

"Dr. Vasser?"

"Yes?" Dr. Vasser replied from behind a stack of folders. Her office had one of the best views but the floor to ceiling windows were mostly obscured by deep stacks of folders, loose papers, and boxes. Hastily scrawled on some of the boxes were locations and dates from the last thirty years. The aide deftly navigated the maze to Dr. Vasser's desk.

"Could you look over these projections? Dr. Choams already did but he wanted a second opinion."

Dr. Vasser looked over her cluttered desk and tried to figure out the best way to clear some room so she could go over the report. There was a time when she loathed them but looking around at all the clutter, she genuinely longed for the days of data slates.

She briefly skimmed over the projections then skipped right to the end and was pleased that their forecast model had moved up by six years. It looked like weather patterns in the southern pacific were becoming more dormant and the arctic temperature swings were flattening out.

"I'll work through these and get back to you. This looks good though."

"That's what we thought too. I'll see you in the morning."

After turning out the lights Dr. Vasser looked out her office onto the vast evergreen forest. She couldn't help but wonder if they'd done enough and if she could have done more. Those two questions had been her constant companion for years now.

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The rich green loam was soft under her bare feet as she made her way through the forest. There was very little noise and the air was thick and humid. High above, the canopy blocked out almost all the sunlight giving the air an almost ethereal quality, a perpetual green twilight. She

moved through the underbrush silently, not quite sure where she was headed, but the forest seemed to guide her always upwards. She crossed a shallow stream and then the forest thinned and opened up upon a small meadow. She recognized the clearing immediately and knew she was dreaming again.

"Leiko?" she heard her name called from far away. She tried to ignore it but already the forest was fading. "Leiko!"

She cracked open her eyes and groaned. Mrs. Shrader was standing over her.

"No one is forcing you to be here, you know? You're an adult and this isn't nap time. Stick around after class."

Shrader went back to the board and continued her lecture while Leiko straightened up in her chair. Leiko swiped through the slides on her tablet and tried to figure out how much of the lecture she'd missed. She knew Mrs. Shrader was right, she didn't have to be there.

Not having to be there and wanting to be there were very different things though. Leiko checked her watch, saw that the lecture was only half done, and sighed. She knew Shrader would be furious, probably kick her out for good, but she felt her eyes already drooping and so she gathered her things and headed out the door.

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"How were your classes today?" her mother Linda asked.

"Fine I guess, same old same old really."

Her mother had found her out in the garden behind their house.

Leiko had been six when her father had blocked off a small patch of land for her very own. At school they had handed out little packets of vegetable seeds for a class project. Every day after

school she would check on her carrots, watering them according to the instructions. After almost two months she had judged them ready, but the carrots she pulled from the ground were stubby little things, nothing like the long bright carrots at the store. Regardless her mother had used them in the stew they had that night. The next year it was carrots again and also tomatoes. Every subsequent year her garden had slowly expanded and now it took up most of the backyard.

"Looks like your squash is coming in well."

"They really are," she replied smiling. "Come look at this."

She took her mother over to the waist high rows of plants. Pulling back the leaves of the nearest one she revealed several small squash, still dark green. "Every one of these has four or five growing."

"That's amazing, that's way more than last year."

"I know, and we had to give most of them away last year."

"Well don't stay out here too long. Do you care what we have for dinner? Your father is working late."

"Just whatever is fine by me."

As her mother went inside Leiko checked her phone. She'd been working for four hours and hadn't realize it. It seemed like when she got to working in the garden there was always something else to do. Fighting the weeds, trimming, harvesting what was ripe before the birds could. It was a never-ending battle but it never really felt like work. Next year she was going to try some heirloom watermelons. It would mean finally digging up the last patch of yard but at this point she doubted her father would notice.

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"God this is so boring," moaned Leiko, tossing the data slate to the bed. After dinner she'd gone to her room to try and study for her classes tomorrow but she'd made very little progress.

Hearing the front door open and the unmistakable sound of her father's clunky boots in the entry way she gave up on studying and headed downstairs.

"Hi sweetheart, how was your day?" her father asked, happy to see her.

"It was fine I guess."

"That's great," he replied, not really hearing her. "Where's your mother, something exciting happened today."

