

**GROUNDBREAKERS**  
REMARKABLE MAPS  
FROM THE LOW COUNTRIES,  
1500-1900



ANNE-RIEKE VAN SCHAİK

# GROUND BREAKERS

REMARKABLE MAPS  
FROM THE LOW COUNTRIES,  
1500-1900

HANNIBAL

# TABLE OF CONTENTS

	<b>FOREWORD</b>	6
	<b>INTRODUCTION</b>	10
<b>I</b>	<b>THE ART OF SURVEYING</b> FROM LOCAL TO NATIONAL	24
<b>II</b>	<b>THE MANY FACES OF A CITY</b> ANTWERP AND THE URBAN CULTURE OF THE SOUTHERN NETHERLANDS	46
<b>III</b>	<b>NEWS IN ABUNDANCE</b> NAVIGATING THE MEDIA LANDSCAPE IN THE SEVENTEENTH CENTURY	86
<b>IV</b>	<b>FRESH OFF THE PRESS</b> CARTOGRAPHIC UPDATES FOR THE BATTLE ON THE SCHELDT (1630s)	104
<b>V</b>	<b>UNITY AND DIVISION</b> THE <i>LEO BELGICUS</i> IN THE NORTHERN AND SOUTHERN NETHERLANDS	120

VI

**THROUGH OTHERS' EYES**  
ITALIANS IN THE SOUTHERN NETHERLANDS

146

VII

**FROM COURSE TO MAP**  
PILOT GUIDES AND SEA CHARTS  
ON BOARD AND ASHORE

166

VIII

**TERRA INCOGNITA?**  
NEW OCEANS,  
NEW WORLDS

194

IX

**WORLDS OF DIFFERENCE**  
MAPS OF THE ANCIENT, MEDIEVAL  
AND MODERN WORLD

240

X

**BIG, BIGGER, BIGGEST**  
WORLD ATLASES AND THE CREATION  
OF THE *ATLAS MAIOR*

264

XI

**MOVING HEAVEN AND EARTH**  
SCIENCE, INSTRUMENTS  
AND THE COSMOS

284

**INDEX OF NAMES** 300 **ACKNOWLEDGEMENTS** 302 **ABOUT THE AUTHOR** 303 **COLOPHON** 304

## FOREWORD

### Antipodeans

In his *Commentary on the Dream of Scipio*, the fifth-century philosopher Macrobius riffed on Cicero's telling of the *Somnium Scipionum*, the eponymous dreamer being the celebrated Roman general Scipio Aemilianus. This hugely influential contemplative treatise explained the celestial spheres and the inaudible yet cosmic music they make. He rounded off with a description of the world, one that was spherical, not flat, and consisted of northern and southern zones. The two halves were, however, tragically destined never to meet because of the torrid zone that separated them.

Macrobius's *Commentary* became an instant classic, assiduously copied and studied in many a medieval monastery. The invention of the printing press allowed the text to be disseminated more widely, with educational diagrams added to what had become a treatise for the more advanced reader. Best of all, though, was the map of that wondrous world, in which Antipodeans dwelt somewhere 'down under'.

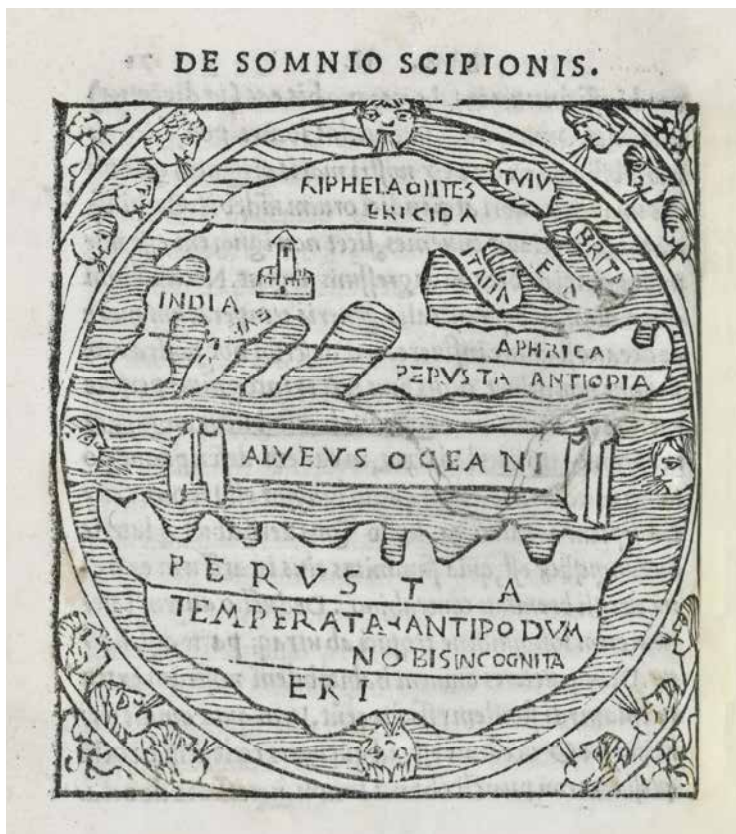
It might seem quaint to us, but a thousand years from now, someone might well think the same of our Google Maps. Because, as Abraham Ortelius (1527-1598) already realized as he compiled the first atlas of the world a millennium after Macrobius, show me your map and I'll tell you who you are. It is no coincidence that he gave his book the title *Theatrum Orbis Terrarum* – 'The Theatre of the World'. Because just as there is nothing objective about theatre, so too land maps, sea charts, globes and city views might appear neutral and factual, but mapmakers view the world through their own lens just as much as a modern documentary maker does. What do you show? And, in some cases more importantly, what don't you show? Where do you place borders and orientation points? And which 'centres' do you put at the centre? Is Jerusalem the centre of the world? Europe? Cartographers don't reproduce; they *construct*. A map does not show *the* image but merely *an* image of the world. Viewed this way, a map – any map, in fact – is a gateway into the knowledge and technology, norms and values, matters of wealth and power, and religious beliefs (or their decline) of the era in which it was made. A gateway, in short, into the world itself. Which is precisely what this book is all about.

### More than a thousand words

We tend to believe that everything was more straightforward in the past: God created the universe with the earth bang in the middle. He was not the type to think 'that'll do more or less for the centre'. Although Macrobius's fans were better informed, as far as most medieval people were concerned, the earth was flat and had edges, a *finis terrae* you would fall off if you didn't take care. And that, of course, is where it all began: if you don't want to fall off the edge of the world, you're going to need a map.

Medieval mariners hugged the coast because you really didn't want to meet the kind of things that lurked further out to sea. The more they voyaged, the better they recorded the crinkly coastlines of Europe in what became known as 'portolan' charts – hand-drawn sea charts that allowed you to travel the known world.

Those same outlines, of course, contained the land on the other side. The land on which the Romans (where would we be without them?) built a network of roads, all of which conveniently led to Rome. Things could hardly get better. And they didn't, in fact, because before you knew it, the Roman Empire suffered its decline and fall, taking with it that centralized vision of the world. Stories of Rome were all very impressive but by then long ago and also far away. A feudal lord in the year 1000 or so had no interest as yet in an *Autoroute du Soleil* to get him to his Mediterranean holiday faster. He wanted to know precisely which territory fell under his control; where the rivers, plateaus and mountains were; which land belonged to God via his agent, the Church (not too much); and which belonged to himself (as much as possible). A vast, unbounded landscape was gradually hemmed in by boundary posts specifying jurisdiction. Medieval people turned out to be extremely clever lawyers: they developed an entire legal system focused on land ownership and its precise definition. A host of surveyors and notaries swiftly emerged, ready and willing to move patiently from one post and one goose to the next, capturing the entire landscape in deeds of land ownership. A picture, as we all know, says more than a thousand words, so it is actually slightly surprising that it was not until the fourteenth century that someone first came up with the idea of mapping the land.



Which brings us to our starting point. While surveyors and notaries were measuring up and describing the terrain, painters began to produce *vues de lieu*, panoramic sketches of the terrain made from a nearby elevation. Back in the studio, these were drawn out more neatly and incorporated in maps. None of which might seem all that special to us now, but at the time it was revolutionary. The new cartography was born.

## Manhattan on the Scheldt

Cartography naturally boomed in the late-medieval Low Countries, simply because everything was booming there. By around 1570, trade via the river Scheldt meant that Antwerp had become the wealthiest city in the known world, the sixteenth-century equivalent to Manhattan, courtesy of the cosmopolitan entrepreneurs who flocked there. Besides Dutch, you would hear more exotic languages in the street, such as Spanish, Portuguese, English, German, Italian and Yiddish. The place smelled of dung and filth, because that's just how it was in medieval cities. But in Antwerp the stench was offset by the wondrous scents of pepper and cinnamon, while mariners told tales of the vast horizon and what lay beyond. The celebrated printer Christophe Plantin had good reason for swapping Paris for Antwerp and becoming Christoffel Plantijn. Meanwhile, book printing was taking off, and the city by the Scheldt was becoming a centre for the dissemination of knowledge too: the place to go for any treatise on the New and the Old World alike. Painters worked furiously, producing for the open market for the first time in Western history rather than working strictly to commission. There was no resisting all these thrilling discoveries and novelties, which forced even the stuffiest of theologians into a U-turn: a wider world they had once fulminated against as the Devil's playground now became God's gift to humanity, in which everything under the sun was worthy of study. *Terra incognita* was no longer out of sight, out of mind and best left to the monsters; the world was steadily revealing all its facets at this bustling intersection of commerce, entrepreneurship, nascent science, technology and religion. And that included maps.



**Anonymous master**  
*Portrait of Four Surveyors with Abbot Antoon De Loose of the St Saviour Abbey in Ename, 1658*  
Oil on paper, 45.5 × 32.5 cm  
ANTWERP, THE PHOEBUS FOUNDATION

To measure is to know and *Ordnung muss sein*, a need for order that was swiftly applied to the very universe itself, giving rise to the discipline of cosmography. This views the earth as, well, some kind of cosmic given that has circles of latitude (albeit not meridians as yet) to show you where you are in the world and hence in the universe. Geographers then set about mapping that world, ideally in the wake of expeditions and exploration. Not to mention our old friend the surveyor, who could enthusiastically apply Euclid's art of triangulation to the world around him. We refer to this as chorography, which might have been good news for notaries but was not something to make an art historian's heart beat any faster. Happily for us, the step towards topography followed quickly. The topographer did, at least, show us what there was to see: plains and valleys, inaccessible forests, hard-to-reach heights and featureless plains were all flattened out, coloured in and/or encoded as lines. Towns show up in that landscape as oases and places to rest after a long journey. Each was different, with rivers, towers, ramparts and windmills. The silhouette of a town was its portrait.

With Antwerp as their base, Europeans drew a picture of the world with the combination of creativity and hard-headedness typical of the entrepreneur. It took a series of religious wars, the violent persecution of Protestants and the exodus of pretty much everyone with a brain, money or both to Amsterdam for that city to pick up the baton in the seventeenth century and for a new Antwerp to be born.

## From meadow to universe

The Phoebus Foundation has an impressive collection of world maps, globes, atlases, measuring instruments and city views. From medieval 'T-O maps' centred on Jerusalem and the first, tentative images of 'The New and Unknown World' (*De nieuwe en onbekende weerd*) to the bustling roadstead of Antwerp and New Amsterdam, the collection tells the history of the world's land and water in words and images.

To the historian Anne-Rieke van Schaik, a map is all this and more. She is fascinated by the different ways in which a map can be read and by the debates that the medium triggers. Anne-Rieke has further honed this expertise as a member of the Explokart research group affiliated with the Allard Pierson and the University of Amsterdam and is currently preparing a thesis on narrative cartography in the early modern Low Countries.

Between November 2021 and February 2022, Anne-Rieke van Schaik was The Phoebus Foundation's first Research Fellow, focusing on our Topography and Cartography sub-collection. Besides preparing a scholarly inventory of these holdings, she also pursued the stories behind the objects. The result is this book, in which Anne-Rieke places this facet of the Phoebus collection firmly on the map for the first time. With the greatest of ease, she zooms in and out from meadow to universe, drawing in the brightest stars in the cartographic firmament such as Mercator and Blaeu without overlooking unsung heroes like our worthy surveyor. Together, they literally and figuratively pushed the frontiers.

