

PRAGUE, KINGDOM OF BOHEMIA, 12 DECEMBER 1877

It was a night so dusky the streetlamps looked like fallen stars. A night seized by a fierce frost, which crept up the spires of Prague until they glimmered like diamond stalagmites, then inched across the Vltava River until its entire surface was as smooth as marble.

It was a night that would bear a new small life.

And, alas, a *smidge* of death.

The Vaškov residence stood – tall, wide and regal – on the south-western corner of Big Old Town Square, looming smugly over the ancient, brightly painted zodiacs of the Astronomical Clock just across the street. Despite the late hour, all twelve of its ornate windows were aglow, revealing a well-to-do household abuzz with nervous activity.

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On the ground floor, maids raced between rooms with buckets of water and fresh linen.

On the first floor, Karel Vaškov sat in his leather armchair, puffing profusely on a Toscano cigar while the three eldest Vaškov children played cards by his feet.

On the second floor, six younger children were eating a box of Swiss chocolates they'd pilfered.

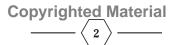
On the third floor, a tired-looking nursemaid was slumped in the rocking chair, having given up on trying to get the two smallest, crib-scaling children to sleep.

And on the fourth floor, Milena Vašková lay in bed, surrounded by midwives, wondering what was taking this baby so much longer to appear than all her others had.

The already large Vaškov family was about to grow by one.

Across the frozen river, another residence stood – narrow, crooked and forlorn – at the bottom of a dark street below the lamplit castle. All its weather-beaten windows were dark, except for the round one just below the gabled roof. It glowed like a single golden eye, staring ominously out into the gloomy night.

Beneath the creaking rafters of the attic room, the soon-to-be-born child's grandmother, Liliana, lay in her bed. Yellow candlelight trembled across her age-weathered face, revealing the feverish sweat that glistened on her forehead.



A man wearing oil-spattered overalls sat on the edge of the bed, frowning down at Liliana in concern.

'Milena's new child is on the way,' Josef said, dabbing his mother's brow with the cleanest corner of his handkerchief. 'Isn't that wonderful, *Maminka*?'

'It's terrible,' Liliana muttered. 'Worse than terrible, in fact. Nothing short of *hellish*.'

'That's no way to speak of a new grandchild. The other eleven children all seem perfectly tolerable. I'm sure this one will be too.'

Liliana seemed not to hear him. 'It's bad enough that it's the twelfth child. But born on the *twelfth* day of the *twelfth* month too.'

'A mere coincidence-'

'I caught you eating twelve fruit dumplings this morning.'

'You can hardly blame me. Those things were divine.'

'There were twelve crows circling the Týn spires.'

'You're giving me twelve different headaches right now.'

Liliana's eyelids fluttered weakly; her voice dropped to a raspy whisper. 'This new child . . . I sense—'

'Maminka, let's not get into prophecies again; it wears you out—'

'I sense dark shadows. And I see –' she squeezed her eyes closed, then immediately snapped them open again – 'an eyeball.'

Josef let out a long sigh. 'Just the one?'

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Liliana's bleary gaze turned to where many ink-smeared words had been scrawled on the wall. 'This new child is the one I've been dreaming about.'

Josef pinched the bridge of his nose. 'You should sleep. The doctor said you'd feel better in the morning.'

'The doctor was wrong,' Liliana whispered, summoning a weak smile. 'My time is nigh, and I am more than ready.'

'Don't say that.'

'One day you'll believe me again,' Liliana rasped. 'One day, you'll see I'm not the foolish old woman your sister insists I am.'

'I don't think you're foolish, but you are rather pale.'

Across the river, the clunking gears of the Astronomical Clock echoed through Big Old Town Square. Despite being too far away to hear it, Liliana turned her gaze in its direction.

On the top floor of the Vaškov residence, the scream of a newborn baby filled the air, and at the very same moment, in the candlelit attic room, Liliana sagged into her pillow.

The baby's first breath had coincided – *precisely* – with Liliana's last.

The Astronomical Clock began to chime the hour.

Twelve strikes.

Midnight.

