

The following is an excerpt  
from the book, *The Millennium of  
the Holy Face*.

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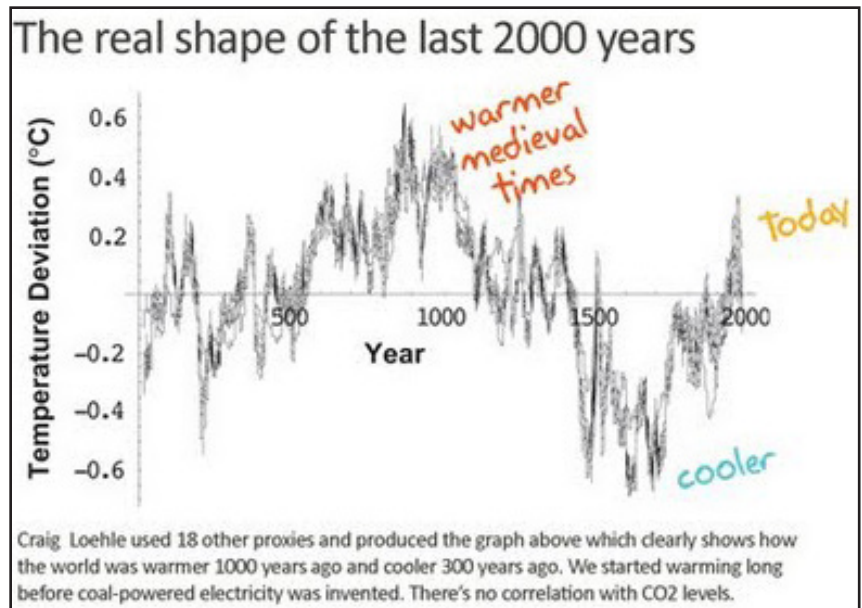
## Chapter 8: 850-950 ~ The Warm Begins

### MEDIEVAL WARM PERIOD

You remember how, in 535, there was a volcanic explosion that caused so many problems worldwide? It made the sky distinctly dimmer for well over a year, diminishing harvests, bringing famine and plague, and, in some areas, leading to local changes in climate that never did return to pre-535 conditions.

But most places did return to normal, and in fact one of the striking realities of the Middle Ages was the long period of general warmth and mildness which began sometime in the 9th century. From 800 until about 1300, there were fewer storms than before and fewer than most times since. Glaciers retreated and agriculture prospered even in the mountains, as longer, warmer summers opened new areas for cultivation. Wine grapes grew in England, as was not possible during the following centuries.

*Warm and pleasant, the Middle Times;  
farmers rejoiced in gentle climes  
From 800-something to 1307,  
and then there came a cooler heaven...*



People put different beginning dates on the Medieval Warm Period, sometime in the eighth or ninth century. This climate warming was not something that turned on like a switch, because the vast reserves of water in the ocean absorb small temperature variations, ensuring that climate changes will usually have to be gradual.

### ST. LEOCRITIA D. 859

But if the weather was warm, other things were cooler.

The century from 850 to 950 opens with a persecution of the Christians of Cordoba in Spain. Under Moslem rule, which is called *sharia*, the Christians and Jews of Spain were *dhimmi*, meaning second-class citizens: they paid a tax for being non-Moslems and they could not hold office. Even more se-

*Leocritia of Moorish Spain  
declared that Jesus alone was gain;  
Which, in Cordoba, 859,  
was a capital crime.*

rious, although they were allowed to practice their faith, making converts was a crime, punishable by death. Finally, if a *dhimmi* married a Moslem, the children must be raised as Moslems. All these things slowly eroded the Christian community, and then the emir — the Moslem governor — called



*The Cathedral in Cordoba became a mosque and this is how the dome was remade. Because Moslems do not allow representation of persons or animals, or indeed of anything on earth, decoration is always exclusively geometric.*

a Christian synod. (The emir called a synod? Yes.) As a result of this, the bishops said that Christians were forbidden to seek martyrdom. Bishop Reccared of Cordova specifically encouraged his people to compromise with their rulers and not to make any kind of protest or public resistance; he agreed with the Moslems that any public statements against Islam were fanatical. In this way, he withdrew his support from any Christian who might convert a friend, a husband, or even her own child.

