

# The Great Interruption 300- 1300 CE

Very early, by the fifth century B.C., Greek scholars saw that the earth was a globe. The first firm evidence is in Plato's *Phaedo*. Serious Greek thinkers ceased thinking of the earth as a flat disk floating on the waters. The Pythagoreans and Plato based their belief on aesthetic grounds. Since a sphere is the most perfect mathematical form, the earth must of course have that shape. To argue otherwise would be to deny order in the Creation.



Ptolemy's maps of Europe and England in 150 CE using Hipparchus' geography. Accounted for a spherical Earth.

## **CHRISTIAN Europe did not carry on the work of Ptolemy**

Instead the leaders of orthodox Christendom built a grand barrier against the progress of knowledge about the earth. Christian geographers in the Middle Ages spent their energies embroidering a neat, theologically appealing picture of what was already known, or was supposed to be known.

## **Geography had no place in the medieval "seven liberal arts."**

Somehow it fit neither into the quadrivium of mathematical disciplines (arithmetic, music, geometry, and astronomy) nor into the trivium of logical and linguistic disciplines (grammar, dialectic, and rhetoric). For a thousand years of the Middle Ages no common synonym for "geography" was in ordinary usage, and the word did not enter the English language until the mid-sixteenth century.

Lacking the dignity of a proper discipline, **geography was an orphan in the world of learning.** The subject became a ragbag filled with odds and ends of knowledge and pseudo-knowledge, of Biblical dogma, travelers' tales, philosophers' speculations, and mythical imaginings.

**Christian dogma and Biblical lore** imposed other figments of the theological imagination on the map of the world. The **maps themselves became guides to the Articles of Faith.**

Every episode and every place mentioned in Scripture required a location and became a tempting arena for Christian geographers. One of the most enticing of these was the **Garden of Eden.**

In the east, then at the top of the map, medieval Christians commonly showed a **Terrestrial Paradise with figures of Adam and Eve** and the serpent all surrounded by a high wall or a mountain range.



*"The First place in the East is Paradise," explained Isidore of Seville (560-636), reputed to be the most learned man of the age, "a garden famous for its delights, where man can never go, for a fiery wall surrounds it and reaches to the sky. Here is the tree of life which gives immortality, here the fountain which divides into four streams that go forth and water the world."*

**The trackless wastes that separated man from Paradise were infested with wild beasts and serpents.** This orthodox view still left ample room for learned theological debate.

To fill the whole world with the rudimentary **Scripture-picture**, it was necessary both to **embroider the Sacred Word and to ignore the real shape of the world**. It is easy to forget what these medieval Christian believers enjoyed, in exchange for the scientific progress that they condemned. A harvest of imaginary delights and terrors!

Brave monks in quest of Paradise, like voyagers to outer space in later centuries, became popular heroes.

Paradise fiction became a genre of sacred literature, just as space adventure would be a form of science fiction.

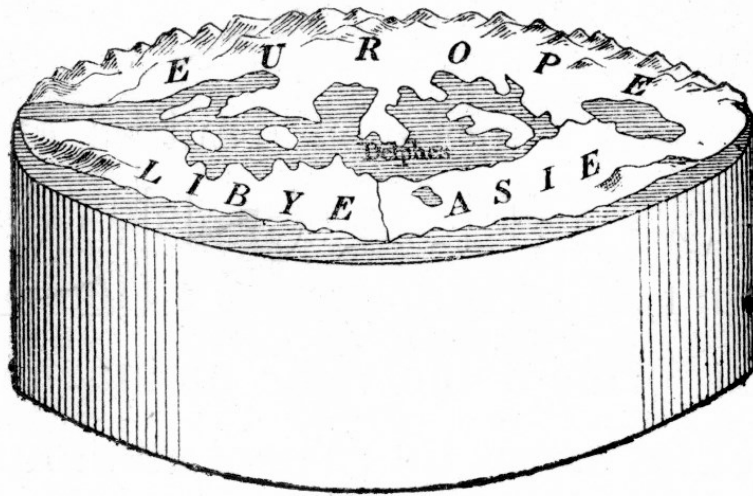


Scenes from Saint Brendan's Terrestrial Paradise

# The Flat Earth Returns

"*CAN any one be so foolish,*" asked the revered Lactantius, "the Christian Cicero," whom Roman Emperor Constantine (300 AD) chose to tutor his son, "*as to believe that there are men whose feet are higher than their heads, or places where things may be hanging downwards, trees growing backwards, or rain falling upwards?*"

"*Where is the marvel of the hanging gardens of Babylon if we are to allow of a hanging world at the Antipodes?*" Saint Augustine and others of his stature agreed that the Antipodes (a place where men's feet were opposite) could not exist.



## **Classic theories of the Antipodes**

described an impassable fiery zone surrounding the equator which separated us from an inhabited region on the other side of the globe. **This raised serious doubts in the Christian mind about the sphericity of the earth.** The race that lived below that torrid zone of course could not be of the race of Adam, nor among those redeemed by the dispensation of Christ.

If one believed that Noah's Ark had come to rest on Mt. Ararat north of the equator, then there was no way for living creatures to have reached an Antipodes. **To avoid heretical possibilities, faithful Christians preferred to believe there could be no Antipodes, or even, if necessary, that the earth was no sphere**

**The ancient Greek and Roman geographers** had not been troubled by such matters. But no Christian could entertain the possibility that any men were not descended from Adam or could be so cut off by tropical fires that they were unreachable by Christ's Gospel.



## Meanwhile in China...

Recall **Phei Hsie** around 300 CE?

Highly accurate flat grid maps.

Perhaps, the long tradition of grid maps of China had reached the Arabs in Sicily through the Arab colony at Canton (China) and through the increasing number of Arab travelers to the East.

**Perhaps the Chinese played a part in ending the Great Interruption**—setting European geographers once again on the path of knowledge, rediscovering the quantitative tools that were the heritage from Greece and Rome

By the mid-twelfth century (1150), even **before** the general **revival of Ptolemy in Europe**, when the Arab geographer Al-Idrisi made his world map for Roger II, Norman king of Sicily (a Viking!!!), he too used a grid scheme which, like that on Chinese maps, makes no allowance for a curved earth.



The map of the Arab I-Idrisi (1150). Flat. But with a grid, and north is up.