

Despite the early morning glow, a smattering of stars were still visible in the butterscotch sky above the Martian horizon. I glanced off the side of our cruising hovercraft. *Botany Crew 6* was written in block letters on the side. The gaudy machine was electric blue with a pink racing stripe, clearly visible against both the sky and land. A hundred meters of empty space below, rows of prairie grass swayed in the artificial breeze like the tan fur of a giant animal.

I took a hand off the control grip to push back my windswept hair. The scent of barley and currant emanated from the fields below — it smelled like buttered popcorn — and I had to express my good cheer. “Let’s go, Extraterrestrial Garden Squad!”

Ayla erupted into laughter behind me. She’d been sketching the landscape in a leather-bound notebook. “We’re not really aliens, you know,” she said. “Alien is a relative term, and we can’t be compared to Earth anymore.”

The sky had changed in our lifetime. Earth once appeared as a bright star, orbited by its lunar sibling. The terminal event itself was easy to miss; the planet flashed red, then faded to gray. A flood of Earthling refugees had slowed to a trickle, then stopped. Even two decades later, Earth — the pale blue dot, humanity’s first home — was a dim spot in the night sky, swirling with radioactive smog.

The situation would have been dire if Mars was still a corporate colony. But an independent Mars was struggling to be born long before the bombs dropped. After one or two generations even the middle managers and corporate enforcers had turned local, more loyal to their scrappy settlement than executives a world away. Generations of terraforming and development had produced a fledgling metropolis, Red One, complete with a homemade atmosphere.

Today, climate engineers were keeping the outer hab-zone at a brisk 15 °C. Ayla was wearing an ecologist’s denim overalls, with a windbreaker pulled over her shoulders. She squinted as her hair — dyed turquoise — streamed in the air behind her, occasionally whipping forward to hit her face. I was enjoying the weather, wearing elastic-waisted shorts under my red and silver pilot jacket.

Ayla pointed down. “Look! Look! Carpet crawler!” Below, a rectangular sheet of photovoltaic metal was inching its way across an oat-covered hill. The driverless crop harvester meandered across the hab-zone, following a carefully programmed route to the next optimal harvest. Deep beneath the soil, subterranean trawlers extracted minerals.

An idea entered my mind, and I had to smile.

“Uh oh, something’s wrong with the thrusters. We’re going down!” I leaned on the control grip hard, though not hard enough to invert the craft. Ayla and I whooped in unison as we were lifted out of our seats, briefly simulating microgravity. When the nose of the craft pointed down at the carpet crawler, she pummeled my shoulder and screamed for me to level out.

“Careful!” said Ayla. After slowing her breathing, she said, “That’s not funny, Delle! I don’t want to break my neck on a routine survey!”

“You’re safe in my hands, A.” I had joyridden hovercraft within city limits, using the cover of darkness to avoid marshals. My confidence was well-earned. “The tether field is like my sixth sense at this point.”

The larger area was a crater, wide and gently sloped enough to be considered a valley. Clusters of thin trees and creosote bushes dotted the valley, the trees able to reach surprising heights without developing much girth. Hardy desert grass provided most of the vegetative

cover connecting the clusters. Tributaries flowed in irrigation patterns across the landscape, branching into many smaller arms to maximize coverage. From above, the nutrient-loaded feeder canals looked like the sparkling blue veins of an intricate vascular system. The prairie grass painted a shifting portrait of green, gold, and brown on a crimson canvas.

The Martian philosophy was that learning is lifelong, and that to understand the world, one had to experience it. Trips to nature reserves, construction sites, laboratories, and makerspaces were more common than days spent in the classroom. The ecologists were a standout. They loved to argue about minutiae, but when they finally made a decision the landscape would change! Watching grass grow never bored me; the best days of my life were spent ambling from field to field, watching life thrive.

I never had a head for the details, though. The beauty of building an ecosystem from scratch interested me more than the technical details of cryogenic germplasm storage, or greenhouse gas-producing bacteria. So I befriended ecologists, and my talent as a pilot gave me an enjoyable way to be useful: everyone could use a ride from time to time.

"Delle, bring us down to that pasture of mesquite grass!" Ayla shielded her eyes and shouted through a scarf. The hovercraft's field was able to redirect the bulk of the red dust blowing up from the Martian landscape, but particles inevitably made their way through. "See that strip by the feeder? It's too dark, right? It doesn't even look like mesquite grass!"

An electric shock ran up my spine. I'd forgotten something important about Galle crater.

