

We Shoot Men from Cannons

“Eels, right?”

Tiff looked up. Sometime during the first sip of her rum and coke a man had appeared on her left. He was a dead-ringer for the conference with his oversized button-up and branded, blue lanyard, which read:

Seattle Bold Futures Symposium

Rob Wheelan, NEIS

Thousands of those name tags were bobbing around now that the seminars had finished for the day. Tiff had left hers up in her room while she'd come down to the hotel bar for a quick drink.

“You were there, right? At that talk? You were in the second row I think. What was the presenter's name? Dr. Nobano, right?” the guy continued, “I can't say I, uh, *got* every part of it though; I'm a bit of a novice when it comes to eels.”

“That's why we keep Dr. Nobano around. He does the legwork,” Tiff said turning just slightly in her seat.

“Well, not much legwork with eels is there?”

Jesus.

She smiled.

“I suppose not.”

“Rob,” the lanyard wearer said extending his hand.

“Wheelan, NEIS” Tiff added, reading from his nametag as they shook.

“Exactly.”

“I'm Tiff.”

“Nice to meet you.”

She raised her drink, jostled the ice in salute, and took another sip. She waited for Rob to say more, but he didn't. He just smiled and adjusted his lean against the neighboring high-back. The bar buzzed around them. “Kinda crowded in here, you looking to nab a seat?”

“Sure,” he said, “you here to watch the launch?”

“Not specifically, no.”

“Oh, really? It might interest you. Star-Bridge is testing that high orbit resupply magnet launcher out in Indonesia. It's gonna be great. It's the start of a new space age.”

Rob pointed to the large TV above the bar. It showed blue skies and big, white, over-ocean clouds. Mid-screen was something shaped like a very large tuning fork, aimed with the prongs at a slight upward angle. *Star-Bridge* was written in black lettering across its side. At first, the scale of what Tiff was looking at was hard to contextualize, but she gradually started to see the tiny, tiny toy helicopters and firetrucks and ambulances zooming around. There were viewing stands too, washes of color and movement that represented people in the most amalgamated sense possible. She realized that each of the letters in the *Star-Bridge* name had to be dozens of meters high. Humanity, and any vaguely *human-sized* thing, was made impossibly insignificant.

“Wow,” she said.

“Yah. It's amazing.”

“It looks expensive.”

Rob hit his knees as he swung himself into the seat beside Tiff. “It cost three-hundred billion dollars,” he said through a stifled wince, “all said and done, from start to finish. Can you imagine that?”

“Nope. I work in oceanography. I didn’t even know numbers went up that high.”

“I’ve known a few guys working on the cooling systems or the g-force counteracts, small bits here and there, and I try to tell them how lucky they are that they’re at a company that puts up that kind of cash behind these big, bold projects. Can you believe that they kind of don’t get it? They look at NEIS, where I’m at, and they think the same thing about what we do. It’s not even close. Don’t get me wrong, we do some cool stuff, but it’s no high orbit delivery system. Nothing like that.”

Rob flagged down the bartender and fired off a few interrogative questions about the beers on tap. The bartender was ready for it. They batted the usual words back and forth; the pastorals and Belgians and farmhouses and hop varietals until each was satisfied at the other’s prowess and some tangy, jaundiced looking IPA had been identified as the obvious choice. Tiff couldn’t help but notice the bartender’s bowtie was a clip-on.

“Can I get your next one?” Rob asked.

“I may be just having the one, but we’ll see.”

His draft arrived, “So, you said you work in oceanography?”

“Yep. Hence the eels.”

Rob laughed, “Right, right. So it’s not just for fun, it’s a *professional* interest?”

“Both. Definitely. I study marine ecosystem impacts mostly—but I’d say I’m more pro eel than your average person for sure. Not quite as pro as Dr. Nobano, but how can you compete with that?”

“You know him pretty well?”

“I mean, a bit. We see each other at these sorts of things,” she gestured broadly, “There’s not that many of us to begin with in our salty little niche and even fewer who can make a conference work with our sailing schedules and research trips, so we gotta stick together when we can. We’re solid mid-tier colleagues I’d say.”

“That’s great, this is my first time at a conference like this.”

“Oh, well, you picked a doozy. I know your NEIS cronies like to go all out at these things.”

