the galaxy, and the ground within becky chambers the galaxy, and the ground within

Also by Becky Chambers

THE WAYFARERS

The Long Way to a Small, Angry Planet A Closed and Common Orbit Record of a Spaceborn Few

To Be Taught, if Fortunate

the galaxy, and the ground within becky chambers



First published in Great Britain in 2021 by Hodder & Stoughton An Hachette UK company

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A CIP catalogue record for this title is available from the British Library

Hardback ISBN 9781473647664 Trade Paperback ISBN 9781473647671

Typeset in Sabon MT by Palimpsest Book Production Ltd, Falkirk, Stirlingshire

Printed and bound in Great Britain by Clays Ltd, Elcograf S.p.A.

Hodder & Stoughton policy is to use papers that are natural, renewable and recyclable products and made from wood grown in sustainable forests. The logging and manufacturing processes are expected to conform to the environmental regulations of the country of origin.

Hodder & Stoughton Ltd Carmelite House 50 Victoria Embankment London EC4Y ODZ

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For the strangers who helped.

Prologue

OPENING HOURS

Received message

Encryption: 0

From: Goran Orbital Cooperative Info Team (path: 8486-747-00)

To: Ooli Oht Ouloo (path: 5787-598-66) Subject: Possible service outage today

This is an update from the Goran Orbital Cooperative regarding satellite network coverage between the hours of 06:00 and 18:00 today, 236/307.

We will be performing routine maintenance and adjustments on a portion of our solar energy fleet. While we hope to avoid any disruptions in service, there is a possibility that residents and business owners in Neighbourhoods 6, 7, and 8 (South) may experience a temporary decrease or loss in power during the hours stated above. Our maintenance crew will do everything in their ability to prevent this from being the case, but please prepare accordingly. We recommend activating and testing your back-up power system ahead of time.

If you have any questions, please feel free to contact our info team via this scrib path.

Thank you for supporting your local planetary co-op!

OULOO

In the Linkings, the system was listed as Tren. The science section in those same files was remarkable only for its brevity, as even the most enthusiastic astronomer would find it hard to get excited over this lonely section of the map. Tren's namesake star was middle-aged and run-of-the-mill, and when you discounted the assorted dust and debris you could find in any stellar system, the only thing orbiting it was one bone-dry planet of mediocre size, possessing no moon, no rings, nothing to harvest, nothing worth mining, nothing to gasp at while on vacation. It was merely a rock, with a half-hearted wisp of atmosphere clinging meagrely to its surface. The planet's name was Gora, the Hanto word for *useless*.

The sole point worth noting about poor Tren and Gora was that on a navigation chart, they had the accidental chance of falling at a favourable distance between five other systems that attracted a lot of to-and-fro. The interspatial tunnels branching from these more vibrant ports of call were old, built with technology that lacked the range of modern wormholes. Tunnels couldn't stretch as far back in the day, is what it came down to, and the old routes from the Harmagian colonial era were commonly punctuated with spots where ships could pop out into normal space before heading down the next leg. At last, the boring little rock that spun around the drab little sun was given a use: that of an anchor between the places people actually wanted to visit.

Traffic at a tunnel hub like Gora was complicated, as the

comings and goings through wormholes had to be meticulously tracked. Swooping out of one tunnel and into the next without any sort of regulation was a perfect recipe for accidents, particularly if you were entering a tunnel someone else had yet to exit. As was the case in all such places, Tren was under the watch of the Galactic Commons Transit Authority. Any ship exiting or entering had to first submit a flight plan indicating their time of arrival, their point of origin, and their final destination. The Transit Authority would then grant access to the destinationbound tunnel in question and assign a departure time. Crossing normal space from one tunnel to the next would only take a few hours, but waits in the Tren system were rarely that short. A layover of at least half a day was common, unless traffic demand was unusually light. And so, the solitary planet had acquired much more company over the decades. Gora was flocked with bubbled habitat domes, each containing diversions and services of varied flavours. There were hotels, tech swaps, restaurants, repair shops, grocery vendors, sim vendors, kick vendors, smash vendors, gardens, tet houses, and swimming pools, each courting weary spacers in need of some real gravity and a brief change in scenery.

