

Background History: The Discovery of the New World

The Dark Ages

From about 476 A. D. to about 1000 A.D. people in Europe lived much as their ancestors before them had lived. There was little change in their daily lives. In this period of time, later to be called the Dark Ages, people had few comforts of life. Their food was plain and often spoiled. Their clothes were coarse and uncomfortable. The cloth they used was made from flax or wool. Their houses and furniture were crudely put together. Very few people at this time could read or write. The only learning that took place in these years was religious learning. The people learned about the Bible and the holy places in it.

The Crusades

During the eleventh century, persons began making pilgrimages to Palestine, or the Holy Land as it was then called. At this time, a group of warlike Turks conquered the Holy Land and stopped all Christian pilgrimages. The Turks were Moslems. They had little sympathy for the Christians who wanted to visit Palestine. They treated the Pilgrims cruelly. This action enraged the Christians of Europe. Kings and nobles formed great armies, and a series of wars known as the Crusades broke out. The Crusades lasted over 200 years.

When the Christian Crusaders went to war in Palestine, they visited many beautiful cities. In the market places of Constantinople and Palestine, they



discovered beautiful garments made from soft woven cottons and shining silks. They saw pearls, diamonds, rubies, and other precious stones that were not available in Europe. They experienced foods that were made tasty with spices from the East Indies. They tasted tea from China and wine from Arabia. They viewed rugs and carpets from Persia and ivory from Africa. As the Crusaders returned home from the wars, they brought back some of these fine goods with them. The people of Europe began to treasure the wonders that were available from the East.

Marco Polo

In 1271, two brothers left Italy for a long voyage to the East. They were jewel merchants. They wanted to establish trade with the legendary land of Cathay.



With them they took the son of one of the brothers: his name was Marco Polo. They spent 24 years serving in the court of Kublai Khan, ruler of the land. When Marco finally returned to Europe in 1295, he brought with him tales of the riches of the Far East. He wrote a book which spoke of the Great Wall of China. It told of the great splendid palaces roofed with gold. This book encouraged merchants to begin trading with the East.

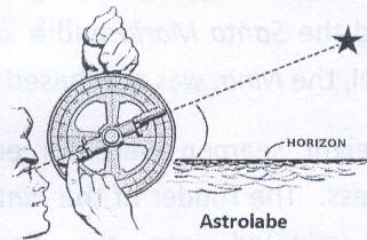
The coastal cities of Italy became busy seaports for the goods that moved across the Mediterranean Sea. From the Mediterranean the goods had to be moved across the deserts of the Middle East by camel caravan. In time, they made it to India and China. All the routes were partly by sea and partly land. When the Turks captured more of the land, they blocked off all the trade routes available to the Europeans. The merchants were forced to begin searching for new routes to the Far East.

Henry the Navigator

Prince Henry was the son of the king of Portugal. He had an observatory built on the seacoast in southern Portugal. He invited geographers, mapmakers, and seamen from all parts of Europe to come and study at his observatory. He set up a school for navigators. He sailed expeditions farther and farther south along the coast of Africa. Each time a ship would return from such a voyage, the geographers and mapmakers would improve their maps.



The sailors were aided by new and better navigation devices. The compass had been perfected. This allowed sailors to sail out of sight of land. Prior to this time, sailors dared not stray from the coastlines. They could tell which direction they were going only by viewing the sun or the stars. If they caught fog or a storm at night, they were helpless. With a new instrument called an astrolabe, they could tell how far from the equator they were. New ships were built with improved steering gear. And when these better ships had sailors using the new instruments and improved maps, it became much safer to sail out of the sight of land. Nevertheless, when Prince Henry died in 1460, he had never achieved his dream of discovering an all water route to the fabled East.



Three Early Explorers

In 1487, a Portuguese explorer named Bartholomeu Dias set a new record. On orders from the new King John II, he sailed farther south than anyone before him had gone. Each explorer that sailed south along the African coast had been instructed to build a pillar at the farthest point reached. Dias passed the last pillar and kept heading south. His ship was buffeted by stormy seas, but he still kept on. After days of fighting storms, he reached the southern tip of Africa. He



named it Cape of Storms. King John, feeling that the name might discourage further exploration in the area, renamed it the Cape of Good Hope.

On August 3, 1492, three ships left the harbor of Palos, Spain. A voyage was beginning that the commander of the ships has worked toward for many years.



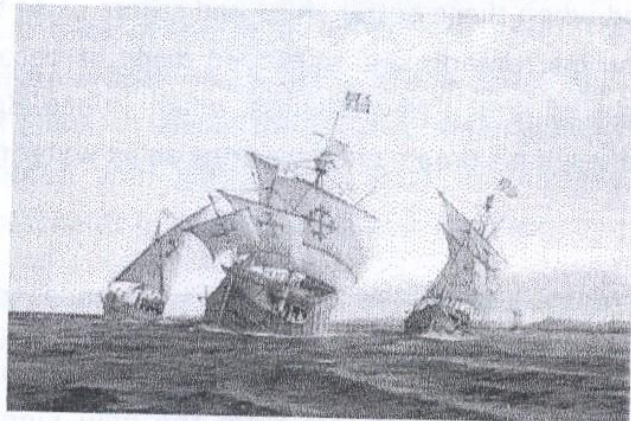
Christopher Columbus

His plan was to reach the East by sailing west. He tried to get support for his plan from the kings of Italy, England, and Portugal. Finally, King Ferdinand and Queen Isabella of Spain agreed to support his dream. The man was Christopher Columbus. The plan seemed ill-fated. The seacoast town of Palos was forced to supply two ships and crew to Columbus for the voyage. The Palos residents received this punishment for having

been caught smuggling illegal goods into Spain. Columbus confiscated a large ship named the *Santa Maria* and a smaller caravel named the *Pinta*. Another caravel, the *Nina*, was purchased outright from a Palos merchant.

Eighty-eight seamen were forced to crew the three ships across the Sea of Darkness. The rudder of the *Pinta* broke a few days out to sea. The tiny caravel sailed crippled into the Canary Islands, where it was repaired.

