**From Urban To India**

Before the end of the eleventh century the first link was forged in the long and intricate chain of discovery and exploration leading Christopher Columbus. That link was the calling of the First Crusade by Pope Urban II at the Council of Clermont in 1095. The primary goal of the First Crusade and of later Crusades—the capture of the Holy Land from the Moslems—was only temporarily attained. However, as so often happens with great historical movements, the unforeseen results of the Crusades proved to be more significant and far-reaching than its sponsors ever imagined.

The Crusades also had important effects on European culture. Europeancontacts with the Byzantine and Moslem empires—which had preserved classical philosophy, medicine, mathematics, astronomy, and geography—facilitated the reintroduction of this body of thought and knowledge into

European life. Contrary to accepted belief, Europeans did not merely accept classical Moslem and Oriental knowledge but, particularly in the sciences, built upon it as well. The result was a series of technological advances which were to prove crucial in the rediscovery and settlement of America.

Chief among these technological accomplishments were improvements in the compass, the astrolabe, and gun powder. Europeans borrowed the compass from Moslem navigators, who probably learned about it from the Chinese. The astrolabe was a device which measured the height of the sun at noon, thereby indicating approximate latitude. It was used by the Greeks, preserved by the Moslems, and passed on to European sea captains. Gun powder, also a Chinese invention, was put to military use by Europeans, thus making it possible for them to overpower the inhabitants of the Americas. No longer would the skraelings (or Native Americans) be able to impede European settlement permanently.

European shipbuilders also made important contributions to marine technology. The galleys that sailed the Mediterranean Sea during the period of the Crusades were low, bulky ships which depended on their rowers as much as on their sails for power. Gradually, however, vessels (called caravels) became larger, longer, narrower, and higher, with multiple decks. Caravels had three masts and depended entirely upon their sails, which had become bulkier and more complex. These improvements, together with an improved rudder, made ships speedier, more maneuverable, and better able to take advantage of wind direction.

Closely allied to the improvements in shipbuilding were the improvements in map making. The forerunners of the modern map were marine charts which described the coastlines, first of the Mediterranean, and later of the Atlantic coast of Europe. By the beginning of the fifteenth century, a Latin translation of Ptolemy’s (second-century) work on geography reminded Europeans of what their scholars had never completely forgotten—that the world was round. The exact circumference of the globe, however, was still in dispute.

Another step on the road to the rediscovery of America was the Renaissance. The Renaissance, or rebirth of classical learning, began in thirteenth-century Italy. There the study of Latin and Greek literature became known as the humanities, the study of human beings and their literature. The Renaissance also stimulated European art, architecture, science, and technology. Perhaps most importantly, it led to a new outlook on life that was very unlike that of the Middle Ages. During the Middle Ages people had concentrated on the next world; during the Renaissance they concentrated on this world. People of the Renaissance tended to be more skeptical, individualistic, and optimistic than their forbears of the Middle Ages. The psychology of the Middle Ages tended to hinder the search for, and exploration of, new parts of the world; the psychology of the Renaissance positively encouraged such ventures. This adventurous spirit is perhaps best illustrated by the missionaries

and traders who, long before Europeans began to think of sailing westward to reach the Orient, attempted to reach India and China by following the caravan routes across Asia.

The Crusades increased trade between Europe and the Far East even more than they increased knowledge. During the course of the Crusades, the merchants of the Italian cities (which were the jumping-off places for the Crusades) had accumulated the ships, the know-how, and the large amounts of capital needed for trade with the Orient. Soon textiles such as silk, satin, velvet, taffeta, and damask; spices (necessities, not luxuries, in the days before refrigeration) such as pepper, cinnamon, ginger, nutmeg, and cloves; as well as rugs, tapestries, gems, china, glassware, perfumes, dyes, and steel weapons began arriving in European markets. Further, hitherto exotic fruits such as cherries, melons, apricots, peaches, and dates became commonplace on the tables of Europeans wealthy enough to afford them. These goods were transported thousands of miles by land and sea before arriving at the port cities at the eastern end of the Mediterranean or at Constantinople.