Inevitably, in a mixed society, there were Moslem-Christian marriages where one or more of the children grew up in sympathy with Christianity. From these families and from others, there were converts to Christianity, as is bound to happen wherever there is freedom of speech. But now, if the convert was brought into court, whatever he

said about his decision to embrace Christianity could be – and was – counted as publicly denouncing Mohammed. In these circumstances, a serious persecution began in Cordoba. We know of it because St. Eulogius wrote a booklet about it to encourage the Christians, and he listed 48 martyrs, mostly between the years 850-859. The booklet made its way to Asturias, the little corner of Spain that was still Christian, and so these stories were kept and remembered.

One of the converts was a young woman named Leocritia, who came to Eulogius, a well-known priest, to hide; her parents were both Moslem, but a relative had converted her. In no time, the Moslems came for both Leocritia and Eulogius, and though they escaped for a while, moving from one place to another, they were finally arrested. Eulogius was executed first, in the hopes that Leocritia would lose her faith when he was no longer there to support her, but Leocritia was firm and was executed a few days later.

Presumably the persecution continued after 859, but Moslems records say nothing about it, and with the execution of Eulogius, silence falls. We know that the monasteries and convents were closed during this time.

### ST. SWITHIN OF WINCHESTER D. 862

About the same time, there was a good priest in England, St. Swithin, a good tutor, and a good bishop of Winchester, the capital city of England.

When he became bishop, he traveled all about his diocese, usually on foot and during the night so that people wouldn't make a fuss over him. Then too,





traveling as the poor travel, he saw how great was the need for more bridges to help people cross the many rivers between their homes and any town they might need to visit. So he arranged for more bridges to be built.

One day, when a workman on a bridge broke a woman's basket of eggs and then made light of her distress, Bishop Swithin intervened. He rebuked the workman, and fixed the eggs. (Humpty Dumpty would have been amazed.) The point is that St. Swithin was just and gracious, and did not tolerate an arrogant attitude towards the poor.

Winchester, in those days, was the capital of England, because it was the capital of Wessex, where the kings lived. But there's more to the story of St. Swithin . . .

### ALFRED THE GREAT 849 – 899

The first true king of England was Egbert of Wessex, a good Christian in the western part of England (that's what Wessex means). When he had a son named Aethelwulf and wanted a good tutor for him, he turned to St. Swithin, who was an excellent tutor, and it was a very happy arrangement all around. When Aethelwulf became king in his turn, he arranged for Swithin to be the bishop in Winchester, so that he might continue to get the good bishop's wise advice. Then a bit later, when he had his own son, he asked St. Swithin to be a tutor once more, as well as a bishop.

That son became King Alfred, perhaps the wisest and greatest of the kings of England.

All during this century, the Norsemen were raiding in different places, and the battles against them were the constant disturbance of everyone in England. At this time, England was still divided into several realms, and Alfred realized that there would be no decisive victory over the Vikings until England was united, because the Vikings moved so fast that they could always pull out and attack somewhere else if things looked bad. While waiting for everyone else to see this reality, King Alfred hid out in the fens – the marshy lands – of Wessex. He was a reader and a thinker, and while he was in hiding, he was once asked to watch some oat cakes lest they burn.

They burned, and the woman who was keeping him was very angry. Later, she found he was king and was afraid he would punish her for scolding him, but he just laughed. He was a holy servant sort of king, not an arrogant one.

Eventually, the English decided to unite, and Alfred said they needed to take three steps to win the Viking wars. These would take time, so they must agree to an annual payment to keep the Norsemen out for a while. This they agreed to, and they bought some time. First of all during these years, Alfred built garrisons so that nobody was more than 20 miles from a protected space. Second, he had ships built with a new design that could meet the Viking ships effectively. Third, he trained his army in a new technique, using horses and new battle tactics. Moreover, he worked it out that,



*Alfred the Great left Winchester town  
To fight the Danes on White Horse Down.  
He won, by our Lady's hand,  
And went home to start schools throughout the land.*

at any given moment, half of his soldiers were at home doing what they needed on their farms, but the other half were ready to move at a moment's notice. At the end of the time Alfred agreed on, the Vikings demanded their annual bribe and Alfred refused. They threatened to fight.

