



WELBECK
FLAME

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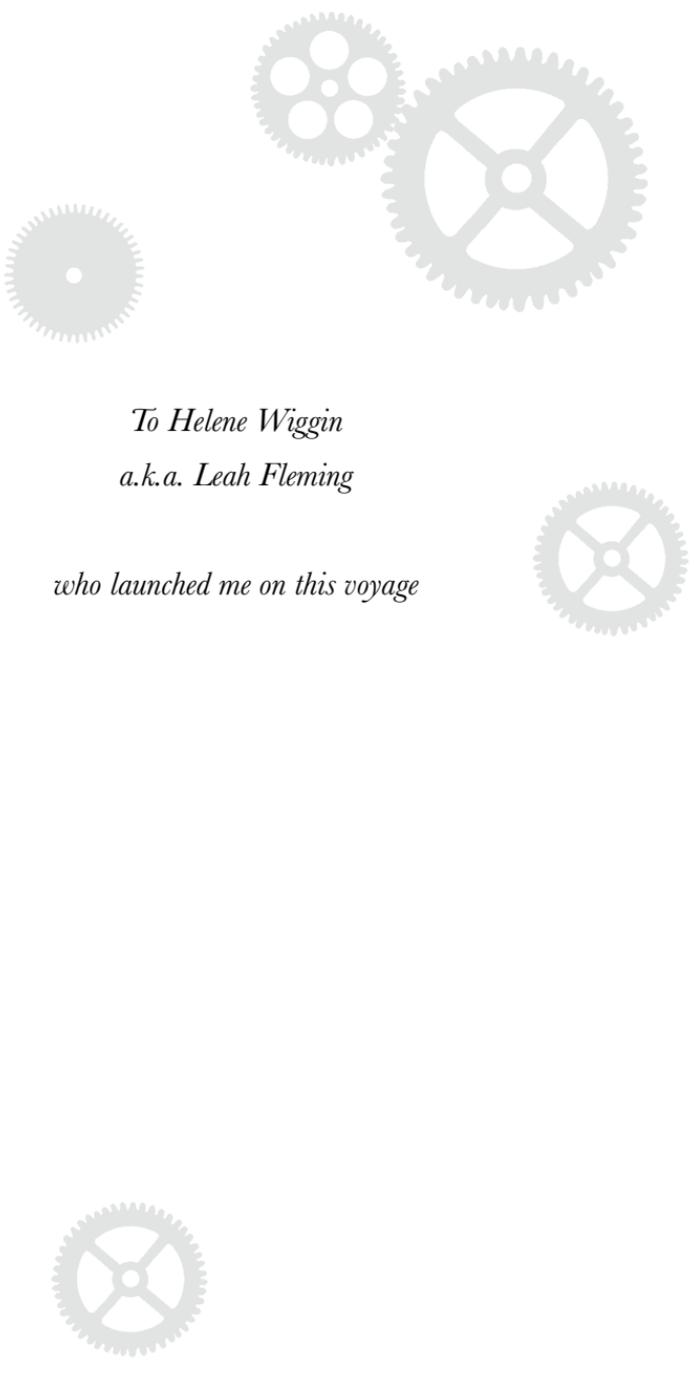
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The page is decorated with several light gray gear icons of various sizes and designs. In the top right, there is a large gear with four spokes and a smaller gear with four circular cutouts. In the middle right, there is another large gear with four spokes. In the bottom right, there is a smaller gear with four spokes. In the bottom center, there is a gear with four spokes. In the bottom left, there is a large gear with a solid center. In the top left, there is a gear with a solid center. The text is centered in the middle of the page.

*To Helene Wiggin
a.k.a. Leah Fleming*

who launched me on this voyage

Dear Reader,

Thank you very much for taking the Time to read this book about Time. And because you are smart enough to read books, you will be smart enough to know that Time works backwards as well as forwards...

*2021, England, London
Bennett.A.M*

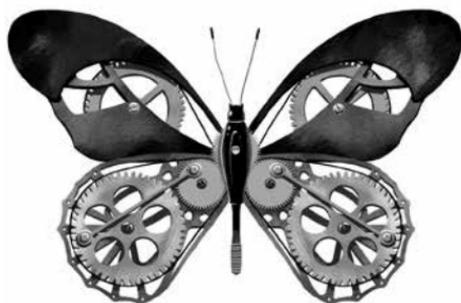
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LONDON

15 JANUARY 1894





15 JANUARY 1894

10 a.m.

Luna thought that an afternoon at her aunt's butterfly club would be the most deathly boring thing in the world.

She had only been living with her aunt for a month and was already sick of butterflies. Aunt Grace collected them, and they were all over the house, skewered with little pins to little cards, their bright wings spread, never to fly again. Colourful, pathetic and very, very dead.

Sometimes she would look at their names, written underneath in neat calligraphy – Rajah Brooke's Birdwing, the Duke of Burgundy, the Great Purple Emperor. They seemed such romantic titles to end in such a sad fate. They should be fluttering around in a meadow somewhere, not imprisoned in this tall, dark house.

Luna sometimes thought of herself as one of them. She had everything she wanted: enough to eat and drink, a nice room of her own and all the pretty gowns she wanted, in bright colours just like the butterflies. But she was pinned up in the tall, dark house too. The house, in a very smart part of Kensington (which was a very smart part of London), somehow seemed taller and skinnier than any in the row. In fact, it looked as stretched as she did.

