

# RECORD BREAKERS

## People and Places



Written by Neil Grant

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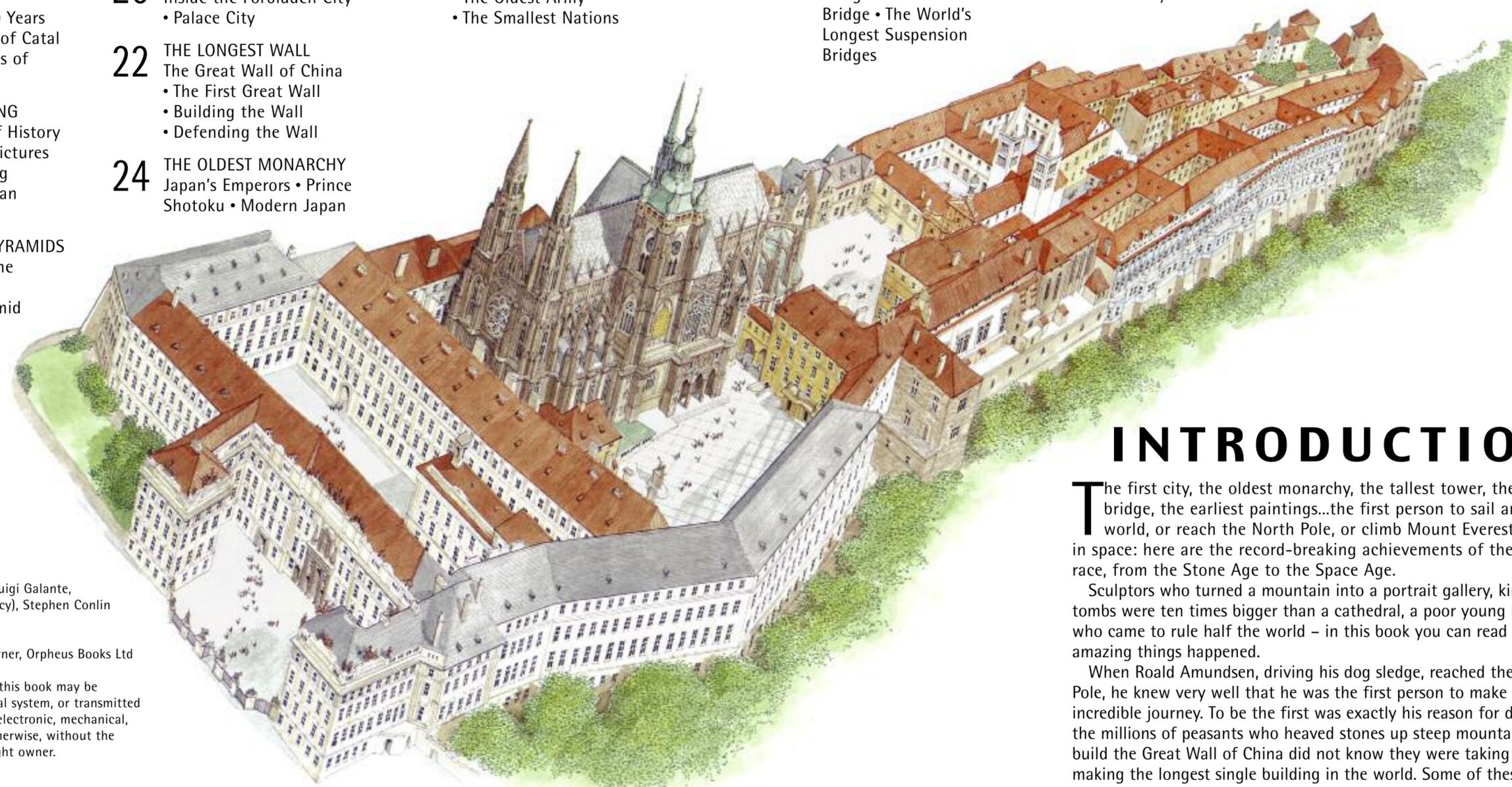
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## INTRODUCTION

The first city, the oldest monarchy, the tallest tower, the longest bridge, the earliest paintings...the first person to sail around the world, or reach the North Pole, or climb Mount Everest, or walk in space: here are the record-breaking achievements of the human race, from the Stone Age to the Space Age.

Sculptors who turned a mountain into a portrait gallery, kings whose tombs were ten times bigger than a cathedral, a poor young herdsman who came to rule half the world – in this book you can read how these amazing things happened.

When Roald Amundsen, driving his dog sledge, reached the South Pole, he knew very well that he was the first person to make that incredible journey. To be the first was exactly his reason for doing it! But the millions of peasants who heaved stones up steep mountainsides to build the Great Wall of China did not know they were taking part in making the longest single building in the world. Some of these records were planned. Some happened by chance. But in many different ways they all show what astonishing things human beings can do.

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Illustrations by Simone Boni, Luigi Galante, Rosanna Rea (The McRae Agency), Stephen Conlin

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ISBN

Printed and bound in

# WORLD RECORD HOLDERS

*First from every continent*

## key

- 1 Gateway Arch, St. Louis, USA *Tallest monument* 192 m
- 2 Mount Rushmore, South Dakota, USA *Largest sculpture*
- 3 CN Tower, Toronto, Canada *Tallest self-supporting structure* 553 m
- 4 Grand Central, New York, USA *Largest railway station* 19 ha
- 5 St. John the Divine, New York, USA *Largest cathedral (by volume)* 476,350 cum
- 6 Louisiana Superdome, New Orleans, USA *Largest domed structure* 5.26 ha
- 7 Cholula, Mexico (now built over by a church) *Largest pyramid* 18 ha
- 8 Mexico City *Second largest city* 23,913,000 people
- 9 La Paz, Bolivia *Highest capital city* 3630 m above sea level
- 10 Ushuaia, Argentina *Southernmost town*
- 11 Greenland *Least densely-populated country* 0.03 people per sq km
- 12 Ny Ålesund, Svalbard *Northernmost village*
- 13 Hradcany, Prague, Czechoslovakia *Largest ancient castle* 267,500 sq m
- 14 Heathrow Airport, London, UK *Most international traffic* About 61,300,000 passengers annually
- 15 Ulm Cathedral, Germany *Tallest steeple* 161 m
- 16 Seville Cathedral, Spain *Largest cathedral (by area)* 116 m long, 76 m wide
- 17 Vatican City State *Smallest country* 0.44 sq km
- 18 Jericho, West Bank, Israel *Oldest city* Built about 10,000 years ago
- 19 Saqqara, Egypt *Oldest pyramid* Built 2700 BC
- 20 Lake Volta, Ghana *Largest reservoir (by area)* 8480 sq km
- 21 Dinka people, Sudan *Tallest people* Average 2.1 m tall
- 22 Bambuti people, Congo *Shortest people* Average 1.4 m tall
- 23 Burj Dubai, United Arab Emirates *Tallest self-supporting structure* 818 m (under construction; scheduled for completion 2009)
- 24 Russia *Largest country* 17,075,400 sq km
- 25 Forbidden City, Beijing, China *Largest palace* About 1 sq km
- 26 Seikan rail tunnel, Japan *Longest tunnel* 54 km
- 27 Tokyo-Yokohama, Japan *Largest city* 28,447,000 people
- 28 Amida Buddha, Ushiku City, Japan *Tallest statue* 120 m
- 29 Akashi-Kaikyo Bridge, Japan *Longest suspension bridge* 1990 m
- 30 Shanghai, China *Busiest port* 443 million tonnes of cargo handled annually
- 31 Shah Faisal, Islamabad, Pakistan *Largest mosque* 19 ha
- 32 Angkor, Cambodia *Largest temple complex* More than 250 sq km
- 33 Sultan's Palace, Brunei *Largest residential palace*
- 34 Taipei 101, Taiwan *Tallest building* 449 m
- 35 Borobudur, Indonesia *Largest Buddhist temple* 15,000 sq m
- 36 Sydney Harbour Bridge, Australia *Widest long-span bridge* 49 m wide
- 37 Trans-Australia line, Nullarbor Plain *Longest straight railway track* 478 km



### THE LARGEST CITIES

	approximate population
1 Tokyo, Japan	35,200,000
2 Mexico City, Mexico	19,400,000
3 New York, USA	18,700,000
4 São Paulo, Brazil	18,300,000
5 Mumbai, India	18,200,000
6 Delhi, India	15,000,000
7 Shanghai, China	14,500,000
8 Kolkata, India	14,200,000
9 Jakarta, Indonesia	12,200,000
10 Buenos Aires, Argentina	12,500,000

*figures are for the entire built-up area*

### THE LARGEST COUNTRIES

	sq km
1 Russia	17,075,400
2 Canada	9,976,139
3 China	9,596,961
4 USA	9,372,614
5 Brazil	8,511,965
6 Australia	7,713,364
7 India	3,287,590

### THE MOST POPULOUS COUNTRIES

	population
1 China	1,321,800,000
2 India	1,169,000,000
3 USA	303,300,000
4 Indonesia	231,600,000
5 Brazil	187,500,000
6 Pakistan	161,600,000
7 Bangladesh	158,700,000
8 Nigeria	148,100,000
9 Russia	142,500,000
10 Japan	127,700,000
11 Mexico	106,500,000
12 Philippines	88,700,000

# THE FIRST ARTISTS

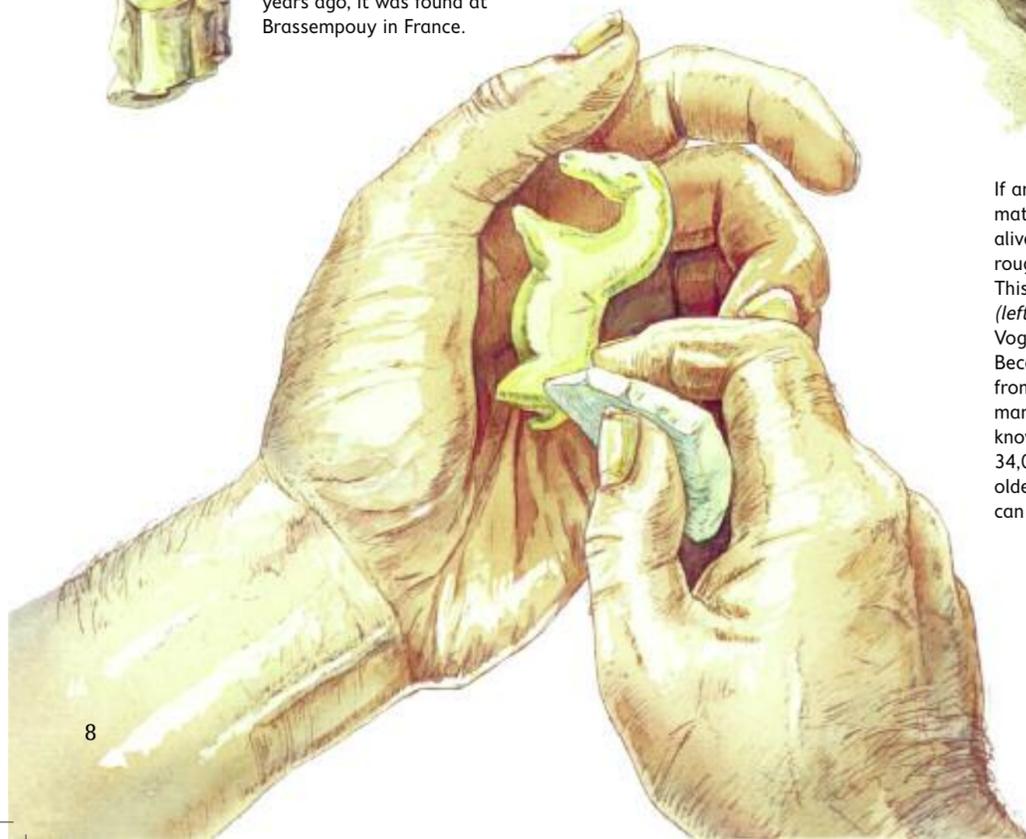
## Stone age paintings

If you give a piece of paper and a pencil to a small child, he or she will probably draw a picture (usually a face). Human beings also made pictures before they learned to read or write – some thousands of years before writing was invented (see page 96).

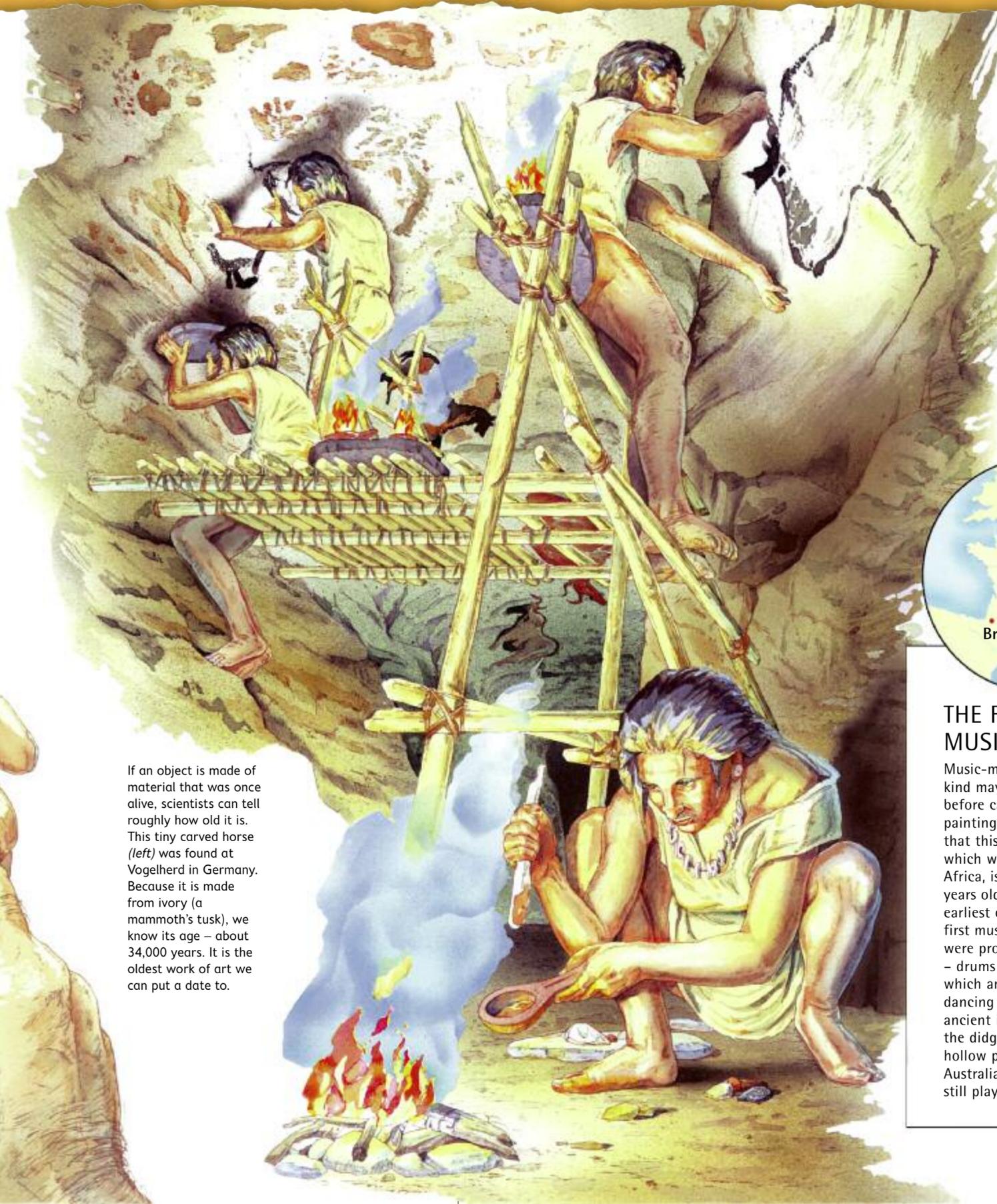
The earliest works of art that have been discovered so far are small carvings made from bone or stone. They were usually small human figures or animals. Some of the figures are of plump women, between 11 and 15 centimetres tall. They must have been handled and carried about quite often because they are highly polished. Perhaps these little figures, called 'Venuses' after the Greek goddess of love, were meant to bring good luck in child-bearing. Naturally, the more children mothers produced, the stronger the tribe would grow.



This head, only 3.8 cm high, may be one of the oldest portraits of a human being. Carved from ivory 25,000 years ago, it was found at Brassempouy in France.



If an object is made of material that was once alive, scientists can tell roughly how old it is. This tiny carved horse (left) was found at Vogelherd in Germany. Because it is made from ivory (a mammoth's tusk), we know its age – about 34,000 years. It is the oldest work of art we can put a date to.



### THE CAVE PAINTERS OF LASCAUX

In 1940 four boys discovered a hole in the ground near Lascaux in France. They climbed down and found themselves in a system of caves. By the light of their lamp they saw, to their amazement, that the walls were covered with lifelike paintings of animals. This underground art gallery is now one of the most precious treasures in Europe.

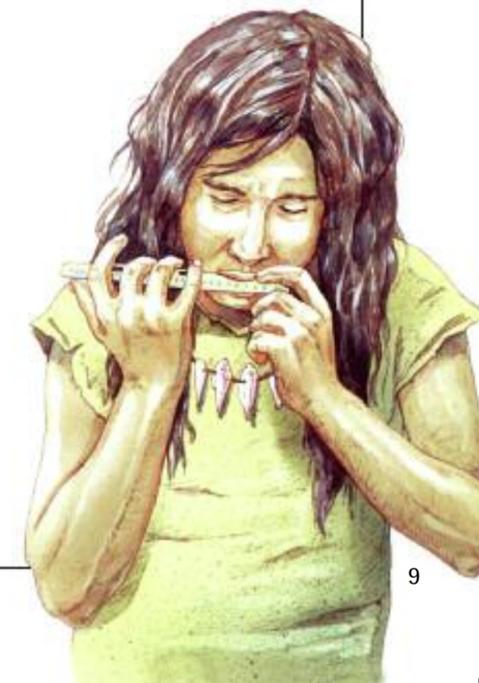
The paintings on the walls, some of the earliest known, were made between 10,000 and 18,000 years ago. They were painted by hunters sheltering in the caves, who worked by the light of burning pine branches. These prehistoric painters, using colours made from powdered rock or plants, were as skilful as any modern painter. But why did they spend so

much time making paintings that no-one could see? No one knows for sure, but the most common animals they painted were large grazing animals such as deer, wild cattle and horses. These were the animals they hunted. The paintings may have been meant as offerings to the gods, urging them to bring success to the huntsmen.