One of these domes, on a flat plain in the southern hemisphere, encased a modest-sized establishment. Its name – as was painted in a wreath of multiple languages on the shuttlepad outside – was the Five-Hop One-Stop.

It was Ouloo's self-appointed mission in life to make you want to land there.

She awoke, as she always did, before dawn. Her eyes opened easily in the ebbing dark, her body long accustomed to transitioning out of sleep at this exact hour in this exact lighting. She stretched against the nest of pillows heaped in her sleeping alcove, pulled her head out from where it rested beneath a hind leg, and shook errant locks of fur from her eyes. She reached out a paw and shut off the alarm that hadn't been needed (she couldn't even remember what it sounded like).

Ouloo swung her long neck out into the room and saw that the sleeping alcove across from hers was empty. 'Tupo?' she called. It wasn't like her child to be awake this early. Every morning in recent memory had begun with a prepubescent war, each more tedious than the last. Ouloo felt a faint glimmer of hope arise, a fantastical fancy in which Tupo had gotten up on xyr own, started xyr chores, perhaps even *cooked*.

Ouloo nearly laughed at herself. There was no chance of that. She padded across the room, entered her grooming cabinet, shut herself in the spacious compartment, put her feet on each of the four placement markers, and tapped a button with her nose. She sighed as a company of clever machines got to work, combing and curling, washing and rinsing, massaging her paw pads and cleaning her dainty ears. She loved this part of the morning, though she did somewhat miss the days before Gora. when her morning routine included scented soaps and herbal powders. But as the host of a multispecies establishment, she knew all too well that what might smell delicious to her might trigger anything from an allergic reaction to a personal insult in someone else, and she valued the long-term satisfaction of her customers exponentially higher than the fleeting indulgence of a rich springweed lather. Ouloo was a woman who took details seriously, and in her mind, there was no detail too small to note, not where her customers were concerned.

'Tupo?' she called again. Properly groomed, she exited the cabinet and headed down the hallway that connected the sleeping room to everything else. Their home was not large or elaborate, but it was just right for two, and they needed nothing more than that. It wasn't typical for Laru to live in a group that small – if a pair even counted as a *group* – but Ouloo didn't think of herself as typical, in any respect. She took pride in that fact.

The hallway was lined with skylights, and the view through them was busy as always. Tren had barely begun to shine that day, but the sky was alight all the same, glittering with satellites, orbiters, and the ever-constant parade of ships launching and landing and sailing by. Ouloo noted, as she passed a window, that the shuttlepad paint could use a touch-up. She mentally added it to Tupo's list.

The scene she found at the end of the hallway sent her fresh curls into an angry ruffle. 'Tupo!' Ouloo scolded. Her eyelids fell shut, and she sighed. She remembered a day long ago when she'd peered into her belly pouch and seen this pearl-pink nugget finally looking at her. Two tendays after being born, Tupo's eyes had just begun to open, and Ouloo had stared back into them with all the love and wonder in the universe, rendered breathless by this moment of pure connection between herself and her marvellous, perfect baby, cooing softness and safety at this tiny living treasure as she wondered who xe might grow into.

The answer, depressingly, was the consummate disaster snoring in the middle of the floor, limbs sprawled like roadkill. Some goofball vid was playing unwatched on the projector nearby, while its lone audience member slept face-first in a bowl of algae puffs.

Ouloo had no time for this. She marched over to her child, wrapped her neck around either side of xyr torso, and shook firmly. 'Tupo!'

Tupo awoke with a snort and a start. 'I didn't,' xe blurted.

Ouloo stomped over to the projector and switched it off. 'You said you would come to bed by midnight.'

