

The Arctic ship *Danmark*

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ABSTRACT. The steam barque *Danmark*, used on Ludvig Mylius-Erichsen's expedition to northeast Greenland (1906–08), was originally a Scottish whaler named *Sir Colin Campbell*, built in 1855 in Sunderland. After nine years of whaling out of Peterhead, in 1865 *Sir Colin Campbell* started the transportation of cryolite from the mines of Ivigtut in southwest Greenland to the United States and several European ports. This trade lasted for 103 years, until 1968. In the early 1870s, the ship was sold to Norwegian owners, renamed *Magdalena*, fitted with a steam-engine, and used as part of the Tønsberg sealing fleet. In 1894 she was the ship in which Roald Amundsen made his first voyage to the Arctic. In 1905 *Magdalena* was chartered by the estate of William Ziegler for a relief expedition to Bass Rock, northeast Greenland, to search for members of the Fiala-Ziegler expedition. The next year she was sold to the Danmark-Expedition and renamed *Danmark*. The main task for the expedition was to survey the coast from 77°N to Independence Bay, an area that was completely unknown. In addition to geographical exploration, much ethnographical, ornithological, zoological, hydrographical, meteorological, and botanical work was carried out on the expedition. In 1909, *Danmark* was sold to the mining company Grønlandske Minedrifts Aktieselskab of Copenhagen. She made voyages every year to Greenland, returning with copper and graphite. In 1916 she was chartered by the American Museum of Natural History to bring home the members of the Crocker Land Expedition. When in December 1917 she returned to Denmark, her captain did not know that, in their two years' absence, the coastal signals had been changed due to conditions in World War I. *Danmark* grounded off Høganäs, Sweden; condemned, she was sold to a breaker's yard, and her masts, sails, engine, and other fittings were sold at auction the following year.

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Introduction

The Arctic ship *Danmark* is well known to the Danish public as the expedition ship for the Danmark-Expedition of 1906–08. During the 62 years she sailed in Arctic waters, *Danmark* passed through numerous aspects of Arctic maritime history, including the decline of the Peterhead whaling fleet; the rise and fall of the southern Norwegian sealing trade; the transportation of ore from cryolite, copper, and graphite mines in the Arctic; and numerous Arctic exploring expeditions.

Early days as *Sir Colin Campbell*

In 1855 the Scottish whaler *Sir Colin Campbell* was built at Sunderland for her owner, George Paul of Peterhead.

She was built from oak, with an average hull thickness of 26 inches. Her bow and keel were extra solid and large, to make her capable of penetrating the ice and reaching the whaling and sealing grounds. She had a gross weight of 381 tons, and her dimensions were 114.5 × 26.8 × 17.3 feet. She was barque-rigged, had two decks, was iron-bolted, and had no engine until 1872. She was named after Sir Colin Campbell, the commander of the Highland Brigade at Alma in the Crimean War.

On 28 February 1856, *Sir Colin Campbell* was towed out of Peterhead harbour. She set sail for Lerwick, Shetland Islands, where most of her crew came aboard prior to the start of her maiden voyage to the Greenland whaling grounds. Her master was Robert Birnie from Peterhead, a highly experienced whaling and sealing captain who had been the master of the Peterhead whaler *Colombia* for five years. (The description 'whaling' may be somewhat misleading because Robert Birnie's whalers were mostly engaged in sealing.) Birnie was *Sir Colin Campbell's* master during her entire period of time in the Scottish whaling industry, a period that lasted nine years. She returned from her first voyage with a catch of four whales and 170 seals, producing 32 tons of oil.

Until 1857 there had been a steady growth of the Peterhead whaling fleet, which reached its zenith that year with a fleet of 31 vessels. But that was a poor year for *Sir Colin Campbell*, which came home with a catch of only four whales and no seals (Macleod 1979). The next year the ship returned with a catch of 8243 seals, but in the two following years *Sir Colin Campbell* again had little success.

By 1860 Peterhead whaling was already in decline, with too few whales and seals for too many ships. The large Peterhead whaling fleet could not last. The increasing uncertainty among those who had invested their money in whaling can be appreciated from the large numbers of whalers that were offered for sale in 1858 and later (A.R. Buchan 1993).

In 1861 the Peterhead whaling fleet was reduced to 21 ships, which were mostly sealing, but Birnie sailed *Sir Colin Campbell* up Davis Strait and into Cumberland Sound, returning home having caught 15 whales. The next year the ship was sold to William Alexander, bank agent, solicitor, and the Provost of Peterhead. Birnie continued as master, although his voyages into Cumberland Sound brought little luck. In 1862 the Peterhead whaling fleet was reduced to 17 ships, which totalled only 18 whales and 18,546 seals (*Peterhead Directory* 1853: Appendix).