While there, Columbus spent an additional two weeks rerigging the *Nina* from lateen (triangular sails) to square rigging. Hearing that a Portuguese man-of-war was on its way to stop his voyage, Columbus slipped out to seas with his three

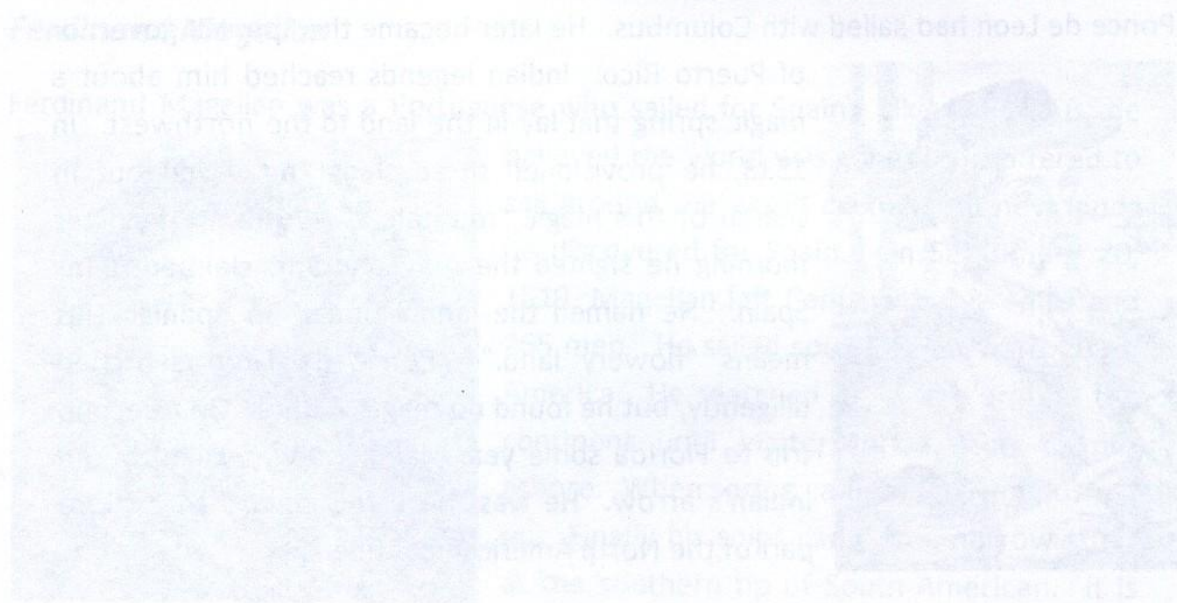


ships. As he passed the last island in the group, it exploded with a violent volcanic eruption. It seemed to be an additional omen of doom.

When the ships compass failed to work properly, his men demanded that he turn back. Columbus forcing his will on the men continued on. When they sailed into what seemed to be a sea of surface weeds, the men became very moody. The

ships were slowed greatly by the weeds. The area today is known as the Sargasso Sea. Columbus had to lie about the distance they had traveled to keep his men from forcing him to return to Spain. Finally signs of land began to appear. Land birds swooped overhead and bits of brush and pieces of fruit were seen floating in the water. Columbus was very relieved when land was finally spotted on October 12, 1492. Seventy days had elapsed since leaving Spain. Columbus named the first island sighted San Salvador. Columbus was to make four voyages in all to the New World. Unfortunately, he died in poverty in 1506, still thinking he had reached the islands off the continent of Asia and unaware that he would live in history as the discoverer of America. (The honor of discovering the route to the Far East was to go to another Portuguese explorer. In 1498, Vasco da Gama sailed four ships around the Cape of Good Hope northward into the Indian Ocean to reach India and the Spice Islands.) However, other captains followed Columbus' lead and opened up the New World of the Americas with its abundant riches, particularly gold. The age of the great galleons had begun.

Ponce De Leon



WIND PATTERNS

WIND PATTERNS proved to be extremely important to the early ocean voyagers. since the ships were powered only by wind, navigators had to know where to find the most favorable winds. They soon discovered that the winds tended to remain stable in certain latitudes. The region between 5 degrees south of the equator became known as the **doldrums**. This is an area of little wind. A ship could become becalmed for weeks at a time. It was an area to be avoided in mid-ocean.

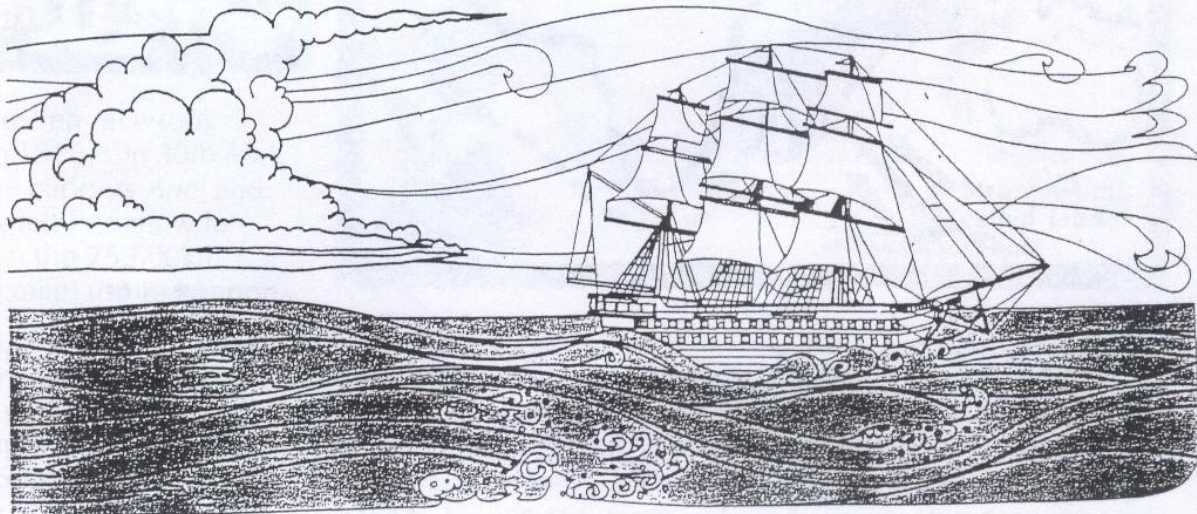
TRADE WINDS North and south of the doldrums are the trade wind belts. They lie between 5 degrees and 30 degrees latitudes. Trade winds in the northern hemisphere are termed **northeasterlies**. This means they blow out of the northeast in a southwesterly direction. In these latitudes, navigators were assured of finding the most favorable winds for getting to the New World.

HORSE LATITUDES Between 30 degrees and 40 degrees is an area that is known for its fair, dry, clear, windless weather. This area has long been known as the **horse latitudes**. But how did it get this strange name? The name was given to the area by early Spanish sailors. When the first Spanish explorers went to the New World, many went to conquer lands. The Spanish explorers were soldiers. They brought their horses to the New World with them. Their horses aided them in conquering the Indians who had no horses. Many of the

first ships attempted to take the shortest passage possible to save time. Rather than taking the more favorable trade winds to the south, they sailed directly west into the 30 degree latitudes. The ships found themselves at the mercy of the windless seas. Many ships lowered their lifeboats and attempted to tow the big ships out of the area of calm. It was nearly impossible to tow a galleon with rowboats. In an effort to make the job easier, they tried to lighten the ship so it would ride higher in the water. This was accomplished by killing the horses and throwing them overboard. This became a common practice when the big ships became becalmed for a long period.