He was ready, and he won. The most famous of his battles was fought near a place where an image of a horse is cut into the turf, exposing the underlying white chalk, in the form of a horse. It is called White Horse Down and there is a famous poem about it. The horse image was not made by Alfred; it is very old, but it's interesting.



By all these means, Alfred defended his realm and the English had some peace.

But even the wisest defense is not enough to make a king “great.” King Alfred believed that it was also his responsibility to see that his people were educated. He started a palace school for his own children, the children of the local nobles, and various other people. (Who did that before him?) Then, since the monasteries were hardest hit by the Vikings, he brought in monks from Europe to provide education beyond his immediate circle. He almost had to start from scratch because the Norsemen, like other barbarians, were never content with beautiful vessels from the monasteries, but had to burn the buildings – and the books – as well.

Alfred went even farther than building schools and providing teachers; he did something that Charlemagne never could. Can you guess what? He urged that important works be translated *into English* and he gathered scholars to work on it. They translated the work of St. Bede. (Yes, Bede was English, but he wrote in Latin, remember?) At the same time, *he, himself*, made a number of translations, starting with a book by St. Gregory the Great (the Pope who was St. Leander's friend). When St. Gregory was trying to reform the bishops of his time, he wrote an essay called *Pastoral Care*, explaining the true duties of a bishop. Alfred translated this into English (Anglo Saxon English, which was the English of long ago) and sent it out to all his bishops.

He also translated Boethius, a famous author from the last days of the Roman Empire, and in fact he translated Boethius twice, first into English and then a second time into English *verse*. He also translated some of the Psalms from Latin into English.

It may seem strange that the king did all these things when he had wars to plan, a navy to rebuild, cities to fortify, and taxation and also laws to change (I didn't mention this), so that everything else could be done in an orderly way. Where did he find time to devote to study?

First of all, he believed that study was essential to a full Christian life and that if he desired God to bless his kingship, he must attend to all its dimensions, not let himself be caught up in the battles. But besides, translation has a way of demanding one's full attention so that the mind is actually rested from other troubles. He said he found it refreshing, and I believe him. Try it.

England was safe from Viking raids for many years. Not that the raids didn't continue; they did. But the English were able to repulse many and give a settlement of land to others, so they could live a moderately peaceful life, and develop their deeper culture.



## ROLLO THE VIKING 846 – 931

While Alfred was working this out in England, France had the same problems with the Norse. Raiders from the sea would come to their coastal towns, take what they wanted, and slip away before an army could be assembled to deal with them. The French solution was to give one of the raiders a whole duchy along the Seine, which flows across France and into the sea right across from England. He was also to have Gisela, the daughter of the king



*Eventually, Rollo the Viking  
Who'd kept France and England  
hiking,  
Chose a bit of land  
And took Gisela's hand.*

*Yet the Christian heart of Rollo,  
judged by his death, was hollow.  
True, he guarded well the Seine;  
but barbarians are a pain.*

of France, in marriage. In return, this raider, Rollo the Viking, promised to defend France from the rest of the Vikings.

Having a wife who was part of the local nobility started to settle him. Not completely; not at once. He did defend the Seine, but he wanted more land, and that still meant battle for his closest neighbors, the people around

him. He got several more towns before he died, but eventually, things really did settle out.

It is said that when Rollo died, he went mad and had 100 Christian captives beheaded to honor the old Viking gods, and then gave a hundred pounds of gold to the nearby churches. I guess he wasn't quite sure whose protection he needed most.

Alas that there was no Boniface to straighten him out!

## HENRY THE FOWLER 876 – 936 :

This story is taken with only slight changes from the account in *Famous Men of the Middle Ages*.

About a hundred years after the death of Charlemagne, there were seven kings ruling the countries where he had once been emperor, and they were all quarreling amongst themselves, which ate up a lot of valuable energy, and also made them vulnerable to outside enemies

Everyone dreamed of a new Charlemagne but he did not appear, and at last the only prince descended from Charlemagne died. Meantime a new threat came out of the east, the Magyars, fierce horsemen barbarians who could not be controlled. The German leadership met and elected Conrad, duke of Franconia, to be their king, in hopes he could lead them to victory.

