A World of Innovation

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Cartography in the Time of Gerhard Mercator

Edited by

Gerhard Holzer,
Valerie Newby,
Petra Svatek
and Georg Zotti

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Gerhard Mercator (1512-1594)
(Library University of Vienna IV-136.236)

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INTRODUCTION

HANS D. KOK

IMCoS, the International Map Collectors' Society, was founded in 1981 in London. On occasion we present ourselves as the Society 'for people who love early maps' without any restrictions either on the maps you love or the place where you reside on this planet. Our membership consists of a great variety of people - male and female - and as it turns out, all possessing a good sense of history. Probably quite logically so, as early maps may be viewed as condensed history, be that in terms of geographical discoveries in times past or thematic issues of past and present. Not to mention celestial maps and those maritime in nature. The latter are often related to navigation and tie in with a great number of related subjects. As a Society our constitution calls for the study of maps, publishing results where applicable, and asks us to protect and conserve these maps for the cultural benefit of posterity. Sometimes we generate interesting research in the cartographical field, sometimes we are called on to keep private persons and institutions from destroying their map archives. On other occasions, our members hold talks and presentations on subjects related to our hobby and draw numbers of interested 'cartophiles' to attend these. The membership is composed of map collectors, academics and curators of map collections and of dealers in the field. It is this combination of interests which makes us strong and makes achieving the goals of the Society feasible. Personally, I promote the idea that map collecting is to be compared to a three-legged stool. Were there no academics studying maps, the collectors would not know what to buy; they would lack information as to which maps are outstanding, rare or rarissima and why they would be worth (a lot?) collecting. Without the dealers, collectors would have no place to buy and without collectors the dealers could not make money. Without collectors and dealers, our academics would work in a void, with nobody to appreciate the information they unearth. Each of these three categories serves to keep the essence of historical cartography upright and over the years – more or less – in balance. No category is superior to any other, and it is the sum total of these categories which makes the system work.

Since its inception, IMCoS has hosted over 30 International Symposia, organised on its behalf. The venues range from Sydney/Australia and Wellington/New Zealand in the south to Reykjavik/Iceland and Oslo/Norway in the north. Our 2013 Symposium was hosted by the University of Alaska in Fairbanks. In an east-west direction we have held our Symposia in Riga/Latvia, Cologne/Mainz, Amsterdam, London, Chicago, Denver, San Francisco, Tokyo and Singapore, whilst Seoul/Korea and Cape Town/South Africa are currently in preparation. Istanbul, Guatemala City, Madrid and Modena are more pearls on the same IMCoS string which has become too long now to report here on all our symposia. Countless members have viewed the extremely rare maps that institutions do not normally put on display or show to ordinary visitors, but which they gladly and proudly make available to real lovers of early maps when a Symposium comes their way. Many speakers of note and many young academics have presented their lectures on these occasions. A considerable number of these presentations were re-worked into articles and subsequently published in the quarterly *IMCoS Journal* for the benefit of the members who were unable to attend the symposia. For the first time, follow up of an International Symposium has resulted in a dedicated publication. The presentations of our excellent 2012 Symposium in Vienna/Austria are collected, edited and published by Gerhard Holzer, Valerie Newby, Petra Svatek and Georg Zotti.

As current chairman of IMCoS, it is both an honour, my prerogative and pleasure, to write the introduction to the book containing these presentations. The Vienna Symposium was organised by a Viennese team headed by Dr. Stefaan Missinne, a Belgian national living in Austria. In view of the fact that 2012 was pre-destined to become the Gerard Mercator year, the famous scientist and cartographer being born 500 years ago in Rupelmonde/Belgium, the emphasis on Mercator's achievements comes naturally in this case. Vienna is also the home to the only Globe Museum in the world and through the kind and knowledgeable assistance of Dr. Rudolf Schmidt (1924-2013), their globe collection is rivalled by none other. We gratefully acknowledge the efforts of Dr. Petra Svatek and the team, who have edited the presentations- no mean feat for sure- and trust that the resulting publication now in your hands, will not only reflect the proceedings of the 2012 IMCoS Vienna Symposium, but will also in retrospect serve as reference material for those interested in historical cartography, whether they be attendees of the Symposium, academics involved in these matters, or collectors and map dealers in general, who have an interest in the various subjects discussed. On behalf of IMCoS and its members, I would like to express my gratitude and appreciation to the

organising team of the Symposium, its speakers and now to the editing team that has worked so hard. Financial support by “Cambridge Scholars Publishing” is gratefully acknowledged; the publication would otherwise have been impossible to produce.