In late 1864 *Sir Colin Campbell* returned from Davis Strait with one whale and 200 seals, which produced only 19 tons of oil. Her last voyage had lasted nine months, and when she reached home, the ship was withdrawn from whaling and sealing. Birnie went to shore, retiring from whaling after having been a whaling master 16 years and having taken 44 whales and 52,800 seals during his career (*Peterhead Directory* 1853).

Arctic freighter: the cryolite trade

In 1865 the role of *Sir Colin Campbell* changed substantially, although one of her areas of operations remained Greenland. On 28 April that year, captained by W. McLennan, she was towed out of the Peterhead harbour and set sail for Ivigtut in southwest Greenland (Fig. 1), where a Danish company had opened a cryolite mine some years earlier. In 1865 the mining company Aktieselskabet Kryolith Mine og Handelselskap was established. It had drawn up a contract for the delivery of 6000 tons of cryolite each year to the Pennsylvania Salt Manufacturing Company, which had established a factory in Pittsburgh, producing soda. Cryolite (from the Greek for 'ice-stone') is a white, soft stone used in the production of various products, including serving as a basis for baking-powder, soap, and bleaching powder for cotton and enamel; later it became an important material in the production of aluminium. Prior to 1864, just a few trial orders of cryolite had been dispatched. But during the next year, several countries saw possibilities in soda production, and a considerable demand began for strongly built ships to transport cryolite from west Greenland to ports in the United States and Europe (Stigø 1987).

In 1865, when *Sir Colin Campbell* made her first voyage to Ivigtut, three ships were lost. The following years, more ships disappeared. As Stigø (1987) has indicated: 'The ships were not built for sailing in the Arctic, and their crews had no experience of sailing in icy water.' However, *Sir Colin Campbell* and other Scottish whalers had indeed been built for icy seas, and their Scottish crews had experienced many rough days on their whaling voyages.



Fig. 1. Map of Greenland highlighting the places involved with the voyages of *Sir Colin Campbell*, *Magdalena*, and *Danmark*.

The Danish government collected taxes from the shipment of cryolite out of Greenland, which were paid by the ship-owners. The master signed a confirmation of the volume in cubic fathoms taken on board his ship and a four months' bill of exchange was sent to the ship-owner (a cubic fathom is the equivalent of slightly more than six cubic metres). The register of each cryolite transport out of Greenland from 1865 onwards is held at Rigsarkivet in Copenhagen. In 1869, 592 cubic fathoms of cryolite were transported out of Ivigtut in 28 loads, half of them aboard Peterhead whalers (Kryolithafgift 1865–69).

Sir Colin Campbell left Peterhead in April 1865 and returned on 23 June before continuing to Danzig (Gdansk) with 31 cubic fathoms of cryolite on board. On returning to Peterhead, her captain and crew were replaced. There seems to have been some disagreement regarding the working conditions. 'Some of the former crew, who had caused so much trouble by refusing to proceed, offered their services for the voyage; but the owners very properly declined their assistance' (Buchan 1993). *Sir Colin Campbell* made a second voyage the same year from Ivigtut to Philadelphia, arriving 22 November and sailing home at the end of the month.

From 1868 until 1870 Alexander Murray served as master of *Sir Colin Campbell*. He was alleged to have sailed in *Felix* with John Ross in the search for traces of the ill-fated expedition led by Sir John Franklin (Clark 1983), and had been decorated. Later in life he was the

captain of *Windward* and *Perseverance*, worked for some years for the Hudson's Bay Company, and wintered in the Canadian Arctic. *Sir Colin Campbell* made two voyages hauling cryolite every year from 1865 until 1870, serving as the largest ship in the early days of cryolite transport from Ivigtut. In 1869, for example, she sailed twice for Philadelphia, hauling 28.25 cubic fathoms of cryolite the first time, and 27.75 cubic fathoms the second voyage (Kryolithafgift 1869).

During winter and early spring, when Arsukfjord was choked by ice, *Sir Colin Campbell* was engaged in other transport, such as coal from North Shields and hay from Rotterdam. But she and the other Peterhead whalers had started a major development in the Arctic, becoming the first foreign ships to participate in the cryolite trade. Transportation of cryolite from Ivigtut lasted for 103 years, until 1968, but after 1885 the business was dominated by American ships (Tving 1944).

