ODD HARALD HAUGE

POLARE TRAGEDIER

OM MOT, OVERMOT – OG DØD

Ten stories of polar tragedies

1. Merchant adventurers to New Lands (1553–56)

2. Willem Barents (three expeditions 1594–97)

3. Jens Munk (the search for the Northwest Passage 1619–20)

4. James Knight (towards the Northwest Passage 1719–21)

5. Vitus Bering (to the Bering Strait 1725–41)

6. The Franklin expedition (1845–48)

7. The Mystery in the Swedish house (1872–73)

8. The Jeanette expedition (1879–82)

9. Andrée's Arctic balloon expedition (1897)

10. Robert F. Scott and the race to the South Pole (1911–12)

Polar Tragedies

On arrogance, the spirit of adventure and polar exploration's greatest failures – 272 pages.

Odd Harald Hauge

Polar exploration's greatest tragedies and mysteries are a fascinating blend of courage, arrogance and ignorance. In search of honour, fame and fortune, polar explorers travelled to the outer edges of the known world – but never returned.

But what lies behind these tragedies? What made an 80-year-old take a team of forty men to Canada on a hunt for gold in the year 1720? How could 17 healthy men die in a newly built house full of food? How could an illegitimate child from Arendal become a Danish war hero and iconic hero of polar exploration?

This book presents both the famous and unknown stories – from Willem Barentsz in 1596, via Vitus Bering and seven other expeditions, to the race between Scott and Amundsen. This is the first time these stories have been presented together in context.

About the author

Odd Harald Hauge (b. 1956) was educated as a business economist. He has been a journalist and editorial lead for Kapital, worked as a stockbroker, been the business editor for the *Aftenposten* newspaper and is the founder of *Nettavisen,* where he was editor-in-chief and CEO. He has published several books.

An extract from

POLARE TRAGEDIER

OM MOT, OVERMOT – OG DØD

(Polar Tragedies: Courage, Arrogance – and Death)

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Chapter 6

The Franklin Expedition (1845–48)

The Cannibals on King William Island

129 men sailed to conquer the Northwest Passage. Never before had an expedition been better equipped, but they would never be seen again and the mystery has endured until the present day. 'Beginning in childhood, I was captivated by the great drama of the Franklin expedition,' wrote Roald Amundsen.

I

The Battle of Waterloo was not only a key point in European history, but it also saw a shift in polar expeditions.

The victory over Napoleon in 1815 marked the beginning of the British Empire's heyday, which reached its culmination over a century later. The arch-enemy had been defeated, and it was necessary to seek out new conquests. The navy had an extensive, well-equipped battle fleet and a number of talented officers following a long period of warfare. They needed new assignments.

Eyes turned to the north. The gentlemen of the nobility would win fame and glory – as well as even more influence for the nation – by becoming the dominant force in the northern latitudes.

Two objectives were identified by Parliament: the North Pole and the Northwest Passage.

All attempts to reach the North Pole before the end of the nineteenth century were half-hearted and altogether hopeless. For instance, the distance from northern Greenland to the North Pole was known – it could be calculated fairly precisely. However, distance was only one element to consider – how difficult it was to cover was something else altogether. During the nineteenth century, no one knew what lay to the north of Greenland – whether it was sea or land. Not until the twentieth century was it proven that the North Pole was not linked to any land.

Conquering the North Pole was primarily a matter of national prestige. On the other hand, the Northwest Passage was largely a financial matter. For kings and merchants, the prospect of enormous gains was what tempted them. Honour and fame awaited the explorer who could find a navigable route to the East and lay claim to the territories and route on behalf of his country and his king. For those who had funded the expedition, fame was not the top priority. Controlling a faster sea route to the East would generate enormous revenues. Forever.

The British did not want for resources, and had no reluctance when it came to their deployment. However, the thing that would come to characterise the nineteenth century's rush towards to the Northwest Passage was a fundamental lack of humility and an inability to learn. The success and power of the British made them arrogant, as happens to all successful societies. They were unstoppable know-it-alls.

In all ages, scurvy had been the great terror and scourge of long sea voyages, as well as wintering in polar regions. From the middle of the eighteenth century, it was well know that lemon juice could counteract scurvy.

Nevertheless, it took fifty years before the British Royal Navy made any changes to navy rations. Over the course of those decades, the number of sailors who died of scurvy was four to five times greater than the number killed by enemy fire.

When naval chiefs finally recognised the benefits, they introduced lime juice – rather than lemon juice – probably because it tasted better. This was why sailors in the Royal Navy became nicknamed as 'limeys' – a term that came to be used later in the nineteenth century to refer to any Englishman, especially by the Americans.

Lime does not contain as much vitamin C as lemon, making it less effective against scurvy – but it was a forgivable error on the part of the Royal Navy. At the time, no one had detected vitamin C and it was therefore not known that this was the active substance.

Just after the turn of the seventeenth century, a new innovation emerged that would have a far greater impact on diet in the polar regions than limes – tinned food. This invention was immediately embraced by the Royal Navy. This was new technology, it was knowledge rather than merely juice, and the technology had been developed for military applications.

Mariners had always been obliged to resort to very one-sided diets while at sea. Fruit and vegetables rot quickly, and meat must be salted to ensure it lasts. A diet of salted meat, biscuits and mouldy bread was on the menu up to the early nineteenth century. Every single day.