However, although king in name, Conrad never had much power over his nobles, some of whom refused to recognize him at all, so all the quarreling and wars continued. In 919, Conrad died, and there is a story that on his death-bed he said to his brother, "Henry, Duke of Saxony, is the ablest ruler in the empire. Elect him king, and Germany will have peace." So it was. A few months after Conrad's death, the nobles met at Aix-la-Chapelle and elected Henry to be their king.

At this time it was the custom in Europe to hunt various birds, such as the wild duck and par-



*Rather than fight for a crown, Henry went fowling.*

*'The Franks don't want a Saxon anyway,' he was growling.*

*But King Conrad showed him wrong:*

*and he was a good king, and his reign was long.*

tridge, using falcons. The falcons were long-winged birds of prey, resembling hawks. They were trained to perch on their master's wrist and wait patiently until they were told to fly. Then they would swiftly dart at their prey and bear it to the ground. Henry was a falconer.

Now, as soon as the dukes had elected him king, a messenger was sent to Saxony to inform him. Because he had no expectation of being elected king, he was out with his falcons, and it took the messengers several days to find him, far up in the Hartz Mountains. For this reason, he is known as Henry the Fowler.

Kneeling at his feet, one of the messengers said:

"God save you, Henry of Saxony. I come to announce the death of King Conrad and to tell you that the nobles have elected you to succeed him as king of the Germans."

For a moment the duke was speechless with amazement. Then he exclaimed:

"Elected me king? I cannot believe it. I am a Saxon, and King Conrad was a Frank and a bitter enemy to me."

"It is true," replied the messenger. "Conrad, when dying, advised that the nobles should choose you as his successor."

Henry was silent for while and then he said, "King Conrad was a good man. I know it now; and I am sorry that I did not understand him better when he was alive. I accept the position offered to me and I pray that I may be guided by Heaven in ruling this people."

So Henry the Fowler left the chase to take up his duties as king of the Germans, but he was hardly seated on the throne when the country was again invaded by thousands of Magyars.

As quickly as he could, Henry gathered an army and marched to meet the barbarians. He came upon a small force under the command of the son of the Magyar king. The Germans easily routed the Magyars and took the king's son prisoner.

This proved to be a very fortunate thing, because it enabled him to stop the war for several years. When the Magyar king learned that his son was a prisoner in the hands of King Henry, he was overwhelmed with grief and sent one of his chiefs to the German camp with a flag of truce, begging that the prince might be given up.

"Our king says that he will give whatever you demand for the release of his son," said the chief

to the German monarch. Henry gave a wise reply, attractive enough for them to agree, but making sure that he would obtain what he needed to defend his country.

“I will give up the prince on this condition only,” was the reply, “the Magyars must leave the soil of Germany immediately and promise not to war on us for nine years. During those years I will pay to the king yearly five thousand pieces of gold.”

“I accept the terms in the king’s name,” responded the chief. The prince returned to his father, and the Magyars withdrew from Germany.

During the nine years of truce King Henry paid great attention to the organization of an army. He made many of his men learn to fight on horseback, as the Magyars did, for men on foot are at a great disadvantage against men on horses. He drilled his men so thoroughly that they became almost invincible. The infantry also were carefully drilled.

Besides this, Henry built a number of forts in different parts of his kingdom and those cities that already had forts, he made stronger. See how like Alfred of England he was?

After nine years, the Magyar chief appeared at the German court on the tenth year and demanded his customary payment.

“Not a piece of gold will be given you,” replied King Henry. “Our truce is ended.”

In less than a week a vast body of Magyars entered Germany to renew the war. Henry held his army in waiting until lack of food compelled the barbarians to divide their forces into two separate bodies. One division was sent to one part of the country, the other to another part.

Henry completely routed both divisions, and the power of the Magyars in Germany was broken.

The Danes also invaded Henry’s kingdom, but he defeated them too, and drove them back.

Henry reigned for eighteen years; and when he died all Germany was peaceful and prosperous. His son Otto succeeded him. He assumed the title of “Emperor,” which Charlemagne had borne more than a hundred years before.