As a map collector myself and chairman of our Society I would like to wish you all pleasant reading and if you have attended the Vienna Symposium in person, it will no doubt bring back memories of the happy days we spent together in Vienna in September 2012!

September 2013, Lisse/The Netherlands
Hans D. Kok, IMCoS Chairman.

500 YEARS OF MERCATOR

GERHARD HOLZER, VALERIE NEWBY,
PETRA SVATEK AND GEORG ZOTTI

In 2012 scholars from different academic disciplines commemorated the 500th birthday of Gerhard Mercator (1512-1594), the most important cartographer and globe maker of the 16th century. Gerhard Mercator was born on the 5th of March 1512 in Rupelmonde in Flanders which was part of the Habsburg Empire. Mercator is remembered amongst others for his publication "Atlas sive Cosmographicae Meditationes de Fabrica Mundi et Fabricati Figura" (1595) and for his specific cylindrical map projection (1569) which is still in use on maritime maps today.

On this occasion, the "International Map Collectors Society" together with the Austrian Academy of Sciences and the Austrian-Belgian Society, organized an international conference which was held in the Austrian Academy of Sciences in Vienna from 9th to 12th of September 2012. The talks were given by internationally renowned map historians, historians and geographers on the collective topic "Gerhard Mercator and cartography in the Habsburg Empire during the 16th century". The organizing committee had put together a program with lectures in the mornings and visits to different map and globe collections in the afternoons. Included were the Woldan Collection of the Austrian Academy of Sciences, the Globe Museum and the "State Hall" of the Austrian National Library with the special exhibition "Cartographic rarities of the Austrian National Library from the first half of the 16th century", the Department of Geography of Vienna University (research group "Cartography and Geoinformation"), the Austrian State Archives, the "Wien Museum", the Schallaburg castle and the Benedictine Monastery of Melk.

Over the last few decades many studies have addressed Mercator's life and cartographic output. But nevertheless many gaps in the research into his globes, maps and interrelationship with other cartographers still need to be filled. The aim of the Viennese IMCoS Conference was to present the latest research on Mercator with a view to his sources, his relationship with other scientific disciplines and cartographers of his time, as well as

his role in the wider world of Renaissance cartography and Humanism. Among other things, new research results were presented on his scientific library, on an astrological disk on the base of his celestial globe and on the source of the star positions of this globe. Also on the similarities and differences between the different versions of his world map (1596), his cosmographical ideology, and on his relationship with other cartographers of the Habsburg Empire including Wolfgang Lazius whose maps became an important source for him.

Besides cartography and geography Mercator also had an excellent knowledge of many other scientific disciplines like mathematics, history, theology, philosophy and astronomy. Therefore he was a truly universal scholar. These interdisciplinary research topics are also the subject of the articles of this book which is structured into the following parts:

1. Cartography in the Habsburg Empire during the time of Mercator
2. Gerhard Mercator: his "Atlas" and the cosmography of his time
3. Gerhard Mercator: acquaintances and sources
4. Globes and celestial maps in Mercator's time

In the first part named "Cartography in the Habsburg Empire during the time of Mercator" five articles address the most important maps and cartographers of the Austrian and Hungarian part of the Habsburg Empire during the 16th century. Some maps of these cartographers became an important source for Mercator's own maps of areas which today comprise Austria, Hungary and Slovenia. During the 16th century a major contribution came from members of the "Second Viennese School of Mathematics and Astronomy" (Georg Tannstetter, Johannes Cuspinian), Wolfgang Lazius, who produced the first Atlas of the Austrian provinces ("Typi chorographici provinciarum Austriae", 1561), and Johannes Sambucus, the author of many maps of Hungary. In addition to these rare maps, attention was increasingly paid to the production of urban maps. For example, the first apex of the urban mapping in Vienna began immediately after the first Turkish siege of the city in 1529, when new fortifications were built and surveying of the city became increasingly important. For this reason, a series of maps of Vienna was produced during the 1530s and 1540s.