Tupo raised xyr neck laboriously, blinking with confusion, algae-puff dust clinging to the fur of xyr face. 'What time is it?'

'It's *morning*. We have guests arriving soon, and . . . and *look* at yourself.'

Tupo continued to blink. Xe grimaced. 'My mouth really hurts,' xe whined.

'Let me see,' Ouloo said. She walked over, swinging her face close to Tupo's, trying to ignore the fact that Tupo had drooled all over the contents of the snack bowl. 'Open up.' Tupo opened xyr mouth wide, habitually. Ouloo peered in. 'Oh, dear,' she said, sympathy bleeding through her annoyance. 'That one's

going to come in by the end of the tenday, I'll bet. We'll put some gel on it, hmm?' Tupo's adult incisors were making their first appearance, and like everything else on the child's body, they were being inelegant about the process. Growing up was never a fun experience for any species, but the Laru were longer-lived than most, and had that much more time to drag the whole unpleasant business out. Ouloo didn't know how she was going to stand at least eight more years of this. Tupo was still so soft, so babylike in temperament, but had finally crossed the threshold from *small and cute* to *big and dumb*. Nothing fit right and everything was in flux. It wasn't just the teeth, but the limbs, the jaw, the adult coat coming in like a badly trimmed hedge, and the smell – stars, but the kid had a funk. 'You need to go wash,' Ouloo said.

'I did last night,' Tupo protested.

'And you need to again,' Ouloo said. 'We have Aeluons coming in, and if *I* can smell you, they definitely will.'

Tupo dug absentmindedly around the snack bowl with a forepaw, searching for puffs that weren't wet. 'Who is coming today?'

Ouloo fetched her scrib from where she'd set it on a side table the night before, the same place she always left it. She gestured at the screen, pulling up that day's list of arrivals. 'We've got three scheduled for docking,' she said. Not the best day ever, but decent. It would give her time to get some repairs done, and Tupo could start on the shuttlepad painting. Ouloo gestured again, pulling the details on screen into projection mode so Tupo could see.

The list read:

Today's scheduled dockings

Saelen (Est. arrival: 11:26) Melody (Est. arrival: 12:15)

Korrigoch Hrut (Est. arrival: 13:06)

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'Which one's the Aeluon ship?' Tupo asked through a full, crunching mouth.

'Which one do you think?'

'I dunno.'

'Oh, come on. Yes, you do.'

Tupo sighed. Normally, xe was all for guessing games like this – and could be a real show-off about it – but mornings were not xyr best time even when xe hadn't spent the night in a snack bowl. 'Saelen.'

'Why?'

'Because that's obviously an Aeluon name.'

'How can you tell?'

'Because of the way it ends. And the ae.'

'Very good.' Ouloo pointed at the third ship name on the list. 'And what language is this one?'

Tupo squinted. 'Is that Ensk?'

'Not even close. Look at the consonants.'

Tupo squinted harder. 'Tellerain!' xe said, as if xe'd known all along. Xyr sleepy eyes perked right up. 'Are they Quelins?'

'Quelin, singular, even if it's a group, and yes, correct.'

Tupo was visibly excited. 'We haven't had any Quelin people in a long time.'

'Well, there aren't many of them who travel in common space. You remember not to be nosy with them about why they're out here, right?'

'Yeah. Their legs are so weird, Mom.'

Ouloo frowned. 'What have we talked about?'

Tupo huffed, making the fur below xyr nose shiver. 'Not weird, just *different*.'

'That's right.'

Tupo rolled xyr eyes, then turned xyr attention to the list once more. 'Who's the second one?'

'Could be anyone,' Ouloo said, as was true for a ship with a Klip name. 'Probably a mixed crew.'

'You could loooook,' Tupo wheedled.

Ouloo gestured at the list, bringing up the details filed with the Transport Authority.

