

THE AGE OF EXPLORATION

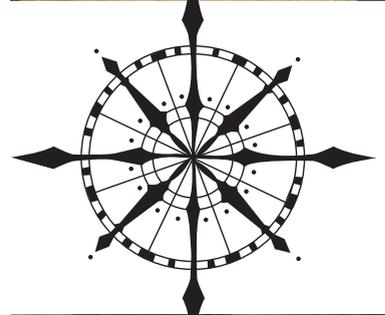
In the fifteenth century, sea-going explorers from Europe and Asia began to sail beyond what was then the known world. Between 1405 and 1433 Admiral Zheng He sailed all the way from China to Africa, coming into contact with many civilisations en route. After 1419 several European nations began to explore, the Portuguese sailing south down the west coast of Africa, the Spanish crossing the Atlantic towards the Caribbean and South America, and the British and French exploring North America. Unlike Admiral Zheng He, the Europeans explored with the intention of colonising



the places they found. They conquered the new lands and exploited them for all the gold, silver and wildlife that they could find. For the indigenous people of these lands, contact with the European colonisers was very destructive and little remains of their civilisations. In contrast, for the Europeans colonisation often meant acquiring fame and wealth beyond their wildest dreams.

KEY WORDS AND TERMS

aboriginal	Those people who lived in a land from the earliest times. The word is often used to describe the people who lived in a particular place before the Europeans first made contact.
caravel	A small three-masted ship used by the early Portuguese and Spanish explorers
circumnavigation	The act of sailing around the world
Equator	The horizontal line drawn around the Earth at the mid-point between the two Poles, which is also its widest point
hourglass	An instrument used to measure time, consisting of two chambers of glass with a quantity of sand inside. The sand takes an hour to fall from the top chamber to the bottom one.
lateen sails	Ships' sails that are hung in a triangular shape
latitude	A location on the Earth's surface measured by its distance either north or south from the Equator
longitude	A location on the Earth's surface measured by its distance either east or west of a meridian drawn through Greenwich in London, England
meridian	Any circle drawn around the world that passes through both Poles
New World	The general name given by European explorers to the places they discovered
Renaissance	Rebirth or revival. The period in Europe from the fourteenth to the sixteenth century when famous new discoveries and inventions were made in art, sculpture, science and medicine
ship's log	A detailed written account of a voyage kept by the ship's captain
square-rigged	A description of a ship that has its sails hung in a square shape



LEFT A 16th century map of the world



TIMELINE

1402–1431	Admiral Zheng He of China makes his voyages of trade and exploration
1419	Prince Henry of Portugal sends his first voyage down west coast of Africa
1492	Columbus becomes the first European to land on the American continent
1497	Vasco da Gama rounds the Cape of Good Hope, reaching India by April 1498
1519–1522	Ferdinand Magellan leads the expedition that becomes the first to circumnavigate the world
1768	James Cook sets off on his first voyage, heading to Tahiti and the Southern Continent
1772	On Cook's second voyage he uses Harrison's chronometer to measure longitude

EAST MEETS WEST

The people of Europe had known for centuries that there were civilisations and enormous land masses to the east. Alexander the Great had conquered huge territories in Persia during the fourth century BC and the Roman Empire had spread into the Middle East. Contact with these eastern lands was broken during the Dark Ages of the Medieval period and only re-established after the Crusades, particularly after the return of Venetian explorer Marco Polo from China in 1295. The eastern Mediterranean region again became the hub of important trading routes between India and China in the east, Africa in the south, and Europe in the west.

In contrast, during the fifteenth and sixteenth centuries the nations on the western edge of Europe, including Portugal, Spain, Britain and Holland, which could not trade with the eastern civilisations, became fascinated with the idea of exploring the world to their west. Some thought it would provide a short route to India and China, while others believed that a **New World** lay undiscovered.

THE EXPLORERS' MOTIVES

Trade

Exploration was a crucial part of the fierce competition between European nations. The lands and people that were colonised could be exploited to make money for the nation that found them. For example, when the Portuguese discovered the island of Madiera in 1420, they found that it was uninhabited and used the land to produce



Many explorers hoped to find great riches in the new lands, like this solid gold religious statue from South America.

the valuable commodities of sugar and wheat. The west coast of Africa provided the Portuguese, Spanish and British with people who could be used as slaves in the plantations of their new colonies.