The articles of the second part about "Gerhard Mercator: his "Atlas" and the cosmography of his time" give us an overview of Mercator's "Atlas" of 1595, his cosmographical ideas and the cosmography of his time. It was Mercator who conceived and justified the prominent role of cosmography as a leading science in the 16th century.

The third part deals with the question of Mercator's sources and acquaintances. Mercator's relationship with the famous Antwerp cartographer Abraham Ortelius, the scientific books of his library and the "Atlas Bruxellensis" as an important source, are described in three articles.

The content of the fourth part talks about the "Globes and celestial maps in Mercator's time". The main focus of the two articles is on Mercator's terrestrial (1541) and celestial (1551) globes and on other globes and celestial maps of his time.

As editors of this book we would like to thank Mag. Jan Mokre and his team from the Austrian National Library, Dr. Robert Rill, Dr. Sándor Békési, Ass.-Prof. Dr. Andreas Riedl and Dr. Gottfried Glaßner for all their professional help and guidance, Dr. Rudolf Schmidt (1924-2013) and H.E. Ambassador of the Kingdom of Belgium in Austria Frank Recker for unforgettable receptions, and the IMCoS committee for their support in publishing this book. Many thanks also to Dr. Stefaan Missinne (IMCoS Austria), Brigitte Beidinger, Rüdiger Schultz and Dr. Helmut Suppan, who helped, together with the editors, to organize this conference, and Francis Herbert Hon. FRGS for his great help in correcting some articles of non-English speaking authors.

We hope this book will stand as a lasting memory of this memorable symposium.

PART 1:

CARTOGRAPHY IN THE HABSBURG EMPIRE IN THE TIME OF MERCATOR

CHAPTER ONE

GEOGRAPHICA FROM THE FIRST HALF OF THE 16TH CENTURY IN THE HOLDINGS OF THE AUSTRIAN NATIONAL LIBRARY[1]

HELGA HÜHNEL

What geographical works would Mercator have found before 1550 if he had had the possibility to use a universal library or collection of that time? Also, what works were collected and retained in a universal library during this important era of geographical discoveries and European expansion overseas?[2]

With regard to the Austrian National Library (ANL) I have looked into these questions, and have screened the geographical holdings from 1500 to 1550 in order to sift out an appropriate image of this science. The ANL, as successor to the former imperial court library and the Habsburg family library, contains a huge store of knowledge. Due to the familiar relationship with the Spanish sovereigns, to whom intermittently Portugal also belonged, the court in Vienna was always very well informed about the New World and received many valuable objects like portolan charts, maps and reports. Likewise the library obtained extensive collections after the death of their private owners by purchase and sometimes by donation, such as the Fugger and the Philippe Stosch collections and the library of Prince Eugene of Savoy, each of them containing many geographical treasures.

To find a suitable place for the rapidly growing library, Emperor Charles VI – Maria Theresa's father - ordered the construction of a jewel of Baroque architecture for his Court Library. In 1726 the baroque State hall, one of the most beautiful historic libraries in the world, was completed and is today home to 200.000 books from 1501 to 1850. It was open to the public right from the beginning.

The ANL objects with a geographical theme of the period have been divided into five categories:

1. New editions of geographical works from early times
2. Sources of the history of discovery
3. Early travel reports
4. Cosmographies
5. Regional descriptions and – cartography

New editions of geographical works of the ancient world

The 16th century was characterized by humanism. Antique culture was imitated as unsurpassed and formed the basis of knowledge. The importance of geography for theology and history can be seen due to some of the following citations. Geography built the "*primum iter ad deum*"[3] as penned by Melanchthon (1497-1560), who introduced geography in Wittenberg and in other protestant universities in 1523. On the Catholic side the famous Johannes Cochläus (1497-1552) wrote in the dedication letter of his description of the earth[4] "*credo equidum geographiam id esse histories quod sol est mundo*". Joachim von Watt /Vadian (1484-1551), one of the most eclectic humanists in the German speaking world, explained to his Viennese students that someone who neglects the study of geography is an *inhumanus, not an* erudite man.[5] To evaluate classical literature and history correctly, a geographical context was needed. Geographical information was picked up and amassed from encyclopaedic and historical texts from antiquity. The rapid development of printing was encouraging the humanists to publish writings by Strabo[6], Pomponius Mela[7], Plinius the Elder[8], Gaius Julius Solinus[9] and Ptolemy, just to name some of them, over and over again.