### THE FIRST MUSIC

Music-making of some kind may have come before carving or painting. The bone whistle that this girl is playing, which was found in North Africa, is thousands of years older than the earliest carvings. But the first musical instruments were probably percussion – drums and rattles – which are good for dancing to. Some very ancient instruments, like the didgeridoo (a long, hollow pipe) of the Australian Aborigines, are still played today.

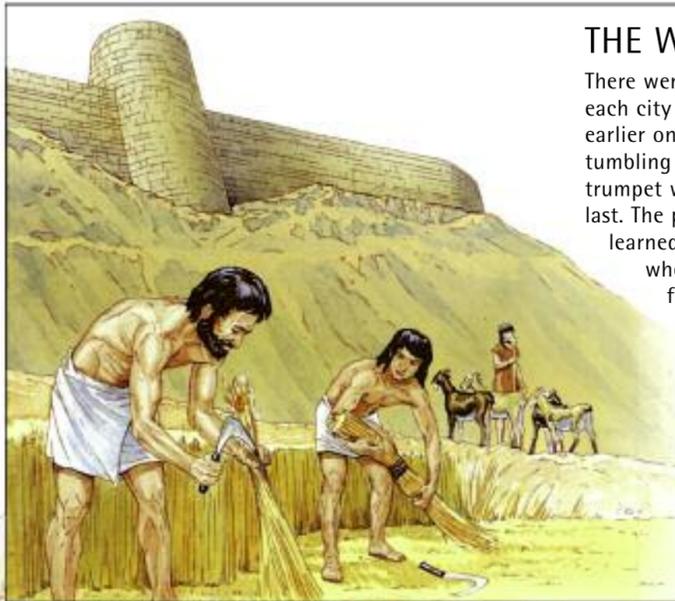


# THE FIRST CITIES

## Town life 10,000 years ago

### THE WALLS OF JERICHO

There were many cities of Jericho, each city rebuilt over the ruins of an earlier one. The walls that came tumbling down when Joshua blew his trumpet were not the first – or the last. The people of the first Jericho learned how to cultivate wild wheat. They worked in the fields by day and stayed safe in their houses behind walls at night. A watchman probably kept guard from the round stone tower.



At Jericho, west of the River Jordan in Palestine, there is a spring, which provides water for growing crops. That spring was there 10,000 years ago. It may be the reason why people first settled at Jericho, the oldest-known city in the world.

The earliest human beings were nomads who never lived in one place for long. They ate wild plants and hunted animals for food. When the food supply ran short, they moved on. About 12,000 years ago they discovered how to grow crops. They became farmers, living all year round in one place, sowing and harvesting grain and keeping herds of animals.

Once people settled down in villages, many things became possible. It was not necessary for everyone to spend their time getting food. Farmers provided the food while some people did other work. They became builders and craftsmen, merchants and soldiers, teachers and priests. Civilization had arrived.

Town life first began in the Middle East, the countries around the eastern end of the Mediterranean Sea. The very first villages were near the mountain slopes where wild cereals grew. Most of them were also near rivers, like the Tigris and Euphrates and the Nile, where the yearly floods gave rich, damp soil. Small hills, called tell in Arabic and huyuk in Turkish, mark the remains of ancient villages.

Some grew larger, with walls, towers and homes made of mud-bricks. They were the first cities.

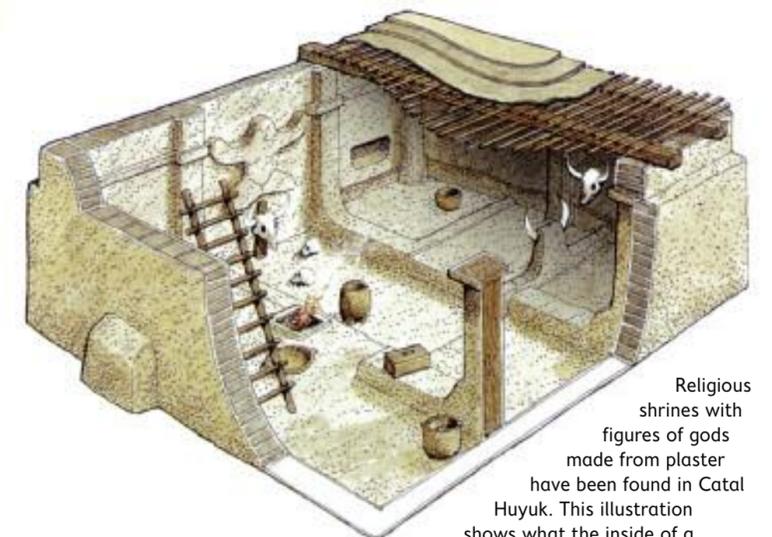
### CRAFTSMEN OF CATAL HUYUK

Pictured here is the ancient city of Catal Huyuk, in modern Turkey. It is almost as old as Jericho. Built of dried clay brick, it had no walls. The houses were packed together with ladders linking one roof with another. Once the ladders were taken away, entry was almost impossible. If attacked, Catal Huyuk would become like a snail hidden away inside its shell.

Craftsmen made ornaments and tools out of obsidian (a hard, glass-like mineral) and copper, which they gained through trade. They made decorated pottery and painted the walls of their houses with scenes of hunting.



Ancient cities lay in the 'Fertile Crescent', a band of good farming land stretching from Egypt up to southern Turkey and down to the Persian Gulf.



Religious shrines with figures of gods made from plaster have been found in Catal Huyuk. This illustration shows what the inside of a shrine looked like.

# THE FIRST WRITING

## The beginning of history

Imagine what the world would be like if no one could read or write! There would be no way of sending messages, keeping records or learning new facts, except by speech.

Writing is a way of recording language by symbols. In languages like English or Russian these symbols are the letters of the alphabet. English has thousands of words, yet we can write them all using just 26 letters. But making words out of letters is not the only way of writing. People used a form of written language long before an alphabet existed.

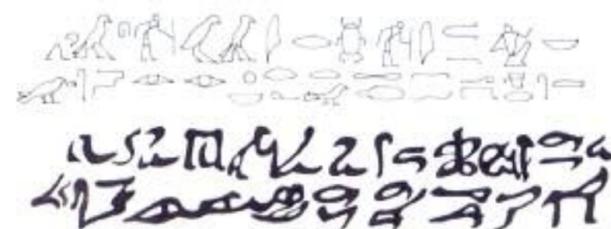
The development of writing as we know it was a very long process, taking thousands of years. It started where civilization began, in the ancient land of Mesopotamia (roughly, modern Iraq). The first things people wanted to record were lists, say, of the animals owned by a farmer. The symbols that stood for these things were, simply, pictures. The symbol for a cow, for example, was a picture of a cow's head. You could make a new word by putting two signs together. The sign for 'woman' and the sign for 'mountains' written together, meant 'foreign woman' ('woman from beyond the mountains').



### WRITING WITH PICTURES

The first writing in picture symbols, or pictograms, that has been discovered so far comes from Uruk, a city of the Sumerians in Mesopotamia. It consists of records of goods and food supplies for a temple, written on slabs of clay with a pointed stick or reed. The clay slabs (above) have lasted very well. We can still read them although they were written 5300 years ago.

Writing cuneiform with a reed pen (below)



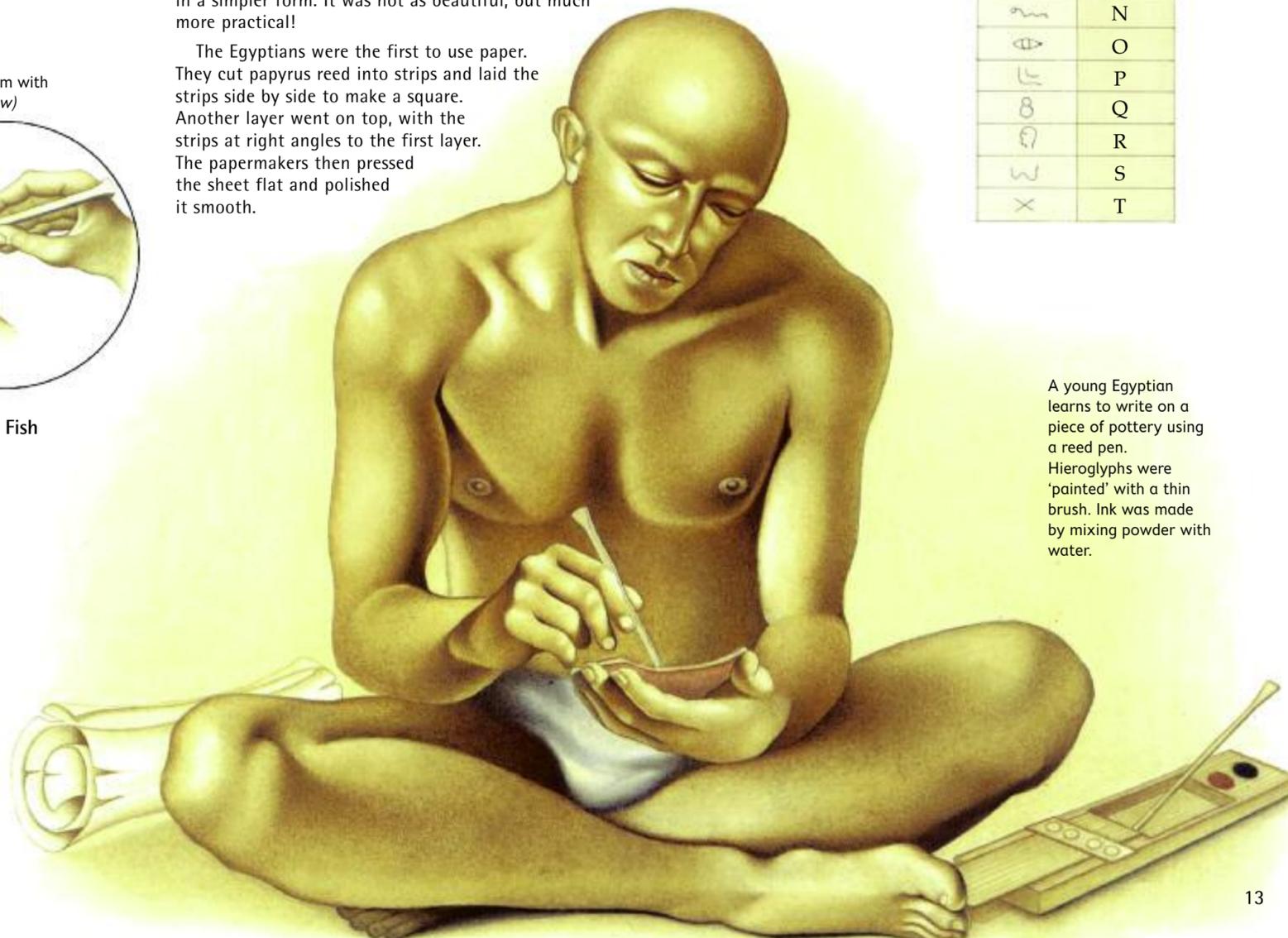
### ANCIENT EGYPTIAN HIEROGLYPHS

A kind of picture-writing was invented in Egypt in about 3000 BC. Symbols called hieroglyphs ('holy writing', top) could record thoughts as well as things. With hieroglyphs, unlike cuneiform, it was possible to write poems, stories and works on law or medicine. Writing hieroglyphs was, however, very slow. So the busy Egyptians developed another, quicker form of writing, called hieratic (above). The characters, or symbols, were based on hieroglyphs, but in a simpler form. It was not as beautiful, but much more practical!

The Egyptians were the first to use paper. They cut papyrus reed into strips and laid the strips side by side to make a square. Another layer went on top, with the strips at right angles to the first layer. The papermakers then pressed the sheet flat and polished it smooth.

The first people to use an alphabet were the Canaanites, who lived in Palestine over 3000 years ago. Instead of having to learn hundreds of different word symbols, a person had only to learn 20 or 30 signs (letters), which stood for sounds. Learning to read and write was much easier. Our own alphabet has descended from the Canaanites' although it has changed a great deal in the past 30 centuries.

Canaanite	Modern
	A
	B
	C
	D
	E
	F
	H
	I
	K
	L
	M
	N
	O
	P
	Q
	R
	S
	T

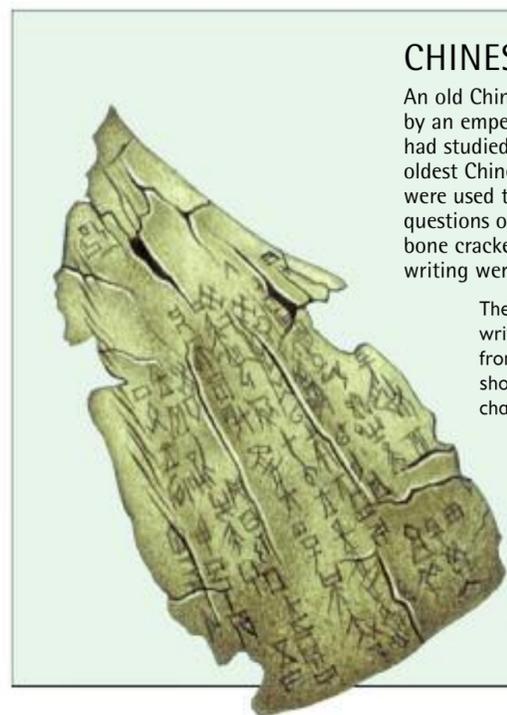


A young Egyptian learns to write on a piece of pottery using a reed pen. Hieroglyphs were 'painted' with a thin brush. Ink was made by mixing powder with water.

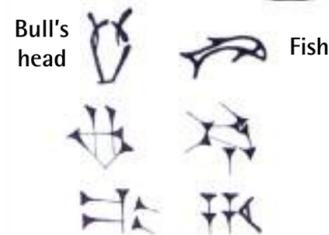
### CHINESE WRITING

An old Chinese legend says that writing was invented by an emperor who lived over 4000 years ago, after he had studied the footprints of birds and animals. The oldest Chinese writing found so far is on bones which were used to foretell the future. Priests wrote questions on a bone then held it over a fire until the bone cracked. The places where the cracks crossed the writing were supposed to give the gods' answers.

The Chinese have never used an alphabet. The written language today has developed directly from the earliest pictograms. These examples show how the symbols for 'man' and 'bird' have changed over about 3000 years.



	Pictogram	Modern character
Man		
Bird		



About 2700 BC, Sumerian writing began to change. Curves disappeared. The symbols were drawn with straight lines, which were easier to write with a reed pen cut to a triangular point. This writing (above) is called cuneiform, meaning 'wedge-like'.

# THE GREATEST PYRAMIDS

## Monuments of the ancient world

After the Spaniards discovered and conquered Mexico nearly 500 years ago, they destroyed many old temples and built Christian churches in their place. In the town of Cholula they built one on top of a small hill covered with bushes. At least, it looks like a hill. In fact, it is the remains of the largest pyramid ever built.

The first pyramid was built here about 1800 years ago. Later it was enlarged four times. The final pyramid was completed about 800 AD. It was about 60 metres high, and 425 metres along each side. As with most of the pyramids of ancient America, it had sides which were not straight but went up in a series of steps, like giant platforms one on top of the other. At the top stood a temple to the old Mexican god, Quetzalcoatl. The people who built this enormous building disappeared long before the Spaniards arrived, and today we know almost nothing about them.

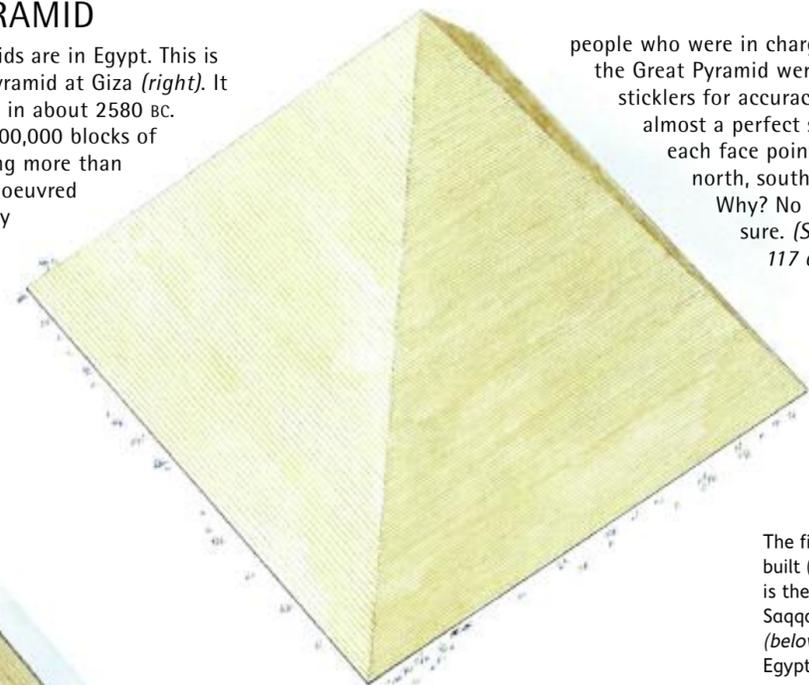
*The illustrations are approximately to scale*



Choga Zanbil (above) was the largest ziggurat, a kind of step pyramid. Now in ruins, it was built in Mesopotamia about 1250 BC.