The smart and skinny house did have a good-sized garden, but Luna was discouraged from playing in it, in case she was 'seen'. It was never explained to her whose gaze she was supposed to be avoiding. She was encouraged to stay indoors and read, but Aunt Grace's books weren't the sort of books with pictures or conversations. They were all books with titles like: *On the Applications of Non-Euclidean Geometry to the Theory of Quadratic Forms*. And who wants to read a book called *that*?

The truth was that Luna Goodhart would have read all the books in the library, however boring they were, if one of them could have told her what had happened to Papa. He'd disappeared very suddenly, with no explanation. Aunt Grace, looking enough like Papa for Luna to trust her at once, had not exactly explained when she'd turned up that Thursday at Luna's house to take her niece home

to live with her. ‘Your father’s on another plane,’ she’d said briskly, holding out her gloved hand, and would not say more, no matter how many times Luna asked. Soon, Luna stopped asking, in case she was told what she feared to be the truth.

That ‘on another plane’ was what grown-ups said when somebody was dead.

It had always been just Luna and Papa, in the little house in Greenwich Park, in the shadow of the Royal Observatory. Papa had given Luna everything, including her strange name, and now he was gone. Luna would spend many moments each day trying to remember the details of his face, the trick of his speech, so terrified was she of forgetting him even a little bit. Sometimes, Luna would sing her father’s favourite song in an attempt to feel closer to him. It was called *Yesterday* and he used to sing it all the time. Sang it, hummed it, whistled it. Luna didn’t know where her father had heard the song – probably at the music hall – but she had never heard anyone else sing it, so it seemed peculiarly his. Now Papa had disappeared, she certainly longed for yesterday. He’d gone without notice, gone without even a note. In the past, even when he’d had to go to his tailor or his attorney, he’d left little notes for her, always signed in the same way.

Yours until the end of time, Papa x

So Luna didn't want to be rude to Aunt Grace when she called that it was time to leave for an afternoon at the Butterfly Club, because Papa's sister was all the family Luna had left. But she *definitely* didn't want to go. Luna's one day of freedom was every Thursday, regular as clockwork, when her aunt was out all afternoon and evening at her butterfly club.

Luna went into the hallway. Aunt Grace was putting on her gloves, and, in doing so, covering up one of the most interesting things about her.

For Aunt Grace had a tattoo on her left wrist. The mark was so small and discreet that at first Luna had thought it a birthmark or a bruise. But it was neither. Luna had had the opportunity to see the thing properly at dinner, when Aunt Grace had passed the salt. It was a beautifully inked tattoo of a butterfly, but not a butterfly like the ones that hung on the walls of the house. It was a clockwork butterfly made up of little cogs and spindles and wheels, like the things that you'd find in the belly of a timepiece.

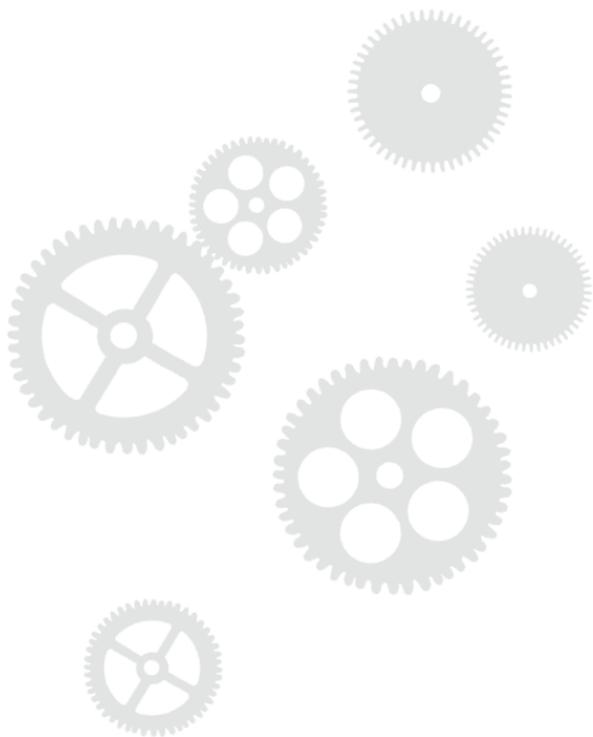
Aunt Grace turned to adjust her hat in the looking-glass, tucking in a stray lock of auburn hair. Auburn was that kind of red that you couldn't really call ginger but

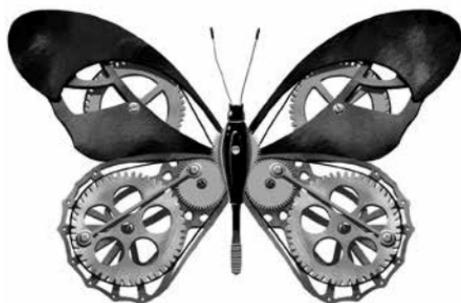
was much darker, the colour of port wine. Aunt Grace was beautiful, what with the auburn hair and everything, but she had jade-green eyes of the same shade as one of the butterflies on the wall, the one called the Green Hairstreak, and they made her look slightly scary. Because of the eyes it was much easier to talk to her when she wasn't looking directly at you. So while her aunt was looking in the looking-glass Luna took her chance and said, '*Must* I come to the Butterfly Club, Aunt? I'm sure I will be fine with Cook and Mabel.'

Aunt Grace turned and fixed the Green-Hairstreak eyes on Luna. 'Luna Goodhart, I promised your father I would help you pass the time, and that is a promise I intend to keep. Now, come along.'

