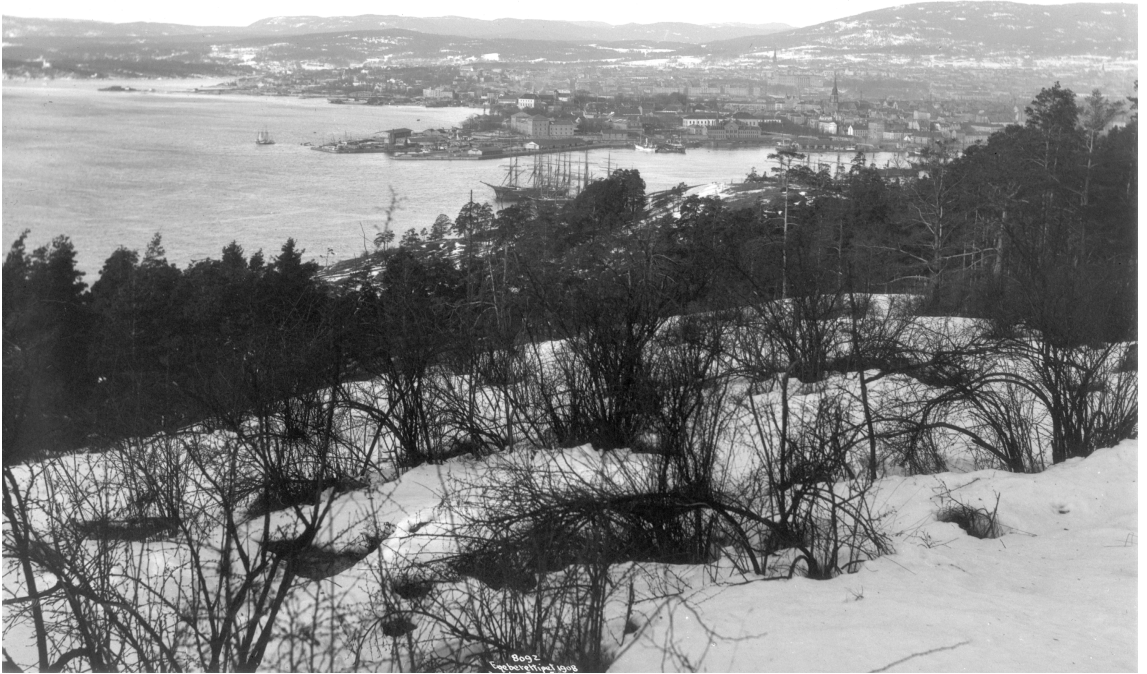


## CHAPTER 2

# A Tale of Two Ports



**Figure 2.1.** Oslo (Kristiania) viewed from Ekeberg, winter 1908, the surface of much of the fjordhead frozen over (Norsk Folkemuseum NF.W 08092).

The Oslo fjord is about seventy miles long and at its head, at the foot of pinewood hills, lies the city and port of Oslo, Norway's capital. Before 1925, and therefore at the time that this book is set, it was known as Kristiania, at the head of Kristianiafjorden. At a latitude of almost sixty degrees north, Oslo lines up with the southernmost point of Britain's

Shetland Islands. Its summers are relatively short and its winters long. On account of its position at the end of the Skagerrak (the sound separating Norway from Denmark), Oslo is also colder in winter than many other fjords. One hundred years ago, moreover, navigation at its head was typically restricted by ice for three or four months, a feature that is much less usual today. In December, though, a sunless sky still often hangs over the country around, as it did a century back. If the atmosphere is clear, the moon takes the place of the sun, the aurora borealis sending streams of light towards the heavens. Visitors from one hundred years back saw nature here as in a deep sleep, with some rivers and streams falling silent, lakes freezing over, and giant icicles appearing on mountainsides and ravines. Pine trees would droop under a heavy mantle of snow, and thick fogs creep across fjord heads. Come summer, however, the contrast with winter could not have been more stark. In Oslo the summer sun dips below the horizon at night for a very short time, and twilight takes the place of the normal darkness of night. Gardens soon erupted in flower, fields were cultivated, fjord sides were clad in the vegetation of spring, and tourists started to arrive to take in the sunshine and the grand scenery.<sup>11</sup> The fjords of Norway, both the Oslo fjord and the fjords the length of Norway's western coast, were as popular among late nineteenth-century visitors as they are today.

## Making sea passage from London to Oslo

From the port of London, it is a 650-mile sea passage to Oslo (then Kristiania). By sail, at the end of the nineteenth century, this meant a four or five-day voyage, varying according to the state of the sea or the direction of the winds. By steamship, it was then two to three days, but the hazards were not necessarily any the less. Having dropped down with the tide to the outer Thames estuary, boats made a north-easterly passage, past the treacherous, wreck-strewn Gunfleet Sands and the Suffolk coast, before striking out over the North Sea off Lowestoft or Flamborough, or

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11 For a contemporary description of the situation of Kristiania and its fjord, see P. B. Du Chaillu, *The Land of the Midnight Sun: Summer and Winter Journeys through Sweden, Norway, Lapland and Northern Finland I* (New York, 1882), pp. 297ff.

else off one of the north-east ports. Even in summer, Atlantic winds can penetrate to the North Sea and the Skagerrak and make for a heavy crossing as great swells build from the west and sharp squalls send spray flying from the crests of waves.

In autumn and winter, the south coast of Norway, too, can be stormy, with unpredictable currents that set towards the coast, the shores rocky and desolate, perpetual prey to roaring breakers.<sup>12</sup> The sea appears never to rest here, for this is where the shallow North Sea gives way to much deeper water and where the tides of the Skagerrak and the North Sea meet. This generates an almost perpetual swell which, when aided by strong winds, makes for heavy seas, forcing many smaller vessels to run for shelter. One British Admiralty pilot describes navigation off this coast as difficult, requiring 'great caution and promptitude'.<sup>13</sup> A century ago, ships' pilots, including those aboard steamships, often had to cut engines in hostile sea and weather to clear their bearings. In 1871, an article for prospective tourists in the London *Times* described any voyage to Norway as a matter requiring serious thought. You were tempting a 'proverbially stormy sea', liable even in early summer to sink ships. There were tales of overladen North Sea steamers having gone down in winter gales. Few passengers escaped seasickness.<sup>14</sup> One seasoned traveller later recalled a dreary December day near this portion of Norway's south-western coast. He was aboard a steamer bound for Kristiania, and there was a fierce gale blowing from the south-east, with snow, hail and sleet falling in alternate succession. Among the other passengers were a dozen sturdy Norwegian captains going home to spend Christmas. These men knew almost every inch of the barren and rocky shore, yet even they seemed anxious and watchful, listening out for the sound of breakers that would signal too close a proximity to the shore and potential shipwreck.<sup>15</sup>

For the vessels that engaged in the ice trade from Norway to Britain, the return passage across the North Sea back to Kristianiafjorden was

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12 See the account in W.A. Ross, *A Yacht Voyage to Norway, Denmark and Sweden I* (London, 1848), pp. 3ff.

13 See Hydrographic Dept. of Admiralty, *Norway Pilot* (7<sup>th</sup> ed., London, 1948), p. 29.

14 See *The Times*, 14<sup>th</sup> October 1871.

15 Du Chaillu, *op.cit.*, II, p. 2.

quite often made in ballast. But at other times shipowners instructed their captains to call at north-east ports to pick up a return cargo of coal or coke. This made for a longer turn-around, but as the shipping route from London to the south of Norway skirted that part of the British coast anyway, it did not represent a serious diversion.<sup>16</sup> Whether in ballast or in coal, however, the ice ships still faced the same hazards as every other vessel crossing the North Sea. Storms and gales tested the competence of crews as well as the seaworthiness of ships. The special ice steamers that were introduced for some of the traffic in the last decade of the nineteenth century certainly had much better chances in heavy weather, but, as will later become clear, sailing vessels remained prominent in the ice trade right up until 1914.

