

17th Century Map-making

Blaeu's Atlas Proves Masterpiece

By Ruth A. Sparrow

● ● ● From the earliest time it has been man's desire to travel afar, exploring and conquering. It was only natural that in time he should wish to show his friends and relatives the direction in which he traveled, the size and shape of the land, and even to illustrate the peoples, the animals, and the vegetation of the country. Because of this, maps were drawn, sometimes on skin or parchment, sometimes on stones or walls.

The Egyptians had the earliest records of maps; many were mural, and some have been found on papyrus rolls. The Babylonians originated the division of the ecliptic into twelve signs, later into degrees. Ptolemy, who lived in the second century A.D., was not a map-maker himself. It was not until the fifteenth century that his *Geographica* was discovered, an edition of which was printed in 1475. The atlas which accompanied it was compiled from the data supplied by Ptolemy who had made the calculations but never drawn the maps. At the end of the fifteenth century, due to extensive explorations, discoveries, printing, and the productivity of Dutch cartographers, modern map-making had its beginnings.

The Blaeu family became one of the better known in the field of map-making. Willem Janson Blaeu, the founder of the firm, was born in Amsterdam in 1571. Not many of the details of his life are known, but the most important one was his visit to the Island of Hveen. The circumstances of his going are not known, but it was probably in 1594, and it was truly a significant venture. No doubt an early liking for mathematical, geographical, and astronomical studies prompted the visit.

On the Island Blaeu was brought into immediate relations with Tycho Brahe, the famous Danish astronomer. In 1576 Tycho had established his observatory at the Castle of Uraniborg. For nearly a quarter of a century this was one of the most famous centers of all Europe for the study of astronomical science and its practical application. There is little information regarding Blaeu's stay, but he appears to have spent two years there studying and constructing mathematical instruments. Here he received a real foundation in scientific knowledge, particularly in astronomy and geography. There is reason to believe that a number of the instruments used by Tycho were the work of Blaeu, and Tycho's observations in turn were the basis of Kepler's calculations.

After about two years on Hveen, Blaeu returned to Amsterdam and established himself in the business that made him one of the most distinguished map and globe-makers of the seventeenth century. In 1633 he became the map-maker of the states-general. Blaeu died in 1638 and was succeeded by his son Jan and his grandson Cornelius. Before 1665 the firm had published about four hundred maps, most of them in folio atlas form, with editions in Dutch, Flemish, Latin, French, German, and Spanish. They were highly decorative in design and color.

The *Grooten Atlas* now on display at the Buffalo Museum of Science was published in nine volumes. Maps of all countries and lands are included. This edition (1634-1665) was commenced during the lifetime of the founder of the House and was continued under the direction of his successors. The Atlas is unexcelled for

