

## LEY LINES

Ley lines are straight alignments drawn between various historic structures, prehistoric sites and prominent landmarks. The idea was developed in early 20th-century Europe, with ley line believers arguing that these alignments were recognised by ancient societies that deliberately erected structures along them.

Since the 1960s, and other esoteric traditions have commonly believed that such ley lines demarcate "earth energies" and serve as guides for alien spacecraft. The idea of "leys" as straight tracks across the landscape was put forward by the English antiquarian Alfred Watkins in the 1920s, particularly in his book *The Old Straight Track*. He argued that straight lines could be drawn between various historic structures and that these represented trade routes created by ancient British societies. Although he gained a small following, Watkins' ideas were never accepted by the British archaeological establishment. His critics noted that his ideas relied on drawing lines between sites established at different periods of the past. They also argued that in prehistory, as in the present, it was impractical to travel in a straight line across hilly or mountainous areas of Britain, rendering his leys unlikely as trade routes.

In 1921, amateur archaeologist Alfred Watkins made a remarkable discovery. He noticed that ancient sites around Britain all fell into a strange alignment. Both man-made and natural monuments could be connected by perfectly straight paths. He coined these routes "ley lines" — and opened up a world of supernatural and spiritual beliefs.

### **So, what are ley lines exactly?**

According to theorists, they are invisible lines that crisscross around the globe — similar to latitudinal and longitudinal lines — dotted with monuments and natural landforms. Some believe they carry rivers of supernatural energy and that there are pockets of concentrated energy at the places where they intersect that can be harnessed by certain individuals. Of course, ley lines aren't without their sceptics. While the idea can be tantalizing to some, others are wary of ascribing to the paranormal component of ley lines — and often attribute much of the theory to pure coincidence. **So, which is it?**

Alfred Watkins was born in Hereford, England, on Jan. 27, 1855, to an affluent family who operated several businesses in the small town. As Watkins grew up, he began taking on duties for the family trades and developed an intimate knowledge of the region. Watkins also had a deep interest in photography, and he established himself as both a respected landscape photographer and a craftsman. He even developed the Watkins Bee Meter, a small exposure meter with a timing chain for traveling photographers. Alfred Watkins, a well-respected photographer who came up with the theory of ley lines.

But Watkins is remembered today less for his photography and more for his theory of ley lines. Per the Tate Museum, Watkins, by his own account, first discovered ley lines during a "rush of revelations" on June 30<sup>th</sup> 1921. He was standing on a hill in Blackwardine when he saw on a map that a number of ancient sites stood in a perfectly straight line. His view from the top of the hill seemed to confirm this, and he followed his initial observation by examining the view from other tall hills in the area. Watkins said he was "unhampered by other theories" and that his observations were "yielding astounding results in all districts." He further theorized that starting at any one point along the line and traveling along it would also reveal sites not marked on maps, such as forest glades, trenches, or notches on crested hills.

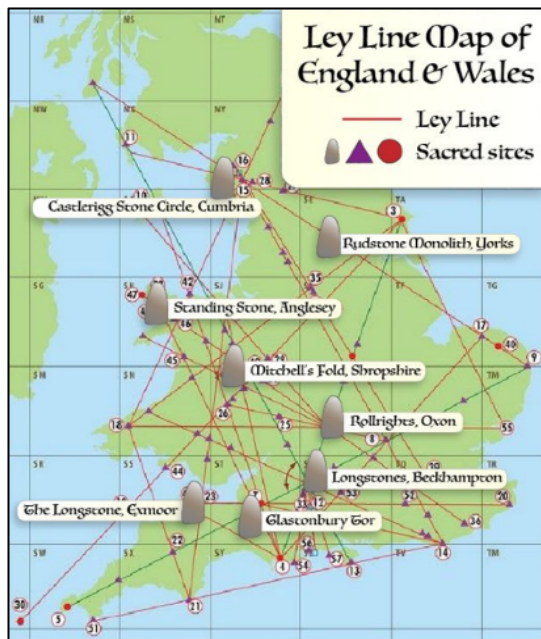
Watkins' view of the world echoed other "alignment" theories, all of which largely suggested the same thing — that ancient humans were in tune with some ethereal force, largely unobserved by modern man, and constructed their sacred places in specific spots where that force was strongest. Watkins' theory didn't win over everyone, however, and to this day, the existence of ley lines is a heavily debated topic.

### **How The Mythology Of Ley Lines Evolved Over Time.**

Watkins claimed that ley lines are straight alignments connecting various historic structures, landmarks, prehistoric sites, and sacred places. However, he didn't personally attribute any mystical properties to the pathways.

He first explored his theory in detail in his book *The Old Straight Track*, in which he argued that ley lines represented ancient trading routes used by England's prehistoric societies. The straight lines allowed them to travel from one place to another as quickly as possible, he posited.

British archaeologists largely disregarded Watkins' hypothesis, though, stating that it would have been impractical for prehistoric societies to travel in perfectly straight lines for trading — just as it is today. For instance, it can be much quicker to walk around a steep hill than to climb over it.



**Ley lines** are hypothetical alignments of ancient landmarks, religious sites, and man-made structures, which proponents suggest are imbued with mystical or spiritual significance. While ley lines are considered a pseudoscientific theory without scientific evidence, they continue to intrigue people who are interested in Earth mysteries, ancient civilizations, and geomancy.

Essex, with its rich history of ancient sites, churches, and standing stones, has long been a region of interest for those exploring ley lines.

Though there's no official or universally accepted map of ley lines, enthusiasts have noted several features in Essex that could be connected in a straight line, potentially forming ley lines. Here are some notable sites that are often associated with ley lines in the county:

**Alfred Watkins' map of ley lines.**

However, like many other fringe ideas, Watkins' theory was just the foundation. Decades later, in the 1960s, Watkins' idea

saw something of a revival thanks to a man named Tony Wedd. In 1961, Wedd suggested ley lines were used by prehistoric humans to communicate with aliens. In fact, he believed they were paths created to guide UFOs visiting Earth. And in 1969, John Michell wrote about ley lines in his book *The View Over Atlantis*, in which he introduced the concept of "Earth energies."

Ley lines began to take on a more esoteric, spiritual connotation around this time. No longer were they simply the trails left by ancient humans; now, they were invisible "energy lines" that only a select few could actually detect.

In January 2023, BBC interviewed artist and performer bone Tan Jones, a believer in these energy lines who walked from London to Stonehenge along one of these purported ley lines. "I've been interested in ley lines for years," Tan Jones said. "I grew up in the countryside, connected to Earth energy, so it makes complete sense to me that there are energy lines moving through the Earth." But the specifics of how ley lines evolved from the trade routes of ancient humans to something more mystical are rather odd.

Throughout the '60s and '70s, ley lines became attached to numerous counterculture movements, with David Newnham writing for *The Guardian* in 2000: "Ley-line theory was to mutate and bifurcate, to bend with every passing fad, so that it frequently seemed as though its only purpose was to highlight the failings of our own times. And with each twist and turn, it became ever more firmly enmeshed in a thicket of mysticism, neo-paganism and plain superstition."

Watkins had considered his hypothesis to be scientific in nature, though he could never definitively prove the concept to be true. Incorporating supernatural elements into the theory certainly didn't help. But in the 1980s, scholars Tom Williamson and Liz Bellamy tried to approach ley lines with a scientific mindset — and ultimately, their findings highlighted a crucial error with the theory.

Williamson and Bellamy's findings did not outright disprove the existence of ley lines, but they did cast a fair amount of reasonable doubt. Essentially, by examining the locations of various archaeological sites across England, they discovered that there was such a high density of landmarks that it was essentially possible to draw a straight line in any direction and connect multiple locations. That is, anyone could create a map of ley lines.

Researcher Tom Brooks argued that keen mathematicians lived in Britain as far back as 5,000 years ago — before the Greeks had even invented geometry. He, like Watkins, examined ancient sites — 1,500 to be precise — and found that they had all been built on a series of isosceles triangles, each one guiding ancient humans to the next.

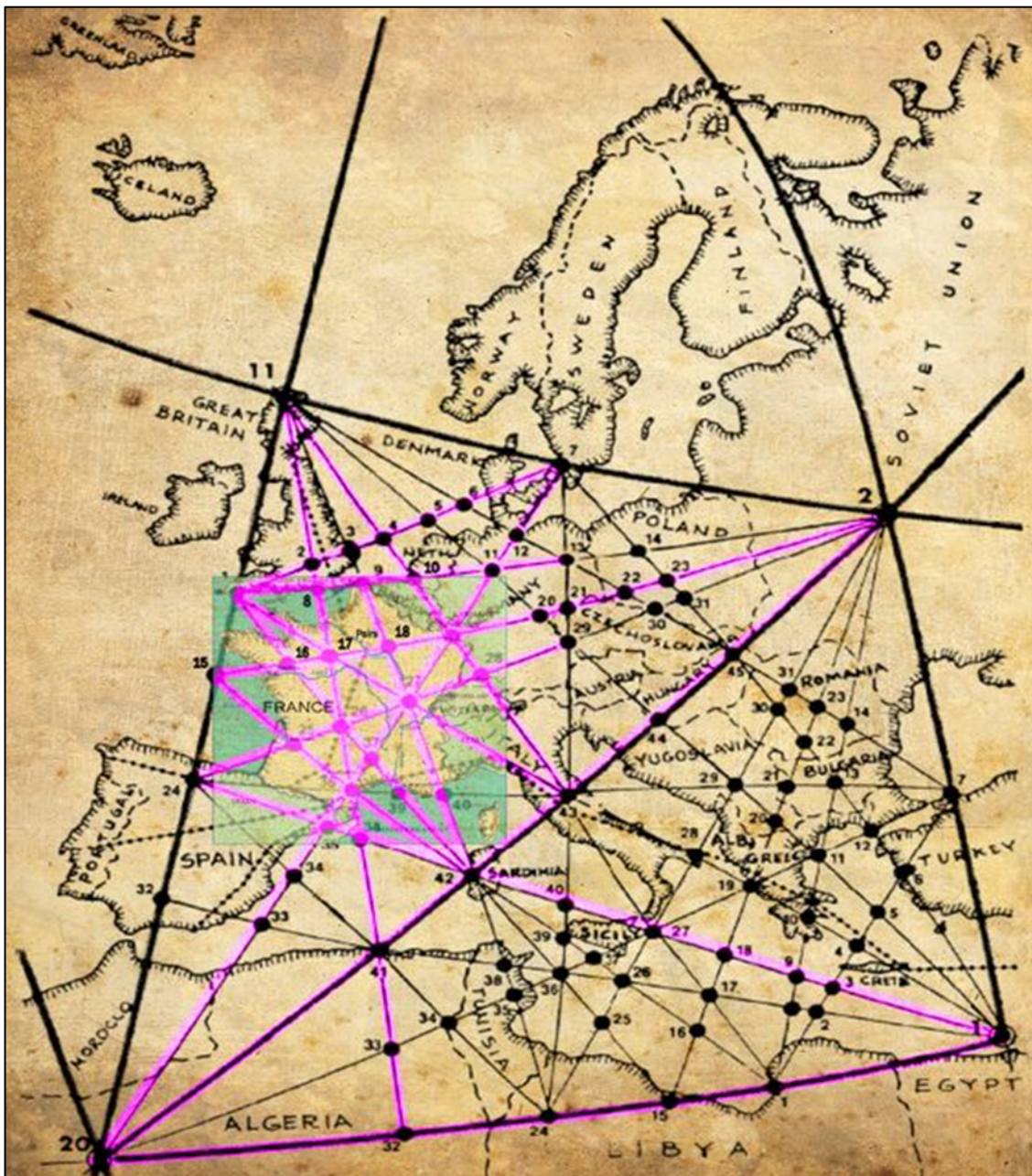
In theory, Brooks' findings would support the existence of ley lines. But to highlight how skewed this data was, Matt Parker of the University of London's School of Mathematics at Queen Mary cheekily applied Brooks' techniques of drawing ley lines maps to Woolworths stores.