GHOST SHIPS There were stories of ghost ships that drifted aimlessly in the areas of the horse latitudes. Their crews were sometimes found on the ships, dead from starvation and thirst. Sometimes the ships had no one aboard. The crews had simply abandoned them, choosing to take their chances in rowboats. Most often this choice ended in disaster.

WESTERLIES North of the horse latitudes are the **westerly wind zones**. These winds come from the west and blow strongly to the east. They are found in the higher latitudes. The winds blow so strongly at these latitudes that mariners have nicknamed them the "roaring forties, the furious fifties and the screaming sixties. These wind patterns provided the ships with steady winds to get back to Europe.



Biographical Sketches

Amerigo Vespucci

Amerigo Vespucci was an Italian living in Spain at the time of Columbus' explorations. Amerigo made several trips to the New World. He did not feel as Columbus did, that the land discovered was Asia and its off-shore islands. He wrote vivid accounts of this continent, which he called the New World. In 1507, a copy of his accounts fell into the hands of a German mapmaker named Martin Waldseemuller. This German geographer was writing a book. Because Vespucci called the land a New World, Waldseemuller felt that it should be named after him. Thus the land Columbus discovered is not called Columbia, but America. America was the Latin way of writing Amerigo.



Ponce De Leon

Ponce de Leon had sailed with Columbus. He later became the Spanish governor of Puerto Rico. Indian legends reached him about a magic spring that lay in the land to the northwest. In 1513, he provisioned three ships and sailed out in search of this magic "fountain of youth." On Easter morning he sighted the mainland and claimed it for Spain. He named the land Florida. In Spanish this means "flowery land." Ponce de Leon searched diligently, but he found no magic waters. On a second trip to Florida some years later, he was killed by an Indian's arrow. He was the first Spaniard to explore part of the North American continent.



Vasco Nunez de Balboa

Vasco Nunez de Balboa was a soldier of fortune who found his way to the New World. He lived in Hispaniola for a time until bad debts forced him to leave or be arrested. He got on a ship and went to Panama. There he founded a Spanish colony. He heard rumors of a great body of water that lay west of the mountains. He gathered a group of 190 Spaniards and Indians and struck out across the steep mountains and marshy jungles of Panama. Panama is only 50 miles across but the going was difficult. Finally, they reached the western shore. Balboa claimed the sea and all the lands touched by it in the name of Spain. The King of Spain was delighted. He commissioned Balboa with the rank and title "Admiral of the Pacific." Balboa began to build a small fleet of ships at Panama. In 1517, Balboa made an enemy of the governor of Panama who tried him for treason and had him executed.



Ferdinand Magellan

Ferdinand Magellan was a Portuguese who sailed for Spain. Like Columbus, he believed the world was round. He offered to sail around the world claiming all new lands he discovered for Spain. On September 20, 1519, Magellan left Cadiz with five ships and 265 men. He sailed southwest toward South America. He searched for a way around the continent until winter forced him to put ashore. When spring came, Magellan pushed on. Finally his ships came to a narrow strait at the southern tip of South American. It is



now called the Straits of Magellan. The land surrounding the strait was called Tierra del Fuego, "land of fires." The land was so forbidding and desolate and the waterway so dangerous that some of the men mutinied. One ship refused to go on and returned to Spain. Magellan lost a second ship during three weeks of maneuvering in the narrow rock-bound passageway. When Magellan finally emerged into the Pacific, he had no way of knowing how incredibly large it was. As he pushed westward, food ran out. The men resorted to eating rats they trapped on the ship. They boiled leather and ate that too. Scurvy became a problem. Finally they reached the Philippine Islands. Here Magellan was killed in a fight with the natives. One ship had to be abandoned. The crew continued west in the remaining two ships. The fourth ship had to be left behind at the Spice Islands. Finally in 1522, one lone ship loaded a cargo ship of spices and limped into Spain. Only 19 men completed the historic voyage. Magellan's voyage served to prove for once and for all, the world was indeed round.

Hernando Cortez

Hernando Cortez was living in Cuba when he heard tales of gold to be found in a land to the west. The tales told of a great Indian culture whose people lived in great stone cities. Their capital city was built on an island by a lake. The Indians were called Aztecs; their leader was Montezuma. Legends say these Aztecs were



once ruled by a white skinned god with long dark hair and a beard. This god brought prosperity to the land. He taught the Aztecs great building and farming skills. This fair-skinned god left the Aztecs to go to the land of the Rising Sun but promised to return someday. Hearing these stories, Cortez gathered a force

of Spaniards and sailed to Mexico. There he found Veracruz. The landing of Cortez was looked on by the natives as a return of the gods in their white-winged ship. The Indians had never seen horse before. The Indians thought the steel-clad Spaniards riding horses were half-man, half-beast. These gods were capable of making thunder and lightning with strange sticks they carried. Montezuma sent gifts to appease these strange gods so they would go away. Once Cortez and his men saw the gifts there was no turning back. One gift was a great wheel made of solid gold. Another like it was made of silver. Cortez reached the Aztec capital of Tenochtitlan by a forced march during November 1519. There he viewed great palaces, temples, and gardens. He was received with great ceremony and was given a palace to live in. His men were treated royally. A fight broke out between the Spaniards and the Aztecs when Cortez had Montezuma taken prisoner. Aztec arrows were no match for Spanish armor, horses and guns. Within a short time the Aztecs were conquered. Cortez sent shiploads of gold and silver from Mexico to Spain. Spain was on her way to becoming a wealthy, powerful nation. She no longer needed to pursue the Far East trade for riches.

Francisco Pizarro

Francisco Pizarro accompanied Balboa across Panama. He heard tales told of a group of Indians called Incas. Incas meant "Children of the Sun." These people



decorated their temples and palaces with gold and silver. Pizarro asked for help from Panama but was refused. He went back to Spain and asked the king for authority to conquer the land of the Incas. Today this land is known as Peru. In 1531, Pizarro returned to Panama. A year later he led an expedition against the Inca cities high in the Andes Mountains of Peru. The Incas received Pizarro as a guest Pizarro was awed by the civilization of the Incas. They had temples built from stone fitted so tightly a knife blade could not be placed between

the blocks, even though no mortar or cement was used to hold them in together. Pizarro was taken to the Temple of the Sun. Atahualpa, the Inca king, lived there. The walls were cover in gold plates. Pizarro tricked his host and made him prisoner. The Incas offered to pay ransom for his release. They would fill a room with gold, higher than Pizarro could reach. Another room, twice as large would be filled with silver. Pizarro aged. Word was sent throughout the land of the Inca. Gold and silver began to pour in. When the ransom was complete, Pizarro had Atahualpa put to death. The Incas were enslaved. Pizarro was killed by one of his own men when a quarrel broke out over dividing the treasure.