Henry’s wife was Saint Matilda, the great-great granddaughter of the great King Alfred of England. She was a worthy wife for so great a king, and she saw to it that some of the kingdom’s money was spent on monasteries and learning as well as on wars. She was another of those Christian wives who had a great family of saints building culture in Europe for many years.

### GOOD KING WENCESLAUS 903 – 929

There is a famous Christmas carol about Good King Wenceslaus, who really lived, and who really was famous for caring for the poor with his own hands, as the verse says he took care of a poor man.. He was actually the Duke of Bohemia until his pagan brother killed him. (There is a different man called King Wenceslaus I — not a saint at all, and not as famous. Our Duke was called a king later in history, because he was loved. That’s a long story for another time.)

How did a Christian king have a pagan brother? The grandfather of Wenceslaus was converted by the missionary brothers, Saints Cyril and Methodius who were so important in the Christian formation of the Slavic peoples; they translated the Bible and the liturgy of the Mass into the Slavonic language, inventing a suitable alphabet along the way.

So therefore, the father of Wenceslaus was a good Christian, but his mother, Drahomira, was





a pagan who only converted so she could marry the duke. Her actual sympathies were pagan and when it came about that the duke died while the boys were still young, she immediately tried to draw them back to the old ways.

Fortunately for the Slavs, all her efforts were opposed by Ludmilla, their Christian grandmother and regent, so, although Drahomira succeeded in making a pagan of Boleslaus, he was the younger son; Wenceslaus became duke. He cared for the poor and he governed wisely, though for only a short time. Drahomira hated both Ludmilla and Wenceslaus and eventually arranged to have Ludmilla strangled and then, with the help of Boleslaus, she had Wenceslaus murdered as well. Boleslaus himself actually murdered his brother in a church where he said they should meet and become at peace.

*The Good and beloved King Wenceslaus  
Was killed by his bad brother Boleslas  
Who had to convert to keep his throne  
So Bohemia became God's own.*

Nevertheless, Drahomira's machinations did not work out. The people of Bohemia loved the young duke who had actually watched over them, and they were not going to give up their faith to follow a murderer. Boleslaus had to pretend repentance and conversion in order to rule successfully.

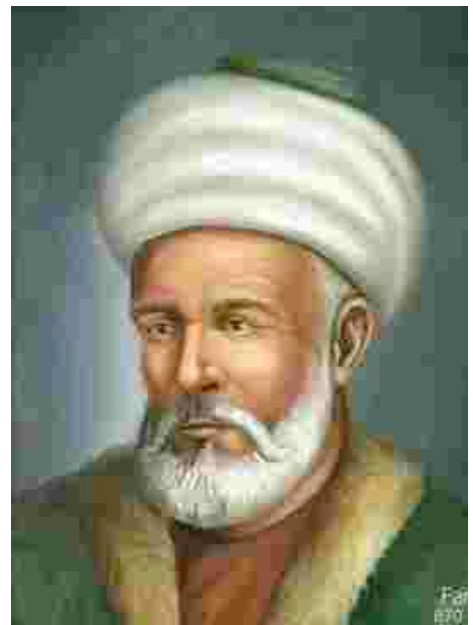
So Wenceslaus won after all, but in the manner of a martyr. He did make it that his people could be Christians.

### AL-FARABI 872-951

While Rollo, Henry, and Wenceslaus took charge of Europe, a certain al-Farabi was studying philosophy at the same House of Wisdom where al-Kwarismi had taught mathematics. The Moslems called al-Farabi the Second Philosopher, the Greek Aristotle being "the first." Al-Farabi was the sort of man who thought about many things, and since he wrote about 100 books, we know what he thought. He wrote about math and music, about language and thought, and especially he wrote about how the government should be run, saying that philosophers should advise statesmen. That is interesting, because many Moslems had the idea that the caliph should be both king and prophet, both a statesman and an unchallengeable religious leader so that the will of God might always be enforced by the power of the state. A government that unites religion and politics that way is called a theocracy.

The good thing about a theocracy is the principle that everything, even politics, belongs to God, and all leadership should be exercised as we believe that God wants it to be done.