The lust for gold

Some explorers were motivated by the opportunities to make huge fortunes from gold and jewels, which were said to be plentiful in the New World. One powerful story was that of El Dorado, a fabulous city of gold. Great riches were said to be assured to anyone who found and conquered this place. However, although the Spanish took plenty of gold from the Americas, the El Dorado story turned out to be nothing more than a myth.

The influence of religion

Other explorers were motivated by the desire to spread the Gospel and convert the local people to Christianity. Indeed, the Spanish Conquistadors often used religion as justification for their conquests. This was particularly the case with Pizarro's conquest of the Inca Empire, when he imprisoned the Sapa Inca Atahualpa on the grounds that he refused to convert to Christianity (see Chapter 9).

The influence of religion was also important in another way. Pope Alexander VI was worried by the competition for colonies between the two largest Catholic countries, Portugal and Spain. He was particularly worried that the fighting between the two countries might allow Protestant countries like Britain and Holland to seize territories. In 1494 the Pope's representatives therefore negotiated the Treaty of Tordesillas, which divided the New World between the two Catholic states. Those territories lying east of the meridian 370 leagues (approximately 1800 kilometres) west of the Cape Verde Islands would belong to Portugal, the lands to the west to Spain.

SOURCE

8.1



Using historical evidence

HOW EUROPE BENEFITED FROM COLONISATION:

By 1600, 200 ships a year entered Seville [in Spain] from the New World. In the peak decade of 1591–1600, 19 million grams of gold [670 000 ounces] and nearly 3 billion grams of silver [105.8 million ounces] came with them ... As overseas trade expanded, Europe received a wide range of new staple foods [like potatoes and maize] as well as exotic ‘colonial’ products including pepper, coffee, cocoa, sugar and tobacco ... The haricot bean, which was first recorded in France in 1542, the tomato, which spread far and wide via Italy, and the capsicum pepper ... were all American in origin.

Source: N. Davies, *Europe: A History*, Pimlico, London, 1996, pp. 510–13.

CHARLES DARWIN WRITING DURING HIS JOURNEY TO BATHURST, JANUARY 1836:

The number of aborigines is rapidly decreasing ... This decrease, no doubt, must be partly owing to the introduction of spirits [alcohol], to European diseases (even the milder ones of which, as the measles, prove very destructive), and to the gradual extinction of the wild animals ...

Besides these several evident causes of destruction, there appears to be some more mysterious agency generally at work. Wherever the European had trod, death seems to pursue the aboriginal. We may look to the wide extent of the Americas, Polynesia, the Cape of Good Hope, and Australia and we find the same results. Nor is it the white man alone that thus acts the destroyer; the Polynesian of Malay extraction has in parts of the East Indian archipelago thus driven before him the dark-coloured native. The varieties of man seem to act on each other in the same way as different species of animals—the stronger always extirpating (destroying completely) the weaker.

Source: Charles Darwin, *The Voyage of the Beagle*, 1839, chapter 19.

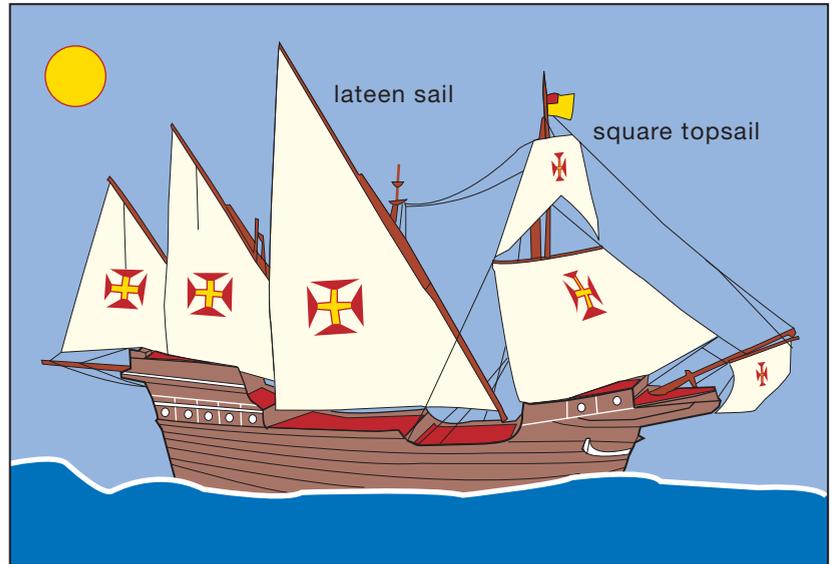
- 1 Using the first extract, explain the many ways in which Europe had benefited from the colonisation of the New World.
- 2 To get an idea of how Spain benefited financially by colonising South America, find out how much money, in Australian dollars, 19 million grams of gold would now be worth. You could look in the Business section of a major newspaper, or do a search on the Internet at <http://www.goldcalculator.com>. Make sure you use the price for grams or kilograms.
- 3 What did Darwin claim was the cause of the deaths of aboriginal people around the world as a result of meeting Europeans?
- 4 Where around the world had Darwin seen these events occur?
- 5 In what way does Darwin claim that humans act like animals?