Hernando de Soto

Hernando de Soto was with Pizarro in Peru. He later became the governor of Cuba. In May 1539, he led an expedition of 550 men to Florida to search for gold. For two years the Spaniards fought the swamps, rivers, and forest of the land that would someday become the southeastern United States. In 1541, De Soto reached a great river that the Indians called Father of Waters. It was the Mississippi. He claimed it and all the land it drained for Spain. De Soto crossed the river and pushed on for another year looking for gold. Finally, with most of his horses gone and his army half-starved and sick, he returned to the great river. He died there and was buried in the river.



IMPORTANT HAPPENINGS

1487

1487-8 Bartolomeo Diaz sails from Lisbon around the tip of South Africa (Cape of Good Hope).

1497-8 Vasco da Gama sails from Lisbon to India with a fleet of four ships.

1497(?)1504 Amerigo Vespucci makes four voyages to South America, two in the service of Spain, two for Portugal.

1492 Christopher Columbus reaches the West Indies in 69 days aboard the *Santa Maria*, a three-masted carrack of about 100 tons. Two tiny caravels, the *Pinto* 50 tons and *Niña* 40 tons, accompany him.

1500 About this time the first large "ship-killing" guns are used on warships. Gunports are added to the ship's sides, so that the big guns can be carried lower down in the hull - where they are less likely to make the ship top heavy.

1500s The after castle begins to become wider in construction in the caravel and later in the galleon. The galleon begins to adopt its developed form: square, low forecastle, long beak, and longer hull. The primitive tiller is replaced by the whipstaff.

1519 Ferdinand Magellan sets out with five ships to discover a western route to the Spice Islands. He sails through Magellan Strait and across the Pacific Ocean to the Philippines where he is killed. One ship, the *Vittoria*, returns to Spain, with only 18 crew alive, the first men to circumnavigate the world.

1571 The battle of Lepanto (see below). Don John of Austria, commanding a fleet of

over 200 galleys and galleasses, defeats the Ottoman navy in the Gulf of Corinth, thereby destroying Turkish sea-power.

1577-80 Francis Drake sails around the world in his galleon *The Pelican* which he renames the *Golden Hind*.

1588 The Spanish Armada of some 130 vessels includes a few galleasses, but the battle is mainly between lower-built and more maneuverable English galleons and the Spanish "floating fortresses." The nimble English ships shadow the enemy, but their long-range gunnery does little serious damage.

1600 The galleon is at its most developed in the early 1600s. Many are three-deckers, carrying between 70 and 100 guns. Galleons now have a square mizzen sail and a spritsail topmast at the end of the bowsprit.

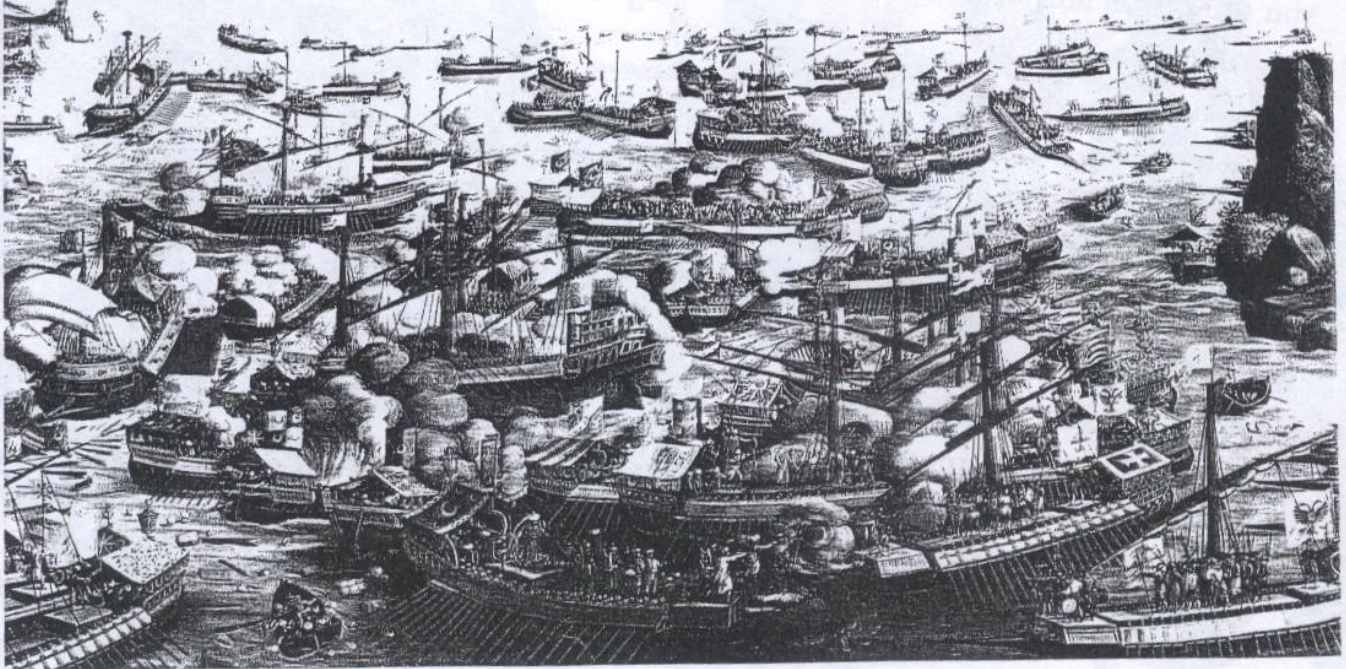
1600s Sea battles between French, Dutch, Spanish, and British vessels lead to construction of bigger warships. Changes in sails follow, and the towering upper-works of the galleon become more streamlined.

1700s Britain's lead in warship construction is challenged by the French and Dutch. The whipstaff is replaced by a wheel which swings the rudder through ropes and pulleys.

1805

The battle of Trafalgar. British navy under Horatio Nelson defeats a combined French and Spanish fleet off southern Spain. Warships of 2,000 tons, with 100 guns on three decks, fight at close quarters, firing terrible broadsides before boarding parties board the enemy ships.