"We know so little about the ancient Woolworths stores," he jokingly told *The Guardian* in 2010, "but we do still know their locations. I thought that if we analysed the sites we could learn more about what life was like in 2008 and how these people went about buying cheap kitchen accessories and discount CDs."

Evidently, three Woolworths stores around Birmingham formed an exact equilateral triangle. It was a remarkable discovery, one that fit his hypothesis, he said, by "skipping over the vast majority, and only choosing a few that happen to line up."

Parker's tongue-in-cheek experiment effectively reached the same conclusion as Williamson and Bellamy's research: by choosing a limited set of data from a larger pool, it can be used to support just about any argument. Is that to say that ley lines definitively don't exist? No. But it does highlight how data can be skewed to push a certain idea while ignoring points that don't fit the mold.

Basically, anyone can create a ley lines map by drawing a straight line through several ancient sites and claiming they were built on the route intentionally, just as they could form a triangle out of three Woolworths stores and say it was the result of something mystical.





Map showing a few of the major lines across the United Kingdom.

## Key Sites in Essex Associated with Ley Lines:



### 1. St. Peter-on-the-Wall (Bradwell-on-Sea):

- One of the oldest surviving churches in England, built around 654 AD. Its remote location and historical significance make it a focal point for those tracing ley lines. Some ley hunters suggest that it lies on an ancient alignment with other early Christian sites.

### 2. Thaxted Church:

- The Church of St. John the Baptist in **Thaxted** is a striking medieval building, with its tall spire making it a visible landmark. Enthusiasts have noted possible alignments between this church and others in the region.

### 3. Epping Forest:

- This ancient woodland in the western part of Essex has long been associated with mysterious and spiritual traditions. Some suggest that the forest itself is part of a wider ley line network, particularly given its proximity to London and other ancient sites.

### 4. Saffron Walden:

- Known for its ancient **earthworks** and the largest turf maze in England, Saffron Walden is a town that often comes up in discussions of ley lines. The **Audley End** mansion nearby, and its connections to earlier religious structures, might also be part of ley line speculation.

#### 5. **Colchester Castle:**

- Colchester is one of the oldest recorded towns in England, with a history dating back to Roman times. **Colchester Castle**, built on the site of a Roman temple, is sometimes linked in theories of ley lines connecting ancient Roman sites across England.

#### 6. **Layer Marney Tower:**

- An imposing Tudor structure located in the village of **Layer Marney**. Some researchers of ley lines suggest the alignment of this tower with other significant historical sites.

#### 7. **Dedham Vale:**

- Located on the border of Essex and Suffolk, this area of natural beauty has prehistoric earthworks and ancient churches. Some believe that it could be part of a ley line system running across East Anglia.

#### 8. **Cressing Temple:**

- This medieval Templar site, founded in the 12th century, contains some of the oldest wooden barns in Europe. The connection between the Knights Templar and ley lines has long been speculated upon by those interested in the mystical significance of such sites.

### **Ley Line Theories in Essex**

- Ley line enthusiasts believe that these sites, along with other ancient landmarks like burial mounds, stone circles, or Iron Age hill forts, align along straight lines across the landscape. While no definitive ley lines have been proven, the belief is that ancient peoples purposefully built along these lines, which may have had spiritual or astronomical significance.
- Some also associate ley lines with **energy currents**, believing that these alignments harness natural Earth energies, and that ancient peoples were aware of these energies when building temples, churches, and other landmarks.

### **Ley Line Map of Essex**

While there are no universally accepted ley line maps, many ley line hunters and dowsers have created their own based on local knowledge and ancient landmarks. Publications and websites on ley lines sometimes provide speculative maps that show lines crossing through Essex, often linking prominent features such as ancient churches, stone markers, or natural landmarks like rivers and forests.

### **Sceptical View**

The theory of ley lines is widely regarded as speculative and without scientific backing. Many of the alignments that ley line enthusiasts claim to exist can often be attributed to coincidence, as England is densely populated with ancient structures, making it easy to find straight lines between some of them. Most historians and archaeologists view ley lines as part of folklore rather than actual historical fact.

However, ley lines continue to fascinate those interested in alternative history, mysticism, and Earth energies, making Essex an intriguing place for exploration of such theories.

In 1961, Tony Wedd put forward the belief that leys were established by prehistoric communities to guide alien spacecraft. This view was promoted to a wider audience in the books of John Michell, particularly his 1969 work *The View Over Atlantis*. Michell's publications were accompanied by the launch of the *Ley Hunter* magazine and the appearance of a ley hunter community keen to identify ley lines across the British landscape. Ley hunters often combined their search for ley lines with other esoteric practices like dowsing and numerology and with a belief in a forthcoming Age of Aquarius that would transform human society. Although often hostile to archaeologists, some ley hunters attempted to ascertain scientific evidence for their belief in earth energies at prehistoric sites, evidence they could not obtain. Following sustained archaeological criticism, the ley hunter community dissipated in the 1990s, with several of its key proponents abandoning the idea and moving into the study of landscape archaeology and folkloristics. Belief in ley lines nevertheless remains common among some esoteric religious groups, such as forms of modern Paganism, in both Europe and North America.

Archaeologists note that there is no evidence that ley lines were a recognised phenomenon among ancient European societies and that attempts to draw them typically rely on linking together structures that were built in different historical periods. Archaeologists and statisticians have demonstrated that a random distribution of a sufficient number of points on a plane will inevitably create alignments of random points purely by chance. Sceptics have also stressed that the esoteric idea of earth energies running through ley lines has not been scientifically verified, remaining an article of faith for its believers.

## Early prototypes

The idea that ancient sacred sites might have been constructed in alignment with one another was proposed in 1846 by the Reverend Edward Duke, who observed that some prehistoric monuments and medieval churches aligned with each other. In 1909, the idea was advanced in Germany. There, Wilhelm Teudt had argued for the presence of linear alignments connecting various sites but suggested that they had a religious and astronomical function. In Germany, the idea was referred to as Heilige Linien ('holy lines'), an idea adopted by some proponents of Nazism.

The idea of "leys" as paths traversing the British landscape was developed by Alfred Watkins, a wealthy businessman and antiquarian who lived in Hereford. According to his account, he was driving across the hills near Blackwardine, Herefordshire, when he looked across the landscape and observed the way that several features lined up together. He subsequently began drawing lines across his Ordnance Survey maps, developing the view that ancient British people had tended to travel in straight lines, using "mark points" along the landscape to guide them. He put forward his idea of ley lines in the 1922 book *Early British Trackways* and then again, in greater depth, in the 1925 book *The Old Straight Track*. He proposed the existence of a network of completely straight roads that cut through a range of prehistoric, Roman, and medieval structures. In his view, these straight tracks were ancient trade routes. Watkins had drawn upon earlier research; he cited the work of the English astronomer Norman Lockyer, who had argued that ancient alignments might be oriented to sunrise and sunset at solstices. His work referred to G. H. Piper's paper presented to the Woolhope Naturalists' Field Club in 1882, which noted that: "A line drawn from the Skirrid-fawr mountain northwards to Arthur's Stone would pass over the camp and southernmost point of Hatterall Hill, Oldcastle, Longtown Castle, and Urishay and Snodhill castles."

Watkins referred to these lines as "leys" although had reservations about doing so. The term ley derived from the Old English term for a cleared space, with Watkins adopting it for his lines because he found it to be part of the place-names of various settlements that were along the lines he traced. He also observed the recurrence of "cole" and "dod" in English place-names, thus suggesting that the individuals who established these lines were referred to as a "coleman" or "dodman". He proposed that the Long Man of Wilmington chalk geoglyph in Sussex was a depiction of such an individual with their measuring equipment.

His ideas were rejected by most experts on British prehistory at the time, including both the small number of recognised archaeological scholars and local enthusiasts. His critics noted that the straight lines he proposed would have been highly impractical means of crossing hilly or mountainous terrain, and that many of the sites he selected as evidence for the leys were of disparate historical origins. Some of Watkins' other ideas, such as his belief that widespread forest clearance took place in prehistory rather than later, would nevertheless later be recognised by archaeologists. Part of archaeologists' objections was their belief that prehistoric Britons would not have been sophisticated enough to produce such accurate measurements across the landscape. British archaeologists were then overwhelmingly committed to ideas of cultural diffusionism, and thus unwelcoming to ideas about ley lines being an independent British development.

In 1926, advocates of Watkins' beliefs established the Straight Track Club. To assist this growing body of enthusiasts who were looking for their own ley lines in the landscape, in 1927, Watkins published *The Ley Hunter's Manual*.

