INTRODUCTION

1 FOREWORD

This handbook was first published by the Maritime Curators' Group in 2002. Its purpose, as its editors explained, was to serve as a '"first-stop shop" for those in maritime museums, and for those […] in related museum and heritage fields who are not maritime specialists, but who may have to deal with maritime material'. As such it provided an excellent overview of the extraordinarily broad and deep knowledge of the maritime world built up by curators and others over many decades. The maritime world has a language and culture all its own – often bafflingly impenetrable to outsiders – and as Britain's relationship with the sea steadily became less visible, more remote and increasingly arcane, there was a pressing need for such a resource.

The original aims of the handbook were laudable, but they are, if anything, even more pertinent today than they were ten years ago. 'Sea-blindness', as it is sometimes known, is still very much an issue, but for the maritime heritage industry it has become intertwined with a steady process of cultural change and retrenchment, a process which has presented serious challenges to the interpretation of maritime collections and histories. The information contained in the handbook is of inestimable value to the increasing number of curators today who have responsibility for maritime collections, many of national and international significance, but who lack the necessary subject expertise to interpret them for their audiences.

Recognising both the growing relevance of the handbook and the need to make it accessible to a much wider curatorial community, both in Britain and abroad, the decision was taken to revise the handbook substantially and publish it in an enhanced, searchable and better illustrated form on the Web. This task was taken on by Brian Lavery, one of the original four editors – the others being Andy King, Matthew Tanner and Chris Young – who has provided a significant amount of additional material for a number of articles, invited the original authors to update their contributions and has written and commissioned some completely new material. Some of the original authors have sadly passed away, but we have tried to add to their articles sympathetically in ways we trust they would have approved.

We are extremely grateful to Arts Council England for their generous support for the project. I would also like to express my gratitude to Brian Lavery for his hard work to bring this together so quickly and to such a high standard, and to Richard Holdsworth, Matthew Tanner and Nigel Rigby who had oversight of the project.

Dr Kevin Fewster, AM FRSA
Director, Royal Museums Greenwich

2 MARITIME HERITAGE NETWORK

The Maritime Heritage Network was formed in 2017 out of the Maritime Curators Group (MCG) that had brought together maritime heritage professionals from across the UK since 1991. The Group has met informally twice a year since 1991, at a different museum venue each time, from Orkney to Falmouth, and Swansea to Belfast. It has discussed modern collecting, disposals, ship preservation, information resources, health and safety and other issues relating to maritime museums and maritime collections. The Group created the first edition of the Manual of Maritime Curatorship.

The new Maritime Heritage Network incorporates all the good practice and collaboration developed in the MCG and now serves as the Subject Specialist Network for maritime heritage in the UK and Northern Ireland. Membership has been expanded and is open to all individuals working with maritime collections, archives, interpretation, conservation, historic ships and boats, maritime heritage education, owner/operators, students and academic researchers, and other aspects of our heritage. The Network usually meets at least every year as part of the UK Maritime Heritage Forum with the aim of fostering a community of interest amongst maritime experts, non-specialists, and enthusiasts, to share best practive and information, and to act together in the interests of the maritime heritage in the UK.

AIMS

- To represent and promote maritime expertise in the wider museum community

- To act as an information network and assist each other

- To resolve and develop issues affecting the maritime heritage

MEMBERSHIP

Membership is open to: (a) working professionals in any discipline in accredited museums or equivalent maritime heritage charities, other individuals that can demonstrate appropriate commitment to maritime heritage, and institutions working towards accreditation; (b) associate members of the International Congress of Maritime Museums. New members are always welcome.

The group can be contacted through its Secretary – details of whom are available through the Collections Trust websites.

3 NAUTICAL BASICS

BY CAPTAIN CHRIS YOUNG RN

If you have a basic understanding of maritime matters, you may not need the help of this article, but if you are unsure of any of the basics, it may be helpful. The sea has a complete language of its own – actually more than one, even in English, since usage varies from port to port, coast to coast, between one trade and another, and between military and civilian sailors. For a general reference, including the naming of parts, the *Oxford Companion to Ships and the Sea* can be recommended, and for technicalities the *Admiralty Manual of Seamanship* and the *Admiralty Manual of Navigation*, or one of the many study texts for sailing qualifications will be helpful. For a historical perspective on seamanship, there is John Harland's outstanding *Seamanship in the Age of Sail*, and Phillips-Burt's *Historical Seamanship*. If you have access to a library with a series of editions of *Seamanship* by Nares, that is the classic reference.