In the ANL there are approximately 100 editions of early geographical works which were published between 1500 and 1550. Many of them were annotated by famous humanists such as Johann Cochläus, Georg Tannstetter, Peter Apian, Heinrich Glarean, Joachim Watt/Vadian, Johannes Camers and Jacob Ziegler. These humanistic *scholia* are much more than text comments, they offer occasions for their own considerations and excursions into the history of discovery.

For a long time the assumption persisted that the mid-European humanists, considering their adherence to the antique texts, had no interest in information about newly discovered overseas regions in the course of European expansion.

Fig. 1-1: P. Apian / L. Fries, Tipus orbis Universalis iuxta Ptolemei Cosmographi traditionem (…). In: J. Camers: … in C. Julii Solini ennarationes. Wien 1520 (ÖNB, 393716-C.KAR)

Recent studies have shown this to be the contrary though. It seems paradoxical that the scientific community would not have responded to new geographical discoveries. Based on many representative sources, Dieter Wuttke shows that Renaissance humanism conceived humanities and the natural sciences as unified.[10] This is also documented by Klaus Vogel, as the humanists took an active interest in the history of discovery in the German speaking areas. A letter from 1503 by the imperial secretary Johannes Kollauer to Konrad Celtis was circulated among the humanists about a newly discovered continent in the southern hemisphere.[11]

Fig. 1-2: A. Vespucci, Von der neuw gefundenen Region … Augsburg 1505 (ÖNB, 393597-B.KAR)

Nevertheless the new knowledge was not assimilated immediately with the traditional view of the world. It was rather a gradual transition, inducing a wide reception only in the 1630s. Examples can often be found, where in addition to the interpretation of antique sources, also new

insights of expeditions and the reception of travel reports were used as deepening knowledge of the world – such as for instance (Fig. 1-1) the world map *Tipus orbis Universalis* (…) by Peter Apian and Lorenz Fries in Johannes Camers' annotated edition of Solinus, which was published in Vienna in 1520 and with permission of the publisher, also in Vadianus Pomponius Mela's edition in Basel (1522), both in our holdings.[12] There is a close geographic likeness to the Waldseemüller map of 1507, and for a long time it was considered as the first map to name America.

Sources of the history of discovery

Instead of speculation about the image of the world, many reports of discoveries gradually led to verified knowledge from the late 15th century. The ANL owns several rare sources of early history of discovery, for example Amerigo Vespucci's voyages. In some letters, which were printed soon after, Vespucci had reported on his journeys to America. His letter to Lorenzo di Medici was published in Latin under the title *Mundus Novus* and the ANL is in possession of two early undated and the first dated edition from 1504 (Augsburg), as well as the German translation from 1505[13] (Fig. 1-2)

Apart from the Medici letter there is the so-called Piero Soderini letter, which was printed in Florence in 1506 and which tells of Vespucci's four journeys to America, although only two of them are verified. The Latin translation was added to the 1507 published *Cosmographiae Introductio* of Martin Waldseemüller and Matthias Ringmann as *Quatuor Americi Vesputii Navigationes*. We do not have the *Editio princeps*, but we do have the second and third editions from May 7th and September 4th 1507 as well as the German translation (Fig. 1-3), which was published in 1509 by Grüninger in Strasbourg.[14]

The distribution of Vespucci's report and its success was enormous. No other text about a journey has had this world-wide historical impact. Martin Waldseemüller and Matthias Ringmann named the newly discovered continent America after Vespucci's christian name.

Another important source for the history of discovery are the reports about the first circumnavigation by Ferdinand Magellan. In 1523, only one year after the return of the only surviving ship of Magellan's fleet, three printed texts in Latin circulated the news in Europe. They are a product of journalistic investigations by erudite humanists, and all of them are available at the ANL.