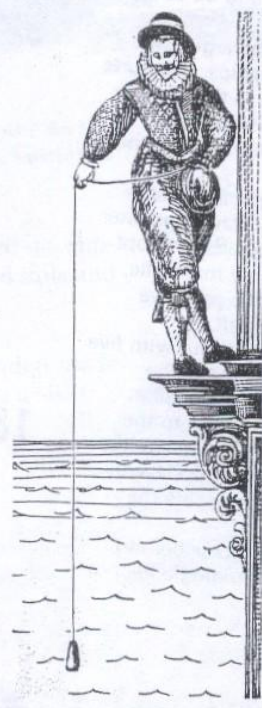
1550



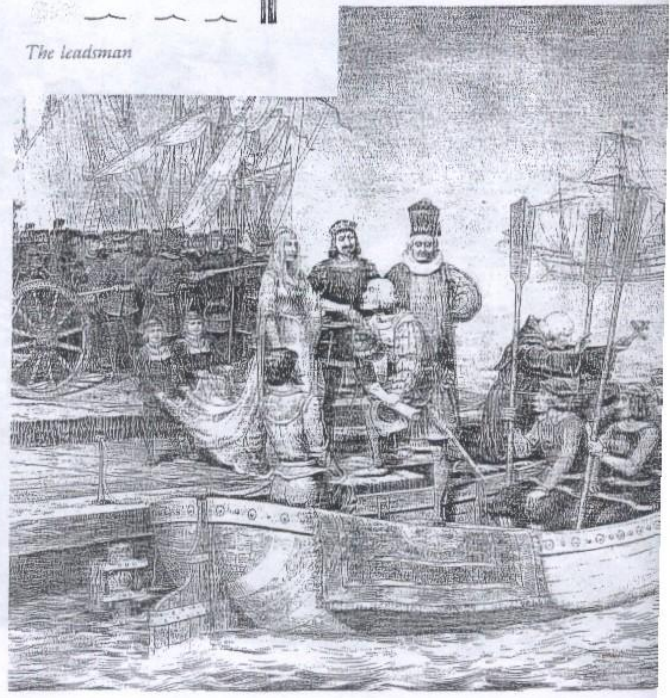
cross a familiar room in the dark without touching anything.

The leadsman's job was to find out how deep the water was at a given spot. He swung a lead sinker on a knotted rope into the water. The last knot left on the surface of the water told the depth. And if tallow were stuffed into the hole in the sinker, it could pick up samples from the ocean bottom and tell you whether you were in an area of mud, coral, or shale.

If you were a cabin boy in 1492, you would have found sailing uncomfortable, if not downright dangerous. You would have lived on salted meat and beans, with only wine and stale water to drink. A hot meal was a luxury. Bed was a straw pallet up on deck. There was little protection from the weather. If your clothes were wet there was no way to



The leadsman



Columbus set sail the same day the last Jews left Spain.



TRAVELERS half-expected to meet monsters in distant lands. Marco Polo traveled in the East between 1271 and 1295. He reported seeing men with faces in their chests, dog-headed men and men with one foot big enough to be used as a sunshade.



THIS ILLUSTRATION, from a textbook written in 1519, shows the goddess of astronomy and the famous geographer, Ptolemy, giving advice to a student of geography.

GEOGRAPHERS in their studies and sailors far out at sea used scientific instruments like astrolabes and armillary spheres to help them observe the movements of stars and planets.

A geographer studies an astrolabe.



The last days of sail

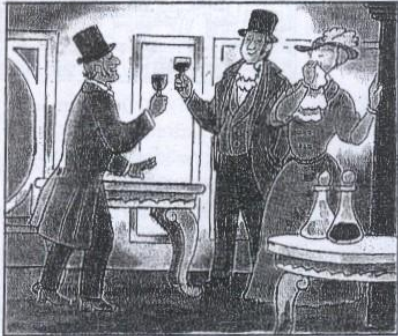
The biggest, fastest and most beautiful sailing ships were built in the 19th century. Cargoes were shipped all over the world by sail and shipowners with fleets of merchant ships

became very rich. Millions of people left Europe in the 1800s. They went to start new lives thousands of miles away in America, Australia and New Zealand.

Emigration by sail

Between 1819 and 1859, more than five million people emigrated from Europe.

They went hoping to make a better life for themselves in the new lands.



Wealthy passengers travelled in comfort: They relaxed in lounges during the long weeks of the voyage.

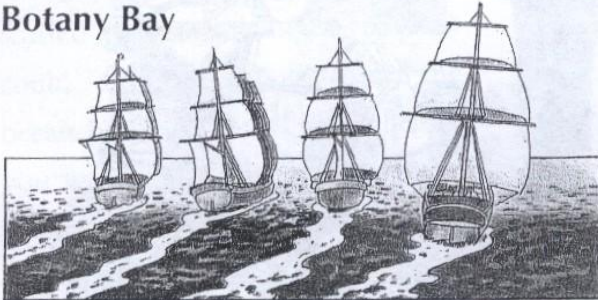


Poorer passengers slept in a space only 2m(6ft) long and 1m(3ft) wide. There were few toilets and no bathrooms.

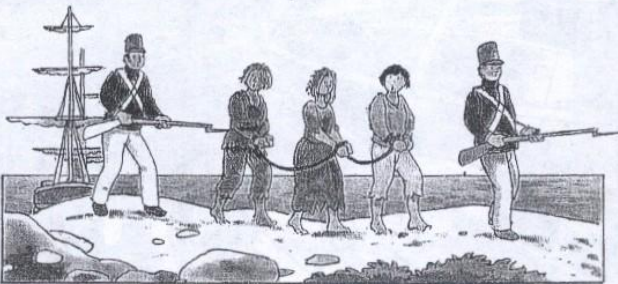


Emigrants had to bring their own food and cook it on deck. In bad weather, they were locked below.

Botany Bay

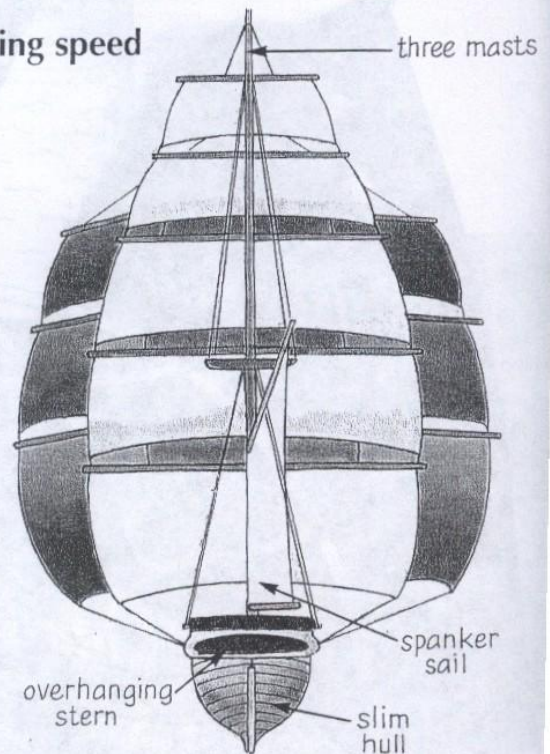


Between 1787 and 1840, the British government sent 74,000 criminals to Australia because the jails were full.



