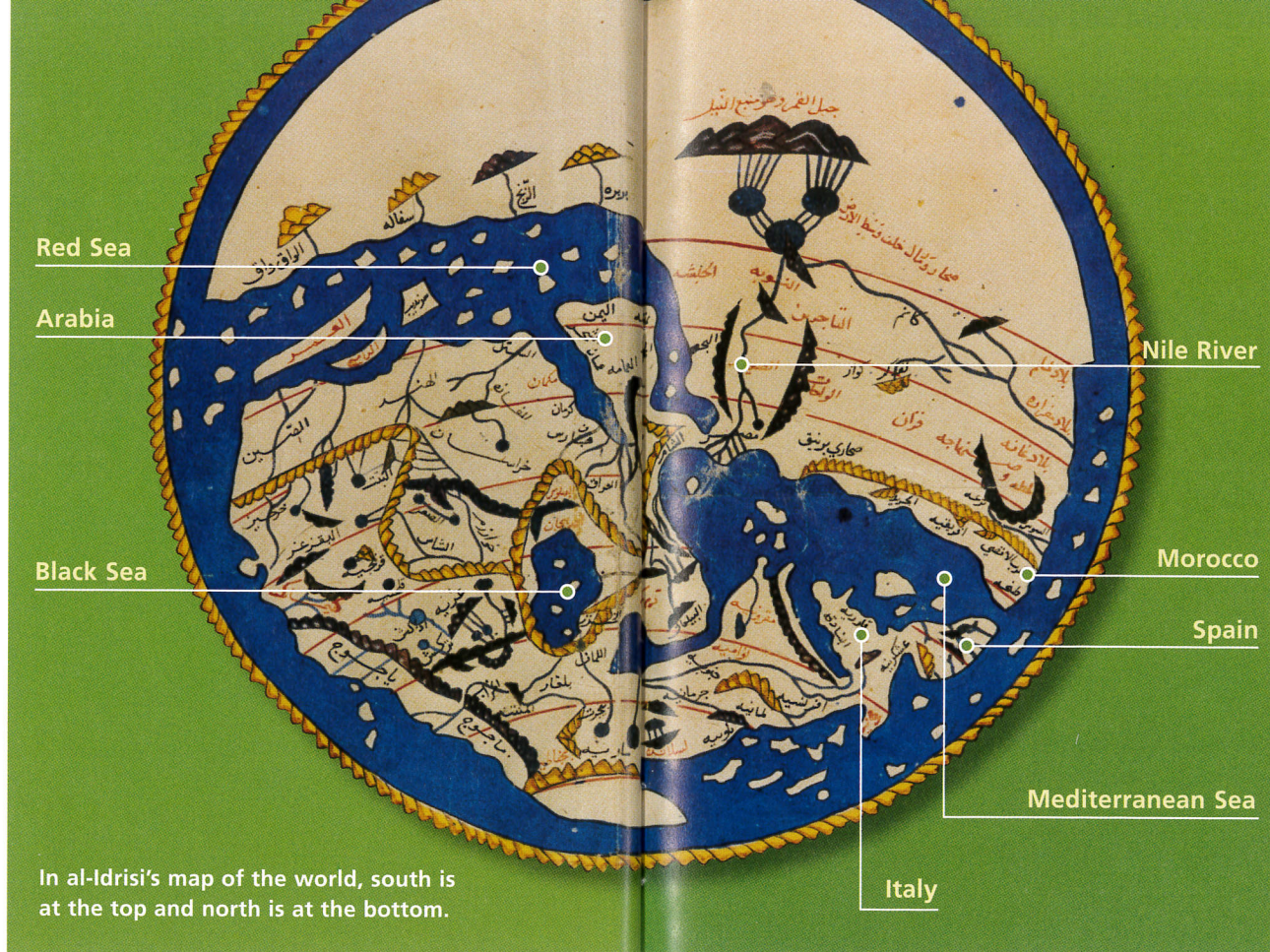


As trade strengthened the ties between the Mediterranean region and the Muslim Empire, Arab scientists became acquainted with ancient Greek scientific works. Scholars translated these works into Arabic, the written language of much of the Islamic world. Beginning with Greek wisdom, Muslim scientists made great strides in the fields of mathematics, medicine, chemistry, and engineering.

Muslim scientists also took an interest in astronomy, which in turn led to an interest in the shape of the Earth. Traders and explorers were traveling farther and farther away, and maps were needed. Cartography, or mapmaking, had been practiced by the ancient Greeks. The famous geographer Ptolemy, who was of Greek descent, had written a book that many Islamic cartographers used. As Muslim traders reached China, Russia, and the west coast of Africa, Muslim maps showed a larger area of the world. In 1154, a Muslim geographer named al-Idrisi (ahl-ihd-REE-see) created the first map of the entire world as it was known in his time.

The First Travel Guide

Al-Idrisi was born in Morocco in 1100 and educated in Córdoba, the wealthy, cultured city that was the capital of Muslim Spain.



In al-Idrisi's map of the world, south is at the top and north is at the bottom.

He wrote poetry, studied medicine, and traveled widely. He voyaged westward into the Atlantic Ocean—an extraordinary journey at this time—visiting the Canary Islands. He also traveled eastward to what is now Turkey. At some point in his life, al-Idrisi went to Sicily to join the court of its Christian king.

Using ancient Greek records as well as more recent discoveries of Muslim sailors and adventurers, al-Idrisi created for the king a large disk-shaped map of the world made from solid silver.

The great disk was almost 80 inches (200 centimeters) across and weighed over 300 pounds (135 kilograms).

Al-Idrisi didn't stop there. He spent the next 15 years writing a book, called *Geography, or The Recreation for Him Who Wishes To Travel Through the Countries*. Islam required that every Muslim male had to make the pilgrimage to Mecca at least once. With all these Muslim travelers, some coming from the farthest reaches of the Islamic Empire, guides such as al-Idrisi's were very useful.

In his book, al-Idrisi wrote that the Earth hung in the universe “like the yoke in an egg”—which suggests that he believed it was round. He calculated the distance around the Earth as 22,900 miles (35,400 kilometers). It is actually about 25,000 miles (40,000 kilometers). He also described the seven “climates,” or zones, into which Muslim geographers divided the habitable world, describing each in detail.

Al-Idrisi often updated and expanded earlier information. For example, Ptolemy did not believe that the Nile River split into two branches far upstream. But al-Idrisi correctly reported that it did, because he knew that Muslim sailors had sailed ships up both branches.

Most early geographers had done little more than repeat travelers' tales. Because al-Idrisi applied scientific standards in presenting the most accurate information available to him, his work was a big step forward in geography.

► For more information about Islamic contributions to geographic knowledge, see page 60.

WHY IT MATTERS TODAY

Muslim geographers such as al-Idrisi advanced the scientific knowledge of the world. The great Age of Exploration of the 1400s and 1500s might not have come as soon were it not for the geographers of the Islamic world.