*Groundbreakers* takes you on a global journey through time and space. Navigation is not by GPS, although the maps created by the leading players in this book unquestionably laid the foundations for that technological *tour de force*. So while you might not be able to view our planet with quite the awestruck gaze of the first cartographers, you will never look at Google Maps in the same way again after reading *Groundbreakers*.

I wish you an immensely pleasurable read.

Dr Katharina Van Cauteren

Chief of Staff of The Phoebus Foundation Chancellery  
Executive Director of The Phoebus Foundation Public Benefit Foundation |  
Stichting van Openbaar Nut



## INTRODUCTION

A vast number of maps from the Low Countries are worthy of study, and there are endless different ways in which the history of cartography in the region might be written. We could, for instance, describe the techniques and methods used to produce maps; recount the lives and times of important surveyors, cartographers, engravers and publishers; or zoom in on the most widespread maps, atlases, globes, instruments, city views and panoramas. We could also take the opposite approach and actively seek out the rarest and most obscure objects. While studying the maps, we could examine the correctness of their content, how accurately they represent the area in question, but we could also consider how certain elements can impose a particular idea on viewers, how they criticise society and guide and manipulate viewers.

I do a little of all these things in this book, based on The Phoebus Foundation's collection of maps, and with several questions in mind: what narratives does the map convey about a location, a country or the world? How does a map shape our picture of reality? What stories does a map *not* tell? My choices are drawn from the Antwerp-based collection and consist of objects that reflect that specific ensemble, bearing in mind that this too is merely a selection and one, moreover, that is personally coloured. Having completed my fellowship at The Phoebus Foundation, I embarked on a doctoral research project into 'story maps' (maps combining narrative and spatial information) from the early modern Low Countries – an interest that resonates in the texts and maps contained in this book.

The selected material dates from roughly the sixteenth to the nineteenth centuries, although the time span of 1500-1900 ought to be taken broadly, since the oldest object is an edition of Ptolemy's 1486 *Cosmographia*, while the most recent is drawn from the archives of Wim Strecker, which contain items up to around 1960. The focus, however, is on the early modern era, when cartography gained a foothold in the Low Countries: a great many, relatively innovative maps were produced in the region – in Flanders and Holland particularly – in that period. The eleven chapters discuss famous highlights, such as Joan Blaeu's *Atlas Maior*, as well as rare, anonymous works. They include both classic geographical maps and topographical city views, while addressing themes such as water management, the Eighty Years War and the struggle for Belgian independence. From an early, unfamiliar view of Antwerp to a monumental wall map several metres high, each document offers a glimpse into how people sought to grasp the complex world around them. The nineteenth century is given somewhat less attention than it deserves, but this too reflects the fact that the collection features more material from the early modern period (1500-1800) than it does from the modern (1800-2000).

There are three pillars to this book, beginning with an object-oriented approach: The Phoebus Foundation's collection was the point of departure when it came to writing the chapters. A second pillar comprises the attempt to show how the Southern and the Northern Netherlands (roughly modern-day Belgium and the Netherlands, respectively) came to be intertwined in the map business. The book highlights the role that mapmakers and other professionals from the Southern Netherlands played in the history of cartography, from Gerard Mercator and Abraham Ortelius to the many anonymous cartographers and surveyors. However, it also situates this cartographic cradle in the broader historical context of the Low Countries, Europe and the world. What we present here, thirdly, is less a chronological than a kaleidoscopic view of the collection and of the history of early maps. Eleven themes are addressed, each exploring a particular view or facet of cartography in terms of its production, content, appearance, style or use. Topics such as surveying, science, navigation, news, and politics form different angles from which to highlight the diversity of The Phoebus Foundation's collection, while also painting a richly nuanced picture of the history of its objects.

Several artefacts drawn from outside the Topography and Cartography subcollection are also incorporated at various places in the text, including paintings and prints by old masters as well as old books, almost all of which likewise belong to The Phoebus Foundation's collection. Because far from being isolated, standalone objects, maps firmly reflect the cultural, intellectual and artistic context of their times. The heyday of Southern Netherlandish cartography coincided with that of Flemish art in the sixteenth and seventeenth centuries. Economic interests, political developments and artistic trends all helped shape the production and consumption of maps.

In the course of writing this book, I made grateful use of the substantial secondary literature available on the various topics. A concise list of key publications can be found at the end of each chapter, along with suggestions for readers wishing to delve into a topic in greater depth. Existing studies thus formed the basis for interpreting the objects from The Phoebus Foundation and situating them within the history of cartography. But there are fresh insights and findings here too, sparked by the unique characteristics of the objects or where my personal enthusiasm led me to carry out additional research. Examples include the unfinished manuscript military map for Louis XIV (→→ pp. 164-165) and the links between the narrative maps of Claes Jansz. Visscher and Pieter Verbiest II in Chapter IV. It is to be hoped, therefore, that this publication might also inspire future researchers to carry out further in-depth research on the objects. Since the book itself is not arranged chronologically, a summary now follows of some of the key figures, works and aspects in the history of cartography. This short history will help readers to place the names and concepts raised in the themed chapters within the context of their time and the evolution of cartography.



Attributed to Adriaan Villegas  
*Chaerte figuratyve vande rechten gheleghentheyte vande Vlaemse zeekosten*, after 1640  
Manuscript map of the North Sea coast  
Pen in brown ink on paper, 485 × 1775 mm  
ANTWERP, THE PHOEBUS FOUNDATION



## A BRIEF HISTORY OF CARTOGRAPHY IN THE LOW COUNTRIES

The span of this book begins as far back as antiquity when, in Alexandria around the year 100 CE, Claudius Ptolemy penned a treatise on how to draw maps, to which he appended a lengthy list of the longitudes and latitudes of some eight thousand locations worldwide. His text was one of the principal sources on which maps of the world would be based for centuries to come, right through to medieval and early modern times. Countless scholars in the Renaissance revised and commented on the classical geographer's standard work, each eager to have their say on what was known about the world, combining the ancient texts with the new knowledge and measurement methods being developed at the time. The Ptolemaic picture of the world persisted as late as the eighteenth century, although in the meantime locations had been surveyed in person, more parts of the world were known, and distances had been measured more accurately.

So when did mapping begin in the Southern Netherlands? It is hard to say, not least because we immediately encounter the problem of how precisely to define a map. In the broadest sense, a map is a visual representation of geographic objects and the spatial relationships between them. But not one by any means that has to be based on precise measurements or calculations. The criteria to be met by a map depend on its function, the mode of production, the knowledge and skills of its intended users, and the political or social interests at play.

The earliest maps often served an administrative purpose: from time immemorial, there has been a need to record the ownership of land in order to avoid disputes. Local surveyors measured the terrain and drew or painted a large-scale map (one in which the depicted objects are represented relatively big). This allowed landowners to tax properties, settle disputes or draw up building plans. The rapid growth of towns and fortifications lent fresh impetus to these practices, as did the need to manage water or drain land for farming. The landscape of the Low Countries was constantly changing in the Middle Ages and the early modern period, and maps likewise needed to be updated regularly. Maps in The Phoebus Foundation's collection showing the Waasland area and other polders on the left bank of the river Scheldt recall this history of water management, while offering a special insight into regional cartography. One exceptionally detailed

large-format manuscript map shows the North Sea coast from Grevelingen to Biervliet (→→ pp. 12-13). Attributed to Adriaan Villegas (1594-1669), it has been dated to shortly after 1640. This 'figurative map' (one that depicts an area in a visual, picturesque way) can be read as an expression of patriotic awareness and might have been linked to the Peace of Münster, which brought an end to the Eighty Years War (1568-1648). That conflict, in which the Low Countries sought to extricate themselves from Spanish-Habsburg rule, is one of the main threads running through this book. In the course of the war – from which only the Northern Netherlands would emerge independent – the various conflicts fought out locally and further afield fuelled demand for maps, which could in turn trigger further political tensions.

A revived interest in and translation of classical texts, the development of triangulation, a newly empirical approach to science, voyages of exploration, the invention of the printing press, commerce, and nascent capitalism all contributed to the growth and flourishing of cartography in the Southern Netherlands in the sixteenth century. Comprehensive world maps, useful sea charts, lavishly illustrated city maps, informative news maps, giant globes, and precise instruments were widely produced and distributed.

The result was a fruitful interaction between commercial cartography on the one hand, and scientific, mathematical and astronomical advances on the other. Measuring the terrain was not enough in itself to map the world: to fully comprehend the earth, knowledge of the universe was needed too. The epicentre of geographic, cosmographic and astronomic learning in the sixteenth century was Leuven (Louvain), where scholars from the region and further afield came together to exchange ideas at the university. An important factor was the printing press, which was (re)invented in Mainz around 1450 and swiftly spread from German cities to centres all over Western Europe. Scientific knowledge thus found its way readily to the Low Countries in the form of printed texts (and images).

Several illustrious figures were active at Leuven university, including the mathematician and cosmographer Gemma Frisius, who made his name setting out and developing the (by then centuries-old) principles of triangulation in a printed treatise. He was tutor to Jacob van Deventer, among others, who toured the Low Countries in the service of the government to map the regions and then the towns, doing so by means of triangulation. Frisius also made globes and other instruments in Leuven and trained Gerard Mercator, who focused on methods for calculating longitude and latitude and projecting the spherical shape of the earth onto a flat surface. This resulted in his monumental map of the world, in which he applied cylindrical projection – better known as the Mercator projection – which is still the best-known Western method for depicting the earth.

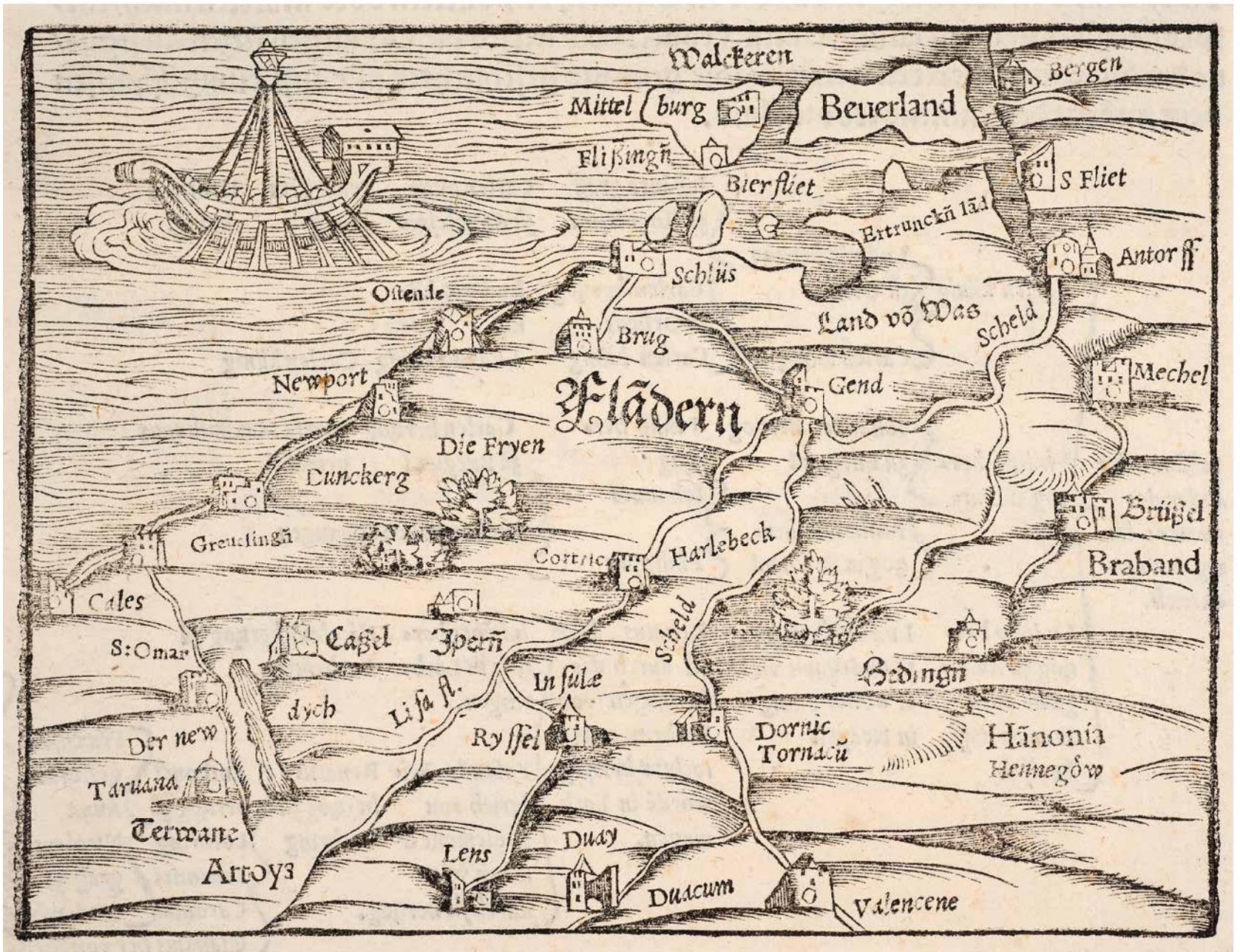
The work carried out by Van Deventer and Mercator was not necessarily intended for lay people, but the invention of the printing press nevertheless allowed cartography to be disseminated to a wider audience. Maps were included in books, with one of the earliest maps of Flanders in The Phoebus Foundation's collection (→ p. 16) appearing in Sebastian Münster's description of the world, the *Cosmographia Universalis* (first edition Basel, 1544). While the map is not especially detailed nor accurate, it does emphasise the strong communication links in the area, with the major towns, identifiable by a castle, connected by rivers and canals. Other early maps in the collection include woodcuts, such as the *mappae mundi* – medieval maps of the world – made for hefty volumes on world history.

