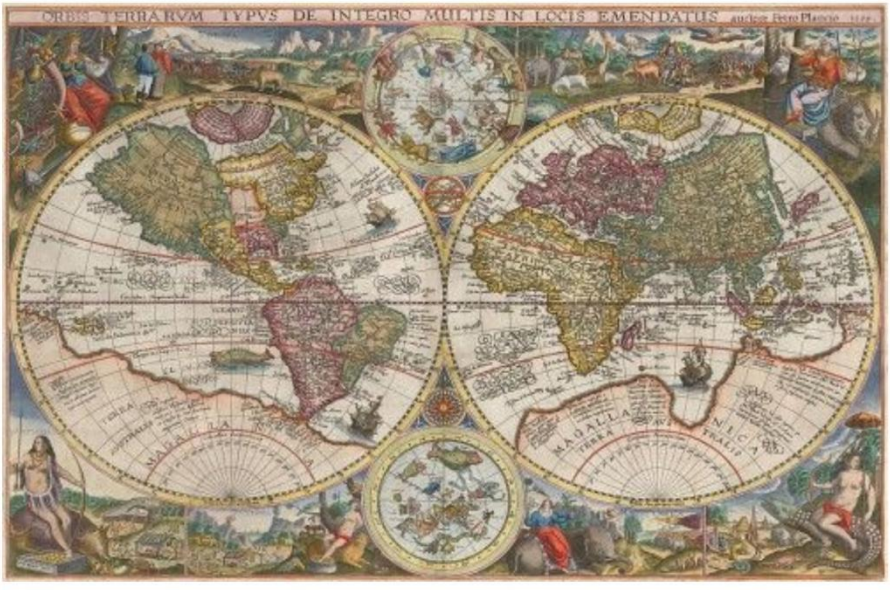

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INTRODUCTION

'Following the light of the sun, we left the Old World.'

CHRISTOPHER COLUMBUS

Maps, it should be said, are not quite what they appear to be. Throughout history cultures have carved, painted and printed their spatial understanding of the world using every material to hand. The Permian sandstone of Italy's Camonica Valley carries the Bedolina Petroglyph, chiselled *c.* 1500 BC by an Iron Age people trying to make sense of their surrounding landscape. The vellum of the 'portolan' navigators' charts that first appeared in the thirteenth century formed the vanguard of a new practical cartographic accuracy, the animal hide able to withstand the sea spray that would otherwise dissolve paper in seconds. And then there are much rarer curiosities, like the giant canvas sheet maps of nineteenth-century missionaries, declaring the number of heathens awaiting conversion (see David Livingstone, Henry Morton Stanley and the 'Dark Continent' entry here) or the collapsible cotton umbrella globes and finely engraved silver coins

of the Victorian map-lover wishing to carry the world with them around town.

John Speed's world map from Prospect of the Most Famous Parts of the World *(1627), the first English atlas of the world.*

And yet with all this diversity there is one material common to every map ever made, an essential ingredient imbuing every cartographic particle: story. Maps are *alive* with stories, crowded

and raucous with the centuries of endeavour that combined to piece together the knowledge they display. Consider each minute curve of coastline and brushstroke of river for what they were to their discoverers: jewels of data snatched from an unmeasured darkness beyond the known horizon, trophies potentially more valuable than a full hold of treasure because of the infinite continental riches to which they could lead. Maps function as intricate tapestries of these adventures, interlacing explorational enterprises of kings, conquerors, corporations, scientists and lone treasure hunters, ultimately all united by a common motive: to bring definition to the blizzard of the blank space.

Large portolan chart of the Mediterranean across three vellum sheets, by Giovanni Battista Cavallini, 1641.