Proponents of Watkins' ideas sent in letters to the archaeologist O. G. S. Crawford, then editor of the *Antiquity* journal. Crawford filed these letters under a section of his archive titled "Crankeries" and was annoyed that educated people believed such ideas when they were demonstrably incorrect. He refused to publish an advert for *The Old Straight Track* in *Antiquity*, at which Watkins became very bitter towards him.

Watkins' last book, *Archaic Tracks Around Cambridge*, was published in 1932. Watkins died on 7 April 1935.

The Club survived him, although it became largely inactive at the outbreak of the Second World War in 1939 and formally disbanded in 1948. The archaeoastronomer Clive Ruggles noted that after the 1920s, "ley lines soon faded into obscurity". The historian Ronald Hutton similarly noted that there had been a "virtual demise" in the idea by the 1950s, in part due to "a natural weariness with a spent enthusiasm".

### **Earth Mysteries movement.**

In the 1960s writer John Michell played a major role in promoting a belief in ley lines.

From the 1940s through to the 1960s, the archaeological establishment blossomed in Britain due to the formation of various university courses on the subject. This helped to professionalise the discipline, and meant that it was no longer an amateur-dominated field of research. It was in the latter decade of this period that a belief in ley lines was taken up by members of the counterculture, where—in the words of the archaeologist Matthew Johnson—they were attributed with "sacred significance or mystical power". Ruggles noted that in this period, ley lines came to be conceived as "lines of power, the paths of some form of spiritual force or energy accessible to our ancient ancestors but now lost to narrow-minded twentieth-century scientific thought".

In his 1961 book *Skyways and Landmarks*, Tony Wedd published his idea that Watkins' leys were both real and served as ancient markers to guide alien spacecraft that were visiting Earth. He came to this conclusion after comparing Watkins' ideas with those of the French ufologist Aimé Michel, who argued for the existence of "orthotemies", lines along which alien spacecraft travelled. Wedd suggested that either spacecraft were following the prehistoric landmarks for guidance or that both the leys and the spacecraft were following a "magnetic current" flowing across the Earth.

Wedd's ideas were taken up by the writer John Michell, who promoted them to a wider audience in his 1967 book *The Flying Saucer Vision*. In this book, Michell promoted the ancient astronaut belief that extraterrestrials had assisted humanity during prehistory, when humans had worshipped these entities as gods, but that the aliens left when humanity became too materialistic and technology-focused. He also argued that humanity's materialism was driving it to self-destruction, but that this could be prevented by re-activating the ancient centres which would facilitate renewed contact with the aliens.

Michell repeated his beliefs in his 1969 book *The View Over Atlantis*. Hutton described it as "almost the founding document of the modern earth mysteries movement". Here he interpreted ley lines by reference to the Chinese concept of geomantic energy lines which he transliterated as "lung Mei", i.e., "dragon veins". He proposed that an advanced ancient society that had once covered much of the world had established ley lines across the landscape to harness this lung mei energy. Translating the term "lung mei" as "dragon paths", he reinterpreted tales from English mythology and folklore in which heroes killed dragons so that the dragon-slayers became the villains. Hutton later noted that Michell's ideas "embodied a fervent religious feeling, which though not Christian was heavily influenced by Christian models", adopting an "evangelical and apocalyptic tone" that announced the coming of an Age of Aquarius in which ancient wisdom would be restored. Michell invented various claims about archaeological evidence to suit his purpose. He viewed archaeologists as antagonists, seeing them as the personification of the modern materialism he was railing against.

In the mid-1970s Michell then published a detailed case study of the West Penwith district of Cornwall, laying out what he believed to be the ley lines in the area. He presented this as a challenge to archaeologists, urging them to examine his ideas in detail and stating that he would donate a large sum of money to charity if they could disprove them. Hutton noted that it represented "the finest piece of surveying work" then undertaken by a pseudo-archaeologists in Britain. However Michell had included natural rock outcrops as well as medieval crosses in his list of Neolithic and Bronze Age monuments.

### **The ley hunting community.**

In 1962, a group of ufologists established the Ley Hunter's Club. Michell's publication was followed by an upsurge in ley hunting as enthusiasts travelled around the British landscape seeking to identify what they believed to be ley lines connecting various historic structures. Parish churches were particularly favoured by the ley hunters, who often worked on the assumption that such churches had almost always been built atop pre-Christian sacred sites.

The 1970s and 1980s also saw the increase in publications on the topic of ley lines. One ley lines enthusiast, Philip Heselton, established the *Ley Hunter* magazine, which was launched in 1965.



It was later edited by Paul Screeton, who also wrote the book *Quicksilver Heritage*, in which he argued that the Neolithic period had seen an idyllic society devoted to spirituality but that this was brought to an end through the introduction of metal technologies in the Bronze Age. He argued that this golden age could nevertheless be restored. Another key book produced among the ley hunting community was *Mysterious Britain*, written by Janet and Colin Bord.

Part of the popularity of ley hunting was that individuals without any form of professional training in archaeology could take part and feel that they could rediscover "the magical landscapes of the past". Ley hunting welcomed those who had "a strong interest in the past but feel excluded from the narrow confines of orthodox academia". The ley hunting movement often blended their activities with other esoteric practices, such as numerology and dowsing. The movement had a diverse base, consisting of individuals from different classes and of different political opinions: it contained adherents of both radical left and radical right ideologies. Ley hunters often differed on how they understood the ley lines; some believed that leys only marked a pre-existing energy current, whereas others thought that the leys helped to control and direct this energy. They were nevertheless generally in agreement that the ley lines were laid out between 5000 BCE and 2600 BCE, after the introduction of agriculture but before the introduction of metal in Britain. For many ley hunters, this Neolithic period was seen as a golden age in which Britons lived in harmony with the natural environment.

Attitudes to the archaeological establishment varied among ley hunters, with some of the latter wanting to convert archaeologists to their beliefs and others believing that that was an impossible task. Ley hunters nevertheless often took an interest in the work of archaeo-astronomers like Alexander Thom and Euan Mackie, being attracted to their arguments about the existence of sophisticated astronomer-priests in British prehistory. In suggesting that prehistoric Britons were far more advanced in mathematics and astronomy than archaeologists had previously accepted, Thom's work was seen as giving additional credibility to the beliefs of ley hunters. Thom lent the idea of leys some support; in 1971 he stated the view that Neolithic British engineers would have been capable of surveying a straight line between two points that were otherwise not visible from each other.

Paul Devereux succeeded Screeton as the editor of the *Ley Hunter*. He was more concerned than many other ley hunters with finding objective evidence for the idea that unusual forms of energy could be measured at places where prehistoric communities had erected structures. He was one of the founding members of the Dragon Project, launched in London in 1977 with the purpose of conducting radioactivity and ultrasonic tests at prehistoric sites, particularly the stone circles created in the Late Neolithic and Early Bronze Age. The Dragon Project continued its research throughout the 1980s, finding that certain prehistoric sites did show higher or lower than average rates of radiation but that others did not and that there was no consistent pattern. Professional archaeologists, whose view of the ley hunters was largely negative, took little interest in such research.

It was only in the 1980s that professional archaeologists in Britain began to engage with the ley hunting movement. In 1983, *Ley Lines in Question*, a book written by the archaeologists Tom Williamson and Liz Bellamy, was published. In this work, Williamson and Bellamy considered and tackled the evidence that ley lines proponents had amassed in support of their beliefs. As part of their book, they examined the example of the West Penwith district that Michell had set out as a challenge to archaeologists during the previous decade. They highlighted that the British landscape was so highly covered in historic monuments that it was statistically unlikely that any straight line could be drawn across the landscape without passing through several such sites. They also demonstrated that ley hunters had often said that certain markers were Neolithic, and thus roughly contemporary with each other, when often they were of widely different dates, such as being Iron Age or medieval. The overall message of Williamson and Bellamy's book was that the idea of leys, as it was being presented by Earth Mysteries proponents, had no basis in empirical reality. Looking back on the book's reception in 2000, Williamson noted that "archaeologists weren't particularly interested, and ley-line people were hostile".

### **Schism in the community.**

From one perspective, the tale of ley-hunting is one of a classic modern religious movement, arising with an apocalyptic language which appropriated some of the tropes of evangelical Christianity, flourished for a brief time, and then subsided into a set of motifs and assumptions retained by a particular subculture of believers. From another, it is a frustrating tale of missed opportunities.

The neglect of landscape and sensory experience by mainstream archaeology in the mid twentieth century was indeed a serious omission, which earth mysteries researchers could well have remedied to

the lasting benefit of knowledge [...] Misled by a fixed and dogmatic set of ideas, however, they passed this by to focus on an attempted proof of beliefs which were ultimately based on faith alone.

### **Historian Ronald Hutton, 2013.**

Williamson and Bellamy's book brought two different responses from the ley hunter community. Some maintained that even if the presence of earth energies running through ley lines could not be demonstrated with empirical evidence and rational argumentation, this did not matter; for them, a belief in ley lines was an act of faith, and in their view archaeologists were too narrow-minded to comprehend this reality. The other approach was to further engage archaeologists by seeking out new data and arguments to bolster their beliefs in ley lines. Hutton noted that this pulled along "a potential fissure between rationalism and mysticism which had always been inherent in the movement".

In 1989, a book that Devereux had co-written with Nigel Pennick, *Lines on the Landscape*, was published. It laid aside ideas of leys representing channels for earth energy, noting that this was beyond the realm of scientific verification, and instead focused on trying to build a case for ley lines that archaeologists could engage with. In particular, it drew attention to ethnographically recorded beliefs in the importance of lines running through the landscape in various communities around the world, proposing these as ethnographic comparisons for what might have occurred in prehistoric Britain. Hutton called the book "an important development", for it was "by far the most well-researched, intelligently written and beautifully produced work yet published on leys". Devereux pursued this approach in a series of further books.

Reflecting his move towards archaeology, in 1991, Devereux published an article on sightlines from the prehistoric site of Silbury Hill, Wiltshire in *Antiquity*. By the 1990s, British archaeology had become more open to ideas about language and cognition, topics that Earth Mysteries enthusiasts had long been interested in. A prominent example of this was the work of Christopher Tilley, who devised the idea of phenomenology, or using human senses to experience a landscape as a means of trying to ascertain how past societies would have done the same.