NAUTICAL TERMS

The following diagram illustrates the most important terms. Note the difference between referring to something inside the ship or boat, and to something outside – in most cases a different term is used.
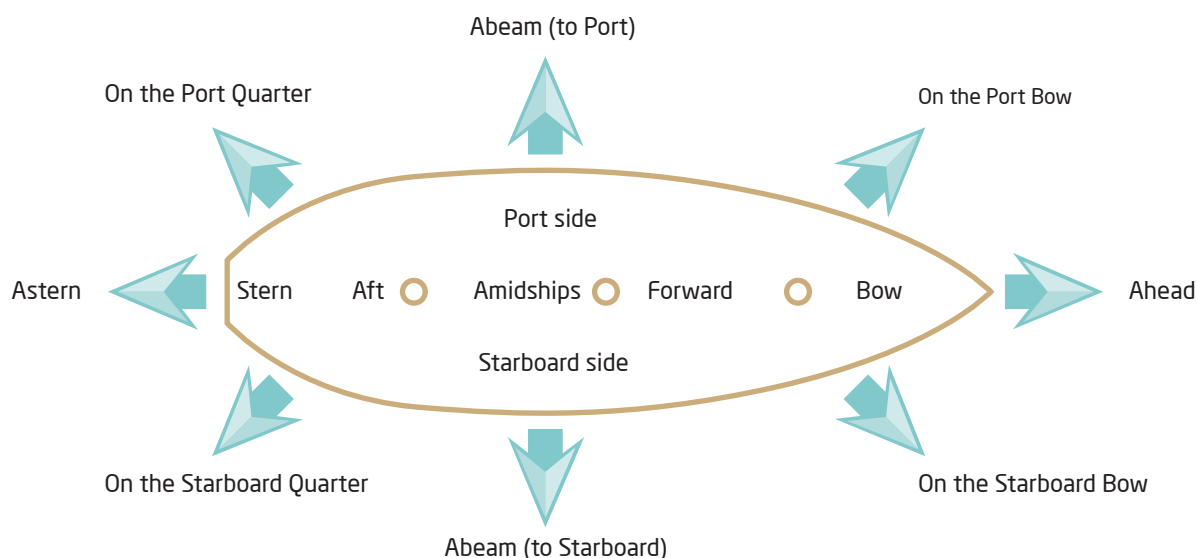
Parts of a ship

SAILORS

Those who go to sea for a living seem to acquire a characteristic set of values and ideas. Until very recently, being at sea meant isolation from the rest of the world for long periods, so getting on with your shipmates was first priority. More than that, in a potentially dangerous environment, mutual confidence in one another's ability to do their job and to stay cool in the face of peril was essential for survival. Seafarers therefore form a brotherhood (slow to accept gender equality!) with an arcane language. Many went to sea because they preferred the isolation; others sought personal challenge, adventure and comradeship, yet others followed local and family tradition. Discipline is necessarily

tight – the lack of it is a recipe for disaster. The captain's word is law, even if he can no longer hang miscreants at the yardarm. In sailing days, prime seamen were supremely fit and agile, performing feats that would make a circus acrobat flinch. Contempt for the landlubber was total, but if you proved yourself up to the job you would be accepted, whatever your nationality or race. The elite of the sailors were the helmsmen, or boatswain's mates, and the petty officers.

Ships' officers would start young – in the Royal Navy a midshipman would typically join at 13 – and would get many years of experience before taking charge of a watch and eventually command. The continuous strain and the loneliness of command wore many men out before their time, or gave rise to eccentricities and sometimes insanity. The officers often had their wives with them in merchant ships, but the monastic life of the crewmen in the forecastle (the *fo'c'sle*) gave rise to a tradition of hard drinking and womanising when ashore.