When woodcuts gave way to copper engravings in the sixteenth and seventeenth centuries, maps began to sell well too. They could now reach a wider audience. While the scholars of Leuven racked their brains over the mathematics underpinning the science of geography, publishers in Antwerp were making serious money through the sale of commercial maps and atlases. Bruges had been an important trading hub earlier, but by the sixteenth century it found itself eclipsed by Antwerp, where a substantial trade had grown up in all sorts of goods, including books, maps and prints.

The multinational publisher Christophe Plantin produced books, prints and also maps for a large international readership, while the collector, map illuminator and future mapmaker Abraham Ortelius had settled in Antwerp too. Plantin and Ortelius – each an excellent networker with a fine nose for business – did not take long to find one another. Ortelius would have the distinction of publishing the first modern world atlas in 1570, of which Plantin printed several editions. The maps were engraved by Frans Hogenberg from Mechelen, who ran a workshop and business of his own in Cologne, from where he published news prints on the Eighty Years War. Hogenberg also co-produced a world city atlas – the *Civitates Orbis Terrarum* (Cologne, volume one: 1572) – with Georg Braun, which drew on examples like the Italian Lodovico Guicciardini's city atlas focusing on the Low Countries, which was enjoying immense success.

The capture of Antwerp by Spanish Habsburg forces in 1585 was a tipping point in the development of cartography in the Southern Netherlands. Many of the mapmakers and publishers previously active in the city now fled to the more tolerant North. The centre of the map market shifted from Antwerp to Amsterdam, and numerous scholars relocated from Leuven to Leiden. Among others, Petrus Plancius, Pieter van den Keere, Cornelis Claesz. and Jodocus Hondius I made the transition. The Dutch East India Company (VOC) and West India Company (WIC), the new Republic's large-scale trading ventures, generated increasing wealth, mostly acquired from the colonies, for their investors.

Petrus Plancius became a regular cartographer for the VOC and studied the shipping routes to the East Indies. He built on Mercator's work but also incorporated information from Portuguese and Spanish sources. The Antwerp-born WIC governor Johannes De Laet contributed to knowledge of the Americas, even though he never set foot there. The seafarer Jacob le Maire, also from Antwerp, on the other hand, completed a major voyage around the world, in the course of which he identified a previously unknown passage to the Pacific Ocean. For centuries afterwards, his route was given pride of place on globes and maps. Various Walloons also sought their fortune in the New Netherlands colony on the other side of the Atlantic.



Sebastian Münster  
 Fla[n]dern, 1550 or after  
 Woodcut map of Flanders  
 Woodcut, 125 × 160 mm  
 ANTWERP, THE PHOEBUS FOUNDATION

These overseas adventures were, however, anything but altruistic. Both the mariners themselves and their promoters back home had just one thing in mind: to make money and become lords and masters of the new territories. Voyages of ‘discovery’ and colonization were inextricably linked with violence, oppression and enslavement. Cartography too was thoroughly implicated in all this, since maps either arose in the colonial context or were a means of pursuing such practices at sea.

The melting pot of the previously mentioned southern mapmakers (such as Petrus Plancius and Jodocus Hondius), northern ones (such as Johannes Janssonius, Lucas Jansz. Waghenauer and the Blaeu family), together with other visitors from abroad, brought about the apogee of cartography in the Low Countries, in terms of both quantity and quality. Despite all this activity by southerners in the Dutch Republic or on the other side of the world, things had not fallen entirely silent in the Southern Netherlands themselves. There were some, for instance, who made the reverse migration from the North to the Catholic South, including the Van Langren family, while some Flemings also returned after a few years, Pieter Verbiest I and his son Pieter Verbiest II among them.

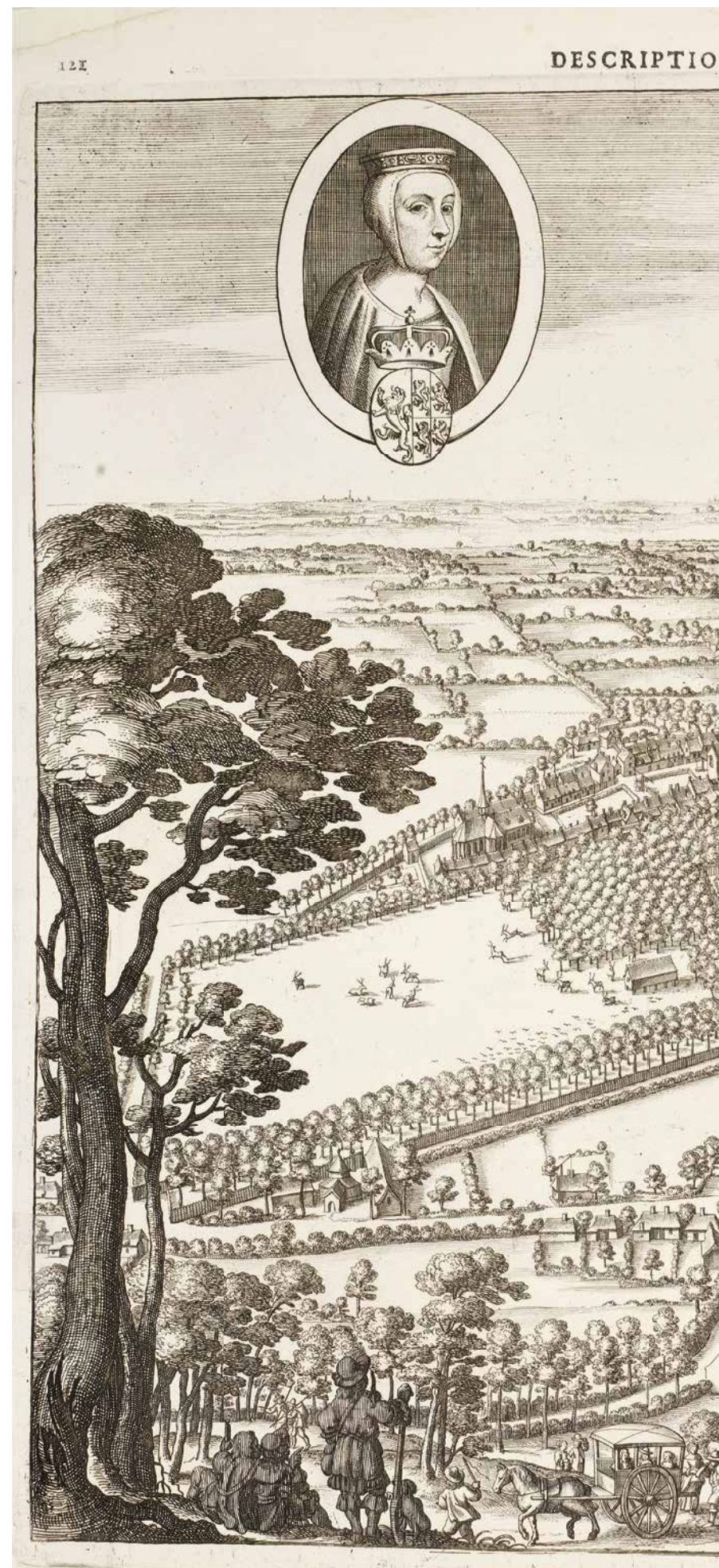
In the course of the eighteenth century, the leading centres of cartography shifted to Britain, France and the Holy Roman Empire. Important names in this regard include Johann Baptist Homann, the Sanson family, Guillaume Delisle and the Delamarche firm in Paris, which produced globes. Just as the Low Countries became less leading in European map production, a flood of ‘chorographic’ works in the Guicciardini tradition began to appear, designed to promote and boost patriotic pride in Flanders, Brabant or the Low Countries as a whole. The phenomenon, which lasted far into the eighteenth century, might have been a response to the declining prosperity in the region in the second half of the seventeenth. These lavishly illustrated books, running to several volumes, were amply furnished with maps and detailed topographical prints of the south’s villages, towns, castles, country houses and monuments. The tone was set by Antonius Sanderus with his *Flandria Illustrata* (Amsterdam, 1641-1644) and *Chorographia sacra Brabantiae* (Brussels, 1659-1663), but important imitators followed, such as Jacques Le Roy with his work devoted to Brabant (→ pp. 18-19), Nicolaas Despars with his chronicle of Flanders, and Jean-Baptiste Christyn with his description of the whole of the Low Countries.

The first truly systematic mapping of the territory corresponding with modern-day Belgium was the gigantic, large-scale map that Joseph Jean François, Count de Ferraris, produced in 1777-1778 for Maria Theresa, empress of Austria. The Ferraris Map meticulously charted what were then the Austrian Netherlands. The fashion for large-scale, nationwide topography of this kind continued into the nineteenth century – the era of imperialism and nation states. Orders came down from government for entire territories to be mapped precisely in a uniform and systematic manner. This became a particular imperative when Belgium broke away from the Kingdom of the United Netherlands in 1830. The newly forged nation felt a powerful need – in terms of identity as well as cartography – to set itself down on paper and present itself as a unified whole. Philippe Vandermaelen had the opportunity to produce the lion’s share of this official cartography.

In addition to formal documents of this kind, there were of course maps for ordinary users too. The middle classes saw their mobility expand in the nineteenth century, with families setting out on their travels – primarily in their own country but also with the occasional trip abroad. Travelogues and guidebooks became more common, and convenient pocket-sized atlases grew in popularity. There was also an explosion in this period in the publication of city views, portraits, and pictures of favourite spots, attractions and buildings in Belgium and abroad. The invention of lithography meant that these could be printed in very large runs. Topographical and cartographical material – in the form of maps, text and images – became more accessible and affordable, no longer the preserve of a wealthy, intellectual elite. Maps now became part of everyday life and leisure in several layers of society.



*Turnhout celebre taxandriae municipium*  
*Bird's-eye view of Turnhout*  
From: Jacques Le Roy, *Castella & Praetoria Nobilium Brabantiae*, 1699  
ANTWERP, THE PHOEBUS FOUNDATION



CASTELLORUM COENOBIORUMQUE AGRI ANTVERPIENSIS.