The Ley Hunter magazine ceased publication in 1999. Its last editor, Danny Sullivan, stated that the idea of leys was "dead". Hutton suggested that some of the enthusiasm formerly directed toward leys was instead directed toward archaeo-astronomy. He also noted that the ley hunting community had "functioned as an indispensable training ground for a small but important group of non-academic scholars who have made a genuine contribution to the study of folklore and mythology." Pennick for instance went on to write a range of short books and pamphlets on European folklore. Another prominent ley hunter, Bob Trubshaw, also wrote several books on these subjects and served as a publisher for others. Jeremy Harte, editor of *Wessex Earth Mysteries*, subsequently produced several books on folklore; his book on British fairy lore later won the Folklore Society's annual prize.

### **Continuing belief**

Modern Pagans in Britain often believe in ley lines running through ancient sites, such as the Coldrum Long Barrow in Kent. In 2005, Ruggles noted that "for the most part, ley lines represent an unhappy episode now consigned to history". However belief in ley lines persists among various esoteric groups, having become an "enduring feature of some brands of esotericism". As Hutton observed, beliefs in "ancient earth energies have passed so far into the religious experience of the 'New Age' counter-culture of Europe and America that it is unlikely that any tests of evidence would bring about an end to belief in them." During the 1970s and 1980s, a belief in ley lines fed into the modern Pagan community. Research that took place in 2014 for instance found that various modern Druids and other Pagans believed that there were ley lines focusing on the Early Neolithic site of Coldrum Long Barrow in Kent, southeast England.

In the US city of Seattle a dowsing organisation called the Geo Group plotted what they believed were the ley lines across the city. They stated that their "project made Seattle the first city on Earth to balance and tune its ley-line system". The Seattle Arts Commission contributed \$5,000 to the project, bringing criticisms from members of the public who regarded it as a waste of money.

### **Scientific views and also: Alignments of random points.**

Ley lines have been characterised as a form of pseudoscience. On *The Sceptic's Dictionary*, the American philosopher and sceptic Robert Todd Carroll noted that none of the statements about magnetic forces underpinning putative ley lines has been scientifically verified.

Williamson and Bellamy characterised ley lines as "one of the biggest red herrings in the history of popular thought". One criticism of Watkins' ley line theory states that given the high density of historic

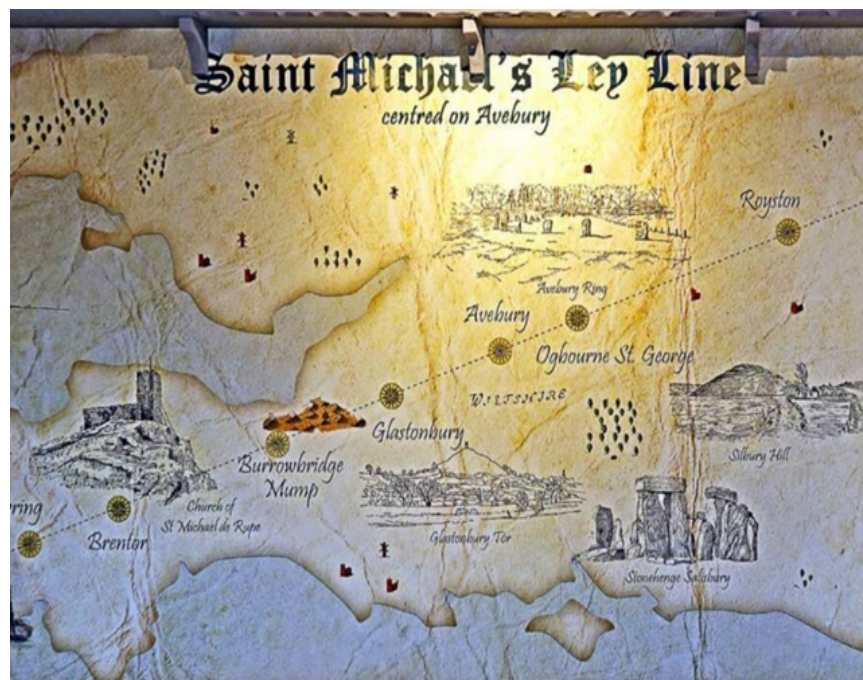
and prehistoric sites in Britain and other parts of Europe, finding straight lines that "connect" sites is trivial and ascribable to coincidence. Johnson stated that "ley lines do not exist". He cited Williamson and Bellamy's work in demonstrating this, noting that their research showed how "the density of archaeological sites in the British landscape is so great that a line drawn through virtually anywhere will 'clip' a number of sites".

Other statistical significance tests have shown that supposed ley-line alignments are no more significant than random occurrences and/or have been generated by selection effects. The paper by statistician Simon Broadbent is one such example and the discussion after the article involving a large number of other statisticians demonstrates the high level of agreement that alignments have no significance compared to the null hypothesis of random locations.

A study by David George Kendall used the techniques of shape analysis to examine the triangles formed by standing stones to deduce if these were often arranged in straight lines. The shape of a triangle can be represented as a point on the sphere, and the distribution of all shapes can be thought of as a distribution over the sphere. The sample distribution from the standing stones was compared with the theoretical distribution to show that the occurrence of straight lines was no more than average.

The archaeologist Richard Atkinson once demonstrated this by taking the positions of telephone booths and pointing out the existence of "telephone box leys". This, he argued, showed that the mere existence of such lines in a set of points does not prove that the lines are deliberate artefacts, especially since it is known that telephone boxes were not laid out in any such manner or with any such intention.

**In 2004, John Bruno Hare wrote:** Watkins never attributed any supernatural significance to leys; he believed that they were simply pathways that had been used for trade or ceremonial purposes, very ancient in origin, possibly dating back to the Neolithic, certainly pre-Roman. His obsession with leys was a natural outgrowth of his interest in landscape photography and love of the British countryside. He was an intensely rational person with an active intellect, and I think he would be a bit disappointed with some of the fringe aspects of ley lines today.



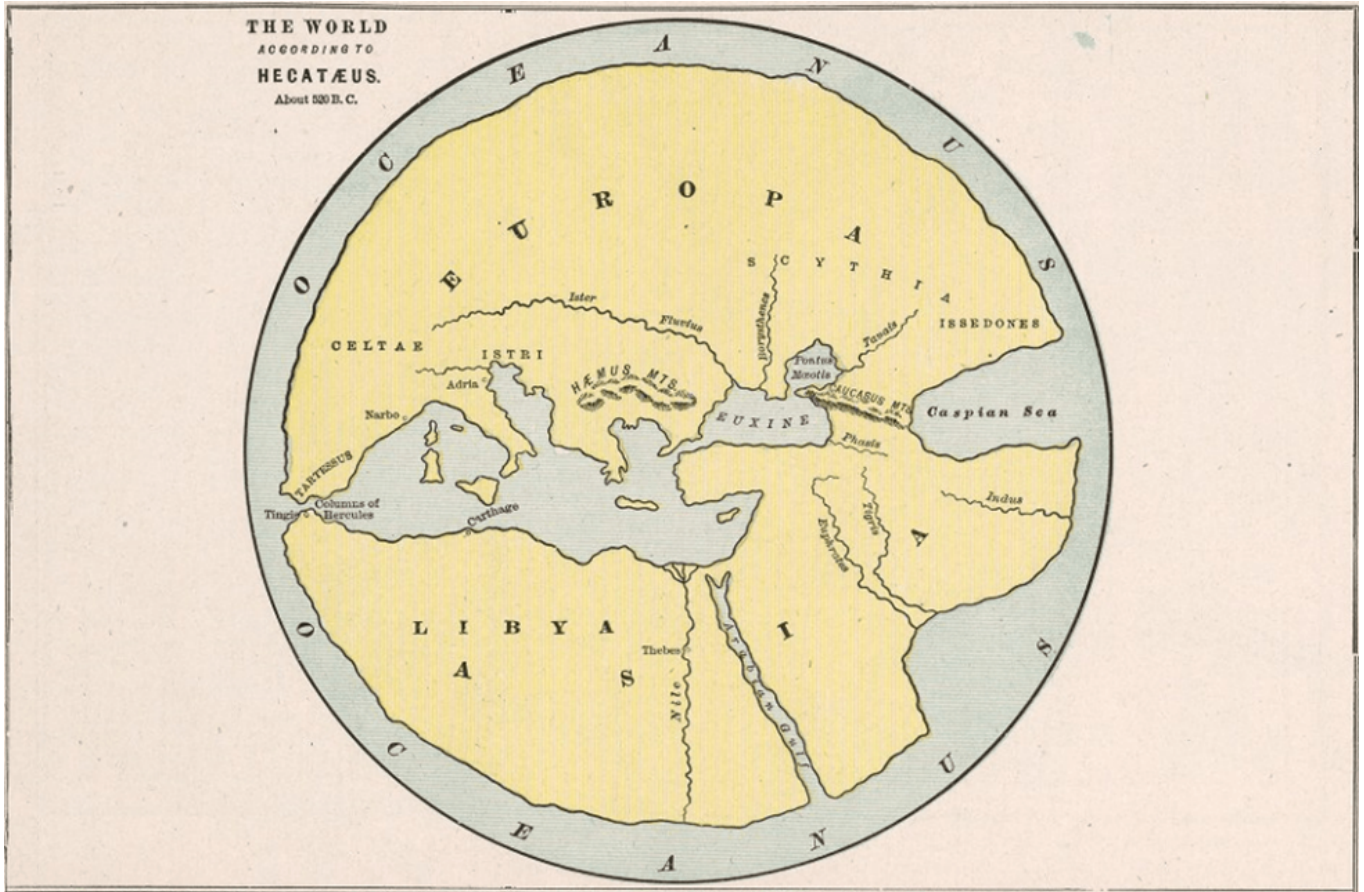
A map showing St. Michael's Line, which connects dozens of landmarks dedicated to the Archangel Michael over a 350-mile stretch between Cornwall and Norfolk.

Williamson and Bellamy's findings did not outright disprove the existence of ley lines, but they did cast a fair amount of reasonable doubt. Essentially, by examining the locations of various archaeological sites across England, they discovered that there was such a high density of landmarks that it was essentially possible to draw a straight line in any direction and connect multiple locations. That is, anyone could create a map of ley lines.

Researcher Tom Brooks argued that keen mathematicians lived in Britain

as far back as 5,000 years ago — before the Greeks had even invented geometry. He, like Watkins, examined ancient sites — 1,500 to be precise — and found that they had all been built on a series of isosceles triangles, each one guiding ancient humans to the next.

In theory, Brooks' findings would support the existence of ley lines.