The idea behind *The Golden Atlas* is to provide this narrative context with the stories of the greatest of these discoverers, revealing how their trailblazing exploits are woven into the historical fabric of the map, as the modern world took shape on the cartographer's canvas. In equal measure, too, is the intent to illustrate these histories with the most beautiful collection of cartography ever published. Some of these maps, in their role as the 'birth certificates' of new nations might be recognizable in their infamy. Other rare examples are published here for the first time, thanks to the wide variety of sources: not only museums and libraries but also private collections and the archives of antiquarian dealers around the world. As such, there are objects of phenomenal worth. The Maggiolo Portolan for example, illustrating 'Verrazzano Traces the East Coast of North America', is currently valued at $10 million (the most precious to ever go on the public market). And each map, from the local to the global, has stories to tell.

John Bett's 1 *lla mechanism.*

Though v :plorers of the
Ancient Wo / begins much
earlier with ın wayfinders.
Between 30(afarers set out
on voyages ɔnly outrigger
canoes and l star patterns
passed down through oral tradition – in a sense, maps in verbal

form. N ts of these earliest
venture he diaspora from
Melanes ast to the Society
Islands, and south to New
Zealand gin to appear with
the nav se of the Egyptian
kingdon l beyond, with slim
paragra nd Roman authors
like Her d documents long
since los

Sebastian Münster's map of the monsters thought to terrorize the Scandinavian waters, 1550.

While the early establishment of trade networks made for piecemeal progress, the most monumental advancement in geographic discovery came with the conquerors. With the fourth-

century BC campaigns of Alexander the Great in his pursuit of the 'ends of the world', and the spread of the Roman Empire, the great geographer Claudius Ptolemy was able to illustrate the world AD *c.* 140 with unprecedented detail using a revolutionary mathematical system of coordinates. As Romanized Europe fell into the Dark Ages of the first millennium with the Empire's collapse, the most notable explorations were conducted by those far beyond its borders: the wildfire spread of Islam unified a vast medley of lands from Spain to the East, allowing scholars free passage throughout; while at the same time Scandinavian expeditions took to the tumultuous North Atlantic to reach Iceland, Greenland and then, by sheer accident, 'Vinland' (North America) in the late tenth century.

With the rest of Europe largely oblivious to these Viking discoveries, it was the unstoppable expansionism of the Mongol forces that delivered the next great impact, with the order brought by the Great Khan allowing European merchants (most famously, Marco Polo) to travel with relative safety throughout Asia in the thirteenth century. The wealth of the East was now evident to European eyes but the overland journey was impractically long and arduous – a sea route was needed, so that entire ships could be filled with bartered silks and spices. Thus the fifteenth century saw the opening of the great Age of Exploration. Portuguese expeditions crept down Africa's west coast, the Crown hoping to establish itself in the Saharan gold and slave trade while searching for a way to India, until Bartolomeu Dias rounded the Cape of Good Hope in 1488 and Vasco da Gama reached India ten years later. At

around the same time a British expedition made a remarkable transatlantic crossing to discover Newfoundland (see John Cabot Journeys to North America entry here), while the Spanish also looked to the West, agreeing in 1494 to leave eastern routes to the Portuguese. Christopher Columbus struck out across the Atlantic to win the race to reach China, arriving instead at the New World (and never accepting that he had failed to find the Orient).

The riches of the Americas would transform Europe to the devastation of the continent's indigenous cultures, but they were not immediately apparent. The way to the East remained the priority, and Ferdinand Magellan set out to uncover a way around the continental obstacle – this he found in the storm corridor of the Strait of Magellan, emerging into the Pacific for the first time in 1520. With the discovery of the golden civilizations of the Aztec and Inca, however, a new breed of ruthless explorer began to arrive in South America for the treasure-hunting opportunities. The hunger for gold led Juan Ponce de León to his discovery of Florida in 1513, as it did Hernán Cortés to his sacking of Mexico between 1517 and 1521, which would seal the destruction of the Aztec Empire.