The bad thing is that while devotion and obedience to God ought to be absolute, obedience to a politician



*For the philosopher al-Farabi  
thinking was no mere hobby.  
He thought it should govern religion and state;  
the imams could not relate.*

is another matter. Politicians argue and try to work things out, but kings and their advisors cannot argue respectfully with each other and at the same time believe that the king is absolutely right: that would be contradictory. Worse, if church and state are united at the top that way, people may be tempted to pretend they are religious just so they can rule. That makes bad religion and bad statesmanship.

Al-Farabi understood that it's pretty hard to be in leadership, and a good caliph or king will want a good advisor, not just a bunch of people who think he is perfect. Furthermore, al-Farabi said that the best advisor will be one who is trained in thinking as well as in the knowledge of God. He really believed in thinking.

Seems pretty simple, but it's not that easy. All through history, there have been religious people who doubted the value of thought, because it might lead you to ideas different from obedience to God. Al-Farabi was not one of those. He believed that learning to think was one of the most important things anyone could do. He believed in both prayer and intellect, and he tried to think it through from an Islamic point of view and explain how they are joined.

I wonder what he would have thought of St. Swithin and the kings of England who lived such a short time before him.

### THE DIAMOND SUTRA 868

Meantime, in the eastern lands, other changes were afoot.

All roads east into China, and all the west-traveling roads out of China, must come to the Taklamakan Desert, which, being 600 miles wide, cannot be crossed by man or beast; there is no road through this dry waste. There the traveler takes one of two mountainous routes: either the road north of the desert, through Kashgar in China and through Tajikistan; or the road south of the desert through Tibet and Lhasa. For either trip, coming in or going out, our traveler will probably stay in the city of Dunhuang, which means Blazing Beacon, as undoubtedly it was for the travelers facing those long, long journeys through the mountains and alongside the desert.

Of course Dunhuang is an oasis, and its lake, called Crescent Lake, supplies plenty of water for the city, and for the provisioning of travelers. Besides the lake, they might have enjoyed visiting the nearby Mingsha Shan or "Echoing Sand Mountain." This is one of the few places in the world where the sand is such that it causes a thunderous reverberation when the wind blows – or when a traveler slides down one of its dunes.

More interesting than the lake and the dunes, however, there are caves near Dunhuang, where travelers used to leave paintings and scrolls, mostly of Buddhist teachings or images of Buddhist holy men or women, but also there were Nesto-



*This is an illustration from the diamond Sutra. It shows the Eldr, Subhuti is asking the Buddha a question about enlightenment.*



rian Christian treasures. One Buddhist scroll, called the Diamond Sutra, is thought to be the oldest book in the world. Not that it had pages, it was still a scroll, but not handwritten. It is a block print, meaning that the words and images were carved into a block of wood that was then inked and used to make multiple copies until the wood weakened or clogged with the inks. It dates from 868 AD.

Dunhuang was under Tibetan control during the anti-Buddhist persecution of Emperor Wuzong, so Buddhism survived at that time, but slowly lost its vitality over the following years. The Moslems were moving in from the west, gradually closing down the Silk Road by piracy or by taxing travelers. Besides, the Moslems made many converts in western China, and these converts did not permit images. For whatever reason, the caves were quietly sealed up in 1005, and were not entered or touched again for nine hundred years. They were almost forgotten!

### COFFEE

Coffee is said to have been discovered during this century. The story is that an Ethiopian goatherd named Kaldi noticed that there was a bush whose bright red berries made his goats quite frisky. He tried chewing them himself, and then took a sample to a Sufi monk who disapprovingly threw it into the fire. The aroma was irresistible and the beans were raked from the fire and used ever after.

Probably the story is no more than that: a story. But it's a good story and provides us with a locus for the original coffee shrubbery. It was in Ethiopia. The Africans mixed roasted coffee with fat and ate it. The Moslems, who were forbidden to use alcoholic stimulants, argued about it for a while and then took delight in it as a beverage. The Orthodox also banned it for a while. These bans are our first evidence of its presence. It should not be assumed that the bans were effective, but it was 400 years before coffee houses appeared in public.