TURNHOUT  
CELEBRE TAXANDRIE  
MUNICIPIUM



## A FLURRY OF PRINTING

Copies, states, editions, impressions, reprints, and variants are all technical terms that give an idea of the complexity of map printing. In some cases they are used more or less interchangeably, while in others they are highly specific.

Although surveyors' maps often continued to be drawn or painted by hand until the nineteenth century, most maps were printed. After the printing press had made its appearance in Western Europe (from 1450 onwards), it became possible to cut a map from a block of wood or to engrave or etch it onto a copper plate, and to then print and distribute it in large editions. The earliest maps in this book are woodcuts, where the part of the drawing not to be printed was cut from a block of wood and the part left behind was then printed. The technique does not allow for much detail but lent itself to large editions and to illustrations in books. In the course of the sixteenth and seventeenth centuries, copper engraving and etching became more common for maps. Engraving is done with a sharp tool called a burin, which is used to cut lines into a copper plate, while etching uses a finer needle to draw the design into a layer of wax covering a similar plate. Maps from the early modern period often used a combination of etching and engraving. Engraving was suitable for lettering, for instance, while etching allowed very precise map elements to be drawn as well as decorations such as cartouches (ornamental frames). These techniques gradually gave way in the nineteenth century to planography, the best-known form of which is lithography, in which the design is drawn on a stone and could also be readily printed in multiple colours.

It is possible, therefore, to have several copies of a printed map in circulation (identical copies of some manuscript maps were also made, although examples of this kind are rarer). The printer or publisher decided on the size of the edition and pulled a specific number of prints from the wood block, the copper plate or the lithographic stone. These were then sold, distributed, or otherwise disseminated. One copy need not be identical to another: each ended up in a different place and was used, annotated or stamped by different people. A particular owner might also ask for their copy to be coloured in. If further examples were needed, a fresh print run could be set up, resulting in a reprint, in which the map might be amended or left unchanged. Where a mapmaker made adjustments to the wood block, copper plate or lithographic stone – deliberately or otherwise and no matter how small – we refer to a new 'state'.

The study of books distinguishes between impressions and editions. An impression refers to one and the same print run, with little difference between a first and a second impression in terms of typesetting or composition: at the very most, an occasional spelling mistake might be corrected. In the case of a new edition, by contrast, a large number of adjustments have been made to the set type, so that the composition of the pages, sections, text or illustrations is different. A new edition will often have been expanded or improved too.

The situation with atlases is a little more complicated. An atlas consists largely of graphic material – printed maps – and its composition is considerably more variable than that of a textbook. This is reflected in the way seventeenth-century map publishers like Hondius, Blaeu and Janssonius issued numerous different editions of their atlases in a short space of time, often adjusting them slightly as they did so: adding extra maps, replacing one map with another, similar one, or adjusting the order in which they appeared.

This makes it hard for us to speak of an 'impression' or an 'edition' of an atlas, and so these terms are rarely applied to early modern atlases. To further complicate things, the maps in atlases could also be distributed separately or else removed from an atlas – whether at the time or at some later date – making it even harder to reconstruct the precise context in which an individual map first appeared. The same goes for many maps that had originally appeared in books or were intended for that purpose. 'Cartobibliography' sets out to classify all these different editions and the individual maps published within them.



4.

IMPRESSIO LIBRORVM.

*Potest vt vna vox capi aure plurima: Linunt ita vna scripta mille paginas.*



19.

SCULPTURA IN ÆS.  
*Sculptor noua arte, bracteata in lamina Scalpit figuras, atque praelis imprimit.*

Hans Collaert and Theodoor Galle after Johannes Stradanus  
*Nova Reperta: Sculptura in aes, c.1590*  
*The invention of copper engraving*  
Copper engraving, 263 × 340 mm  
ANTWERP, THE PHOEBUS FOUNDATION

## CONCLUSION

This book invites you to discover for yourself the history of cartography in the (Southern) Netherlands, as briefly summarised above. The first chapter begins with local cartography and topography, based on surveying and fieldwork. We then travel from the countryside to the urban landscape, where a variety of city ‘portraits’ and maps are featured. This is followed by several chapters on the role of cartography in news culture and historiography, with particular reference to the Eighty Years War. Chapter III discusses the different news media, after which a specific case is examined in Chapter IV. Chapter V looks at how the Low Countries reflected on their own history and on the relationship between North and South, while Chapter VI deals with the role played in historiography and mapping by foreigners – Italians in particular. In Chapter VII we take to the water: how are maps used to plot a course and navigate at sea? The next chapter focuses on where vessels from the Low Countries sailed to, which ‘new worlds’ were visited and mapped, and for what reasons. We then zoom out again to consider the different world views that held sway through the centuries, before examining world atlases, including Blaeu’s *Atlas Maior*. The book rounds off by bidding farewell to the earth, using astronomical instruments and cosmography to gaze out into the universe and back.

The chapters are structured by scale, steadily zooming out as we go, yet also simultaneously zooming in on the objects from The Phoebus Foundation’s collection and their various creators, each of whom contributed to the story of Netherlandish cartography. The highlighted thematic texts provide extra information about certain subjects, specific makers or important events. The interspersed texts marked in yellow point out special objects from the collection. The people and works that are examined along the way shed light on glorious moments in cartographic history while not shrinking from the dark side that often lies hidden. There is more that maps *do not* show than they *do*, while at the same time they seek to present us with particular ideas and world views. An early map not only represents a geographical area and a historical situation; it is also not easy to pin down and can prompt an infinite number of new questions, discussions and interpretations. *Groundbreakers* invites you to explore and expand the horizons of your own world through cartography.

## LITERATURE

- J. Bossu, *Vlaanderen in oude kaarten: drie eeuwen cartografie*, Tielt, 1982.
- W. Bracke & E. Leenders, *Vlaanderen in 100 kaarten*, Leuven, 2015.
- P. De Maeyer, ‘Cartografie, de zee en de rol van de Vlamingen’, *VLIZ, De Grote Rede*, 31, 2011: 11-16.
- P. De Maeyer, M. Galand, B. Vannieuwenhuyze et al., *De geschiedenis van België in 100 oude kaarten*, Tielt, 2021.
- D. Duncker & H. Weiss, *Het hertogdom Brabant in kaart en prent*, Tielt, 1983.
- C. Koeman, *Atlantes Neerlandici. Bibliography of terrestrial, maritime and celestial atlases and pilot books, published in the Netherlands up to 1880*, Amsterdam, 1967-1971, 5 vols.
- C. Koeman, *Geschiedenis van de kartografie van Nederland: zes eeuwen land- en zeekaarten en stadsplattegronden*, Alphen aan den Rijn, 1983.
- C. Koeman, G. Schilder, M. van Egmond et al., ‘Commercial Cartography and Map Production in the Low Countries, 1500-ca. 1672’, in: D. Woodward (ed.), *The History of Cartography*, vol. 3. *Cartography in the European Renaissance*, Chicago / London, 2007, vol. 2: 1296-1383.
- C. Koeman & M. van Egmond, ‘Surveying and Official Mapping in the Low Countries, 1500-ca. 1670’, in: D. Woodward (ed.), *The History of Cartography*, vol. 3. *Cartography in the European Renaissance*, Chicago / London, 2007, vol. 2: 1246-1295.
- P. van der Krogt (ed.), *Koeman’s Atlantes Neerlandici. New Edition*, Houten, 1997 et seq., 6 vols.
- G. Schilder & M. van Egmond, ‘Maritime Cartography in the Low Countries during the Renaissance’, in: D. Woodward (ed.), *The History of Cartography*, vol. 3. *Cartography in the European Renaissance*, Chicago / London, 2007, vol. 2: 1384-1432.
- H. van der Heijden, *Het Hertogdom Brabant in oude kaarten, 1536-1785*, Eersel, 1991.
- B. Vannieuwenhuyze, M. Griffioen & A. van Schaik, *Oude kaarten lezen. Handboek voor historische cartografie*, Zwolle, 2023.
- K. Zandvliet, *De groote waereld in ’t kleen geschildert: Nederlandse kartografie tussen de middeleeuwen en de industriële revolutie*, Alphen aan den Rijn, 1985.
- K. Zandvliet, ‘Mapping the Dutch World Overseas in the Seventeenth Century’, in: D. Woodward (ed.), *The History of Cartography*, vol. 3. *Cartography in the European Renaissance*, Chicago / London, 2007, vol. 2: 1433-1462.

WITHOUT LAND, there would be no maps. While you will also find maps of the sea, the heavens and imaginary realms in this book, representing land has always been the most obvious task of the cartographer. Boundaries, plots and roads, from cultivated land to pristine nature: these are what a map shows us. Maps are the medium of choice for registering land and have been so since time immemorial. The need to correctly administer land taxes and the rights and duties of landowners dates back centuries. The history of the Dutch and Belgian landscape, characterised by a constant struggle with water, required its inhabitants to be flexible and inventive. They reclaimed land from the sea and, if the dykes were breached, drained it all over again. All these changes to a landscape viewed as 'malleable' demanded the creation of maps: for administrative purposes, tax collection, the settlement of disputes and claiming ownership of a piece of land.

By no means were the local surroundings always mapped using the same yardstick – whether literal or figurative. What methods and techniques, then, *did* mapmakers use in the Southern Netherlands? The earliest measurements were made using a chain and a surveyor's cross. Later, triangulation allowed larger distances to be measured, and the method continued to be used until the nineteenth century, after Belgium had become an independent nation. An official land register was introduced in 1834 (two years later than in the Netherlands), influenced by recent Napoleonic innovations and the French revolutionary occupation of the Low Countries (1794-1814). Henceforward, the land registry would administer real estate and the associated rights and duties in the form of taxes, leading to the uniform, systematic mapping of the entire landscape of the Low Countries. Steadily zooming out from local cartography, accurate surveying was raised to a national level.

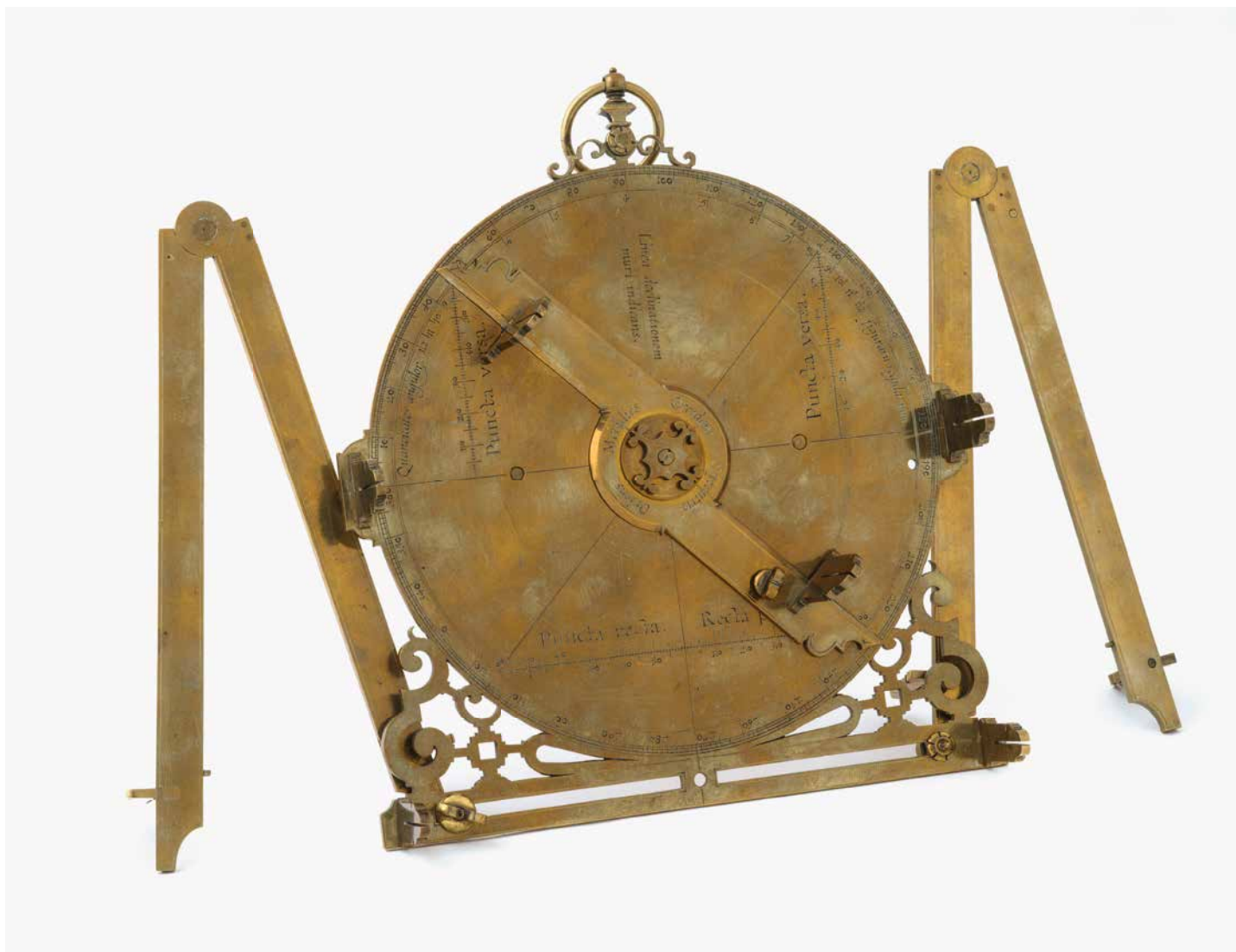


CHAPTER I

# THE ART OF SURVEYING

FROM LOCAL  
TO NATIONAL





Attributed to Michel Coignet  
Double-sided surveyor's circle, c.1610  
Polished brass, 24.5 × 19.2 × 0.2 cm  
ANTWERP, THE PHOEBUS FOUNDATION