Rob nodded enthusiastically through a big gulp of his pint. The maneuver misfired though and little golden rivulets of beer seeped out the side of his mouth to be immediately lost in the blonde stubble of his chin. As he started speaking again, he took several long swipes at the damp spot with the back of his hand. “It is a lot. That’s for sure. But, you know, it’s been just an amazing experience. So many really smart people, so many wild, big, crazy ideas. I kind of can’t get enough of it. And the launch? I can’t wait.”

Some chyron at the bottom of the barroom TV immediately drew Rob’s eye. Tiff read it too. *Bad weather expected—delay probable.*

“When’s the launch supposed to be exactly?”

“An hour or so. They’re sending up an inaugural manned crew of five along with a bunch of material for the orbital platforms. Once they’re... *propelled* at launch it should only take about six minutes for them to reach orbit. Then they’ll be met by some shuttle craft up there and ferried over to the Star-Bridge station. That’ll be champagne time.”

“You gonna celebrate with the Star-Bridge folks?”

“Oh no, the whole conference will all just celebrate together I imagine. That’s why I came down. Everyone’s pulling for things to go smoothly. It’s a momentous day, doesn’t matter which company.”

Tiff nodded and looked back towards the TV.

“When you say ‘propelled,’ do you mean, fired? Isn’t that basically what’s happening?”

“Yah,” Rob chuckled and lifted his beer, “apparently the Star-Bridge people get *really* offended though if you say ‘fired.’ Someone told me there was a memo of acceptable words to use about the launch circulated among their staff here. I’m not trying to ruffle any feathers.”

“Is ‘giant space cannon’ on the acceptable list, you think?”

“No. I wouldn’t think so.”

“‘Vanity project?’”

“Probably not,” Rob laughed again, this time in a more effortful, obliging way. It was clear that he didn’t know how to respond, but the conversation had some momentum now.

“You’d said you have a sailing schedule. So you have a boat? What’s that like?”

“To be so lucky—no, I don’t have a boat.”

“Sorry, I mean your *company’s* boat?”

“No company either; I get my own research grants, usually through the Salish Sea Institute of Marine Studies. A lot of the grant money goes to renting a cabin or bunk on some ship sailing in the general area that I want to be going for my research. I’m a hitchhiker, basically.”

“Wow. That sounds interesting.”

“It’s not as romantic as it sounds. I spend about half of my year out on the water. My bailiwick is in pollutants and micro-plastics so for every time I’m out on a boat somewhere in Micronesia, there’s another time I’m down below deck on some tugboat in the Virginia Tidewater. If I have a good crew it’s an alright gig. But it’s equally likely that I’m paired with like *one guy* on some rusty sloop or a whole crew of fall-down drunks. Can get a little hairy then.”

“Oh yah?”

“Not like that; just makes it harder to do the job. Each ship is a whole little world of its own. You got old grudges, new grudges, ways of doing things that nobody thinks about anymore, that kinda stuff. So when I come cold into that with my sample kits, it’s like I’m some alien that’s just landed on their planet. Most of the time they have no idea what to make of me. Plus, my work sometimes gets in their way, or, you know, it might bring me a little too close to seeing something, well, *mildly* illegal or shady that they do on the sly. So I can’t just get there and start throwing buoys over-side; I gotta find a way to get along. Sometimes that’s easy. Other times, I never *really* do, but I’ve done enough to get by. Cigarettes help. I hand them out like candy. The crew usually doesn’t see any of that money that the captain gets for my bunk, but you’d be surprised how far a few smokes’ll get you. I’m a scientist who spends most of my time giving out personal little bribes.”

“Does that work?”

“Most of the time, yah. Little things like that can go a long way.”

Excited chatter rushed through the bar. Tiff and Rob both looked up and saw that the TV’s chyron had changed. *Weather dissipating. Launch on schedule.* They watched for a moment longer to see if that meant the gargantuan thing would stir to life. There was no visible change. Just open sky, big letters, and countless buzzing little wind-ups. But Rob was thrilled.

“Within a few weeks that thing is supposed to be sending something like 10 tons of equipment into orbit *each day*. Or, if each of its modules—.”

“—Modules?” Tiff smirked.

“What it launches. The uh, things it *fires* up into space.”