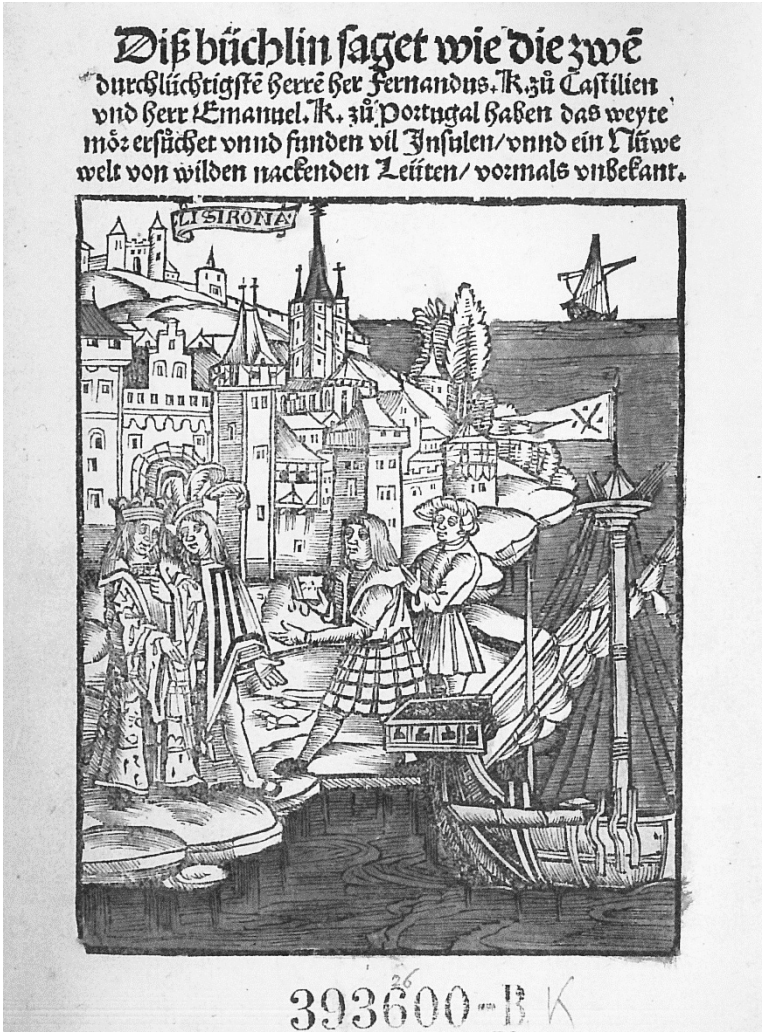

Fig. 1-3: A. Vespucci, Disz Büchlein saget … Straßburg 1509 (ÖNB, 393600-B.KAR)

The first text *De Moluccis insulis* comes from Maximilianus Transylvanus, a diplomat and secretary to the Emperor Charles V. In September 1522, while at the court of Valladolid, he interviewed the surviving members of the Magellan expedition (Elcano and Pigafetta) about the first voyage round the world. Eager to acquire fame as a writer,

he produced his text in October 1522 as a letter to Matthäus Lang, Archbishop of Salzburg, who has suggested that he perform the interview in the first place. This first published report about Magellan's circumnavigation had already been printed in Cologne in January 1523.

The second report about this event is a printed letter by Johannes Schöner *De nuper sub Castiliae ac Portugalliae Regibus …* (Kirchehrenbach 1523), which was used as a collateral paper to a globe manufactured by him. Schöner quotes Maximilianus Transylvanus as source for this letter. This bibliographic rarity proves how fast news about the recent discoveries was circulating in Central Europe. Because of circulating doubts concerning Amerigo Vespucci's merits, Schöner now allocated America's discovery to Columbus in 1523, contrary to his previous Cosmography from 1515 and replacing the name America by „Terra firma". The third report about the Magellan expedition is to be found in the major work of Petrus Martyr d'Anghiera *De orbe novo decades* – printed as a letter to Pope Hadrian VI. He, among others, recommended the Pope consult a globe, in order to be able to follow the route of the circumnavigation.[15] In 1511 Petrus Martyr was nominated the royal chronicler of the Indian council. His "Decades of the New World" in Latin, a series of letters and reports of the early explorations of Central and South America, rank among the most remarkable texts of Iberian humanism with regard to form and content about colonial America and the early explorations.