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The twelfth child born into the Vaškov family was a girl with hair the colour of spider silk, and candle-smoke eyes flecked with the palest blue. As those eyes fluttered open for the first time, her family peered down into her crib, as if studying a rare and mystifying scientific phenomenon.

'She has Máma's small, twitchy nose,' said a young girl.

'And Táta's perfectly symmetrical dimples,' said an older boy.

The baby hiccuped, her gaze drifting towards a shadow on the wall.

'Her eyes, though,' said another child. 'Where did *those* come from?'

They all looked to their mother, waiting for her to offer a hypothesis. Instead, they were greeted by a frown.

'We've examined this little specimen enough for now,'



their father said quickly. 'I'm sure we can all agree she's splendid, and that it's time for breakfast.'

All eleven children nodded in agreement – some with their father's first statement, some with his second. A few hours and pastry-fuelled negotiations later, the children had settled on a name for the newest sister.

Ema.

No one was more taken with the littlest child than the eldest child, Františka. Before Ema's first morning was over, Františka had fashioned a sling out of a scarf and tucked Ema inside it. 'I will take her everywhere I go,' she declared. 'And I will show her all there is to see.'

When Milena opened her mouth to protest, Františka silenced her with a shake of her head.

'You feed her milk; I'll feed her wisdom,' said Františka decisively. 'Besides, every child in this family has a twin, except for me and little Ema here. I see no reason why we cannot form our own, unconventional twinship.'

And so it was that Ema found herself nestled in the arms of a ten-year-old philosopher each day, listening to her soothing commentary as they roamed the house.

'A *normal* drawing room would be full of elegant chairs, a beautifully woven carpet, and gossiping ladies in frilly dresses. But Máma is a meteorologist and prefers entertaining ideas, rather than people. You'll notice *these* chairs all have chemical



burns that no amount of patching-up will cover, and Máma has painted the periodic table on the floorboards, to save her having to squint at the one on the wall.'

'Are you criticizing my decorating skills?' Milena said, peering up from her clutter-strewn desk.

'Not at all,' Františka said. 'I'm merely giving Ema her first lesson in the unlikely beauty of chaos.'

Milena chuckled softly and Ema was carried up the marble stairs where Františka informed her that *normal* bedrooms *weren't* full of equipment, excited mutterings and the occasional loud bang.

'Each one doubles as a laboratory,' Františka explained. 'I don't need a laboratory. The only tool a philosopher needs is her mind, and maybe some *kolache*. Speaking of which, there's a bakery by Charles Bridge that I must show you. On the way I'll introduce you to trees and towers and ducks.'

Outside, Ema's candle-smoke eyes blinked furiously, taking in the colour and scale of the city.

'It's a big old universe, isn't it?' Františka said. 'Don't worry, though, we'll find your place in it.'

As far as Ema was concerned, Františka was the centre of the universe. For the next three years, she never left her sister's orbit.

Ema's first word was 'Tiška', her second word was 'biscuit', and with a lot of encouragement, her third and

fourth words were *almost* recognizable as 'Aristotle' and 'Socrates'.

As soon as Ema got the hang of joining words into complete sentences, she discovered the magic of asking questions.

'Where do bubbles go when they pop?'

'Why can't ducks talk?'

'Who invented horses? Was it Táta?'

Whatever the question, Františka answered it with a radiant smile that made Ema giddy with delight. Until one day, when Ema asked a question that left her insides itching unpleasantly.

'Tiška, where are you going?'

Her sister stopped packing her green portmanteau and lifted Ema on to her lap. 'I'm going to school in Vienna,' Františka answered, with a smile that looked as if it were *not* for Ema. 'I'll get to study philosophy every single day and maybe even win trophies and go to university.'

For the first time in her life, Ema wished she'd never asked.

'I'll be back for the holidays,' Františka continued. 'But I'm thirteen now. It is time I find my place in this big world. I wish we'd been actual twins, Ema, so that we could start this journey together. Your time will come though, I promise. And in the meantime, Marek and Magdalena have agreed to continue your education.'



Františka carried her into the next bedroom, where the eldest set of twins were hunched over a table covered with broken pots. Ema eyed them warily.