“Bullets? Cannon balls?”

“If each of them is full of crew members it can send nearly a thousand people into orbit in *one day*. That type of scale is exactly the way we get off the doormat of Earth and out into the solar system—new planets. It’s really hard to overstate how amazing this all is. They’re having a watch party back at the NEIS campus too.”

“What’s NEIS stand for again?”

“Next Earth Interstellar Solutions.”

Tiff finished her drink.

“Can I get your next one? I was thinking of getting another beer too.”

“Sure.”

Clip-on came back. Another round of debate and posturing. Rob decided on some other amber-tinted list of adjectives. “You want one too?”

“Naw, I’ll stick to the rum and coke.”

“It does seem like you’re pretty used to drinking with sailors.”

“Sure, except for the coke part. So do you like it over there? At NEIS?” she said sharply articulating each letter in the acronym.

“I really, really do, yah. It’s a great bunch of people to work with, kind of like a mini version of one of these conferences on the day to day. We work really hard. The hours are... intense, but that’s the trade-off you make to be at the tip of the spear as we say. Advancement takes sacrifice.”

“Huh.”

“You get it. And it’s an incredible environment—if you go down to some of the other floors you’ll see people working on habitat systems, on fuel cells, on gravity compensators, the list goes on.”

“Sounds very sci-fi.”

Rob appreciated the comparison. “Definitely.”

“So what do you do specifically?”

“I study ecosystems too, in a way. But my focus is more on learning how they work here on Earth so that they can be reproduced or, you know, streamlined for another world.”

“Thinking of putting some eels up on Mars?”

“I’ll have to check with Dr. Nobano.”

“Wise. I can get you in.”

“Oh great, thanks! That might be helpful because when we’re designing an ecosystem we look for animals that support human populations in a variety of ways. You know, we think about livestock, companions, and symbolically important animals. All that stuff. But we also need to think about what we call the ‘joint species’ that make an ecosystem work, and, particularly, joint species that are resilient to patterns of human behavior. Eels seem like a strong contender because people really don’t eat them so they’re generally not commercially fished and they thrive in high human impact environments.”

“People eat eels all the time; eel fishing is a huge industry.”

“It’s relative.”

Tiff shrugged. “So you’re kind of like space Noah? Choosing which species gets to leave the planet before it totally melts down.”

“Ideally every species would make the leap; but early on we have to prioritize.”

“Fair enough.”

“That’s what’s incredible about the orbital mag—,” he glanced around and whispered, “I mean, *the cannon*, because it will theoretically allow for so much biomass to be moved *so quickly*. It makes it cheaper, and it probably ensures a much higher survival rate for the animals.”

“That’s wild to imagine. Just shooting elephants up into space instead of doing something to save them down here.”

“We probably wouldn’t do elephants.”

“Just essential species.”

“Right. Priorities.” Rob thought they were agreeing about something. They were not.

“OK, so, if we’re talking eels for example, you’re gonna have a tough time finding an ocean for them not on Earth. Doesn’t that complicate things a bit?”

“That’s not really our department. We do modeling for different scenarios, but there’s nothing so concrete at this point that we get too bogged down in the details. We try to be really expansive in the range of possibilities, but it’s hard not to make a lot of Earth similar assumptions. You know, gravity levels and water cycles and that kind of thing.”

“I bet. Seems... a little backwards.”

“Totally. That’s why we try to avoid thinking about Earth specifically I guess.”

“No, I mean, *we’re on Earth*. Doesn’t it feel like we should spend more effort on the planet we know about rather than some hypothetical?”

“You don’t think we should go to other planets?”

“No, I do. I just wonder about that,” she nudged her drink in the direction of the TV, “and the three-hundred billion dollars. It’s just like I said earlier; seems like an expensive way to not solve a problem.”

Tiff underestimated either her own antagonism to the space cannon, or how much rum ole’ clip-on had been pairing with the coke. Both probably. She’d gotten punchier than she’d meant to and she could see that Rob was recontextualizing the purpose of their conversation. She watched him nod along in an automatic, practiced kind of way. She noticed his legs cross and re-cross, his posture taking on a rigid kind of consideration. He was shifting gears. He was becoming the sage upon the mountain top. The educator. The wise, wandering dispeller of her ignorance. Every academic or scientist or engineer Tiff had ever known had this mode—herself included—but there were a variety of more palatable ways it could be carried through. She regretted triggering it, particularly since Rob’s version did not resemble her own strategy of congenial bribery and free cigarettes.