On the tail of the Spanish came the English. Francis Drake left England in 1577, appearing in the Pacific via the Strait of Magellan to the shock of the Spaniards, who were completely unprepared for the ensuing pillaging campaign that would turn into the first English global circumnavigation. Sir Walter Ralegh arrived in search of his own prize, chasing the myth of El Dorado with disastrous consequences, just as a new obsession gripped his peers:

the search for a Northwest Passage. This would theoretically allow easier sailing from the Atlantic to the Pacific across the top of, if not through, North America, and in anticipation of easier commerce with the East the seventeenth century saw the appearance of the trading company phenomenon. These monopolistic organizations grew to possess the wealth and power of nations. The English Muscovy Company sent trading missions into Russia and Central Asia, scanning for a Northeast Passage to China; while the British East India Company sought the treasures of the Orient via more southern routes in competition with the Dutch East India Company (VOC). The latter became so astonishingly rich from its secret trade routes (locked away in a hidden atlas called *The Sea Torch*) that to this day it remains the wealthiest company in history, valued at a modern 7 trillion US dollars. (For context, today's most valuable company, Apple, is at the time of writing worth a mere $750 billion.) The VOC's westward explorations from their base in Java led to the discovery of a new land to obsess over: Australia and, shortly after, the first European sighting of New Zealand.

Pieter van der Aa's Planisphere Terrestre . . . *(1713), displaying the extent of French exploration.*

With the eighteenth century came a gradual shift to a scientific approach to discovery, embodied by more mathematical and less decorative mapping, and our cast of characters morph from gold-greedy privateers to more regimented pragmatists. Vitus Bering led his extraordinary fact-finding expedition across Russia's frozen entirety to grant the last wish of Peter the Great; while between 1766 and 1769 Louis Antoine de Bougainville carried out the first French circumnavigation, which also featured the remarkable forgotten story of the first woman to sail around the world. But the gold standard of this Scientific Age of Exploration was set by Captain James Cook, who before meeting his grisly end in Hawaii made three epic voyages around the Pacific on a meticulous

research mission of unparalleled success. Countless explorers were inspired to follow Cook's example, and maps of continental coastlines grew ever more detailed with the likes of La Pérouse (before his mysterious vanishing) and George Vancouver. In the nineteenth century this developed further with explorers like the Scotsman Mungo Park setting out into the giant empty space on the map that was Africa's interior; while Alexander von Humboldt and Aimé Bonpland wrote, mapped and measured their way through South America's exotic nature; and Meriwether Lewis and William Clark made the first crossing of America's western vastness at the behest of Thomas Jefferson.

Though Arctic exploration had remained a preoccupation, the mid-nineteenth century saw a renewed British drive to find the Northwest Passage, with William Parry, John Ross and most famously Sir John Franklin's lost expedition among those combing the frozen labyrinth for a navigable route. The obsession persisted into the twentieth century, in what is known as the Heroic Age of exploration, when Roald Amundsen finally managed the feat between 1903 and 1906, and the last great challenge of discovery became the race to the poles, open to any with sufficient amounts of funding, courage and foolhardiness. While the contest to be the first to the North Pole remains unresolved due to the extraordinary unreliability of its two competitors, with the First World War engulfing the world this last great explorational age drew to a close with the gripping tales of Antarctic rivalry between British and Norwegian teams battling to raise the first flag at the

South Pole, their inspirational bravery punctuating a story of catastrophic misfortune.

EXPLORATION AND MAPPING OF THE ANCIENT WORLD 2250BC–AD150

'There is nothing impossible to him who will try.'

ALEXANDER THE GREAT

along Africa's east coast until finally turning westward, around South Africa, with the sun on their right. (Herodotus, without a concept of the Earth's curvature, found this baffling.) Eventually they returned to Egypt via the Mediterranean, having sailed around the African continent. How much of this actually occurred has been debated for more than two thousand years. Pliny believed the story while Ptolemy rubbished the idea, holding the notion, as one finds exhibited on his maps, that Africa could not be circumnavigated due to it being a promontory of a vast southern continent.