Having completed passage across the North Sea, the port of Kristiansand eventually affords a welcome refuge to seafarers, its harbour well sheltered from outside sea and gale, and one hundred years ago an easy place for ice ships to shelter and to repair. In clear weather, this first real spectacle of Norway's coast never failed to impress (and nor does it today): peaks capped with snow, piercing an atmosphere of the intensest blue. Leaving Kristiansand, it is still no easy passage along Norway's south-eastern shores. But, a century ago, aided by Norwegian pilot-boats that had a reputation to be able to swim the waves like ducks, the entrance to Kristianiafjorden would soon have appeared to its late nineteenth-century navigators, the tall, tapering lighthouse of Faerder Fyr ready to throw out its welcome beam. The Norwegian sea pilots were then a remarkable body of men. Numbering some 500 in total, they mostly fished or worked in the forest in winter, but in summer joined one of the many pilot stations. Any vessel of more than 30 tons burden was required by Norwegian law to take on a pilot, and as many as 17,000 vessels could be piloted in any one year, the ships engaged in the ice trade affording no exception.<sup>17</sup> With a pilot aboard and once under the lee of the fjord, itself

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16 This was the case, for example, at Shoreham harbour on the south coast of England where Norwegian ice was regularly imported for supply to ice merchants in the nearby resort of Brighton: see R.G. Martin, 'Ice houses and the commercial ice trade in Brighton', *Sussex Industrial History* 14 (1984–85), pp. 22–3.

17 See M.A. Wyllie, *Norway and its Fjords* (London, 1907), pp. 3–4.

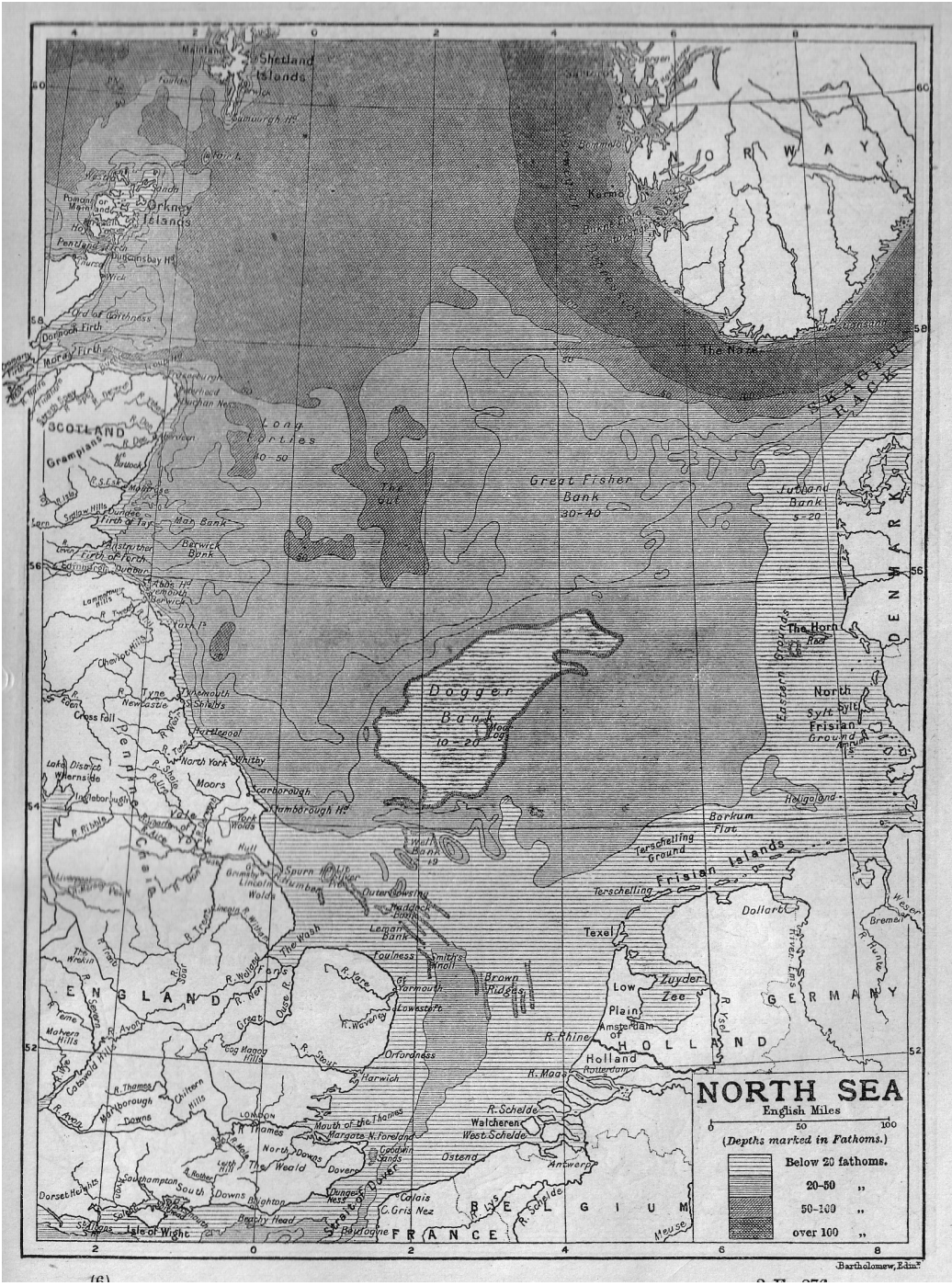


Figure 2.2. A period map that highlights the shallowness of much of this sea area, but also the deep water off the Norwegian coast (*The Harmsworth Encyclopaedia* VI, London, c. 1903).

significantly less deep than many fjords of Norway's western coast, the journey to Kristiania lay northward, past hundreds of rocky, ice-worn islands. On all sides, the sloping shores were (and remain today) covered with thick forests of fir, as far as the eye can see. By the town of Drøbak, where the many inshore pilots lived, the fjord narrows to about a mile broad. Later, though, it expands into an irregular basin and the shores steepen. Then, wind and tide permitting, vessels approached the old harbour of Kristiania, fronted by an array of small islands. Westward, the stark white tower of Oscarshall, the royal summer palace, came to view on the island of Bygdøy, while, in the centre, stood the ancient fortress of Akershus, dominating the foreground promontory. Finally, one saw the elegant late nineteenth-century city stretching out northward, some of its buildings standing on terraces reminiscent of Calton Hill in Edinburgh. One hundred years back, this part of the fjord regularly froze over from the end of December until early spring and all vessels were in danger of becoming imprisoned in the ice. However, ice-breakers subsequently began to maintain a navigation channel, but, alongside them, local men would have been out cutting ice on the otherwise frozen water. For this was then the season of the ice harvest.

Over these winter months, some of the ships that carried the harvested ice blocks to London and other British ports would have lain scattered about the shores and inlets around the fjord head. Many of the sailing vessels, largely an assortment of wooden barques and brigs, would have had their rigging dismantled and some would have been held fast in the ice. A number, though, would already have been taking ice on board, despite being imprisoned in the frozen fjord. For it was as practical to store ice in a ship's hold in winter as it was to carry it to a nearby ice store. There was also the advantage that, as soon as the thaw set in, these ships could make immediate passage to British ports and begin fulfilling spring contracts with ice import merchants there.

Visitors to Kristiania at such times never ceased to be amazed at the hive of animation that the areas around the head of the fjord presented on fine winter days. It was not just the presence of small armies of men out cutting the ice and hauling the giant blocks of ice on to the fjord surface with all their attendant horses and sleds. Equally striking were

the bands of ordinary inhabitants walking to and fro across the ice. There were also people skating, and others riding small hand sleighs, propelled along with the aid of special ski sticks.<sup>18</sup> If you ventured further inland, it soon became apparent that lakes were also an important contributor to the ice harvest. In fact, as much ice was probably cut from lakes around Kristianiafjorden as came from the fjord itself, and the



**Figure 2.3.** Kristiania and the head of Kristianiafjord at the turn of the century, the spelling anglicised in this British map (*The Harmsworth Encyclopaedia* VI, London, c. 1903).