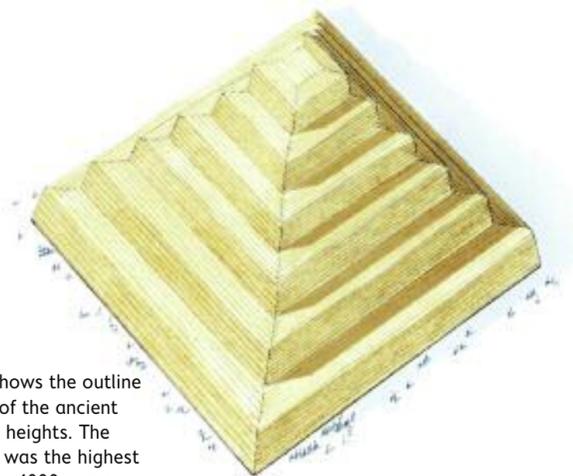
### THE GREAT PYRAMID

The most famous pyramids are in Egypt. This is the largest, the Great Pyramid at Giza (right). It was built by King Khufu in about 2580 BC. There are more than 2,500,000 blocks of limestone, some weighing more than 15 tonnes. All were manoeuvred carefully into position by ramps, levers, rollers and sledges. The

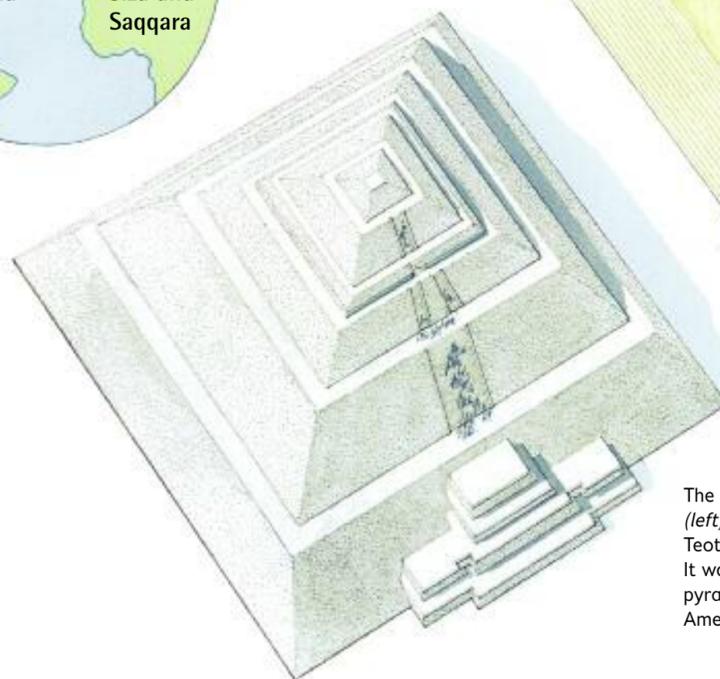


people who were in charge of building the Great Pyramid were clearly sticklers for accuracy! Its base is almost a perfect square, with each face pointing exactly north, south, east and west. Why? No one knows for sure. (See also pages 117 and 119.)

The first pyramid ever built (about 2700 BC), is the step pyramid of Saqqara, Egypt (below). Later, the Egyptians built their pyramids with smooth sides (above).



This diagram (below) shows the outline of five great pyramids of the ancient world, comparing their heights. The Great Pyramid at Giza was the highest building in the world for 4000 years (see page 117).



The Pyramid of the Sun (left) was built at Teotihuacan in Mexico. It was the tallest pyramid in ancient America.



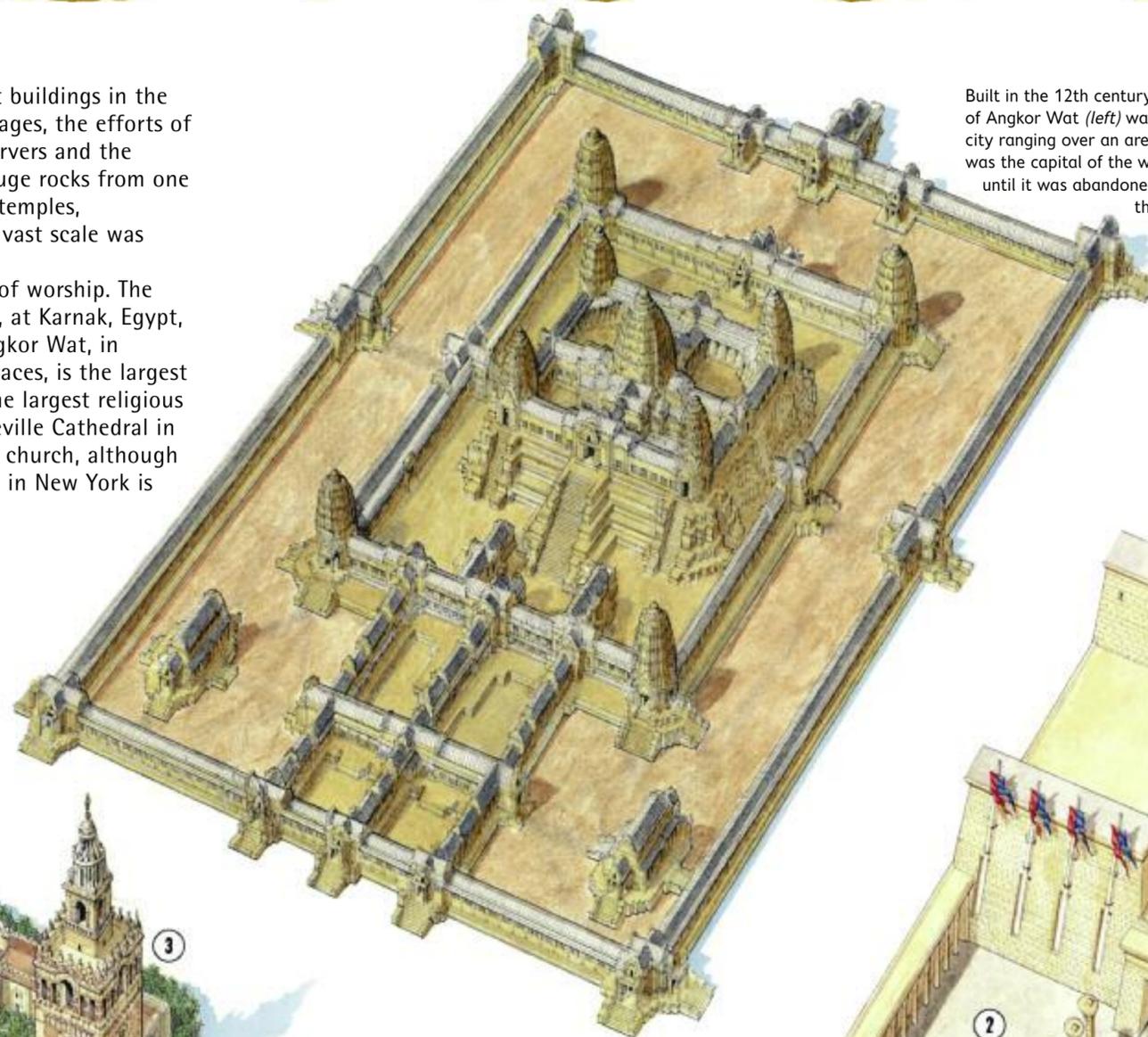
# THE GREATEST TEMPLES

## The largest religious buildings

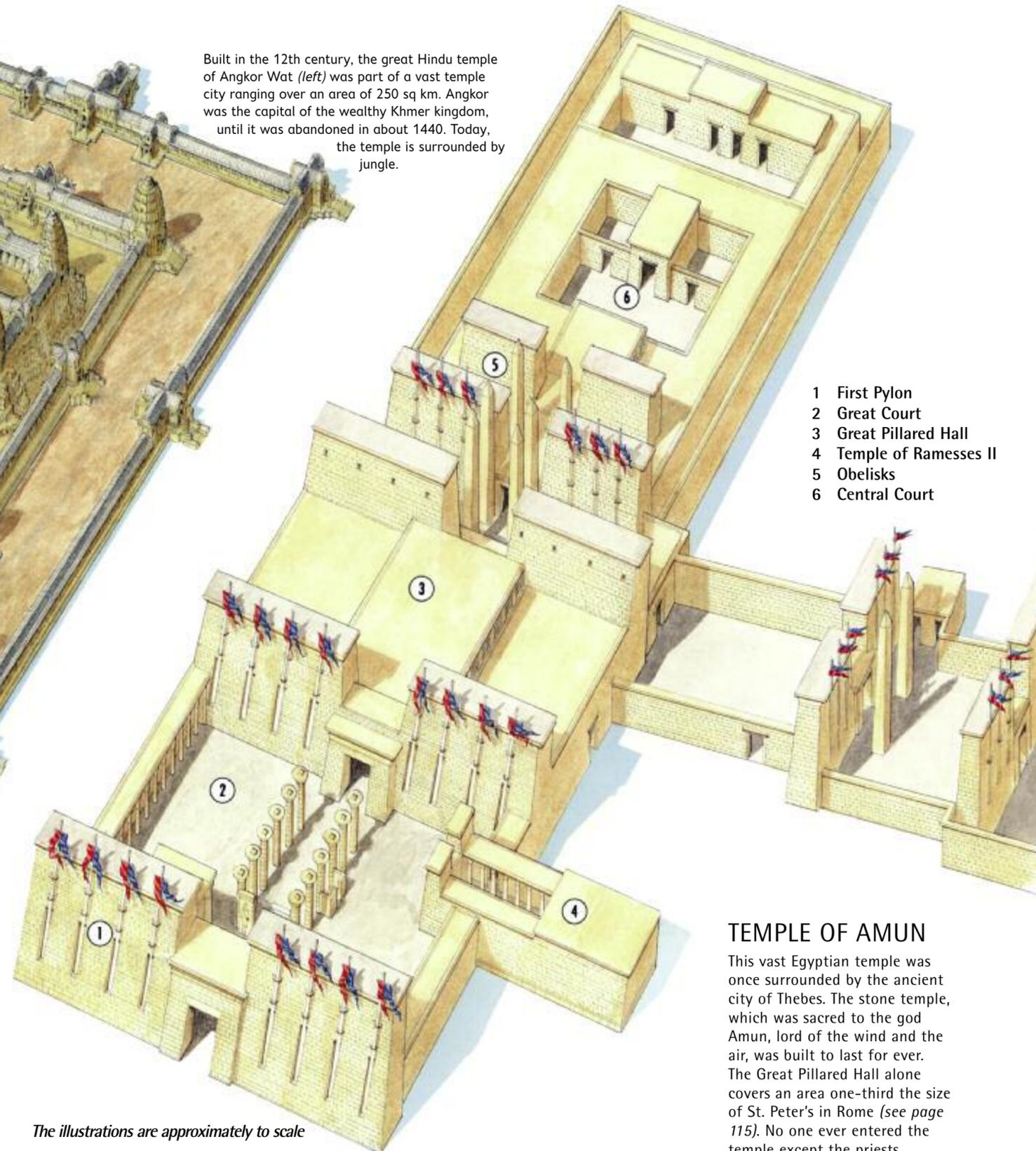
Until the last century, most of the greatest buildings in the world were built for the gods. Down the ages, the efforts of millions of people – quarrymen, stone-carvers and the ordinary souls who were commanded to drag huge rocks from one place to another – were put to the building of temples, cathedrals, mosques or pyramids. On occasions, vast scale was called for.

This illustration compares three great places of worship. The oldest and largest of all is the Temple of Amun, at Karnak, Egypt, built nearly 3500 years ago. The Temple of Angkor Wat, in Cambodia, a small mountain of towers and terraces, is the largest temple of more recent history. It was part of the largest religious complex (collections of buildings) ever built. Seville Cathedral in Spain is larger in area than any other Christian church, although the unfinished Cathedral of St. John the Divine in New York is larger by volume.

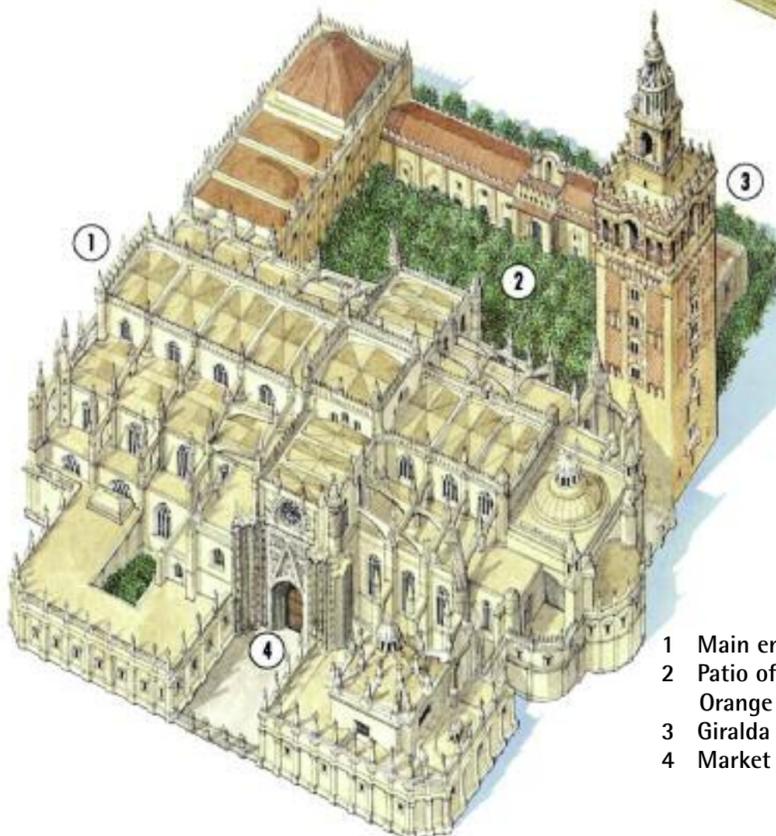
Seville Cathedral (*below*) began life as a mosque. When Seville was conquered by Spanish Christians, it was made even larger and turned into a cathedral. The mosque's minaret became its bell tower, called the Giralda after the weather vane or 'giraldillo'. Inside the cathedral you will find the tomb of Christopher Columbus.



Built in the 12th century, the great Hindu temple of Angkor Wat (*left*) was part of a vast temple city ranging over an area of 250 sq km. Angkor was the capital of the wealthy Khmer kingdom, until it was abandoned in about 1440. Today, the temple is surrounded by jungle.



- 1 First Pylon
- 2 Great Court
- 3 Great Pillared Hall
- 4 Temple of Ramesses II
- 5 Obelisks
- 6 Central Court



- 1 Main entrance
- 2 Patio of the Orange Trees
- 3 Giralda
- 4 Market door

Compare the size of these huge buildings with a two-storey house.



The illustrations are approximately to scale

### TEMPLE OF AMUN

This vast Egyptian temple was once surrounded by the ancient city of Thebes. The stone temple, which was sacred to the god Amun, lord of the wind and the air, was built to last for ever. The Great Pillared Hall alone covers an area one-third the size of St. Peter's in Rome (see page 115). No one ever entered the temple except the priests.

# THE EARLIEST SPORTS

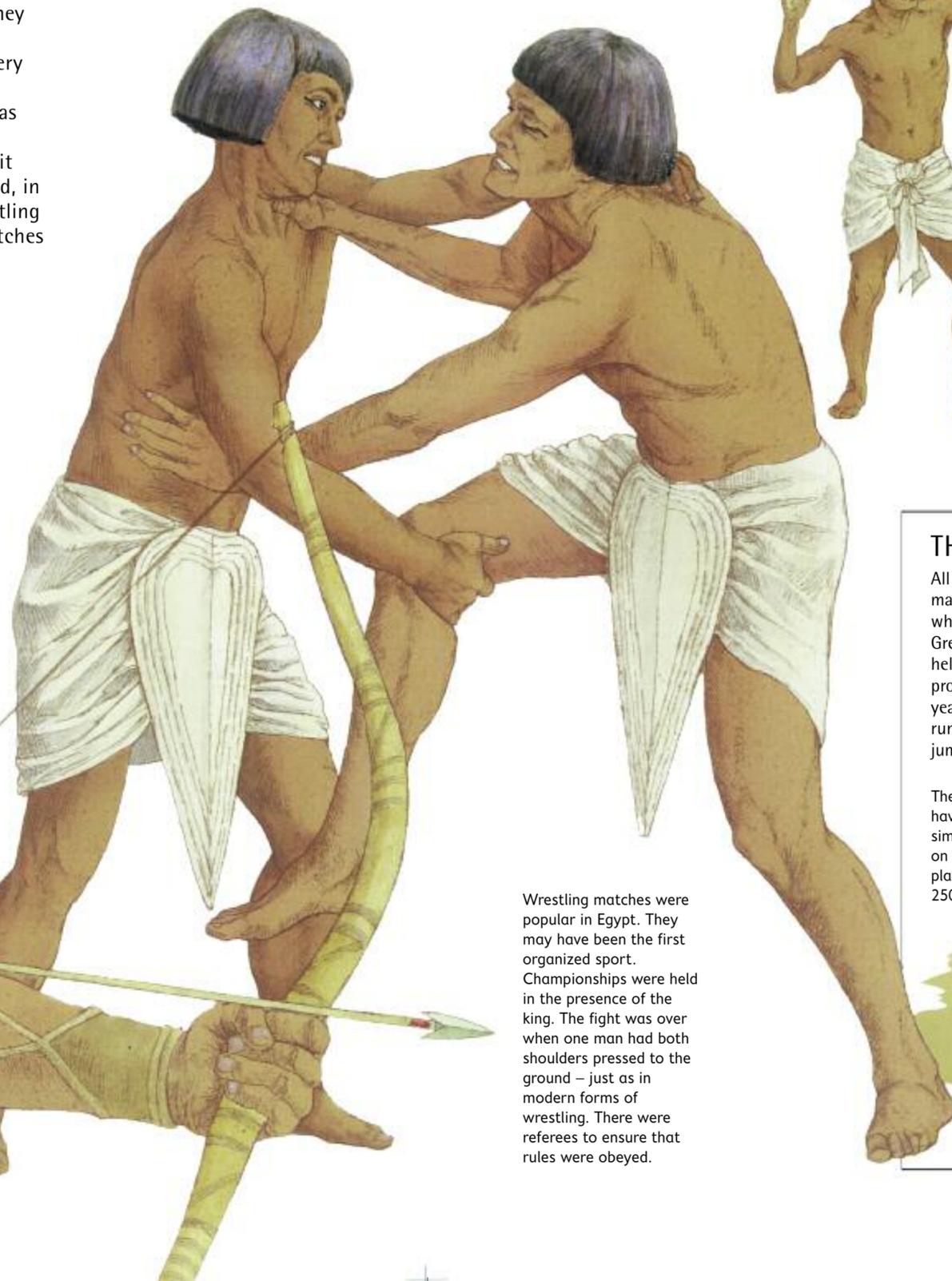
## Martial arts in ancient Egypt

Our earliest ancestors were hunters, but they hunted for food, not for sport. Probably they played games of some kind, because all human beings do. True sports did not begin until civilization (see page 95) was established, when kings and noblemen hunted wild animals with spears. They hunted because they enjoyed it, not because they needed food.