'Máma and Táta will take her each evening as they always do,' Františka said, setting Ema in Marek's arms. 'But she needs someone to give her lots of attention during the day. We can't let her curiosity go to waste.'

Ema scratched at her stomach, wondering why she couldn't reach the unbearable itchiness inside. It was still bothering her the next day, as the family gathered on the station platform to see Františka off.

The steam train hissed, its wheels screeching as it and Františka disappeared, and then the itching finally stopped. In its place, however, was the painful realization that Ema's entire world had tilted on its axis.

For the next year, Ema followed her new custodians as if she were their much smaller, much too talkative shadow.

'We can't teach you about anthropology if you keep asking random questions,' Marek said one day, in one of Prague's many museums.

'Why don't we *tell* you all about the ancient Egyptians?' Magdalena said, patting her lap. 'You can just sit and listen.' Ema sat, as instructed. The listening part proved harder. '... in the early dynastic period...'

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Her mind was still preoccupied with her unanswered questions.

"... Ema, why aren't you blinking ...?"

They buzzed around her brain like trapped wasps.

"... let's take her home; she's drawing looks"

Marek and Magdalena left for school the following autumn, eagerly passing Ema over to the next set of twins. Ema felt a sense of unease as Kryštof and Kateřina explained that they would *tell* her all there was to know about zoology.

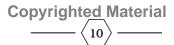
'No questions,' Kryštof whispered, as the three of them crawled through the undergrowth of the local woodlands. 'You'll scare every creature off.'

'Yes,' agreed Kateřina. 'Stealth is key.'

Ema was, it turned out, exceptionally good at stealth. Kryštof and Kateřina seemed not to notice when Ema stopped following them to the woods, choosing instead to study the creatures she found the most mysterious, curious and fascinating of all...

Her parents.

For an entire week, she got up early to hide beneath a cabinet in the library, so she could study her father working. Karel was, she quickly decided, the human form of a well-wound clock. He arrived at the stroke of nine each morning to sit at his clutter-free desk. He would work silently for



precisely two hours, smoke precisely four cigars in that time, and then get up at the stroke of eleven to neaten his already neat bookshelves, before returning to his desk for another hour of work and a further two cigars. And then at precisely midday, his neatly groomed face would appear beneath the cabinet to smile at Ema and tell her it was time for lunch.

Observing her mother's routine, on the other hand, was like trying to chase a storm. The only time her mother's energy stilled was when she noticed someone about to leave the house. She'd hurry to the hallway and declare things like: 'You'll not need that thick coat – the wind is about to die down, but you will need an umbrella as it'll have started raining before you even leave the square—' or: 'Be back by six p.m., as that is when both the incoming snowstorm and your supper will arrive.'

Her mother was always precise about the weather.

And she was *always* too distracted to notice Ema lurking beneath the cabinets of her drawing-room laboratory – which was precisely where Ema was when one of Milena's chemistry experiments went awry. As her mother pulled the curtains from their rods and flapped them over the smouldering remnants of her paperwork, an old box was sent tumbling off the top of a shelf.

The fire was quickly extinguished, but the contents of the box exploded – photographs, drawings and several lace



handkerchiefs scattered across the floor. Ema watched in astonishment as her mother started to weep, then dropped to her knees to gather it all up again.

One photograph had landed right by Ema's nose.

A moment later it was in her hand, and her eyes were gazing down at the age-faded image of a man and a woman – the latter of whom had the same pale grey eyes that Ema had.

Ema's gasp of surprise was followed swiftly by Milena's shriek of shock.

She was watching Ema with a look of panicked horror on her face. '*Beruška*, what are you doing?'

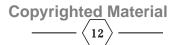
'Who are these two?' Ema asked. 'One looks like me, but more old, and the other one looks like you, but more moustachey.'

'That's your grandmother, Liliana, who is dead now,' Milena said, pushing her lips into a tight smile. 'And your uncle, my twin brother, Josef, who is travelling the world on a bicycle, I believe.'

'Why are you smiling if you're so sad?'