Norwegian sealer *Magdalena*

In 1871 *Sir Colin Campbell* was purchased from Peterhead by Gustav Conrad Hansen, a merchant and ship-owner in Tønsberg. She was renamed *Magdalena* and fitted with extra ice sheathing. Her first master under her new name was Captain Christiansen, who had sailed her from Peterhead to Tønsberg. A.J. Bryde then captained her for one year in 1873, after which Christiansen returned.

In 1872 *Magdalena* was fitted with a 1-cylinder steam-engine that delivered 60 hp. (On being fitted with a steam-engine, *Magdalena* appeared in Lloyd's Register with the name 'Steamer' included, as if that had been her name for some time. In the Danish literature, she was referred to as ex. *Sir Colin Campbell*, ex. *Steamer*. There is no other evidence that her name was changed, and it is considered that the word 'Steamer' was inserted merely to indicate that she had been so fitted.) The steam-engine was installed at Nylands Verksted, Christiania (present-day Oslo).

Magdalena now joined the Tønsberg sealing fleet, which, under the guidance of Svend Foyn, had made sealing progressively more profitable; by 1870 the average net profit was 30%, and the next few years were even more profitable. In the early 1870s several ship-owners and merchants in southern Norway invested in sealers, and of the 26 sealers that left Tønsberg in spring 1872 for sealing at Jan Mayen, 10 had engines (Johnsen 1964).

Magdalena was not pretty, and the Norwegian Arctic explorer Gunnar Isachsen wrote about her: 'Although *Magdalena* was ugly, her lines under water were beautifully designed. That made her capable, under full sail, of a speed of 11 knots' (Isachsen 1925). Moreover, she made good profits for her owner, Gustav C. Hansen, during her first years in the sealing industry, at a time when he had a fleet of sailing ships, but *Magdalena* was the only one involved in sealing.

The competition at the sealing grounds was becoming progressively more keen, and, as had been the case in

Greenland, there were too few seals for too many ships. In 1877 the sealing captains in the Tønsberg sealing fleet arranged a meeting about the preservation of the seals, in order to forbid the catch of mother seals during the breeding season. All but two of the sealing masters agreed, and a letter was sent to the government (Johnsen 1964).

In 1881 *Magdalena* was lengthened from 114 to 122 feet, and underwent other substantial rebuilding, which increased her gross tonnage to 428 tons. The rebuilding cost her owner 19,000 Norwegian kroner, and Captain L. Støkken was signed on as her new master. In the early 1890s Jens Hansen became her captain, a position he held until she was sold in 1900.

In 1894 Roald Amundsen, then a medical student, signed on as a crewman on board *Magdalena* and made his first Arctic voyage, sailing to the White Sea and Greenland sealing grounds. He wrote about it later: 'It was my very first contact with the ice, and I enjoyed it' (Amundsen 1906). In 1898 *Magdalena* grounded and was badly damaged, but she was fully repaired. The Norwegian maritime museum in Oslo (Norsk Sjøfartsmuseum), holds a drawing of the vessel 'as a wreck aground,' but there is no evidence of where the grounding occurred.

Magdalena was sold in 1900 to Alfred Nilson of Tønsberg, the owner of a factory that extracted oil from seal and whale blubber at Vrengen, where the Tønsberg sealing fleet was based, and where sealers were laid up off-season. Nilson had her overhauled in 1901, following which her last masters in the sealing trade were M. Jackobsen in 1902–03 and J.E. Samuelsen in 1904.

Magdalena's relief expedition to northeast Greenland, 1905

The Baldwin-Ziegler expedition started in 1901, led by Evelyn Baldwin and financed by the wealthy American William Ziegler. The expedition accomplished very little, and in 1902 Baldwin returned to the United States. Ziegler thereupon promptly sent out a second expedition under the leadership of the photographer from the first expedition, Anthony Fiala (Kock 1984).

Having returned to Franz Josef Land in 1903 with a goal of attaining the North Pole, the Fiala-Ziegler expedition suffered a major loss when its ship *America* was crushed in the ice and ultimately sank. In 1905, after nothing had been heard from the expedition for two years, the estate of Ziegler sent the relief ship *Terra Nova* (later made famous on Robert Falcon Scott's final expedition) to bring the expedition home, under the command of Johan Kjeldsen, a well-known Norwegian ice-navigator, and with a crew of Norwegians. At the same time, *Magdalena* was chartered for a relief expedition to Bass Rock (ca. 75°N), northeast Greenland.

Earlier observations, such as those of Fridjof Nansen on his *Fram* expedition (1893–96), had demonstrated the existence of a southwesterly current along the East Greenland coast. It was considered possible that the members of the Fiala-Ziegler expedition would take advantage of this current on their return from the North



Fig. 2. *Magdalena* on her relief voyage to Bass Rock in northeast Greenland, 1905.