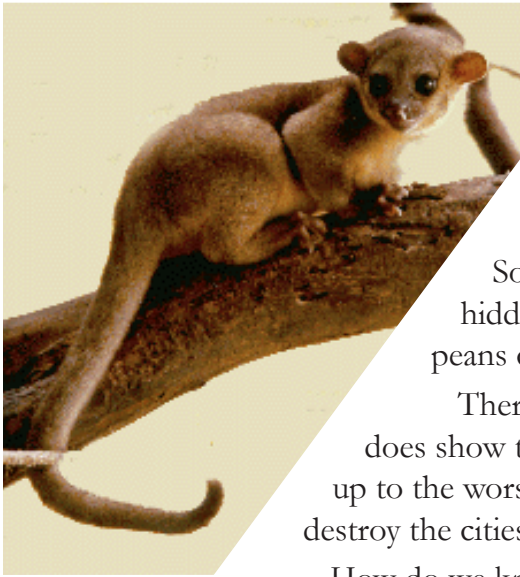
*When Kaldi's goats were frisky  
Some thought their provender risky,  
But most men loved both frisk and aroma  
And gladly brought their coffee home - ah!*

### THE GREAT MAYA DROUGHTS

In the Americas, this is the century when the massive cities of the Maya suddenly came to an end, or at least a deep pause. The Maya lived in the Yucatan, a very large peninsula that reaches into the Gulf of Mexico from the southwest. There must have been at least four million people living in the Maya cities of the Yucatan; some say 14 million. Everyone left or died and the jungle choked every street and hid every building so that you could walk through their cities or even fly over without seeing them. When Palenque was discovered, the archaeologists were stunned.

Palenque was immense, much larger and more prosperous than anything in contemporary Europe. Numerous walls and courtyards were decorated with bas-relief images of animals and people. In all the ruins, there is no sign of destruction, no soot from burning, just a silent ruin. For years, the discoverers pulled away the jungle to reveal more and more of the lost city and then of other cities. What had become of the people? There were no bones and no writing or even burials that





might have held the clue, only the majestic stone buildings and human silence amidst the twitter of birds and the unhappy cry of the gentle kinkajou.

There were other cities in the Yucatan, and some of them were inhabited when the Europeans arrived, but it was obvious that their golden age lay in the distant past. Something had cut them down, and their glory was hinted but hidden, for the men who lived in the Maya cities when the Europeans came were not the builders of cities.

There is no agreement about the fall of the Mayas, but research does show that drought struck repeatedly during this century, adding up to the worst droughts in 7,000 years. That would have been enough to destroy the cities.

How do we know there was drought? If nobody was writing, what record do we have from over a thousand years ago? We have tight tree rings, which could mean drought, but they could also result from cold, so they are just a hint.

One of the clear records is in the shelly sediments on the bottom of one of the rare lakes of the area. Shells are made of calcium carbonate, a compound that includes oxygen taken up from the water. Now: oxygen comes in two forms, or as chemists would say, two isotopes. The common isotope has 8 protons and 8 neutrons; this is oxygen-16 ( $8 + 8 + 16$ ). A much less common isotope has 8 protons and 10 neutrons. This is oxygen-18. When water evaporates, the oxygen-16 evaporates more easily because it is lighter, and normally it is replaced by rainwater in its season. In a year of drought, however, more water evaporates than comes in again, and the lake water gradually comes to have a relatively high concentration of oxygen-18. This is taken up in the shells. Thus the oxygen isotopes in the shells can give evidence for a drought; and there are other signals that are even more complex and surprising.

Did you think you would have to learn chemistry in order to understand history? It is all very mysterious! Next comes a geology lesson:

The Yucatan is a limestone peninsula. When rain falls on limestone, it runs off in streams or else it slowly erodes the land into caves and, after making pools in the caves, runs away to the sea from there. Water does not collect in limestone or make large aquifers as it does in sandstone, and the result is that the only abundance of water in such a land is what fell in the last season plus a few lakes. There is no reservoir against drought. Even though



*In the dreadful Maya drought*

*Everyone died or else moved out.*

*'Twas the kinkajou saw the rains resume*

*And watched the stones of Palenque fall into jungly gloom.*

the Yucatan is a peninsula, the surrounding water is salty, so it is not easy to use. If the rains fail for just two or three years at a time, the people must move away or die. During the 9th century, drought struck so often that it was impossible for the people to return to their homes, or, to put it another way, anyone who returned would have had to leave again.