In January 1788, a fleet of 11 sailing ships arrived in Botany Bay, after eight months at sea. The 700 convicts on board became Australia's first settlers.

Sailing speed



Ships were now fitted with more sails. Their hulls were made longer and sleeker to cut through water more quickly.

Life at sea

Life for sailors in the 1700s and 1800s was harsh. They worked long, hard hours and

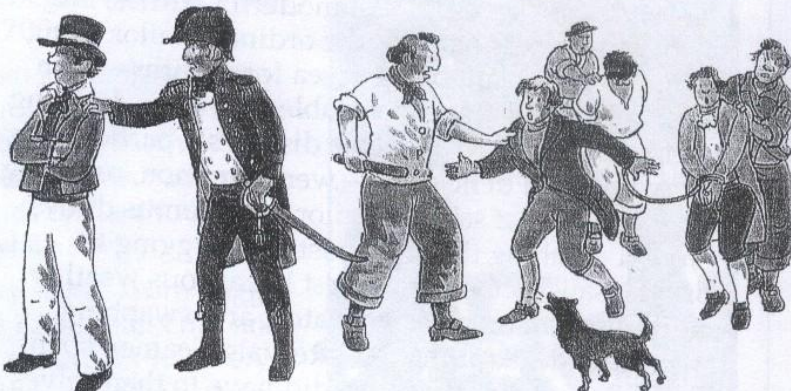
were punished for any offense. They were poorly paid and their food was often

bad. They died of fevers or of horrible wounds in battle.

The press gang

During a war, groups of seamen called press gangs captured able-bodied men and forced them to go to sea.

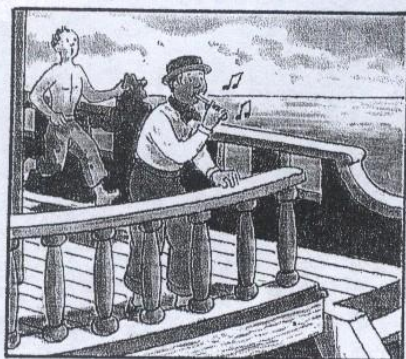
This cruel way of finding a crew for warships was called impressment. It was stopped in about 1850.



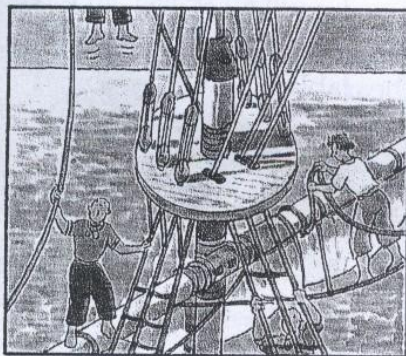
A sailor's day

A sailor's day at that time was divided into six periods of duty called watches. Each one was four hours long and was marked by the ship's bell.

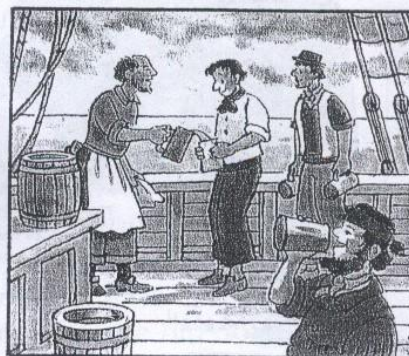
The ship's crew was split into two or three groups. These were also called watches. One watch could rest below decks while the others were on duty.



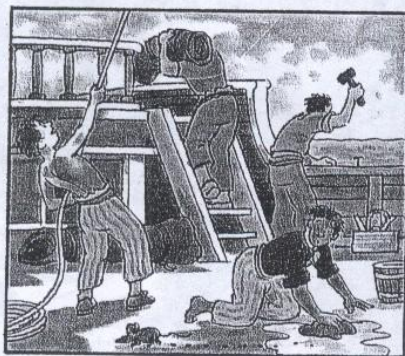
The sailor's day began when the boatswain blew his whistle. This woke the men on the first watch of the day.



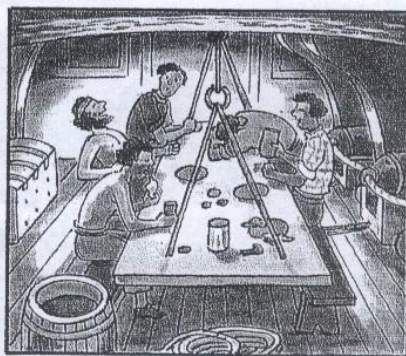
They climbed the masts to unfurl the sails. If a fair wind was blowing, the ship moved on its way.



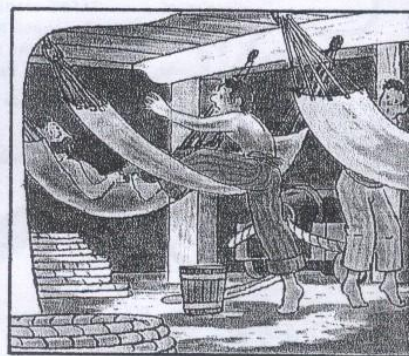
At about 11.30 am, sailors on British ships were given their daily ration of half-a-pint of rum and water, called grog.



During the day, the sailors cleaned weapons, washed the decks and paintwork and did repair work on the ship.



The men off duty had supper at 5 pm. They carried it down from the galley to the lower decks to eat.

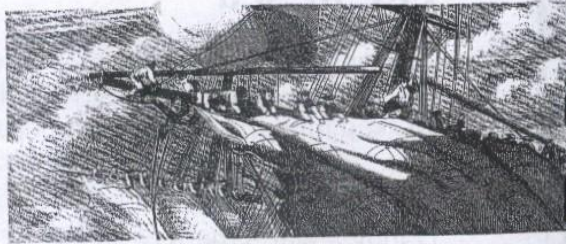


The sailors hung up their hammocks to sleep in at around 8 pm. They were only about 0.3m(1ft) apart.