<sup>18</sup> Du Chaillu, *op. cit.*, II, p. 3.

ice from these lakes had often started to form earlier and was thicker. The difficulty was finding means of conveying it to waiting vessels, but, as will later be seen, Norwegian ice exporters evolved some ingenious solutions for the task.<sup>19</sup>

The earliest time in the year that ships fully laden with ice usually left Norwegian shores to make passage to Britain was at the beginning of March. In the southern part of Kristianiafjorden, some ports and loading places remained almost ice-free in an average winter, and the same was true on the south and south-east coasts of Norway. In such cases, departures might be possible at the end of February, but for areas further inland ice impeded navigation, for sailing ships especially. Moreover, the earlier an ice-ship left Norwegian shores, the more likely it was to meet bad weather. And the nature of ice as a cargo, as will later become plain, made the voyages of all ice ships especially hazardous. *The Times* regularly reported disasters at sea and nearly all those that related to ice ships occurred when they were in passage to British or other European ports laden with ice. In the spring of 1892, for example, the schooner *Telegraph*, en route from Drøbak in Kristianiafjorden to Bristol with an ice cargo, went aground on the Goodwin Sands. Fortunately, lifeboats observed her distress signals, and she was eventually assisted into Dover by a steam tug.<sup>20</sup> Seven years later, in the spring of 1899, the Norwegian schooner *Iduna*, on its way to Newhaven on the south coast of England with an ice cargo, foundered on rocks off Aberdeen. Its crew saved themselves by escaping in boats to reach the Lemon and Owen lightship, where they were later taken off by another vessel and conveyed safely ashore.<sup>21</sup>

The autumn season also brought its share of disaster for ice ships. In early November 1878, the Norwegian brig, *Matilda*, was wrecked with a cargo of ice on the Lincolnshire coast near Donna Nook. She had sailed from Larvik and was destined for Hull to supply the fishing fleet there.

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19 See, for example, the commentary in A.F. Mockler-Ferryman, *Peeps at Many Lands: Norway* (London, 1909), p. 12.

20 *The Times*, 19<sup>th</sup> March 1892.

21 *Ibid.*, 28<sup>th</sup> March 1899.



Happily, all the hands were saved by the local lifeboat.<sup>22</sup> In November 1895, however, the crew of the Norwegian brigantine, *Isbaaden*, was much less fortunate. Bound from Kragerø to Lowestoft with a cargo of ice, again for the fishing trade, the vessel became unmanageable in a severe storm, after having lost most of her sails and spars. She drifted on to the Norfolk shore south-east of Cromer at a point where it was impossible for any rocket apparatus to reach her. As a result, all 10 hands perished, the vessel breaking up rapidly on the beach.<sup>23</sup> The storm trials suffered by some ice ships can often defy imagination. In September 1899, the Norwegian schooner *Marie*, with a cargo of ice, had spent 16 days struggling to make passage across the North Sea, running before fierce gales for nine of them. She was eventually sighted by a British steam trawler and towed into Yarmouth.<sup>24</sup>

## Navigating the Thames estuary to the Port of London

As if the perils of the North Sea were not enough for the crews of ice ships, the approach to the estuary of the Thames offered its own peculiar hazards. Compared to the deep water off the coasts of Norway, the sea approach to the port of London could not be more different. Shallow as they are, the North Sea and the English Channel become still shallower in the outer estuary of the Thames. As the tide retreats, there is revealed a vast delta, mile upon mile of mud and sand bisected by an ever-growing array of meandering channels.<sup>25</sup> There are areas of the outer estuary thirty or forty miles from shore that are fully exposed at some states of the tide. They rejoice in names like Barrow, North Shingle, Long Sand and Kentish Knock. In September 1909, the Norwegian brig, *Bein*, with a cargo of ice, was driven in a northwesterly gale on to the Mouse Sands off Foulness. There she sprang a leak, but, with the aid of the ship's pumps,

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22 *Ibid.*, 11<sup>th</sup> November 1878.

23 *Ibid.*, 26<sup>th</sup> November 1895.

24 *Ibid.*, 25<sup>th</sup> September 1899.

25 Some of the hazards are admirably demonstrated in E.E. Middleton's *The Cruise of the Kate* (2<sup>nd</sup> ed., London, 1888).

succeeded in sailing five miles further up the estuary, only to capsize in Long Reach, her cargo a total loss but her crew managing to scramble ashore.<sup>26</sup>

At its most seaward, the mouth of the Thames estuary is all of thirty miles wide. To the eye, though, such a measure is meaningless, for there is a perpetual difficulty in distinguishing what is water from what is land. A century ago, the country around the estuary was wide-open and remains so to a large extent today. As Charles Dickens remarks in *Great Expectations*, the river here appears as just one black horizontal line and the marshes just another, if not quite so broad and so black. The estuary is marked by no natural gateway. There are no bluffs or promontories on which ancient fortifications once deterred foreign raiders. Instead, there are merely great flats, desolate marshes as far as the eye can see, unbroken by house or tree, with not a soul to be seen on them. The run up the lower Thames estuary appears like a sail through Fenland. You might even be in Dutch country, as lines of sea walls and sea dykes are all that catch the eye. Almost the whole area is subject to inundation. For much of its lower course, the Thames stands higher than the surrounding country. Some of the dykes or embankments date back more than a thousand years. In a few places they stand as much as fifty feet above low tide. But over the centuries, the river has still periodically burst through, the Barking and Dagenham levels perhaps seeing the worst and most regular of the floodings.<sup>27</sup>

At the close of the nineteenth century, there was no more difficult place in the world for a foreign navigator to find sea passage.<sup>28</sup> Many Norwegian sea captains were old hands at negotiating the outer estuary, but there remained the difficulty that the sandbars and mud banks were constantly shifting. In bad weather, even the most accomplished of seamen could lose their bearings. Although lines of buoys stretched out everywhere across the wide estuary, marking out the so-called ‘deeps’,

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26 *The Times*, 11<sup>th</sup> September 1909.

27 See T. R. Way and W.G. Bell, *The Thames from Chelsea to the Nore* (London, 1907), pp. 90–1; also H. Belloc, *The River of London* (London, 1912).

28 One gets a clear sense of this from a perusal of S.A. Moore, *The Thames Estuary: Its Tides, Channels, Ports and Anchorages* (London, 1894).

