

Milestones in Atlases

Early Maps Recorded Travel

By Ruth A. Sparrow

Supplementing her article on atlases published in the October, 1937, issue of Hobbies, Ruth A. Sparrow, Librarian, this month discusses other atlases in the Museum's "Milestones of Science" collection of early and first editions in scientific fields.—Editor's Note.

● ● ● The earliest maps were undoubtedly the results of man's efforts to show to others the places he had visited and their relative positions to some given point. Jerusalem was often used as a center, and Delphi was considered the center of the universe by the Greeks. That he might more clearly describe the country, various marks, decorations, and pictures were included. We find cities designated by sketches of buildings, and the addition of a cross indicated a cathedral or other ecclesiastical activities. Contours, forests, indigenous animals, or even an allusion to some historical event are pictured. The seas are generally inhabited by whales, sea-monsters, mermaids, and other aquatic life, both real and imaginary. Sailing ships are numerous.

The Egyptians were perhaps the earliest map-makers as evidenced by murals and papyrus rolls of ancient origin. Claudius Ptolemaeus, commonly referred to as Ptolemy, was an Alexandrine of the second century after Christ. He was an outstanding astronomer, mathematician, and geographer, the most distinguished and the last of the great scholars of the Alexandrine school. His geocentric theory is set forth in the greatest astronomical work of antiquity, *Almagestum*. While entirely erroneous, it was held to be true for over fifteen hundred years until the establishment of the heliocentric theory of Copernicus. Ptolemy is scarcely less celebrated in geography. He had a great influence on geographic progress and endeavored to place it on a scientific basis.

The *Geographicae* of Ptolemy is

little more than a listing of places by latitude and longitude. It is possible that maps accompanied the early manuscripts, but no records have been found. His reckonings were founded on the assumption that the length of a degree at the equator was five hundred stadia instead of six hundred stadia. This reduced the circumference of the world some seven thousand miles. In spite of these errors Ptolemy's scientific method was correct and was used as a basis for cartographers for centuries. He also extended the unknown lands of Asia and Africa, not taking into account a vast expanse of ocean and the Western Hemisphere. These errors undoubtedly contributed greatly to Columbus' plans and led to his belief that by sailing westward across the Atlantic he would soon arrive in Asia.

The first atlas to be published bearing a definite date was a most beautiful German one, *Rudimentum Novitiorum* (Lübeck, 1475). From this book we have the first dated circular wood-cut map of the world.

The earliest edition of Ptolemy in this collection is the second Rome of 1490. There are twenty-seven maps, reprinted from the same plates as the Rome 1478 edition. Ptolemy's errors and lack of knowledge show up strongly in the world map. Northern Africa is shown in some detail, but the rest of the continent wanders vaguely to the south and east. The eastern extension of it joins with Asia somewhere beyond the Malay Peninsula, thus making an inland sea of the Indian Ocean. The Mediterranean area closely resembles it as we know

it today, though the meridians are not correct. The Scandinavian peninsula is entirely omitted and that of India scarcely indicated, while the island of Ceylon assumes vast proportions.

History was made in 1492 when Columbus "discovered" America. The fact that the Mongolians may have reached it as early as 500 A.D., and the Norsemen certainly by the year 1000, was either unknown or ignored by Columbus and his contemporaries. Even today scant recognition is made of the earlier discoveries. It was some years before America appeared on maps. This was no doubt due in part to the fact that America was believed to be part of Asia.

For years it was thought that the *Polyhistoria* (Vienna, 1520) of Solinus (c. 3d century A.D.) was the first printed map of the world to bear the name America. The discovery of a Waldseemuller map of 1507 disallowed this claim. It does not lose its importance as an atlas, however. It is one of the treasures of geographic history. This edition contains the famous double-page folding map of the world by Apianus. A translation of the inscription on it reads: "Map of the whole world according to Ptolemy, the cosmographer and the voyages of the discovery of Americus Vesputius and others prepared by Peter Apianus of Leisnig, 1520." North and South America are entirely separated by a wide strait where the Isthmus of Panama should be. On the lower part of the map is an inscription: "In the year 1497 this land with its adjacent islands was discovered by Columbus of Genoa by order of the King of Castille.—America provincia."