And she held out a gloved hand. The hand reminded Luna of the day she'd collected Luna from the Greenwich Park house, the day that Father hadn't come home. Then, as now, the leather of her aunt's glove was cold, and the bones inside hard as pistons, almost as if Aunt Grace was part-machine. For the first time, Luna had a dark fantasy that the marking on her aunt's left wrist, which she could see at that moment peeping from the glove, was not a tattoo at all but a butterfly-shaped tear in the skin to reveal the machinery beneath.

The thought was nonsensical, but at the same time so frightening that Luna bit her tongue, and came along at once.





15 JANUARY 1894

11.50 a.m.

When Luna saw the Greenwich Observatory high on its green hill, she felt like she was seeing an old friend. The house she'd shared with Papa had not been far from here, and as Aunt Grace briskly helped her out of the hansom cab right by the entrance, she suddenly missed her father very badly.

Of course, Luna had never been inside the observatory, because such an honour was reserved for the most eminent scientists of the age. Aunt Grace, however, crossed the threshold as if it was her own, leading Luna by the hand through the iron gates and across the paved courtyard. A great brass line, like a single railway track, divided the pavings. She was so curious that she forgot to be frightened of her aunt.

‘What’s that?’

Aunt Grace actually stopped. ‘That,’ she said, ‘is the Prime Meridian. A geographical reference line that passes through this very spot, which gives us Greenwich Mean Time. This is the place from which all of our clocks are set. You are at the very home of time.’

A doorman let them through the entrance with no more than a touch of his hat. Clearly Aunt Grace was known here. She led Luna along passageways and down stairs and through doorways to the secret heart of the observatory, all the time following the brass line of the Meridian. Eventually the line stopped dead at a blank wall, at the foot of a grandfather clock, tall as Aunt Grace with a pendulum swinging in its belly. Luna looked up at Aunt Grace – it was, quite literally, the end of the line. But Aunt Grace reached up to open the casement, and she altered the gilded hands of the clock until they read 4.45 exactly.

As soon as she did so, the whole body of the clock swung outwards.

It was a door.

Aunt Grace stepped through the clock door into the dark, and Luna found herself in a room that was so dimly lit that at first it was hard to make out what was in it. But as the clock, which had closed behind them, chimed

noon with a silvery song, Aunt Grace said, ‘Welcome to the Butterfly Room.’

Gradually Luna’s eyes adjusted and she could see that the room was twelve-sided in shape, and each wall had a floor-to-ceiling shutter that was tightly closed. And around the walls, just like at the house in Kensington, there were hundreds and thousands of butterflies in a myriad of colours and shapes and sizes, all pinned to cards and carefully captioned. Luna looked at the nearest ones to her head, with their velvety wings and splayed antennae. In Aunt Grace’s house she didn’t really like them, but here they made her feel strangely at home. She even recognised an old acquaintance, a Blue Morpho butterfly, as big as a handspan, just like the one in Aunt Grace’s study, with wings the exact azure-blue as the dress Luna was wearing.

Then she noticed that around the lamplit edges of the room stood many distinguished-looking figures, perhaps forty or fifty in all. There was a mixture of ladies and gentlemen, all in smart evening dress like Aunt Grace, the men in top hats which looked like black stovepipes, the women in bonnets. They were all having hushed but important-sounding conversations, and didn’t bother to stop when Luna and Aunt Grace came in. But Luna did notice one or two of them looking at her in an interested

way – all kindly but curious, as if she was some sort of new species. Perhaps that could be explained by the fact that there was only one other child in the room, a handsome blonde boy, about the same height as Luna, standing with a handsome blonde man.

Aunt Grace nodded at the company, but headed straight to greet the blonde man, who clicked his heels smartly together, bowed his head sharply and kissed her butterfly wrist. From that moment, they forgot Luna and the boy, and just talked over their heads. Luna didn't understand a word, as they were speaking in a foreign language, but she did learn one thing from the conversation. The blonde man waved his hands about as he talked, and she could see, on his left wrist, a butterfly tattoo.

'Is that your mother?'

Luna could understand why the blonde boy had asked that. She and Aunt Grace shared the Goodhart auburn hair and green eyes.

'My aunt. She's a scientist. Is that your father?'

'Yes.' The boy's golden hair fell in his eyes, and he had a habit of raking it back with a pale hand.

'Is he a scientist too?'

'A doctor.'

'A physician?' asked Luna.

‘Yes. But also a great inventor. Dr Tanius Kass.’ The boy said his father’s name with a touching pride, as if Luna should have heard of him. ‘He’s from Prussia. That is, we both are.’ That explained the boy’s slight accent. Luna wasn’t too sure exactly where Prussia was – she knew it was an empire somewhere in eastern Europe, and vaguely thought it was perhaps made up of bits of Germany and bits of Russia. What she did know from the front of Papa’s newspaper was that they always seemed to be fighting, either for themselves or for others.

‘My name’s Konstantin,’ said the Prussian boy.

‘I’m Luna.’ Luna studied her new acquaintance. He looked ... she searched for the word ... expensive, in his well-cut silver-grey suit of clothes and his starched white Eton collars and silken cravat. But he seemed very down to earth, and not superior at all, and he smiled a crooked half-smile. Encouraged by his friendliness she said, ‘Did you know that your father has a clockwork butterfly tattooed on his wrist?’

‘Yes,’ said Konstantin. ‘I have been asking about it for years.’

‘What did he say?’

‘That he would explain it to me on my thirteenth birthday.’

‘When’s that?’

‘Today.’

‘Happy birthday.’

‘Thank you.’