When engines began to appear the engineers, stokers and firemen were looked down upon by the sailors, but gradually became accepted as part of the crew as the importance of sail decreased. The cooks and stewards were also a downtrodden class, but they had their day if they rose to be purser, who controlled the stores and often made more money than the captain. Doctors and chaplains had the reputation of going to sea because they had got into trouble on shore, but there were many remarkable characters. Certificates of qualification for officers, and registration of seamen, were triggered by real concerns about competence and safety at sea. Two great Merchant Shipping Acts (1855 and 1894) introduced proper regulation, and still largely apply today. The paperwork they generate, such as crew documents, or fishing boat registers, are invaluable sources.

NAVIGATION

Early seafarers soon ventured further off shore to fish or trade, using familiar patterns of stars, and the daily movement of the sun and moon, to guide them. It is clear, for example, that the first human inhabitants of Australia must have crossed the ocean to reach that continent more than 40,000 years ago. The Chinese first used magnetic rocks ('lodestones') to steer by, leading to the development of the magnetic compass. Astronomers had worked out how the sun, moon, stars and planets moved, and increasingly sophisticated instruments were developed to measure their angle above the horizon. These instruments represented high technology of their time. The **astrolabe**, the **octant** (aka Hadley's **Quadrant)** and the **sextant** were developed successively, and fine examples of them are found in many collections. The simplest method of use was to measure the sun's altitude at mid-day. By a simple calculation the ship's latitude can be derived, so the navigator could draw a line on the chart on which the ship's position lay. This was called a 'position line'. To get a unique position, another line was needed, crossing the first to give a point. A crude method was to time the sun's mid-day passage – if your clock was accurate you could work out the longitude. Until the invention of Harrison's chronometer in the 18th century, the inaccuracy of the navigator's timepiece made the results even more unreliable. Observations of the sun were the simplest to deal with, and most navigators got by with just that, with a fair degree of success. Ship's time was often taken from the noon observation of the sun, and it became general practice for ship's officers to take sights of the sun's angle above the horizon with a sextant precisely at noon each day. With sophisticated tables and a knowledge of spherical trigonometry, you could get position lines by observing other bodies, such as bright stars or planets, or the moon. You could get three or more position lines. Unfortunately they rarely meet at a single point, but produce an irregular figure which was known as the 'cocked hat'. The smaller the cocked hat, the better your observations.

Navigators used a lead-line, a heavy lead weight on a line with depths marked on it, to sound or measure the depth of the water. A hollow let into the bottom of the weight could also be 'armed' with tallow in order to pick up a sample of the sea bed. From the depth and type of bottom, the navigator could infer much about the ship's position. In the 20th century, the development of the echo sounder made the lead-line obsolete. In the last fifty years a multiplicity of radio based devices have made the job much simpler.

Navigators depend on accurate charts as well as instruments, and the development of these from the 16th to 19th centuries is a major topic. The key feature of a maritime chart is that it maps the sea, not the land, and includes the depths of water at certain stages of the tide. British charts measured the depth in fathoms (6ft), until recently when they became metric. It was also important, when land was sighted, to identify where you were. Prominent features or marks on the land, and lighthouses and buoys, help in the identification process. Early charts do not include the conventions that we take for granted. For example, the top of the chart may often be oriented to the East, and not the North.
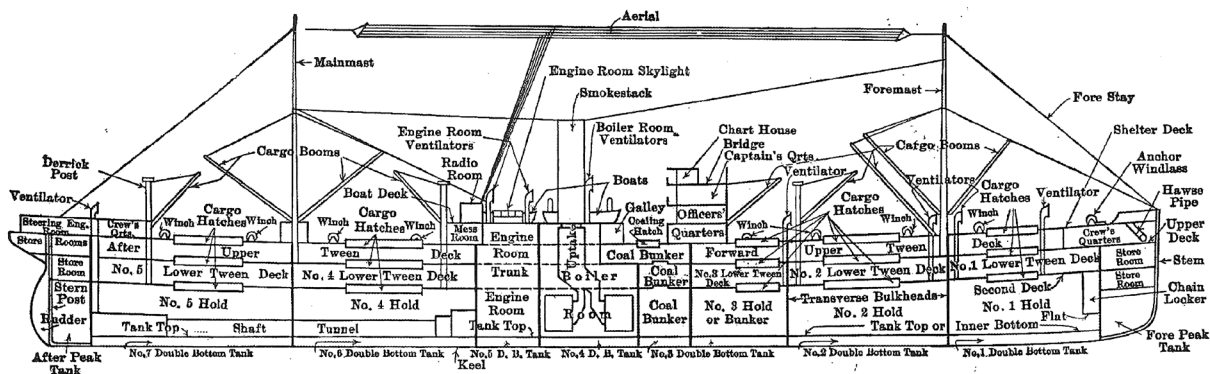
HARBOURS