The Royal Navy was consequently convinced that they had discovered how to survive in Arctic climes for longer periods of time. The answer was lime juice and tinned meat, fruit and vegetables. This was an established truth, sanctioned by the Royal Navy, and it would take a vast amount of facts to make any holes in this 'truth'.

The way that tinned foods are produced greatly reduces the vitamin C content, meaning that the food no longer has an effect on scurvy. Additionally, the early form of this technology did not heat the food sufficiently – it was merely cooked rather than being sterilised at higher temperatures, meaning that the shelf-life was not as long as was thought.

Even worse still, the original production method introduced a new, deadly element. It transpired that what had been considered the saviour was, in fact, a threat as menacing as scurvy. A threat that was more insidious, more threatening and more frightening.

II

The Royal Navy chiefs did not imagine that the Northwest Passage would pose any sort of obstacle to the might British naval fleet. It would only be a matter of months.

The man tasked with the assignment and thus being on the receiving end of the honour was Captain John Ross. In the summer of 1818, he sailed with his two ships from the Davis Strait between Greenland and Canada into what would later be known as Lancaster Sound. This was the right way to the Promised East, but Ross made the mistake of believing that the sound was just a large bay and he turned around. They had reportedly sighted a mountain range straight ahead of them, which must have been a mirage. We know from a number of later accounts of voyages in these waters that fog is a major issue. Eighty-five years later, Roald Amundsen wrote that there was dense fog almost every day and that navigation was exceedingly difficult.

Ross was unable to find any other route into the labyrinth, and he turned back, empty-handed. For this mistake, he was labelled an idiot by John Barrow, Second Secretary to the Admiralty. Ross did not improve matters by naming the 'bay' after the admiral: for one year it was known as Barrow Bay.

From his desk in London, Barrow did not have the answer to the puzzle of the Northwest Passage either, but he was still boiling with rage. The easy victory that he had expected and almost certainly promised to the politicians had been thrown away by Ross.

The captain on the second ship in the Ross expedition was the young William Edward Parry. He had been strongly critical of the decision to turn around in Barrow Bay and ensured that he took the opportunity to inform the navy chiefs of this. Consequently, Parry was dispatched just a year later by Barrow with two ships to sail the same route, with the same objective: find the Northwest Passage.

Parry probably had the biggest dose of devil's own luck ever recorded. The Lancaster Sound, which is normally filled with ice all summer, was ice-free. With a wind behind him, Parry sailed further west than anyone before him.

The joy was to be short-lived.

When the ice came suddenly, as it always does, they were trapped and forced to winter on Melville Island, which is far further west than anyone had gone in the Lancaster Sound either before or after that expedition. Parry assumed that it would be straightforward to sail westward the next summer when they were released from the grip of the ice, but that route is not navigable and is always closed off by the ice.

The young captain and his reportedly very young crew proved equal to the task. Parry did most things right during his wintering, which historians consider the first to take

place in that part of the world. Of course, in doing so they forget the Inuit who had survived in the region for hundreds or thousands of years.

Parry did so well not because he was fashionably equipped with lime juice and tinned foods, but because he ensured that the crew hunted for fresh meat as often as the weather and temperatures allowed. There were birds, foxes, hares and the occasional reindeer – and possibly even polar bears – to be caught. They also planted common sorrel, a wild plant that fell out of use in Europe a century ago.

Most of the crew fell ill during the winter, but only one died of scurvy. The others returned home in good health. The whole expedition was a great organisational achievement by Parry.

However, Parry's accomplishment came to cost many people their lives.

Regrettably, the navy chiefs misinterpreted the success. They were convinced that it was the result of lime juice and tinned food, which meant this became the magic spell. The consumption of fresh meat was swept aside in the reports. On the contrary, the 'truth' had been confirmed – people would not develop scurvy if they were equipped according to modern principles.

There would be no shortage of contradictory 'evidence' over the decades that followed, but the truth is the truth. It takes a lot to change minds about something everyone already knows.

The hero Parry was dispatched on two new expeditions in the 1820s, one of them to sail towards the North Pole, but he achieved nothing except getting one of the navy's best ships crushed by the ice. The discovery of the Northwest Passage was at stake.

From the sidelines, these expeditions were observed by John Ross – demoted and no longer a navy captain, and still the subject of widespread scandal at his unforgivable mistake in the Lancaster Sound. He was not finished with the Northwest Passage, and managed to secure funding for an expedition thanks to the help of private individuals. It is remarkable that his second voyage has not been recorded in history as one of the most impressive.

One of the reasons that this expedition is nevertheless remembered is his next-in-command. James Clark Ross was the nephew of John Ross and a highly experienced Arctic sea captain. He had accompanied his uncle on the first expedition in 1818, as well as all of Captain Parry's expeditions in the 1820s.

When the private expedition led by John Ross left England in 1829, they knew where the entrance to the Northwest Passage was likely to be – and just like Parry, Ross encountered the Lancaster Sound clear of ice. He then sailed into the first wide inlet to the south – Prince Regent Inlet. We have to assumed that he was determined not to misinterpret it as a bay once again. But this time, it *was* a bay.

Admittedly, they passed a strait to the west halfway in to the 500 kilometre-long bay, which made the land the west of them an island – Somerset Island. By sailing through this strait, they had come much closer to solving the mystery of the Northwest Passage, but the strait is narrow and shallow, and might not have been navigable with ships of the day, which were difficult to manoeuvre.

Instead, they pushed on deeper into the bay until the ice caught them. Ross named the bay the Gulf of Boothia and the land to the west as Boothia, in honour of his sponsor the gin distiller Felix Boothia.