Luna looked at the boy with the respect due from someone who was only twelve to someone who was thirteen. ‘Did you get anything nice?’

His answer was a strange one. ‘This is the first birthday I have had standing up on my own two feet,’ he said in his precise English. ‘I have never travelled. I have never even been to school. I have spent most of my life on my sick-bed, with only books for company. My brothers call me “Konstantly-ill”.’

‘What was wrong with you?’

‘My heart. Some disease with a long name. A long word of the heart.’

Luna studied the boy. Because she was so tall, he was almost exactly her height. ‘You look well now,’ she said comfortingly.

‘I had an operation. A very clever surgeon. My father says I have a clockwork heart now.’

Luna smiled at what was clearly a joke. ‘So what *did* you get for your birthday? Besides the clockwork heart, I mean?’

He smiled his half-smile again. ‘Now I am well, I asked for an adventure.’

‘And did you get one?’

He looked about him. ‘I think this might be it.’

Luna felt a thrill travel up her spine. ‘You may be right,’ she said. ‘How about this as a starting point? My aunt has the same tattoo as your father.’

Konstantin turned wide grey eyes on her. ‘*Really?*’ He thought for a moment. ‘Then I would be willing to wager that everyone else in this room has one too.’

Luna leant forward and looked left and right around the room. Sure enough, every left wrist that was exposed showed the same mark of the clockwork butterfly.

Aunt Grace turned to her. ‘Stop fidgeting, child.’

‘Who are these people, Aunt? Are they all scientists?’

‘Some, not all. Some are authors, like Mr H.G. Wells over there. Explorers, like Miss Mary Kingsley beyond him. Artists, like Mr Burne-Jones to your left. They are the finest minds of our age. A league of extraordinary ladies and gentlemen.’ Somehow, when Aunt Grace said this, she managed not to sound big-headed, just matter-of-fact.

‘Like the Royal Society?’ Luna thought this was an intelligent thing to say. The Royal Society, she knew, was a collection of the cleverest minds in the country.

‘Not at *all* like the Royal Society,’ sniffed Aunt Grace disapprovingly. ‘They do not admit women, much to their detriment.’

Luna was not entirely sure what detriment meant, but *was* sure it was a bad thing just from the way Aunt Grace said it. Slightly crushed, she asked, ‘So are all these ladies and gentlemen interested in butterflies?’

Aunt Grace turned and gave her a very direct look with those green eyes. ‘No. None of them are. Not even me.’

Luna thought of all the butterflies at home, and looked around the room at all the winged creatures flattened against the walls. ‘Then why...?’

‘It’s a cover,’ Aunt Grace said, ‘a blind. A respectable pursuit for ladies and gentlemen in order to mask our true business.’

‘And what is your true business?’

‘Progress,’ she said grandly. ‘You’ve heard of the Kodak box camera? The gramophone? The electric lightbulb? We brought them all to the world’s attention, and many other wonders besides.’

‘So you – the Butterfly Club – invented all these things?’

‘No. We borrowed them.’

‘Where from?’

‘From the future.’

Luna frowned a little, thinking for a moment that she had misheard. ‘I’m sorry, Aunt, but I simply don’t know what you mean.’

‘Those things would not be in our day-to-day lives, in eighteen hundred and ninety four, were it not for the Butterfly Club,’ Aunt Grace explained. ‘They belonged in the future; we found them, and brought them back.’

‘But ... but that’s impossible!’

‘As Mr Conan Doyle over there will tell you,’ said Aunt Grace, pointing to a serious gentleman with an impressive moustache, ‘when you have eliminated the impossible, whatever remains, however improbable, must be the truth.’

Luna goggled at the gentleman. If the inventor of the great detective Sherlock Holmes could believe in all of this, it couldn’t be an elaborate joke, could it?

Aunt Grace’s face was deadly serious. ‘I must tell you that time travel is perfectly possible.’

‘But how?’

‘All in good time.’

Luna looked at Aunt Grace sharply. She didn’t *seem* like she was making a joke – she wasn’t that type. ‘So you are stealing from the future?’

Aunt Grace turned on her. ‘Luna! What an ugly word. We are merely *borrowing* – bringing these treasures back in

time to bring progress forward. They would have come anyway. We just make them come sooner.’

‘So why are you called the Butterfly Club? And why do you all have butterfly tattoos on your wrists?’

She gave a rare smile. ‘Ah, you noticed that, did you? It is because of the Butterfly Effect, a scientific phenomenon discovered by our founder. His research is the reason this club exists.’

‘What’s the Butterfly Effect?’

Aunt Grace shot a look towards the grandfather-clock-which-was-also-a-door. It obviously had two faces, because it looked just the same on this side of the wall as it did on the other. Except for one thing. On this side, its hands showed what was presumably the true time, which was one minute to noon. ‘I think,’ said Aunt Grace, ‘we will let our founder speak for himself.’ She turned to Konstantin’s father. ‘Doctor Kass?’ she said sweetly. ‘It is time.’

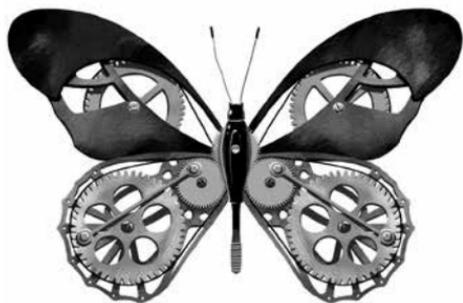
The doctor picked up a little table from the shadows and placed it in the centre of the floor. Luna noticed that the table had twelve sides, just like the room, and that there was something on it covered in a dark cloth. The doctor removed the cloth with a flourish to reveal a little clockwork contraption, which seemed to be in the shape of a bird. A hush settled over the edges of the room as the

members seated themselves and fell quiet. ‘I now call this meeting of the Butterfly Club to order,’ said Aunt Grace into the silence.