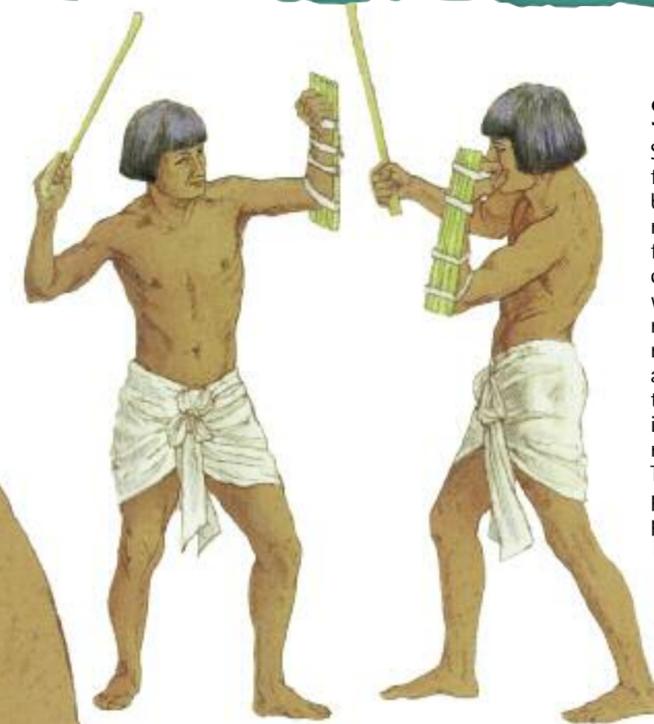
Many of the earliest sports, the 'martial arts' such as wrestling, archery and fencing, were based on fighting. Young men had to be trained for battle by practising combat with their hands or with weapons. That was how most sports began.

Egypt was one of the first civilizations. We know a great deal about it because the ancient Egyptians left records of nearly everything they did, in both words and pictures. We can still see paintings of young men wrestling or fencing and read descriptions of swimming contests and rowing matches held on the River Nile.

Bows and arrows were used by hunters 50,000 years ago. In ancient Egypt, archery (below) was a popular sport. A scene carved in stone in an Egyptian temple about 3500 years ago shows King Amenhotep II shooting an arrow at a target – while riding in a chariot travelling at top speed!



Wrestling matches were popular in Egypt. They may have been the first organized sport. Championships were held in the presence of the king. The fight was over when one man had both shoulders pressed to the ground – just as in modern forms of wrestling. There were referees to ensure that rules were obeyed.



### STICK FIGHTING

Swords were used for fighting as soon as human beings learned how to make metal weapons. Sword fighting later became a sport called fencing, played with wooden swords. The first match of which we have a record was held in Egypt about 3200 years ago. From this illustration you can tell it is a sporting contest and not a duel between enemies. The swords have blunted points and the fencers wear protection against accidental injury. Narrow shields cover their free arms, which they used to fend off a thrust from their opponent's sword. Crowds of spectators would turn up to watch the duellers perform.

### THE FIRST OLYMPICS

All early civilizations practised the martial arts, but we do not know when other sports began. The ancient Greeks were fond of athletics. They held the first Olympic Games, probably in 776 BC, then every four years after that. The Games included running races and events like long jump, discus and javelin.



The Minoan civilization existed in the Mediterranean island of Crete between about 2000 and 1400 BC. Here are two Minoan boys boxing (above).

The oldest team game may have been polo, a game similar to hockey but played on horseback (below). It was played in Persia (Iran) at least 2500 years ago.



# THE LARGEST PALACE

## Inside the Forbidden City

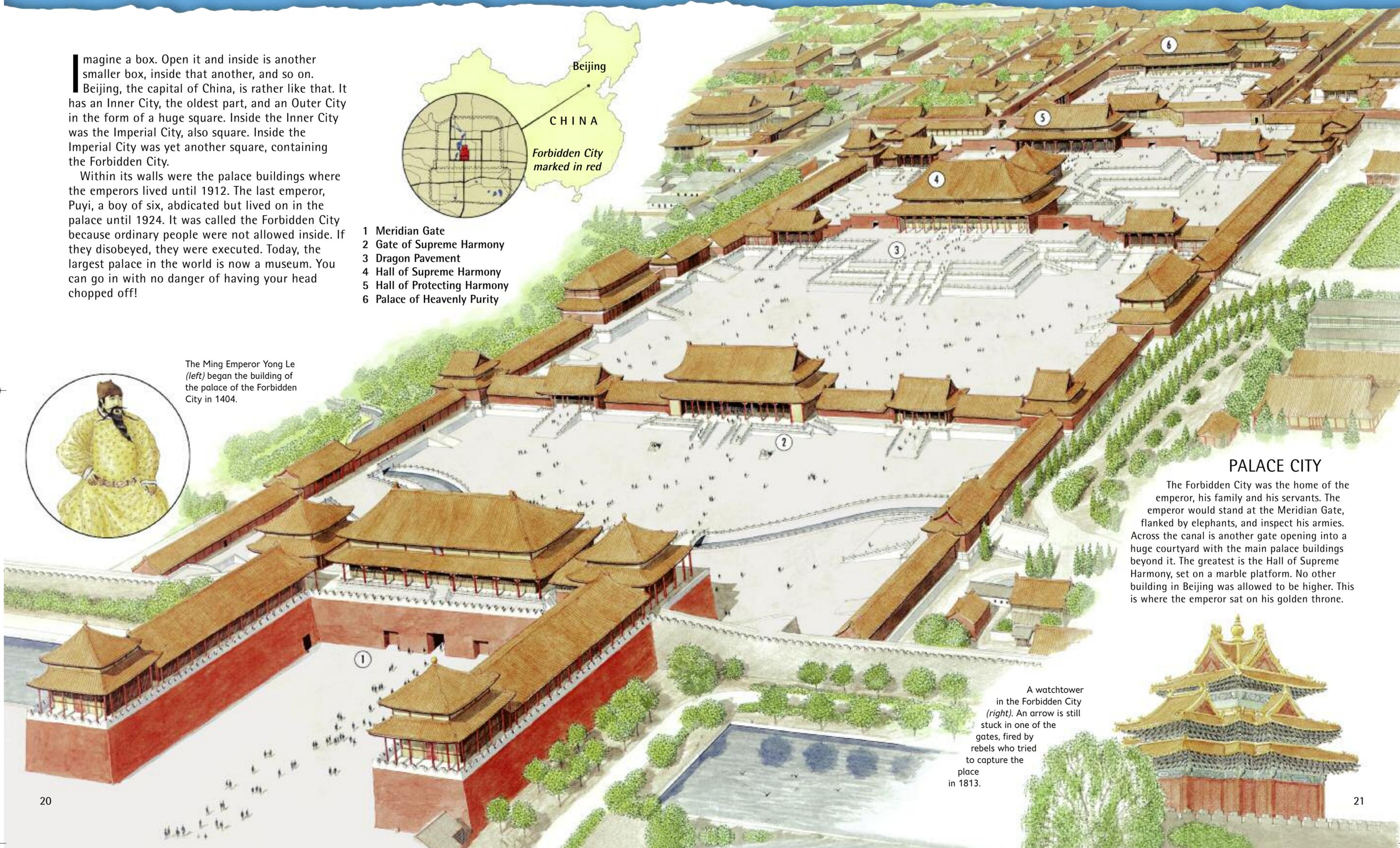
Imagine a box. Open it and inside is another smaller box, inside that another, and so on. Beijing, the capital of China, is rather like that. It has an Inner City, the oldest part, and an Outer City in the form of a huge square. Inside the Inner City was the Imperial City, also square. Inside the Imperial City was yet another square, containing the Forbidden City.

Within its walls were the palace buildings where the emperors lived until 1912. The last emperor, Puyi, a boy of six, abdicated but lived on in the palace until 1924. It was called the Forbidden City because ordinary people were not allowed inside. If they disobeyed, they were executed. Today, the largest palace in the world is now a museum. You can go in with no danger of having your head chopped off!



- 1 Meridian Gate
- 2 Gate of Supreme Harmony
- 3 Dragon Pavement
- 4 Hall of Supreme Harmony
- 5 Hall of Protecting Harmony
- 6 Palace of Heavenly Purity

The Ming Emperor Yong Le (left) began the building of the palace of the Forbidden City in 1404.



### PALACE CITY

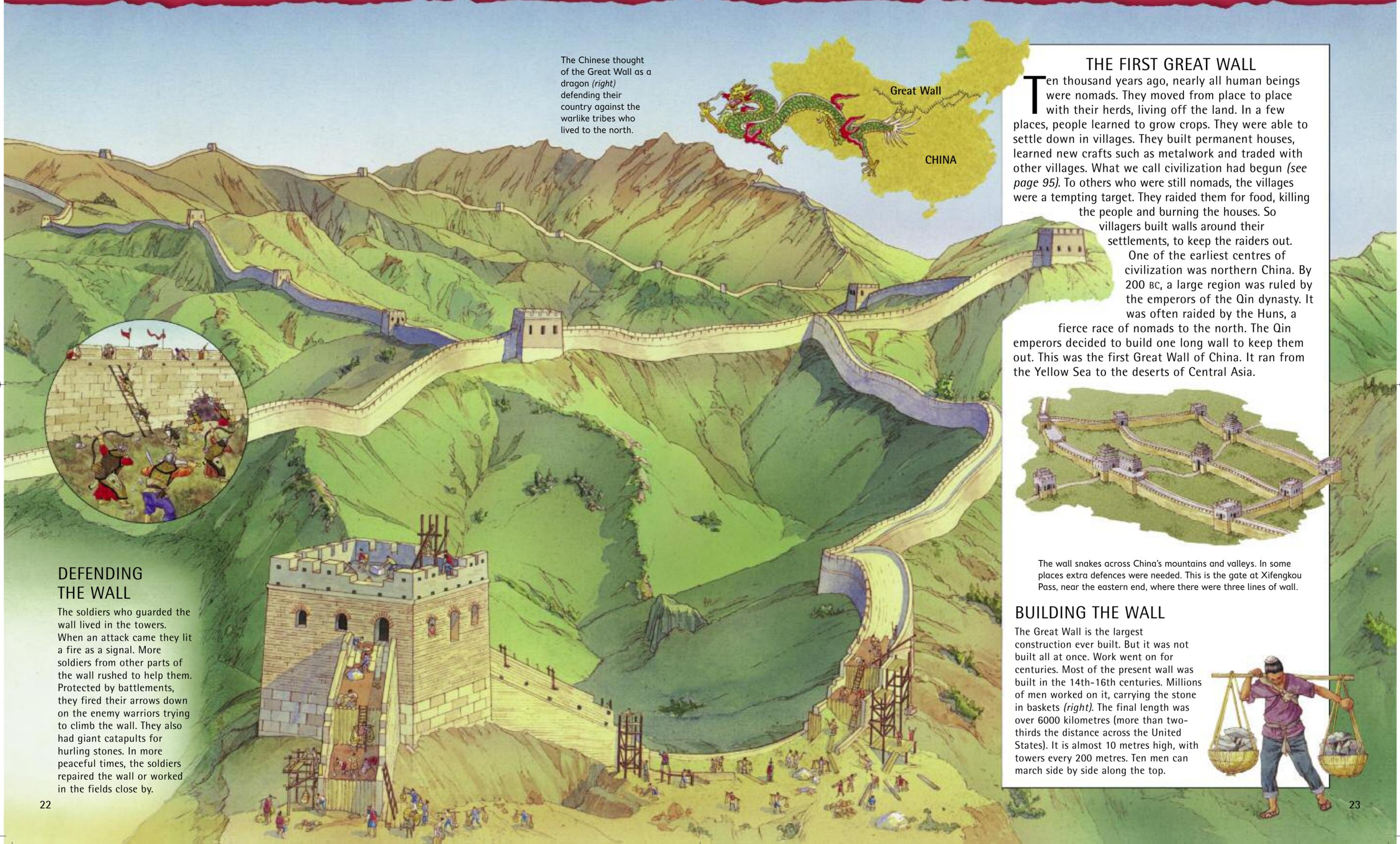
The Forbidden City was the home of the emperor, his family and his servants. The emperor would stand at the Meridian Gate, flanked by elephants, and inspect his armies. Across the canal is another gate opening into a huge courtyard with the main palace buildings beyond it. The greatest is the Hall of Supreme Harmony, set on a marble platform. No other building in Beijing was allowed to be higher. This is where the emperor sat on his golden throne.

A watchtower in the Forbidden City (right). An arrow is still stuck in one of the gates, fired by rebels who tried to capture the place in 1813.



# THE LONGEST WALL

## The Great Wall of China

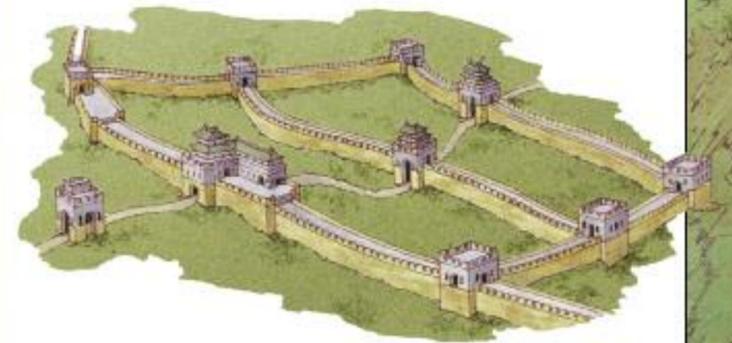


The Chinese thought of the Great Wall as a dragon (right) defending their country against the warlike tribes who lived to the north.

### THE FIRST GREAT WALL

Ten thousand years ago, nearly all human beings were nomads. They moved from place to place with their herds, living off the land. In a few places, people learned to grow crops. They were able to settle down in villages. They built permanent houses, learned new crafts such as metalwork and traded with other villages. What we call civilization had begun (see page 95). To others who were still nomads, the villages were a tempting target. They raided them for food, killing the people and burning the houses. So villagers built walls around their settlements, to keep the raiders out.

One of the earliest centres of civilization was northern China. By 200 BC, a large region was ruled by the emperors of the Qin dynasty. It was often raided by the Huns, a fierce race of nomads to the north. The Qin emperors decided to build one long wall to keep them out. This was the first Great Wall of China. It ran from the Yellow Sea to the deserts of Central Asia.



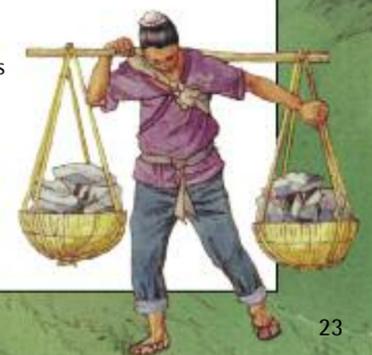
The wall snakes across China's mountains and valleys. In some places extra defences were needed. This is the gate at Xifengkou Pass, near the eastern end, where there were three lines of wall.

### DEFENDING THE WALL

The soldiers who guarded the wall lived in the towers. When an attack came they lit a fire as a signal. More soldiers from other parts of the wall rushed to help them. Protected by battlements, they fired their arrows down on the enemy warriors trying to climb the wall. They also had giant catapults for hurling stones. In more peaceful times, the soldiers repaired the wall or worked in the fields close by.

### BUILDING THE WALL

The Great Wall is the largest construction ever built. But it was not built all at once. Work went on for centuries. Most of the present wall was built in the 14th-16th centuries. Millions of men worked on it, carrying the stone in baskets (right). The final length was over 6000 kilometres (more than two-thirds the distance across the United States). It is almost 10 metres high, with towers every 200 metres. Ten men can march side by side along the top.



# THE OLDEST MONARCHY

## Japan's emperors

The people of ancient Japan believed their islands were created by the goddess of the Sun. A child of the Sun goddess, Jimmu, united the people under his rule and became the first emperor.

When did all this happen? The legends say Jimmu's rule began in 660 BC. Modern historians are not so sure. They think Jimmu may have lived hundreds of years later, from about 40 BC to 10 BC. In any event, the same imperial family has ruled Japan to the present day. No other monarchy in the world has lasted so long.

Japan has always had an emperor, or sometimes an empress, who was looked upon both as a god as well as a monarch. But the god-emperor was

not always a powerful ruler. For hundreds of years other great families, stronger than the royal family, fought for control. Japan was torn by civil wars.

Japan became a settled, peaceful country again in the 16th century. The men who brought peace were the shoguns, or 'governors', of the Tokugawa family. Though loyal to the emperor, they held all the power. For 200 years they shut the country down. Few foreign visitors were allowed in and no Japanese were allowed out. Japan was cut off from the rest of the world, but at least there was peace. Warlike nobles were kept in their own castles. The emperors lived quietly in their palace in Kyoto.