Pole, meaning that some of them had a chance of reaching the coast of northeast Greenland. Therefore, in 1901 the ship *Belgica* had laid out depots and put up two houses at Bass Rock for the members of the Baldwin-Ziegler expedition (Fiala 1907).

The purpose of the *Magdalena* expedition, therefore, was to proceed from Sandefjord, Norway, directly to Bass Rock for the relief of any members of the Fiala-Ziegler expedition who might have reached these points. She sailed from Sandefjord on 22 June, a week after the departure of *Terra Nova*, with the main relief party on board. Her officers and a crew of 18, all Norwegians, had sailed as sealers and whalers, and the captain, K. Tandberg, had sailed in the Arctic for 25 years (Nilson 1922).

The leader of the relief expedition was Oliver L. Fassing of the United States. The contract between the Ziegler estate and *Magdalena's* owner was that the crew should take the opportunity of catching seals and bottlenose whales during June, stopping in July to ensure they could have open water to penetrate to Bass Rock. During the voyage, it was planned that Fassing would make weather observations and take air and water temperatures.

On 28 June they were off the northeast of Shetland. 'The sea is high but the *Magdalena* is remarkably steady and comfortable under sail' Fassing wrote in his diary (quoted in Fiala 1907) (Fig. 2). By 30 June, the Faeroes were in sight. During June and early July some seals and bottlenoses were caught.

On 18 July *Magdalena* was beset in the ice. She had made slow progress through a narrow channel, when the channel began to close up astern. Two large floes were grinding and the ship was nipped twice and lifted several feet. At one time her rudder was up in the air; the next time she was laid almost on her side. But she very soon righted herself and to the expedition members' great relief they found that the damage was minor. Three days later, *Magdalena* reached her destination. Fassing and some of the sailors visited Bass Rock, where they found the



Fig. 3. The crew of *Magdalena* visiting the depot at Bass Rock.

stores had not been disturbed and the houses were in good condition (Fig. 3). They also met the Tromsø sealer *Severn* (Captain Ole Nessø), which had been sealing in the region for 14 days, and had seen no trace of the Fiala-Ziegler party.

Late in the evening *Magdalena* manoeuvred out of the belt of ice into open sea, heading for Reykjavik. Fassing hoped to find a ship for England or the continent. Brisk northeast winds prevailed all day, enabling them to make fine progress towards Iceland without use of the engine. On 1 August, they called at Ellefsen whaling station at Mjoafjord on the east coast of Iceland to replenish coal and water. That was fortunate, as they learned that the Danish steamer *Kong Inge* was to sail from Mjoafjord to Leith, Scotland, within two days. Fassing transferred ships and on 7 August *Kong Inge* reached Leith. Several days later, in a comfortable hotel in London, Fassing read about the safe return of Kjeldsen; *Terra Nova* had brought all but one of the Fiala-Ziegler expedition members safely back to Tromsø (Fiala 1907).

The depots at Bass Rock became salvation and support for explorers, sailors, and sealers at northeast Greenland for the years to come. Indeed, some of *Magdalena's* crew took advantage of them, but by then she had been renamed *Danmark*.

The Danmark-Expedition to northeast Greenland

In 1906 *Magdalena* was sold to the Danmark-Expedition to the coast of northeast Greenland, and was renamed *Danmark*, under which name she entered her most famous period.

Ludvig Mylius-Erichsen's plan for an expedition to the coast of northeast Greenland was born during his winter expedition (1902–04) there. His idea included the notion of the purchase or rent of a Norwegian sealer that could take the expedition as far north as possible on the east coast. The expedition ship either would then return to Denmark and come back again two years later, or would winter with the expedition. The expedition ship would carry the name of the nation: *Danmark*.

Late in 1904 Mylius-Erichsen began raising money to finance the expedition. He distributed his plan to those people in Europe whose names were connected with famous polar expeditions — including Fritjof Nansen, G.A. Narthorst, Otto Nordenskiöld, Karl Koldewey, Erich von Drygalski, and Julius Payer — asking for comments and advice. In England, Clements Markham and Scott Keltie at the Royal Geographical Society received copies of the plan. Danish ice navigators and explorers were also approached, and they encouraged Mylius-Erichsen to proceed.