The doctor wound a brass key at the contraption’s back. There was a whirring noise and the bird began to animate. As it cocked its little head to one side, bright ruby red eyes shining, clockwork wings fluttering and resettling, for all the world as if it lived, Aunt Grace addressed the bird in a commanding voice. ‘Chronos,’ she said. ‘Show us the professor.’

Even more remarkably, the clockwork bird opened its little brass beak and spoke. ‘Initiating primary communication,’ it said in a tiny, tinny metallic voice. Then it opened its beak wider and a broad beam of light shone forth, as tall as a lamp-post. Luna watched with her mouth open, something young Victorian ladies weren’t really supposed to do. But she couldn’t be blamed for this, as the beam of light resolved itself into arms and legs and a head, and a ghost appeared in the middle of the room.





15 JANUARY 1894

12.10 p.m.

Of course, Luna only thought the figure was a ghost for a moment.

In the next instant, the scientific mind Aunt Grace insisted Luna possessed had rationalised that what she was seeing was an optical illusion. Luna could see the ladies and gentlemen on the other side of the room through his ghostly flesh. The apparition was a man, and an odd-looking man at that.

He was tall and wore no hat on his head. He was balding and had a slightly bulbous head, as if his brain was so big that it had expanded his skull and there was now not quite enough hair to cover it. But it was his garments that were the strangest things about him. He wore a suit of clothes in a loud check, with a white shirt with long collars, and a

thin, striped cravat tied in a neat knot and hanging down flat, not with the silken flourish of the more substantial gentlemen in the room. He wore no waistcoat or pocket watch, and there were no kid gloves on his hands, nor cane by his side. Really, he looked most peculiar. And he sounded most peculiar too, because the illusion spoke.

‘Hi, folks. Right on time.’ Here the apparition did an odd thing. He checked his left wrist, and Luna almost expected to see a butterfly tattoo, but instead his white cuff retracted to reveal a tiny little clock, like the face of a pocket-watch, strapped to his wrist by a band of thin leather. ‘What can I do you for?’

Luna didn’t understand this question, but she did understand what it meant when Aunt Grace held out her butterfly hand to her. Although there was no glove on it, the Hand had to be obeyed. Luna shuffled forward reluctantly into the middle of the room and stood by her aunt.

The ghost turned his eyes on Luna. He could obviously see her – it was very unsettling. But then he smiled. ‘Who’s this?’

‘This is Luna, Professor,’ said Aunt Grace. ‘My niece.’

‘Well, hello, little lady.’

Dr Kass then brought the blonde boy forward, steering

him by his shoulders. ‘And this is Konstantin, *mein lieber Sohn*, my dear son.’

‘Hello, sport,’ said the apparition. ‘How ya doing?’

It was clear that Konstantin didn’t exactly know what to say to this either, so he remained silent.

Luckily Aunt Grace took over. ‘Professor. Will you explain to Luna, and young Konstantin here, who you are?’

‘Sure. My name is Edward Norton Lorenz, and I’m a professor of mathematics and meteorology.’

‘Will you explain to them where you are?’ said Aunt Grace.

‘I’m in my study at Massachusetts Institute of Technology, where I’m currently employed.’

‘And now, Professor,’ said Aunt Grace, clearly and distinctly, ‘will you explain to them *when* you are?’

‘Sure. It’s currently January fifteenth, 1969.’

Luna looked at Konstantin, and Konstantin looked back at her. This must be some sort of practical joke, surely? But then she looked around at all the members of the Butterfly Club. They were serious people, with serious expressions. They didn’t look like a pack of jokers. In fact, she noticed the author Conan Doyle scribbling away in his pocketbook, writing down everything the professor said.

Aunt Grace spoke to the apparition. ‘Professor. Could you explain a little about your work?’

‘Certainly,’ said the ghost. ‘Some years ago I began to study chaos theory, in an attempt to forecast extraordinary weather events. I asked the question, “Does the flap of a butterfly’s wings in Brazil set a tornado in Texas?” and discovered that something as small as the beat of a butterfly’s wing could indeed have far-reaching effects on the rest of time. Ever since I first discovered I could talk to you good folks, I’ve been using my calculations to help you ... well ... time travel.’

Luna’s mouth, already gaping, dropped all the way open at this.

‘I won’t bore you kids with the math, but the golden rule is this. You may only travel *forward*, not back. If you travel back in time you will trigger what I’ve come to call the Butterfly Effect – you could, by making tiny changes, significantly alter your own world, or even wipe out your own existence.’

‘So no Tudors or Romans then?’ said Luna. The whole thing was so unbelievable she had to treat it as a joke.

‘I’m afraid not, honey. You can’t even go back to your version of yesterday.’

This, of course, made Luna think of Papa.

‘But the future,’ said the professor, ‘between where you are in 1894, and where I am in 1969, that is your ballpark. Sorry! I mean to say, that’s the hunting ground for your time treasures.’ He shook a warning finger at them. ‘But even future travel is not without its problems. You won’t change your own past, but you could alter the future. You can’t change huge events. But remember, small changes can have big consequences. *That’s* the Butterfly Effect.’

