

## Matteo Ricci

Italian missionary and mathematician **Matteo Ricci** (October 6, 1552 – May 11, 1610), founder of the Jesuit missions in China, was the first to share European mathematics with the Chinese. Not only did he give China a glimpse of his God and religion, he provided them with their first impression of Western civilization and science. Ricci was born in Macerata, then part of the Papal States. His nobleman father forbade any talk of religious topics in his home. Perhaps this restriction had a reverse effect on Ricci who was attracted to the Society of Jesus order, organized by St. Ignatius of Loyola only a generation earlier. In 1568 Ricci was sent to Rome to study law, but three years later he joined the Jesuits. He matriculated at the Collegio Romano, where in addition to his



philosophical, and theological studies he learned mathematics, cosmology, and astronomy from the Jesuit scholar Christopher Clavius.

At his request, in 1577, Ricci was sent to the China mission. Without visiting his family to say goodbye, he stopped in Portugal before sailing to the Portuguese colony of Goa on the Indian subcontinent where he was ordained a priest. He and his three companions spent four years receiving further training in Chinese culture and language at Macao, a small Portuguese enclave on the coast of Southern China. In 1582 Ricci stepped ashore in China, which was isolated from the rest of the world, certain of its superiority. The Chinese lived in what they called the Middle Kingdom, based on their belief that China was the center of the universe. Ricci became extremely proficient in the Chinese language and acquired an excellent and respectful understanding of Chinese culture. While in Kwangtung Province he produced the first edition of his map of the world, *Great Map of Ten Thousand Countries*, probably the most accurate at the time. The Chinese had maps, called “descriptions of the world” by their geographers, but these only showed the fifteen provinces of China surrounded by the sea and a few islands engraved with the names of countries of which they had little knowledge. The Chinese conception of the greatness of their country and of the insignificance of other lands caused them to believe that the rest of the world was savage and barbarous. Learned Chinese protested when shown European maps and saw how little a part of the world China occupied. Although East Asia – and China in particular – were represented clearly with scientific precision, several Chinese

cartographers criticized the configuration of Ricci's maps as an insult to China's centrality.

Ricci slowly earned the respect of his Chinese hosts because of his personal qualities and his complete adaptation to Chinese customs. He chose to wear the attire of a Chinese scholar and to adopt a Chinese name, "Li Matou." High-ranking Chinese officials addressed Ricci as the "Wise Man of the Great West." He was welcomed into the academies and gained many influential friendships. He taught Chinese scholars the mathematical ideas that he had learned from his teacher Clavius. They found the concepts very different from their own mathematics. Ricci lived in Nanking (now Nanjing), working on mathematics, astronomy and geography. In 1601 he was finally allowed to settle in Peking (now Beijing), from which as a foreigner he had been barred earlier. He became the court mathematician of the Emperor, Wan-li, and remained at the Forbidden City until his death nine years later. His last years were busy and demanding. In May 1610 his health gave out, and after an illness of eight days, he died at the age of 58. Foreigners were barred from being buried in China, but the Emperor gave the Jesuits the Zhalan cemetery and commissioned a magnificent tombstone for Ricci that still stands today. Because of his accomplishments, the communist government maintains it and protects it from vandalism. The tomb, which is in the shape of a small hill with a cross carved on it, is located two miles from the west gate of Beijing city. The inscription, in both Latin and Chinese, reads, "1610, Pioneer of Christian Missionary."

Ricci did more than any of others to acquaint the Chinese with the mathematics and astronomy of the West. His books *Geometrica Practica* and *Trigonometrica* were translations of Clavius' work into Chinese. In collaboration with native scholars Hsü Kuang-ching and Li Chi Ts'ao, Ricci translated the first six books of Euclid's *Elements* into Chinese. He used the certainty of Euclid's propositions to eliminate the doubts of Ming intellectuals about the existence of God and attract them to Western religion. In 1596 Ricci wrote *A Treatise on Mnemonics*, in which he recreated the medieval European idea of a memory palace. The latter is constructed in one's mind and is furnished with mnemonic devices. He told the Chinese that the size of the palace depended upon how much they wanted to remember. To everything one wanted to remember, an image was required, and every image needed to be assigned a place in the palace. Memory palaces were important before the invention of printing, when most knowledge was learned by rote and memorized.

On the four-hundredth anniversary of Ricci's arrival in Beijing, Pope John Paul II described the Jesuit as: "a precious connecting link between West and East, between European Renaissance culture and Chinese culture, and between the ancient and magnificent Chinese civilization and the world of Europe." Ricci's means for developing a better understanding

between the people of China and those of Europe have been at the center of every subsequent effort to build bridges between the two very different civilizations. In the year 2000, *Life Magazine* ranked Matteo number sixty-nine on its list of 100 most important people of the last millennium. While the criteria for making the list and being ranked is none too clear, it's amazing that Ricci was well-enough known to be considered. The first ten on *Life's* list are: Thomas Edison, Christopher Columbus, Martin Luther, Galileo Galilei, Leonardo da Vinci, Isaac Newton, Ferdinand Magellan, Louis Pasteur, Charles Darwin, and Thomas Jefferson.

**Quotation of the Day:** “Another remarkable fact ... marking a difference from the West is that the entire kingdom is administered by the Order of the Learned, commonly known as The Philosophers. The responsibility for the orderly management of the entire realm is wholly and completely committed to their charge and care. The army, both officers and soldiers, hold them in high respect and show them the promptest obedience and deference, and not infrequently the military are disciplined by them as a schoolboy might be punished by his master.” – Matteo Ricci