Milena took the photograph from Ema's fingers and put it back in the box. Ema looked down at the dark shadow pooled beneath her mother's feet, feeling as if it were seeping into her own shadow. Tears prickled in the corners of her eyes.

'I'm not sad, beruška.'



'Yes, you are. In fact, you're getting sadder and sadder. I can feel it.'

'Nobody can feel other people's emotions, Ema.'

Later that night, Ema lay in bed feeling more confused than she'd ever felt before. Why had her mother lied about feeling sad? And what did her shadow seemingly have to do with it?

Ema was handed over to the next set of twins – Hedvika and Jana – the following year. Their thrill at having a tiny acolyte to share their passion for digging up old things with lasted almost an entire month, until one day they came home with Ema slung over Jana's shoulder, crying her eyes out.

'We took her to the Bone Church in Kutná Hora,' Hedvika explained, as Milena and Karel looked at their weeping daughter.

'She insisted on it,' Jana quickly added. 'She said she had a hypothesis she wanted to test, and that her insides were itching to go there. We just thought she had an unusual way of expressing her excitement, but she keeps scratching at her stomach – look.'

Ema was, indeed, still scratching her stomach and feeling an inexplicable sense of dread spreading through every inch of her skeleton.



'Anyway, it wasn't the *bones* that upset her,' Hedvika said. 'It was the people in the graveyard *outside* the church, gathered for a funeral, that upset her. She started whispering about dark shadows. Then bawling her eyes out.'

They all turned to Ema and waited for her to explain herself.

Ema shuddered. 'I felt their sadness ... and my shadow ... it's still dark. Just like yours was, Máma, when you were looking at that photograph of Liliana and Josef.'

Her mother's face darkened like a storm cloud, and the itching inside Ema turned into an uncomfortable thrum that vibrated through her. It was the same feeling she'd had just before Františka had left – as if something bad was about to happen.

'Was this your hypothesis, Ema?' Milena asked quietly.

Ema reached into her satchel, pulled out a bundle of papers, and handed them to her mother.

'Shadowology?' Without looking at any of Ema's carefully collected notes and observations, Milena handed the papers back. 'You will stop this . . . research . . . right now.'

Ema realized then that the itching inside her had stopped and that the most calamitous thing since watching Františka's train chug away from her had just occurred.

She'd upset her mother.



Hedvika and Jana left a few months later, and Ema was sent to study physics in her father's library with her brothers Benedikt and Lubos.

By now, all Ema wanted was a subject of her own to study. But the memory of her mother's disapproval still felt like a fresh wound. It took Ema several more months before she felt another spark of curiosity that would not cease tugging at her.

'Ema, why are you shining that light through your arm?' her father asked.

He, Benedikt, and Lubos were peering over their wirerimmed spectacles at her.

'I was trying to see my bones,' Ema explained.

'Have you decided to take up anatomy?' Benedikt asked.

'No,' Ema said. 'I call it intuitive osteology. I learned that word from Hedvika. It means the study of bones, but I added the "intuitive" bit because I'm convinced there's a sixth sense hiding in my bone marrow that warns me of impending doom.'

Her father and brothers blinked.

'Yesterday, I couldn't stop scratching my left humerus bone,' Ema continued. 'I *knew* something bad was going to happen. And then something bad *did* happen.' She lifted her sleeve to show the nasty scab on her elbow. 'I tripped over a cat. I'm still collecting data to prove my hypothesis, but I'll soon be able to show Máma how she does what she does.'

Her father and brothers frowned.

'What has any of that got to do with Máma?' Lubos asked.

'She *predicts* the weather,' Ema said, confused that they hadn't worked out the obvious. 'Just like I predict bad things.'

The library fell uncomfortably quiet.

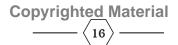
'Beruška,' Karel said finally, 'your mother uses barometers and other such equipment to predict the weather. Her skill comes from observations, not hunches. Promise me you won't let your mother hear this new hypothesis of yours. I suspect it will upset her.'

Ema felt a tickle of despair in her chest. 'I promise.'

That night, Ema found herself confused once again. If she couldn't observe her bones to prove her hypothesis, then what *could* she observe?