When the ice had first embraced the ship, it became obvious they would have to overwinter. There was a large Inuit settlement in this area, and the Ross expedition remained in close contact with the Inuit. It was probably the expedition's salvation and also its path to eternal fame.

The winter passed without the health of the crew worsening dramatically. With the coming of spring and the light came hope: expectations of the next step west towards fame. However, the ice did not let them go. Not in July, not in August, not in September. They only managed to move the ship a few kilometres to the north before they were forced to prepare for another winter.

It too passed without any reports of widespread illness. Yet it must have occurred to the leader of the expedition that he was in danger of returning home just as empty-handed as the last time. Discovering a new dead-end was no way to achieve fame. On the other hand, all the land around them was unknown to Europeans – every step was a new conquest.

Captain Ross was a thick-skinned and easy-going man who was not cut out for heavy exertion. His nephew, however, did not hesitate to undertake a long expedition by dog sled during the second spring with assistance from the Inuit. The sled expedition penetrated further west than anyone had done before. They discovered King William Island and reached Victory Point on the island's western shore, a place that would assume legendary significance some thirty years later.

However, there is another, more important reason why James Clark Ross is named in the history books. On the way to King William Island, he became the discoverer of the magnetic north pole. On 1 June 1831, he was the first person to stand on the exact point and be able to measure and prove it. James Clark Ross also noticed that the magnetic north pole was constantly moving, but that it stayed still for long enough to be measured.

The location of the magnetic north pole took on great significance for navigation at sea: for the first time, mariners knew exactly what the misalignment on the compass was from any place in the northern hemisphere.

The joy of this scientific achievement and the surveying of new land came gradually to be overshadowed by a new threat. The ice remained throughout July, August and September. They were destined for a third winter in the same place.

It is remarkable that the expedition was frozen into the bay for three winters without any of the 24-man crew dying. John Ross did not blindly believe in the glory of tinned foods – he believed in fresh meat. The Inuit did not have tinned food, but they managed to live there. The expedition followed the Inuit way of life in many regards: they ate fresh meat as much as they could during the autumn and winter, they continuously hunted seals and other game, and they eagerly ate the stomach of a reindeer that had been buried since the autumn. It was full of greenery that the reindeer had eaten before the arrival of winter. Two hundred years later, this remains the way for nomads to survive in cold regions.

One can only imagine the desperation of the expedition when the ice did not clear during the third summer. Their supplies were dwindling and the sparse fauna in the area could not provide for both the British and the Inuit over the course of another winter. They had to escape.

The ship was sacrificed. Using sleds and lifeboats, which they pulled across the ice, they headed northwards for the Lancaster Sound, hoping to find ice-free sea. But they arrived too late. Where they had hoped to find sea there was nothing but ice – a sight that must have been extremely depressing. There followed their fourth winter in the Arctic.

They managed to build a makeshift hut, which was very poorly insulated and a squeeze for 24 men. Up on the northern tip of Somerset Island there was no Inuit settlement. It became clear why. There was far less fauna there, making access to fresh meat during the winter almost non-existent. Nevertheless, the position had been chosen because Captain Parry's first expedition had left behind plentiful tinned food on the site. John Ross could therefore thank his nemesis Parry.

Due to the tinned food, they did not go short of provisions – but everyone was seriously ill during the winter. This is one of the first times that the word 'debility' begins to appear in the logbooks. The term referred to what might be considered laziness, or even apathy or giddiness.

The expedition's doctor wrote that their condition was so poor that it was evidence that tinned vegetables were an insufficient defence against scurvy. However, he did not take his conclusions further than that.

Expedition leader John Ross did not believe he would survive the winter, but they eventually managed to catch some ptarmigan and fish early in the summer which saved everyone except the ship's carpenter. 'The first salmon of the year is a better defence

against scurvy that all the medicines in the world,' Ross wrote. This is no exaggeration – nowadays we know that scurvy can be cured in 24 hours with vitamin C.

We can only imagine how the 23 surviving crew scouted the pack ice, early and late, while fearing yet another winter they were unlikely to survive. Late that summer, in mid-August, a long strip of open sea opened to the east. They launched the lifeboats, and with a tailwind they sailed and rowed as if possessed, towards rescue. They hoped to be picked up by whalers based around Baffin Island.

Several ships passed without spotting them, but in the end the miracle was accomplished. The crew on the rescue ship were all familiar with the missing Ross expedition, but refused to believe it was really them.

The discovery of the magnetic north pole and their miraculous survival made them all heroes. It also went a long way in rehabilitating John Ross, although he never became a true polar hero – he had too many peculiarities for that. For one thing, he did not fit the image of a polar hero. Worse still, he was a slave driver, a snob and a sworn supporter of the class system. Even in the cramped little hut during the final winter, he had occupied a large share of the space for himself and insisted on maintaining rank. Everyone else was his servant. Only contemporary obedience to superiors, authority, nobility, rank and hierarchy saved him from mutiny.

For the first and perhaps last time in polar history, his men took revenge upon their return. An anonymous expeditionary member published their account in *The Last Voyage of Capt. Sir John Ross*, which depicted him as inept, fat and unpleasant. The conclusion was that his men did not think he deserved their respect or recognition.

Despite all his failings, John Ross was nevertheless one of the smartest polar explorers of all time. None before him had survived four years almost without incident. And he had done it by following his own path rather than abiding by established truths, choosing instead to learn from those who knew better. The next person to do the same thing was Roald Amundsen: the first person to pass through the Northwest Passage.