The Danish Arctic explorers Carl Ryder, Gustav Holm, T.V. Garde, and G.C. Amdrup made a common declaration. While not discussing the details of the plan, they advised that the purchased ship should over-winter, because the crew could then support the expedition in putting up depots, being engaged in research during wintering, and keeping the ship for the expedition's safety and return. It turned out to be very good advice (Det Grønlandske Selskaps Skrifter 1983).

In December 1905 Mylius-Erichsen decided to purchase *Belgica*, which had made the first wintering in Antarctica under Adrien de Gerlache. She had recently returned from northeast Greenland, where Louis P. Robert (Duc de Orléans) had made a survey of the coast, and the Danmark-Expedition was intended to continue the survey farther north.

In February 1906 the Danmark-Expedition received from S.Th. Sverre — a company engaged in the fur trade and that managed several sealers — an account of *Magdalena*, including information about the ship's equipment and cabin facilities. The company recommended the ship for the expedition, and *Magdalena* was sold for 39,250 Norwegian kroner; this included a double set of sails, boats, tools, and equipment. The bill of sale was dated 9 April 1906, and was signed by G.C. Amdrup on behalf of the Danmark-Expedition's committee. The principal reasons for purchasing the 51-year-old *Magdalena* instead of the 21-year-old *Belgica* were: (1) the price; (2) discussions between the owner of *Belgica* and Mylius-Erichsen had become progressively more complicated; and (3) *Magdalena* was substantially larger — having a capacity of 428 tons, compared with *Belgica*'s 263 tons — so that both the expedition and crew would be able to winter on board (Ventegodt 2000).

Magdalena was taken from Tønsberg to Copenhagen by the Danish navigator Christian B. Throstrup and her Norwegian first officer, Carl Johan Ring, who had sailed with her on her sealing voyages for six years. Ring then joined the expedition as the ice-pilot. He knew the ship and could advise Mylius-Erichsen regarding repairs and refitting, which she needed after serving 51 years in Arctic waters. She arrived in Copenhagen on 13 April 1906, and soon was renamed *Danmark*.

The captain was supposed to be Ejnar Mikkelsen, who had sailed as a mate aboard *Antarctic* on Amdrup's expedition to Greenland in 1900, wintered in Franz Josef Land 1901–02, and sailed as first officer on the *Thor*



Fig. 4. Mylius-Erichsen equipped the expedition with an automobile, intended for crossing frozen fjords. This did not work, and the axle was used as a winch to operate weather balloons.

expedition. Mikkelsen was to become a famous expedition leader and ice navigator, but he did not sail with *Danmark* because he and Mylius-Erichsen could not agree. Years later Mikkelsen wrote: 'I received Mylius-Erichsen's offer to be the expedition ship *Danmark*'s master. We did not agree, because Mylius had, from my point of view, some strange ideas about equal rights for all members of the expedition, where the master of the ship and the cabin boy should have the same rights in all matters. All decisions at sea and land were the expedition's. There could be no co-operation between him and me. We went separate ways' (Mikkelsen 1955). Alf Trolle, a navy officer aged 26, became the captain and the expedition's deputy leader.

The question of equipping *Danmark* with wireless telegraphy was considered, so that the ship would be able to stay in contact with dog teams far away. Firms were invited to give offers, but no one could guarantee that it would work, so the plan for installing a wireless station was put aside. However, a telephone was installed aboard *Danmark* to make 'local calls' to the station ashore.

On 24 June 1906 *Danmark* left Copenhagen with an expedition staff of 25 men, 30 dogs, and an automobile (Fig. 4). As they cruised out of the harbour, they passed the armoured cruiser *Olfert Fischer*, commanded by the Arctic explorer A.P. Hovgaard. The expedition did not have a good start. On the first day a topgallant yard

broke; the next day the jib-boom broke. The expedition had to call at Frederikshavn for repairs, where, after two days, the voyage continued to the Faeroes, where three more men and 65 dogs came aboard. The voyage continued to Eskefjord, Iceland, where the coal bunkers were replenished. At the local whaling station, a large quantity of whale meat was taken onboard for the dogs (Ventegodt 2000).

On 30 July the expedition met the first ice, at 74°31'N. Due to difficult ice conditions and the ship having a weak engine, Ring and Trolle had a hard time manoeuvring. On 16 August *Danmark* reached her wintering harbour, and moored at 76°46'17"N, 18°37'W, which Mylius-Erichsen named Danmarks Havn. In November, Mylius-Erichsen led a party of six on a sledge trip to the Baldwin-Ziegler depots at Bass Rock. Ring, who had been to Bass Rock with *Magdalena*, was in the team. The depot was in good condition, which was vital because if the expedition was forced to abandon *Danmark* and make a retreat along the coast south to Angmagssalik, the depots and houses contained many essential stores and provisions. In addition, if the expedition became short of provisions and dog-food, the depot could be reached. In fact, during the winter a further journey to Bass Rock depot did become necessary to get more provisions and food for the dogs.

