

# Goodricke's Time

PERSEUS.



A.C. Theokas

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*Non est ad astra mollis e terris via.*

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ISBN: 1546302964

ISBN-13: 978-1546302964

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For deaf children, everywhere



### ACKNOWLEDGEMENTS

A historical novel requires research. Visits to archives and libraries to source original material remain necessary, despite the Internet. I am grateful for the professionalism and courtesies shown by The Royal Society, The Royal Astronomical Society, the British Library, the Houghton Library of Harvard University and the Beinecke Library of Yale University. I especially wish to thank Alex Stagg of the Royal National Institute of the Deaf, Anne Wheeler, Victoria Hoyle and Joy Cann of the City of York Archives, Martin Lunn of the Yorkshire Museum and Vikki Kerr of the City of Edinburgh Archives. Their assistance helped make this undertaking enjoyable and fruitful.

I thank Jim Kyle, Professor Emeritus of Deaf Education at the Centre for Deaf Studies (now sadly closed) at the University of Bristol who provided material assistance as well as point out inaccuracies in my recounting of the practice of deaf education in the eighteenth century.

Kay Coe's review of an early version led to improved pacing. Sandy Coates spotted inconsistencies in language and logic. John Moss' scalpel excised numerous errors and bloated sentences. Lewis, Marcie and Janice made numerous clarifications and patiently listened as I prattled on about the latest chapter.

Sarah Cheeseman proofread my grammatical and typographical errors. Any that remain are my responsibility alone.

Finally, I wish to acknowledge Zdeňek Kopal, late Professor of Astronomy of the University of Manchester. It was his impassioned lecture that first introduced me to young John Goodricke





*Goodricke's Time*

*Prologue*

*Boston, USA Present Time*

Cheerful children frolic on the broad expanse of a Persian carpet in the Henry Bayard Long Room of the Boston Athenæum Library. Its sombre portraits and classical statuary are not usually witness to such restive behaviour. Today, however, these restrained surroundings have been transformed into a temporary theatre for the performance of the ancient Greek myth *Persens and Medusa*.

The sudden voice of an unseen narrator startles the children into silence.

'This is the story of the adventures of Perseus! Son of Danaë and Zeus himself!'

The youngest squirm in their parents' grasp to source the sound. Lights dim and eyes widen as marionettes as tall as the children themselves appear and step across the small stage with a typically jerky motion.

*Persens and Medusa* is a curious choice for such a young audience. Greek mythology, replete with themes of violence, greed, lust and revenge, could be deemed unsuitable. Would this performance be faithful to the narrative and depict one marionette decapitating another? The dénouement of this myth is, after all, the beheading of the most feared Gorgon. But this is also the only Greek myth where magic plays a major part. A bottomless wallet, a helmet that makes its wearer invisible, and sandals that enable flight could be elements in any traditional fable. It

also demonstrates perseverance and courage prevailing over treachery and evil, a good moral tale.

The young audience is beguiled as Perseus commences his mission to slay the head Gorgon, Medusa. Soaring over scrolling seas on winged sandals he alights at the island home of the Graeae, the three blind Grey Sisters. He demands they reveal the location of the Gorgons' lair, lest he steal their shared single eye leaving them all sightless. Fearful and alarmed, they quickly disclose its whereabouts. The children are spellbound.

He comes to the Gorgons' cave and creeps inside. What is that horrible hissing sound? Medusa! Her hair is made of snakes! Should Perseus but glance at her hideous face he will turn to stone! Instead, he looks at her reflection in his polished shield and sidles ever closer. His little wooden sword strikes! Her puppet head pops off, snakes and all. Perseus slays Medusa and the children madly cheer.

The deep-voiced narrator returns.

'As a reward for his heroism, the gods, after his long and happy life, placed Perseus amongst the stars where he remains to this day.'

Thus was Perseus honoured. He yet holds Medusa's head in one hand, his sword held high in the other. But wait! Medusa is still alive! One of her eyes repeatedly dims and brightens.

This is the star Algol, named from the Arabic *Al Ra's al Gbul*, the Head of the Demon. Two thousand years later the true nature of this dimming would be brought to light through the work of a young Yorkshire astronomer.

*Groningen, The Netherlands 1769*

Henry Goodricke, Esquire, paced in his study. The sun had set and the feeble glow from the grate could not hold back the gathering shadows. A deadened voice drifting down from an upstairs bedroom and the interminable ticking of his long case clock the only sounds.

Recently established in Holland as a representative of His Majesty's government, his profession combined qualities expected of any diplomat or gentleman; restraint and acceptance of the inevitable in life. But he was not in an accepting mood.