At the time, there was no one who wanted to learn from John Ross. One example was Captain George Back, who participated in several significant, land-based expeditions in the northern reaches of Canada. Back was the stark opposite of Ross: he was handsome, charming, a gifted poet and painter, had spent five years in prison during the French revolution and had cleaned up when it came to life as an adventurer. Everyone admired Back.

In the hunt for the Northwest Passage, sled expeditions were also dispatched into the unknown far north of Canada. Mapping the coast would provide more information about possible routes to the west.

George Back led one such expedition in 1836-37, which was a complete fiasco. They were to survey the Melville Peninsula, but their ship got stuck in ice and they were unable

to reach the shore with their equipment. Throughout the winter, the crew suffered greatly with illness. It began just a few weeks after they stopped being able to obtain fresh meat by hunting while ashore. The majority complained of weakness and joint pain, and the doctor diagnosed scurvy.

The antidote was to eat more tinned food.

During the winter, two men died while the others lay apathetically on board the ship, too weak to do anything. Eventually, they were unable even to eat. The latter may have been their salvation since they consequently did not eat their fill of tinned foods. When summer finally arrived, the emaciated crew managed to meander their leaky ship back to Ireland where many were bedridden for months.

In the report, the illness on board was eventually marked as 'inexplicable' and the case closed. They had had the best provisions available – the cause had to lie elsewhere. The most likely cause was that an infectious disease had joined as stowaway when they had left home.

This was a new and major setback for the navy. Nevertheless, the indefatigable John Barrow decided to make one last attempt. It would be the biggest and best equipped expedition ever.

III

John Barrow was the Permanent Secretary to the Admiralty and head of the Royal Navy for forty years, serving under a number of Prime Ministers and Naval Ministers. He had experienced major victories in war, had lived in China, had aid the establishment of the new Cape of Good Hope colony in South Africa, in addition to being a writer and rhetorically gifted. However, nothing in this background provides an explanation for why the Northwest Passage became an obsession for Barrow. That was the result of his participation at the age of 16 in whaling in Greenland. He had the polar bug and could not be cured.

The final push for the northwest was planned methodically. Barrow had appointed the leading polar explorer of the day, James Clark Ross, as the expedition leader. The fêted and admired Ross had just returned home from this third voyage to Antarctica, where he had made it all the way to the edge of the ice that surrounds large parts of the landmass. He had also discovered the volcano Erebus, and had named it after his ship. However, he had failed to locate the magnetic south pole.

An important factor for Barrow was that Ross had avoided serious illness and fatalities amongst his crew on the Antarctic expeditions. He had also pulled off an equivalent feat together with his uncle John Ross fifteen years earlier in the Arctic.

Like his uncle, James Clark Ross was sceptical of tinned foods as the remedy for scurvy, and this was without a doubt why his Antarctic expeditions had been so

successful. Unfortunately, Barrow and the political leadership in the navy believed that it was the *dividend* of tinned food.

If James Clark Ross had been on board either of the ships 'Erebus' or 'Terror' when they departed London in 1845, it is very likely that they would have succeeded in penetrating the Northwest Passage. Instead, that honour would fall to Roald Amundsen sixty years later.

However, Ross made a choice that must have shocked the leading men of the era. He declined the appointment from John Barrow because he had promised his wife not to undertake any further polar expeditions. The decision was so incomprehensible to those around him that it was rumoured that he had an alcohol problem. *That* was something people could relate to.

Instead, the navy opted for a man who could very much be described as one of their own. Sir John Franklin was 59 years old, and clearly too old for such exertions – that much everyone agreed on. First Lord of the Admiralty, Lord Haddington, interviewed Franklin and did not hide his concerns. 'I might find a good excuse for not letting you go, Sir John,' said the peer, 'in the telling record which informs me that you are sixty years old.' 'No, no, my lord,' was Franklin's rejoinder, 'I am only fifty-nine.'

It was not just his age that was an issue. Men who had been with him in the field were unimpressed. 'He lacks even the physique necessary for moderate journeys – at best he can walk twelve kilometres in a day. He must have three meals a day and cannot do without his cup of tea. If he fails in his undertakings, it is not necessary because it is difficult.'

This was written while Franklin was still *young*.

Nevertheless, Franklin was the chosen candidate. His peers in senior navy ranks concluded that he would die of disappointment if he was not given the command.

Looking at Franklin's life in further detail, it becomes easier to understand the navy's decision. He enlisted in the navy at 14 and participated in a number of naval battles during the Napoleonic wars, including the legendary Battle of Trafalgar where Lord Nelson fell. When Napoleon was defeated at Waterloo, Franklin was 29 and evidently a rising star.

Like many other young captains, he turned his gaze northward – but it was on land that he distinguished himself. In 1819, he was given the command of an expedition to haul sleds from Hudson Bay across the tundra to the north in order to survey the Arctic coastline.

It did not go well.

The return journey could have formed a separate chapter in this book, but life had greater catastrophes in store for Franklin. Hunger, cold and exhaustion cost ten men their lives as they stumbled back across the barren Canadian tundra. Franklin had no

experience of such an icy desert – his domain was the sea and firepower. There is no wholly credible account of the return journey in existence, but it is probable that Franklin and his men were forced to eat reindeer dung and the soles of their shoes, both of which are unlikely to have offered much in the way of nutrition. On the other hand, it is more likely that they were able to kill each other and then eat each other. Cannibalism is more common than you would think.