Probably many died waiting for the rain until they were too weak to make the necessary trip to other lands. Unfortunately also, many were undoubtedly sacrificed in the belief that the gods would relent and send rain in view of this unhappy gift. This was part of Maya practice.

But the rains did not come. Many would have moved, but most likely, people died by the millions. It is impossible to imagine how terrible it was in those years. Those who survived never rebuilt the glory of earlier centuries. When European missionaries arrived, they found some of the ruins, and some of the people, but it was a very long time before we understood how vast had been the Maya community.

### FOR YOUR REFLECTION:

It is interesting to see how many kinds of knowledge contribute to learning history. Some people are always supposing that what was long ago is just stories and the truth cannot be known. Well, the truth is not always obvious, but if we persevere, we find evidence in unexpected places. Who would think that seashells would tell us about a drought?

### MEDIEVAL WARMING:

On the Medieval Warm period: This is the website the chart comes from:

<http://joannenova.com.au/2009/12/fraudulent-hockey-sticks-and-hidden-data/>

Some people say that there was no medieval warm period; the weather then was just the same as now. Well, if you study history, you see that it was warmer then. Even if people didn't have thermometers like ours, we still know about their weather, because they had good and bad harvests and that changed history in various ways. For example, the monasteries kept track of their harvests, even when others did not. We know that grapes were grown much farther north in those days.

### SINGING DUNES:

Go to YouTube for an explanation and recording of singing dunes like Mingsha Shan. The grains of sand are shaped just so that they have a resonance that causes them to get louder and louder instead of just sounding a little swishy. There are such dunes in the Mohave in America as well.

Melanie Hunt has a good clip and a scientific discussion of Singing Sand Dunes, here:

<http://www.youtube.com/watch?v=7I6BesINIM8&feature=related>

And here is a more personal description:

<http://www.youtube.com/watch?v=4yFaMsUawi4&feature=related>

### COFFEE:

I am sure you can find a fun website about coffee. Here is one: <http://theoatmeal.com/comics/coffee>

### QUESTIONS FOR REVIEW:

Do you know enough Latin to explain this verse?

*Libera nos a furore Normanorum*

*May Vikings soon fall short of a battle quorum.*

*God settle them with wives*

*And return to us our farms and lives.*

- 1) What is our evidence of Christian persecution in Moslem Spain?
- 2) Who was St. Swithin? Whom did he tutor?
- 3) Who was Henry the Fowler, and who was his wife?
- 4) Who was the philosopher who wanted statesmen to be advised by philosophers?
- 5) What do you suppose he would have thought of St. Swithin and King Alfred the Great?
- 6) Where is coffee from? Who was the (legendary) discoverer of coffee?
- 7) What is oxygen-18 and what climatic event can it record?

### FURTHER READING:

About King Alfred, you must certainly find someone to read *The Battle of the White Horse* by G.K. Chesterton. It is a ballad; it is meant to be heard, not just read.

Read about St. Leocritia and St. Swithin in *The Children's Book of Saints* by Williamson. It's important, because people don't realize there was persecution at this time in Spain. The record of persecution dried up when Eulogius, the man who was recording the martyrdoms, was martyred.

*Famous Men of the Middle Ages* was written as a public school text in the early twentieth century. It is easy and memorable reading, somewhat romanticized.

My source for the story of the Maya droughts is *The Great Maya Droughts: Water, Life, and Death* by Richardson Gill. People have offered many reasons for the disappearance of the Maya civilization. I think this explanation is very persuasive. It is more a teacher's resource than a student's, but it's very, very interesting, even if you only skim a few parts.

The idea that the Mayas died out because they were careless of the land or ecology has been a common opinion, but it does not seem right, because in that case, you should see a long period of decline before the Maya cities died out. The Maya cities did not decline. They were there, thriving, and then suddenly, the people were gone. For that reason, some people think they might have been conquered. Yes, but then you would see the signs of war, damaged buildings, bones, things like that.

There is a wonderful biography called *The Man Who Loved China: the Fantastic Story of the Eccentric Scientist Who Unlocked the Mysteries of the Middle Kingdom*. It's about Joseph Needham. Many wonderful things to learn. The Chinese were a great people.

Gavin Menzies also has interesting material about the inventiveness of the Chinese.