Soon, the only twins left were Jasmína and Nina – whose offer to teach her astronomy Ema politely turned down. She was too busy trying to find an answer to what was responsible for her intuition.

Though the quantity of siblings in the house had steadily diminished, the quantity of trophies they sent home was increasing—almost entirely filling the hallway. Ema wondered what kind of trophies—if any—she would one day receive...



and if there'd even be enough space left in the hallway for her parents to display them.

Ema began to feel as if she were haunting her family's home, instead of living in it. She wanted nothing more than for her scientific calling to fall into her lap.

Instead, Ema fell into bed with a vicious fever. 'Something awful is going to happen,' she rasped as her mother mopped her brow, 'I can feel it.'

'Fevers can cause delirium,' Milena said. 'Everything will be fine, I promise.'

For the next week, Ema slept fitfully – her dreams were dark and scary; her bones felt electrically charged.

The fever broke on her eleventh birthday.

The dread that had been coursing through her stilled too but left Ema feeling weak and wobbly. She stumbled downstairs in her sweat-drenched nightgown. Her mother and sisters were gathered around the table, chatting happily.

Nothing looked wrong.

Ema's confused staring was interrupted by a scream as one of the maids entered. Everyone followed the maid's gaze to Ema.

'She just appeared in the doorway like a ghost!' the maid said, clutching her chest. 'What are you doing, sneaking around like that!'

'I didn't sneak,' Ema said.

'Oh, beruška,' Milena said. 'Come and have a seat; you look awful.'

Ema stood there, shaking her head. 'Has something awful happened?'

'Everything is fine. Just like I promised.'

Just then her father came into the room, holding a telegram in his shaking hands.

'What is it?' Milena asked.

'It's Františka,' Karel said, his face pale. 'She's had an accident.'

Ema heard a faraway shriek that sounded an awful lot like her own voice. Dizziness finally overwhelmed her, and everything turned dark.

When Ema came round the following morning, Františka's face was staring at her in concern from the next pillow.

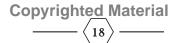
'You're alive!' Ema said, reaching out to wrap her arms round her.

'Don't!' Františka said, wincing as she held up a hand. 'I have a broken arm and three fractured ribs, so I'm afraid I am ill-equipped to give you the hug I so desperately wish to.'

'You look awful,' Ema said, staring at her sister's pale face and bandaged body.

'You look awfuller,' Františka said, giggling.

'What happened?'



'I tried to climb a tree in roller skates,' Františka said. 'In my defence, it was the first time I'd tried this bizarre new invention. I'd just got the hang of not falling over every three seconds when the biggest dog I've ever seen came charging towards me. There was an oak tree nearby. I forgot I had wheels on my feet. It did not go well. The silver lining is that now I get to see you in person! What's wrong? Why are you trembling?'

Ema had been right about disaster looming. She opened her mouth, ready to share her ponderings with her sister, but stopped herself. What if Františka responded the same way as her parents? Ema didn't think she could bear to see disappointment on her sister's face. And so, Ema swallowed her questions down again.

'Nothing is wrong,' Ema said. 'I was just worried about you.'

'Ema,' Františka said, suddenly much more serious. 'Máma and Táta are worried about *you*. They've told me about your ... studies. You know how I feel about being curious, but ... please, don't ask questions about Liliana. Some things are better buried in the past.'

Ema swallowed a hard lump and nodded.

'Now! How about we gorge ourselves on *kolache*?' Františka said, grinning again. 'That'll cheer us both up, I'm sure.'

Ema forced a smile, feeling it settle over her face like a mask.

She wore that very same mask the day that Františka left, taking the last of Ema's siblings with her. In the thunderous quiet that followed their departure, Ema felt hollow.

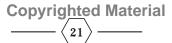
The great enigma of her life had presented itself: how was she ever supposed to understand a world that didn't understand her?



E ma had been dreading her twelfth birthday. When the day arrived, despair hummed through her, vibrating every atom of her being.

She spent the morning on her bedroom windowsill with a monocular spyglass pressed to her left eye, scanning Big Old Town Square for a person she'd never seen before, but whom she knew she would recognize as soon as she saw them.