KEY TECHNOLOGICAL DEVELOPMENTS

Ship design

Improvements in the design of ships meant that by the end of the fifteenth century explorers could travel further than ever before and return unharmed to pass on their knowledge. The **caravel** was developed by the Portuguese from small fishing boats, and it was used extensively for exploration from 1441 onwards as it was so sturdy. Its lateen (triangular) sails also made it very manoeuvrable into the wind and its shallow hull meant that it could sail close to the shore. Christopher Columbus used two caravels in his first voyage of 1492, the *Niña* and the *Pinta*. Both were probably no more than 25 metres long and weighed roughly 60 tonnes.

A Portuguese caravel



Sailors used an astrolabe to measure latitude.

Navigation

It was crucial that the explorers were able to work out where they had been and to create rough maps of their discoveries. This would allow them to get home, and enable others to retrace their journey. However, their navigational instruments were very basic and modern sailors would be horrified if they had to rely on them. Yet, in the right hands, they proved to be accurate enough to do the job required.

The vital measurements taken were of direction, latitude and speed. To measure direction, sailors would use their mariners' compass, while to measure **latitude** they used the astrolabe (see p. 165), with some precision. Finally, speed would be calculated using a log and an **hourglass**. The log was a length of rope with knots



LEFT Harrison's marine chronometer

FAR LEFT A mariner's compass

**Internet sites**

<http://www.nps.gov/fora/navigation.htm>

(a general explanation of navigation equipment)

<http://www.astrolabes.org/MARINER.htm>

<http://www.nmm.ac.uk/site/navId/005001004001> (the search for longitude)

<http://www.sailingships.hnpl.net/pages/history/evolution.htm> (caravels)

at uniform intervals. It would be let out from the stern of the ship and, using the hourglass, the time taken for the knots to pass through the sailor's hand would be recorded. However, the problem of calculating **longitude** was not officially solved until the invention of the first accurate and easily portable timepiece, by John Harrison in 1773. This timepiece was first used by Captain Cook on his second voyage to the Pacific.