Hecataeus of Miletus' map of the world, made in the 5th or 6th century BC. Hecataeus divides the world into three parts: Europe, Asia, and Libya, centered around the Mediterranean Sea. His world is a round disc surrounded by an ocean.



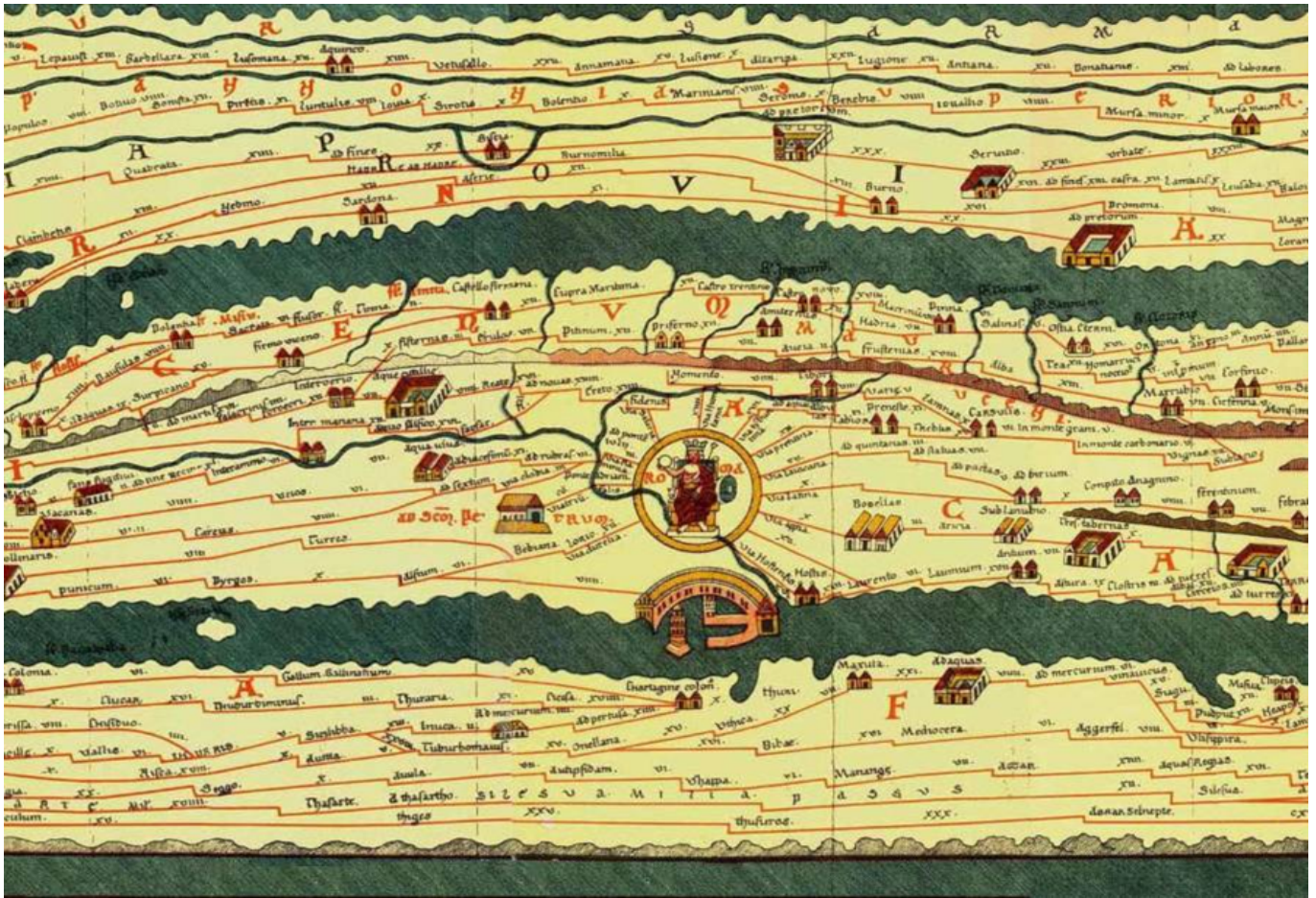
Posidonius' world map, made in the 2nd century BC. This map expands on the early Greek vision of the world, including discoveries of Alexander the Great.



Pomponius' world map, made in 43 AD.



Ptolemy's world map, designed in 150 AD. Ptolemy was the first to add longitudinal and latitudinal lines to his map in the world.



The centre of the Tabula Peutingeriana, a 4th century Roman map outlining the road network of the Roman Empire. The full map is extremely long, extending from Iberia to India, with Rome as the centre of the world.



Cosmas Indicopleustes's model of the world, from Christian Topography. 6th century AD.

Cosmas showed the world as a flat place, with the sky overhead shaped like a chest and heaven watching over it all.



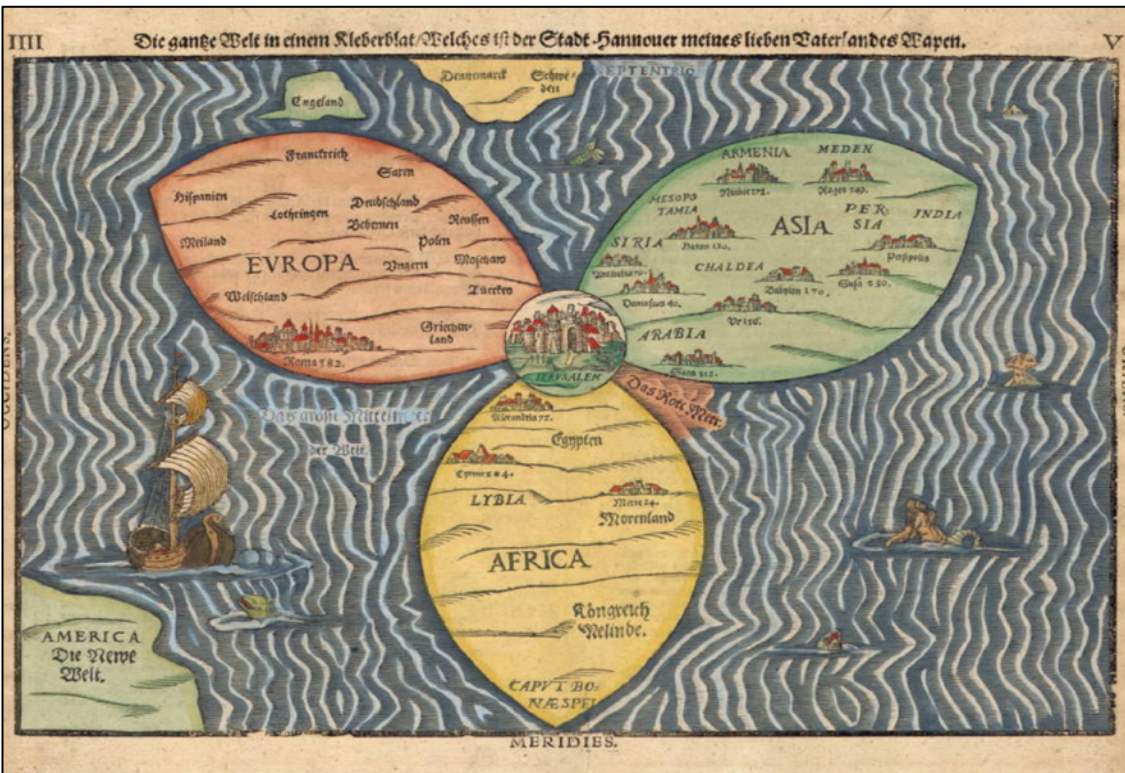
Cosmas Indicopleustes's world map, from the 6th century, depicting the world as a flat rectangle.



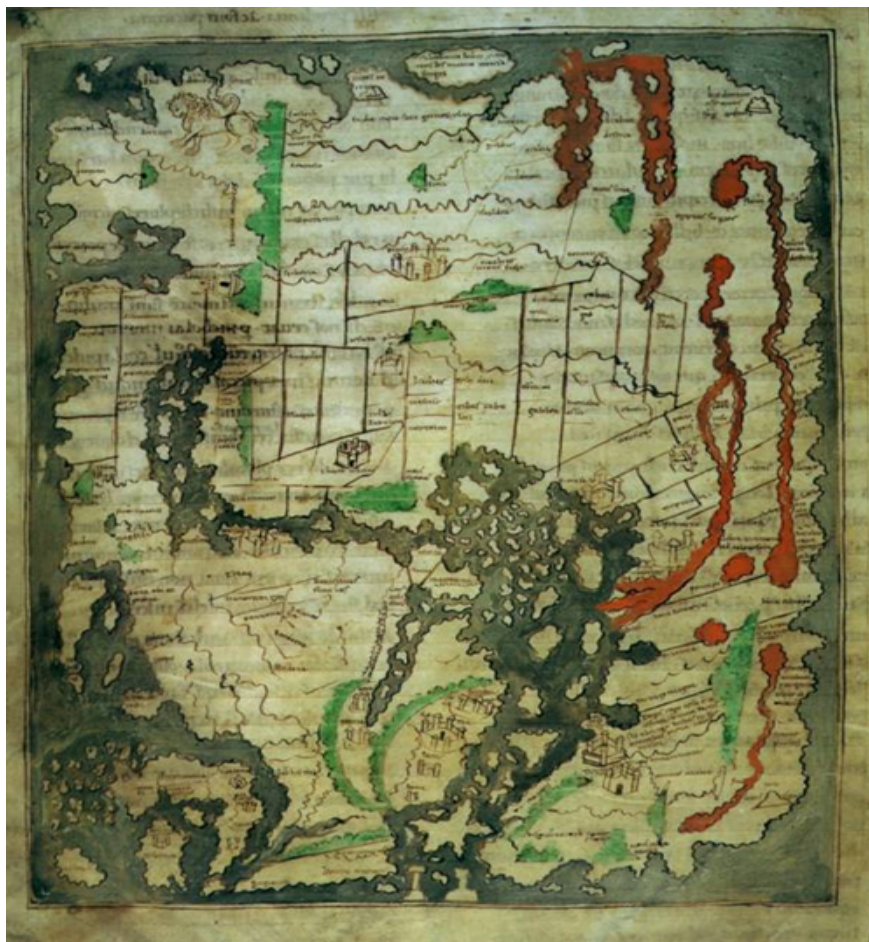
A fanciful rendition of the "T and O" map developed by Isidor of Sevilla in the 7th century.