“Investing in spacefaring technology has had tremendous knock-on effects in basically every other field since the 60’s. The discoveries it enables can’t really be easily quantified. Innovation in one field helps all the rest.”

“True. GPS. Satellites. Tang. Good stuff.”

“Space travel is not incompatible with solving our issues here at home, it in fact opens up the space for creative solutions. Who knows what kind of value that three-hundred billion dollars will generate. Systemic innovation is too complicated to really, truly know until we see some incredible breakthrough and we trace back some of its components to things that were discovered with the Star-Bridge cannon.”

She couldn't help herself. "That's fair if it's a healthy proportion of the time and money invested, but I don't think that's the case. I mean, *three-hundred billion dollars* for one company's big space cannon. That's a lot of money to spend and just hope that other innovations will trickle down."

"It does two things though. It helps here *and* it sets us up to go to new planets."

"New planets with water and atmospheres and nutrients in the soil? Which ones? Which planets are we talking about?"

"There has to be some out there."

"Yes. Statistically."

"But that's where my work comes in. We can make new ecosystems on more reachable planets or moons. You know, terraform."

"So to save *our* oceans, let's say, we need to go into space, find a close enough planet, and *make a new* ocean out there totally from scratch? That's the way to solve our problem here on Earth?"

"I'm not trying to solve that problem."

"Yep. Which I guess is what dampens my enthusiasm for the space cannons."

"Don't you think it's important that people care about space? About the future of humanity? This is big stuff that's about to happen today. Look around at how excited people are, I think that's pretty beautiful."

Tiff shrugged, "It is beautiful. And, well, macabre, I guess. I just wish that enthusiasm could be mustered for saving our oceans or our climate in general. It's like you said, we have to choose between eels and elephants. Doing something about the problem here on Earth is the important bit, it's the eels, right? The priority consideration. But space cannons and lunar colonies and all that? That's elephants all the way down for me."

"That wasn't really what I was saying before."

"It's not a perfect metaphor."

They went on like that. Rob cloaking himself in the strained virtue of the cheerful teacher and Tiff just enjoying a tussle that she wouldn't have to jump overboard to escape. It was one of those rosy-cheeked but bloodless kind of contests, propelled by one more round of drinks and then another. All the while, the white jumpsuit clad space cadets out in Indonesia were busying themselves for history. Nothing could be gleaned from the motionlessness of the great, big, giant thing on the TV screen. Even the wind-ups buzzing around it gave no indication of when the launch might be. It was only the update chyron on the TV that deigned to keep the folks at home in the loop.

On schedule.

Soon.

Imminent.

Such ever-ticking predictions caused a rush to the bar for orders of champagne and rounds of shots, celebratory projectiles ready for liftoff. Shouts of orders and clinking noise like rockets blasting off to either side. After that though, things quieted. A lull. The air lost some of its charge. The screen still flashed with its alacritous pronouncements, but each update followed by inaction made Tiff and Rob distrust it a bit more. Their sparring was a preferable thing to focus on; it was right there in front of them, hot-faced and important feeling. They argued, but less out of meanness for one another than out of self-righteousness—a need to power through and overcome the gravity of skepticism. They waved their hands and cut each other off; they sighed, eye-rolled, huffed, and knowingly snickered. Rob's didacticism fell off somewhere

during his fourth pint. He was funny when stymied, charming even. Hapless. Sarcasm sunk into him without so much as a ripple. And Tiff felt empowered by her role as the cynic in their argument. Being the science-camp-stowaway on three oceans' worth of rusty fishing boats always put her in the awkward position of defending, as an idea, the work she was doing. There was optimism in taking samples, in making theories, and in proposing solutions, an optimism that didn't quite fit in the galley mess and was liable to blow away topside. Hope was her ballast, a thing keeping her in check, keeping her righted. Here, though, she could really let loose. Booze dispelled the force of her words, as if she were pounding sand.

"Next Earth Interstellar Solutions—NEIS—you have to admit, that's kind of a stupid name. Next Earth? As if there's another one, just sitting there."