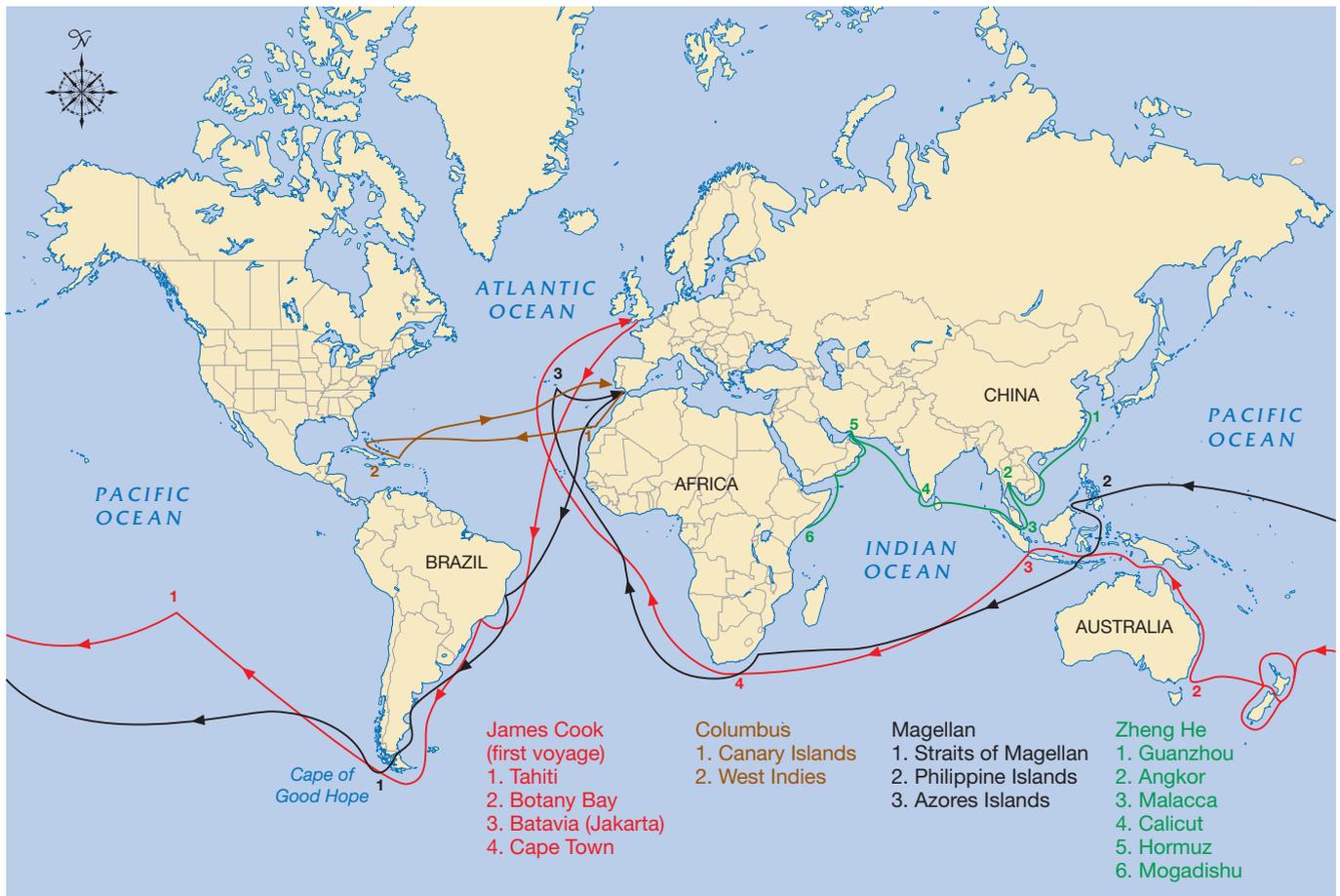
FAMOUS EXPLORERS AND THEIR VOYAGES



This monument near Lisbon commemorates famous Portuguese explorers. Henry the Navigator is at the prow holding a small caravel, followed by Vasco da Gama, Pedro Álvares Cabral (the first European to land in Brazil), Ferdinand Magellan (who crossed the Pacific in 1520) and many others.

Vasco da Gama

In 1419 Prince Henry of Portugal sent his first voyage of exploration down the west coast of Africa. Known as 'Henry the Navigator', he equipped many such voyages, hoping to find gold and people to convert to Christianity, and he invested heavily in new methods of ship-building and navigation. This exploration continued long after his death in 1460. In 1497 Vasco da Gama rounded the Cape of Good Hope and pressed on up the east coast of Africa and Arabia. He eventually reached India, and a highly profitable trading route was created between Portugal, India and the Spice Islands (a group of islands between Papua New Guinea and Sulawesi, now part of Indonesia). Huge profits were made carrying pepper and spices such as cinnamon and nutmeg back to Europe. Vasco



da Gama returned to Portugal in July 1498 to a hero's reception and was showered with honours and money. In 1502 he set out again with heavily armed ships to defeat the African tribes and Arabian kingdoms which threatened Portugal's new trading route. He died in India in 1524.