These maps divided the world into three, perfectly divided parts: Asia, Europe, and Africa, with Jerusalem at the Centre of the world.

This version of the map was drawn by Jean Mansel between 1459-1463.



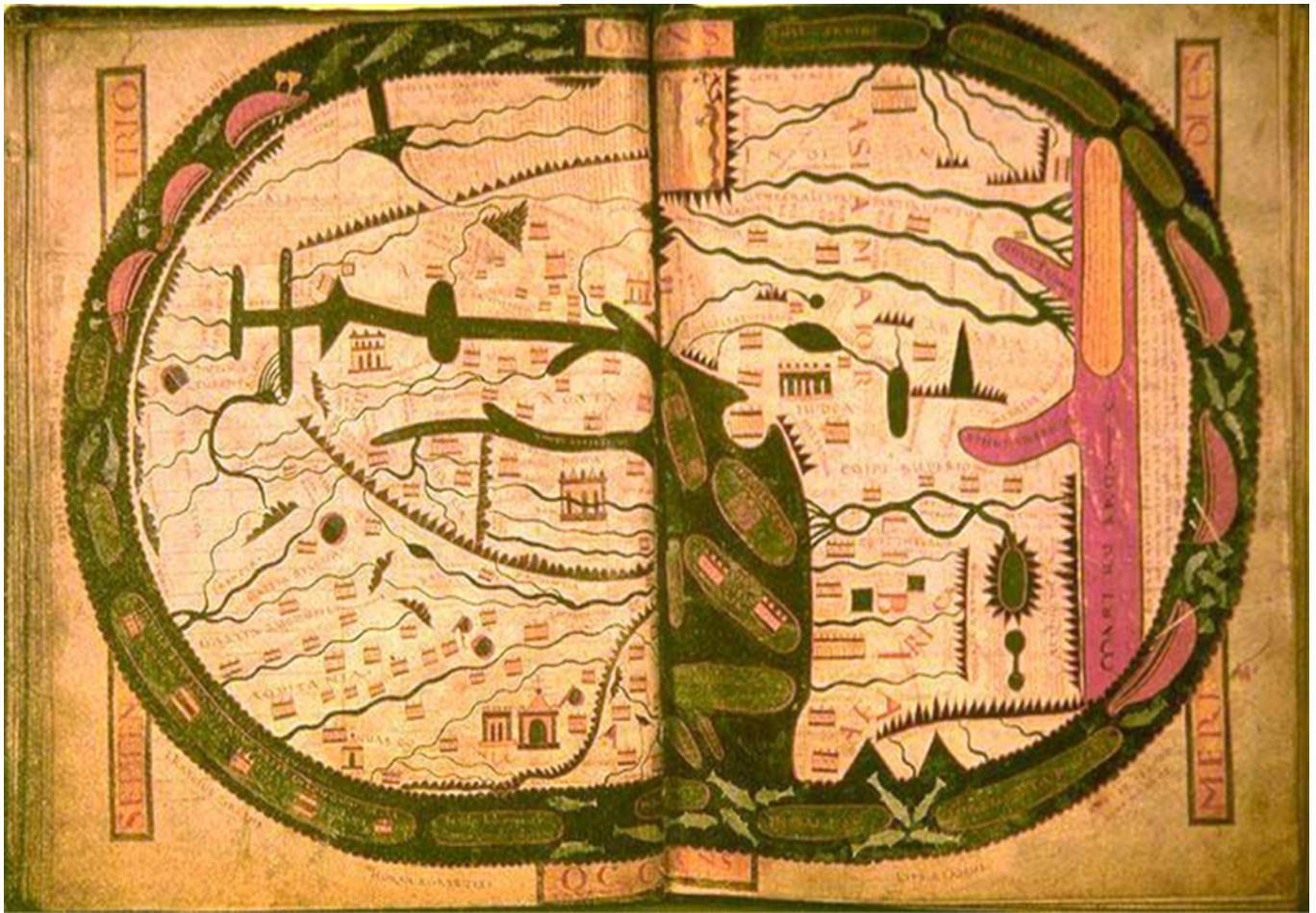
A later Christian map, the Bunting Clover Leaf Map, drawn by Heinrich Bunting in Germany in 1581. This map is not meant to depict the world as it is, but instead the world as an extension of the Christian trinity, with Jerusalem as the centre that holds the world together.



The Anglo-Saxon Cotton Map, created between 1025 and 1050 AD.

The eastern parts of the world make the topmost part of this map. The artist has painted every river in Africa red, misunderstanding descriptions of the Red Sea.





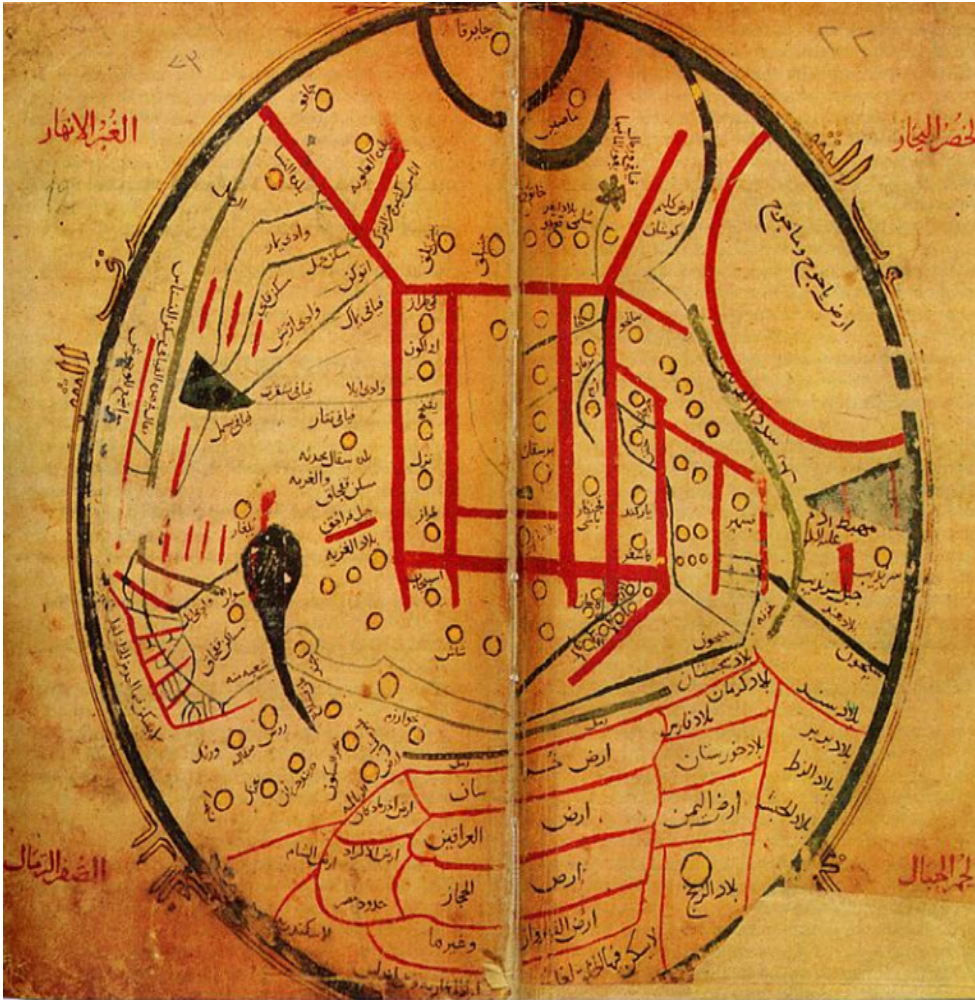
The world according to Beatus of Libeana, and Asturian monk, created in the 8th century AD. Beatus's map is called a "Christian Map," based on the T and O design.



The "Map of the Track of Yu Gong" was carved into a stone in Shaanxi, China, in 1137.

This map, depicting the scope of the Chinese empire, was meticulously drawn on a rectangular grid.

Mahmud al-Kashgari's map of the world, drawn in the 11th century.



This map centres the world around Balasagun, an ancient city in the place where Krygyzstan now stands. It includes places prophesied to appear in the end times, like Gog and Magog.



Al-Idrisi's Tabula Rogeriana, drawn in 1154 AD. This map was created based on the reports of Arab merchants who had travelled across the world. It was, at the time, the most accurate and extensive map of the world. Though the map depicts Europe and Asia extensively, it still only shows the northern parts of Africa.

The Psalter World Map, drawn by an unknown medieval monk in 1260 AD.

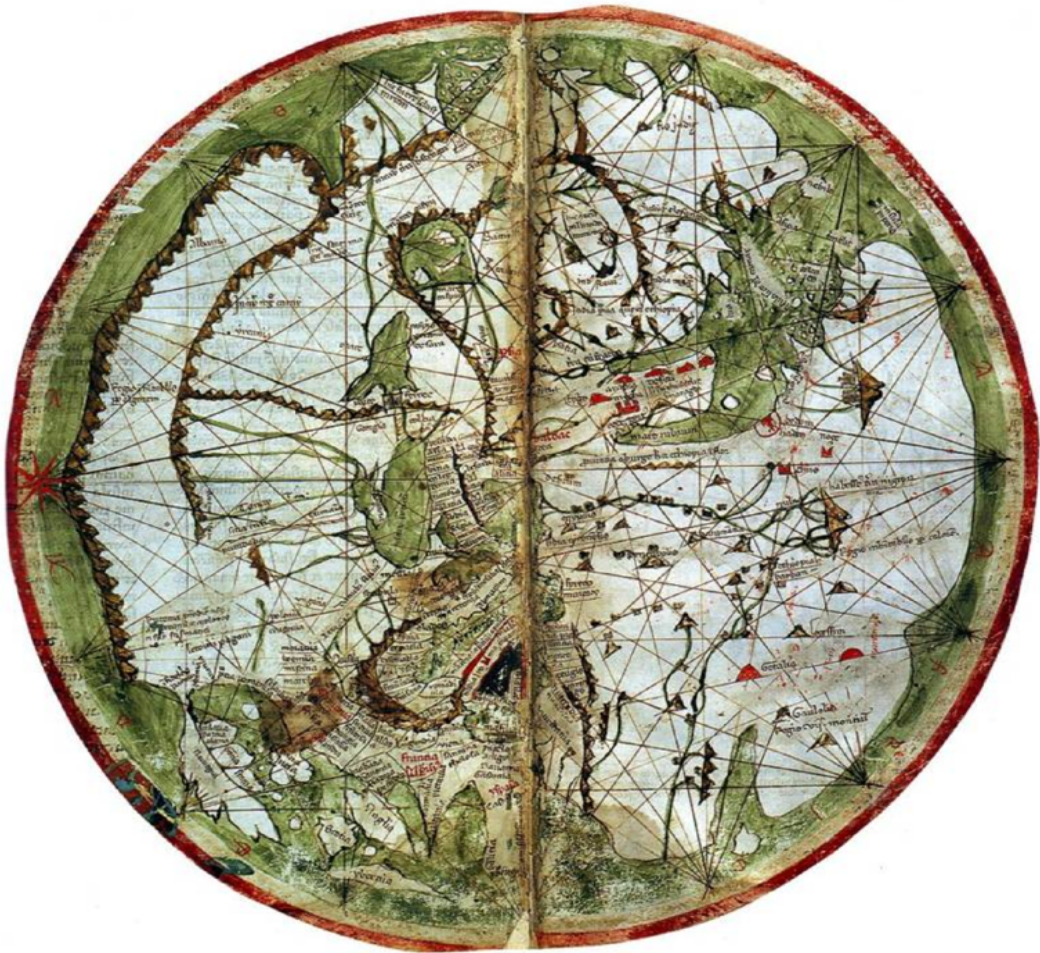
Maps from this period often put the east at the top of the world, as the place where the sun rises, with Jesus watching over the world.