Now Konstantin spoke up. ‘But ... Professor. Aren’t you travelling back in time at this very moment?’

‘Shake me by the hand, young fella.’

Konstantin stepped forward to shake hands, but the boy’s fingers passed right through the man’s as if the professor was indeed a spectre.

‘What you are seeing is a manifestation of me – a hologram,’ said the professor. ‘I’m not really there. I’m still in my own time.’

‘Professor,’ said Aunt Grace. ‘Our time is short. I would like you to tell these children about our conversation last week.’

‘Well, ma’am, you told me that your Queen Victoria has announced an Empire-wide scientific contest to find a method of communication through the ether.’

‘That’s correct,’ agreed Aunt Grace. ‘The Gabriel

Communication Medal. It is worth one thousand gold sovereigns to the person or persons who can invent a way to speak across continents – to send and receive messages without wires.’

‘And I said that “through the ether” sounds an awful lot like radio waves, and in that case you can’t do better than find a fella called Marconi.’

‘Guglielmo Marconi,’ put in Dr Kass.

‘That’s it,’ said the professor. ‘Guglielmo Marconi. An Italian physicist. He really started cooking with gas around 1912.’ The professor chuckled. ‘Sorry. Keep forgetting. Mustn’t use modern slang. When I said “cooking with gas”, I merely meant that’s when Marconi had gotten his wireless radio to a competent standard – it was used for maritime communication. I suggested putting 1912 into the old dial. Eighteen years from where you are now.’

‘Can I ask a question?’ Konstantin piped up.

‘Of course, *lieber Sohn*,’ said his father.

‘Well, my question is: if this is all true, why not go as far as you can, to 1969, and get the most advanced device you can find there?’

Dr Tanius Kass did not quite meet his son’s eyes. It was Aunt Grace who explained, ‘Because our inventions have to be plausible. If our finds are too advanced our activities

would arouse suspicion. We are careful not to go too far into the future.’

‘And there is another point to make,’ Dr Kass added. ‘If we go too far ahead, then we might not have the raw materials, or the manufacturing skill in our own time to create or maintain such machines. Eighteen years is about right.’

‘Yes, indeed,’ agreed Aunt Grace. ‘Professor, when we first discussed this, where did you tell us to go in eighteen years’ time?’

‘I said to try Southampton on the south coast of England. Huge port for huge ships. By then Marconi’s wirelesses were standard in the ships on the White Star Line, so you’ll be able to find one in what was called the Marconi Room. That’ll get you your Gabriel Medal all right. Any one of those big ocean liners will do. Any ship except for—’

The professor’s image stuttered and froze.

Dr Kass knelt down to examine the clockwork bird. ‘Regrettably there was a transmission interruption of the phantasmagorical holographic manifestation,’ it said in its flat little metallic voice, and the final words got slower and lower and sort of stretched until they finally stopped.

The doctor explained. ‘Chronos only works for about

two minutes at a time. His mechanism is clockwork, and he runs down quickly.’

‘Can’t you just wind him up again?’ Konstantin asked his father.

‘*Nein, lieber Sohn,*’ said the doctor. ‘Not for a while. He partly runs on magnets, and their polarity has to be restored before he can work again. He takes a few hours to recharge.’

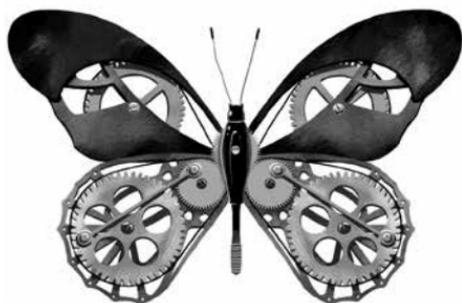
‘No matter,’ said Aunt Grace to the room at large. ‘We have it from the professor’s lips twice now. 1912. Southampton. England. Those are the settings.’

‘The settings?’ repeated Luna. ‘The settings for what?’

‘Is Mr Herbert George Wells here?’ said Aunt Grace, ignoring Luna’s question and peering into the shadows. ‘Mr Wells, be good enough to bring the contraption.’

For the first time Luna noticed that the brass meridian line, which ran as wide as a handspan right through the centre of the room, disappeared into the folds of a dark-red velvet curtain cordoning off the far end of the room. Mr H.G. Wells walked the line to the red velvet curtain, and drew it back to reveal another extraordinary sight.





15 JANUARY 1894

12.15 p.m.

It was a machine, made of brass and polished wood and bone-white ivory, set upon four wheels. It had two lamps at the front, and four little doors, and rails around the sides. Inside there was room enough for four souls, on comfortable bench-like seats upholstered in red velvet and set with gilded studs, like something you'd find in a drawing room. At the front of the train was a raised seat for the driver, set before a console with levers and labels and lights, and a trio of ivory dials.

It looked a little like the new trains on the Metropolitan Underground railway, but about a quarter of a carriage long. The train rolled to the very centre of the great twelve-sided room, slowly and smoothly, crackling with forks of lightning as blue as the Morpho butterfly, the

wheels rolling either side of the meridian as if the copper line was a track.

As soon as the train stopped, Luna discovered that the person who had been driving the contraption was almost as incredible as the machine itself. A boy, probably not much older than Luna, got out of the cab to stand before them. He was broad and strong, and he had blacker-than-black hair and bluer-than-blue eyes. But it was not so much his colouring that marked him out as his outfit.