Something exciting made Leiko nervous. The last time something exciting happened at work it was the big promotion. Initially everyone was excited, herself included, and that weekend they'd all gone out to celebrate. At dinner her parents couldn't help but talk about what they'd be able to do with the extra money. Leiko couldn't complain, they'd moved to a better neighborhood and she wasn't paying for school, but her father was rarely home before eight or nine and wasn't around on the weekends that much either anymore.

"So, what's the exciting news?" her mother asked. Like Leiko she'd heard her husband come home.

"Lin, I've been added to the pool of candidates." her father pronounced.

"What exactly does that mean?" she asked.

"It means they're considering me for relocation. They've run into technical difficulties on site and some of the people they have up there aren't cutting it. I know we need to talk about this but I wanted the option. We could always say no."

"Could you though, you told me when the company asks you don't really say no."

"Well, that's not really true but yeah if you turn down a big opportunity they are pretty slow to offer a new one, especially one like this. If I say no now, we won't get another shot. We've been talking about this for ages."

"So you've said yes then?"

"I said I was honored to be considered, which I am."

"What about me?" Leiko asked, interjecting herself into the conversation.

"There's a spot for you too. They need young people and they've reviewed your entrance scores. You being included was part of the agreement."

"Wow, so it might really happen, we might be headed to Mars?"

As a project lead on the dome construction projects, Leiko always knew migrating to Mars was a possibility for her father. Her parents had talked about it enough but it always stayed an abstract idea. Something that was always in casual conversation since she'd been young. It was almost the background noise of her late childhood, something she hadn't really thought about seriously. Now though, it was a reality. And she could go too.

Leiko thought about what her life up there would be like and knew it wouldn't be easy. She'd have to live in a bubble for the rest of her life. Everyone knew Mars was one way. Even if you worked your ass off staying fit your bone density was shot within a year. Only a very few people had ever come back to Earth after an extended stay and those few had fared so badly the practice was halted entirely. Mars was a one-way trip.

"Leiko, what do you think?" her mother asked.

"No way," she replied and stomped off to her room.

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"Leiko?" her father asked, knocking on the door.

"I don't want to go." She felt like an eight year old throwing a tantrum but the idea was too much. Leave everything she'd ever known and go live under those domes. Never feel the sun, never actually be outside again. The thought made her stomach turn.

"Look, no one is going to make you." Her father was always the voice of reason, often infuriatingly so. "If you want to stay you can stay. I can't drag you with us, you're nineteen for god's sake. You can make your own choice. There's something you've got to know though. I haven't told your mom this yet, so don't say anything, okay?"

"Okay."

"In the next twenty, maybe thirty years the temperature increase is going to accelerate. How it is right now, how hot it is. That's going to be a day to be enjoyed. The equators will probably become unlivable, not that they're really livable now, and there'll be extreme weather changes. Nowhere really is going to be fine, it's going to be a mess. Flooding, seismic events, the whole deal. There'll be no food, no power, no water. It'll be the dark ages all over again except for some very remote or very lucky places."

"That can't be right. Just yesterday I saw an article about how the glacial melt had stopped and we may even be on the back end of the temperature rises. The changes were working. The solar power and the emissions cuts. It was all working."

"I know, I've seen it too and I thought it was true. In the last six months or so the company has started to share some information with me. Right now every nation on Earth is scrambling to get as many of their people off world as possible without triggering a global panic. If people

really knew what was going to come it would be chaos. That's why they've accelerated their plans to get the colonies up and running. There is no way we'll get even a million people up there. Probably lucky to get half that. And it'll be miserable with that many people even, but the alternative, sticking it out here, it'll be no comparison."

This was almost too much for Leiko to take in. "Can't we do anything?" she asked.

"You and me, no. We've tried, we really have been. Now it's looking like Mars is the best shot. People will survive and adapt, they'll have to, and we'll make it work. They need people though. Think of it as an adventure."

Leiko had nothing to say to this. The whole planet? Her first instinct was to call Charley and let her know but what would she say. Sorry it's all been a lie and we're all screwed? Sure hope you can find your way to Mars, that's where I'm going? Not saying anything at all would be just as bad, if not worse. She wondered if she even had her number any more.

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The final question on the exam was where do you see yourself in 10 years? She knew this was a common question in job interviews but at fourteen Leiko had no idea how to answer. She did the quick math in her head and she'd be a couple years out of college by then, hopefully. The application for the summer at the Reforestation Project was full of these kinds of questions. Ten years was such a long time but they expected some sort of answer. She typed in "Changing the world for the better," and submitted it before she could change her mind.

