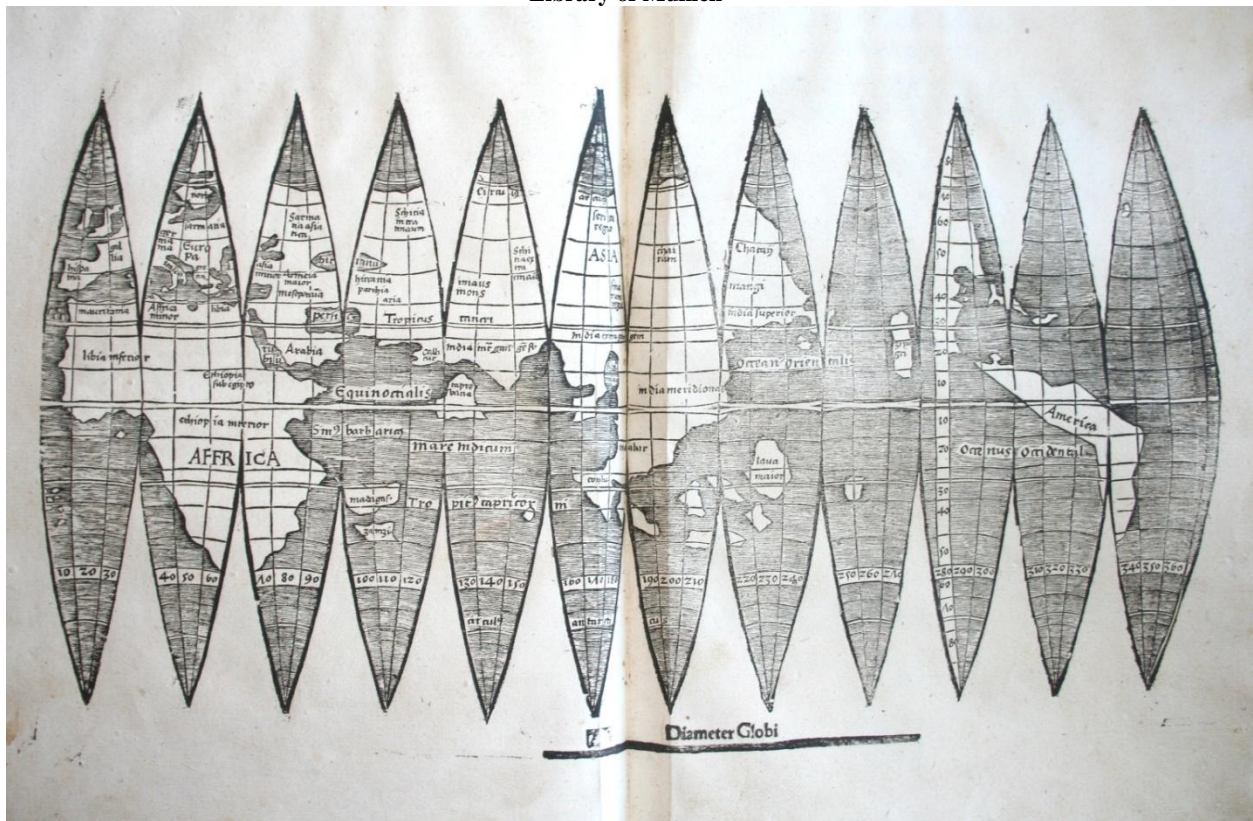


Details, Date, and Significance of the Fifth Set of Waldseemüller's Globe Gores Recently Discovered in the Munich University Library

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This past June, Elke Humml, a librarian at Ludwig-Maximilians-Universität (LMU) in Munich, discovered a previously unknown exemplar of globe gores originally designed by the cartographer Martin Waldseemüller (fig. 1).

Figure 1: The newly discovered globe gores, University Library of Munich, ULM Cim. 107#2. Courtesy of the University Library of Munich



In the nineteenth century this set of the gores had been bound between two copies of Johannes Peckham's *Perspectiva communis*, one published in 1504, and the other in about 1510.² No more is known about the provenance of the gores, unfortunately. Only four other exemplars of these globe gores were previously known to exist,³ so this was a sensational find—all the more so because this set of gores is different from the others. The purpose of the article is to give some details about the gores and the significance of this discovery.

Martin Waldseemüller (c. 1475-1520),⁴ who spent most of his life in the town of Saint-Dié near Strasbourg, is most famous for his large world map of 1507 which was printed on twelve sheets and is the first to apply the name America to the New World (fig. 2).

Figure 2: Martin Waldseemüller's 1507 world map, Courtesy of the Library of Congress.



Figure 3: "America" on Martin Waldseemüller's 1507 world map (detail) Courtesy of the Library of Congress.