"I didn't name it," Rob shrugged.

"Oho, what's this I'm detecting Mr. Company Man? So you don't like the name either?"

"I didn't say that."

"Is it because it's stupid?"

"No... I don't *love* the acronym."

Tiff raised her hands in victory, "Aha! I knew I'd get you to crack on something, Wheelan!"

He smiled over the lip of his pint glass, "I guess you did... uh, what *is* your last name anyway?"

"It's written on the lanyard up in my room so guess you'll never know."

"Oh."

"Unless you come and read it for yourself."

Not her subtlest maneuver. And it surprised even her a little. She couldn't help going wide-eyed at her own boldness for a moment, which she tried to smoothly mask by taking up and finishing her cocktail. The implication of what she'd said was slow to dawn on Rob. But he'd reached the frothy bottom of his beer a few minutes ago, so when realization struck he had nowhere to hide.

"Oh," he said again.

Rob flagged down the clip-on barkeep and paid the check. Tiff boldly led their way out of the bar and through the anticipatory celebration of the hotel's first floor. The two kept up their barbs as they squeezed between groups; they shouted distracted, faux-pithy put-downs through the surrounding din. Waiting for the elevator, Tiff gave Rob a playful shove. Three. Two. One. The elevator touched down. They boarded. Systems check—input coordinates.

The doors closed.

Clear for takeoff.

"Tiffany *Jolliet*," Rob read, picking Tiff's lanyard up from the bedside table. Tiff shook her sandy hair a few times and ran her fingers through to smooth out the tangles. Her and Rob lay naked beside one another, sheets kicked to the floor.

She smiled and flicked Rob's cheek. "I'd say you could call me TJ, but I know how you feel about acronyms."

"That one's alright."

"Sure, sure." Rob set the lanyard down next to a crumpled pack of Thai cigarettes on the nightstand and picked up his phone. For the last few minutes Tiff had noticed it flashing almost

continuously. Updates. More communiques from Indonesia passed helpfully along by probably half of the contacts in Rob's phone.

"We can watch if you want."

Rob was scrolling through the messages to get his bearings. He sat up, looked at her, but didn't say anything.

"Really, it's fine. I don't mind watching," Tiff continued.

"I mean, if you're alright with it."

"Sure."

Rob hurried, lanky and naked, across the room. He turned on the TV and found a channel covering the Star-Bridge launch. As if asking one more time, he looked back at Tiff.

"Yah, yah, I said OK, let's just watch. Long as it's not going to be another two hours of any-minute-now."

"No, no," Rob said excitedly, "They say now, as in, *now-now*."

"We'll see."

Rob sat leaning forward at the foot of the bed. His long, bare back and posture made him look like a question mark. That seemed appropriate to Tiff. He was so excited; so boyish and thrilled. It was endearing.

"I'm going to shower real quick."

"You'll miss it," Rob said, "Really, it's happening at any time."

Just then, the TV picture cut away to a carefully staged group of about a dozen people behind a podium. Women. Men. Hardhats. Pristine white jumpsuits and lab coats. Glasses. The works. Real science type shit.

"*Today marks an incredible moment on our journey to the stars,*" began a man wearing a slim suit jacket. He went on like that. Stirring and gently authoritative. Tiff glanced over at Rob and saw that he was grinning wildly. He kept looking over.

See?

See?

Isn't this amazing?

Sneaky bastard. He'd gotten her in the end; their whole argument had just been preamble to soften her up for this moment. Maybe she was a believer after all, even if only a little.

The speaker concluded his remarks and the TV picture switched back over to the space cannon. It looked no different than it had for the last few hours, but now there was a little frame-within-a-frame patch in of what had to be the control room in the TV's upper right hand corner. They were working furiously in there. On another part of the screen, a timer appeared.

"Holy shit," Rob gasped, "it's going. It's actually going."

Five minutes. Four. Three.

Rob looked like he would topple over he leaned so far forward. Without taking his eyes from the screen, he was texting a mad dash of things to his coworkers.

Two.

The control room people typed and nodded and projected smooth purpose through the screen. The hair rose on Tiff's arm.

One.