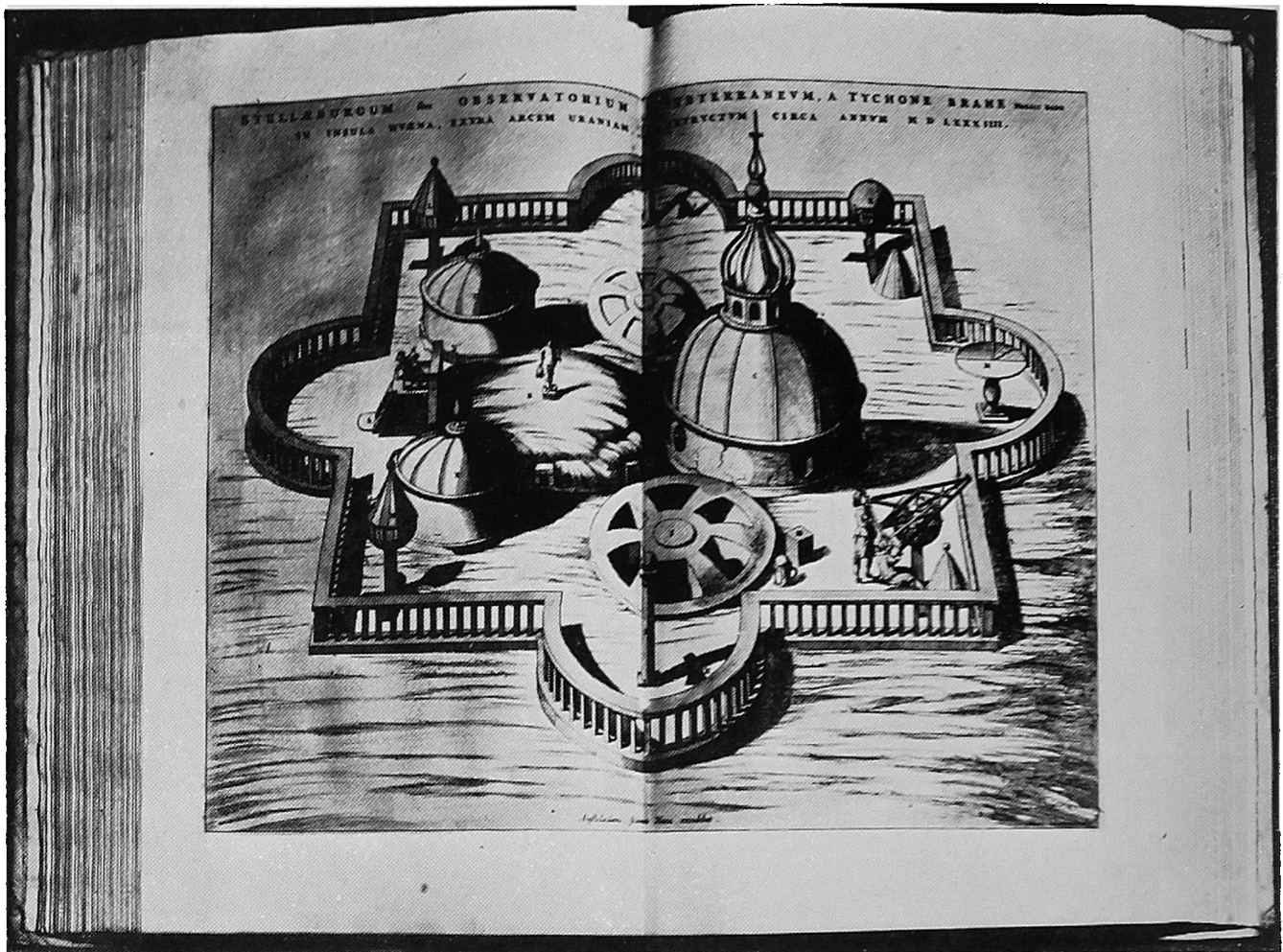


Photo by Simmons

Tycho Brahe's Observatory through Blaeu's eyes.

beauty and workmanship, and the maps fairly represent the extent of the geographical knowledge attained at the time of their engraving.

The first volume has a general title-page, the remainder only volume title-pages. It contains a very complete system of geography and topography according to the knowledge of the period, together with a great number of maps and plates. The early chapters are devoted to the Heavenly Bodies, the Four Circles, the Equinoxial Circle, the Zodiac, the Meridians, the Horizon, the Four Small Circles, the Zones, the Climates.

The maps are by various cartographers and are beautifully engraved and ornamented with views, coats of arms, groups of allegorical figures, men and women in the dress of the time, and many other subjects illustrating the historical description of the country. All the towns are spotted, not by a mere dot, but by the outline of a

building. The cities are denoted by a large building in red. Cathedrals, churches, and schools have special symbols, and these are added to the buildings of the towns or villages.

The large double-page map of the world has elaborate borders. The top one depicts the seven planets, and the lower one the four seasons. The map itself is adorned with sea monsters and other ornaments. On this map there are many blank spots—the western coast of North America above Lower California and west of the Rockies, eastern Australia, the Arctic and the Antarctic, eastern Siberia, and many islands of the Pacific.

In this same volume there is one of the most important and interesting features of the Atlas—a set of plates illustrating the astronomical observatory and instruments of Tycho Brahe. There are many pages of text to accompany the illustrations. There is a topographic map of the Island of

Hveen, a plan of the castle grounds, a vertical section of the main building, and the floor plan. Then there is a series of plates illustrating the various astronomical instruments—sextants for altitude and distance, several armillaries, Ptolemy's and Brahe's parallactic instruments, a large steel quadrant, and a revolving azimuth quadrant. There is also a floor and ground plan of the underground observatory on the Island. These pictures were apparently copied from Tycho Brahe's own book, *Astronomiae Instaurate Mechanica*, published in 1598 and also on display at the Museum.

Another section which is of special interest is the Western Hemisphere, particularly what is now the eastern coast of the United States. The map of the two continents was new, having just been published for the first time. The western coast has been filled in, though it stretches vaguely in the direction of Alaska, which had not yet made the news. This map of America (*America Nova Tabula*) has a top border containing "views" of nine American cities—Havana, St. Domingo, Cartagena, Mexico, Cusco, Potosi, I. La Mocha in Chili, Rio Ianeiro, Olinda in Pharnambucco. On the side borders there are representations of natives in costume and without, from Groenlandi, Virginiani, Nova Albionis (New England), Mexicani, Peruviani, Braziliani, Brasiliani Milites, Insulani de la Mocha in Chili, and Freti Magellanici accole.

The map of New Netherlands and New England is a most interesting one. It seems to be earlier than some of the others covering eastern North America. In the sea are several ships in full sail; a one-man, two-men, and five-men Indian canoes are being paddled offshore. On land are bears, birds, beavers, wolves, deer, and a turkey. There are two Indian village groups within stockades. Many familiar names appear on this map—Tad-

ousac; Quebec; Cape Cod; Nieu Plemonth (New Plymouth); Manatthans (New York); Fort Orange (Albany); Zuyder Zee (Buzzards Bay); Capes May, Henry, and Charles; and the Rivière Quinebeque (Kennebec River). The map is badly distorted in the region of the St. Lawrence, but the remainder has a fairly recognizable coast line. Beyond (inland) Quebec there is a fork in the St. Lawrence to the south. It is unnamed and has its source in "Lac Iroconeisensis." Its latitude is 43° - 44° North and 308° East. This brings it in eastern New York, and it is probable that the river is the Richelieu and the lake is Champlain. There is no source shown for the St. Lawrence, though the Falls of Niagara and Lake Ontario were known at the time and have been noted on other maps of the period. There is no doubt that Blaeu's maps are a thing of beauty, but one must sometimes doubt their accuracy.

It is quite impossible to cover all the interesting points in the nine volumes. Blaeu's maps are among the finest ever published, and it is a delight to study them. All are adorned in magnificent colors with heraldic coats of arms, and the title-pieces and scales of miles are enclosed within beautiful scroll work and are further embellished with large figures in the costume of the period or with native animals. The seas are decorated with sea monsters, a whaling scene off the coast of Spitzbergen, compass roses, and ships in full sail. Off the coast of Malta there is a thrilling battle between Venetian galleys and galleons. Frequently battle scenes are depicted. Tranquil lateens ply the Mediterranean; elephants, ostriches, lions, and monkeys roam the plains and jungles of Africa; a small group of pyramids snuggle close to the Nile. Modern pictorial maps for the most part seem inferior when compared with this gorgeous display of artistry.