*Keep cool, she doesn't know.*

"It's probably the shadow of a cloud or something," I said.

Ayla shook her head. "Sky's clear. It could be flooded, maybe something's blocking that feeder flowing nearby." Ayla unclipped her security belt and leaned over the ship's rail, extending more of her body over the ship's edge than was safe. A silver trowel, pruning shears, and pump-action vial of concentrated nitrogen fertilizer peeked out of her overalls. She wore her tools even inside the city, in case of a "botany emergency."

"Maybe it's meant to be flooded," I said, "are they setting up a floodplain out here in Galle?"

"You never flood mesquite grass," said Ayla. "It would drown! Bring us down, Delle."

Dissuading her was impossible at this point. She had a mystery in her grasp and she wouldn't let it go.

I leaned forward on the control grip, lowering the craft towards the dark patch. As we got closer, a tangled bed of dark vines became visible; in stark contrast with the lightly colored prairie grass filling the rest of the crater.

The hovercraft descended until several meters from the surface, where I brought it to a halt and dropped the touchdown ladder. Ayla ignored it and vaulted off the side of the vehicle like a gymnast. By the time I had parked the craft and reached the ground she was already crouching in a mass of green vines.

"Hold on," said Ayla, suddenly serious, "...this isn't even mesquite grass." She plucked a red bud from the soil and held it against her notebook to sketch. "Obviously, this is something else. Delle, what the hell is this?"

I got on one knee — the damp soil squelched against my bare skin — and took the bud she offered. Mesquite grass didn't produce any kind of buds or fruit, that would require too much water for the frugal desert plant.

"I mean, there's nothing actually wrong with going out to the middle of the hab-zone and planting something from the Seedbank," I said. "Right?"

"Not without telling anyone! And I don't think this is an old Earth plant," Ayla said, "it must be some crew's GMO project. These vines look water-loving, so no wonder they flooded it." She lowered her notebook and met my eyes, still crouching in the spongy soil.

"Has anyone else seeded the area lately?" Ayla asked.

I stayed silent, unsure how to answer.

Ayla stood and offered me a waxy tear-shaped leaf. "I do see people come by this way on mag-boards, but I always assumed they were joyriding. Or finding someplace shady to make out." She bent down to pluck a plant out by the stem. "Not practicing botany."

I shifted. "Come to think of it, I've seen that guy... Kelso, cruise this way with his girlfriend a few times."

"The pinball player? I saw him at Mars Bowl stadium," Ayla said. "Even on the megascreen, he skeeved me out. Let's call him, see what this stuff is."

She dragged me aboard the hovercraft, and we pressed together in front of its vid-screen. Kelso's connection code flashed on the screen for a few beats before he appeared standing back from the camera, shirtless with a towel draped over his shoulder. He'd answered quickly but seemed surprised to see us. He must have been expecting a different call.

"Uh, Delle? And who is this..." said Kelso.

"Hey Kelso, this is my friend Ayla, from *Botany 6*," I began. "We're out in Galle crater, and—"

"Did you plant some weird seeds out here?" said Ayla.

Kelso's cheeks reddened and he reached off-camera for a jacket that he pulled on but left unzipped. "What's that supposed to mean? If that's some bad joke—"

"You ripped out our mesquite grass, jerk, why not find an empty plot?" demanded Ayla.

"Wait, what?"

I nudged Ayla and we both leaned back from the screen. "Chill, A, I'm just gonna ask him to explain."

"How well do you know him?" said Ayla.

"What are you two whispering about?" Kelso's voice crackled through the speakers. "You better not be calling a goddamn marshall, we can handle this *ourselves*." His tone of voice rose at the end of the sentence.

Community marshalls bore little resemblance to the militarized law enforcement of Earth. They were officially unarmed, though some carried non-lethal chem weapons like pepper spray or nauseants. But even without the threat of force or incarceration, marshalls could be nosy and persistent.

"I'm not some kind of eco-freak, Delle. I got someone else to—" Kelso stopped as his brain caught up to his mouth, and he met Ayla's gaze with a stubborn set of his jaw. "You better not be getting cold feet," he said to me, turning his eyes back from Ayla. "I don't like getting thrown under the bus."

That was an ancient phrase that Martians used for its folksiness. The only vehicles one could be realistically thrown under in Red One were the sleek train pods that ran through the city on rail, and even then your timing would need to be precise. The rails were designed to

detect human presence, and activate a pulsing field to push unlucky pedestrians out of harm's way. You could push someone in front of an e-bike, but that didn't have the same impact.