They were eventually saved by the local Inuit at a time when the expedition leader thought he was unable to carry on.

Franklin managed to transform this fiasco into a triumph. In London, he shamelessly recounted the expedition's heroic struggle for survival, about the soles, dung, murder and cannibalism. Franklin became known as 'the man who ate his boots'. Rather than being dismissed, he was promoted and dispatched on a new expedition six years later to the same region.

Franklin had learned his lesson. His second sled expedition was a success, both in terms of surveying new territory and in terms of returning home alive. He was honoured for this and appointed Lieutenant-Governor of Van Diemen's Land. It was from here that he had returned home when he was surprisingly given the chance to head the best equipped, most prestigious British expedition in history.

The two ships, 'Erebus' and 'Terror', had both been built as warships and were reinforced with iron plates in their bows and upgraded with all modern facilities for the officers and crew. It was 1845, but desalination technology was already available in the galley and a form of water borne heating was installed beneath the deck powered by a steam boiler.

It is always cramped at sea, not least in 1845, but they managed to fit in libraries of 1700 and 1200 books on the two ships respectively. They also had a basic type of organ that could play fifty pre-programmed melodies. One manifestation of the innovative element of the expedition was that they had one of the latest technological inventions with them: a camera.

Nevertheless, the biggest delight and surprise for the crew was that they were all equipped with clothing for extreme weather. This included sealskin mittens and caps, winter coats and leather trousers. The chiefs had clearly picked up some ideas from the Inuit.

There were enough provisions on board to last three years. 134 men could look forward to more than 8000 crates of tinned food, each one weighing three or four kilos. They had in excess of three tons of tobacco, 1000 litres of wine (reserved for those who were ill) and more than 4 tons of chocolate. As insurance against scurvy, they had more than 4 tons of lime juice.

Of course, 'Erebus' and 'Terror' were sailing ships, but they were each equipped with a steam engine removed from a locomotive and connected to the propeller. They were only for use in emergencies.

The Times was extravagant with superlatives when reporting on the departure down the Thames on 9 May 1845. 'First Lord of the Admiralty Lord Haddington has spared no effort or expense to maximise the crew's comfort and thereby ensure the successful outcome of the voyage.'

The days prior to departure were filled with festivities and official receptions. Since the civilian crew had been paid two years' wages in advance, it is fair to assume that some money was spent in the pubs in port before they said farewell.

All contemporary articles, editorials and journals were filled with optimism on behalf of the expedition. President of the Royal Geographic Society, Sir Roderick Murchison, summarised feelings as follows: 'Merely *the name* Franklin is a national guarantee of success.'

There was something of the Titanic about the whole affair.

Although the two ships were already so overloaded with supplies that the crew could barely find space to hang their hammocks, they were trailed by a transport ship with further provisions up to Disko Bay off Greenland. Amongst other things, ten live ox were slaughtered and the meat transferred to 'Erebus' and 'Terror'.

Most men on board sent greetings home from Greenland. Many expressed their enthusiasm for Franklin as a leader and person. They praised his composure, his experience and his ability to take an interest in individuals. 'We are becoming more and more fond of Sir John Franklin the more we get to know him,' wrote one junior officer.

Five of the crew had fallen ill and returned to England with the transport ship. This left a crew of 129 men, plus one dog and a monkey. They sailed from Greenland on 12 July.

A fortnight later, they encountered two whaling ships in Baffin Bay. The Franklin expedition was moored to an iceberg, awaiting good conditions to sail into the Lancaster Sound. One of the whaling ship captains later reported that the crews were on good form and in a good mood. Franklin had said they had food to last five years, and that they could stretch to seven years if necessary. They also intended to shoot as much game as they could.

Franklin invited the whaling ship captains to dinner, but strong winds pulled the ships apart making it impossible. One day in early August, the whaling ships saw 'Erebus' and 'Terror' set sail and head into the Lancaster Sound.

They would never be seen again.

IV

How long do you have to be gone to be missed?

In London, John Barrow announced his departure after more than forty years in post. The Franklin expedition was under way, he had completed his mission and withdrew to a Scottish castle to write about the Arctic expeditions.

He had no grounds to worry when there was no word from the expedition the next summer. Only the naivest optimists believed that the Northwest Passage could be conquered after just one winter. There was also no great cause for concern in the summer of 1847, two years after departure. The distances were significant, and the opportunities for communication limited.

However, towards the end of the year, unease began to set in at naval headquarters. It ought to have been possible for them to make it through over the course of two summers and for notification to arrive during the autumn. In the spring of 1848, questions were asked in the House of Commons about what the government intended to do about the matter. The expedition had food to last for three years – provisions were likely to run out in just a few months' time.

It was the equivalent of kicking down an open door. As soon as someone whispered the word 'alarm', the alarm was raised.

Three rescue expeditions were immediately launched. One was to sail around the Americas and up the Bering Strait between Alaska and Russia, where Franklin was expected to arrive after a successful voyage. This was in itself a formidable journey. A second expedition was to cross the Canadian tundra and follow the McKenzie River to the coast. This was also no simple undertaking.

However, it was the third expedition that most faith was placed in – it was to sail the same route as it was assumed Franklin had chosen. Sir James Clark Ross accepted the command – his wife no longer held a veto in a national crisis. Assigned two of the navy's best ships, they were towed down the Thames almost three years to the day after Franklin had set off.

John Barrow, the architect of the hunt for the Northwest Passage, died that autumn. He would never know what had happened.