Melody

Ship category: Family shuttle

Associated orbital ship (if applicable): Harmony

Length of planetside layover: Two hours

Pilot: Speaker

'What kind of a name is Speaker?' Tupo said. 'That's not a name.'

'It's clearly *xyr* name,' Ouloo said, but now she was curious, too. A modder, most likely. Modders always had funny names like that. She pulled up the pilot licence that had been submitted with the docking request. The file appeared on screen, complete with a photo of the pilot in question.

Ouloo gasped.

Tupo was fully awake now. 'What is *that*?' xe cried, pushing xyr face in close. 'Mom, what is *that*?'

Ouloo stared. That . . . that couldn't be right.

Day 236, GC Standard 307

COURSE ADJUSTMENTS

SPEAKER

When Speaker awoke, Tracker was nowhere in sight. This was to be expected. Tracker was always the first to be up and about. As egglings, Tracker had been nearly free of her shell by the time Speaker had started to crack through her own – a fact neither twin remembered, but one their relatives relayed time and again. Speaker had never known a life without Tracker in it, nor a morning when she'd awoken with her sister still in their bed. As such, it was not the sound of a busy sibling which roused Speaker that morning, but instead, the loud chime of a message alert.

'Can you get that?' Speaker called, reluctant to let go of the cushion she was curled around.

The message alert continued, which gave Speaker her answer. Reluctantly, Speaker crawled to the edge of the hanging bed. She reached out a forearm, using the large keratin hook at the end of her much-smaller hand to anchor herself to the nearest ambulation pole. She then swung her body out to grab the next pole with the opposing hook, and so on, and so forth. As was the case on any Akarak ship, every room in the *Harmony* was filled with lattices of floor-to-ceiling poles, each a constructed course designed to mimic the arboreal byways her ancestors had used. Speaker had never moved about using a real tree, nor, she imagined, did she move as dexterously as her predecessors had. Like many, Speaker had been born with what her people called Irirek syndrome – an environmentally triggered genetic condition that limited the use of her legs.

The two short limbs that hung below her as she swung across the room could grasp and passively support, but nothing beyond that. Her arms were what carried her, and these were strong and tireless, even on a morning when she'd been awoken rudely.

Speaker reached the comms panel embedded in the wall, and settled herself into one of the woven seating hammocks that hung before it. She gestured to the panel, and looked at the incoming call data. A local transmission, not an ansible call. Speaker took a breath and willed herself into a state of calm. Who knew? Maybe it would go well this time.

A Laru appeared on screen – her destination's ground host, Speaker assumed, for the vowel-heavy name she'd previously noted when requesting a docking slot at the Five-Hop could be nothing *but* Laru. Most Akaraks found this species difficult to read, what with their thick fur obscuring so much of their facial musculature, but Speaker could interpret Laru expression and body language both, just as she could with most GC species. She had doggedly practised at this, and knew her skills in this regard to be sharp.

In any case, this particular Laru was nervous, a fact which made Speaker feel both exhausted and utterly unsurprised.

The Laru addressed her in laborious Hanto. 'I am Ouloo, the ground host. Please state your business here.' The lack of polite greeting or welcome was unmissable, especially in the flowery colonial tongue. One might have chalked that up to Ouloo's obvious difficulty with speaking the language, but experience had taught its recipient better.

Speaker adopted a posture that she knew worked well on Laru: slumped shoulders, head extended farther forward than was natural for her. To a Laru, this would hit the approximate visual markers for a person at ease. 'Hello, Ouloo,' Speaker responded in polished Klip. 'It's a pleasure to meet you. My name is Speaker. You should have our shuttle reservation on file – the *Melody*.'

Ouloo's clay-red fur fluffed in surprise, and Speaker didn't have to guess at why. Akaraks were not known for conversing easily in Klip. 'Oh, I, um . . .' The Laru scrambled on her end, entering commands with her shaggy paws. 'The . . . ?'

'The *Melody*,' Speaker repeated. She doubted Ouloo had not seen the reservation before this point.