"Leave it alone," Kelso reiterated. The vid-screen turned black.

A chill traveled the length of my spine. Suddenly the horizon seemed very far away.

"Let's head back to station," I said, quickly noting pre-flight checks.

Ayla leaned on the shoulder of my weathered pilot seat. "Delle—"

"Sit back, I'm taking off."

She remained standing and gripped the seat's shoulder as the hovercraft's hum rose in pitch and volume, lifting the machine above the surface. The resulting wind disturbed the grass, sending a family of wiry cottontail rabbits bounding through the sporadic ground cover.

"Kelso seemed angry. I wasn't going to call the marshals, you know." She pulled her scarf up as we cleared the rim of the crater, dust billowing around the ship. Red One's skyline became visible. The silver-topped buildings created a halo effect around the city. "How does he know you, Delle?"

She finally sat back in her seat and shouted to be heard, "What is he growing? Are the plant buds for hard substances..." her eyes opened wide despite the dust, "or poison! Good thing I didn't taste it!"

"Look, it's not Kelso's problem," I said, "I shouldn't have roped him into this. Wait 'til we land, I promise I'll explain."

It was Blair that I was worried about, not Kelso. He was the type of abrasive blowhard to get on your nerves but avoid a fight through some subconscious sense of social cues. Blair backed up her threats. She hadn't appeared in the video-call, but Kelso never strayed too far from her. If she hadn't been in the room listening, Kelso would have messaged her immediately. Blair was a hacker who grew up playing in the digital wasteland of Earth's old datasphere. Red One's datasphere was an oasis in the desert, isolated but full of life, while Earth's was a burnt forest.

Martians weren't wasteful enough to sink valuable resources into equipping every single appliance with smart capacity. But society was still highly connected — through the datasphere connecting personal devices, atmospheric and ecological monitoring, and the safety network built into every authorized form of transportation — and a targeted cyber attack could take effect without being traced back to its author. Martians guilty of crossing Blair or her love could find themselves locked in their blocks at inconvenient times, or their brakes stalling on a dangerous turn.

Once a girl had a shouting match with Blair outside Pax Music Hall, something about that week's lineup of guests. Her personal EMV device failed three days later on a tour of Red One's largest rubber farm. She broke a leg and suffered scrapes and bruises tumbling through the pointed rows of rubber trees. No one could prove Blair's involvement, but the girl moved to the furthest borough she could all the same. Though in Red One, there's only so far you can run.

After minutes of uninterrupted flight, the hovercraft's thrusters began to stall.

"Shit."

"We're dropping, Delle," said Ayla.

A message flashed on the vid-screen, *snitches get stitches!*

When working properly the control grip provided gentle resistance to my steering. Without propulsion, I had to wrestle to bring the machine into a controlled descent.

"Why is this happening?!" Ayla was back clinging to the pilot seat's shoulder.

As the crimson surface drew closer, the rate at which creosote bushes flew past made it clear we were moving too fast.

"Sit down, we're gonna be fine! There's a downward slope here. The ship's flat and wide so it won't flip, I mean I hope it won't flip," I spoke without knowing if Ayla could hear me over the screaming wind.

The thrusters lost more lift with a shudder. I felt the drop in my chest.

The nose of the hovercraft collided with a half-buried boulder, flinging the stern forward in a catapult motion. A mass flew by my ear and beyond the ship's field accompanied by a high-pitched scream, lowering in pitch as the doppler effect reversed. My skin was raw and sore where the seat's security belt had wrapped around my body at the moment of impact.

When my eyes refocused and enough dust had settled, I saw Ayla curled up in the red soil ahead. A second later I scrambled over the windshield and leapt off the crumpled hood, landing short of where Ayla's body lay. She was gasping for air and struggling to speak, the wind knocked out of her.

"Ayla!" I knelt and searched for serious wounds. She hissed when I brushed her right ankle. Upon lifting her denim pant leg I saw that it was badly bruised; it must have been the first limb to touch the ground, taking the bulk of her weight.

"I... I'm ok... I need a minute," she paused for breath every few syllables. "I think I... crushed some... jack plant." Her shaking hand pulled a spongy leaf from under her arm.

Ayla had flown far but rolled and avoided any hard obstacles. It hurt to hear how small her voice was.

"I'm sorry," I said, unable to think of anything else to say, "I'm so sorry."

"Come here," she patted the soil, and flipped from the fetal position to her back.

I laid down on my back and stifled an urge to make snow angels in the red dust.

"You have to tell me what that was about, Delle." We stared at the butterscotch sky as Ayla regained her breath.