One by one, each grinning market vendor and rosynosed customer appeared in the brass circle of Ema's spyglass. She could almost taste the toasted walnuts that were lifted towards cold lips and feel the warmth of steaming honey wine as it was ladled into cups. But it was a blurry figure entering the square from the side of the Church of Our Lady Before Týn that finally caught her attention.



Ema tweaked the spyglass's focus until the figure sharpened. Nothing about this person appeared extraordinary except for one clue: the way they walked – commanding the crowds to part with nothing more than a determined stride.

'That's her!'

As the woman strode past the towering Christmas tree in the centre of the square, the grinding of large gears shattered through the quiet.

Clunk-clunk-clunk.

Ema turned her spyglass towards the Astronomical Clock across the street. Beside the bright zodiac dial, the skeletal figure of Death began to ring its bell. But Ema already knew – in her very bones – exactly what time it was.

Twelve o'clock.

'Oh no.'

The twin doors above the zodiac creaked open and the mechanical figures of the twelve apostles began rotating into view. As the first chime rang out, there was a *knock-knock-knock* on the front door.

Ema snapped her spyglass closed as she tumbled off the windowsill. She staggered on numb legs across the room, pausing only to check herself in the mirror. She judged herself perfectly presentable, except for the bright red circle round her left eye, courtesy of the spyglass.

Knock-knock-knock.



Grabbing her leather satchel, she ran from her room.

The house was earily quiet. The clocks had been stilled and the maids furloughed until spring. The only noise that followed Ema as she hurried past her siblings' empty bedrooms was the *jingle-jangle* of the bell round her neck.

At the top of the final stairs, Ema came to a breathless halt. Her parents emerged from opposite doorways: Karel from the library, a cigar clamped between his teeth as he neatened his already-neat necktie, and Milena from the drawing room, hastily arranging her hair with a pencil.

Knock-knock-knock-

Ema made it to the foot of the stairs just as the eleventh knock struck. She sucked in a hopeful breath, then blew it out in a defeated sigh at the final – twelfth – knock.

Her father threw the door open.

The twelfth chime echoed into their hallway.

Ema stared wide-eyed at the woman on their doorstep.

Dagmara Bartoňová was exactly how she had imagined the headmistress of an exclusive academy for young female scholars would look: nothing short of a marvel.

Her blue travel cloak was unremarkable, her brown hair was plain as could be, but her eyes gleamed like cut glass. She had the look of someone who could stare deep into the cosmos and uncover its deepest mysteries in just a few blinks.

'Dobrý den,' Dagmara Bartoňová said. 'What a joy it is to see you both again.'

'We appreciate you visiting at such short notice,' Karel said. 'You have no idea just how grateful we are.'

'Oh, I have some idea,' Dagmara said with a wry smile. 'But I was in the city anyway.'

She stepped forward and Ema's parents sprang apart to let her through. Ema's mouth twitched, ready to offer the headmistress a smile, but those cut-glass eyes glided right over her.

'I don't have much time. I want to be back at school before dark.'

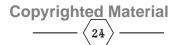
'Of course,' Milena said. 'Follow me.'

The three of them swept into the drawing room, leaving Ema blinking in bemusement.

The *jingle-jangling* of her bell collar was the only noise she made as she followed meekly after them.

Dust sheets covered the furniture. There was no sign whatsoever that this was a room in which science was celebrated. The only thing that remained uncovered was the periodic table painted on the floor, and the four chairs set out around it. Ema sat herself in the chair nearest the headmistress and cradled her satchel to her chest.

'Yes,' her father was saying to Dagmara, cutting the tip off a fresh cigar. 'We learned that the curatorship Vendula



promised us has gone to some astronomer nobody has heard of. So, we've decided to join our eldest daughter on her expedition to the Alps. You remember Františka, don't you? After finishing her degree in philosophy, she started another one in glaciology.'

Those sharp eyes twinkled, and the headmistress smiled softly. 'A teacher never forgets a student as brilliant as Františka. You must be so proud.'

Milena and Karel beamed, and Ema felt a familiar knot tighten in the pit of her stomach.