About three weeks later she'd got her acceptance letter and then it was off to the rain forest.

The trip started at the airport with tearful goodbyes from her mother. Her father was more stoic but Leiko could tell he was having a hard time letting go.

It took two days to get to the site, the flight out was painless but she'd had to take a second flight and then an old school bus out to the work camp.

"Okay, new arrivals over here." A woman who looked like a camp counselor called out. A couple other buses had just pulled up as well and the kids started through the registration tent. Leiko joined the line that was forming.

"I'm Charley," the girl behind her in line said, extending her hand.

"Leiko," she replied.

"Is that Hawaiian?"

"Something like that."

Charley was from California. She described her parents as hippies who had not so much forced but had aggressively coerced Charley into the summer at the Reforestation Project. They hoped it would instill some back to nature love that they had.

At the registration desk the girls were assigned different tents but the next day they ended up partnered anyway. After the first day of working together Charley and Leiko had pulled strings to get reassigned to the same tent and became inseparable.

After the initial orientation week, the days that followed were mostly the same. Up at dawn to be trucked out to the new tree line along with the tools and saplings. The kids worked in pairs digging and planting new trees while a team came behind with other plants and a third behind them packing everything down.

The trees they planted were a variety, no monoculture, and the supervisors (who insisted on being called counselors) encouraged the kids to plant in a natural way and avoiding straight rows.

Afternoons were more fun, lots of nature walks and sightseeing. Maybe a trip to the local village or swimming in the river that ran a few miles north.

One night, unable to sleep, Leiko had felt compelled to take a walk. Charley was snoring loudly and Leiko slipped out unnoticed. It was dark, hardly any light from the sliver of the moon, but Leiko felt like she knew where she was going. Wandering off by yourself was strictly prohibited; if you were caught it was an automatic trip home with your parents billed the airfare, and no second chances. That night though Leiko felt no anxiety about being caught.

Deeper and deeper she wandered into the forest, somehow always on an upward slope, never tripping or being caught by the undergrowth. After what could have been minutes or hours she emerged into a clearing.

Running through the clearing was a small stream and a small pool had formed. Some sort of luminous moss coated the trees, giving a soft blue glow to the area.

Kneeling down at the pool at first she didn't see anything, but as her eyes adjusted all she saw was herself. She could see the scrape on her head from walking into a low branch, and her face looked thinner, almost gaunt from all the hard work. Thinking on what she'd accomplished in the last month or so, what all she'd done, she realized it wasn't that much. Sure they planted trees but on the way out to the camp it looked like half the country had been razed for grasslands, maybe more. They were planting a couple hundred trees a day tops and it was often way less than that. Even if she moved out here, made this her life's work, it wouldn't move the needle. The alternative though, if she hadn't done anything would be acres and acres of forest that would never be. Even though it was only a little, it was better than nothing. Every little bit counted for something.

The next morning Leiko woke in her bed like nothing had happened. She didn't remember how she got back from the clearing but the clearing itself was seared into her brain. It had felt so real

at the time and although she could remember everything the whole event now seemed somehow otherworldly.

When Charley woke up Leiko had tried to explain but didn't really have the words. Charley had been more impressed that she'd managed to not get caught sneaking out.

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"10 Kilograms is all I get?"

"That's right, and its space limited too."

"What's that, like 20 pounds?"

"Just about and the boxes are about 15 inches cubed."

"I can't get my life down into that, there's no way."

"I know, how do you think I feel? The baby books alone will take up that space. Then there's my grandmother's jewelry, my jewelry, the Christmas stockings your grandmother made by hand. It's impossible. Most of your stuff will fit on a data slate. I might even need some of your space."

It had only taken a week between her father being added to the pool and him being selected to transfer to Mars. She'd never ask, and her father wouldn't admit it anyway, but he'd probably had to pull some major strings to get transferred. Supposedly it was a non-biased anonymous approval process for fairness but even Leiko knew that was bullshit. The only thing that surprised her was the brazenness.

After the approval they'd all been sent an orientation packet which was mostly rules. Can't bring this, can't do that. It would be a lot like living at work full time, the company owned the dome

and although it technically didn't own the people, it controlled every aspect down to the breathable air.