He was the only son of Sir John Goodricke, the 5th Baronet of Ribston and His Britannic Majesty's Envoy to the Court at Stockholm. Sir John was, by common consent, the diplomatic corps' most quick-witted and keen-sighted. While a baronet may rank lowest in British nobility, it was a member of the order of honour nonetheless and hereditarily entailed. It was a title that Henry would eventually bequeath to his son who would one day be known as Sir John. If Henry did not quite match his father's distinguished career, he would see to it that his son did. Or so he had thought. Now he was about to learn whether he would only meet an early death.

He had married Levina Benjarmina Sessler, the daughter of a Dutch merchant, eight years earlier when he was but nineteen. Marriage into a prosperous family aided

the exercise of diplomacy, but far from being simply an arranged union he did love Levina. He was enamoured by her spirit and intelligence, all the more when he saw these traits emerge in young John.

Life in Groningen had its advantages, but he now wondered whether, for the safety of his children, it had been right to remain. Anne, their first child, died in infancy. Mary and Harriet were well enough, as far as he knew, but *febris scarlatinosa*, scarlet fever, had bred within his son. Was it just last week when the physician was first summoned? He remembered asking for an honest prognosis, but winced at the ensuing clinical assessment. He was unsure whether the physician hid behind jargon or was only giving an honest opinion. It did not matter, he simply did not take to the man. He recalled his world being overturned by seemingly incessant argot.

*The malaise, dull headaches and slight fever your child has experienced, as I feared, indicate the incubation for something much worse. He has now moved to the, ah, primary stages of the affliction. There will be difficulty in swallowing, and the symptoms of a more severe fever will follow - thirst, nausea, vomiting, headache. This can be followed by the desquamate stage characterised by the detachment of the skin corresponding to the site of eruptions. Scarletina with mixed eruptions often means either bronchitis or pneumonia will follow. If not, there remains a lifelong susceptibility to these. Of the several internal calamities delivered the more common one is a rather foetid purulent discharge from the nose due to, ah, to an ulcerative disease of the mucous membranes. I should add that a similar inflammation of the ears will result in permanent impairment of hearing and, quite possibly, its total loss.'*

*'Good God, sir! You are not reading a paper at some blasted academy!'*

Goodricke regretted his unbecoming outburst. His son's illness was not this man's doing, but his gaunt features coupled with a cheerless deportment suggested he was allied with this disease, that he had brought it with him.

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The physician had returned and was examining his son as Levina sat by. He instructed him to say nothing to her before first informing him. If the news was to be for the worse, he wished to at first bear it alone. A loss of composure was not something he wanted anyone to witness. He would prepare himself and then return to his son and waiting wife.

She spoke a bit louder.

‘Bedankt voor het komen.’ *Thank you for coming.*

The staircase creaked and Goodricke stopped pacing. The physician stood in the doorway, his medical bag in both hands. He spoke into the darkening room.

‘May we have a little light, sir?’

Goodricke placed a taper in the coals and, in silence, lit a few candles. A small action, but it had a calming effect.

‘You have your light, sir. Speak.’

‘Thank you. Your son’s condition is no longer dire. I believe the crisis has passed. He will live.’

A coal shifted in the grate, producing a small flare. Henry looked at it and then back at the physician, facial creases sharpened in shadow. His tone suggested this was the good news. He paused, took a breath, and continued.

‘However, sir, I am sorry to tell you that I fear your son is now deaf and in all likelihood, shall remain so. I wish I were able to announce a complete recovery, but I cannot. I am sorry for it, but I must report otherwise.’

Goodricke heard the faint sound of Levina singing a familiar lullaby. The physician had apparently followed his instructions.

‘You are certain there is to be no full recovery?’

He wanted to contend as he was used to doing, but knew it to be misplaced energy. Still, he continued.

‘I realise that he has indeed suffered a serious affliction, but others have completely recovered, surely?’

‘Not always,’ the physician replied. ‘The sepsis emanating from the ears is indicative of permanent damage within. The inflammation of the inner ear has grown to, ah,

to a suppuration resulting in a likely perforation of the membranes. At least he has not suffered a mandible abscess which can accompany this condition and is usually a sign that death will soon follow.'

'Of course. I am sure that you have done everything possible.'

He had the news he had been waiting for and wanted a moment before returning to his wife.

'Let me see you out.'

'I shall return in a day or two,' the physician said. 'Take heart, sir. He is now out of danger. So many others have not survived.'

'Yes, I thank you, you have been most ...' he searched for a word. 'Clear'.

'Then I bid you good night, sir.'