Collections of travel reports

It was a 16th century novelty that these accounts of the history of discovery and travel reports were collected in anthologies in order to make them available to a wider public.

The edition *Paesi novamente ritrovati*, of Fracanzano Montalboddo published in 1507 in Vicenza was a very successful work of that kind. It contains amongst others travel reports of Columbus, Vespucci, da Gama, Cabral and Cadamosto. The ANL's map department has one unique Latin edition of Montalboddo from the year 1508. (Fig. 1-4) Remarkably enough to this *Itinerarium Portugalensium* six unassociated woodcut maps were added, illustrating the reports about the journeys along the West African coast undertaken by Alvise Cadamosto and Pedro da Sintra in the 15th century. (Fig. 1-5) These are the earliest known examples of detailed maps of West Africa.

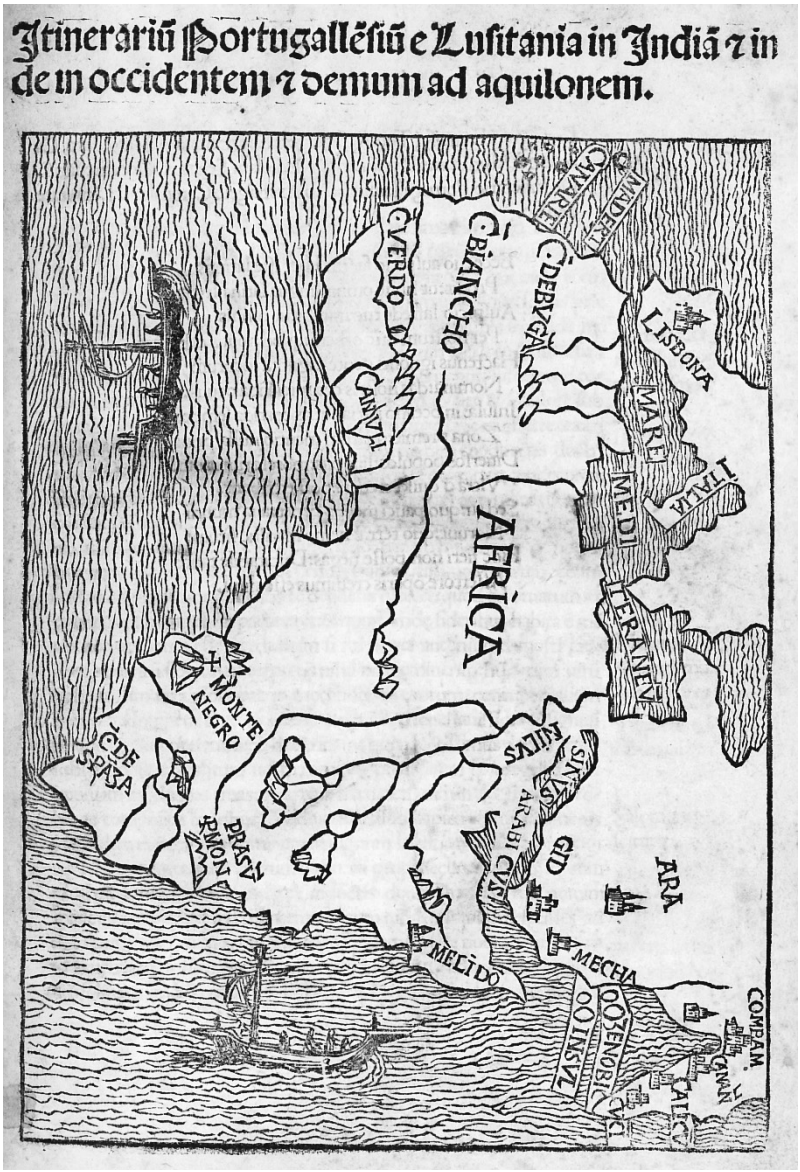

Fig. 1-4: F. Montalboddo, Itinerariu[m] Portugalle[n]siu[m] ... Milan 1508 (ÖNB, 394092-C.KAR, title Page)