For the decorated Ross, the Franklin rescue mission was not one that he would be proud of. His crew were more afflicted by illness on this voyage than on any other that he had undertaken, and all this in spite of the fact that he had never before been so well equipped or provisioned.

They almost got through the Lancaster Sound before they were stopped by ice and forced to find a harbour for the winter. From their position, they fired flares for two weeks – day and night – in case anyone from the Franklin expedition was nearby.

The winter was hard – by October there were already many complaining of weakness and joint pain. Throughout the winter, afflictions spread that were more psychological in nature: crew became depressed, confined, distant and fearful of the future. This may be

an understandable reaction when confined to a cold, dirty and cramped ship during eternal darkness, day and night. Those who were worst hit received extra rations of tinned food. Two men died, but were recorded as being weaklings by the ship's doctor.

There is little fauna on the northern shore of Somerset Island, but the few foxes caught in snares were not eaten. Instead, a disc was attached to them stating where the rescue expedition was located in the hope that someone on the Franklin expedition would shoot them.

When spring arrived, Ross organised multiple sled expeditions to search for Franklin. He headed up the one that made it furthest south – in the direction of the magnetic north pole and King William Island. This was familiar terrain for Ross, but progress was slow. Everyone suffered from joint pain and exhaustion they had not encountered previously. Although the sleds got lighter as provisions decreased, they had major issues pulling them across the uneven sea ice. They were forced to turn back: Ross built a cairn on the shore with a written message for Franklin. They returned to the ships after 39 days, some of them literally on their hands and knees.

Later findings showed that Ross had guessed correctly – this was the direction the Franklin expedition had gone. When they built the cairn, they were just 300 kilometres from where some of the members of the Franklin expedition were probably still alive. However, when Ross had to turn around to save his own men, all hope was lost for those remaining.

No one could have known in the summer of 1849, but Ross came under sustained criticism for not having done more to search for Franklin. As expedition leader, the decision for him had been straightforward: the health situation on board meant that another winter was not possible. Eight men died during the first winter and it was possible that no one would have survived a second given had weak they already were.

The health issues were automatically characterised as scurvy, but Ross claimed it was 'exhaustion, not scurvy'. The provisions were examined and the experts concluded that the tinned lime juice had lost its acidity and was therefore less effective against scurvy. It was always scurvy.

The fact that the experienced Ross had encountered a more deadly first winter than any other expedition previously was therefore dismissed with the explanation of 'weak lime juice'. They got no closer to the true problem.

The Franklin expedition's mysterious fate became an obsession of the day. In 1850, the British government offered a reward of £20,000 – an outrageous sum at the time – to the person or persons who managed to rescue Franklin. A further £10,000 was promised for the rescue of any of the crew, and a final £10,000 was promised for news of what had actually happened.

One driver behind this was Franklin's young wife, Lady Jane Franklin. She also had considerable resources at her disposal and promised her own bounties. Furthermore, she contacted the most powerful men of the day, spoke in Parliament and travelled to ports where whaling ships called, to ask them to search when they were in the region.

A whole armada of rescue ships swarmed towards the Northwest Passage – from the east and the west. Search parties were dispatched to comb some of the islands. The first point of certainty was the discovery of three graves on the southwest tip of Devon Island in the Lancaster Sound. The headstones showed that these three men had died in the winter of 1846, which meant it had to have been during the first winter that the Franklin expedition spent at the site.

The reasons for why three young men would die after just a few months on the best equipped expedition ever were a mystery, and some pointed the finger at the tinned food producer who had reportedly had quality issues. Other expeditions reported that the tinned food had fermented because the tins were not sealed. It was convenient to have parties to apportion blame to, but it did little to help solve the mystery. The first winter harbour had been found in a natural and probable location, but all traces stopped there.

No one knew where to search next.

V

The eventual conqueror of the Northwest Passage, Roald Amundsen, writes in his book based on the voyage on board 'Gjøa' that 'no tragedy on the polar ice has gripped people as deeply as Franklin and his men'.

During the 1850s and 1860s, more than thirty expeditions set out to solve the Franklin riddle, some of them by land. As a result of this, the area that encompassed the Northwest Passage was well-explored, and it was claimed that the passage was *actually* completed. It was just that no one had done it.

More or less all of these expeditions were severely hit by illness, even if they placed great emphasis on avoiding scurvy. Many describe people descending into madness, unable to control their temper and alternating between laughter and tears. Some simply wandered around and starved in the winter darkness.

One of these, an American expedition which was in fact an attempt to sail to the North Pole, got stuck for two winters off the northern coast of Greenland. Everyone fell ill except for the captain who ate the rats on board. He was unable to persuade the crew to join him in his meal choices. Many died and the survivors abandoned the ship and headed south along Greenland's coast for almost three months until they met a Danish ship.

All these deaths were caused indirectly by the Franklin hysteria. Some were fortune hunters who wanted to claim the bounty, others were public expeditions. The magic of the Northwest Passage was perhaps greater than ever, but it was clear that the route

would never be of any financial significance. Additionally, the waters were insufficiently clear and in the best case they would only be navigable one month of the year. Even Roald Amundsen had to winter three times from 1903 to 1906.

On 31 March 1854, all 129 members of the Franklin expedition were publicly declared dead. Nine years had passed since they left London. This did nothing to subdue interest in the fate of the expedition.

