EXAMPLES OF MAPS
BEFORE 1878

The twelve map extracts of sheet I.3.1 only partly illustrate important features of cartography in Belgium. The examples chosen indicate several methods of map production at different periods so that they also show the evolution of mapping techniques in this country. They equally show the landscapes of the period and particularly well illustrate the geographical contrasts of town and country. Plates 2, 3, 4, 5, 6, 8, 10 and 12 are from the *Bibliothèque royale Albert Ier* (Maps and Plans section), 1 and 9 from the *Institut géographique national* (National Geographical Institute), 7 from the Dutch topographical service in Delft and 11 from the *Crédit communal de Belgique.*

At the time of the Renaissance, the main centres of cartographic activity in western Europe were to be found in Germany (*sensu lato*) and in Italy. At the beginning of the sixteenth century a move began towards the north-west so that by the end of the century the principal cartographic centres were in the southern Low Countries. During this time, dominated at first by the Louvain professor Gemma Frisius (1508-1555), pride of place in our cartography must surely go to the celebrated Gerhard Mercator (1512-1594). He was interested in the major geographical explorations and applied himself particularly to the production of atlas maps. Mercator is equally well represented by regional maps and *plate 1* is a 1 : 200 000 reduction of parts of his well known map of Flanders « *Exactissima Flandriae descriptio* » published in 1540 at an original scale of about 1 : 180 000. This map, engraved by Mercator, could have been surveyed by Jacob van Deventer (c. 1500-1575).

Van Deventer's map of the Duchy of Brabant had previously appeared in 1536 and the 1571 edition *(plate 2)* is a reduction to about 1 : 180 000 scale made by Abraham Ortelius, cartographer and map editor, who lived from 1527 to 1598. This map formed part of his « *Theatrum Orbis Terrarum* » or « *Theatre, oft Toonneel des Aertbodems* ». In many ways this map strongly resembles the preceding extract. The map shows only the planimetric detail of the main agglomerations, rivers, canals and woods. Jacob van Deventer is known above all for his plans of many of the towns of the Low Countries (both north and south) which were surveyed by order of Philip II.

In the course of the seventeenth century the centre of scientific and commercial cartography of western Europe was displaced further north : from Louvain to Leiden and from Antwerp to Amsterdam. Commercial cartographic production reached a culminating point in the northern Low Countries with the work of Blaeu, Hondius and Janssonius. Scientific cartography, particularly geodesy, reached a high standard as shown by the pioneer work of Willebrord Snellius (1580-1626), professor of Mathematics at Leiden. At the same time, ground survey was improving in regional mapping, as can be seen in *plate 3* by M.F. van Langren (c. 1600-1675) taken from the Atlas by W.J. Blaeu of 1635. This example illustrates not only the close relations which existed between the Northern and the Southern Low Countries, but equally the precise cartographic representation of urban areas, e.g. Brussels and Vilvoorde.

During the period 1706-1712 a map of Belgian territory in 24 sheets was published by the Brussels editor Eugène Henri Fricx (c. 1670-c. 1730). This map, relatively detailed, at a scale of approximately 1 : 135 000, was recognized as a great success so that it was continued in re-issues by Crépy in 1743 *(plate 4)* and by G. Fricx between 1745 and 1747.

In the middle of the eighteenth century the survey method of triangulation had been readily applied in Germany, and above all in France, where the Cassini's had adopted the Snellius method for systematically surveying the whole country during the period 1744-1789 at the scale of 1 : 86 400. It was during this period and in liaison with French cartographers, that a map of the Austrian Low Countries was surveyed under the direction of Count Joseph de Ferraris (1726-1814). This first systematic topographic map of Belgium was at the large scale of 1 : 11 500 (1771-1778) of which there were three manuscript examples, one of which is preserved at the *Bibliothèque royale Albert Ier (plate 6).* An offset reproduction was published by the *Crédit communal de Belgique (plate 11).*

In 1777-1778, Ferraris published also a series of maps of our countries at the scale 1 : 86 400. On the maps engraved by L.A. Dupuis *(plate 5)* relief is represented for the first time by hachures. These were not, however, the systematic hachuring used later in France in topographic mapping.

A new base map of Belgian territory at the scale of 1 : 25 000 was started under the Dutch regime : it was based on a triangulation scheme linked in the south to that of France and in the north to the northern Low Countries network. The area adjacent to the French frontier was mapped from 1816 and work continued progressively to the north. The creation of an independent Belgium brought a premature end to the cartographic activity of the *Militaire Verkenningen* with the result that the map remained as a definitive one for only a small part of the country, chiefly to the south (57 sheets in manuscript). *Plate 7* well illustrates the detail of both the planimetry and the relief mapping, for which Van Gorkum's method of hachures had been employed. These were based on the method of relief mapping devised by J.G. Lehmann (1765-1811). This method of topographic mapping was continued after 1830 in the Netherlands : it resulted in the first official topographic base map of this country.

In the meantime, Philippe Vandermaelen (1795-1869) had been actively engaged in cartography and some 15 years after the foundation of his *Etablissement Géographique de Bruxelles* in 1830, his topographic maps at the scale of 1 : 20 000 were well under way. The 250 sheets covering the entire territory of Belgium were published in less than 10 years. They were engraved on lithographic stone and are in monochrome *(plate 8)* : relief is represented by hachures but not in a systematic manner. Although subsequent to those of the *Militaire Verkenningen* and at a larger scale, these sheets were less detailed in both planimetry and height representation.

The first official mapping of Belgium must be attributed to the *Dépôt de la Guerre.* It was based on a new triangulation and a levelling network started respectively in 1839 and 1851. The first sheet at a scale of 1 : 20 000 came off the press in 1866 and the last one 15 years later (multicolour lithography, *plate 9*). As with the topographic maps of France of this time the Belgian maps were based on the Bonne's equalarea conical projection. Field survey was undertaken by plane table and clinometer. For the first time relief was represented by contours and these displaced the « plastic relief » which had been found on all older maps. The *Dépôt de la Guerre* also published in 1874 a map of communications at the scale of 1 : 160 000 in four sheets *(plate 10).*

Very few maps at a scale of 1 : 10 000 or larger have been published. One exception are the plans in the *Cadastral Atlas of Belgium* by P.C. Popp. Former controller of the Cadastral Office, he arranged for the publication of cadastral plans of about 1 800 communes of the 2 566 which make up Belgium. Produced at first in monochrome lithography at the scale of 1 : 7 500 the edition changed to the scale of 1 : 5 000 for later maps *(plate 12).* Cadastral plans in Belgium, as in neighbouring countries, date from the start of the nineteenth century.