The Laru's large eyes darted up and down as she read a file on an unseen screen. 'Yes, I see,' Ouloo said. Her voice remained uneasy, adrift. 'Sorry, I didn't realise you were, um . . .' She paused. 'Could you . . . could you send over your ship's travel registry permit?'

Speaker resisted the urge to snap her beak in annoyance, and kept her head soothingly extended. 'My pilot's licence should be there with our reservation,' she said. 'Is that not sufficient?'

'Yes, um, it is. This is just for extra verification. Standard security policy.'

Speaker wondered if that policy had existed prior to this conversation. 'One moment,' she said. She called up the file and sent it forth.

There was a chirp on Ouloo's end as the file was received. The Laru's eyes went up and down, up and down, a few more times than one would assume was necessary to read such a short file. 'Thanks very much,' Ouloo said. 'All seems in order.' She was trying to sound friendly now, but there was still an edge to her voice. 'Welcome to Gora. We're looking forward to having you at the Five-Hop. I'll be in the office upon your arrival to assess your needs and show you around our facilities.' She paused again. 'I'm sorry, but we haven't had Akarak guests before. I make a point of offering something for every species, but I don't have — I don't know—' She laughed awkwardly. 'I mean — I suppose it's an oversight on my part—'

'Not to worry,' Speaker said. 'Our stop here will be short, and we'll be most comfortable in our shuttle anyway. I just need a few supplies.'

'Right,' the Laru said. 'Well, I hope it's a pleasant stop all

the same. Um . . . you saw in the docking reservation guide that we have a strict no-weapons policy, correct?'

Speaker let the mild insult slide, like so many others. 'We don't carry weapons,' she said.

'Oh,' Ouloo said, surprised once more. She brightened, trying to salvage the conversation. 'You'll be less fuss than the Aeluon, then. We got a shuttle in from some border mess, and she *definitely* had to lock a few things up. You'll see her around, I'm sure.'

'I'm sure I will,' Speaker said. 'See you when we dock.'

The screen went black. Speaker exhaled, deeply. She glanced at the clock – an hour until they reached Gora. Time enough for a few creature comforts.

She swung from pole to pole, out of the bedroom and into the washroom, where she drank some water, relieved herself, and put a pack of meadowmelt dentbots to work. Meadowmelt was *her* preferred flavour, not Tracker's, but Tracker had been the one to put in the grocery order at the last market stop. Knowing this made Speaker smile as she spat the last of the cleansing froth out of her mouth. Her sister had a knack for unspoken kindnesses.

Feeling more herself, Speaker made her way down the corridor, peeking in each room as she passed by. The *Harmony* would've been far too cramped for a typical Akarak family of ten or more, but this ship was home to Speaker and Tracker alone. The unlived-in rooms were far from empty, however. Each was stuffed to the brim with tech, medicine, shelf-stable food, bedding, air tanks – whatever leftovers they'd scrounged or gifts they'd accepted. Speaker and Tracker did not carry this cargo for themselves, but for those they encountered in their work. There was no way of knowing who would need what, and so it was best to carry everything.

Tracker was, predictably, in one of the only two rooms on the *Harmony* that the sisters had set aside for something other than practical use. One of the rooms belonged to Speaker, who

was in the slow process of kitting it out to be an acoustic paradise for listening to music. Tracker's room – the one Speaker entered now - was a garden, in a way. Tracker had an affinity for growing crystals, and she'd developed the room solely for this purpose. The lower part of the room was stuffed with shelves holding beakers, burners, jars of powders and salts. The walls were decked in coloured lights, affixed here and there at asymmetrical angles. Tracker's inorganic creations filled the remainder of the space, hanging from twine-supported bowls and cups in the open air between ambulation poles. Some of the crystals were fuzzy, others chunky and smooth. Some looked like water ice, or engine char, or melted glass. Their colours were varied as could be, and every movement Speaker made, no matter how minute, resulted in the room shifting into a new arrangement of kaleidoscopic glitter born out of the play between the character of minerals and the wavelengths of light.

