."

"But you said the beacon is broken."

"It is." She turned around and pointed at Mount Ida. "But ISTA landed a habitat farther up the base of the volcano for Mom and Dad. It's just sitting there, waiting for us, and it has all the supplies we would need."

"Does it have a beacon?"

"Even better. It has a Tangle."

If I had paid better attention to the information my parents had sent me, I might have thought of that. I tried to take in the mountain again, but its size still confounded me. Back on Earth, I would have assumed something that high in the sky was a weird cloud, not a volcano. The impossible scale of it made it hard to estimate how far away it was.

"How long will it take to get there?" I asked.

"I don't know."

"So it could take a long time."

She nodded. "It could take a very long time."

"That means we don't know how much food and water to pack. And maybe we won't even be able to find the habitat. And there might be other aliens out there that you haven't seen yet."

She paused. "I guess so."

I raised my right eyebrow at her in obvious skepticism, a movement she would surely recognize. Then I said, “What if we stayed here? In the lander?”

She rolled her eyes. “We can’t.”

“Why not?”

“Because we can’t.”

“But we have shelter here. We have food and—”

“No!” Once again, her raised voice startled me. “We can’t stay here. You don’t know shit, okay? You’re just a—you’re a liability. That’s not your fault. But for now, you just have to trust me.”

“A *liability*?” I knew how unprepared I was, but the disdain in her voice shocked and hurt me, even as I had begun to sense that something wasn’t right with her. I tried to keep my voice calm. “I just want to know why we can’t stay,” I said. “Is it dangerous here?”

“No.” She turned away, hugging herself. “You just . . . you don’t know what it’s been like for me. I would have left a long time ago, but I was waiting for you. And the others are counting on us. Mom and Dad are counting on us.”

I knew that was the simple, undeniable truth of it. “Then when do we—”

The ferns parted, silencing me, and a mole-snake emerged. It didn’t look anything like the creature I had imagined, based on the name she’d given it. I would have called it something different. I had pictured scales, or lizard skin, but this creature seemed to be covered in short, white fur. It was more like a large ferret, although its wide, flat head did resemble the shape of a snake’s. It stared at us with small, black button eyes, like a stuffed animal, and it nodded its head up and down, as if answering yes to a question someone had just asked. It had delicate, feather-like whiskers, and long claws on its feet, but the rest of its sinuous body remained hidden in the ferns.

“Whoa,” I whispered.

“That’s the first extraterrestrial life-form you’ve seen.” She offered me a slight smile, but there was still something patronizing in her expression that I couldn’t read.

“It’s kinda cute,” I said.

“Really?” She cocked her head to the side and regarded the creature for a moment, then shrugged. “If you say so. Now, back to your question.”

I wondered briefly how we could look at the same creature so differently if we were the same person. “My question?”

“You were going to ask when we should leave.”

She was right, I was.

“I think it’ll take us a full day to organize and pack,” she said. “So let’s plan on heading out the day after tomorrow.”

“Oh—okay,” I said. That felt very soon. But I nodded and noticed that the ferret, or the mole-snake, had retreated back into the ferns.