'We couldn't be prouder,' her mother said. 'Františka's research is helping our own immensely. This trip might just provide us with the data we need to silence our critics.'

Dagmara nodded knowingly, but then her smile dropped. 'But while you're gone, you need a babysitter for your youngest child. Don't you have maids for that?'

And just like that, the gleam of pride in her parents' eyes dulled, and their smiles became fractionally more strained.

'We need her in school,' her father said. 'Nearly five months without tuition would be such a waste.'

'She wasn't due to be interviewed until June,' Dagmara said. 'You know my rules. I will not take a student on until she is ready.'

'She's definitely ready now,' Karel insisted, in a voice that oozed sincerity.

'Just like her sisters were,' Milena added, with a smile that radiated integrity. 'We're certain of it.'

Dagmara Bartoňová's steely gaze bore through Ema's parents.

Ema leaned forward in her seat, wondering if the headmistress could also see the tiny twitch under her father's left eye, or the slight pinch at the corner of her mother's mouth. Their true feelings were as clear to Ema as a cloudless sky – they weren't certain about Ema's preparedness in the slightest.

Surely, those cut-glass eyes would see what Ema could see?

Finally, however, Dagmara gave them a single nod.

Ema wasn't sure if she was disappointed or relieved.

'All right,' Dagmara said. 'Please send for her.'

'I'm right here!' Ema said, with more bite than she'd intended.

'Sweet saints!' The headmistress clutched at her chest as she finally turned her gaze to Ema, staring at her as if she were looking at an apparition. She blinked, then turned back to Ema's parents. 'Does she always sneak up like that?'

Her parents' apologetic smiles said it all; yes, their daughter did have an uncanny tendency to move about unnoticed, and no, they weren't sure how she managed it.



'If I may, Professor Bartoňová,' Ema said, as contritely as she could, 'I didn't sneak up. I was there in the hallway when you arrived. Surely you heard my bell necklace?'

Dagmara blinked down at the necklace in question. 'I thought I heard a cat.'

'That often happens,' Ema replied glumly. 'I clearly need to come up with a different method of amplifying my movements. Tap shoes, perhaps?'

Dagmara frowned, then turned to Ema's parents. 'You may wait elsewhere while I interview her.'

Karel's and Milena's hopeful smiles twitched almost imperceptibly. They looked to Ema with matching expressions of near-invisible panic. Near invisible to everyone but Ema, it seemed.

'It's all right,' Ema said, patting her satchel before offering up the biggest lie she'd ever told: 'I'm ready.'

With synchronized nods, her parents left the room, leaving Ema wilting under the scrutiny of the most intimidating eyes she had ever seen.

'So,' Dagmara said. Her gaze flicked, dagger-quick, to the satchel cradled in Ema's lap. 'Is that your research proposal for admittance to my school?'

Ema nodded, withdrew a neat bundle of papers and passed them over – curling her hands in her lap as Dagmara began to read.

'Ah,' the headmistress said. 'A geological study into the rock formations of the Bohemian Forest.'

'Yes. We spent last summer there.'

Dagmara skimmed through two more pages. 'And rock formations are your great scientific passion, are they?'

Ema kept her smile fixed expertly in place. 'My father says that geology provides a very grounded career.'

'Aren't fathers amusing,' Dagmara said, without any twitch of amusement that Ema could detect.

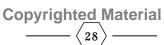
'And my mother says my drawing is acceptable enough to capture the details with ninety-four per cent accuracy. I'm sure I could improve that with practice.'

'I have no doubt you could.'

Ema watched every inch of the headmistress's face: the small crease between her brows, the way her right eye was slightly more narrowed than her left, and the barely perceptible tilt of her chin. Ema could see that the headmistress was anything but impressed. This fear was confirmed when, on reaching the twelfth page, Dagmara dropped the papers on the floor beside her.

Ema flinched as they hit the floorboards with a slap. 'There's another thirty-three pages of—'

'Rocks, Ema. Which, in the hands of an ardent geologist, can be a highly invigorating subject. But all I see here is lots of rocks, and some impassionate observations about their



properties. Tell me what, exactly, is it about rocks that has you filling out forty-five pages on them?'