Goodricke remained on the steps and watched the physician's carriage recede along the Noorderhaven canal. He heard the fading clip-clop, a woman's laughter from the canal side opposite, a dog's brief bark and then silence. He glanced up at the emerging stars as if to ask why, in all this creation, his son must endure what was surely to follow. He returned inside and climbed the stairs burdened not only with the thought of telling his wife but also how they would tell young John.

He approached the bedroom door and was confronted by the odour of the vinegar and hops applied to moisten the throat. Was it ever effective? The smell of stale sweat was added as he stepped further inside. Levina, sitting on the edge of the bed wiping her son's brow, looked up. Redness could be seen around her eyes, despite the dim candlelight. For a moment neither of them spoke. His hesitation was news enough. She looked at him and her expression turned to one of anger.

'Deze keer *niet*, Henry. Niet *dít* kind. Ik *verbied* het!' - *Not this time, Henry. Not this child. I forbid it!* she said, a fist pounding each syllable into her chest.

She calmed and sighed.

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'What has the physician found? You may speak plainly. He sleeps,' she said, gesturing over their son with a clenched cloth.

*We can speak plainly enough from now on*, he thought.

Thankfully, scarlet fever had not afflicted his other children. Had the belladonna helped? It was children, mostly, it sought out. The sepsis the doctor had mentioned had been all too evident. John's eyes had been stuck shut by a brownish secretion while his ears discharged the same characteristic material. It was as if his small body could not contain all the putrefaction within. At least he did not suffer from desquamation of the skin, one of the more obscene symptoms. If the physician was right, the disease had burned out. The foetid discharge from the ears had ceased pulsing, but not before doing damage.

Levina, breathing heavily, impatiently awaited his reply. The only other sound was John's own ragged breathing, each exhalation ending with a thin little squeak like the cry of an expiring mouse.

The long case clock chimed sweetly and triggered a memory of when he first sensed just how unusual his son was.

*'Father, how does it work?' asked John, his arm upraised, a forefinger protruding from a ruffled cuff pointing up at the clock.*

*Henry felt a surge of pride.*

*A fine clock was a possession subtly reflecting the traits of its owner, a gentleman of means who was reliable, steady, punctilious. The work of the well-known London clock-maker, Thomas Mudge, it had an oak case detailed with veneered burr walnut and roundels of satinwood and ebony. The eight-day mechanism drove seconds on a dial plate and phases of the Moon. But John, he suspected, was not the least bit interested in cosmetics.*

*Now, my boy, let us see what we can make of this, shall we?'*

*Henry carefully lifted the hood to expose the shiny brass clockwork. He then opened the doors in the clock's waist, revealing the weights and swinging pendulum.*



'Up, my boy, up!'

Henry knelt down and lifted John to his shoulder, bringing him eye level with the clock's movement.

John was transfixed by the gleaming gears, this one hardly moving, that one a bit faster. It all seemed impossibly complex, gear upon gear, all rotating in rhythm with the syncopating beat of the pendulum.

'Now this little one here is the escape wheel. It turns once around every minute, so it drives the motion of the second hand. And this one is the centre wheel. It turns once around every hour. So, what do you suppose it controls?'

'The hour hand?'

'Excellent, well done! All these gears you see make up what the clockmaker calls the train.'

'But what makes the ticking noise?'

'Ah, this bit here. It is known as the deadbeat escapement.'

'What a silly name!'

'Yes, yes, a silly name, but it is important as it keeps the main gear here from jumping about as the pendulum completes its swing. This is what keeps time accurate to a second a day. It all connects to the hands, and chimes and the moon phase dial just here. Do you see?'

'And these, Father?'

'The weights? Well, this one keeps the escapement moving and the other powers the chime you hear when it strikes the hour.'

John thought for a moment and then asked, 'But if the weights keep the clock going, can it still go as you wind them up?'

This rather perceptive question took him by surprise.

'Yes. Well, this one does.'

'How?'

'Ah, well, I am afraid I do not know, but an excellent question. Well said!'

'Why must it be so tall?'

'Well, because the pendulum must be very long. The longer the pendulum, the more time it takes to swing from one side to the other. The shorter the pendulum, the faster it swings. So, there is one length where it takes exactly one second to swing from one side to the other and that is the length you see here.'

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*John Goodricke did not yet understand the physics of a pendulum's motion or its distillation to movement more refined, but he knew one day he surely would. It was as if the brass gears with their tiny teeth, the delicate springs and the pendulum's swing would carry him to some higher purpose.*

*He regarded the rolling gears a bit longer and looked at his father with his little smile.*

The chiming ceased, ending Henry's reverie. He felt a sadness stirring within as he turned to face Levina.

'My dear...' he began.