## THE COIGNET AND DOU CIRCLES

For many years, triangulation was the most commonly used and accurate method for calculating the distance between places. It relied on measuring the angles between specific locations. What kind of tools did surveyors take with them to measure those angles and lengths around the year 1600 or so? Their instruments were traditionally fairly simple and would not change drastically until the nineteenth century. A rod and chain, for instance, were used to measure relatively short distances. The physical rod could be half or a whole rod in length, while a surveyor's chain was equal to five or ten rods. A rod was an ancient unit of measurement, the precise size of which varied between around three and six metres depending on the location. The Rhenish rod was the most common in the Low Countries, measuring 3.767 metres. Surveyors sometimes worked with 'chain pullers' – assistants who laid out the chain for them. The surveyor's cross was a right-angled device with a fixed sight at the end of each arm through which the surveyor could look in order to plot right angles.

A more sophisticated instrument arrived with the surveyor's circle, a polished-brass version of which in The Phoebus Foundation's collection is attributed to Michel Coignet (1549-1623). This Antwerp mathematician, cartographer and instrument maker spent part of his career as a scientist at the Spanish-Habsburg court of Archduke Albert of Austria (1559-1621) and the Infanta Isabella Clara Eugenia (1566-1633), governors of the Southern Netherlands. Working with the engraver Ferdinand Arsenius (active 1589-1628), Coignet caused the centre of scientific instrument-making to shift from Leuven to Antwerp.

The surveyor's circle developed by Coignet is similar to the well-known 'Holland circle' or 'Dou circle', the latter named for Jan Pietersz. Dou (1573-1635), one of the most influential and well-known surveyors of the Low Countries. Dou built his reputation through the circle he invented around 1610, for which he ingeniously combined several existing principles. Taking the basic surveyor's cross, he added a single rotating sight, which allowed angles greater than ninety degrees to be measured as well. A neat feature of this device was that it was now possible to triangulate using just one instrument. Because of its widespread use in the Low Countries, his invention later became known as the 'Holland circle'.

Coignet's instrument is similar to Dou's, consisting of a disc with a fixed and a rotating sight. The circumference of the circle is engraved with 360-degree marks, allowing angles to be read off directly and easily. Two rotating, fold-out rulers are fixed to the back, with further sights at the ends, allowing the highly accurate measurement of angles over large distances. The rules have a scale of their own too. The device can also be suspended by the ring at the top, so that vertical angles as well as horizontal ones can be measured.

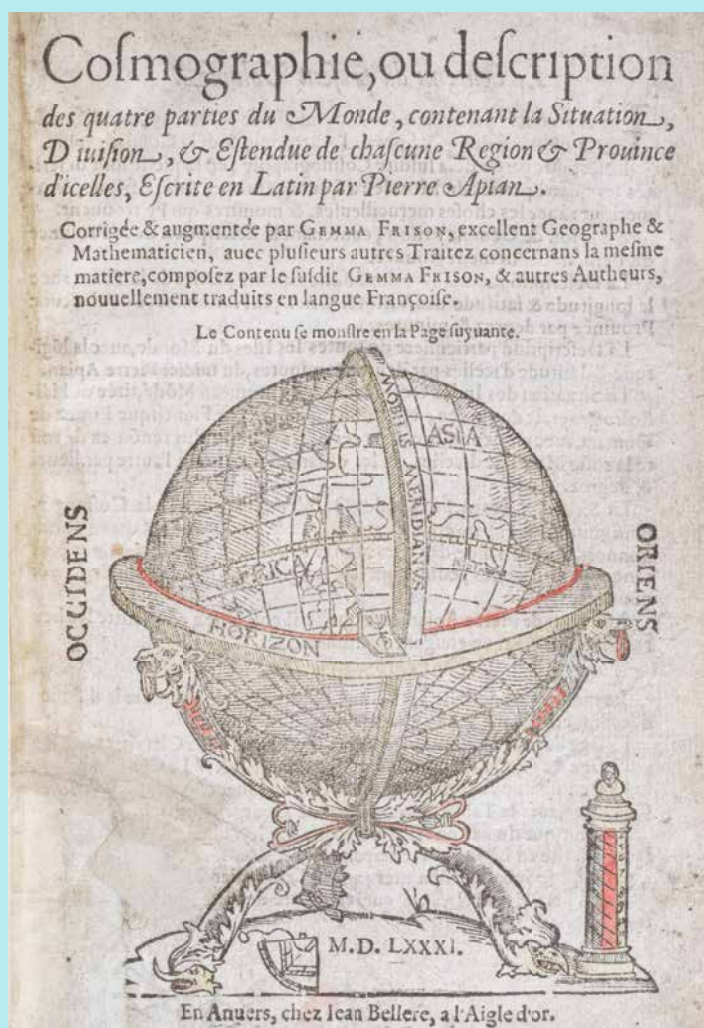
All the same, the surveyor's circle that Coignet designed lacks some of the clever touches that Dou added to his version, such as the recesses in the disc to reduce the weight of the instrument and allow a larger size. Nor does it have the socket for placing on a long stick, so that the surveyor could take sightings at eye level, or the compass at the centre for use in orientation.

## GEMMA FRISIUS AND TRIANGULATION

Surveying made its appearance in medieval Western Europe by way of the Arab world and treatises by Roman surveyors (*agrimensores*). While simply counting footsteps is one way to measure distances, the triangulation method would change this forever. ‘Forward intersection’ is based on Pythagoras’s theorem. A triangle has three angles and three sides, and if at least three of these elements are known, including the length of one or more sides, the remaining dimensions can be calculated. If, say, you know the length of one side of the triangle and two of its angles, you can swiftly work out the rest.

But how do you go about measuring the angles between places located some distance from each other? To do this, you need to stand on a high spot, such as a church tower, hill or some specially installed base point. The angle between two other elevations further away can then be measured, or alternatively the angle relative to the north. These angles are then plotted on paper, following which the length of the sides of the triangle can be calculated. In the course of the eighteenth and nineteenth centuries, imaginary triangles between places were created in the Low Countries to facilitate this process – ‘triangle networks’ that allowed large-scale topographical maps to be drawn up for bigger areas.

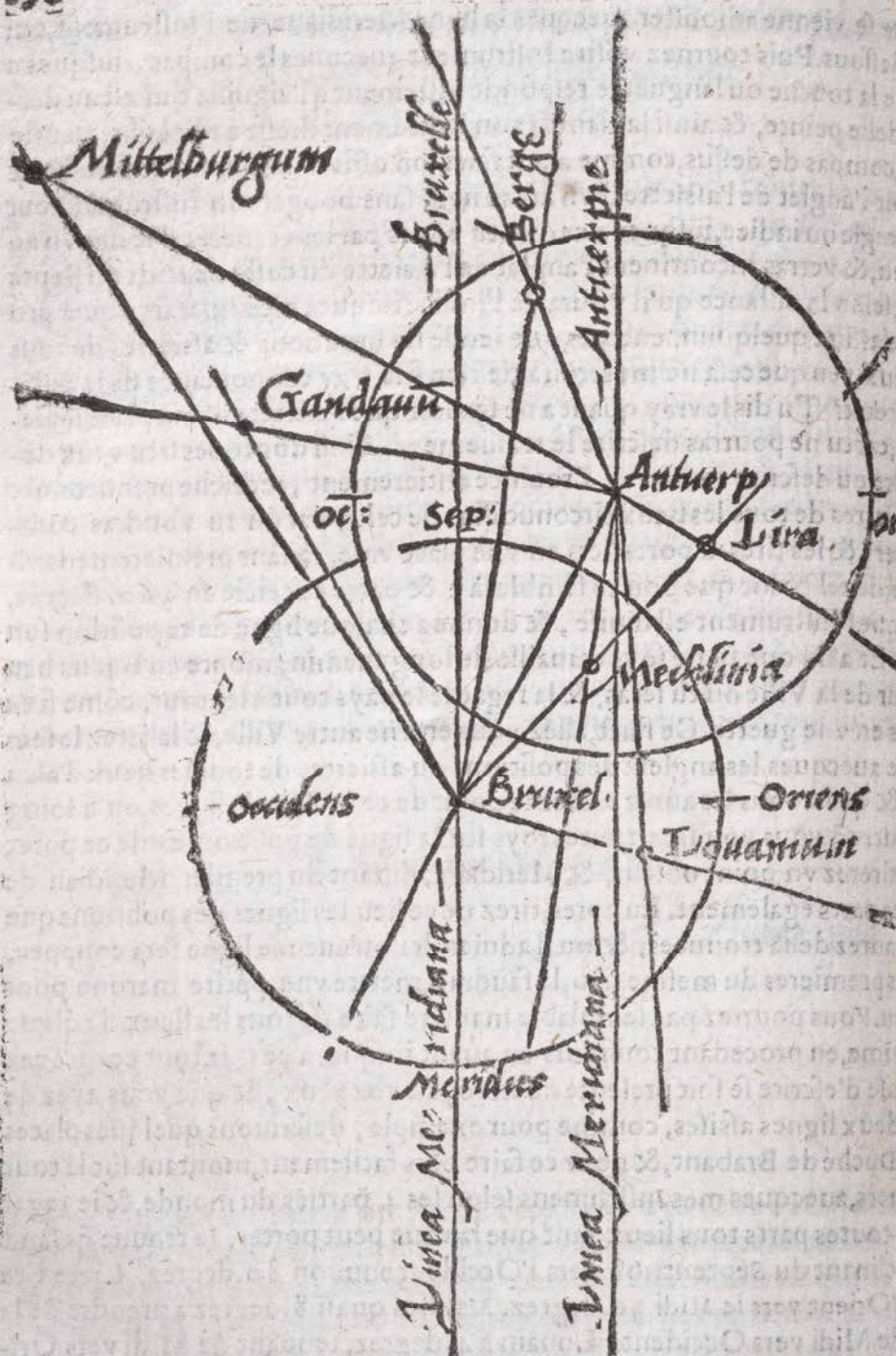
There is evidence that the principles of triangulation were already being applied in ancient times, and one of the earliest Dutch cartographers, Jacob van Deventer (1505-1575), is known to have used the technique in his early regional maps of the Low Countries, which are among the oldest of their kind. It is now widely accepted, however, that the first establishment and dissemination of the age-old method can be attributed to the Dutchman Gemma Frisius (1508-1555). Frisius, as he was called in his native Dokkum, was active from around 1525 in Leuven, where he studied before going on to teach mathematics and medicine. He also designed globes and instruments there, drawing on the work of all manner of important scientists. It was in Leuven that Frisius published an amended reissue of *Cosmographicus liber* (first edition: Landshut, 1524) by Peter Apian (→ Chapter XI). He added an appendix on surveying entitled *De locorum describendorum ratione* (‘Concerning the method of describing places’), in which he introduced the triangulation method in such a practical way that it could be applied to mapmaking. Frisius’s reissue first appeared in February 1533. The Phoebus Foundation owns the improved second edition, translated into French, of 1581. It is thanks to this widely disseminated publication that Frisius is now viewed as the inventor of triangulation. Apian and Frisius’s treatise lived on in some thirty translations and reprints until 1609.