Life at sea

BEFORE THE INTRODUCTION of modern luxuries, life on board ship was hard for the ordinary sailor. Long voyages often meant being at sea for months – even years. Fresh food was unavailable, and even drinking water could be scarce. Terrible diseases – particularly scurvy (vitamin deficiency) – were common, resulting in many deaths at sea. The sailor's numerous duties included climbing the high masts and rigging to work the sails (often in the most hazardous weather conditions), taking turns on watch, and swabbing down filthy decks at regular intervals. Seamen spent what time they did have to themselves on hobbies or games, or on playing pranks on fellow crew members. Life on board ship changed little between 1500 and 1850. After this, the introduction of steam power and more sophisticated navigational aids made the sailor's life much more bearable.

Sailors in rigging



PASSING THE TIME
Seamen on whaling ships often passed their spare time engraving designs on whales' teeth. The engraving was sometimes rubbed with black ink or soot to produce a clear image. This art is known as "scrimshaw."

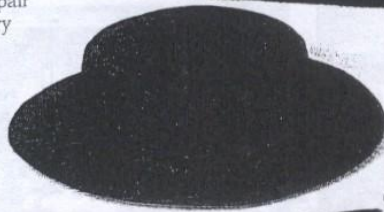
SAILOR'S SEA CHEST
Sailors stored all their belongings in a sea chest, which took up little room on board. These chests had to be strong, as they had a variety of uses; they were sometimes used as seats, tables, and even beds. This chest has the name and date of its owner painted on it and is full of the kind of objects it might have originally held.



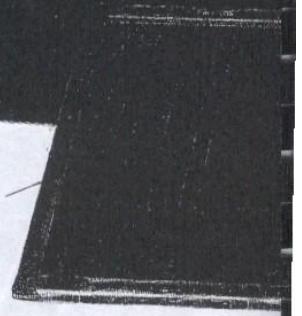
GOLD HOOPS
Sailors sometimes wore earrings. This gold pair belonged to a 19th-century American sailor named Richard Ward.

SEA BED
The hammock was adapted from a hanging bed Columbus discovered (pp. 22–23). Because the hammock swings from side to side, its occupant did not fall out in heavy seas.

Sailor's hat



18th-century log slate



Pencil for slate

Twist of tobacco

Sailmaker's bag

Fid for splicing ropes

Seam rubber for flattening seams

Palm to protect hand

Needles and case



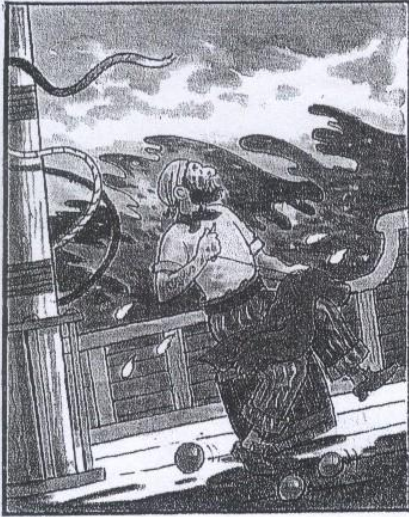
TOOLS OF THE TRADE
Few skills were more essential than that of the sailmaker. This bag contains the tools necessary for mending sails, repairing ropes, and sewing canvas.

Sailors' clothes

Sailors did not have uniforms until about 1850, although officers began wearing them in the 1700s.

A captain in the Royal Navy of about 150 years ago wore a long blue tail-coat with brass buttons. He had gold epaulettes on his shoulders and a white shirt.

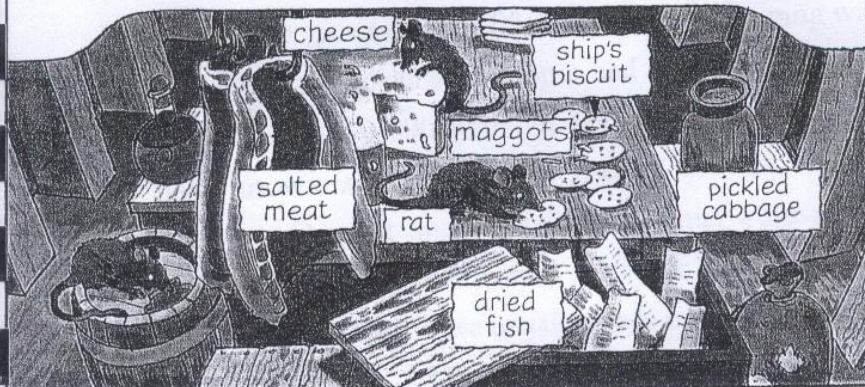
Ordinary sailors wore baggy trousers called breeches and a loose shirt. They had very few clothes and were given one afternoon each week to mend them.



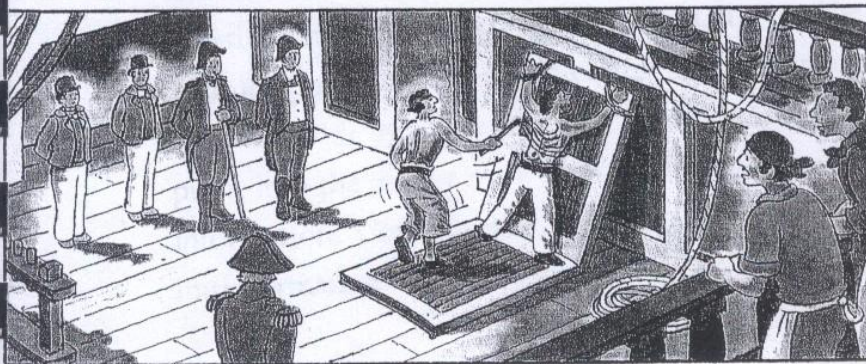
Ship's food

Food on board a ship during the 1700s and 1800s was unhealthy. Fresh fruit and vegetables soon rotted.

Sailors often ate only dry ship's biscuit, salted meat and dried fish. Cheese and flour became maggots.



Discipline on board



For a punishment, sailors were flogged with a whip called a cat o' nine tails. Although no sailor was

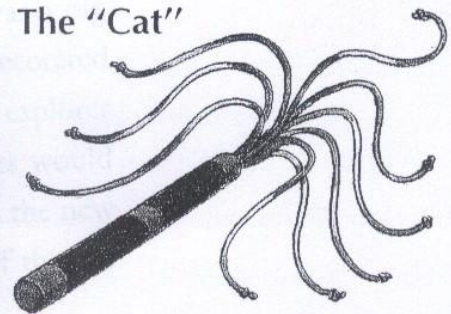
supposed to be given more than 12 lashes, some captains were brutal and gave more.

Scurvy



Until the 1700s, many thousands of sailors died of a horrible disease called scurvy. People did not know what caused it. In 1753, it was proved that oranges, lemons and limes cured scurvy, and a sailor's diet improved.