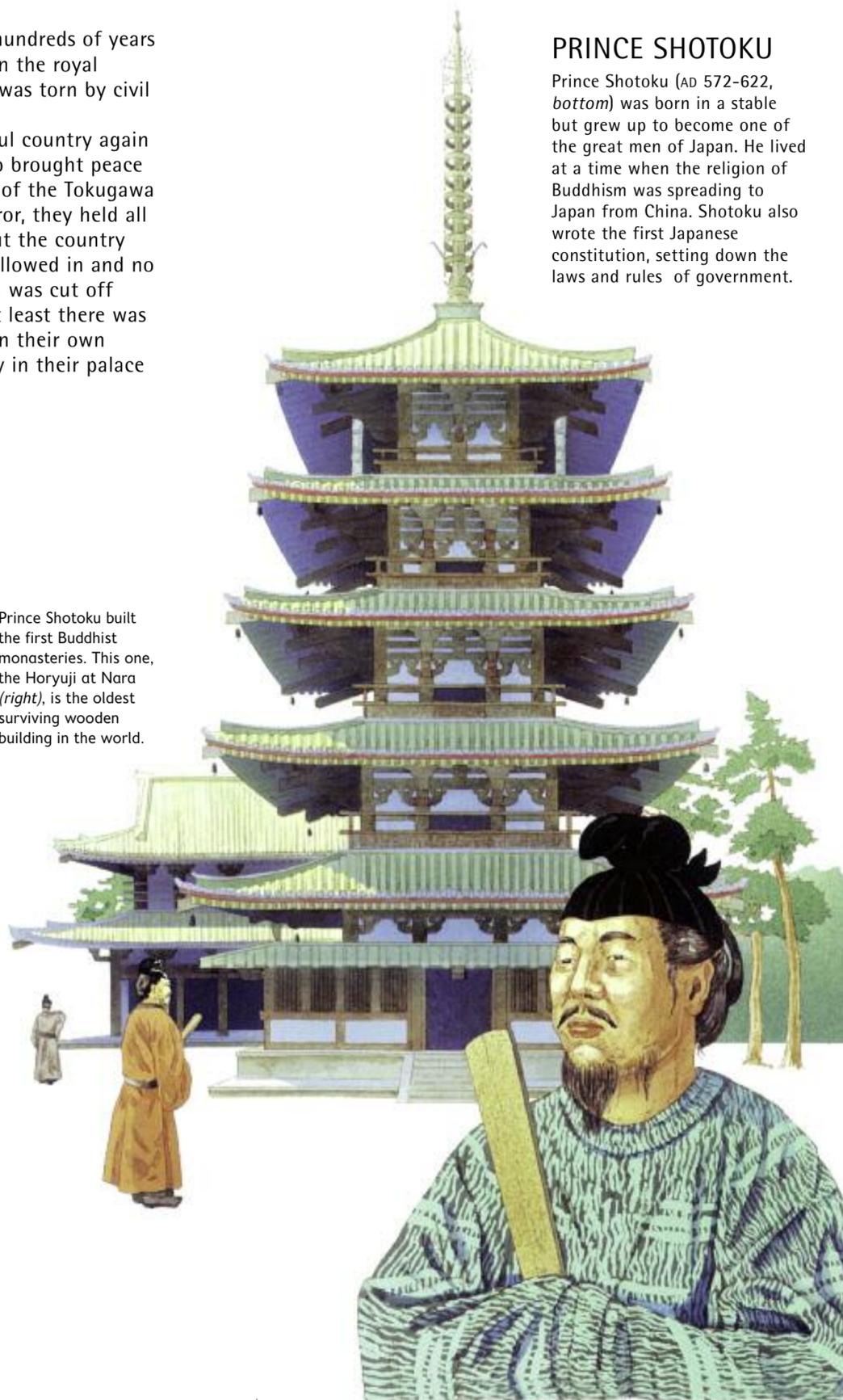


Emperor Jimmu (right) and his descendants united the Japanese islands over 2000 years ago. His life and deeds belong to legend.

Prince Shotoku built the first Buddhist monasteries. This one, the Horyuji at Nara (right), is the oldest surviving wooden building in the world.



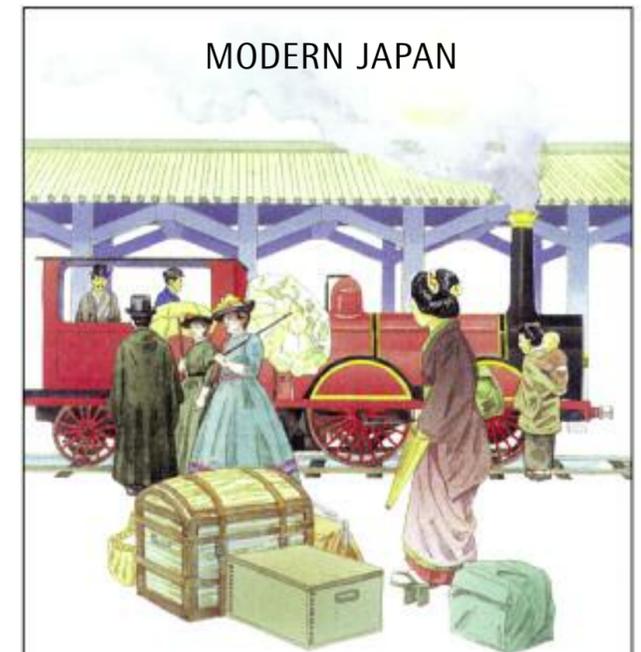
The Japanese religion of Shinto was founded by the Emperor Suinin about 1500 years ago. This is the first Shinto shrine, or temple, at Ise (left). The Emperor Suinin built it for the Sun goddess. Inside the building, he placed her sacred mirror. It is still there today.



### PRINCE SHOTOKU

Prince Shotoku (AD 572-622, bottom) was born in a stable but grew up to become one of the great men of Japan. He lived at a time when the religion of Buddhism was spreading to Japan from China. Shotoku also wrote the first Japanese constitution, setting down the laws and rules of government.

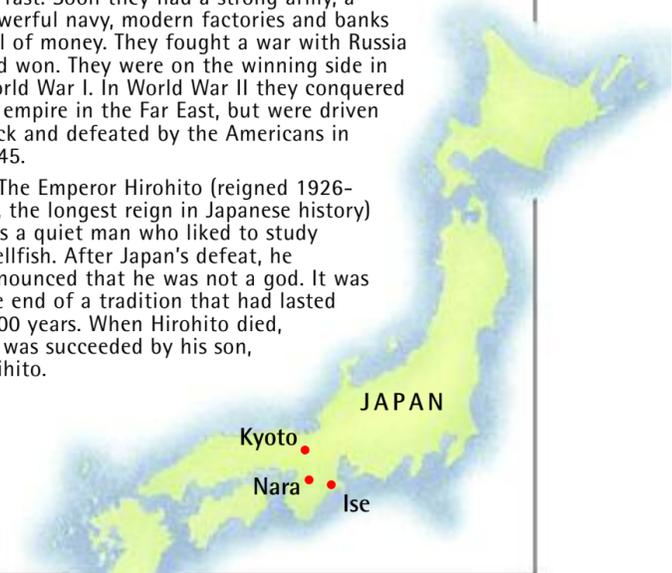
### MODERN JAPAN



Under the Tokugawa shoguns, Japan was isolated from the rest of the world. The visit of an American expedition led by Commodore Perry in 1854 began to change things. Japan started to trade with the United States and other Western countries. At the same time, ordinary people protested over their poor working conditions. The last Tokugawa was forced to resign in 1867 and the Emperor Meiji took over the government. He moved into the shoguns' old palace and began a programme to make Japan a modern state.

The Japanese people saw themselves as a great nation led by their god-emperor. They caught up fast. Soon they had a strong army, a powerful navy, modern factories and banks full of money. They fought a war with Russia and won. They were on the winning side in World War I. In World War II they conquered an empire in the Far East, but were driven back and defeated by the Americans in 1945.

The Emperor Hirohito (reigned 1926-89, the longest reign in Japanese history) was a quiet man who liked to study shellfish. After Japan's defeat, he announced that he was not a god. It was the end of a tradition that had lasted 2000 years. When Hirohito died, he was succeeded by his son, Akihito.



# THE GREATEST EMPIRE

## Conquests of the Mongols

The Mongols were nomads who lived in tribes in north-east Asia. In 1206 they were united by a man called Timujin, who took the name Genghis Khan, 'Ruler of All', and set out to conquer the world.

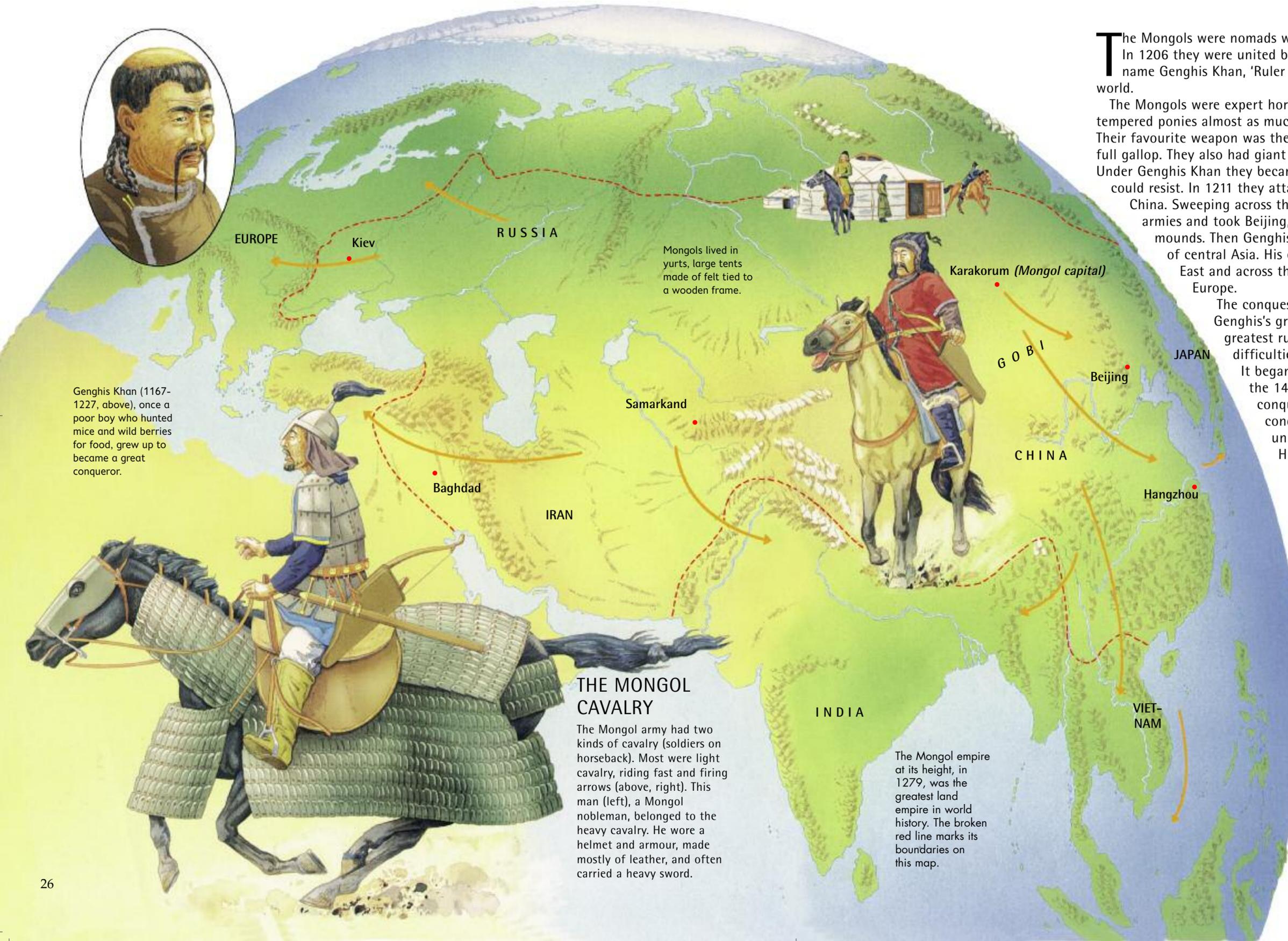
The Mongols were expert horsemen. They loved their tough, bad-tempered ponies almost as much as they loved their own children. Their favourite weapon was the bow and arrow, which they fired at full gallop. They also had giant catapults for attacking walled cities. Under Genghis Khan they became an organized army that nobody could resist. In 1211 they attacked the Qin empire of northern China. Sweeping across the Gobi desert, they smashed the Qin armies and took Beijing, leaving dead bodies piled in mounds. Then Genghis turned against the Muslim powers of central Asia. His cavalry pounded through the Middle East and across the vast expanses of Russia into Europe.

The conquest of China was completed by Genghis's grandson, Kublai Khan. He was the greatest ruler in the world but he soon had difficulties in controlling such a large empire. It began to break up into separate states. In the 14th century another Mongol conqueror, Tamerlane, repeated Genghis's conquests. He was a brilliant warrior but, unlike Genghis, he was a poor governor. His empire collapsed at his death.

With their powerful bows, Mongol archers fired light arrows first, then, at close range, heavier arrows to pierce armour.



Genghis Khan (1167-1227, above), once a poor boy who hunted mice and wild berries for food, grew up to become a great conqueror.



Mongols lived in yurts, large tents made of felt tied to a wooden frame.

Karakorum (Mongol capital)

### THE MONGOL CAVALRY

The Mongol army had two kinds of cavalry (soldiers on horseback). Most were light cavalry, riding fast and firing arrows (above, right). This man (left), a Mongol nobleman, belonged to the heavy cavalry. He wore a helmet and armour, made mostly of leather, and often carried a heavy sword.

The Mongol empire at its height, in 1279, was the greatest land empire in world history. The broken red line marks its boundaries on this map.



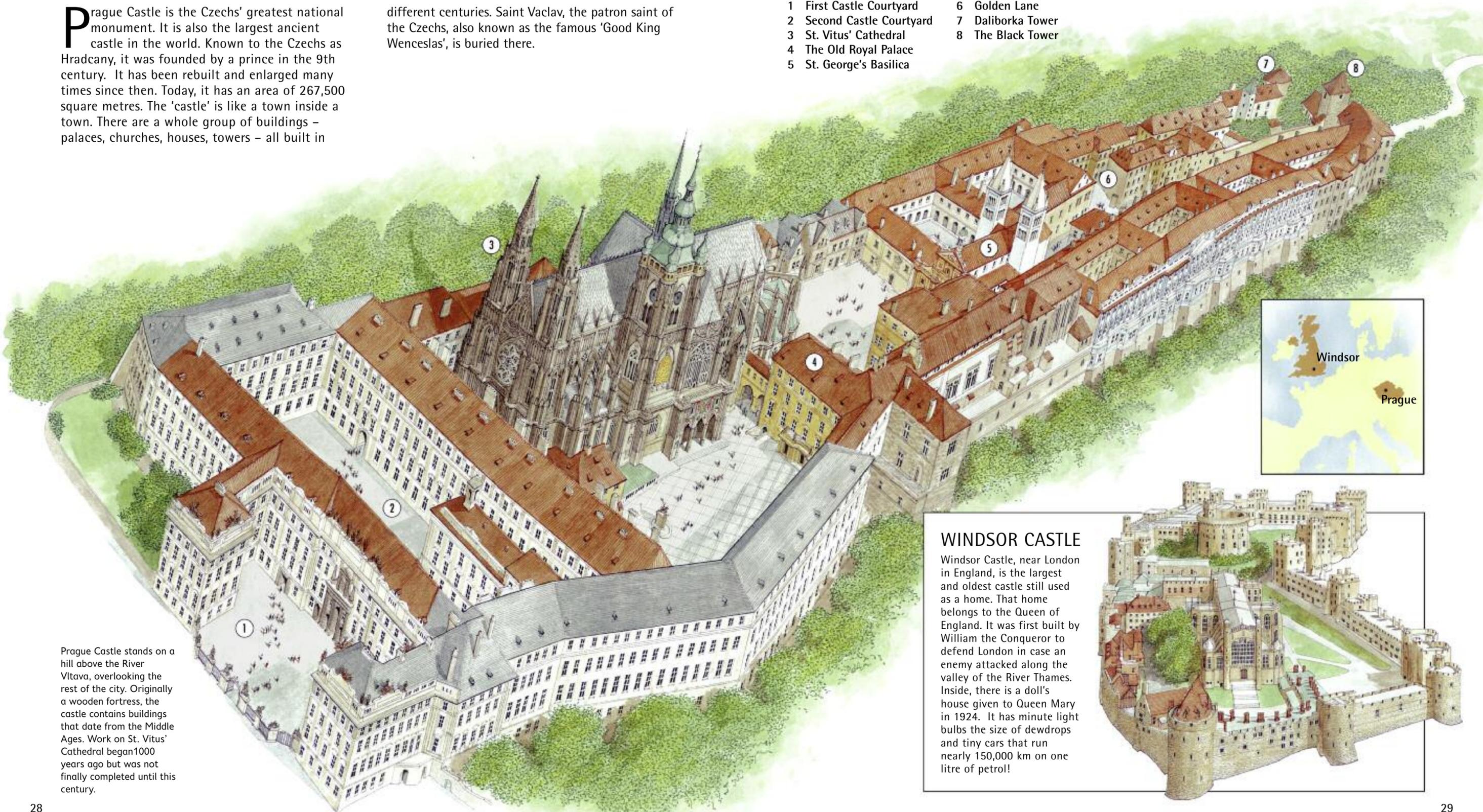
# THE LARGEST CASTLE

## Prague Castle

Prague Castle is the Czechs' greatest national monument. It is also the largest ancient castle in the world. Known to the Czechs as Hradcany, it was founded by a prince in the 9th century. It has been rebuilt and enlarged many times since then. Today, it has an area of 267,500 square metres. The 'castle' is like a town inside a town. There are a whole group of buildings – palaces, churches, houses, towers – all built in

different centuries. Saint Vaclav, the patron saint of the Czechs, also known as the famous 'Good King Wenceslas', is buried there.

- 1 First Castle Courtyard
- 2 Second Castle Courtyard
- 3 St. Vitus' Cathedral
- 4 The Old Royal Palace
- 5 St. George's Basilica
- 6 Golden Lane
- 7 Daliborka Tower
- 8 The Black Tower



Prague Castle stands on a hill above the River Vltava, overlooking the rest of the city. Originally a wooden fortress, the castle contains buildings that date from the Middle Ages. Work on St. Vitus' Cathedral began 1000 years ago but was not finally completed until this century.