Title page  
From: Peter Apian and Gemma Frisius, *Cosmographie, ou description des quatre parties du Monde*, 1581  
ANTWERP, THE PHOEBUS FOUNDATION

192

## La maniere de descrire les lieux



en 90. parties, ou le demicerle en 180. En apres ie tire des le point premierement marqué iusques au lieu marqué vne ligne par ses degrez, & laisse de ceste maniere la Carte imparfaicte, avecques les seules lignes. d'Anuers ie me vay a Bruxelles, & cherche les lignes de position ou assiette de toutes les places ou ie puis atteindre de la veüe, Je trouue que Louvain tire de la part d'Orient

## MAPPING AND PICTURING THE WAASLAND

The flat polders of the Low Countries readily lent themselves to triangulation: no matter how far apart they were, it was relatively easy to pick out church towers and other tall buildings in the distance across the sprawling landscape. Newly reclaimed land was divided into parcels, which meant it had to be registered. There are references to surveyors in Flemish coastal regions from as early as 1190, and the Waasland in what is now East Flanders also boasts a long tradition of surveying in connection with land reclamation, particularly from the fifteenth century onwards. Accurate maps needed to be drawn up before, during, and after a new polder was drained. The Phoebus Foundation's collection includes a series of figurative polder plans of the Waasland which vividly map and depict this changing, malleable landscape.

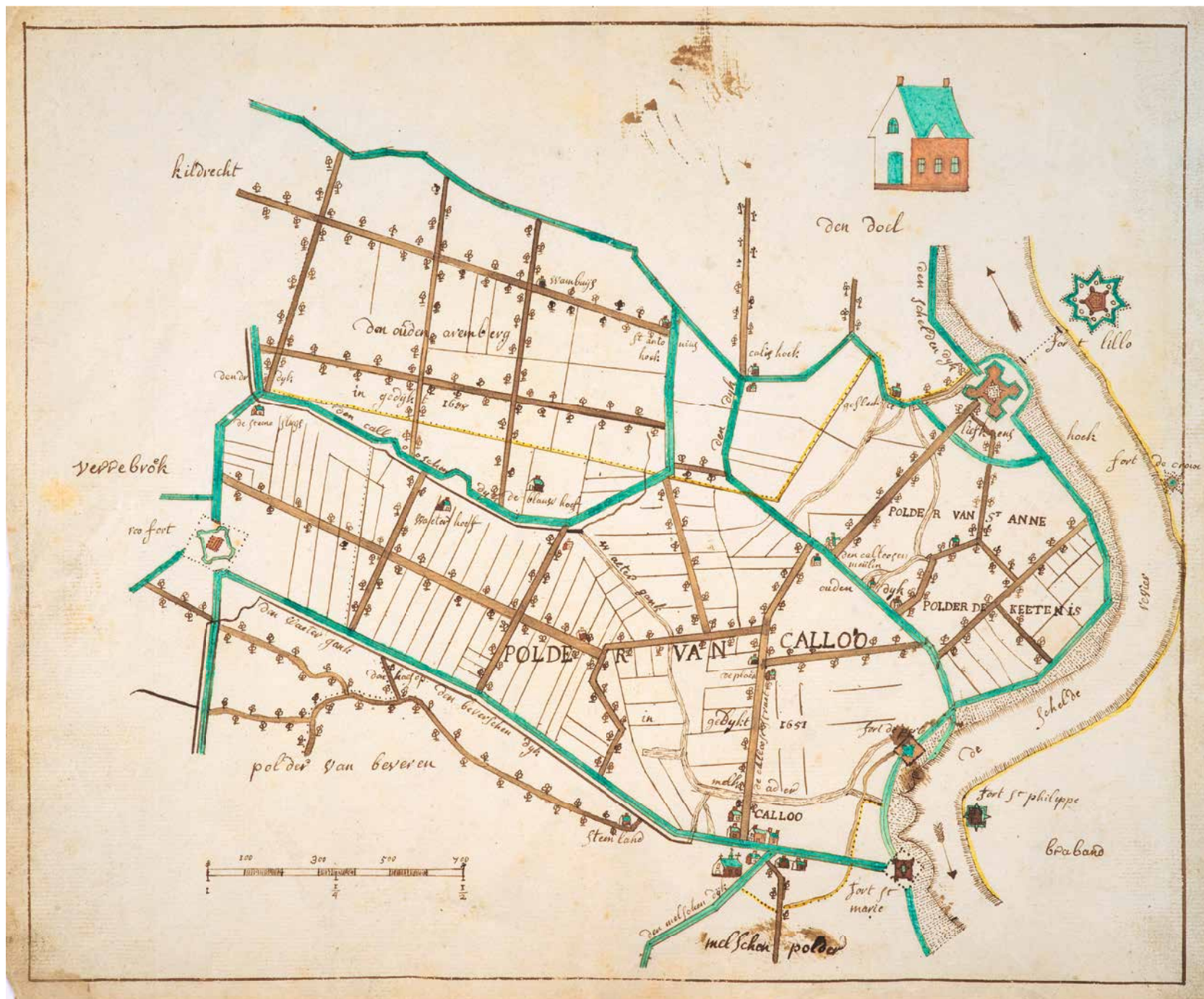
The manuscript series was drawn up by an unidentified surveyor and is undated, although the dates of several polder projects are given, the earliest being 1688. Each map shows the subdivision of the polders and includes a scale indicator of 100 to 1,000 rods. The unit in question might have been the Waas or the Ghent rod (both of which were equal to 3.854 metres). The maps contain numerous details about roads (in brown), dykes (green), windmills, marshes, salt marshes and farmland. Houses and larger buildings are drawn three-dimensionally, viewed vertically from the front, and some are labelled (the Singelberg, for instance). The surveyor might have used some of these tall buildings as triangulation points, including the *capel op gaverland* shown bottom right or the church next to Fort Verrebroek, on the opposite side of the mapped area.

Local maps like this are a rich source of information, not least for regional toponyms. Next to the Singelberg, for example, we see the words *de cleyne verre* ('little Verre') to the right of the *grootte verre* ('big Verre'), to identify the polders. Another manuscript map in The Phoebus Foundation's collection zooms in further on this small piece of polder, located at the Singelberg and Beveren Castle. With a scale of 100 Ghent rods, it shows the precise parcels making up the *cleyne verre*, as drawn and painted by the Beveren surveyor Henricus Joppen on 3 January 1771. The handwritten text at the bottom explains that Petrus De Kever, prior of the nearby Wilhelmitte monastery, commissioned the map, which is a copy of one showing the Beveren polder in the year 1692, made by another local surveyor called Baudewijn Speelman.

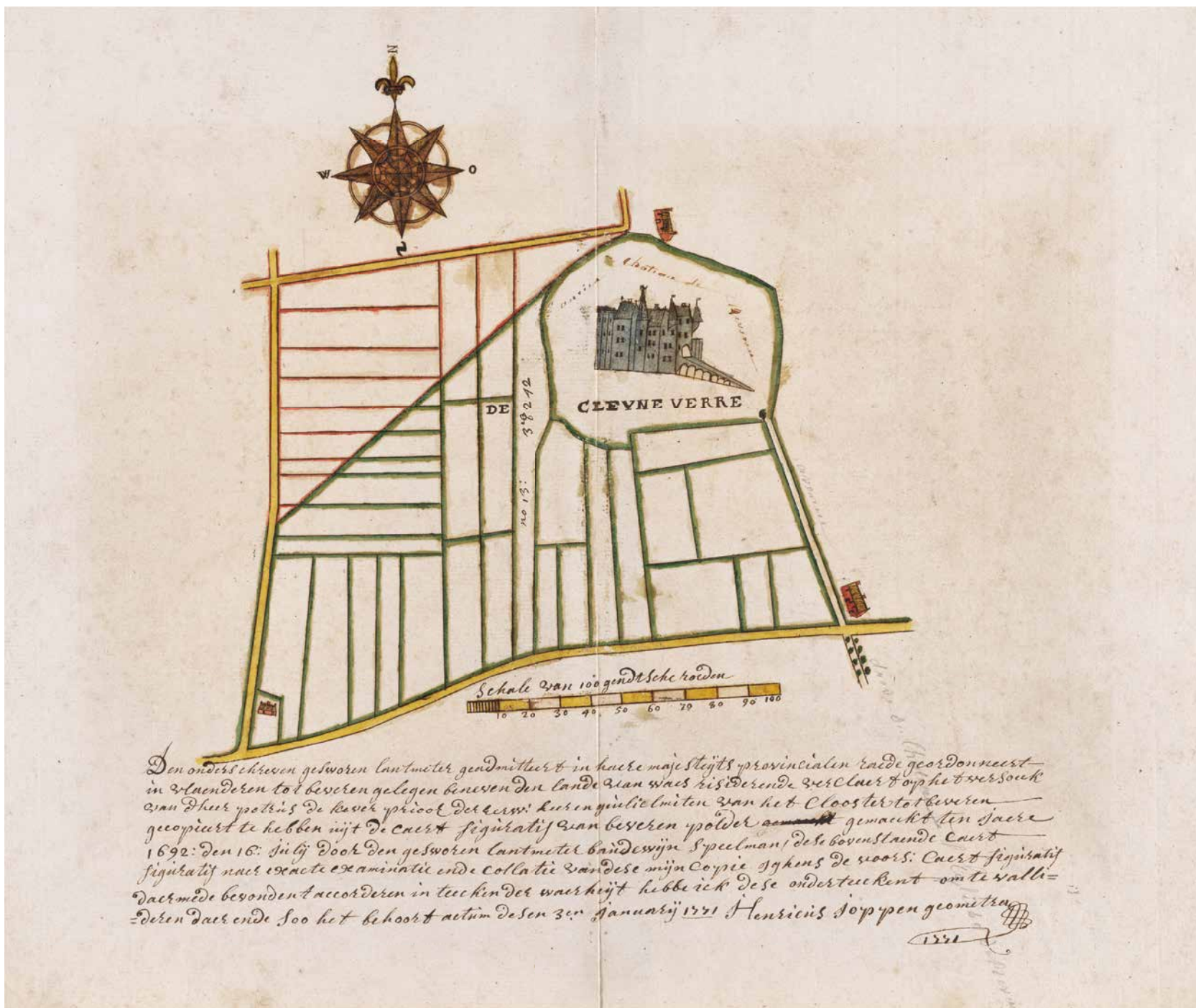
The monastery's records show that it was indeed headed by a prior Petrus Jozef De Kever from 1762 to 1770. Speelman's original 1692 map has yet to be located, but we do know that he prepared maps for several estates belonging to the aristocratic Arenberg family, including one of the plot division of Oud-Arenberg-polder, reclamation of which was completed in 1688. Once a piece of land had been fully drained, the polder was divided into parcels, which were precisely mapped out and their areas stated. The plots were then assigned by lot and sold to subscribers. The new owners were often specified by name on parcel maps, which formed part of the register or 'land book'.