Ships need safe berths wherever they go. Often the natural lie of the land provides sheltered water, protected from rough seas, in which ships can anchor. In other places there are man made breakwaters and piers. For easy loading and unloading, alongside berths are needed with sufficient depth of water to allow vessels to berth at least at high water. Busy and efficient ports built non tidal, or floating harbours, which were closed off from the sea by a lock so that the water stayed at the high water level or near it, but this meant that ships could only go in and out within a couple of hours of high water. Such harbours were major industrial complexes, with cranes, railways, repair facilities, etc. Some harbours remained only anchorages. If ships put down a single anchor, they would swing round as the tide changed, and this meant leaving enough room between ships to avoid snags and collisions. If space was at a premium, the port authority might lay mooring buoys, and the ship would secure to one of these, or, more often, between two buoys with a line to each from each end of the ship, so that movements was minimised. Berthing ships in the days of sail was always a tricky business, and most ports had rowing boats, which would help pull ships into position, or simply take a line ashore or to a buoy. When steam arrived, the first really practical steam vessels were the steam tugs that could make berthing and unberthing a ship much easier. Modern ships have very sophisticated manoeuvring propulsion to minimise the expense of tugs, but tugs are still used widely.

OWNERSHIP AND REGISTRATION OF SHIPS

This is a complex subject on its own, but the basic principles are: a ship is registered to a particular port, traditionally its home port; the ownership is divided into 64 'shares', held by anything from one to 64 people, of whom the captain was often one (hence one of his nicknames was 'the owner'). The ship flew the merchant ship flag of the country in which it was registered, and very often a 'house flag' of the owners. From the early 19th century, ships started to use a series of (usually) four flags spelling out the ship's code numbers or letters for identification when arriving in port. Paintings may include these flags and allow the ship to be precisely identified. The ship's name and port were painted and/or carved on the transom (across the stern), and a figurehead often accompanied the name at the bow also. A ship also had a registered number, and this was carved into a main beam below decks, so she could still be identified even if her name was changed. *Lloyd's Register of Shipping*, inter alia, listed all this, and more, information for vessels above a certain size. The capacity of the ship was described by her tonnage, which was measured in a great variety of ways and harbour dues were based on the tonnage.

SHIPBUILDING

Most ships were built on the shore and persuaded into the sea by whatever means were available – this process can be seen even today, in the Arabian Gulf, for instance. The modern shipyard with huge slipways is only a development of the technique. A few ships are built in dry docks, where they are available, and launched by flooding the dock and removing the dock gate to allow the ship to leave. Wood was the traditional material from the dugout tree trunk to the fully developed sailing ship of the 18th and 19th centuries. The arrival of steam roughly coincided with the first ships built of iron in the 1830s, which allowed larger ships to be built. Cheap strong steel took over from the 1860s onwards, and remains the most commonly used material. However, modern materials such as GRP (fibreglass) now dominate smaller vessel building. Wood still has a place, and concrete has a small niche. Boat- and shipbuilders were independent craftsmen who usually built to order, but their usual approach was to turn out a vessel, which was an improved version of the one before. Shortage of timber in the UK by the middle of the 19th century made many owners buy from the US and Canada, or from the Baltic countries. Steam, and later diesel, power gradually drove out sail over a long century, and the host of small builders gave way to a few large shipyards, which in their turn yielded in this country to foreign competition in the second half of the 20th century. Similarly, the small local trading vessels have given way to rail and road transport, and the container ship.

Profile of a cargo steamer