That very autumn, the sensational headline 'Startling News: Sir John Franklin Starved to Death.' was printed on the front page of the Canadian *Toronto Globe* newspaper. The news came from British expedition leader John Rae, who had been on his second publicly-funded rescue mission overland. He had spoken to Inuit on the mainland south of the area in question. A group of white men had starved to death on the way south towards Back River on the mainland after their ship had been crushed by the ice. The Inuit were able to determine that they must have died of hunger since some of the bodies had visibly been eaten. Rae met the Inuit on the western shore of the Boothia peninsula that Ross had named after the gin distiller, but the tragedy had happened further west on King William Island.

The Inuit's stories would probably not have been deemed credible if Rae had not bought a number of 'souvenirs' from them. These included cutlery embossed with the expedition monogram, which removed any doubt that Franklin and his men were gone for good. The locals had also found eight handwritten books, clearly diaries, amongst the dead – but these had been destroyed by their children while being played with.

The revelations about cannibalism would normally have aroused commotion, disgust and resentment in Britain – especially against those who brought such allegations. However, Franklin had become yesterday's news. Britain was engaged in the Crimean War and one of its cavalry regiments had just been slaughtered. Frozen bodies were no longer hot.

One of the few people not to give up the search for a final answer was Lady Jane Franklin, the widow. She became a symbol to many – an independent woman of means who had seen more of the world than possibly any other woman of that time. She was willing spend her entire fortune to find answers. What had happened?

She funded her own expedition with donations from many other wealthy benefactors. The steamship 'Fox', with a highly experienced crew under the command of Captain McClintock, headed north in the summer of 1857. They raised a monument at the site where it was known Franklin had spent his first winter, before heading south to where the Inuit had described finding the bodies.

On King William Island, they met Inuit who said they had seen two large ships off the island. Both had been crushed by the ice, and the crew had headed southwards

towards what the locals referred to as 'the big river' – Back River. Many had died en route, and the last of them had died at the mouth of the river.

This is probably the same Inuit settlement that Roald Amundsen was to camp close to for almost two years when his expedition wintered over two winters in Gjoa Haven.

McClintock also purchased objects from the Inuit that proved that the Franklin expedition had been in the area. He ordered a search of the shores of the large island, and the findings told the story piece by piece. They found a skeleton with a weird diary written backwards, which left them none the wiser. A little later, a short message was found in a cairn. It said that after the first winter, the expedition had sailed northward and then been stopped by ice, before sailing south along the western side of Cornwall Island. It was a peculiar choice, but it was not explained.

The same message had received an important addition eleven months later: 105 men under the command of Captain Crozier abandoned the 'Terror' and 'Erebus' on 25 April 1848 after having been frozen in since September 1846. The intention was to make for Back River on the Canadian mainland. For the public, the most important detail was that Sir John Franklin had died on 11 June 1847. The total number of dead at the time was nine officers and fifteen sailors.

The decision to go south was disastrous. They should have gone north towards the Lancaster Sound, just as Captain Ross had done to save his expedition fifteen years earlier after *three* winters. Had they done so, they would have encountered one of several rescue expeditions that autumn. It is worth noting that this would only have been the case if they had survived that long – and it is by no means certain given the true cause of the catastrophe.

Instead, they decided to try and reach Fort Resolution in Hudson Bay – more than 2000 kilometres away, and across some of the most unforgiving and desolate territory in the world. Even in the present day with the lightest equipment and the highest levels of fitness, it would still take eighty or ninety days. With the equipment of the era, it was an impossible task. The decision seemed so absurd that it was most reminiscent of a mass suicide under the leadership of a doomsday preacher.

It is likely that the original group of more than one hundred people was broken up into small clusters. The 1859 expedition found a 28-foot lifeboat that had been pulled on a sled, probably in order to sail down the Back River. The boat and sled weighed in excess of 600 kilos. On board were two bodies, and they were unlikely to have hauled that weight there themselves.

Nevertheless, the most remarkable thing was the contents of the boat.

There were no provisions in the boat except for tea and chocolate. On the other hand, there was enormous quantities of dead weight. There were clothes and boots, silk scarves, curtains, silver cutlery, sponges, slippers, perfumed soap, hairbrushes,

toothbrushes and a number of books. Just as strangely, the sled was point north – away from the route they had set out on.

Even if this was all odd and inexplicable, the news was still that the Franklin mystery had been resolved. Lady Jane had a date and place of death for her husband. They had got further than any other expedition before them. The British Empire considered the Northwest Passage conquered. It was just that no one had done it.

In some respects, Franklin was unlucky. Previous expeditions had concluded that what is now known as King William Island was a peninsula. Franklin therefore believed he had to walk down its western shore. Enormous quantities of drift ice are drawn down the McClintock channel from the north, and the pack ice can be there for years at a time. Roald Amundsen was the first person to go down the eastern side of King William Island, which was the key to his success.

Interest in Britain declined after the mystery had been solved. However, there were still adventurers in the USA who were fascinated by the story – not least the possibility that members of the crew might still be alive and living amongst the Inuit. Consequently, there was a steady stream of expeditions to the area, more remains were find and further fragments of the story were uncovered. There is much to suggest that four men (and the ship's dog) only abandoned the ships in the summer of 1849, one year after the large group, and at around the same time as James Clark Ross was on his way towards them from the north. What happened to this group of four or why they remained is unknown; they may have been left to guard valuables on board.

Naturally, interest in the fate of the expedition dissipated, but it never vanished – and since 2010 there has been renewed enthusiasm. 'Erebus' and 'Terror' were found on the seabed in 2014 and 2016 respectively, just south of where the Inuit had said. Both ships had been well-preserved by the cold water, and on board there may be objects and even potentially readable documents that provide more answers.