In March 1907 four sledge teams headed north to start the cartographic work. However, one team, consisting of Mylius-Erichsen, N.P. Høeg-Hagen, and J. Brønlund, never returned to the ship, after having last been seen in late May. Searches were made until November, but no trace was found of the missing men. In March 1908 another search team of two men, J.P. Cock and T. Gabrielsen, was sent out, which later found Brønlund's body, his diary, and a bottle containing some of Høeg-Hagen's map sketches. The diary was in Greenlandic, which they could not read, but the final page was in Danish and informed them that Høeg-Hagen had died on 15 November 1907 and Mylius-Erichsen 10 days later. The diary was taken to Copenhagen for translation and ultimately gave a picture of the tragedy. They had run out of food, and the stock of dogs was reduced from 28 to 14, one by one, for food for the men and other dogs. Their footwear had been in tatters, with no possibility of any repair. The bodies of Mylius-Erichsen and Høeg-Hansen were never found (Lundebye 1984).

In spring 1908 the expedition was close to being finished; equipment was taken on board and preparations made for departure. On 10 July 1908, three Norwegian sealers sighted *Danmark* and brought news from the outside world. By 21 July *Danmark* was free of the ice, and the expedition headed home. The engine gave trouble and the boiler cracked, but *Danmark* finally reached Bergen, where Roald Amundsen came aboard (Freuchen 1953). Another Arctic explorer, soon to be famous, Knud Rasmussen, also came aboard. (In 1903, the three explorers — Rasmussen, Mylius-Erichsen, and Amundsen — had met at Dalrymple Island on the northwest coast of Greenland (Hanssen 1941).) From Bergen a brief report

was sent by wireless to the committee, and Linhard, the doctor, was sent home overland to meet the committee.

It turned out that the repair of the boiler would take some time, so it was decided that *Danmark* should be towed home. On 28 August 1908, on a warm summer day, thousands of people gathered at the seaside to watch her being towed into Copenhagen harbour with the Danish national flag at half-mast. The *Danmark*-Expedition had been a great success despite the tragic loss of the expedition leader and two members. It had fulfilled its task of surveying the rest of the coast of northeast Greenland. In addition, much geographical, meteorological, and zoological research was carried out.

Arctic freighter, again

After *Danmark* returned in 1908, she was laid up at the navy's shipyard, and in June 1909 was sold to the mining company Grønlandske Minedrifts Aktieselskab. In 1907 this company, managed by M.I. Nyboe, had obtained concessions to start mining copper and to build a power station at Ivnatsiak in the Juliannehaab district in southwest Greenland. During the summer of 1908, some 30 men were engaged in putting up houses and installing the necessary mining and water-pumping equipment (Birket-Smith 1950).

At this time *Danmark* was not intended to be an Arctic freighter. The company's plan was to use her as an accommodation ship, moored in the copper mine's harbour. Permission was given by the Greenland administration in a letter dated 9 July 1909, on condition that she did not block the traffic in the harbour (Beretninger og Kundgørelser vedrørende Kolonierne i Grønland for aarene 1909–1917). An arrangement was made with the KGH (the Royal Greenland Trade), who chartered her for one voyage, of provisions, only. *Danmark* was to leave Copenhagen in late July 1910 with a cargo of 200 tons of various stores for Juliannehaab. This was supposed to be her last voyage, before she dropped her anchor and became an accommodation ship. However, fate stepped in. In spring of 1910, a fire destroyed the houses at the copper mine; much machinery was damaged, and no copper was taken out that year. The mining company changed its plan because it needed a ship to supply new material and to serve the route between Denmark and the copper mine.

In 1910 *Danmark* was re-engined with an old three-cylinder steam-engine. J.P.V. Kjøller — who had sailed in the KGH fleet for some years — signed on as her captain for three years. That same year, *Danmark* made her first voyage to Ivnatsiak. She had become an Arctic freighter again, bringing up personnel, provisions, and other supplies to the copper mines and returning with copper ore to the continent every year until 1914 when the mine was closed because it was no longer profitable (Birket-Smith 1950).