Den ouden Arenberg  
Detail from: Manuscript map of the Waasland, with the Kallo polder, Doel, the Melschen polder, Verrebroek and the river Scheldt, after 1688 (p. 31)



Manuscript map of the Waasland, with the Kallø polder, Doel, the Melschen polder, Verrebroek and the river Scheldt, after 1688  
 Ink and watercolour on paper, 314 × 376 mm  
 ANTWERP, THE PHOEBUS FOUNDATION



Manuscript map of the Waasland, with the Beveren polder,  
Fort Verrebroek and Kallo, after 1688  
Ink and watercolour on paper, 315 × 372 mm  
ANTWERP, THE PHOEBUS FOUNDATION

Henricus Joppen after Baudewijn Speelman  
Manuscript map of part of the Beveren polder known as 'cleyne verre', 1771  
Ink and watercolour on paper, 330 × 427 mm  
ANTWERP, THE PHOEBUS FOUNDATION

Capel op Gaverland and Verrebroek fort  
Details from: Manuscript map of the Waasland, with the Beveren polder,  
Fort Verrebroek and Kallo, after 1688 (p. 33)





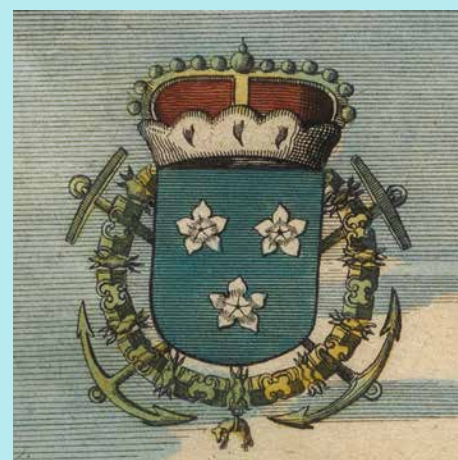


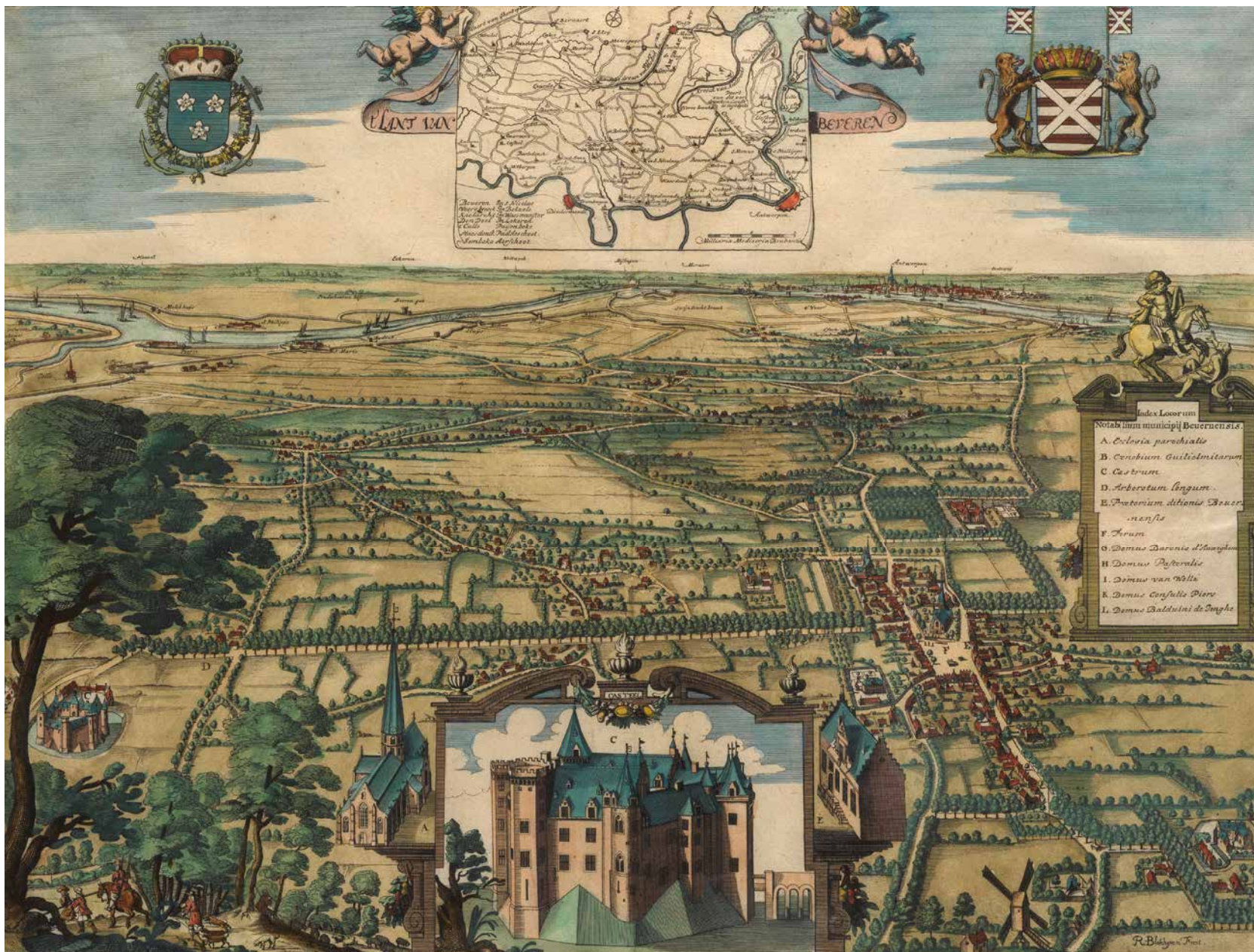
## BEVEREN CASTLE

Beveren Castle stands out in Henricus Joppen's polder map, which contains a large depiction of it, even though the building on the Singelberg near Beveren had been demolished in the middle of the seventeenth century. It had featured prominently during the revolt against Spanish rule as the headquarters of Alexander Farnese (1545-1592), Duke of Parma and governor of the Low Countries (→ p. 68). It was here that representatives of Antwerp officially agreed the city's capitulation to the Spanish in 1585. The castle and surrounding estates had come into the hands of the Arenberg family in 1622 but had since fallen into disrepair. It was demolished in 1652, and the materials were reused during the construction of churches in Beveren, Verrebroek and Kallo.

Joppen's map keeps the memory of the castle alive by depicting it large and centrally. The picture recalls the bird's-eye view of Beveren in the chorographic book *Verheerlijkt Vlaendre* ('Exalted Flanders'; The Hague, 1735), a reissue of Antonius Sanderus's chorography of Flanders (→ p. 60), which also shows Beveren Castle, even though nothing but ruins remained of it at the time. The print was made by the Dutch engraver Reynier Blokhuisen (1663/1683-1724/1744), who did not visit his locations to record them in person but will have looked instead at seventeenth-century images, maps and text descriptions. The coats of arms of the duke of Arenberg (left) and of Beveren (right) are featured in the map, which shows all the villages and churches in the area, as well as its windmills, gallows and fortresses. The most important buildings are explained in the legend, including the Wilhelmitte monastery (B), which was suppressed in 1784, and Beveren Castle (C), which is also depicted in the insert at the bottom. Could it be that the eighteenth-century mapmakers failed to do their homework and were simply unaware that Beveren Castle no longer existed here? Despite being demolished, the memory of the castle was preserved for many years after, living on in works of art and maps.

Jan Baptist Saive  
 Portrait of Duke Alexander Farnese, Governor of the Spanish Netherlands, 1592  
 Oil on canvas, 203 × 108 cm  
 ANTWERP, THE PHOEBUS FOUNDATION





Reynier Blokhuisen

't Lant van Beveren, 1735

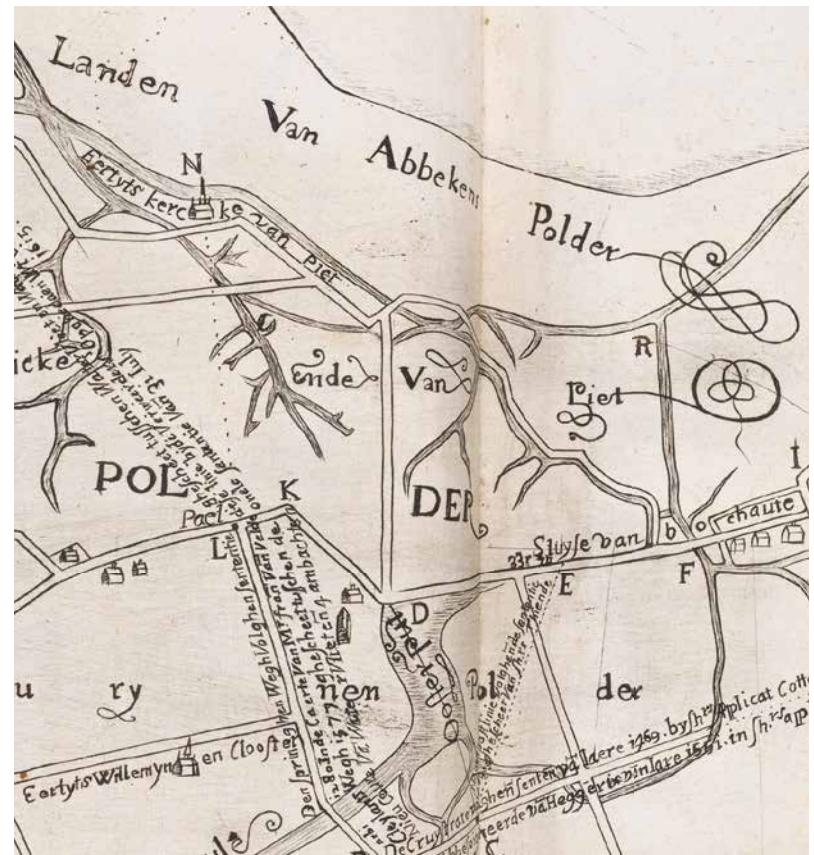
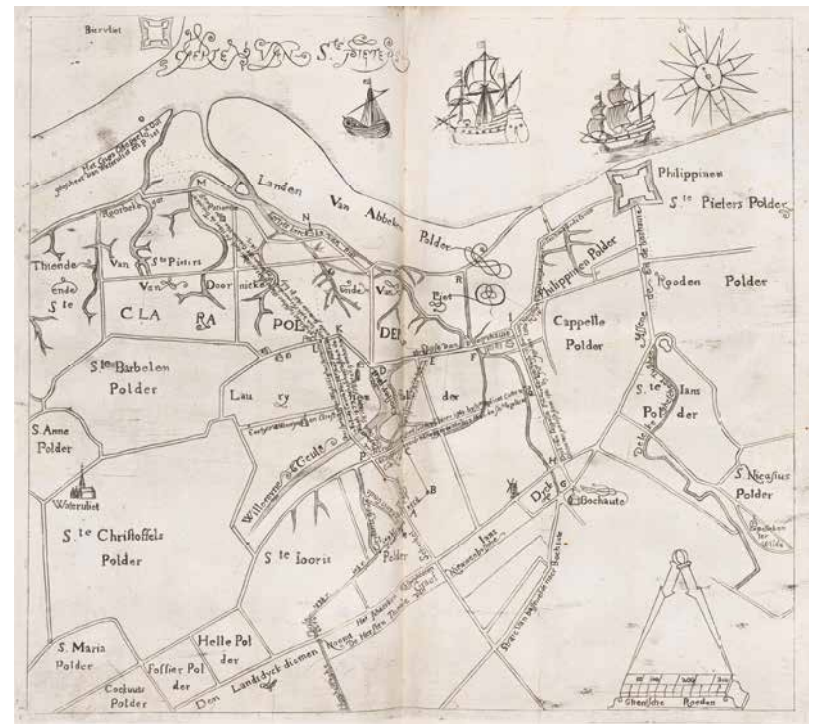
*Bird's-eye view of the Beveren area*

Hand-coloured copper engraving and etching, 470 × 525 mm

ANTWERP, THE PHOEBUS FOUNDATION

The Arenberg family arms

Detail from: Reynier Blokhuisen, 't Lant van Beveren, 1735



Jan Bale  
Caerte van Nieuwenbossche  
Dispute map

From: J. Vander Beke, *Applicat, ende employ van preuve, omme d'eerw. vrawue abdesse van Nieuwenbosghe, H.ghe. Jeghens den eerweer. heere prelaet van S. Pieters, neffens Ghendt*, 1653

ANTWERP, THE PHOEBUS FOUNDATION

Detail from: Jan Bale, *Caerte van Nieuwenbossche*, 1653

Jan Bale  
Caerte van Ste. Pieters  
Dispute map

From: J. Vander Beke, *Applicat, ende employ van preuve, omme d'eerw. vrawue abdesse van Nieuwenbosghe, H.ghe. Jeghens den eerweer. heere prelaet van S. Pieters, neffens Ghendt*, 1653

ANTWERP, THE PHOEBUS FOUNDATION

Detail from: Jan Bale, *Caerte van Ste. Pieters*, 1653

## DISPUTE MAPS

It was not unusual for the prior of a monastery to commission a map from a surveyor, as Petrus De Kever did from Henricus Joppen, since Church ownership of land required the production of a great many maps. Long before the creation of the land registry, it was primarily religious institutions like this that owned and leased out parcels of land. To that end, monasteries, abbeys and parishes had surveyors measure and map their real-estate holdings to enable them to collect taxes and keep records. It was not unusual for disputes to arise between major landowners about which land belonged to whom or the precise size of a particular plot. Existing surveyors' maps were useful when seeking to settle such cases, but judges sometimes also commissioned an impartial surveyor to map the land for a specific judicial procedure. One of the parties to the dispute might dispatch a surveyor to the contested area too, as seems to have occurred with the maps opposite.