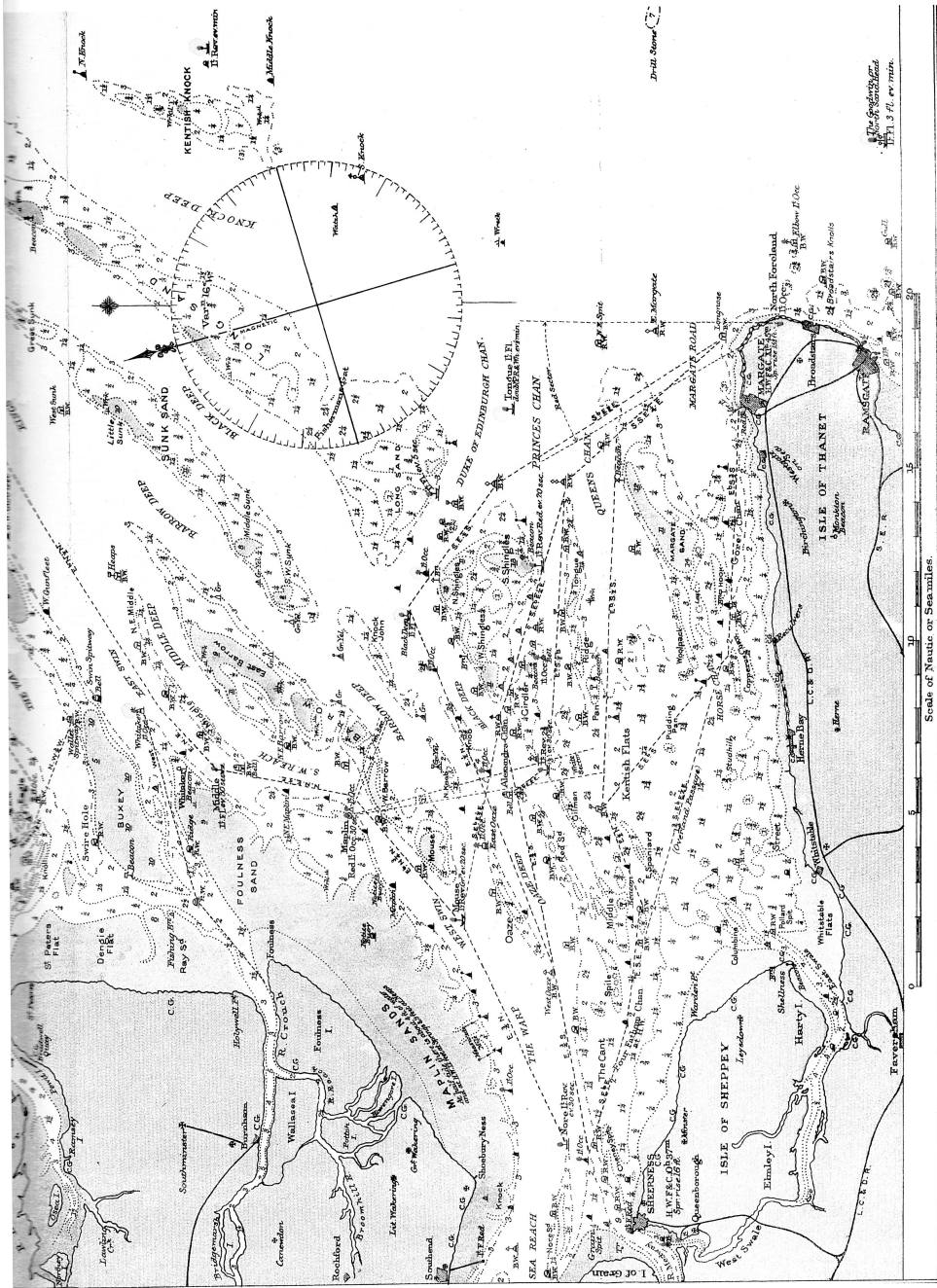


Figure 2.4. The wide expanse of the sea approach to the estuary of the lower Thames (Bodleian: 201226 e.3, fold-out map).

they were sometimes so close that it was easy to end up crossing from one marked channel to another and run the risk of going aground. In strong westerly winds, there was no other course than to lay anchor and wait, sometimes for days. Tides presented another hazard. Catch the flood unawares and you could end up marooned in mud or sand. In places, there were double tides to drive you along deeper into the estuary mouth. Eventually, though, you saw signs of civilization. First was the famous Nore light, three miles north-east of Sheerness, marking the Nore sandbank. The light shows fifty feet above high water. But from here it is still forty-seven miles to the port of London. In June 1797 the Nore acquired revolutionary associations when there was mutiny in the fleet anchored there. Its ringleader, Richard Parker, proclaimed the fleet a 'Floating Republic', but his fame was brief. Within the month he had been hanged from the yardarm of his own ship.<sup>29</sup> Beyond the Nore, you are in Sea Reach, where the estuary is two-thirds of a mile across and the navigation channel broad and deep. Here around 1900, in the hours immediately before and after high water, observers would have seen a constant procession of vessels inward and outward bound. They ranged from Atlantic leviathans and tramp steamers to all manner of sailing ships and river barges, ice ships not least of them. This was also a major place of anchor, for what was known as 'lying-off'. On some days whole squadrons of vessels could be seen riding here, lazily swinging round on their anchor chains with the ebb and flow of the tides, as if under orders from some invisible admiral.<sup>30</sup>

London's first land defences made their appearance on the shores above the Nore. At Sheerness, forts and batteries, some of them floating, then guarded the entrance to the Medway and Chatham dockyard beyond.<sup>31</sup> Cruisers and other ships of war could be seen constantly coming and going. Above Sea Reach, as the river makes a ninety degree southward bend, the granite-faced Coalhouse Fort and battery would have come into view to starboard.<sup>32</sup> It was just above here, at Coalhouse Point, that

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29 C. Dickens, *Dictionary of the Thames, from Oxford to the Nore* (London, 1880).

30 See Way and Bell, *op. cit.*, pp. 102-3.

31 See C. Dickens, *op. cit.*, p. 66.

32 See M. Brown, *Coalhouse Fort Wing battery, East Tilbury, Essex* (London, 2003).

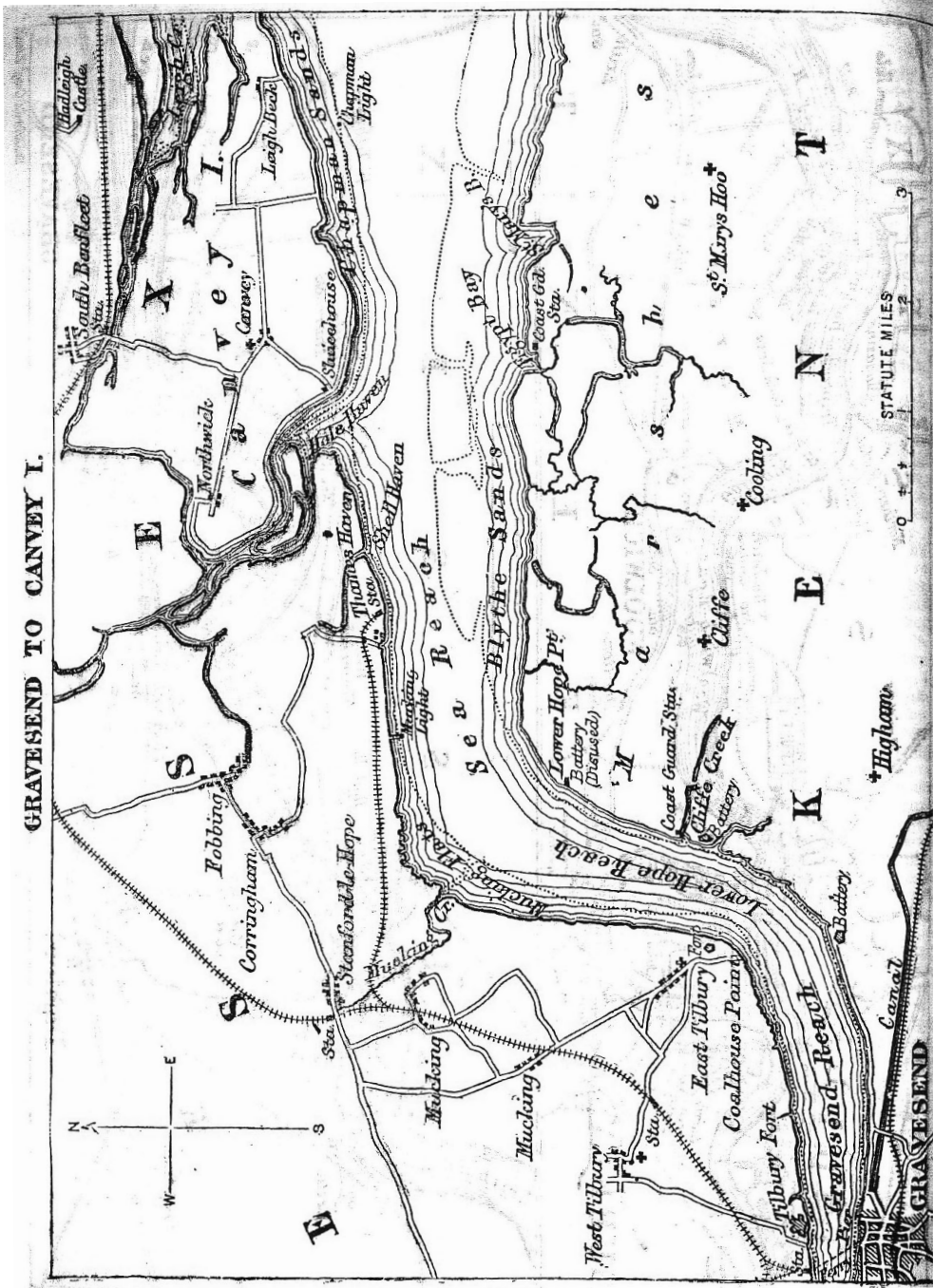


Figure 2.5. The lower reaches of the Thames from a late nineteenth-century map (Bodleian: G.A. Eng. Rivers 16' 33 pp. 130-1).