Tracker hung by her feet from the ceiling netting, her hands arranging the contents of a likewise hanging bowl. 'This batch is turning out beautifully,' she said in their native Ihreet.

Speaker climbed toward the bowl in question, but halfway up, the maze of poles and jars that Tracker had configured around her own motions no longer worked for someone with legs of different make. Tracker noted Speaker's difficulty, and without a word from either sister, shimmied down to help. Tracker turned horizontal, vertical, back limbs flipping her body in ways Speaker's could not. She linked wrist-hooks with Speaker. She supported, boosted, guided. Speaker leaned, followed, trusted. This was a dance they knew well.

Pressed close against Tracker's torso, Speaker could hear the rattle of her sister's lungs. 'Bad day?' Speaker asked.

'Not the best,' Tracker said. Irirek syndrome had passed her by, but she had challenges of her own. It had been Speaker who had noticed the first signs of brittle lung in Tracker, three full years after the improperly filtered air they'd breathed as egglings had kicked off a slow-burn mutative revolt. Speaker hadn't

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known what was wrong, only that at night, when she rested her ear near her sister's nostrils or against her heart, sometimes she could hear those sleeping breaths catch and stumble. If she hadn't dragged Tracker to a doctor, Speaker would've become a sibling alone – the worst thing an Akarak could bear.

'Did you take your medicine?' Speaker asked.

'I will,' Tracker said. She gave Speaker one last gentle tug, up to the seating hammock by the bowl she'd been working on.

'Take your damn medicine,' Speaker said calmly as she sat. She leaned forward and peered into the bowl. The mineral spires within were a bottomless blue, mysterious and pacifying, branching outward in beguiling geometry. She picked one up and admired it, turning it this way and that in the coloured light. 'Is this why you didn't pick up the call?'

'No,' Tracker said, reclining on a hammock below. 'I just didn't want to deal with it.'

Speaker flicked her eyes toward her sister. 'Thanks,' she said.

Tracker spread her arms out to the side in congenial argument. 'Tell me it wasn't some bullshit.'

'Oh, it absolutely was some bullshit,' Speaker said.

'Mmm-hmm,' Tracker said. 'And nothing makes bullshit worse than someone with an accent like mine.'

'Your accent is fine,' Speaker said. 'It's not like you're the only person in the galaxy with a thick accent.'

'Okay, well, I don't know half as many words as you. Not even half. Like . . . an eighth. A sixteenth.'

'It's still good enough for a docking call.'

Tracker linked her wrist-hooks together behind her head, lounging in a manner that said she was not going to concede this point. 'You're Speaker, not me.'

Speaker put the crystal back in the bowl. 'Do you want to come with me this time?'

'No,' Tracker said. This was of no surprise. She rarely left the ship unless there was good reason to. This was a common trait for their kind, but Tracker had fostered it with aplomb.

She was a master of not going anywhere. Still, something occurred to her after her initial answer. 'How *much* bullshit was that call?'

Speaker understood the underlying question: is it safe for you to go alone? 'Not the dangerous kind,' she said. 'She seemed fussy, not violent. Besides, she doesn't allow weapons.'

'Okay. You're sure?' Tracker said.

'I'm sure.' Speaker began to make her way down, carefully. Tracker moved to help, but Speaker waved her off. 'I'm fine.' She swung herself to Tracker's hammock, and her sister made room. They arranged themselves around each other in familiar choreography, taking on a configuration that came as naturally to them as the shapes the crystals formed. Tracker started to cough, and Speaker held her sister's hands as the short fit peaked and passed. 'Hey, while I'm gone?' she said.

Tracker took a few slow, deliberate breaths, making sure everything within her chest was working as intended. 'Yeah?' she said at last.

Speaker looked Tracker dead in the eye. 'Take your medicine.'