Egyptian soldiers from Hatshepsut's expedition to the Land of Punt as depicted from her temple at Deir el-Bahari.

Another figure mentioned by Herodotus is Scylax of Caryanda, a Greek in the service of the Persians who explored the coasts of the Indian Ocean and rounded the Arabian Peninsula in 515 BC. While Scylax trailblazed for honour and glory, the reason for the 470 BC voyage of Sataspes, nephew of Persian King Darius, was quite different. After being caught defiling a nobleman's daughter, Sataspes avoided the standard sentence of impalement by choosing a punishment 'even more severe': a journey around

Africa. He sailed from Egypt via the Strait of Gibraltar, following the African coast south for months until he discovered a land of pygmies wearing palm leaves. Unable to progress past adverse currents, he returned to Persia in the hope his discoveries merited a pardon. They didn't. Xerxes deemed the voyage a poor effort, and Sataspes was impaled regardless.

Ortelius's 1608 map of Alexander the Great's conquests in the Middle East and Persia.

The fourth century BC belonged to Alexander the Great, who inherited the Ancient Greek kingdom of Macedon at the age of twenty when his father Philip was assassinated. Awarded the generalship of Greece with a formidable army at his command, he crossed the Dardanelles (a waterway that effectively forms the border between Europe and Asia) in 334 BC and embarked on an

creatures couldn't survive the low altitude). When he gave the order to cross the mighty Ganges, his exhausted men refused to march any farther.

In 325 BC a geographer named Pytheas of the Greek colony and trade centre Massalia (Marseilles) made his own extraordinary voyage of discovery, documenting for the first time the coastline of Great Britain, northern Europe and lands beyond. Though his record of the journey, *About the Ocean*, did not survive, it was celebrated in Antiquity and fragments survive as echoes in other geographies. He was the first to describe the Midnight Sun of the north that shone for months at a time, the first scientific examiner of polar ice and the Germanic tribes, and the first to introduce the mythical island of Thule, which would pervade geographic imagination for more than a thousand years as a name for every unfounded rumour and fantasy of northern territory. It appears Pytheas's route took him from the Bay of Biscay, round modern Brittany to cross the English Channel and reach Cornwall. He then circumnavigated 'the islands of the Pretanni' [Great Britain], investigating the Orkney and Shetland Islands, and headed north to Thule, which is thought to be either Iceland or the Norwegian coast.

Mercator's
1578
map
of
the
world
based
on
Ptolemy's
writings.

A
section
from
the
c.1200
copy
of
the
300
BC
original
Tabula
Peutingeriana,
a
22ft-
(7m-
)

long
road
map
of
the
Roman
Empire
marking
c.4000
settlements.
The
British
coast
is
in
the
top-
left
corner.

Though he had his doubters – Strabo sums up Pytheas as an 'arch falsifier' – *About the Ocean* was cited by historians and geographers for centuries with a visible influence on early cartography, like the map by Ptolemy (here) which shows Scotland bent off at a right angle, most likely because of a reliance on Pytheas's erroneous coordinates.

Into the new millennium and the shadows cloaking the heartlands of France, Germany, Spain and Britain were blazed away by the explorations of Imperial Rome led by Julius Caesar and

his successors, producing for the first time detailed documentation of the geography and native cultures encountered. By AD 84 the Gallo-Roman general Agricola was in Scotland. Oblivious to Pytheas's journey, he dispatched a party to circumnavigate, which claimed the Orkney Islands and sighted their own 'Thule' – in this instance, the Shetlands. Meanwhile, in Africa Suetonius Paulinus crossed the Atlas Mountains in the north in AD 42, and in AD 60 a tiny group of Praetorian Guard was dispatched by Nero to navigate the Nile in search of its source, eventually losing the river in the giant Sudd swampland of south Sudan, a mire that would swallow up future search attempts.

Greek
mathematician
Ptolemy,
this
copy
printed
in
Rome,
1478.