The 1525 edition of Ptolemy's *Geographicae* is a splendid copy. It is the fourth and last of the famous Strassburg editions and the second edition of a Ptolemy to bear the name America. It was printed from the same blocks as the edition of 1522. The

Orbis Typus Universalis is the work of Waldseemuller, master cartographer. This was not a new map but a reproduction of one from the 1513 edition with the name America added. The discovery of Columbus is described, and there are two pages containing a map of America or rather, as called at that time, the Western Ocean and Terra Nova with Islands.

Another map representing Greenland and Russia is really a map of the Eastern Hemisphere containing a portion of the American coast. The world map extends from Greenland to Madagascar and from Java to the West Indies.

The maps of the 1535 edition of Ptolemy are those used in the 1525 edition. The woodblocks for the latter were sent to Lyons and were used for the first Servetus edition. Servetus (Michael Villanovanus) edited and wrote many of the new descriptions on the backs of the maps. The edition is famous mainly due to its association with the trial and burning alive of Servetus in 1553. Alleged authorship of a statement printed on the back of the map of Palestine was one of the charges brought against him. His remarks on the soil and climate of that country were resented. Dr. Edward G. Schaubert has translated this so-called libelous description for us:

"Judea is one of the several provinces of Syria. It lies adjacent to Coelosyria and is washed in the west by the Sea of Egypt. It is watered by the Jordan river in the east. This land is called Canaan in the books of the Bible and by Josephus who follows them. It is a land abounding in various resources, fertile for raising crops, plenteously watered, exceedingly rich in frankincense, located in the middle of the world. The consequence is that it is neither chilled by too intense cold nor parched by heat. Because of this favorable climate, the Israelites or Hebrews . . . thought that it was the

land that had once been promised to their fathers, Abraham, Isaac, and Jacob, by the Deity: that is to say, a land flowing with milk and honey. . . Nevertheless, he pleased to know, dear reader, that it was with deliberate insult, or else from sheer boastfulness, that such excellence was ascribed to this land, for the very reason that the experience of merchants and those who travel abroad reveals this land to be uncultivated, arid, and destitute of all charm. Wherefore, you may declare the 'promised land' to be *land promised*, and not, according to our ordinary speech, a land of promise."

During the Middle Ages cartography was neglected, and it is mainly through the sailing directories of the seamen of the period that we have some fairly good maps. These sailing directories were called *portolanos*. They were based on the estimated bearings and distances between ports, the bearings being dependent on observations of the heavens. The *portolanos* were in use long before the compass. We are fortunate to have on loan from Grenville Kane four of these interesting charts. Dr. Edward Stevenson attributes them to Jaume Olives (c. 1550). There are four double-page maps on vellum in gold, red, and green within borders of red. The first chart shows the eastern Mediterranean, Greece with the Archipelago, and also the eastern part of Africa as far as Cyrene, and the Black Sea with Crimea. The second is of the western Mediterranean, with the north coast of Africa, Italy, Sicily, Dalmatia, the islands of Sardinia and Corsica, Eastern Spain, and the Balearic islands. The third chart is of Western Europe showing Great Britain and Ireland (England and Scotland are shown as separated by a strait), Holland, France, Spain, and part of Denmark. To the south of Iceland is an island labelled *Insula de Brazil*, but it does not seem to be con-

nected in any way with America. On the last chart is the west coast of Africa from Gibraltar to Senegambia, the Canaries, the Azores, and the Cape Verde Islands.

The last atlas of this group is that of Abrahamus Ortelius (1527-1598), a Flemish geographer. He traveled widely and had a large acquaintance with the geographers of his time. He was appointed Royal Geographer to Philip II in 1575. In 1570 Ortelius published *Theatrum Orbis Terrarum*, a collection of maps with short descriptions of various countries in Latin. It remained a standard geography for some years. It is a most delightful and colorful atlas inscribed with a variety of decoration. It is not as elaborate as the Blaeu *Grooten Atlas*,* but it is in no way lacking in interest in comparison. The maps are pictorial for the most part — small buildings indicate towns, animals rove about, and there are scenes of the life and costumes of the wilder and lesser-known peoples of the time. The map of China shows interesting pictures of wagons with sails. They had apparently reached a point when they were seeking power to make wheels turn other than by the pulling of animals. A horseless carriage was sought even in the sixteenth century. There is an interesting map of the voyages of St. Paul with inserts showing the scene of the vision at Damascus and another of his shipwreck on Malta. The new world was still thought of as "West India," as shown in a map of the East Indies with a part of America in the upper corner.

These atlases show the early progress in map-making, and with the previously described Blaeu and Homann round out an interesting collection of works in the history of this particular field of geography.

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