Gervase of Ebstorf's world map, drawn in Germany in the 13th century. The Ebstorf Map is based on the medieval T and O model, with Jerusalem at the centre of the world. It is decorated with illustrations from Biblical stories for each part of the world.



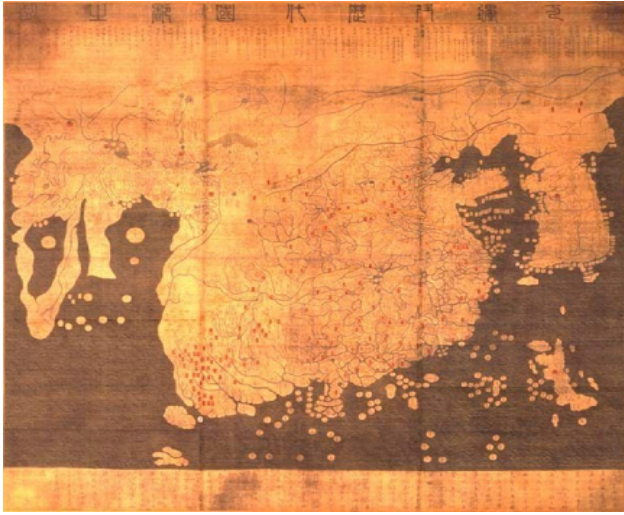
The Hereford Mappa Mundi, drawn by Richard of Haldingham in the 14th century. This is another T and O map, with Jerusalem at the centre at the east at the top. The circle at the far south side of the map is the Garden of Eden.



Italian geographer Pietro Vesconte's world map, drawn in 1321 AD. Vesconte, using nautical charts to map the seas, brought accuracy back into maps after centuries of T and O designs.



The Da Ming Hu Yi Tu, a Chinese map made in the late 14th century. This map shows the world as it appeared to China during the Ming Dynasty, with China dominating the overwhelming majority of the planet and all of Europe squeezed into a small space in the west.



The Kangnido World Map, created by Korean officials in 1402 AD.

This map, created by the Joseon Dynasty, combined Chinese maps with information about the Western world, gathered from Mongolian Muslims.

The Genoese map, drawn in 1457 based on the descriptions of Niccolo da Conti.

This map depicts a growing European understanding of the Asian world after the first trade routes with Mongolia and China opened.



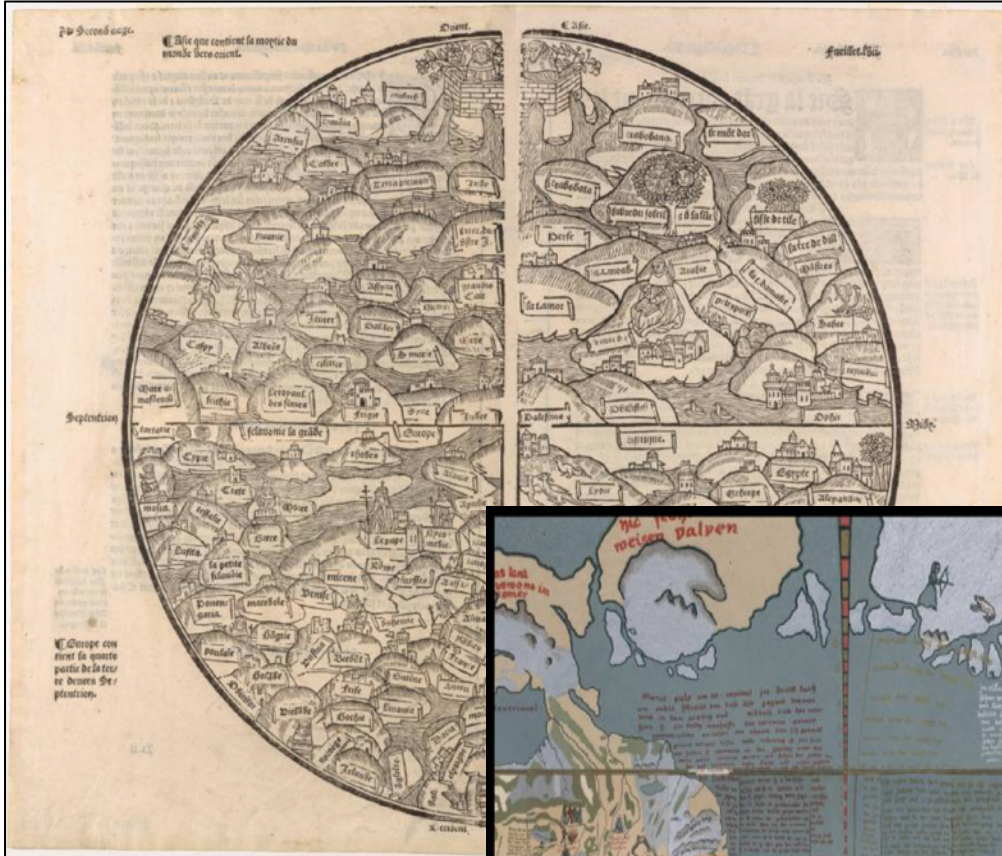
A map made by Venetian monk Fra Mauro between 1457 and 1459.

This map was made with the help of Andrea Bianco, a sailor and cartographer, and reflects his extensive knowledge of the world.

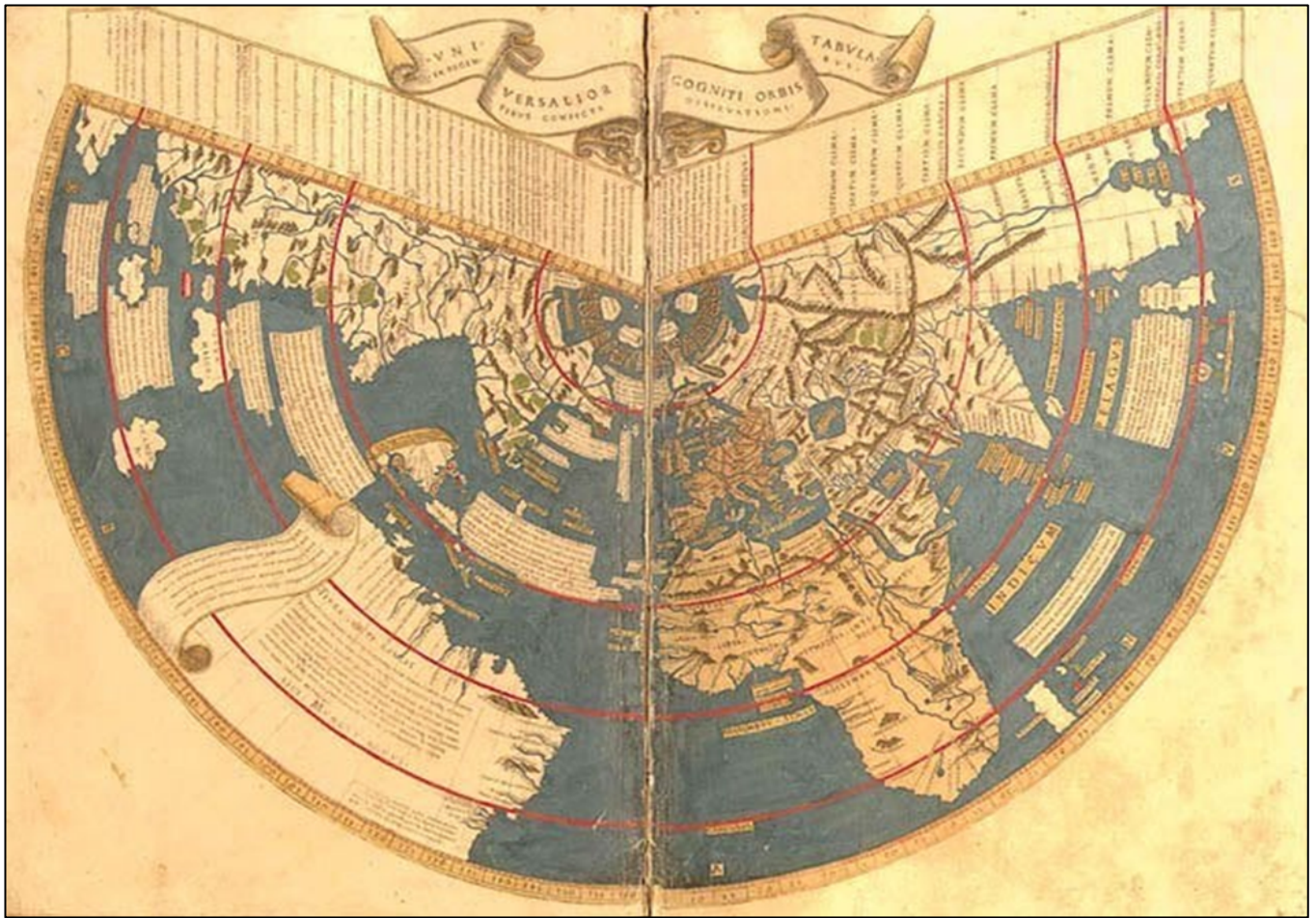
The Mer des Hystoires world map, drawn in 1491.