For a few breathless seconds nothing happened. Then, just barely visible, the end of the massive prongs began to vibrate. Then shake. Then the whole end of them boomed mightily. Particles and pieces of indecipherable scale sailed into the sky in every direction. At first, that

seemed right. It was a cannon after all. Tiff had imagined there should be some kind of explosion.

But it wasn't right.

She could tell on Rob's face.

The far skyward end of the machine shuddered again and fire started to spew out, not in bursts, but in rolling, black-smoke billows. The lazy, white clouds were being muscled out of the sky while the swirled humanity on the viewing platforms began to drain of color. They were being evacuated. Tiff couldn't hear any sirens but she could see the small flashes of blue and red shaded over the base of the cannon.

The screen flashed back to the podium. The previous tableau of scientific competence had been replaced by a woman in a dark blazer who was partway through a monotone recitation of the evolving situation. Before Rob switched off the TV, she'd said the word *catastrophic* twice.

"Fuck," he said.

He dove headfirst back into his phone. "Fuck. Fuck. Fuck."

He took a call in the bathroom but Tiff didn't hear him say much. When he came back in, he started putting on his clothes.

"Are you OK? What happened?" she asked.

"It's a disaster."

"Shit."

"Guess you knew this would happen though, right?"

"Rob, I—"

"Real fucking waste of money, eh? Just like you said."

He was flustered. He picked up his shoes first, the rest of him still unclothed, and went to put them on. He realized what he was doing and stopped, put them down, and reached for his pants. "I can't believe it. I... shit... we'd hoped..." he stopped.

"We don't know how bad it is yet."

He stood there, anger ready on the launch pad, but it didn't quite liftoff either. He dropped the pant leg he was holding and laid back down onto the bed still clutching his phone. "Everybody's going crazy. We're fucked."

Tiff didn't know what to say to that and Rob didn't elaborate. He just lay staring at the ceiling. Minutes went by. The entire room seemed to warp around him, a central point of dense, all-consuming shock.

"Let's get some air," Tiff finally said, swinging over the bedside and pulling on a pair of pants. Rob didn't move. She walked around to his side of the bed, picked up his hastily discarded pants and underwear, and set them on his chest. She picked up the pack of cigarettes beside him, threw on a shirt, and stepped out onto the balcony.

She barely knew this guy, she didn't know if he'd come or leave or stay catatonic on the bed, but eventually he came shuffling out looking down at his phone.

"What a shit show," he said again.

"You smoke?" Tiff asked.

"No."

She pinched out two frayed cylinders from her pack anyway and handed him one.

"It sucks," she said, "to be the only one around you who knows *just how bad* something is."

She took Rob's phone and set it aside.

“I get that. Believe me, when I’m out on the water running my tests, each time—each and every time—things comes back worse than the year before. It’s right smack in front of me: things are going wrong. There’s no explosions maybe, but it’s lots of little disasters that keep adding up. But I keep thinking things might get better. I’m *hoping*. Right? Trying things and hoping. I get what it feels like when the bottom drops out.”

“What do you care? You think this is all stupid. You said so yourself.”

“Maybe some of it, but—,”

“—Wow.”

“No, listen. I get the other parts though. I heard the way you were talking about it. I *get* that. At the end of the day, cannons or micro-plastics or eels, right, we’re out there hoping something we do or believe in is going to make things better. It hurts when it doesn’t.”

Rob looked out over the balcony railing. Down below there were hundreds of conference goers gathering and dispersing in confused groups. A distraught kind of murmur followed the updrafts of the warm night.

“I guess you’re right... I’d just hoped, like, a lot.”

Tiff nodded.

“Tomorrow’s going be a bitch. We’d made all these plans to keep the celebrations rolling. We were supposed to be so jazzed that the hang-overs wouldn’t slow us down.”

“People will still be hung-over.”

Rob sighed and rolled the cigarette between his fingers, “It’s going be a brutal few days. Sitting through these talks? Walking around with all these people? How are we supposed to do that now?”

Tiff looked up. The glow of the city around them had stripped the night of all but its brightest stars. This wasn’t the kind of sky Rob thought about when he dreamed of the future. One that was mostly empty; a thing made up almost entirely of insurmountable distances.

“Well,” Tiff answered drifting closer to Rob, “that’s what the smokes are for.”