He had a cap on his head, and above the peak was a pair of brass-and-glass goggles. He wore shirtsleeves and a waistcoat like a labourer, and brown breeches tucked into boots that were more buckle than shoe-leather. His buttons were cogs, and his belt a bicycle chain. He looked as if his clothes had been cobbled together using bits and pieces from his profession – little bits of iron found along the railways.

Luna's eyes widened. The boy looked dangerous and adventurous and very capable. In fact, he couldn't have looked more different to Konstantin, with his delicate pallor and his well-tailored frock coat. But while Konstantin did look like he fitted in with this company, and this setting, this railway boy was earthy and tanned from a life obviously lived outdoors – he didn't look like he

felt at home in a room at all.

Luna was so fascinated by the newcomer that she hardly noticed that there was another, older fellow, dressed very like him, pushing the strange machine from behind. He had a weather-beaten complexion but the same piercing blue eyes as the boy.

Aunt Grace introduced the machine first. ‘This,’ she said, ‘is the Time Train.’

Just from the way she said it, you could tell she was giving both words Capital Letters. She introduced the man next. ‘This is Mr Michael O’Connell. He is a navigational engineer.’

Luna knew all about ‘navvies’. They were the engineers, often from Ireland, who had the expert skill and knowledge to build the railways that now spanned the Empire like a vast iron spider.

‘And this is Aidan,’ Aunt Grace went on, indicating the driver boy, ‘who is following in his father’s profession. Aidan knows everything there is to know about the Time Train, for he helped our Mr H.G. Wells construct it. Didn’t you, young man?’

Aidan grinned an enormous grin. If Konstantin had half a smile, Aidan had the rest of it, and then some. The boy touched the goggles on his cap in deference to Aunt

Grace. ‘To be sure, missus. What I don’t know about the Time Train isn’t worth knowing.’

‘She’s a complex machine, to be sure, but an easy old girl to operate,’ said Mr O’Connell.

‘Yes indeed,’ agreed the boy, who seemed the more talkative of the two. ‘To go forward in time you settle yourself on her saddle and push this lever with the ivory handle forward.’ Luna noticed that, just like his father, he referred to the Time Train as *she*, just as people spoke about ships and pianos. Aidan pointed to the different bits of the contraption as he spoke. ‘You must set these dials for date, time and place, and the mechanism is powered by quartz crystals at the rear.’

‘Will it work?’ asked Luna doubtfully.

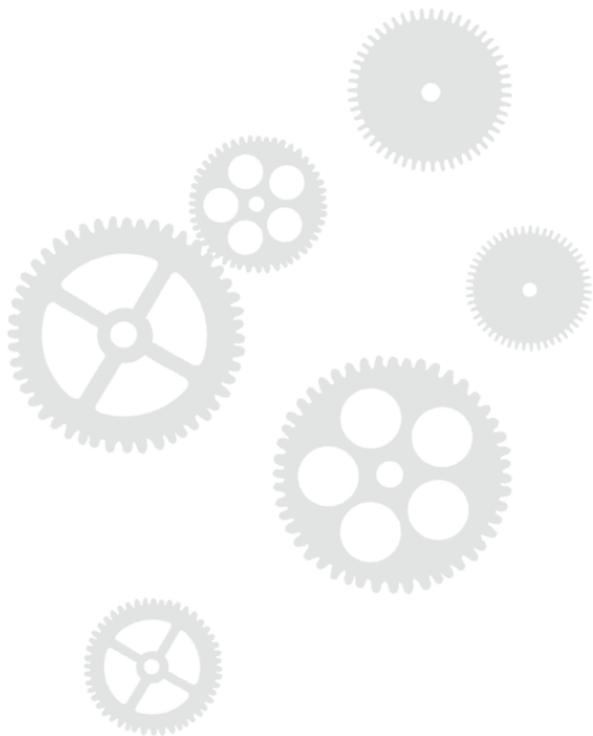
‘It will work,’ said Aidan, brimming with confidence. ‘It *has* worked.’

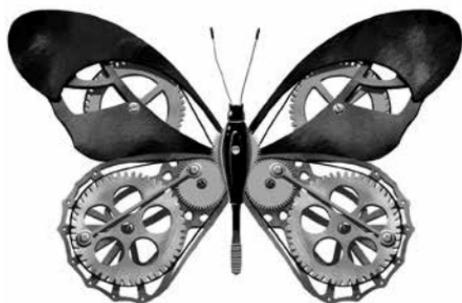
‘Our members have been using this machine for some time,’ said Mr Wells kindly. ‘There’s really no need to worry.’

Luna wondered why it was she and Konstantin who had to have their minds set at rest, and why the Butterfly Club were taking such pains to explain their plans to a pair of mere children. She asked her aunt directly. ‘Why are you telling *us* all this?’

Aunt Grace exchanged a look with Dr Kass, then turned to her niece.

‘Because, dear Luna,’ she said, ‘*you* will be making the journey to 1912.’





15 JANUARY 1894
12.30 p.m.

‘**A** lone?’ Luna was in shock. Aunt Grace had spoken as if the matter was already settled.

‘Not alone,’ said Dr Kass. ‘Konstantin will go with you.’

‘And Aidan,’ said Aunt Grace, ‘as your engineer.’

The tall train boy nodded and grinned, as if this was the most normal proposal in the world. He was clearly the only one of the three who knew anything about this plan.

Dr Kass put his hand on his son’s shoulder. ‘You asked for an adventure for your birthday, Konstantin. This is it. Chronos will go with you,’ he went on. ‘You may ask him if you have further questions. I have loaded as much knowledge into him as I can. Every member of the Butterfly Club has spoken to him at length, and he has recorded the vocabulary and digested the specialisms of

every one of us. You may ask him anything.’