Today, the preliminary 'truth' is that the crew abandoned the ships, probably in several waves, setting out southwards. It would have been natural to do so in the spring when the light returned and the weather was milder. They still had food on board, but they must have realised that it would not last yet another winter, meaning they could not be in the same place. In the barren landscape it was impossible to hunt enough to feed one hundred men – even the Inuit succumbed to starvation in bad years.

The cannibalism that was proven was due to starvation – the last resort of man. They had no experience of distances or how heavy it was to pull a sled filled with silver cutlery and books across loose snow. They did not get far before the food ran out.

However, was a lack of food the expedition's biggest issue until then?

VI

In 1981, the anthropologist Owen Beattie decided to follow up on many of the loose threads in the eternal Franklin drama in a more scientific manner.

Remains are well preserved at northern latitudes due to the climate, so it was not far-fetched to search for new answers from so long ago. Over the years, grave sites, skeletons and materials were found along the entire route from where the ships were finally locked into the ice down to the southern tip of King William Island and on the mainland. The grave site there has been named 'Starvation Cove'.

Using modern methods, it was established beyond any doubt that the Inuit accounts were correct. The final survivors had eaten their comrades. The Inuit had found boots filled with cooked human flesh – a way of transporting the food. Limbs had been sawn off, holes had been drilled in skulls to extract brain matter, and some body parts had been scraped clean of meat.

There is hardly anyone who had learned in advance how to eat another human being. Nevertheless, research shows that cannibalism tends to follow roughly the same pattern once the decision is first made. Initially, the meaty parts such as thighs, legs, buttocks and arms are eaten. Parts that are recognisably human, such as hands and feet, are avoided.

As desperation increases, other parts of the body become edible. Bowels, bone marrow and skin are all consumed. The skull is emptied by making a hole in it, while bones are crushed to remove the marrow. All this is clear as day for anyone examining bones, even if they are 130 years old. Limbs are cut off, all meat is scraped from the bone and there are clearly visible scrape marks.

The cannibals got the furthest, but they were still interminably far from rescue.

It is obvious that the 105 men who left 'Erebus' and 'Terror' in the spring of 1848 were sentenced to death, especially as they headed south in the opposite direction from rescue. However, researchers began to become interested in why so many died while they were still on board and had such plentiful supplies of food.

They had a theory.

The year after, the skeleton of a member of the Franklin expedition was analysed for various trace substances. The same was done to three Inuit skeletons. The Franklin man had extremely high levels of lead in his bones, while the Inuit had almost none.

There had been an awareness of lead poisoning since Roman times. Lead was used extensively in pans, pipes, buckets and a range of kitchen utensils, and the Romans had a conscious – if not scientific – relationship to quantities of lead. Almost two thousand years later in the eighteenth century, Benjamin Franklin demonstrated the harmful and often fatal effects of lead consumption. He described weight loss, lethargy, paralysis, paranoia, abdominal pain, joint pain and fainting as symptoms. These symptoms match perfectly those described on nineteenth century polar voyages. However, Franklin's studies of lead poisoning were not amongst his most read, and no one cared at the time.

So where did the lead in the Franklin man come from? The comparison with the Inuit demonstrated that it was not a result of local conditions. Suspicion fell on the tinned food.

The innovation of the early nineteenth century featured a bottom, lid and seam that were all soldered together with lead before the food was cooked (and later sterilised). Lead often ran down the inside in large quantities since tinned food was made by hand. Researchers had no shortage of tinned remains to examine – a cairn of around 700 empty tins had been built at one location on King William Island. Almost all had wide stripes of lead on the inside, similar to when wax melts and runs.

The researchers were given permission to open the three graves at the site where the Franklin expedition had its first winter camp. The bodies were almost intact, with visible facial features – as if they had died of hunger a month ago. Thorough investigations showed that the deceased had many issues, and that an exact cause of death could not be ascertained, but common to them all was a high level of lead. The levels were not as high as in the bones found on King William Island, but the men who died there had eaten tinned food for two more years.

There could no longer be any doubt about the fact that lead poisoning had played a crucial role in the fate of the expedition. The theory has been rejected by several researcher in recent years because so many members of the expedition clearly died of other causes – primarily starvation. However, while not all 129 members directly died of lead poisoning, it weakened their overall state sufficiently that they succumbed to other illnesses.

The detection of high levels of lead also explains the mysterious illnesses on a number of other expeditions during the nineteenth century. Tinned food was consumed in order to avoid scurvy, but tinned meat and vegetables had little to no impact on scurvy. Additionally, people were slowly lead poisoned – a truly deadly double act. The expeditions that procured fresh meat over the winter were the ones that did best, but even they described remarkable levels of exhaustion amongst all members and a number of inexplicable deaths.

Lead poisons the nervous system, paralyses and strongly affects the ability to make logical decisions. It is on this basis that we reflect on the confused flight of more than one hundred men made from the two ships frozen into the ice. They dragged with them completely useless items and headed south away from rescue before a number of them turned back. The remaining officers would naturally have been aware of how John Ross had saved his men many years earlier by going north. Nevertheless, they did the opposite.

The curse of the tinned food was something John Franklin could not have been aware of, but the many expeditions with high death tolls should have raised doubts amongst those responsible as to whether tinned food was the solution to everything.

In classic British spirit, they chose in hindsight to regard Franklin as a hero and honoured him and his men for discovering the Northwest Passage.

They simply had not completed it.