### WINDSOR CASTLE

Windsor Castle, near London in England, is the largest and oldest castle still used as a home. That home belongs to the Queen of England. It was first built by William the Conqueror to defend London in case an enemy attacked along the valley of the River Thames. Inside, there is a doll's house given to Queen Mary in 1924. It has minute light bulbs the size of dewdrops and tiny cars that run nearly 150,000 km on one litre of petrol!

# THE SMALLEST COUNTRY

## Vatican city state

**T**HE VATICAN CITY is all that remains of lands belonging to the Pope that, until 1870, included most of central Italy. Under an agreement made with the Italian government in 1929, the Vatican became a fully independent state with its own government. With an area of only 44 hectares (about one-eighth the size of Central Park, New York), it is the smallest independent country in the world.

The Vatican is the centre of the Roman Catholic Church, which numbers nearly 900 million followers. It is home to the Pope, who is head of the Church, and a population of about 800, the smallest of any nation.

This tiny country is dominated by the magnificent St. Peter's Basilica (not a cathedral, but an important Roman Catholic church), and its square. Within its walls there are a number of palaces, museums, colleges, two churches besides St. Peter's and a railway station. It runs its own bank, post office, and newspaper, and issues its own stamps and coins.

The Vatican City State is situated on the west bank of the River Tiber in Rome, capital city of Italy.

VATICAN CITY STATE

EUROPE

ITALY

Rome



### THE OLDEST ARMY

The Swiss Guard was founded in 1506, making it the oldest existing army in the world. It is also the smallest, numbering 100. Members of the Guard must have completed their training in the Swiss army. Only once did they go into battle. In 1527 they defended the Pope from the forces of the Emperor Charles V.

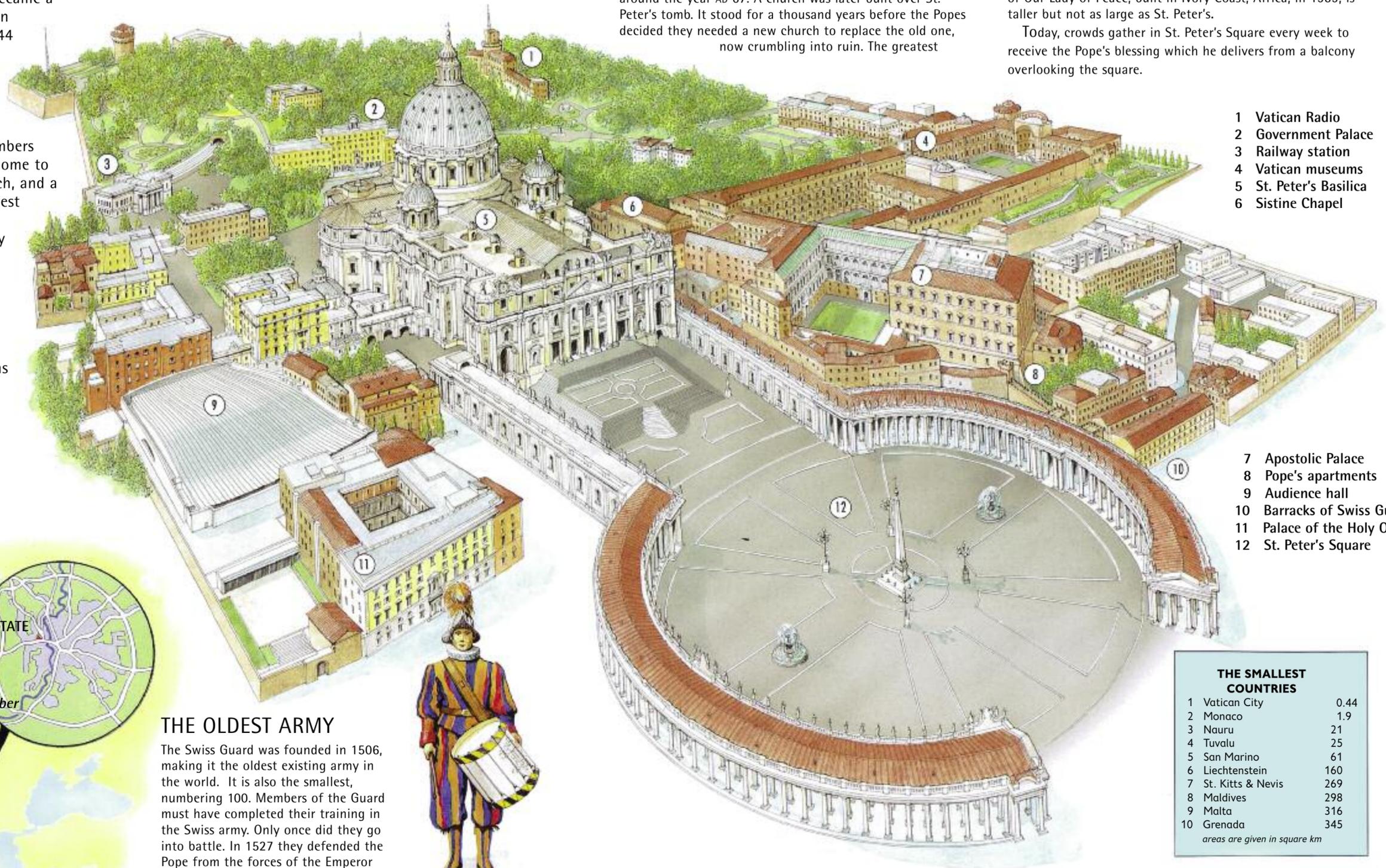


### THE LARGEST CHURCH

Where St. Peter's stands today was, in Roman times, the Gardens of Nero. Here, many Christians were put to death. They included St. Peter, one of Jesus's apostles, who died around the year AD 67. A church was later built over St. Peter's tomb. It stood for a thousand years before the Popes decided they needed a new church to replace the old one, now crumbling into ruin. The greatest

architects of the time, including Michelangelo, were hired to design and build the new St. Peter's. Begun in 1507, it took more than 150 years to complete. A new church, The Basilica of Our Lady of Peace, built in Ivory Coast, Africa, in 1989, is taller but not as large as St. Peter's.

Today, crowds gather in St. Peter's Square every week to receive the Pope's blessing which he delivers from a balcony overlooking the square.



- 1 Vatican Radio
- 2 Government Palace
- 3 Railway station
- 4 Vatican museums
- 5 St. Peter's Basilica
- 6 Sistine Chapel

- 7 Apostolic Palace
- 8 Pope's apartments
- 9 Audience hall
- 10 Barracks of Swiss Guard
- 11 Palace of the Holy Office
- 12 St. Peter's Square

#### THE SMALLEST COUNTRIES

1	Vatican City	0.44
2	Monaco	1.9
3	Nauru	21
4	Tuvalu	25
5	San Marino	61
6	Liechtenstein	160
7	St. Kitts & Nevis	269
8	Maldives	298
9	Malta	316
10	Grenada	345

areas are given in square km

# REACHING FOR THE SKIES

*The tallest buildings in history*

For nearly 4000 years, the Great Pyramid of Giza looked down on all the other great pyramids of ancient Egypt – and on every other building in the world. The only one of the Seven Wonders of the World to survive largely intact, it lost 10 metres off its height when the topmost stones fell away (see page 99).

It was not until the time when the great cathedrals of medieval Europe were built that its record was broken. In 1311 the central tower of Lincoln Cathedral in England, topped by a lead-covered wooden spire, finally outreached the Great Pyramid. Although the spire was blown down in a storm in 1549, no higher building was erected until the Washington Monument, built in 1884 to commemorate the first US president, George Washington, was completed.

Just five years later, the record returned to Europe.

Gustav Eiffel's iron tower, the marvel of the 1889 Paris International Exhibition, astonished the world. It took 230 men just over two years to build it, hammering together 18,000 pieces of iron using 2,500,000 rivets. It was extended in 1959 by a 20-metre TV antenna. In hot weather the metal expands and the tower grows another 18 centimetres taller.

The coming of the skyscraper, made possible by the use of steel building frames and the invention of hydraulic lifts, meant that sooner or later one would become the world's tallest building. The Chrysler Building duly did so in 1930, only to be overtaken by another New York skyscraper, the Empire State Building, a few months later. The Empire State's spire, extended by a TV mast 20 years later, was originally intended to be a mooring post for airships. It remained the world's highest building until 1973, when the twin towers of the World Trade Center, also in New York City, were built.

The record changed hands twice more. Chicago took the record from New York with its Sears Tower. Then, in 1976, the CN Tower in Toronto became the world's tallest self-supporting structure. It is as high as five-and-a-half football pitches stacked end to end!

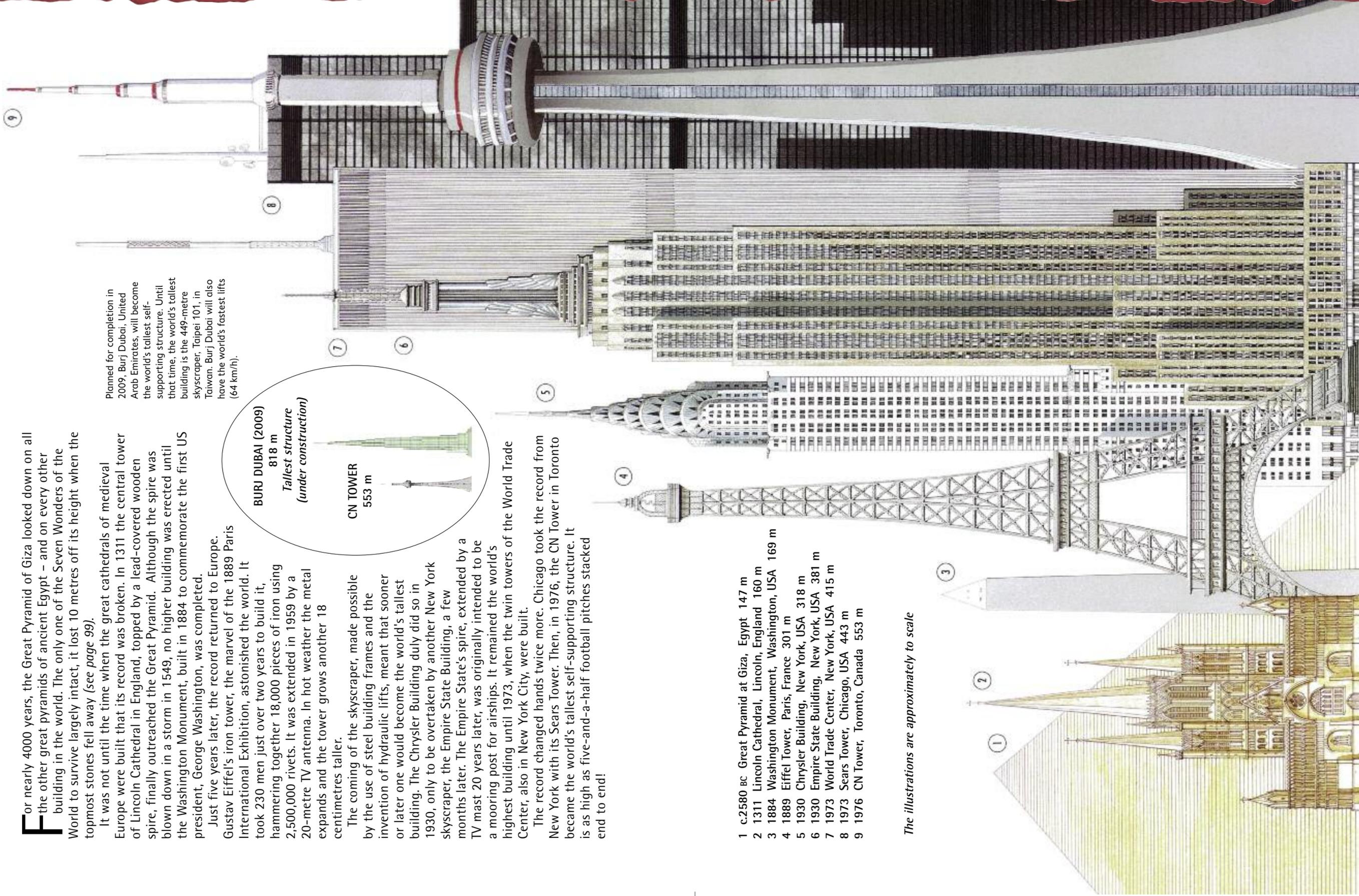
Planned for completion in 2009, Burj Dubai, United Arab Emirates, will become the world's tallest self-supporting structure. Until that time, the world's tallest building is the 449-metre skyscraper, Taipei 101, in Taiwan. Burj Dubai will also have the world's fastest lifts (64 km/h).

**BURJ DUBAI (2009)**  
818 m  
*Tallest structure (under construction)*

**CN TOWER**  
553 m

- 1 c.2580 BC Great Pyramid at Giza, Egypt 147 m
- 2 1311 Lincoln Cathedral, Lincoln, England 160 m
- 3 1884 Washington Monument, Washington, USA 169 m
- 4 1889 Eiffel Tower, Paris, France 301 m
- 5 1930 Chrysler Building, New York, USA 318 m
- 6 1930 Empire State Building, New York, USA 381 m
- 7 1973 World Trade Center, New York, USA 415 m
- 8 1973 Sears Tower, Chicago, USA 443 m
- 9 1976 CN Tower, Toronto, Canada 553 m

*The illustrations are approximately to scale*



# THE HIGHEST MONUMENTS

*And the tallest steeple*

**G**ateway Arch, the highest monument in the world, stands on the banks of the Mississippi River in the city of St. Louis, Missouri, USA. Built in 1965, the 192-metre-high stainless steel arch was designed in the shape of a rainbow. The arch is hollow inside. Lifts go up to the top where there are portholes to look through.

The Gateway Arch marks St. Louis' historic role as 'gateway to the West'. In the mid-nineteenth century, hopeful farmers, their wagon trains laden with all their possessions and drawn by oxen, set out from St. Louis bound for Oregon and California and a better life in the West.

## GATEWAY ARCH

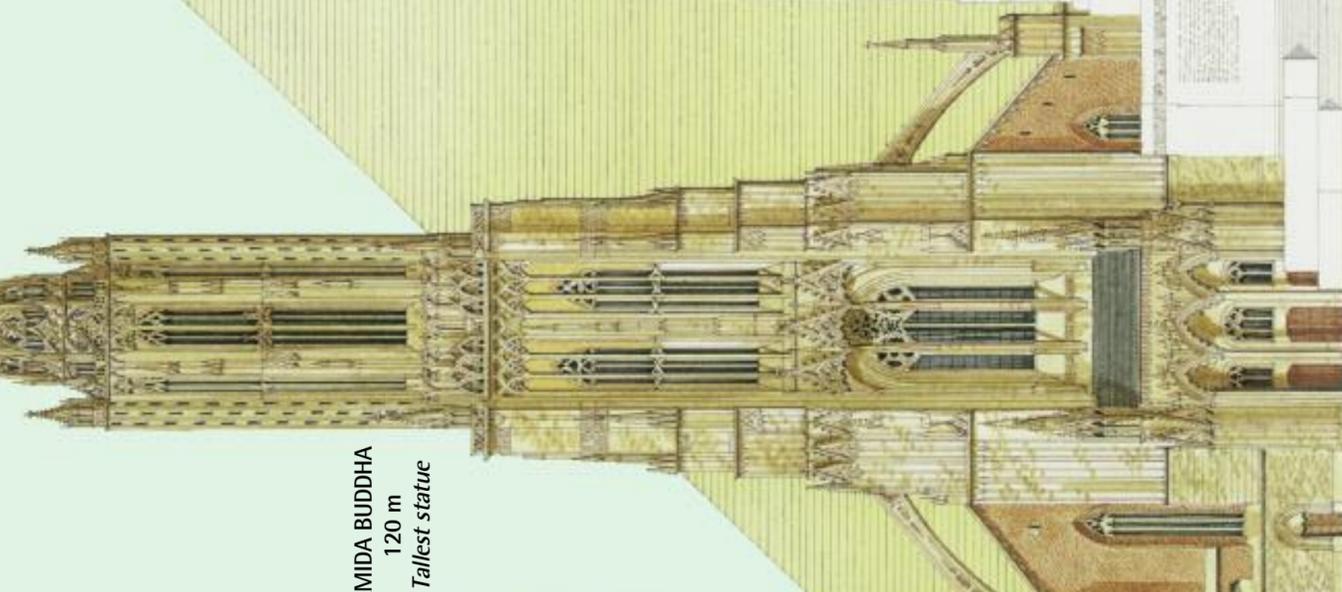
*The illustrations are approximately to scale*

The Cathedral, or Munster, at Ulm, Germany, holds the record for the tallest church steeple. From the laying of its foundations to the completion of its spire, the building took 500 years to complete.

## ULM CATHEDRAL

The tallest statue in the world, the bronze Amida Buddha in Ushiku City, Japan, stands 120 m tall and weighs over 1000 tonnes. Inside the statue are rooms for meditation and spiritual learning. You can climb a stairway and look out of the statue's chest on to the gardens below.

**AMIDA BUDDHA**  
120 m  
*Tallest statue*

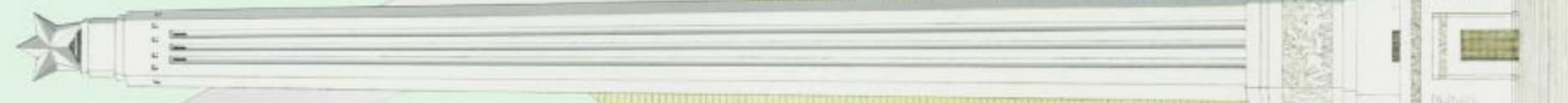


**COAST REDWOOD** 115.5 m  
*Tallest tree*



## SAN JACINTO MONUMENT

**GREAT PYRAMID AT GIZA** 147 m  
*Tallest pyramid*



The highest column in the world is at San Jacinto, Texas, USA (left). It is 174 m high. The Texas star at the top alone weighs nearly 200 tonnes. The column was built in 1936 to commemorate a battle fought 100 years earlier. Then, in a fierce attack lasting only 18 minutes, Texan soldiers defeated the Mexican army. For the next nine years, until 1845, Texas was an independent nation.