the Norwegian sailing barque, *Cirro* [*sic*], with a cargo of ice, had to be beached in July 1907, having sprung a leak downriver and taken on 11 feet of water in her hold, fatal for any ship that had ice aboard.<sup>33</sup>

Continuing the journey upriver, there were yet more forts and batteries to port, lining the eastern shore: first Cliffe Fort, then Shornehouse Fort.<sup>34</sup> At Coalhouse, heavy guns could be brought to fire downriver, across the river, as well as upriver in the direction of Gravesend. But if this was not enough to deter an enemy ironclad, Cliffe Fort also had a torpedo launcher, designed to target enemy vessels as they slowed to make the turn from Lower Hope into Gravesend Reach. Finally, moored to the riverbed, was a network of mines that could be detonated electrically from Coalhouse and Shornehouse Forts.<sup>35</sup>

Eventually, at Tilbury, Henry VIII's famous fort, with its elaborate earthworks and seventeenth-century water gate, stood as lowly sentinel, built at the point in the river where its width first fell within the range of early cannon shot.<sup>36</sup> It was near here, in the fields of west Tilbury, that Queen Elizabeth reviewed her forces before they left to take on the Spanish Armada.

At Gravesend, the main channel of the river, almost 60 feet deep, makes contact with the land for the first time. Here has long been the first river ferry. It is here, too, that sea pilots were exchanged for river pilots. In 1900, there were around 200 stationed in the town, all engaged in steering vessels through the tide-swept reaches, a facility for which the masters of ice ships were doubly thankful.<sup>37</sup> In April 1910, nevertheless, a pilot still failed to prevent a steamer running down the Norwegian sailing barque *Berean*, anchored with a cargo of ice in Gravesend Reach, waiting on the flood tide. The barque was so damaged that she had to be beached on the north shore below Tilbury, her cargo destined to become a total loss.<sup>38</sup> The town of Gravesend itself rises rapidly from the riverside, and there were then chalk cliffs and wooded hills visible to lend to the view.

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33 *The Times*, 18<sup>th</sup> July 1907.

34 See Brown, *op. cit.*

35 *Ibid.*

36 See P. Pattison, *Tilbury Fort, Essex* (London, 2004).

37 A.J. Philip, *Gravesend, the Watergate of London* (3rd. ed., London, 1906), p. 69.

38 *The Times*, 9<sup>th</sup> April 1910.

On the north bank, meanwhile, to the west of Tilbury fort, were the new Tilbury Docks, opened in 1886. Built largely as transit docks, with little in the way of warehouse accommodation, they would have appeared as giant rectangular ponds in an otherwise featureless marsh. At their head, a small half-timbered building may have caught the eye, its roof formed from thatch. But this was no remnant of marsh farming. It was the dock-workers' canteen. However, the docks had remained surprisingly empty since their opening in 1886.<sup>39</sup>

From Gravesend, it remains a lengthy passage to the port of London, for this is the Thames in its flood plain and the river meanders crazily, in places turning through as much as 180 degrees.<sup>40</sup> The meanders give rise to depositional shoals, particularly where the river widens its banks. Shoals also form below the mouths of the larger tributary streams and can encroach on the centre of navigation. For sailing vessels, movement on the river is now entirely dependent on wind and tide. In a few places the channel is wide enough for tacking, but when the winds are contrary or when the depth of water is suspect, the tide becomes the key to movement. At low water, there are parts of the river where the available draught reduces to fifteen feet, whereas at London Bridge, for example, there is a twenty-foot rise to high water. In favourable winds, passage is possible from Gravesend to the Pool of London on a single rising tide. But, more often than not, vessels have to make stops on their passage. The flood typically yields only about four hours of flow, but at little more than two miles an hour. The draughts of many of the larger ice ships would have given them little sea room over this long stretch of the Lower Thames. Moreover, by the end of the nineteenth century, sailing space on this portion of the river would have been crowded with lighters and barges. On a clear afternoon, the sun lit up the rich colours of the barge sails: crimson, red, and purple-brown. But in rain or fog, they became hazy shadows, requiring a vigilant look-out.<sup>41</sup>

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39 J. Pudney, *London's Docks* (London, 1975), p. 105.

40 For a full account of the river above London, see L. Rodwell Jones, *The Geography of London River* (London, 1931).

41 See F. Cowper, *Sailing Tours: The Coasts of Essex and Suffolk* (London, 1892), pp. 11ff.

Soon the Thames' river banks would have started to show signs of more regular settlements.<sup>42</sup> Those at Greenhithe and Erith were built on estuarine bluffs. On clear days, open windows and balconies commanded grand views of the water and of river life. Woolwich had a naval dockyard, while at Greenwich there was Wren's magnificent palace, a river vista to compare with St. Petersburg. At Gallion's Reach, the new Albert Dock, all of three quarters of a mile long, came into view, formed, like its neighbouring Victoria Dock to the east, from the barren Plaistow marshes. Now the banks on both shores were increasingly lined with houses and stores. Tavern bay-windows peered out across the water. All seemed to perch precariously on the river's edge, streets often ending abruptly in water steps or wooden jetties. Behind them lay soaring warehouses and steaming factories. The river's meander bends would now have been honeycombed with shipyards and dock basins of all shapes and sizes. By Rotherhithe, the banks consisted of a continuous mass of brick and stone. Here was the London river of Dickens's *Old Curiosity Shop*: forests of masts, steamships beating the water impatiently with their heavy paddles, long black tiers of colliers, fleets of barges coming lazily on like lumbering fish. There were vessels discharging cargoes, while others spread out their sails to dry. It was the flood tide and the water and all upon it were buoyant, a mass of motion.