With great effort, Ema sat a little straighter. 'My parents-' 'Yes, I thought so.'

'But-'

Dagmara Bartoňová held up a hand, and it was as if she'd sucked all the air out of Ema's lungs. All Ema could do was try to hold on to her carefully curated composure as she felt herself being studied with intense scrutiny. She couldn't help but feel in awe of this woman, as well as utterly terrified of her.

'The difference between you and your parents, Ema, is that they spend their days speculating at great and passionate length about carbonic gases, and how our Earth will soon become dangerously warm. A subject considered utterly ridiculous by many of their peers. Personally, I never dismiss a hypothesis just because it seems implausible. But I need to see one key thing in my pupils.'

Ema's gaze flicked automatically to the wall of photographs and trophies in the hallway.

'Exceptionalism?' Ema asked quietly.

'We all have the ability to be exceptional ... but to get there, we need passion. I interviewed all your sisters, and none of them were exceptional at that point. But they were, each one of them, full of passion and potential.'

Ema swallowed a hard lump as Dagmara leaned forward.

'Just one question, Ema. Answer it with full conviction and you may yet fulfil your parents' dreams of attending my school.'

Ema nodded.

'What is it in this world, or beyond, that mystifies you to such an extent that it makes your very soul burn with determination to solve it?'

'I-'

'Think carefully before you answer.'

Ema had rehearsed what she was meant to say for nearly a week; she knew she should talk about tectonic plates and Earth's lithosphere. Instinctively, however, she returned her gaze to her leather satchel. There was another bundle of papers in that bag. Another, secret, body of research. But not one she could ever present to such a woman and expect to be taken seriously.

Ema licked her dry lips. 'Rocks-'

The headmistress's chair scraped loudly as she stood, sending the pulse in Ema's ears into a clamorous crescendo.

'Wait!'

Those crystalline eyes glinted down at her once more. Ema stared up into them and could almost see what would happen next play out like a series of moving, flickering pictures. Dagmara would throw open the doors, her parents



would stand there with twin expressions of disappointment, and Ema would drop to her knees in despair.

She couldn't let that happen. 'I have something else . . . a quandary I cannot solve no matter how hard I try, but that will not cease tugging at me, demanding I find answers.'

The headmistress blinked, once, like a camera shutter. She sat down again. 'And what is this mystifying quandary of yours?'

Ema's heart continued its chaotic jitter.

She took a breath.

'The mystery . . . is me.'

'Pardon?'

Ema reached for her satchel, pulled out a thicker bundle of papers, and dropped them in Dagmara's lap. The headmistress stared down at the title page in bewilderment.

'The Ema Enigma?'

'Yes. I am an enigma. Not the good, interesting kind of enigma – like the birth of the universe. But the bad, frustrating kind of enigma – like how one sock always vanishes in the laundry.'

Dagmara opened her mouth as if to respond, but her jaw hung loose instead and stayed there.

Ema pressed on. 'It has been clear to me all my life that I'm not like everyone else, so I decided to start developing

new scientific fields of study to try to explain the phenomena I experience.'

Ema flipped to the first page.

Dagmara settled her sceptical gaze on its contents. 'The Happy Birthday Paradox?'

'As of today, I've only had twelve birthdays, so the data is limited in scope, but there's a clear pattern emerging. I haven't had a single birthday that hasn't ended in catastrophe.'

'It's your birthday today? Happ-'

'Don't! You mustn't say it. Whenever people say that, things tend to go momentously badly ... Here, look.' Ema leaned forward and flicked a few pages. 'It's my *twelfth* birthday, on the *twelfth* day, of the *twelfth* month—'

Dagmara read the next title. 'Dodecaphobia?'

'There is something very troubling about the number twelve,' Ema said gravely. 'My observations today provide further evidence. There were twelve hairs on my pillow this morning, I hiccuped twelve times during breakfast, twelve bicycles cycled through the square this morning, you arrived at the very stroke of twelve, and then you knocked twelve times.'

'Are you calling me a bad omen?'

'I would never. Please, read on.'

The headmistress sighed, then flicked the page again. 'Intuitive osteology?'