The informational packed for the Martian colony was very thorough, and most of it she was sure she would figure out, but the space and weight requirements for the outbound trip were crazy. Leiko understood the need, every ounce of weight probably meant triple that in fuel and the ships they were running weren't big at all. Still though, getting her life down to a twenty pound fifteen inch cubed box would be impossible.

Better get started, she thought to herself as she immediately put back all the clothes and shoes she'd decided she couldn't live without. That was another thing about Mars, it was extremely controlled for bacteria. Any clothes from outside weren't permitted. Too many chances for dormant mold spores, seeds, really anything that could survive in the fibers and cuffs of clothes. The colony was a closed system and anything that was spreadable could devastate the colony.

Next were the books, there were a couple that were dear to her but the weight to sentiment value was all wrong. Her data slate definitely made the cut, and then she got to thinking about what she could bring to Mars that would be impossible to get while she was there. Their money would transfer, and so would all the digital files she had. Gold wouldn't go any further than credit, probably less in fact. Her mom was just bringing the jewelry for sentimental value. She thought and thought, they had food, they had water, they had entertainment, it was really only open skies and green fields they lacked.

Life on Mars was a life living under a dome. Maybe the domes would get bigger, and the domes would get nicer. The domes might even one day be so big she could forget there was a dome at all, but regardless, life on Mars would be a life under glass.

Try as she might she couldn't figure out any way to even symbolically capture the idea of open skies and green fields in a way that she could take with her. Her box, which she had felt like

was incredibly limited, would only have a handful of things. Her mother would be grateful for the space.

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On the way to the launch site Leiko felt herself getting sick. Down in the pit of her stomach a tight ball of anxiety had formed and her hands started shaking. Her mother noticed right away and tried to rub her shoulders soothingly but this just agitated Leiko more.

Around the time they were exiting the freeway an idea occurred to her. It was so simple, now that she thought about it. So obvious. A sense of relief washed over her and she felt like herself again.

"Mom, I'm not going."

Her mother, lost in thought didn't even acknowledge her. "What was that?" she asked after Leiko nudged her.

"I said I'm not going. I'm not going to Mars."

"Of course you are, we're all set to go."

"I know but I've changed my mind. I'm not going."

"Don't be ridiculous," her mother replied, finally turning to face her. Leiko had a clear vision of this moment for years afterwards. It was the first time as an adult she felt like her mother really saw her. Really took a look at who she was as an adult. "You don't have a job, we've sold the house. Everything is gone or donated or sold. Everything we own is in those three tiny boxes that got picked up this morning and what's in the bank account. There is literally nothing else."

"I'll figure it out," she replied. The enormity of staying was catching up to her. Her mother was right, the logistics would be tough. "I'll stay with some friends till I can get a job. Maybe stay with Kylie or whoever."

"You haven't talked to Kylie since graduation and you'll basically be homeless. It won't be that bad, what's brought this on all the sudden. Mark, are you hearing this?"

Her father had been busy with his emails, worried about being out of contact for the twelve hours or so it would take till they were in orbit. Even right up to his last moments on Earth his face was buried in company business.

"No, what's the problem?"

"Leiko has decided she's not coming"

"What?"

"Apparently she's going to find a job or something and will figure it out."

"Like hell you are. Did you forget what we talked about? This is it for us, our best chance. Besides, everything's gone. The house is sold, we got rid of all our things. Do you even have any clothes besides what you're wearing?"

Her father was right of course, but just then, her father's points were mostly about things again. Things things things. The stuff they measured their life against. She knew she wouldn't starve to death, no chance at all of that happening, and after that she really could figure it out.

"Can you make me go, like can you physically force me against my will to get on that ship? Can you drag me kicking and screaming like a three year old through the terminal?"

Her father sighed. "Of course not."

"Then I'm not going."

"But why?"

Leiko paused for a moment and realized if she followed through with this this would probably be the very last time she saw her parents in person. "You know how after I graduated I tried to take all those classes online. I think it'll be like that but forever. I can't live under glass, I need to be able to breathe. There are no trees there, you know? Like zero trees, and no real green spaces to speak of."

"What about the hydroponics bay, you were excited about that I thought?"

"It's not the same, little plastic buckets, row after row after row on shelves underneath artificial light for optimum growth returns. Nothing natural, just another system. I can't do it."

Her father's shoulders slumped a little bit and she knew she'd won. Her mother saw the change too.

"Mark, we can't leave her. If she won't come we can't split up the family."