Because of agreements negotiated during the period of the Crusades, merchants from one or another of the Italian cities (most often from Venice, Genoa, or Pisa) held a virtual monopoly of all trade at these ports. They alone were eligible to purchase the oriental products, and merchants from the rest of Europe were forced to go to Italy to obtain these products—at exorbitant prices.

Italy was not the only area of Europe to benefit from the increase in trade. Important mercantile towns and seaports developed in the Low Countries (present-day Holland and Belgium), Portugal, Spain, France, England, and the Hanseatic League towns along the Baltic and North seas. Merchants from all these parts of Europe purchased oriental goods and, in return, sold the hides, timber, furs, tin, lead, woolen goods, and leather products which were produced in their own areas. These towns also became centers of industry and banking. The wealthy bourgeoisie (town dwellers) who controlled them gradually attained a position of power and influence in the medieval world.

However, all these new nations found themselves with a common problem: an unfavorable balance of trade, or, more precisely, an unfavorable balance of payments. In other words, they were spending more on the goods they imported than they received for the goods they exported. As a result, bullion (gold and silver) was being drained out of all these new nations. According to the economic doctrine which developed concurrently with the rise of the nation-state, nothing could be more disastrous. Without an ample supply of gold and silver, how could merchants carry on their trade? How could a king support an army and navy to protect his and his nation’s interests? The cause of this unfavorable balance of payments was obvious. The prices these nations had to pay for oriental products reflected the intrinsically high value of the goods, the huge distances over which they had to be transported, the innumerable tolls which were levied on them, the number of middlemen through whose hands they passed, and the monopolistic prices charged by the Italian merchants. On the other hand, the prices which the new nations were able to charge for their raw materials and even for their manufactured goods were much more modest.

The solution to this problem was equally obvious: Find an alternative route to the Far East. The nation that discovered such a route would break the monopoly of the Italian merchants and possibly even replace them as the purveyor of oriental goods to the rest of Europe.

PORTUGUESE EXPLORATION

Portugal was the first nation-state to institute the search for such a route. Several factors help explain Portugal’s precedence in this enterprise: It was unified at an early date; it was barred from eastward expansion by the powerful Spanish state of Castile; it had many good harbors; and its seamen were

seasoned by a long series of naval wars against the Moors of North Africa. Further, from 1422 to 1460 Portuguese exploration had the unflagging support of Prince Henry the Navigator, a younger son of the Portuguese royal family.

Prince Henry’s motives were mixed. He planned to spread Christianity to the peoples of Africa and, perhaps, with the aid of the legendary Christian kingdom ruled by Prester John, drive the Moors from North Africa. He also hoped to reach Guinea, on the Atlantic coast of Africa, where caravans from central Africa reportedly delivered ivory, gold, and slaves. Finally, he anticipated finding a passage through, if not around, Africa to the Far East. Prince Henry was no idle dreamer. He endowed a naval observatory at Cape St. Vincent, on the southwestern tip of Portugal, where navigators, astronomers, and map makers—Moslem and Jewish as well as Christian— worked to conquer uncharted seas. For almost forty years Prince Henry sent one expedition after another down the west coast of Africa. In 1434 a Portuguese sea captain returned home safely after sailing beyond Cape Bojador into waters which had hitherto been thought to be boiling hot, thick with salt, and full of sea monsters. In 1441 Antan Goncalves, another of Prince Henry’s captains, landed just south of Cape Bojador and kidnapped ten or twelve Africans and brought them back to Portugal as slaves. From this small

beginning grew the gigantic slave trade of the future.

Not even the Prince’s death could deter Portuguese exploration. In 1471 Portuguese explorers sailed south of the equator; in 1484 they reached the mouth of the Congo River; and in 1486 Bartholomew Diaz rounded the Cape of Good Hope. In 1497–1498 Vasco da Gama sailed to India, returning to Lisbon the following year with a cargo of pepper, cinnamon, cloves, nutmeg,and gems worth a sizable fortune.