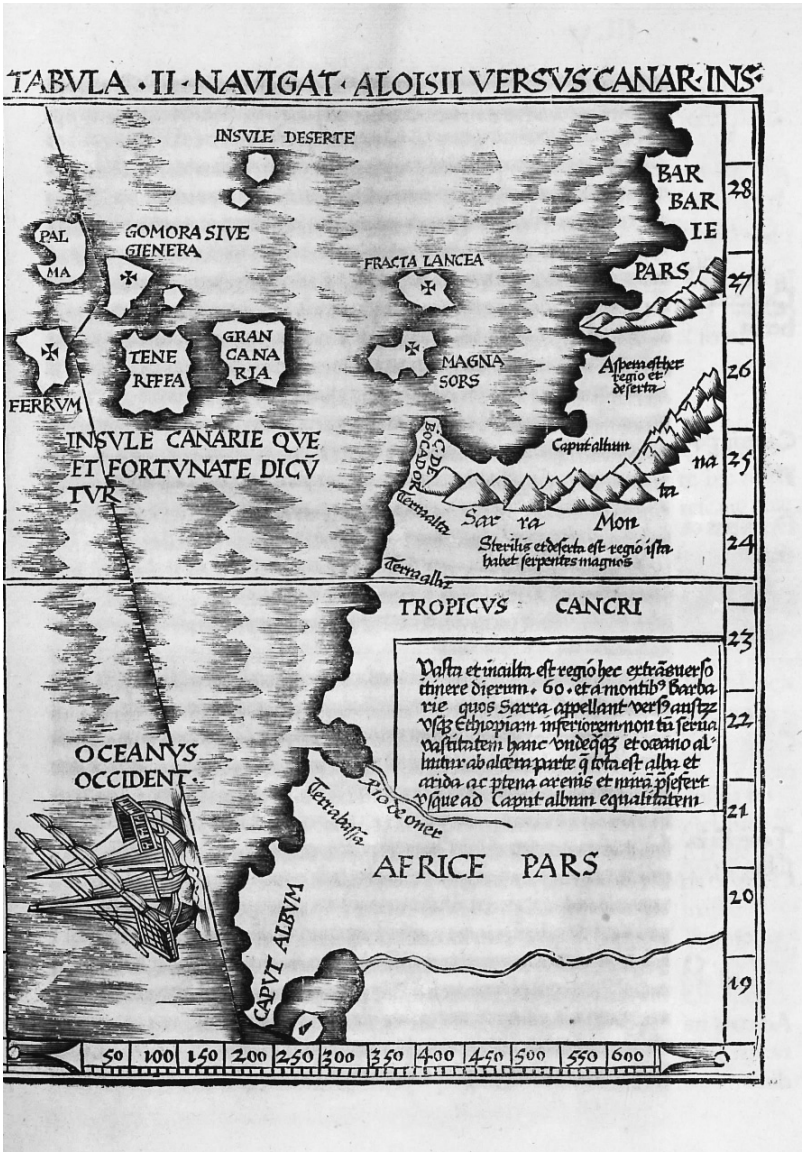

Fig. 1-5: Westafrika. Tabula II. In: F. Montalboddo, Itinerariu[m] Portugalle[n]siu[m] … Milan 1508 (ÖNB, 394092-C.KAR, Tab. II)