Journeys of Cook, Columbus, Magellan and Zheng He

Christopher Columbus

Christopher Columbus was born in Genoa, Italy. During the 1470s he tried in vain to persuade the King of Portugal to help him discover a route to the Far East by sailing westwards across the Atlantic Ocean. In frustration he turned to King Ferdinand and Queen Isabella of Spain, and in 1492 he received their

Christopher Columbus (1451–1506) receiving gifts from the local chief Guacanagari in Hispaniola (modern-day Haiti), by Theodore de Bry (1528–98)



approval and enough money to fund his first voyage. Columbus took three ships, the *Santa Maria*, the *Niña* and the *Pinta* and set sail on 3 August 1492 from Palos in Spain. On 12 October land was sighted and Columbus went ashore and claimed it for Spain. He had landed on the Bahamas but assumed it was part of India and referred to the local people as Indians. He continued his voyage and landed on Cuba and the island of Hispaniola. He returned to Spain, arriving in March 1493, without the *Santa Maria* which had run aground and was destroyed. Columbus received rewards for his discoveries, although there was disappointment that large quantities of gold had not been discovered. Further voyages in 1493, 1498 and 1502 led to more discoveries. Columbus died in 1506 in Valladolid, Spain.

Ferdinand Magellan

Although born and brought up in Portugal, Ferdinand Magellan is famous for a voyage of exploration on behalf of the Spanish. Commissioned by Emperor Charles V, Magellan set out in September 1519 towards the east coast of South America. Having put down a mutiny among his men, Magellan then pushed on southwards and discovered a channel across the southern tip of South America that can be taken to avoid sailing around the treacherous Cape Horn. His fleet then sailed north in the newly discovered ocean that Magellan called the *Mar Pacifico*. In March 1521 Magellan arrived in the Philippines and was killed by a poisoned arrow a month later when fighting with the local people. His crew was able to return home in September 1522, having carried out the first **circumnavigation** of the world, proving both that the Americas are separate from Asia and that the Earth is round.

Engraving of Captain
James Cook



James Cook

In August 1768 Lieutenant James Cook left London on his ship the *Endeavour* to sail to Tahiti in the Pacific to conduct scientific observations of the planet Venus. Once the observations were completed, and following instructions, Cook opened a package of secret orders, which ordered him to sail south to find whether there was a southern continent. In October 1769 he reached the shores of New Zealand and proceeded to chart the coastline of the two main islands. From there he went north-west and in April 1770 he landed in Australia. Following a near-fatal accident in June 1770 when the *Endeavour* smashed onto coral reefs off Cape York in Queensland, and the loss of many crew members to diseases like typhoid in Batavia (modern-day Jakarta), Cook arrived back in Britain on 13 July 1771.

On his second voyage, in 1772, Cook was still looking for the southern continent and he sailed into the bitterly

cold region of Antarctica. Cook famously used John Harrison's chronometer to measure longitude. He praised its accuracy, which helped to convince others to adopt it. Cook was killed on his third voyage, on 14 February 1779 in Hawaii, in a skirmish with the local people.

Admiral Zheng He

Zheng He was sent on voyages of exploration by Emperor Zhu Di of the Ming Dynasty, who came to power in 1402. His fleets of anything up to 300 ships journeyed south along the coast to modern-day Vietnam, Thailand, Malacca in Malaysia, Calicut in India and Hormuz in Arabia. He established trading links with these places, offering blue and white porcelain, jade, lacquer and silk textiles. In return, the Chinese received valuable spices, gold cloth, amber, incense, tin, and wild animals such as giraffes, lions, leopards, elephants and parrots. The largest of his ships were said to be over 120 metres long and 45 metres wide, far larger than any vessel of exploration built by the Europeans. This period of enormous discovery and trade by Zheng He was brief. With the death of Emperor Zhu Di in 1424, his successors started to turn their back on foreign exploration. Zheng He's last voyage was in 1431. Since government records on Zheng He's journeys were deliberately destroyed in the fifteenth century, historians are left to piece together the clues as to what he did find and wonder what might have been if the Chinese had continued to explore.

Admiral Zheng He's voyages of exploration came to an end in 1431.



Internet sites

- <http://www.newadvent.org/cathen/06374a.htm> (Vasco da Gama)
- <http://www.mariner.org/age/columbus.html> (voyages of Columbus)
- <http://www.stemnet.nf.ca/CITE/exmagellan.htm> (Ferdinand Magellan)
- <http://www.nmm.ac.uk/> (James Cook)
- <http://www.time.com/time/asia/features/journey2001/> (Admiral Zheng He)