Being the only survivor of its age, *Geography* neatly summarized the history of ancient exploration. With his maps reproduced in medieval manuscripts, supplanting the religious *mappae mundi*

Rectangular world map from the Book of Curiosities, *c.1020-50, an illustrated anonymous cosmography, compiled in Egypt during the first half of the eleventh century.*

Circular world map by Al-Sharif Al-Idrisi from manuscript in Bodleian, 1154.

By 833 Muhammad ibn Musa al-Khwarizmi, a Persian scholar of Baghdad's House of Wisdom, made the first major reworking of *Geography* with his *Book of the Description of the Earth*. Hampered by a lack of the original maps, al-Khwarizmi set about refining the work with more modern information, correcting, for example, Ptolemy's wild overestimation of the length of the Mediterranean Sea from 63 degrees of longitude to a more accurate 50 degrees, and showed the Atlantic and Indian Oceans as open bodies of water, rather than landlocked seas as Ptolemy had asserted.

Following this, Ibn Khordadbeh wrote the earliest surviving Arabic book of administrative geography, detailing the trade routes all the way to the Indies with maps and recording the land, people and culture of the southern Asian coast as far as

Brahmaputra, the Andaman Islands, Peninsular Malaysia and Java. As well as making early references to the lands of Tang China, Unified Silla (Korea) and Japan, Ibn Khordadbeh also mentions the mythical land of Wak-Wak, which is most famous for its tree of screaming human heads, which roared in salutation of the sun at dawn and dusk: 'East of China are the lands of Wak-Wak, which are so rich in gold that the inhabitants make the chains for their dogs and the collars for their monkeys of this metal. They manufacture tunics woven with gold.'

In the early tenth century, a remarkable journey was made by the Arabic traveller Ahmad ibn Fadhlan, who crossed the Caspian Sea in 922 as part of an embassy to the Volga Bulgaria, in what is now European Russia. A large part of his journal – a complete version of which was discovered only in 1923 – is devoted to his study of the 'Rusiyyah' people – better known as Vikings. To his Arab eyes the blond-haired men were extraordinary, as tall as palm trees and tattooed with dark 'tree patterns' from 'fingernails to neck'. Ibn Fadhlan proclaims the Rusiyyah to be perfect physical specimens, though utterly vulgar and completely lacking in personal hygiene, and he reports with horror the gruesome sight of human sacrifice as part of a ship funeral of one of their chieftains.

The world map

from
the
Tabula
Rogeriana,
created
by
the
Arab
geographer
Muhammad
al-
Idrisi,
in
1154.
The
map
is
shown
here
upside-
down
for
familiarity,
as
it
is
drawn
with
south
at
the

top,
common
to
Islamic
maps
of
this
period
as
those
in
the
many
territories
north
of
Mecca
turned
south
to
pray.

An even more revered traveller is the Iraq-born Abu'l-Hasan al-Mas'udi, sometimes called the 'Herodotus of the Arabs', whose ravenous curiosity led him out to see the world for himself. His travels took him to Syria, Iran, Armenia, the shores of the Caspian Sea, the Indus valley, Sri Lanka, Oman and the east coast of Africa as far south as Zanzibar, possibly even to Madagascar. Though much of his writing has not survived, more than twenty works are attributed to al-Mas'udi, on subjects ranging from sects to poisons.

THE VIKINGS DISCOVER AMERICA 986-1010

'He who has travelled can tell what spirit governs the men he meets.'

FROM THE OLD NORSE POEM *THE HÁVAMÁL*

Ortelius's famous 1587 map of Iceland, with exploding volcanoes and mythological sea creatures.