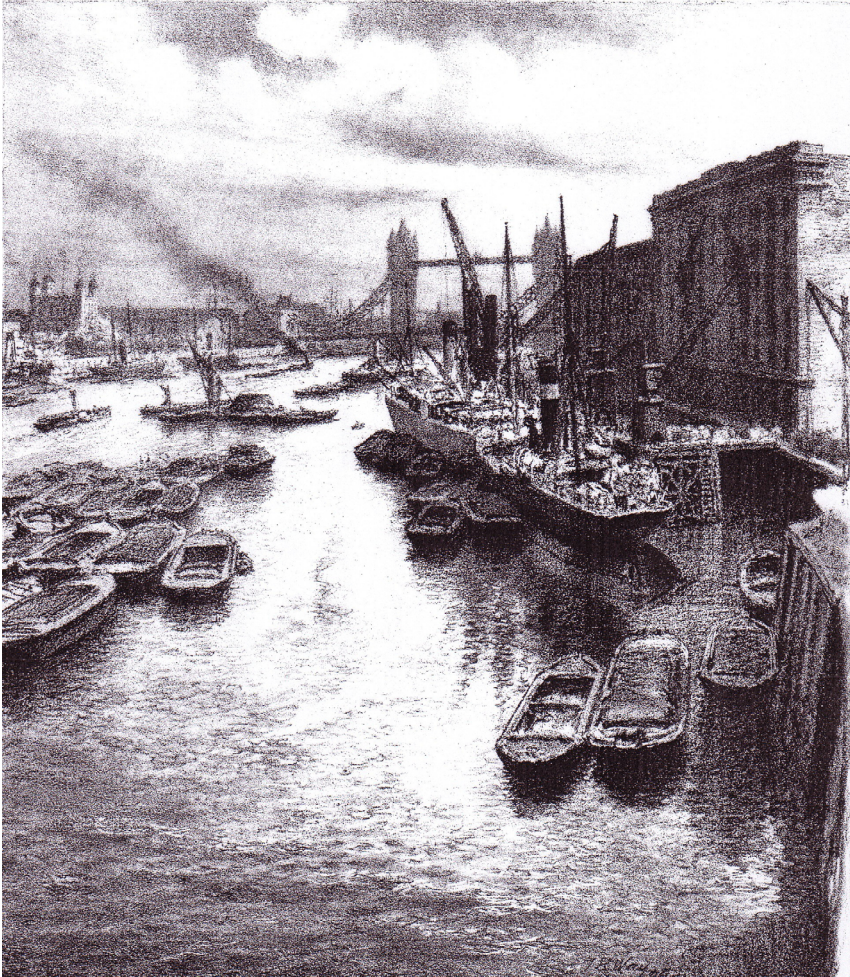
For the crews of the ice ships, the port of London was a second home. In spring and autumn, it offered respite from an often arduous passage. The seamen frequented the dockside pubs and bars, exchanging stories of their voyages. By the early 1900s, there were typically 20 or more ice ships from Norway discharging their cargoes in the port of London every 24 hours in the ice import season. One of the largest recorded individual shipments was 910 tons. It was imported in 1899 and was destined for the ice stores of Messrs. Leftwich & Co., the firm that brought the very first cargo of Norwegian ice to Britain in 1822.<sup>43</sup> Sometimes cargoes of over 1,000 tons were landed, although this was not always aboard a single vessel.

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42 See Rodwell Jones, *op. cit.*

43 *Cold Storage and Ice Trades Review* II (1899), p. 35.

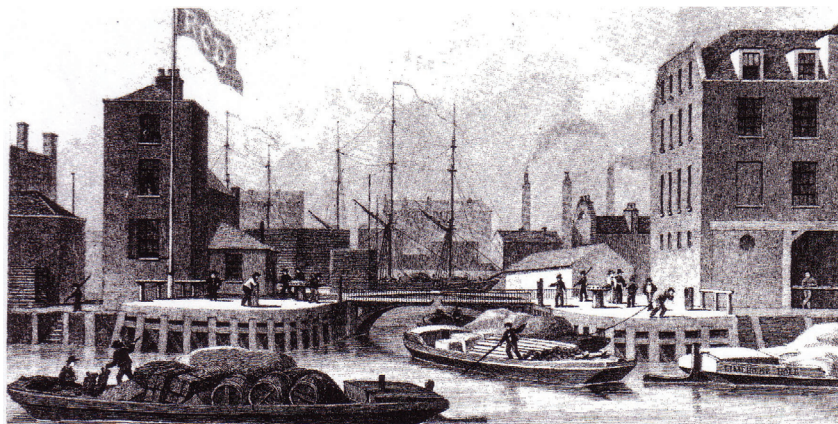




**Figure 2.6.** The upper pool of the Thames (Bodleian: G.A Eng. rivers 4' 26 plate XI).

The port had no single point of landing for Norwegian ice once the vessels that carried it had completed the circuitous passage upriver. The Regent's Canal Dock at Limehouse was, historically, among the first destinations. At its north-eastern quay, Slaters occupied a long-established site for ice imports. As early as 1893, it was landing more than 25,000 tons annually.<sup>44</sup> Here ice blocks were trans-shipped on to barges for delivery to ice stores and ice wells at various points along the line of the canal, particularly as

44 A. Faulkner, *The Regent's Canal: London's hidden waterway* (Burton-on-Trent, 2005), pp. 131–2.



**Figure 2.7.** The entrance to the Regent's Canal dock at Limehouse. Illustration: J. Pudney, *London's Docks* (London, 1975), p. 47 (Bodleian 247921 d.3090).

it threaded north and west across the capital. Carlo Gatti, who founded what in due course came to be one of the largest ice importing companies, brought his first consignment of Norwegian ice to London via the Regent's Canal, and had ice wells at 12–13, New Wharf Road, alongside the canal's Battlebridge basin just north-east of King's Cross station.<sup>45</sup> The man that founded the Norway ice trade into London, William Leftwich, had large ice wells by the canal at Camden.<sup>46</sup> The Great Cumberland market also drew its supplies from the Regent's Canal, via the Cumberland Market Basin, where it boasted a huge underground ice store with a capacity of 1500 tons.<sup>47</sup>

The Thames at Limehouse aside, the famous Wenham Lake Ice Company had an ice store further upriver at St. Katherine's Dock just below Tower Bridge, while Slaters, who by 1900 claimed to be the largest ice merchant in England, had established further depots in the London Docks at Shadwell as well as much further upriver at Battersea.<sup>48</sup> The last site would not have been accessible by the vessels that brought the ice from Norway's lakes and fjords. The ice would have had to be trans-shipped to river barges at Shadwell or at the Regent's Canal Dock.

<sup>45</sup> F. Kinross, *Coffee and Ices: The story of Carlo Gatti in London* (Sudbury, 1991), pp. 26–7.

<sup>46</sup> See *Cold Storage and Ice Trades Review* II (1899), p. 36.

<sup>47</sup> S.P. Beamon and S. Roaf, *The Ice-Houses of Britain* (London, 1990), p. 52.

<sup>48</sup> See the company advertisement in *Cold Storage and Ice Trades Review* III (1900), p. 182.

March 15, 1906.

**COLD STORAGE**  
BY THE TOWER OF LONDON

**THE BEST  
 NATURAL BLOCK ICE**

That comes to London will this year  
 be imported by

**THE NORTH POLE ICE CO. Ltd.**  
**43, Gt. TOWER STREET, E.C.**  
 And Depots.

Our  
 Quotation: **1/-** per Cwt.

**DELIVERED TWICE DAILY**  
 IN LONDON.

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 Yearly Increase of Sales: **10,000 TONS**