Even during the age of exploration, some monks continued to make T and O maps, with Jerusalem at the centre of the world and paradise as a real location in the

eastern side of the world.



A projection of the Edapfel globe, produced by Martin Behaim in Germany in 1492. The Edapfel is the oldest known globe, showing the world as a sphere but with the undiscovered America as an empty ocean.



Johannes Ruysch's map of the world, drawn in 1507. This map shows one of the first drawings of the New World.

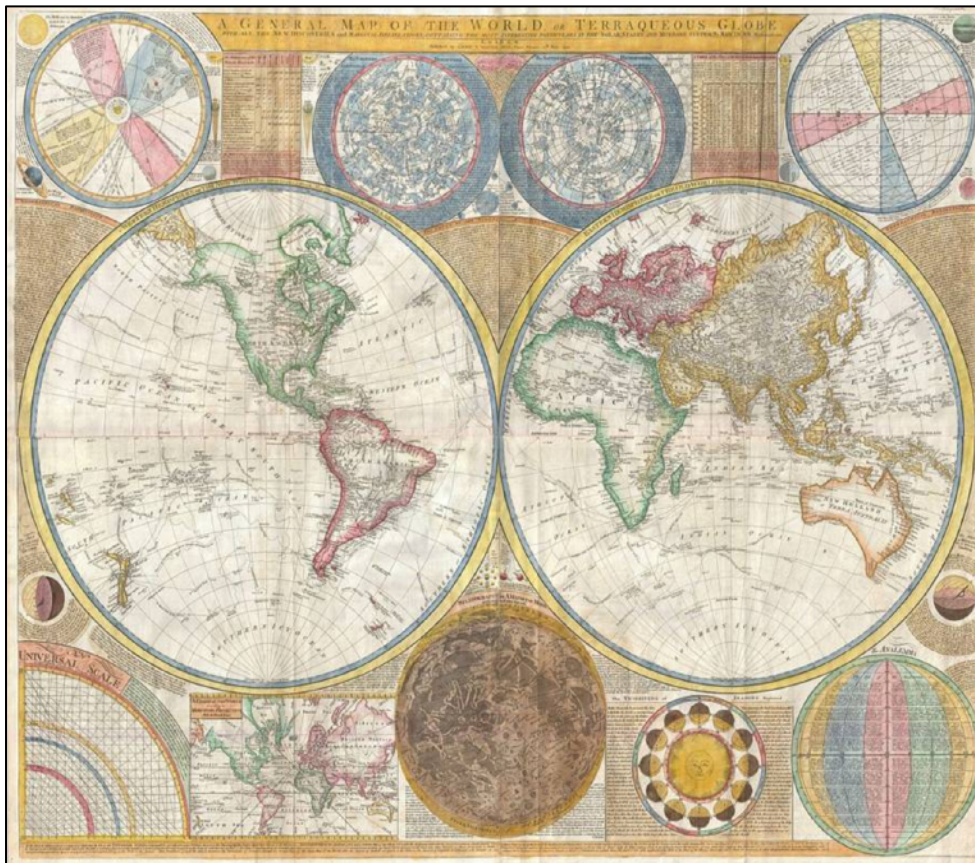


Martin Waldseemüller and Matthias Ringmann's map, drawn in 1507. This was the first map to label the New World as "America," drawn, here, as nothing more than the thin strip of the eastern coast.





Gerard van Schagen's map of the world, drawn in 1689. By now, much of the world had been mapped, with only small parts of the Americas left ambiguously blank.



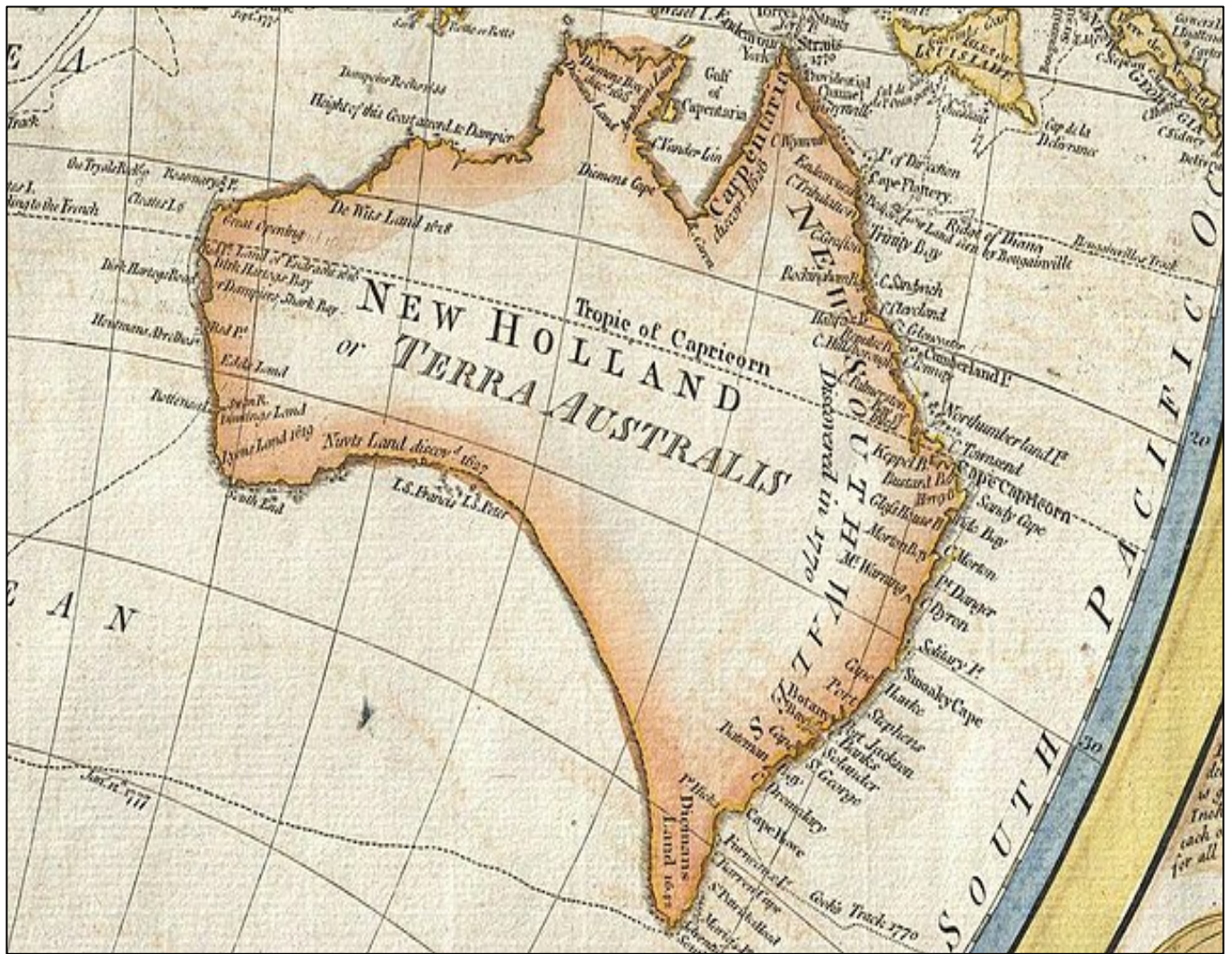
Samuel Dunn's map of the world, drawn in 1794 AD.

Covers the entire world in a double hemisphere projection. The primary map is surrounded on all sides but detailed scientific calculations and descriptions as well as northern and southern hemisphere star charts, a map of the Moon, a Latitude and Longitude Analemma chart, a map of the Solar System, a Mercator projection of the world, an Analemma projection, a seasonal chart, a universal scale chart, and numerous smaller diagrams depicting planets and mathematical systems.

This map follows shortly after the explorations of Captain Cook in the Arctic and Pacific Northwest, so the general outline of the continent is known. However, when this map was made, few inland expeditions had extended westward beyond the Mississippi. This map notes two separate speculative courses for the apocryphal River of the West, a northern route extending from Lake Winnipeg and a southern route passing south of Winnipeg through Pike's lake. The River of the West was hopeful dream of French and English explorers who were searching for a water passage through North America to the Pacific. In concept, should such a route be found, it would have become an important trade artery allowing the British and French, who's colonies dominated the eastern parts of North America, to compete with the Spanish for control of the lucrative Asia-Pacific trade. Little did these earlier speculative cartographers realize the bulk of the Rocky Mountains stood between them and their dreams!

Drake's Harbour is where Sir Francis Drake supposedly landed during his circumnavigation of the globe in 1580. Drake wintered in this harbor and used the abundant resources of the region to repair his ships. He also claimed the lands for England dubbing them New Albion. Although the true location of Drake's port is unknown, most place it much further to the north. By situating it and consequently New Albion further to the south, Dunn is advocating a British rather than Spanish claim to this region. On the Eastern coast of North America we find a fledgling United States extending from Georgia to Maine. Dunn names Boston, New York, Charleston, Long Island, and Philadelphia, as well as the important smaller towns of Jamestown, Williamsburg and Edmonton. South America exhibits a typically accurate coastline and limited knowledge of the interior beyond Peru and the populated coastlands. A few islands are noted off the coast, including the Galapagos, which are referred to as the Incharned Islands. The Amazon is vague with many of its tributaries drawn in speculatively. Dunn and d'Anville have done away with the popular representation of Manoa or El Dorado in Guyana, but a vestigial Lake Parima is evident. Further south, the Laguna de los Xarayes, another apocryphal destination, is drawn at the northernmost terminus of the Paraguay River. The Xaraiés, meaning Masters of the River were an indigenous people occupying what are today parts of Brazil's Matte Grosso and the Pantanal. When Spanish and Portuguese explorers first navigated up the Paraguay River, as always in search of El Dorado, they encountered the vast Pantanal flood plain at the height of its annual inundation. Understandably misinterpreting the flood plain as a gigantic inland sea, they named it after the local inhabitants, the Xaraies. Using the discoveries of Captain James Cook as his guide, Dunn was able to outline the whole world for the first time.





Compiled by Norman Bambridge  
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