The record of a court case dated 5 April 1653 between St Peter's Abbey near Ghent and Nieuwenbos Abbey, penned by J. Vander Beke, includes a dispute map of this kind. The abbess of Nieuwenbos claimed the right to tithes raised on the Clara and Isabelle Polders. Tithes were a type of Church tax which required the tenant farmers to hand over a tenth of their produce (crops, livestock, grain, and so on) to the landowner. The entire area around Ghent had been deliberately flooded in 1621 and 1622 for strategic military reasons during the Eighty Years War. With the return of peace in 1648 and the granting of permission to drain the land once more, a renewed discussion arose as to who was entitled to levy tithes on it.

What makes the case interesting is that the arguments presented by the abbess of Nieuwenbos were supported by two maps (most likely partial copies of existing ones) included in the printed report of the hearing. The first is the *Caerte van Nieuwenbossche*, showing several polders in the vicinity of the abbey. The *kercke van Piet* (St Peter's Church) was a particularly important element in the dispute, as was the point where the land ended (*ende van Piet*). The second map, a *Caerte van Ste Pieters*, shows the same polders, and a few more besides. The *thienden* (tithes) are explicitly inscribed in several places, and notes were added to particular features, such as the year in which the polder was drained. The map will have been used to determine the precise boundaries and who was to receive how much of the proceeds. Surveyors might also have indicated the boundaries with stones erected in situ.

The maps are not signed, but have been linked with the Ghent surveyor and mapmaker Jan Bale (or Jan Van Bale, active in the second half of the seventeenth century), who was the regular surveyor for St Peter's Abbey and had made similar maps for the dispute between the same parties a year earlier. That case too had pitted the abbot of St Peter's and the pastor in Boekhoute, Arnulf Borcquelmans, against the abbess of Nieuwenbos. If it was indeed Jan Bale who prepared the maps, it is not impossible that he skewed his survey of the parcel in favour of St Peter's Abbey, his employer.

## PHILIPPE VANDERMAELEN

‘To measure is to know’, but as the aforementioned dispute maps testify, to measure land can also be to appropriate it. Determining areas and fixing boundaries would occur two centuries later for a much larger territory, now with different interests at play. In 1830, Belgium gained its independence from the United Kingdom of the Netherlands following a series of uprisings. The brand-new nation needed to be documented and mapped as swiftly as possible. The task fell to Philippe Vandermaelen (1795-1869) who, around that same year of independence, founded the *Établissement Géographique de Bruxelles* – a scientific institute and intellectual centre that also boasted its own lithographic printing works, a large library and a museum. Vandermaelen set about improving the topographical map drawn up by Count de Ferraris (1762-1814) and overseeing the production, among other things, of a series of 250 topographical maps of the new kingdom. He was given access to the cadastral plans and triangulations that had previously been made of what was now Belgian territory.

Philippe Vandermaelen is viewed as the greatest Belgian cartographer since Abraham Ortelius (→ p. 126) and Gerard Mercator (→ p. 202), partly because his company enjoyed a monopoly on mapmaking for a substantial part of the nineteenth century. In the course of that period, he became highly influential: topographical cartography was rendered practicable, scale was applied uniformly and consistently, and lithographic printing was introduced. The *Établissement* continued to operate for several years after Vandermaelen’s death in 1869.

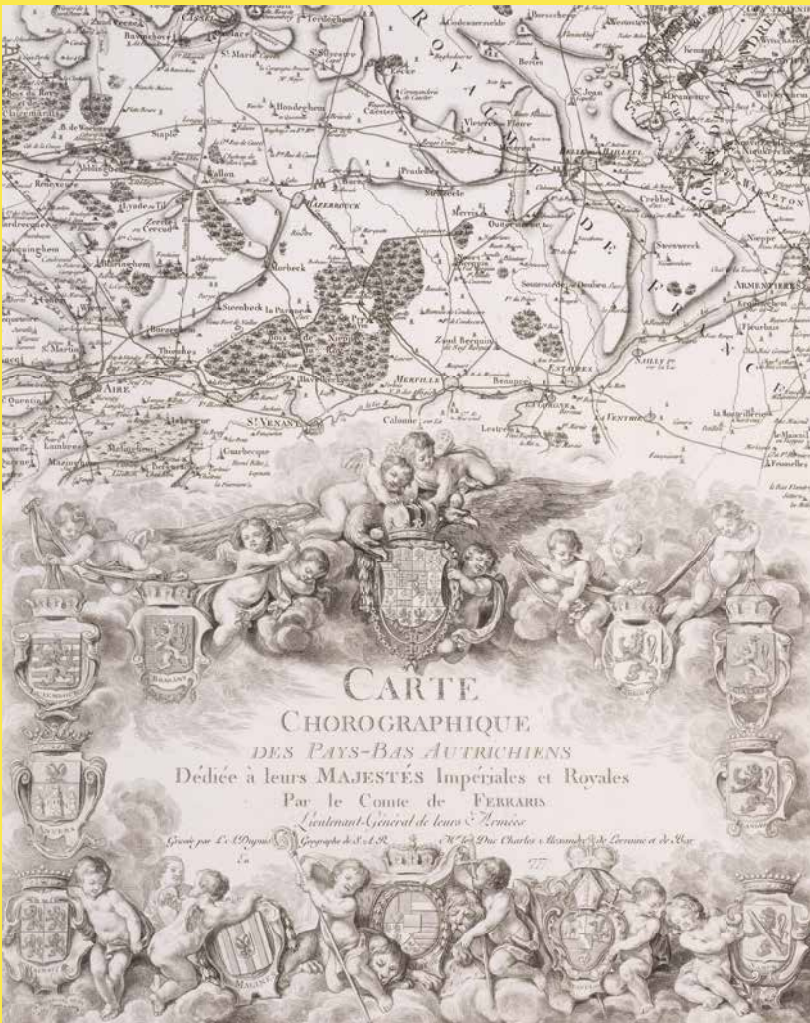
The *Plan de la Wateringue de Calloo* (1871) was published by the institute in this latter period – a hydrographic map of the polders near Kallo, for which Vandermaelen’s *Cartes topographiques de la Belgique* (1846-1854) served as the basis. The scale was the same, but the map was adapted to its new subject: hydrology and watercourses. Some sections were greatly simplified, with houses and other buildings, numerous roads, and details of subdivision and land use all omitted. The focus was firmly on the polders, the course of the water and other elements relevant to water management, such as dykes (the thick black lines), salt marshes, windmills and sluices. The water itself is coloured blue and stands out immediately.



# Ferraris's topographical map

In 1777 and 1778, Holy Roman Empress Maria Theresa commissioned Joseph Jean François, Count de Ferraris (1726-1814), to prepare a huge, large-scale topographical map, running to 275 sheets, of her territory in the Low Countries. The Austrian Netherlands (*Belgium Austriacum*) is the collective name given to the eleven provinces of the Southern Netherlands during the period of Austrian Habsburg rule between 1715 and 1795 (with a brief hiatus in 1790), when the region became an autonomous part of the Habsburg monarchy. It is sometimes referred to as the 'Imperial Netherlands' to distinguish it from the Republic of the Seven United Netherlands (*Belgium Foederatum*), roughly the modern-day Netherlands.

The Ferraris Map is viewed as the first detailed topographical survey of what is now Belgium, drawn at a scale of 1:11,520. De Ferraris created the maps by hand and in a military context: he was a general of the Austrian artillery and a field marshal of the Austrian Netherlands. Only three original versions still exist, but a commercial printed version was also sold as a limited edition, a copy of which is in The Phoebus Foundation's collection. The scale of the printed Ferraris map has been reduced and the 275 map sections brought back to 25 sheets, bound together into a book. The trade edition too was made under the supervision of Count de Ferraris and was engraved by Louis-André Dupuis (active 1769-1787) and Jean-Baptiste Poirson (1761-1831). Besides these two mapmakers, many other engravers, etchers and draughtsmen contributed to its production.



Map sheet 11: title cartouche  
From: Joseph Jean François de Ferraris, *Carte Chorographique des Pays-Bas Autrichiens Dédiée à leurs Majestés Impériales et Royales*, 1777 and 1797  
ANTWERP, THE PHOEBUS FOUNDATION

Map sheet 9: Brabant and Limburg  
From: Joseph Jean François de Ferraris, *Carte Chorographique des Pays-Bas Autrichiens Dédiée à leurs Majestés Impériales et Royales*, 1777 and 1797  
ANTWERP, THE PHOEBUS FOUNDATION





SCIENTIFIC EDITOR

Katharina Van Cauteren

AUTHOR

Anne-Rieke van Schaik

CONTENT EDITING & COORDINATION

Leen Kelchtermans

EDITING

Wannes Wets

IMAGE RESEARCH

Séverine Lacante

Katrijn Van Bragt

TRANSLATION

Ted Alkins

COPY EDITING

Xavier De Jonge

PROJECT MANAGEMENT

Stephanie Van den bosch

GRAPHIC DESIGN

Paul Boudens

PRINTING & PHOTOENGRAVING

die Keure, Bruges, Belgium

BINDING

Van Mierlo, Nijmegen, The Netherlands

PUBLISHER

Gautier Platteau

ISBN 978 94 6494 104 3

D/2024/11922/16

NUR 646

© Hannibal Books, 2024

[www.hannibalbooks.be](http://www.hannibalbooks.be)

© The Phoebus Foundation Public Benefit Foundation |

Stichting van Openbaar Nut, 2024

[www.phoebusfoundation.org](http://www.phoebusfoundation.org)

All rights reserved for all countries. No part of this publication may be reproduced, stored in a database and/or made public in any form or by any means, electronic, mechanical or otherwise, without the prior written permission of the publisher.

The Phoebus Foundation Public Benefit Foundation and Hannibal Books have made every effort to apply the laws on copyright to all the images that appear in this publication. Whosoever should still wish to assert copyright is requested to contact the publisher.

COVER

Pieter Van den Keere

*Hydrographica descriptio, in qua Hispaniae orae maritimae à Capite S. Martini usq'ad Caput Dragonis / Beschryvinge vande zeecusten van Spaengen van Cabo S. Martin tot Cabo Dragonis*  
From: Willem Barentsz., *Caertboeck Vande Midlandtsche Zee*, 1609  
&

Rumold Mercator after Gerard Mercator  
*Orbis terrae compendiosa descriptio*, 1587

ANTWERP, THE PHOEBUS FOUNDATION

PICTURE CREDITS

p. 81 © Museum de Lakenhal, Leiden

pp. 98-99 © Rijksmuseum Amsterdam

p. 279 © Allard Pierson UvA, Amsterdam

All other images © The Phoebus Foundation

The Foundation would like to thank all the institutions and photographers who have provided visual material, especially Adri Verburg and Michel Wuyts.