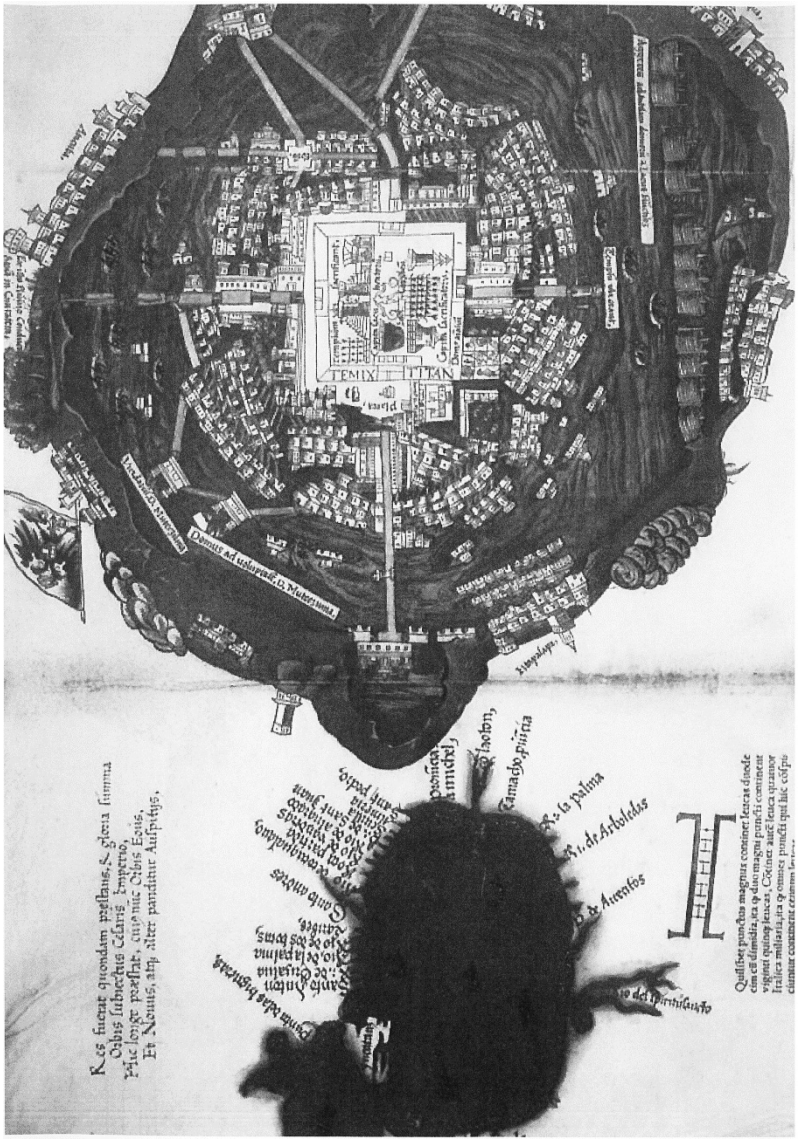

Fig. 1-6: Mexico City and a sketch of the Caribbean before 1522. In: H. Cortés, Praeclara Ferdina(n)di ... Nuremberg 1524 (ÖNB, 394471-C.KAR)

Peter Meurer has recently proved that this series of maps was created as a test run for a projected publication in the Strasbourg environment of Martin Waldseemüller and Lorenz Fries in about 1520 to 1525, but which was never published.[16]

The same year a German translation by Jobst Ruchamer of this collection of travel reports was released. The title *Newe unbekanthe landte und ein newe welte in kurtz verganger zeythe erfunden* (new unknown lands and a new world recently discovered), published in Nuremberg 1508 is already defining very distinctly the traditional knowledge of earlier times from empirical knowledge of the early modern times. In 1532 a new, extended Latin version of the Montalboddo, adapted by Simon Grynäus and Johann Huttich was published as *Novus orbis regionum*. Two years later it was again transferred into German by Michael Herr under the title *Die New Welt der landschaften und Insulen, so bis hie her allen Altweltbeschrybern unbekant* … (Strasburg 1534) without him having known the translation by Ruchamer from 1508.

In his *Cosmographia* from 1544 Sebastian Münster still used parts from the Grynäus. If nowadays the Grynäus is cited, only a few people know that this is about an extended edition by Montalboddo from 1507. One of our most important sources for the history of discovery is a report by Hernan Cortés. Cortés left for Mexico to conquer the Empire of the Aztecs and between 1519 and 1521 he sent three letters to Emperor Charles V where he reported his progress in conquering Mexico. Already in 1524[17] this news was printed in Nuremberg, though probably in small numbers as only 15 copies have survived. From these copies just six (and only two are coloured) include a city map of Tenochtitlan (Fig. 1-6), today Mexico City, with a sketch of the Caribbean.

Our copy contains a superbly coloured map printed on finest parchment. In contrast to the other copies, the dedicatory inscription is handwritten. This is undoubtedly the original edition of the Cortés plan.[18] In the age of discovery broadsheets and news sheets plus published letters were an important medium of distribution in Europe about new information. These news sheets from the first half of the 16th century rank among the earliest printed reports in German of the Portuguese expeditions to Brazil and India. The historical-cultural importance of this five-page *Copia der Newen Zeytung auß Presillg Landt*, of which only twelve copies are known, is enormous. It gives contemporary information about a Portuguese merchant shipping journey to Brazil and India.