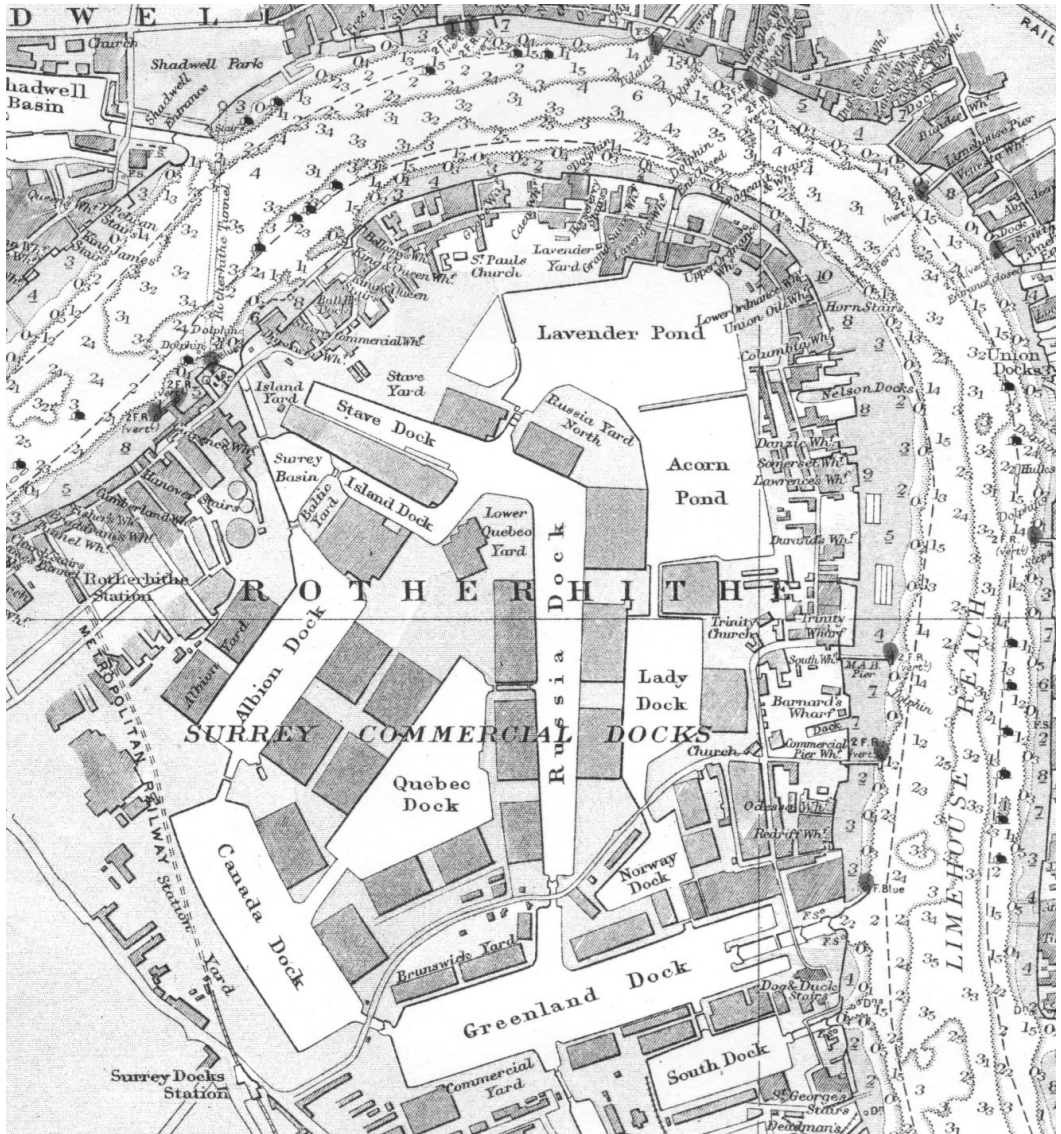
**Figure 2.8.** Full-page advertisement for the North Pole Ice Company's Norwegian ice imports (Bodleian: Per. 193998 d.1/IX p. 97).

The early years of the twentieth century saw Slaters face serious competition from the newly formed North Pole Ice Company which both manufactured ice and imported it.<sup>49</sup> The new company had a Thames jetty on the Greenwich Marshes on the south side of the river. It was linked by tramway to their ice factory in Blackwall Lane nearby. The jetty was for some time the loading place for its manufactured ice, for distribution by barge to places upriver. At the same time, though, it was also an easy point of landing for imported block ice from Norway, given the natural depth to the river at the seaward end of Blackwall Reach. However, the company also had an ice depot in Great Tower Street, close to the Tower of London. From here they advertised natural block ice delivered twice daily.

Another destination for imported ice by the turn of the century was the Surrey Commercial Docks, formed within one of the tight south bends of the river. They handled up to about 25,000 tons annually.<sup>50</sup>

49 For a detailed profile of the company, see *Cold Storage and Ice Trades Review* IV (1902), p. 314.

50 *Ibid.*, VI (1903), p. 233.



**Figure 2.9.** London's Surrey Docks, formed within a tight south bend of the Thames. Limehouse and the Regent's Canal Dock are just off the map due north, and the Shadwell Basin is plainly visible north-west (Admiralty Chart no. 3337, 1903 - Creative Commons CC0 License).

There was even a Norway Dock, although it is not necessarily the case that Norwegian ice was actually landed there. Of course, some Norwegian ice was not off-loaded at docks at all. It was transferred direct to river barges anchored in the stream. Such practices were common with quite a range

of coasting and foreign traffics, although it made for serious congestion at times, particularly within the Pool of London just below Tower Bridge. It was generally reckoned that there was more wastage of ice with transshipment of this sort. Indeed, in a court case of 1912 involving ice transferred to Thames lighters from the North Pole Ice Company's Blackwall factory, the cargo in question was claimed to have decreased from 44 to 28 tons through the bargeman failing to pump waste water from the lighters regularly.<sup>51</sup> This was an infinitely heavier rate of loss than normally occurred on passage over the North Sea.

Several of the individuals who started up London's trade in Norwegian ice in early to mid-century went on to amass substantial fortunes. Carlo Gatti was one of them.<sup>52</sup> He had arrived in England in 1847 from Ticino in Switzerland and, like so many Italian-speaking Ticinese, he ultimately prospered abroad, becoming one of London's most famous restaurateurs. The young Gatti started his career by running a street stall in London, selling coffee, hot chestnuts and a confection rather like a sugared waffle. Within a couple of years, though, Gatti had joined in business with a Swiss-Italian *chocolatier* and together they set up a café-restaurant in Holborn Hill. It was here, sometime around 1850, that Carlo Gatti began making ices for his customers. By 1851 he had opened premises as a pastry cook in the Great Hall of Hungerford Market off the Strand and this was where he soon established his legendary Refreshment Hall, a real continental-style café, and eventual venue for the launch of the famous 'penny ice'. At first, Gatti obtained the ice for the freezing mixture for making his ice creams from local ponds, lakes and canals. But finding limits to the quantities he could obtain, especially after mild winters, he set upon importing ice from Norway. Among the earliest cargoes was a 400-ton shipment from Kragerø in the spring of 1857. By this time, Gatti was already styling himself as an ice merchant and had acquired a selection of wells and cellars for storing the article. Within a few years he had become the capital's largest ice trader, his employees delivering supplies around central London in a fleet of carts and wagons. He died in 1878, but

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51 *Ibid.*, XV (1912), p. 304.

52 See Kinross, *op. cit.*

his company lived on, becoming part of a giant ice-importing combine for London in 1901.

Carlo Gatti had a major rival as an ice merchant in the Leftwich family, whose company operated from London's Little Albany Street. William Leftwich, the founder member, had, as we have seen, pioneered the import of Norwegian ice to Britain. Chartering a sailing ship called *The Spring*, he accompanied it to a location north of Trondheim and there loaded 300 tons of ice. The ship left Yarmouth for Norway on March 17<sup>th</sup> 1822 but it was not until May 8<sup>th</sup> that she arrived back in London. The explanation for the extraordinary duration of the voyage was that she had faced an exceptionally stormy passage and had suffered a leak that necessitated the crew manning the pumps in fear of the vessel being completely overwhelmed. Even on arrival in the Thames, she still had four feet of water in the hold. She was also held up by British customs officials who could not at first decide what duty was payable on such an unusual cargo.<sup>53</sup>

William Leftwich was descended from an old Cheshire family that was able to trace its line of descent back to feudal times. He began business as a wholesale confectioner in London's Fleet Street and in Kingston.<sup>54</sup> He would thus have made ice cream in summer seasons and would have needed large quantities of ice for the purpose, just like Carlo Gatti. Importing ice from Norway was a logical step and when the first cargo was eventually landed, there was no shortage of confectioners as well as fishmongers ready to purchase it. Leftwich's profits from the carriage of ice were initially small and it was ten years before he had any competitors in the trade. Subsequently, though, the firm grew steadily, drawing its custom principally from among families of the upper classes, and from a range of clubs and hotels. By the 1890s, it was regarded as London's premier firm of ice importers, with the *Cold Storage and Ice Trades Review* running a feature article on it in June 1899.<sup>55</sup>

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53 There is a detailed account in the Wiborg ms: T Wiborg, 1913, Berg-Kragerø Museum, Norway.