The "Cat"

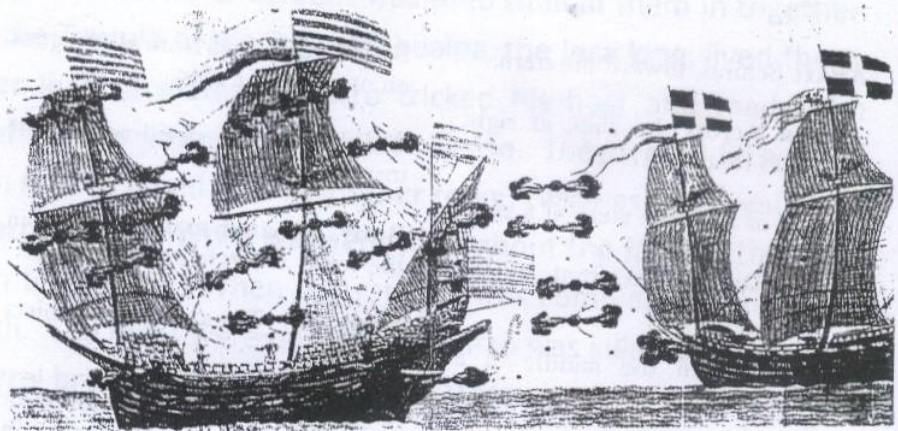


A cat o' nine tails had nine pieces of cord attached to its wooden handle. Each cord had three knots in it. Twelve lashes were enough to cut a man's back. Salt was rubbed into the cuts to heal them.

GLOSSARY OF TERMS

- Abaft** Behind, toward the stern.
- Abeam** Across the ship, at right angles to its length.
- Aft** At or near the stern of a ship.
- Ahead** Directly in front of the bows.
- Amidships** In the middle of a ship.
- Anchor** Heavy piece of iron which digs into the sea bed to hold a ship to the spot.
- Astern** Backward — behind the stern.
- Athwartships** Across the ship, from one side to the other.
- Awash** Level with the surface of the sea.
- Ballast** Heavy material such as stones in the bottom of the hold to help keep the ship upright.
- Beak** A strong projection of the prow (or bow) which smashed oncoming waves when a ship pitched or dipped low in a rough sea.
- Beam** Width of ship at its widest point.
- Berth** Place where a ship ties up.
- Bilge** The bottom of a ship.
- Bonaventure** An extra mizzen mast on a four-mast ship.
- Boom** A pole along the foot of a sail.
- Bow** The sharp front end of a ship.
- Bowsprit** A long spar at the bow.
- Bridge** Raised deck from which a ship is navigated.
- Broadside** Shots from all the guns on one side of a ship.
- Bulkhead** Wall dividing up the inside of a ship.
- Buoy** A floating marker moored in the water to guide or warn ships.
- Buoyancy** The ability of an object to float.
- Capstan** A revolving windlass or drum-shaped device for winding in anchor cable.
- Carvel-built** (Of a wooden ship): having its planks laid edge to edge.
- Caulking** Making seams between planks watertight with pitch (tar).
- Chart** Map of the sea and coastal waters.
- Clinker-built** (Of a wooden ship): having its planks overlapping.
- Deck** Nautical word for floor.
- Dock** The working area of a harbor where ships are loaded, unloaded and repaired.
- Draft** Depth of a ship below the water.
- Fathom** Unit of length used for measuring the depth of water, equal to 6 ft (1.83 m).
- Following wind** One blowing from astern (behind).
- Forecastle, or Fo'c'sle** Raised deck in the bows. Often used to describe accommodation in the bows for the crew.
- Forward** Near the front or bow.
- Freeboard** Height from waterline to the top of the hull.
- Galley** A ship's kitchen.
- Gear** Nautical word for machinery or equipment — e.g. steering gear, ship's gear (derricks, cranes etc. for loading cargo).
- Gunwale** (gunnel) Upper edge of a ship's or boat's side.
- Hatch** An opening in a deck, or its wooden cover.
- Heel** When a sailing ship is blown over to one side it is said to heel over.
- Helm** Steering control of a ship.
- Hogging** The tendency of a ship to droop at bow and stern when it rides over a wave.
- Hold** The lowest part of the hull where cargo is stored.
- Hull** The body of a ship.
- Keel** The main timber at the bottom of a ship (the spine).
- Knot** A speed of a nautical mile an hour.
- Lateen** A triangular sail which set along the ship ('fore-and-aft not across it).
- Latitude** Distance north or south of the equator, measured in degrees, from 0° on the equator to 90° at the poles.
- Leeward** Direction toward which the wind blows. The lee side of ship is therefore the sheltered side away from the wind.
- Longitude** Distance east or west of the Greenwich zero meridian measured in degrees east or west of Greenwich.
- Mizzen** Fore-and-aft sail; also the mizzen may refer to the mast itself.

Right: An illustration from a book printed in 1585 shows fire bombs and cannon balls headed for a Swedish ship. Other kinds of shot commonly used were explosive bombs (hollow iron balls filled with gunpowder); hot shot (solid balls which were heated before being placed in the gun) and chain shot (two iron balls linked by a chain).



Moor To secure a ship, either against a quay, or by tying it to a mooring buoy, or by dropping anchor.

Nautical mile A distance of 6,076.1 ft (1,852 m).

Orlop A deck beneath the lower gundeck and above the hold.

Pitching The plunging and rising movements of a ship as it rides across the waves.

Poop The aftercastle: a raised deck at the stern.

Port The left-hand side of a ship, looking forward.

Porthole An opening in the side of a ship to let in light and air and for cannon to fire through.

Quarterdeck Part of upper-deck between stern and mizzenmast.

Rake The slope of masts, funnels, bows, etc.

Ratlines Ropes knotted across the shrouds to provide a rope ladder to the masthead.

Rigging The ropes used to support masts, and to control sails and spars.

Rudder Large, flat wooden blade at the stern, used to turn a ship.

Sheet Rope used for setting and trimming a sail.

Shroud Rope from masthead to ship's side, supporting mast.

Spar Wooden pole such as mast or yard.

Spritsail A small square sail fitted to the bowsprit.

Square sail A sail set across the ship, from side to side.

Starboard Right hand side of ship.

Stay Rope which helps support a mast.

Stempost The curved timber at the bow to which a ship's sides are joined.

Stern The back of the ship.

Superstructure Upper parts of a ship, built on top of the hull.

Tiller Length of wood fitted to the top of the rudder, for steering.

Trim To adjust the balance of a ship or boat; to move yards or sails to suit wind. Also the way a ship floats in the water.

Wake or Wash The waves and foam caused by a moving ship.

Watch A spell of duty for a seaman.

Windward Direction from which the wind blows. The windward side is therefore the one exposed to the wind.

Yard A spar (or pole) slung across a mast to support a sail.