In 1913 *Danmark* was completely overhauled, her bottom repaired and renailed, and Chr. A. Hansen was signed on as her captain. The next year the copper mine was closed, but at the same time the Grønlandske

Minedrifts Aktieselskab opened a graphite mine at the island named Amitsoq, between Juliannehaab and Cape Farewell (Birket-Smith 1950). *Danmark* took up the same duty as a freighter, sailing between the graphite mine at Amitsoq, Europe, and the United States. In September 1915 *Danmark* was chartered by the KGH to bring up 200 tons of coal to Juliannehaab, replacing the vessels that had been impounded by the Royal Navy in the Orkneys (which were released at the end of the year) (Den Kongelige Grønlandske Handel).

Bringing home the Crocker Land Expedition

In 1906, Robert E. Peary had claimed to have discovered 'Crocker Land' to the northwest of Ellesmere Island. In his book, *The North Pole* (Peary 1910), Crocker Land is shown on the map. In 1913, the Crocker Land Expedition, led by Donald B. MacMillan, set out 'to reach, map the coastline, and explore Crocker Land whose mountains Peary sighted in 1906' (MacMillan 1918). But no such land actually existed; it was merely an atmospheric mirage. The Crocker Land Expedition was supposed to last for two years, but it did not return home until the summer of 1917, when *Danmark* was chartered to bring its members back south.

In 1915 the three-masted, engined schooner *George B. Cluett* was sent to northwest Greenland to bring the expedition members back to the United States. However, she was beset in the ice in Parker Snow Bay, 76°N. The ship's propeller was damaged, and her crew was not equipped for winter. Further, the relief expedition was running out of food, and the crew was on 3/4 rations when *George B. Cluett* returned on 29 July 1916 with the members of the Crocker Land Expedition still stranded at Etah (78°20'N) in northwest Greenland (Hunt and Thompson 1980).

The next year the American Museum of Natural History chartered *Danmark* to bring the expedition back. She had been in the US with a cargo of graphite from the mines in Greenland. Nyboe, the mining company's manager, had sailed with her to the United States and made an arrangement with the museum 'to proceed to Etah from South Greenland to convey the members and collections of the expedition to Sydney, Cape Breton' (MacMillan 1918).

The American Museum of Natural History equipped *Danmark* with provisions for 30 men to last until November 1917. In order to save money, the Museum agreed that she could take a cargo of oil in barrels and other equipment to the mines at Amitsoq, before heading north to Etah. She also took in a few tons of graphite as ballast after having unloaded her main cargo. On the way to Etah, the expedition called at Godhaven and Upernavik. At Godhavn the Swedish explorer Thorild Wulff came on board. He had stayed at Godhaven, carrying out oceanographic research from one of the station's motor-boats, and his plan was to sail with *Danmark* to Thule in order to join Knud Rasmussen on one of his 'long sledge tours.'

Wulff continued his scientific programme on board, managing 'to obtain oceanographic observations from 25 stations along the route' (Liljequist 1993). It was a difficult ice-year, and they spent five weeks fighting north from Upernavik district through the ice in Melville Bay to Cape York. On 23 September they reached Wolstenholme Fjord, but *Danmark* was frozen in and forced to winter at North Star Bay (76°30'N, 69°W) some two months after *George B. Cluett* had left.

Two members of the Crocker Land Expedition, Harrison J. Hunter and W. Elmer Ekblaw, happened to be in North Star Bay when *Danmark* arrived. They should have sailed with *George B. Cluett*, but she had run out of food, so they remained aboard *Danmark* until 18 December. Captain Chr. Hansen and his crew did their very best for the two men, who found *Danmark* most comfortable. She was well supplied with food, canned fruit, vegetables, and corned beef, and they had fresh meals, but she was short of coal. Almost all of the fuel had been burned forcing her way north along the Greenland coast. The two Americans reported to the other expedition members at Etah that they considered the coal supply so small that in their opinion she would never reach Etah, or if she did, her homeward voyage by sail alone could be very lengthy. MacMillan ordered Hunt and Ekblaw to sledge down the coast to Holsteinsborg to notify the American Museum that the second relief ship had failed to reach Etah. They reached Holsteinsborg on 20 April 1917, three months before *Danmark* was free (Hunt and Thompson 1980).

In late July 1917, *Neptune*, captained by Bob Bartlett, reached Etah and brought the members of the Crocker Land Expedition home (Bartlett 1928). At that time, *Danmark* had started her very last voyage.

Danmark's last voyage

In early summer 1917 'there was no great harmony on-board my old expedition vessel the *Danmark*' (Freuchen 1953). The captain and his crew were anxious to leave their anchorage at North Star Bay, where they had spent the winter. Peter Freuchen had been in the region since 1910, and he advised the captain not to leave too soon, but, according to Freuchen, Captain Hansen could not stand up against his crew.