## THE LARGEST SCULPTURE

In the Black Hills of South Dakota, USA, four gigantic stone heads look out from a high granite cliff on Mount Rushmore. The heads represent four famous American presidents: George Washington, Thomas Jefferson, Theodore Roosevelt and Abraham Lincoln. The heads are each about 20 m high, and were designed over 50 years ago by the sculptor Gutzon Borglum. Miners and quarrymen spent 15 years chiselling and drilling to carve the faces out of the mountain. Finishing touches, like the dark shadows at the centre of the eyes, were added at the end.

Only a short distance from Mount Rushmore, a new, even larger sculpture is being blasted out of the mountains. The figure of the American Indian Chief Crazy Horse was begun in 1948 by sculptor Korczak Ziolkowski. So far, only the face has been carved out. The whole statue will stand 172 metres high when it is eventually completed.



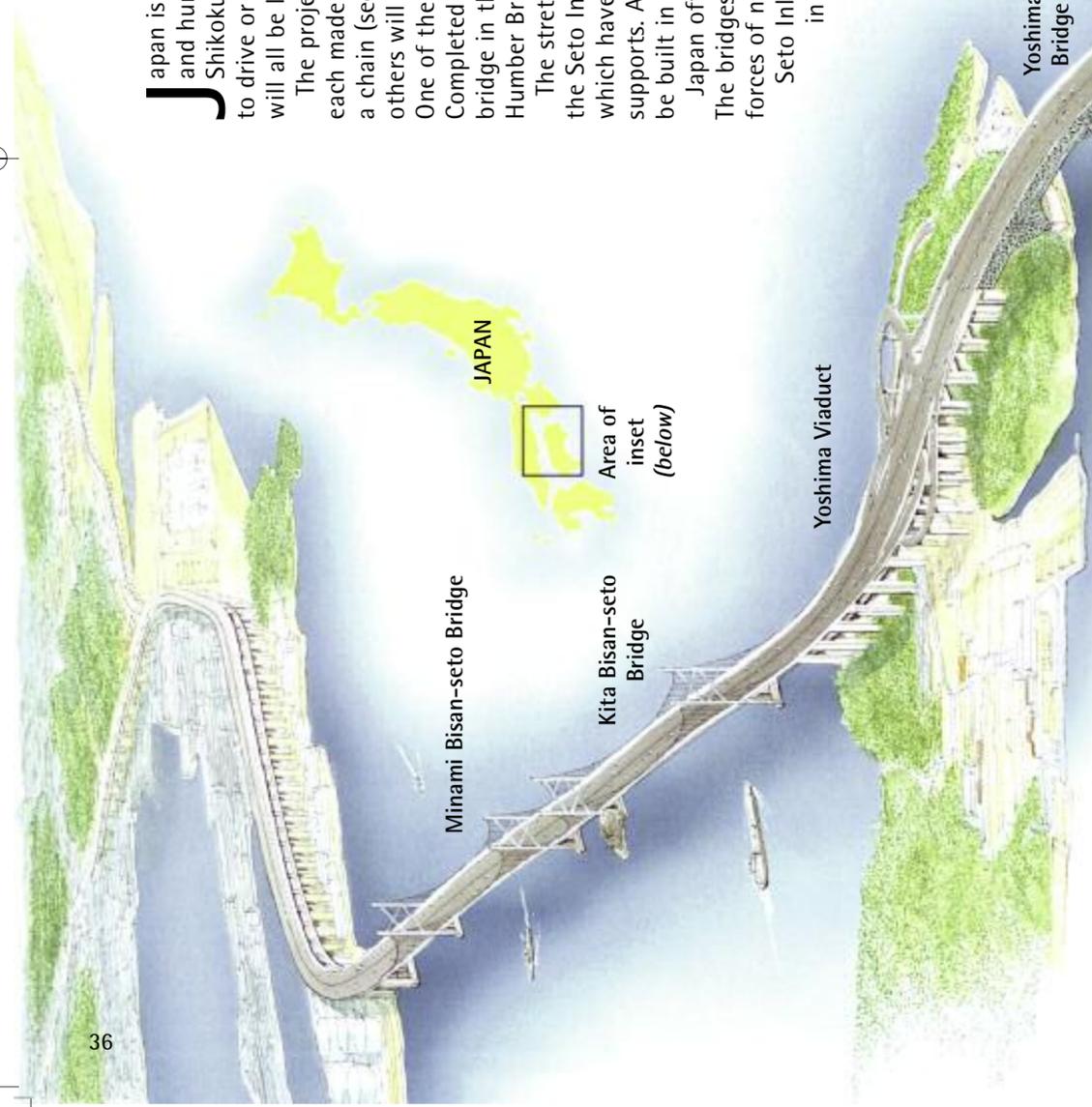
# THE LONGEST BRIDGE

Japan is a country of islands. It has four large islands, and hundreds of small ones. By the time the Honshu-Shikoku Bridge Project is complete, people will be able to drive or travel by train to all four main islands. They will all be linked by bridges or tunnels.

The project consists of not one, but three crossings, each made up of a number of bridges linked together in a chain (see inset). One has already been built and the others will be finished before the end of this century. One of the three will include the Akashi-Kaikyo Bridge. Completed in 1998, it is now the longest suspension bridge in the world, taking the record held by the Humber Bridge in England.

The stretch of water which the bridges cross is called the Seto Inland Sea. It has many small islands, some of which have been used as 'stepping stones' for the bridge supports. As the sea bed is hard granite, supports can also be built in the water.

Japan often suffers from earthquakes and typhoons. The bridges must be able to stand up against these fierce forces of nature, as well as strong tidal currents in the Seto Inland Sea. The bridge engineers also had to keep in mind that this region is a national park where some rare and beautiful plants and animals live. They had to plan the bridges and their roads in a way that would damage the environment as little as possible.



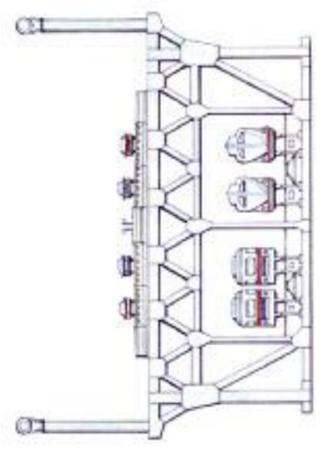
JAPAN  
Area of inset (below)

**THE WORLD'S LONGEST SUSPENSION BRIDGES**

	year of completion	span (metres)
1	1998	1990
2	1997	1624
3	1981	1410
4	1964	1298
5	1937	1280
6	1957	1158
7	1988	1100
8	1988	1090
9	1973	1074
10	1931	1067
11	1966	1013
12	1964	1006
13	1988	990
14	1966	988
15	1988	940

\* These bridges are all part of the Seto-Ohashi Bridge

Snaking across five islands and ten kilometres of sea, the Seto-Ohashi Bridge is nearly 13 km long. Suspension bridges, in which the deck is held up by cables suspended from high towers at either end, cover the longest spans.



This is a cross-section of the bridge (above). It has two decks. On the top deck, cars and trucks travel along a four-lane highway. Below, electric trains run back and forth.

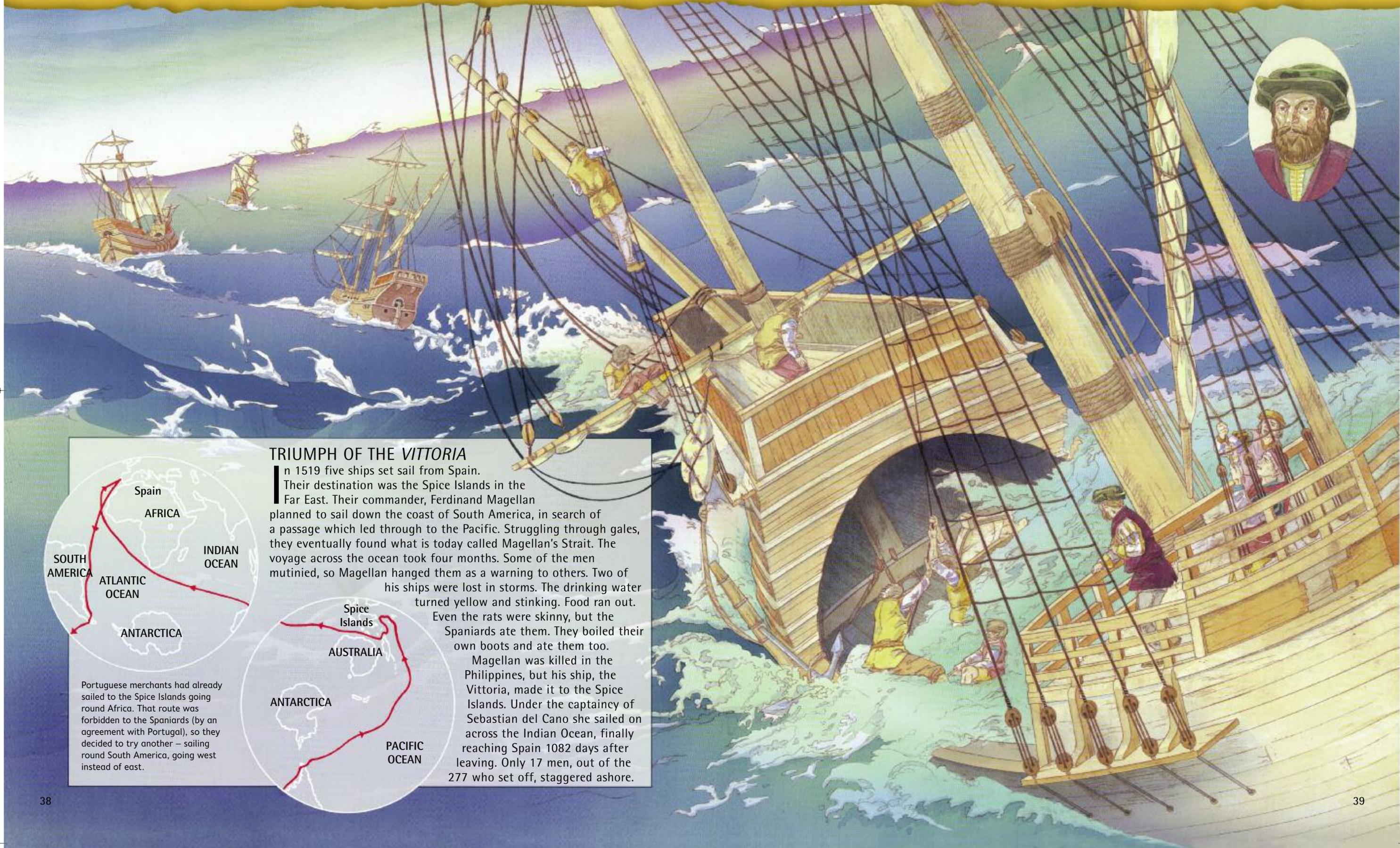
## Japan's Honshu-Shikoku bridge

### THE SETO-OHASHI BRIDGE

Made chiefly of steel and concrete, this bridge is the longest bridge in the world which carries both a road and a railway. Three suspension bridges, three other large bridges and three viaducts make up the links in the chain. The total length of all the steel cable used is 296,000 kilometres. A cable that long would go around the Earth seven times – with a few thousand kilometres left over!

# FIRST AROUND THE WORLD

## Magellan's great voyage



Portuguese merchants had already sailed to the Spice Islands going round Africa. That route was forbidden to the Spaniards (by an agreement with Portugal), so they decided to try another – sailing round South America, going west instead of east.

### TRIUMPH OF THE VITTORIA

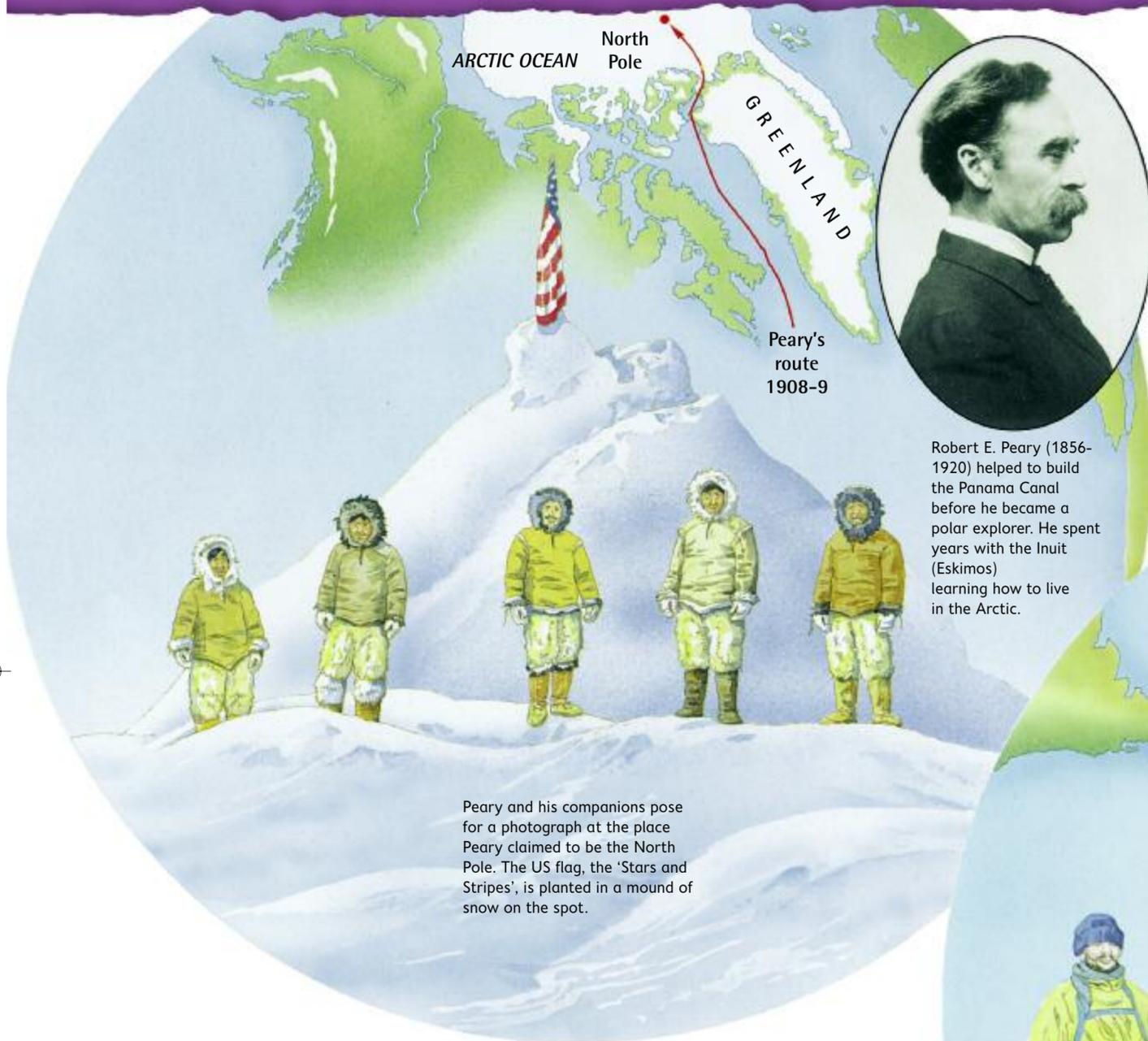
In 1519 five ships set sail from Spain. Their destination was the Spice Islands in the Far East. Their commander, Ferdinand Magellan planned to sail down the coast of South America, in search of a passage which led through to the Pacific. Struggling through gales, they eventually found what is today called Magellan's Strait. The voyage across the ocean took four months. Some of the men mutinied, so Magellan hanged them as a warning to others. Two of his ships were lost in storms. The drinking water turned yellow and stinking. Food ran out. Even the rats were skinny, but the Spaniards ate them. They boiled their own boots and ate them too.



Magellan was killed in the Philippines, but his ship, the Vittoria, made it to the Spice Islands. Under the captaincy of Sebastian del Cano she sailed on across the Indian Ocean, finally reaching Spain 1082 days after leaving. Only 17 men, out of the 277 who set off, staggered ashore.

# FIRST TO THE POLES

## The journeys of Peary and Amundsen



ARCTIC OCEAN  
North Pole  
GREENLAND  
Peary's route 1908-9



Robert E. Peary (1856-1920) helped to build the Panama Canal before he became a polar explorer. He spent years with the Inuit (Eskimos) learning how to live in the Arctic.

Peary and his companions pose for a photograph at the place Peary claimed to be the North Pole. The US flag, the 'Stars and Stripes', is planted in a mound of snow on the spot.