‘And he has another even more important function,’ said Aunt Grace. ‘Through Chronos you may speak with Professor Lorenz. He will appear to you, and give you aid, just as he did today.’

‘How?’ asked Konstantin.

‘You may easily remember Chronos’s properties,’ said Dr Kass. ‘Turn his key anti-clockwise – *backwards* in time, as it were – to ask Chronos anything we have already recorded into his mechanism in our time of 1894. Turn the key clockwise – *forward* in time – to send a message to the professor in 1969 that you need to speak to him. But remember,’ said the doctor, ‘Chronos may only speak for about two minutes at a time, either to you or to the professor. Then he runs down. And you cannot wind him up again straightaway – he needs a few hours to reset his polarity. Look. He lives here.’

Dr Kass took the clockwork bird over to the brass contraption. He opened two small doors in the face of the round clock on the dashboard of the Time Train and fitted the little bird inside. Then Luna understood – Chronos was a bird who lived in a clock. Of course! He was a cuckoo. What else?

‘Do we go now? Tonight?’ Konstantin asked. He

sounded excited, and there was a flush along his pale cheekbones.

‘Yes,’ said his father.

‘Is it dangerous?’

‘Not, we think, for you,’ said Aunt Grace. ‘Children may go about unmarked and unchallenged. That is why we want you to go. We think you may be able to... borrow... the wireless radio.’ This made a certain dark sense to Luna. Victorian children were largely ignored – and it seemed that children in the future were too.

‘Think of it,’ said Aunt Grace, clapping her hands over the three young people before her. ‘What an adventure! You will be the first time-travelling children in the *world*.’

Luna looked to her left and right, to the boys who were to be her travelling companions. She plucked her aunt’s sleeve and drew her to one side, speaking in an undertone. ‘Aunt. In the time I have lived with you, you have barely let me out of the house. You cannot think it... suitable... that I should travel like this – anywhere, let alone through time – unchaperoned in the company of two boys.’

‘Oh, but there *will* be another girl with you,’ said Aunt Grace. ‘Nadia will be there all the time.’

‘Who is Nadia?’

Aunt Grace nodded towards Aidan, now seated in the

driver's saddle and checking the settings. 'Ask him. *He* knows.'

But Luna had made up her mind. Whether or not some mysterious girl was going to meet them in 1912, she was not about to take part in this experiment. She knew that it was common practice in mining to send a canary down a coal mine, and if the canary died that meant there were poisonous gases present and that the miners shouldn't risk it. Her father had always encouraged her to speak her mind – she did so now. 'I won't go,' she said. 'I won't be a canary in the coal mine.'

'Oh, I think you will,' said Aunt Grace harshly. Her voice was flint, her green eyes jade. 'You see, your father was the one who didn't come back. *He* was the canary.'

Luna let out a little gasp, and took a pace backward. Papa? *That's* where he had gone?

Aunt Grace must have seen her niece's expression, for she softened her voice, and spoke more kindly than she ever had. 'I'm giving you the chance to follow him, Luna. To find him. I told you he was on another plane, and I spoke the truth. He's out there somewhere. You may be able to bring back more than the wireless radio.'

'*Oh!*' If Luna had been just a little younger she would have stamped her foot. It was too bad. Aunt Grace had

her pinned down, as surely as a butterfly on a card.

The grandfather clock seemed to tick louder and louder, intruding on Luna's indecision.

'Come on, *Fräulein*. It'll be fun,' called Konstantin confidently. He was already in the Time Train, having boarded while Luna and her aunt were having their low-voiced conference.

'The train works. I promise you,' said Aidan, holding out his hand.

Luna looked at the grubby fingers with disdain. Her fear and anger made her ungracious. 'I can get up myself, thank you.'

The Irish boy merely hooted with amusement, making her even crosser. 'Oh ho, too hoity-toity for help, are we, Duchess?'

Luna studiously ignored him. She put one buttoned boot on the running board of the Time Train, torn by indecision. She could stay in the present, where it was safe, and face her aunt. Or she could travel to the future, face its dangers, and seek her father.

'Tick tock,' said Aunt Grace warningly.

Luna took hold of the brass rail and lifted her other boot off the ground. She was on board the Time Train.

'Good for you, Duchess.' Aidan, sitting before the

controls, set the ivory dials. The little white tiles were etched with ink-black numbers and letters, just like the word games Luna and her father used to play in the evenings. Aidan turned the tumblers until they read **SOUTHAMPTON 1912**. He hesitated over the third one. ‘Time of year?’

‘Spring tides, surely,’ said Konstantin. ‘That’s when most of the sailings go, I think.’

‘Tenth of April’ll do,’ said Aidan. ‘Me ma’s birthday. Day or night?’

‘Day,’ said Konstantin eagerly. ‘We will be better able to move around undetected in a crowd.’

‘From your mouth to God’s ear,’ said Aidan and set the fourth dial for noon.

His brown hand released the ivory lever and eased it forward. The dials began to spin. Luna’s stomach lurched as the wheels turned and the train began to move across the vast room, using the meridian as a track, faster and faster, towards the grandfather clock concealing the door. As they gathered speed and the blue lightning danced about the train, every single butterfly on the walls detached from its card and began to fly about the room in a whirling, rainbow twister. The Time Train shot across the vast room until there was nowhere else to go.

They were going to crash into the clock.
There was a blinding flash.
And an ear-splitting bang.