Danmark managed to get free, and she called at ports down the west coast of Greenland on her voyage to Denmark, including the coal mine at Qutdligssat to replenish her coal supply, and finally at the graphite mines at Amitsoq, where she took in her cargo, and passengers came on board. She then proceeded south.

On 13 December 1917, at 4:20 AM, *Danmark*, with 16 crew, 13 passengers, and 130 tons of ore ran aground north of Høganæs on the Swedish coast. The wind was west-southwest with a moderate gale, some rain, and poor visibility. She started to take in water. During the day, the passengers, some of the crew, and the first mate were brought ashore by a lifeboat from Høganæs.

On 21 December she was refloated by the salvage steamer *Kattegat* and towed to Helsingør. The maritime declaration stated that the grounding was caused by the setting of the current, and thick weather. In addition, Captain Hansen had been away for two years in the Arctic and had not been informed of changes in the light-signals because of the war. Divers examined the hull, following which the ship was condemned and sold to a breaker's yard for 45,000 kroner. Her equipment, masts, sails, and lanterns were sold at auction the following year, and *Danmark* had become part of history.

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References

- Amundsen, R. 1906. *Nordvest-passagen*. Oslo: H. Aschehaug & Co.
- Bartlett, R.A. 1928. *The log of Bob Bartlett*. London: G.P. Putnam's Sons.
- Beretninger og Kundgørelser vedrørende Kolonierne i Grønland for aarene 1909–1917.
- Birket-Smith, K. 1950. *Grønlandsbogen I and II*. Copenhagen: J.H. Schultz Forlag.
- Buchan, A.R. 1993. *The Peterhead whaling trade*. Peterhead: Buchan Field Club (Occasional publication 1).
- Buchan, J. 1993. *A Peterhead portrait*. Peterhead: Buchan Field Club (Occasional publication 2).
- Clark, G.V. 1983. *The last of the whaling captains*. Glasgow: Brown, Son and Ferguson.
- Den Kongelige Grønlandske Handel (KGH). Beseilingerne på Grønland fra 1781 til 1940.
- Det Grønlandske Selskabs Skrifter. 1983. *Mindeblade om Danmark-Expeditionen 1906–08*. Charlottenlund: Arktisk Institut (Skrifter 25).
- Fiala, A. 1907. *Fighting the polar ice*. London: Hodder & Stoughton.
- Freuchen, P. 1953. *Vagrant viking*. New York: Julian Messner.
- Hanssen, H. 1941. *Gjennom Isbaksten. Atten År med Roald Amundsen*. Oslo: Aschehoug.
- Hunt, H.J., and R.H. Thompson. 1980. *North to the horizon*. Camden: Down East Books.
- Isachsen, G. 1925. *Grønland og Grønlandsisen*. Oslo: J.W. Cappelens Forlag.
- Johnsen, A.O. 1964. *Tønsbergs historie III*. Oslo: Gyldendals Norske forlag.
- Kock, P. 1984. *Kaptajnen: logbok over polarforskeren Ejnar Mikkelsen's togt gennem tilværelsen*. Copenhagen: Gyldendal.
- Kryolithafgift 1865–69. Utskibningsliste 1865–69. Unpublished document. Copenhagen: Rigsarkivet.
- Liljequist, Gösta H. 1993. *High Latitudes*. Västerås: Swedish Polar Research Secretariat.
- Lundebye, V. 1984. *Omkom 79' Fjorden: tragedien på Danmark-expeditionen 1906–08*. Brøndum: Vang Lundeby & Brøndums Forlag.
- MacMillan, D.B. 1918. *Four years in the white north*. London: Merdici Society.
- Macleod, I. 1979. *To the Greenland whaling: Alexander Trotter's journal of the voyage of Enterprise in 1856*. Sandwick, Shetland: Thuleprint.
- Mikkelsen, E. 1955. *Farlig tomandsfærd*. Haslev: Nordisk Forlag A/S.
- Nilson, A. 1922. Letter to G. Isachsen. Oslo: Norsk Sjøfartsmuseum.
- Peary, R.E. 1910. *The North Pole*. New York: Fredrick A. Stokes Company.
- Peterhead Directory*. 1853. Peterhead: Arbuthnot Museum.
- Stigø, S. 1987. *Eventyret om kryolit*. Øresund: Kryolitselskabet Øresund A/S
- Tving, R. 1944. *Træk af Grønlandsfartens historie*. Copenhagen: Einar Munkgaard Forlag.
- Ventegodt, O. 2000. *Den siste brik*. Copenhagen: Gyldendals Forlag.