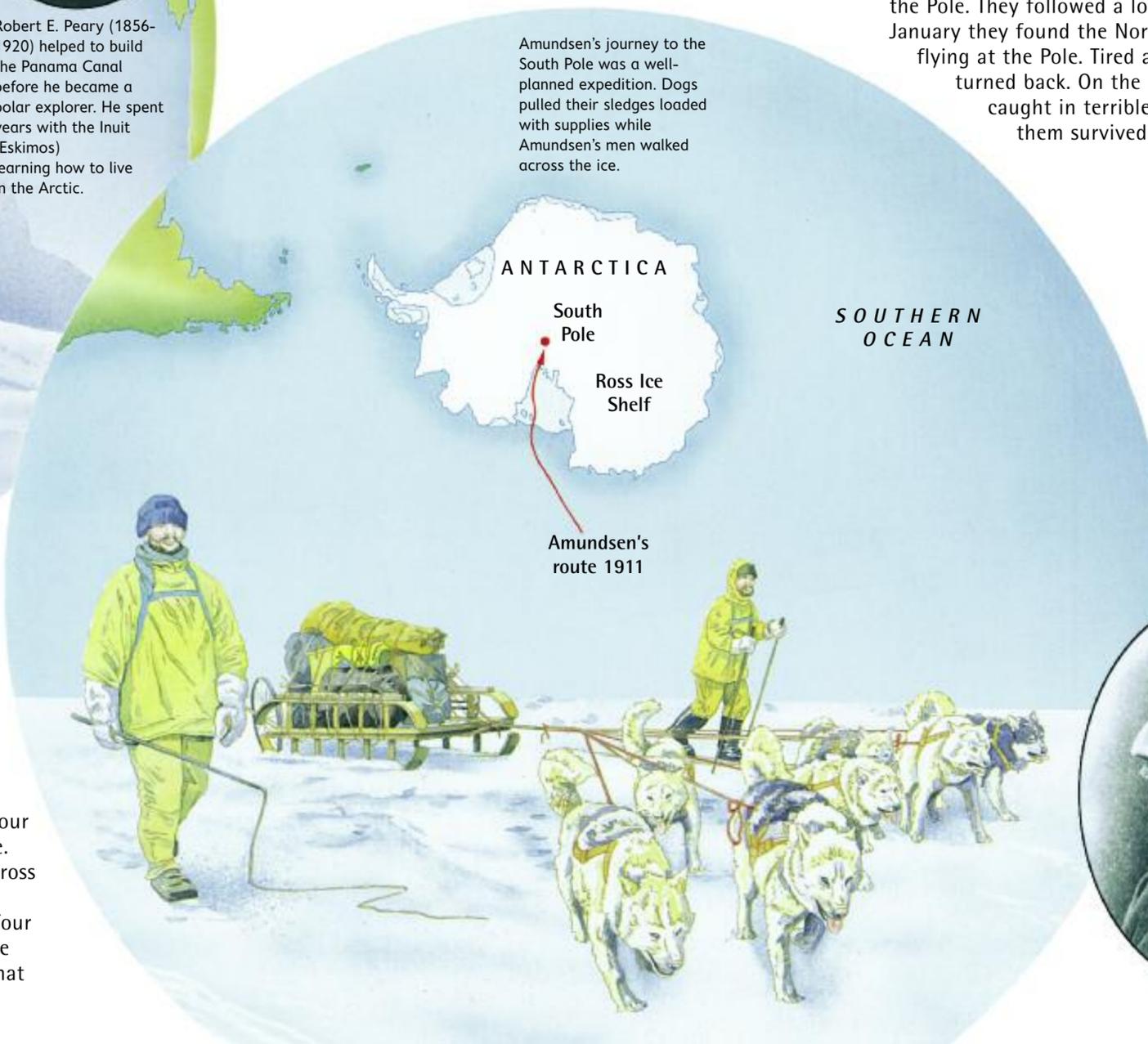
In 1909 American explorer Robert Peary began his eighth Arctic expedition. It would surely be his last. He was 52 years old and he had lost all his toes through frostbite. But he was determined to reach the North Pole. Nothing else in his life mattered so much.

From his base on Cape Columbia in the Canadian Arctic, he set out with 19 dog sledges across the shifting, broken ice of the Arctic Ocean. Though often held up by

stretches of open water, he advanced at a brisk rate of 24 kilometres a day.

Other members of the expedition had gone ahead to leave supplies of fuel and food before turning back. He made the final dash to the Pole with his old friend, Matthew Henson, and four Inuit. On 6 April they reached the Pole.

No one had ever travelled so fast across the Arctic ice. In that final dash he covered more than 300 kilometres in four days. Indeed, doubts over his incredible speed have made some people think that



Amundsen's journey to the South Pole was a well-planned expedition. Dogs pulled their sledges loaded with supplies while Amundsen's men walked across the ice.

ANTARCTICA  
South Pole  
Ross Ice Shelf  
SOUTHERN OCEAN  
Amundsen's route 1911



The Norwegian Roald Amundsen (1872-1928) gave up his medical studies to be an explorer. Besides his polar conquest, he was the first to sail through the Northwest Passage, in Arctic Canada.

Norwegian explorer Roald Amundsen wanted to be the first man to reach the North Pole. When he heard that Peary (*opposite*) had got there first, he switched to the South Pole. His ship, the *Fram*, specially built for polar voyages, carried his expedition to the Bay of Whales. In October 1911 he set out with four men and four sledges, pulled by 52 dogs.

The first stage was across the Ross Ice Shelf. They made good progress across the flat ice, stopping for supplies already placed along part of the route by an advance party. Next came the climb up the rough ice of the Axel Heiberg Glacier. Terrible cold (-50°C), gales and blizzards, hidden cracks in the ice - dangers loomed at all times. But Amundsen was confident and on 14 December they reached the South Pole and raised the Norwegian flag. By 25 January they were back at their ship.

The Norwegians were not the only men in Antarctica that summer. A British team, led by Captain Robert F. Scott, was also trying to reach the Pole. They followed a longer route. On 17 January they found the Norwegian flag already flying at the Pole. Tired and sad, Scott's men turned back. On the Ross Ice Shelf they were caught in terrible blizzards. Not one of them survived.

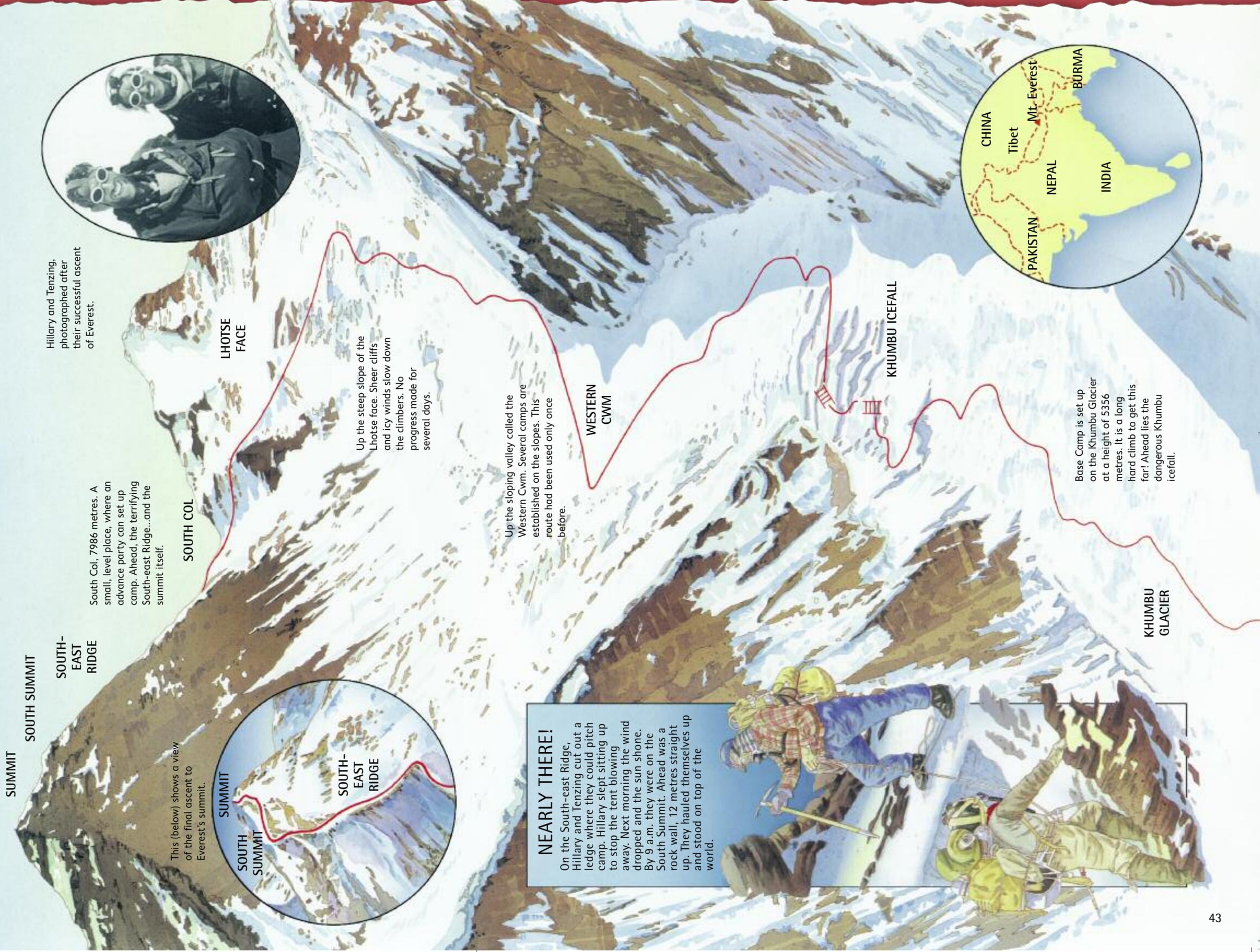
# TO EARTH'S HIGHEST POINT

*First to climb Mount Everest*

People first began climbing mountains about 200 years ago, but not until this century did anyone try to climb Mount Everest, the highest mountain in the world (8848 metres see page 33). Two British mountaineers, George Mallory and Andrew Irvine, may have got there in 1924. They were last seen 250 metres from the top. Then they disappeared.

The Tibetans call Everest Qomolangma, 'Mother Goddess of the World'. Gales blow at more than 150 kilometres an hour and the air is so thin that most climbers take oxygen tanks.

In 1953 a British and Commonwealth expedition led by Colonel John Hunt set out to climb Everest. Two men reached the South Summit but had to return. Colonel Hunt chose two others to make a second attempt. They were Edmund Hillary, a New Zealander, and Tenzing Norgay. Tenzing was a Sherpa, one of the peoples who live in mountainous Nepal. On 29 May they reached the top. Worried that their oxygen might run out, they stayed only 15 minutes. After taking photographs they made their way, weary but triumphant, back down the mountain.



SUMMIT  
SOUTH SUMMIT

SOUTH-EAST RIDGE

South Col, 7986 metres. A small, level place, where an advance party can set up camp. Ahead, the terrifying South-east Ridge...and the summit itself.

SOUTH COL

LHOTSE FACE

Up the steep slope of the Lhotse face. Sheer cliffs and icy winds slow down the climbers. No progress made for several days.

Up the sloping valley called the Western Cwm. Several camps are established on the slopes. This route had been used only once before.

WESTERN CWM

KHUMBU ICEFALL

KHUMBU GLACIER

Base Camp is set up on the Khumbu Glacier at a height of 5356 metres. It is a long hard climb to get this far! Ahead lies the dangerous Khumbu icefall.



Hillary and Tenzing, photographed after their successful ascent of Everest.



This (below) shows a view of the final ascent to Everest's summit.



### NEARLY THERE!

On the South-east Ridge, Hillary and Tenzing cut out a ledge where they could pitch camp. Hillary slept sitting up to stop the tent blowing away. Next morning the wind dropped and the sun shone. By 9 a.m. they were on the South Summit. Ahead was a rock wall, 12 metres straight up. They hauled themselves up and stood on top of the world.



# FIRST IN SPACE

## From Gagarin to the space walkers

People dreamed of travelling in outer space long before rockets were invented. In 1865 the French science-fiction writer Jules Verne wrote a story about travellers to the Moon. They got there in something that looked like a train!

The secret of space travel was the rocket – petrol or jet engines do not work in space. The first man who suggested that rockets might be used for space flight was a Russian teacher, Konstantin Tsiolkovsky, in 1903. No one took much notice then but the American scientist, Robert H. Goddard, built the first successful rocket, using liquid fuel, in 1926 (see pages 162–163).

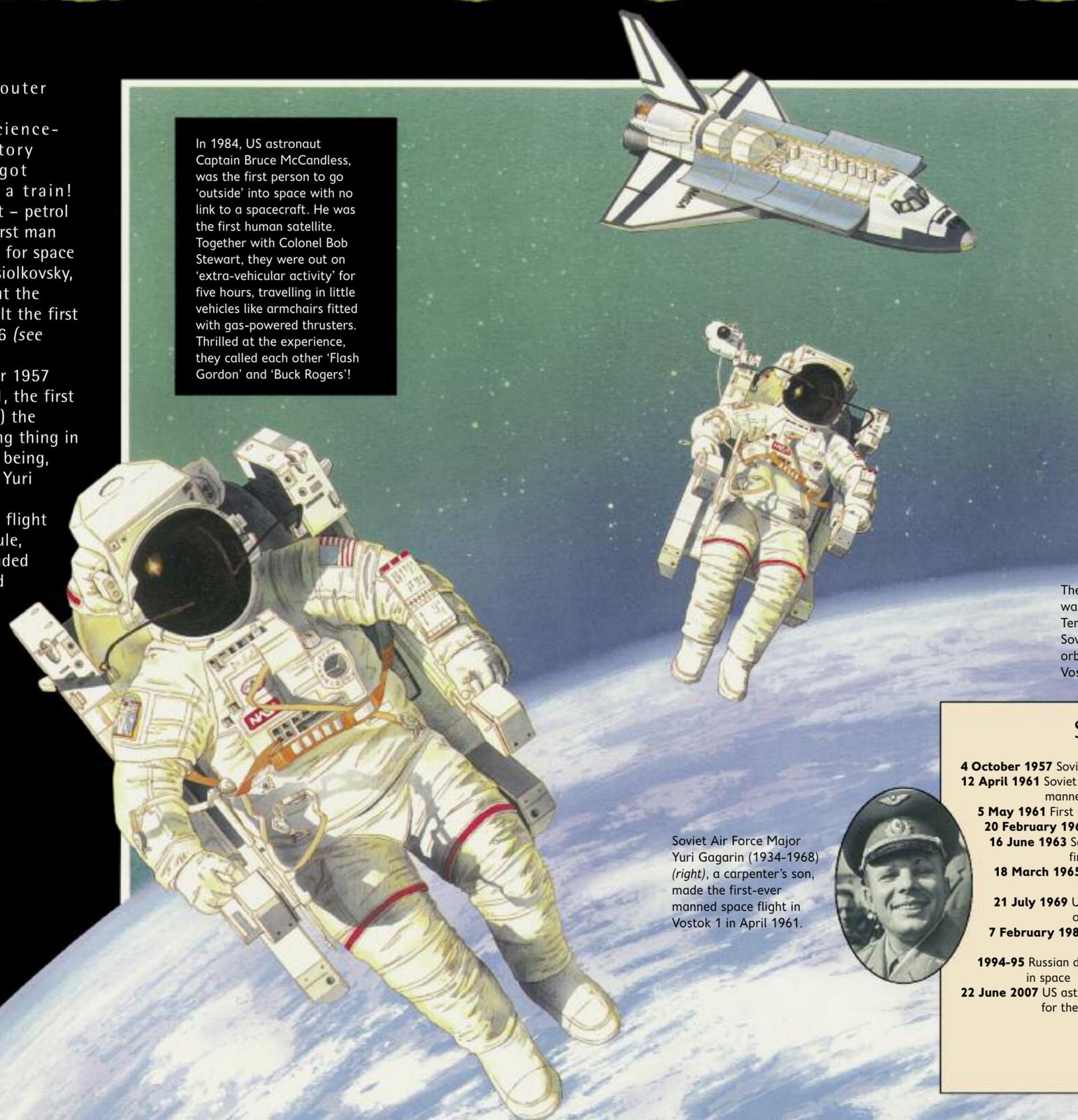
The Space Age really began on 4 October 1957 when the Soviet Union launched Sputnik 1, the first man-made satellite to orbit (travel around) the Earth. A dog called Laika was the first living thing in space, closely followed by the first human being, Soviet cosmonaut ('sailor of the universe') Yuri Gagarin, on 12 April 1961. His spacecraft, Vostok 1, made one orbit of the Earth in a flight that lasted 108 minutes. The descent capsule, which measured just 2.3 metres across, landed in Russia but Gagarin was not in it: he had parachuted out at 6700 metres.

Yuri Gagarin was the first human being to travel outside the Earth's atmosphere.

### THE FIRST SPACE WALK

Aleksei Leonov, Soviet ex-fighter pilot, trained as a cosmonaut and became the first human to walk in space in 1965. He left his spacecraft, Voskhod 2, via an airlock. With the door to the spacecraft shut behind him, the airlock was depressurized. He then opened the exit hatch and entered space. Tied to the craft by a cable, Leonov spent ten minutes alone in space, taking pictures with a portable television camera.

In 1984, US astronaut Captain Bruce McCandless, was the first person to go 'outside' into space with no link to a spacecraft. He was the first human satellite. Together with Colonel Bob Stewart, they were out on 'extra-vehicular activity' for five hours, travelling in little vehicles like armchairs fitted with gas-powered thrusters. Thrilled at the experience, they called each other 'Flash Gordon' and 'Buck Rogers'!



### A YEAR IN SPACE

In the 1970s the Soviets and the Americans began building large space stations. Much larger than the tiny capsules of Gagarin and Glenn, they allowed crews to spend time carrying out scientific research. In 1987–88 Soviet cosmonauts Musa Manarov and Vladimir Titov spent just short of 366 days in the Mir space station. Their record was broken by Valeri Poliakov in 1995. He now also holds the record for the longest distance travelled. On board Mir, he has flown about 400 million kilometres, well over the equivalent of a return trip to the Sun.

The first woman in space was 26-year-old Valentina Tereshkova from the Soviet Union (right). She orbited the Earth in Vostok 6 48 times in 1963.



### SPACE FIRSTS

- 4 October 1957** Soviets launch Sputnik 1, first man-made satellite
- 12 April 1961** Soviet cosmonaut Yuri Gagarin makes first flight in manned spacecraft, Vostok 1
- 5 May 1961** First US astronaut Alan Shepard makes 15-minute flight
- 20 February 1962** John Glenn becomes first US astronaut to orbit Earth
- 16 June 1963** Soviet cosmonaut Valentina Tereshkova becomes first woman in space
- 18 March 1965** Soviet cosmonaut Aleksei Leonov makes first space walk
- 21 July 1969** US astronaut Neil Armstrong is the first man to walk on the Moon
- 7 February 1984** US astronaut Bruce McCandless performs first untethered space walk
- 1994-95** Russian doctor Valeri Poliakov spends a record 437 days in space
- 22 June 2007** US astronaut Sunita Williams sets the record, 195 days, for the longest space flight by a woman.

Soviet Air Force Major Yuri Gagarin (1934–1968) (right), a carpenter's son, made the first-ever manned space flight in Vostok 1 in April 1961.



Neil Armstrong, (right) the first person to set foot on the Moon



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