"Lin, I don't know. We can't force her. This isn't the last ship, I can probably swing her on a later flight, maybe. Maybe she'll change her mind before it's too late. But there will come a time," he said now looking right at Leiko. "There will be a last flight. No one knows when it will be but one day they'll still be doing runs and then they won't anymore and that'll be it. You have to understand that. Maybe a couple months roughing it, couch surfing and minimum wage, if you can even find it, and you'll change your mind. I hope it's not too late."

Leiko would often think back on the bitter and tearful goodbye that had followed. Could she have convinced her mother to stay, was there some way she could have reasoned with her father? Mostly though she thought on how things would have changed if she'd gone with them to Mars when she had the chance.

She stayed to watch the shuttle take off then wandered around the launch facility, not sure what to do with herself. A couple weeks ago she'd finally dug up Charley's number but had been too unsure of what to say and hadn't called.

"Hey," Charley answered after the first ring.

"Hey," Leiko replied, not sure where to even start.

"What's wrong?" Even not talking for years Charley still knew something was the matter. That little bit of kindness was enough to break the dam inside her and Leiko spilled out everything, her parents leaving, her staying behind, the supposed conspiracy to cover up how screwed everybody who wasn't on Mars was, herself now included. She talked at Charley for half an hour and when she finished she felt like a great weight had been lifted off of her.

"Want to come out here, stay with me for a while?"

"I can't, I don't have enough money."

"Don't worry about that, I can cover the ticket."

Six hours later she was on a plane headed west.

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"Leiko, this is Dr. Haskers. Dr. Haskers, this is my friend from the summer at the Reforestation Project. The one whose father is high up at one of the companies building the domes. Tell him what you told me."

The day after she landed Charley took Leiko to meet one of the professors at her university.

"He told me that it's a big cover up to get as many people off planet as soon as possible. The government is in on it and all the biggest companies know, I guess." She went on to tell Dr. Haskers anything else she could think of, all the things her father had let her know. The climate data, the life boat situation. How it was not a matter of if but when. He took all this with a blank face, taking it all in. She felt completely emptied by the time she finished talking.

"Some of my colleagues have been talking, and this seems to confirm our worst suspicions. It's no surprise that they would want to keep this a secret, if the news got out there would be panic. Especially if it can't be helped."

"Can it be helped?"

"I honestly don't know, probably not. We've got to try though. We don't have the luxury of running from this problem, it's up to us to fix it."

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Dr. Hasker's ran a small climate change nonprofit in his spare time, but with Leiko's account he resigned his position at the university to run the organization full time. The funds were a trickle at first, as were the volunteers. That all changed when the coastal cities started to flood and it became obvious all the rich and powerful were suddenly on Mars. By then all sorts of projects were launched, a banning of all fossil fuels, an expansion of solar, a giant mirror was even launched to some success to divert a portion of sunlight. In the end it was impossible to say how much change any one group was really responsible for. The catastrophe wasn't nearly as bad as her father had predicted. Millions, not billions of people perished. Earth was set back technologically a hundred years or so, some technologies were lost, and somewhere in the middle of everything they'd lost touch with the Martian colonies. Still, life continued for the majority of people.

Dr. Hasker's original team eventually spun off into many different projects, and after a couple years Leiko didn't really see the old group anymore. Along the way though she had managed to get her degree and even a doctorate in Ecology. When the Reforestation Project was being expanded, she a natural choice to head up one of the divisions.

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Dr. Vasser arrived at her office bright and early and was greeted by the ever-expanding mountain of reports and paperwork that were slowly burying her desk. Before she'd even settled in with her coffee there was a knock on her door.

"Dr. Vasser?" The man that stepped into her office was one of the technicians in the scrap recovery teams. She'd met him once but couldn't remember his name. Tom something?

"Yes?"

"There's a phone call for you?" He said, almost like it was a question.

"Can't you just transfer it to my phone?"

"It's one of the old sat phones," the tech replied, handing over an old beat up brick of a phone. The screen glowed green and the thick antenna stuck out at an odd angle. Even in the age of a technological setback, the phone looked dated. "I was down in the basement doing inventory and we were testing these out. It just started ringing."

"Hello?" she asked tentatively, holding the phone awkwardly to her ear.

"Leiko? Is that you? Can you hear me? Are you getting this?"

"Mom, is that you? How is that possible?"

"Some of the old satellites is what your father said. It's so glad to hear your voice. I've missed you so much."