Centuries before Columbus, the Vikings trod the sands of American shores. In Greenland, Eirik Raudi, also known as Erik the Red, had successfully colonized a new home for himself, his family and followers, after being banished from Norway for the crime of manslaughter. Stories of his vast, fertile new country were propelled by Eirik's cunning invention of 'Greenland' as an alluring name for the new settlement, three-quarters of which is actually covered by a permanent ice sheet. Rumour of abundant walrus tusk ivory – one of Medieval Europe's most valuable trade materials – reached Norwegian and Icelandic ears, and the northern waters soon teemed with vessels carrying families determined to stake their claim in the new land rush. And so perhaps it was inevitable that among this throng of traffic a ship would slip from its course by accident, and its passengers stumble onto an even greater discovery.

A painting by the nineteenth-century artist Jens Erik Carl Rasmussen of a Viking vessel off the Greenland coast.

In 986 the Norseman Bjarni Herjólfsson made landfall in Iceland, intending to meet up with his family. To his dismay he was told that his father had left the country, having sold his home to join Erik the Red on his quest to colonize Greenland. Herjólfsson set out again, this time for the new settlement, but things didn't quite go to plan. On the third day of his journey his ship was swept up by a northern wind, carrying him a great distance until finally he met with strange terrain – he had discovered Labrador

(northeast Canada). Herjólfsson explored the forests and hills, and then made another attempt for Greenland, this time successfully. Little was made of his sightings until fifteen years later when Leif Erikson, son of the Red, bought Herjólfsson's own boat and headed for the land he had described. (Incidentally, it is Erikson, not Herjólfsson, who is given credit for the discovery in the saga of Erik the Red.)

Around the year 1000, Erikson and his fifteen-man crew retraced Herjólfsson's voyage and arrived at 'a land of flat stones' they called Helluland, according to the sagas that record the story. It is generally agreed that this is Baffin Island, the fifth-largest island in the world, in what is today the Canadian territory of Nunavut. The barren ground and mountains were not the most suitable for settlement though and Erikson moved on, south to 'Markland'. Here again he found inhospitable shores thick with woodland and so continued his journey, making for another shore in the distance which he found to have a more agreeable terrain and climate. He remained there for a winter, and sung the country's praises on his return: temperate, rich with vegetation, its freshwater teeming with fish. Most wonderfully he told of lush grapes on the vine, and so it was named 'Vinland', the land of wine. (Whether this last feature was true, or whether Erikson had as great a gift for false advertising as his father, is debatable.)

Regardless, Vinland was now on the Norse radar and another expedition was dispatched, led by Leif's brother Thorvald, as Erikson had to remain behind to maintain the Greenland colony. This time, however, the Vikings encountered resistance from the

native population and Thorvald was felled by an arrow. For a while the Norse were put off from making further efforts at exploring the new country until 1010, when Erikson's brother-in-law, Thorfinn Karlsefini, landed with a contingent of sixty-one men with their wives and farming animals in tow, determined to form a settlement. From this point the story is told with variation among the sagas, but it can be gathered that the Norse base was situated on the northern tip of Newfoundland. There is currently little evidence as to how much of their surroundings they explored, but it seems they maintained a presence on the American continent until the mid-fourteenth century. In 1960 an archaeological site at L'Anse aux Meadows at this general spot produced evidence of such a settlement, confirming this extraordinary pre-Columbian transoceanic contact.

Another related discovery of recent times is decidedly more controversial. 'The Vinland Map' is purported to be a fifteenth-century world map showing these Norse discoveries in the New World, including 'Vinlanda Insula', as well as Africa, Asia and Europe. The map was found in 1957 (three years before the unearthing of the Viking site at L'Anse aux Meadows) among the pages of a medieval text *Hystoria Tartarorum*, after a London book dealer named Irving Davis offered the slim volume for sale to the British Museum. It was treated with deep suspicion right away. The position of wormholes in the document did not match those in the book, although this appeared to be resolved a year later when the same dealer happened to come across a third volume with the corresponding markings. Since this time, the Vinland map has

Peace), which allowed, for the first time, travellers to have a relatively safe passage from Europe to China.


image
not
available


image
not
available