"I know, A," I said. "It wasn't supposed to be a big deal, now you're hurt and the ship's broken—"

"I'm fine." There was an edge to Ayla's voice. "You can call one of your pilot friends for a ride and repair-techs can pick up what's left of *Botany 6*." Her hand touched my forearm in the space between us, startling me.

"What's growing in Galle crater?" she asked. "What would make you lie to me?"

I shivered from the juxtaposition of Ayla's touch and the cool dirt. It was a free planet, sure, but Ayla took personal stewardship over her favorite corners. I internally cursed Kelso and Blair for acting like old Earth gangsters. "The finished product is a resin pod they call Sarsaparilla," I said, embarrassed at the pettiness of the secret, "you vaporize it and inhale the fumes. Blair knows how to synthesize the buds into resin and Kelso hands it out. Super popular in clubs."

"A party drug? That's fertile soil, Delle, and this is what you use it for?"

"Don't be mad, A."

"... I'm mad, Delle."

"It's.. it's very in demand." I tried to explain. "They say it turns music into a full-body experience. The land use isn't terrible, it just... hasn't been approved."

“Or tested with the local ecology,” she said. “Or regulated, or cataloged. What if this *Sarsaparilla* is invasive? Or produces toxic byproducts? Where’s your environmental impact report, Delle?” She sighed. “I believe in what I do. I believe that one day this entire planet will be filled with life; that we can do better than they did!” She was pointing at the sky. I couldn’t see the expired Earth anymore, the Sun had risen too high, but I knew what she meant.

“Do you not respect my work, Delle?”

“Of course I do, Ayla, it’s just... look, I used to run with Blair’s people, but I don’t anymore.” I stammered for a second, then rallied. “I didn’t like who I was with them, so I made the decision to change. I turned a new leaf.” I cleared my throat and took a second to think. I knew I was coming off as pleading, and I was grateful she couldn’t see my face.

“Did you plant the drugs yourself?” she asked.

“No!”

“Did you know about it?”

“...”

She scoffed. “Why wouldn’t you tell me? That’s what I don’t understand.”

I shifted in the cool dirt. “I spent a lot of time with Blair. She knows a lot of things that I did... a lot of things I’m not proud of.”

Ayla stayed silent for a while. I came close to confessing just to fill the silence, but she spoke up before I did.

“Is it really bad?”

“...yeah.”

“Can you tell me?”

I stayed silent. I wasn’t ready.

Ayla waited a moment, then sighed. “Ok. You’re my friend, Delle, and I trust that you’re not a bad person. Once we get back, I’ll need some space. We can talk when you’re ready to be honest with me.”

We were silent for a few minutes. You could notice the shimmer of the containment field obstructing the sparse clouds, but only if you squinted. The habitable zone could inspire claustrophobia the first time you saw its edge, but now the city felt uncomfortably far with our progress halted.

“Oh, and you’re going to have to reseed the mesquite grass,” she said.

I almost laughed. That was the worst punishment I would have received from the marshals anyway. It wasn’t the use of recreational drugs that was prohibited — no one cared about personal cannabis gardens or basement mushroom farms — it was the misuse of productive land.

A black smudge appeared in the sky. I thought it was a spot in my vision, until Ayla propped herself on her elbows and asked, “is that thing getting bigger?”

I sat up and focused. The object was growing, revealing an H-shape, along with several white-hot vertical trails of plasma slowing its descent from orbit. It was a ship. Not an EMV or a hovercraft, but a genuine spaceship! Two decades after losing Earth, refugees and spacefarers had slowed to a trickle, then stopped entirely. Most of the spaceships had since been stripped for parts and materials not native to Mars.

“That’s way too small to be an immigration ship,” said Ayla. “Besides, none of the unlaunched passenger vessels survived Earth’s galvanized mess of an atmosphere. Nothing on

the surface could have survived the onslaught, let alone something capable of escaping the planet's gravity."

"Is it a warship?" I asked, a hard knot forming in my stomach.

"I don't recognize that model," said Ayla. "Not from this far, at least."

The ship was going to land outside the hab-zone.

I turned back to Ayla. "Let's get that beacon going," I said.

I helped her up. She wrapped an arm around my shoulder, wincing at the slightest pressure on her ankle. We made our way to the wrecked hovercraft, smoke emerging from where the volcanic boulder had split the hood. Kilometers beyond the hab-zone, the unidentified ship rocketed towards the surface. I wondered if it would stop in time, or if Mars would gain a new crater.