

3.6 Map Development After the Arab Geographers

The Chinese during the Yüan dynasty (1260-1367) also known as the Mongol period produced some maps that were reasonably accurate and depicted Asia, Europe and Africa.¹ Chu-ssu-pen's (1273-1337) 14th century world atlas, *Yü-t'u*, contained a great deal of information about the China Seas and the Indian Ocean for its time.² Another was *Sheng-chiao huang-pei t'u* by Li Tse-min.³

The Catalan Atlas (map) of 1375 compiled by Abraham Cresques shows India as a peninsula⁴ and by 1400, "The Ptolemaic idea of a land-locked Indian Ocean had now been abandoned and the journeyings of Nicolo Conti had filled in many of the details of the map of Asia. But cartographers were still influenced by the earlier travels of Marco Polo, who had much overestimated the length of his journey to the palace of the Great Khan".⁵ In Europe under Prince Henry the Navigator, in the first half of the fifteenth century, the Portuguese began their exploration work and a determined search was made throughout Europe for maps, writings and details of the world. It was about the same time that similar efforts were made elsewhere and in particular in China during the Ming dynasty under Emperor Ch'eng-tsu who was on the throne from 1403-1424. Under Emperor Ch'eng-tsu some of the greatest chinese exploratory expeditions were undertaken reaching India, Arabia and Africa. A diagrammatic chart showing the north-western Indian Ocean with the west coast of India at the top and the southern coast of Arabia at the bottom was made as a result of Cheng Ho's voyages to India and Hormuz in the 15th century.⁶

The world map of Henricus Martellus Germanus in his *Insularium illustratum*, Florence c. 1489 has place names along the north and west coasts of Africa which abruptly end just before the Southern Cape. In contrast the east coast is devoid of any placenames.⁷ Juan de la Cosa, a contemporary of Christopher Columbus, produced an illustrated world map in 1500⁸ and the Cantino world map, Portuguese, c. 1502 was the first to record contact with India.⁹ The world map from Ptolemy's Geography, Rome Edition of 1508 and the detail therein contrasted with an

¹ #309 Wiethoff, Bodo, Introduction to Chinese History, Thames and Hudson Ltd, London, 1975 ~ p. 150

² #195 Fernandez-Armesto, Felipe (ed.), The Times Atlas of World Exploration, Times Books, London, 1991 ~ p. 22

³ #309 Wiethoff, Bodo, Introduction to Chinese History, Thames and Hudson Ltd, London, 1975 ~ p. 150

⁴ #141 Gavet-Imbert, Michele (ed.), The Guinness Book of Explorers and Exploration, Guinness Publishing Ltd, Enfield, Middlesex, 1991 ~ p. 37. [Josse Hubert] and #167 Burman, Edward, The World Before Columbus 1100-1492, W. H. Allen & Co Plc, London, 1989 ~ p. 86 opp. [Topham]

⁵ #126 Bell, Christopher, Portugal and the Quest for the Indies, Barnes & Noble, New York, 1974 ~ p. 177

⁶ #195 Fernandez-Armesto, Felipe (ed.), The Times Atlas of World Exploration, Times Books, London, 1991 ~ p. 22

⁷ #192 Axelson, Eric, Prince Henry the Navigator and the discovery of the sea route to India, vol. 127 part 2 p. 145-158, The Geographical Journal, Jun-61 ~ p. 155 opp. [British Museum Add. MS. 15760, ff. 68v-69]

⁸ #180 Roberts, Gail, Atlas of Discovery with an Introduction by Sir Francis Chichester, Bloomsbury Books, London, 1989 ~ pp. 42-3

⁹ #191 Hale, J. R., Renaissance Exploration, British Broadcasting Corporation, London, 1968 ~ p. 54

Italian map of Africa, made in the same year, showing the Portuguese route to India.¹⁰ Gerardus Mercator, world map, 1538¹¹ Mercator published the first part of his atlas in 1585. It was for this atlas that his son Rumold drew a world map dividing the world into two hemispheres. It was in effect a redrawing of the Mercator's map of 1569.¹² A cartographer from Venice, Giacomo Gastaldi, (1500-1565)¹³ produced a map of Asia on six separate sheets. One map showing south-east Asia appeared in 1561.¹⁴ A detailed world map was produced by Pedro de Lemos

¹⁰ #184 Castlereagh, Duncan, *The Great Age of Exploration*, The Reader's Digest Association Ltd, London, 1971 ~ cf. maps on pages 22 and 169

¹¹ #191 Hale, J. R., *Renaissance Exploration*, British Broadcasting Corporation, London, 1968 ~ p. 49

¹² #180 Roberts, Gail, *Atlas of Discovery with an Introduction by Sir Francis Chichester*, Bloomsbury Books, London, 1989 ~ pp. 142-3

¹³ both dates uncertain.

¹⁴ #180 Roberts, Gail, *Atlas of Discovery with an Introduction by Sir Francis Chichester*, Bloomsbury Books, London, 1989 ~ pp. 50-1