54 See E. David, *Harvest of the Cold Months: The Social History of Ice and Ices* (Harmondsworth, 1996), p. 344.

55 *Cold Storage and Ice Trades Review* II (1899), pp. 35–6.

## Ports outside London that shared in the ice trade

The ports of Kristiania and London were not the sole axis of Norway's ice exports to Britain, but they assumed primary status at an early point in the growth of the trade in natural ice. As early as 1867, it was noted how large quantities of ice were exported from Kristiania to leading British ports.<sup>56</sup> One London ice company had already taken a lease on an island in the fjord on which there was a small lake from which ice was gathered each winter season.<sup>57</sup> The trade subsequently grew in leaps and bounds and, at its height, in the late 1890s, London alone was receiving from Norway around 200,000 tons each year, accounting for between forty and fifty per cent of the total trade.<sup>58</sup> From Kristiania, ice exports seem to have peaked at around 76,000 tons in 1898 which would account for only about one sixth of all ice exported to Britain from Norway. However, the proportion is much higher if Kristianiafjorden is treated as the point of export. For whilst the Kristiania district was a place where ice was loaded aboard ship and where ice from hosts of small ice farmers was stored, much ice (especially in winter) was loaded directly into vessels at the fjord edge – usually at the point nearest to the lake or fjord area from which it had been cut. There were also other ports in the fjord that participated in the trade. Most prominent was Drøbak, from where ice cut for the Wenham Lake Ice Company was loaded. It came from the nearby Lake Oppegård which the Company had renamed Lake Wenham to maintain the association with imported American ice from Wenham Pond in Massachusetts.

There were branches of Kristianiafjorden where ice was loaded. Drammen, at the head of Drammensfjord, was among them. Here, by the early 1900s, it was a common sight to find steamers moored right alongside the rocky shores taking on cargo that came sliding down wooden chutes from the lakes in the hills around. By this mechanism, blocks of

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<sup>56</sup> J. Bowden, *Norway: Its Peoples, Products and Institutions* (London, 1867), p. 129.

<sup>57</sup> *Ibid.*

<sup>58</sup> Details of all Norwegian ice imports into Britain were recorded each month in the *Cold Storage and Ice Trades Review*. The figures were typically summarized at six and twelve-monthly intervals, with commentaries on the state of the trade and its prospects.



**Figure 2.10.** An ice block on a wooden switch-back railway near Kragerø as it approaches the shoreline, ice workers and ice-steamer awaiting loading (Berg-Kragerø Museum, Creative Commons BY-ND 4.0).

ice could be directed straight into the ships' holds.<sup>59</sup> As will later be seen, the chutes were the terminal points of switchback ice railways. Observers remarked how at first it was almost impossible to make out the nature of the cargo that came down from the hillsides, appearing and re-appearing on its roller-coaster course. It was only when the sun's rays caught a block on its swift course downward that it was revealed as a great lump of ice, now, according to the traveller, turned into a shimmering jewel.

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59 M.A. Wyllie, *Norway and its Fjords* (London, 1907), p. 7.



Outside of Kristianiafjorden, ice was also despatched to Britain from a number of places on the southern or south-eastern fjords, including Skien, Brevik and Kragerø. But ultimately it was the Kristiania and Drøbak districts that dominated Norwegian ice exports, for here was found ice of the best and most uniform quality, and typically thicker than that from the fjords of the North Sea coast.

In Britain, whilst London was the chief port of entry for Norwegian ice, there were many other ports that shared in the trade. For a while, Grimsby headed that list, in many years unloading as much ice tonnage into its stores as was loaded in a year in Kristiania. Much of it was destined for Grimsby's large fishing industry. The first regular cargoes of Norwegian ice arrived in the port in 1857 aboard the sailing barques *Amphion* and *Lehman*. The 460-ton consignment originated from Drøbak on Kristianiafjorden. There was already a thatched ice-house on the dockside for storage.<sup>60</sup> Hull had a similar but smaller trade, also allied to fishing. Elsewhere, Liverpool and Glasgow were importing some 37,000 tons between them in both 1899 and 1900, in this case connected not with fishing but with general public demand in summer.<sup>61</sup>

By the year 1900, there were in total no less than 49 separate ports of entry for Norwegian block ice, embracing a startlingly wide array of destinations (see Appendix for details of their names and tonnages). Ireland, for instance, took some 23,000 tons in that year, and included small south-west ports like Galway, Limerick, Tralee and Skibbereen. Tralee alone took nearly 4,300 tons, as much as each of the North Sea ports of Hartlepool and Goole.<sup>62</sup> Tralee, though, was twice the sea distance from the Norwegian fjords, as were many of its neighbouring ports. The ice was destined for use in the prosperous fishing then to be had in the Atlantic off south-west Ireland, particularly for mackerel and herring. But the sea freight on the ice would have been prohibitive unless cargoes came by sail rather than steam. This is confirmed by a case in the Liverpool County Court in November 1901. It told of an episode in March of that year when a 604-ton cargo of Norwegian ice aboard the sailing barque *Lorenzo* had

60 E. Gillett, *A History of Grimsby* (Oxford, 1970), p. 231.

61 Figures drawn from summary tables in the *Cold Storage and Ice Trades Review*.

62 *Ibid.*, III (1901), pp. 344–5.

been delayed discharging in Berehaven harbour in Bantry Bay. The 482-ton vessel had been chartered by a Liverpool ice merchant from a shipowner in Arendal on Norway's south-eastern coast. The original plan had been to discharge the ice into a hulk anchored in the harbour, but the depth of water was inadequate for the barque, with its 17-foot draught, to tie up alongside. The reason for the court case was that the shipowner claimed demurrage (storage) costs for the extra time that the cargo had to remain on board the ship.<sup>63</sup>

The wide array of ports of entry for Norwegian ice, with some regularly landing only a few hundred tons a year, reflected the difficulties of transferring ice for any distance inland, especially if there was no inland water communication. Individual consignments of ice were regularly carried by railway wagon, but bulk transfer of Norwegian ice was far less common, largely due to problems of handling, packing and insulation. By the last years of the nineteenth century, therefore, even some of the smallest coastal towns had seen the formation of ice-importing companies, their ice supplies arriving once or twice a year, invariably by sailing ship since it was sail that offered the cheapest freights. Falmouth, in south-west Cornwall, for instance, had an ice company from 1898, even if it continually struggled to pay its way. It had rented a hulk and had invested in crushing apparatus. As it imported only a few hundred tons each year, any delay in the arrival of a cargo could mean the difference between profit and loss. Its managers appear to have taken no pay. In effect, they ran the company largely for public benefit.<sup>64</sup>

Britain was not in fact the only country in Europe to import natural ice from Norway. Denmark, Germany, the Netherlands, Belgium and France at various times all traded in the commodity. In 1901, taking ice exports just from the district of Kristiania, 53,432 tons went to Britain, but a mere 1,324 tons to Germany and 2,354 tons to France.<sup>65</sup> However, the Wiborg papers indicate that Boulogne in France and Ostend in Belgium were some of the most important destinations for ice exported

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63 See *Cold Storage and Ice Trades Review* IV (1901), p. 234.

64 *Ibid.*, I (1898), p. 9; *idem.*, VII (1904), p. 54.

65 *Ibid.*, V (1902), p. 175.

from Kragerø by around 1910. Germany boasted ice farming of its own and the call for Norwegian imports generally came only after an exceptionally mild winter there when little ice formed on its lakes and water channels. The Weser districts, for example, were producing 150,000 tons a year in the early 1900s.<sup>66</sup> When this ice harvest failed, as it did in 1906 and 1910, that was roughly the volume of ice that was shipped in from Norwegian stores.

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66 *Ibid.*, IX (1906), p. 49.