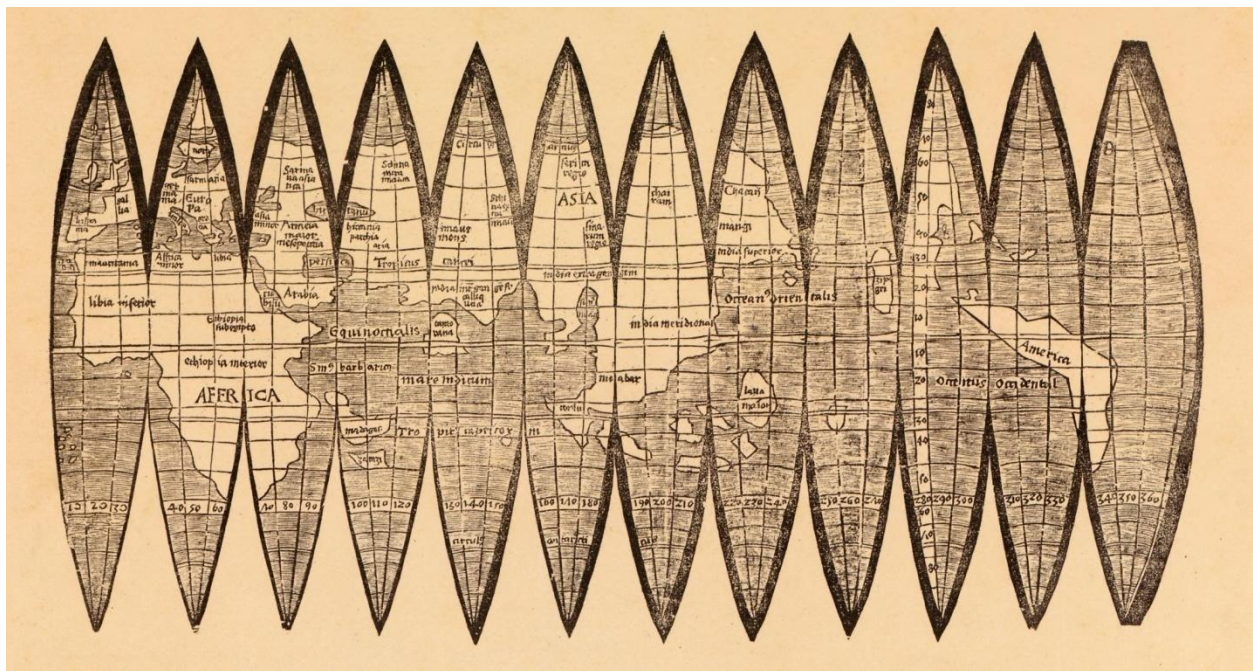
This map survives in only one exemplar which was discovered in Germany in 1901 and is on permanent display the Library of Congress in Washington DC.⁵ When it was originally sold this map was accompanied by a set of globe gores (which also apply the name "America" to the New World) and a book titled the *Cosmographiae introductio* (Introduction to Cosmography),⁶ and

this book contains an explanation of the name for the newly discovered lands. Waldseemüller and his co-author Matthias Ringmann noted that the explorer Amerigo Vespucci had recently discovered a “fourth part” of the world, and suggested that “Inasmuch as both Europe and Asia received their names from women, I see no reason why anyone should justly object to calling this part Amerige, i.e., the land of Amerigo, or America, after Amerigo, its discoverer, a man of great ability.”⁷ This naming, made in the small town of Saint-Dié five hundred years ago, continues to have influence even today.

Thus the globe gores were part of the same cartographic and cosmographic project as the famous 1507 world map, and also participate in the naming of the newly discovered lands. It is tempting to think that the globe gores were sold with the map not only to help the buyer of the map understand the projection used in the map, but also to emphasize Waldseemüller’s boldness in representing all 360° of the earth’s circumference at a time when much of the earth’s surface was still unknown.

In news reports on the discovery of the fifth set of gores, Sven Kuttner, Rare Book Librarian at the University of Munich, noted some differences between the new set and the four others.⁸ On the four previously known sets of gores, most of the segments of the gores have a thick black border (fig. 4), while on the LMU set they do not.

Figure 4: A facsimile of the 1507 edition of Waldseemüller’s globe gores, courtesy of the Library of Congress.



On the four known sets, Calicut is in the fifth segment of the gores, on the Malabar Coast northeast of the island of Taprobana, while on the LMU set it is on the fourth segment, northwest of Taprobana. Kuttner also notes that the style of the hatching that represents the waters of the oceans and seas is different, the shapes of some of the letters are different, and also the watermark matches that in a book from 1518,⁹ which suggests that the gores were printed after the first edition of 1507.

It should be stated clearly that the LMU set is printed from an entirely different woodblock than the edition of 1507, and there are other important differences of detail between the LMU set and the four other known set that confirm that the LMU set represents a different, previously unknown edition. The most striking is that the LMU set includes at the bottom a thick line with the indication “Diameter Globi” just above it, indicating the diameter of the sphere onto which the gores should be glued. These words are printed from typeface that had been set into the woodblock of the gores, a technique used on Waldseemüller’s 1507 and 1516 maps.¹⁰ The typeface used is the same as that used by Waldseemüller in his *Cosmographiae introductio* and also for some of the text blocks on his 1507 and 1516 maps,¹¹ but this part of the block was over-inked when the LMU set was printed, as the letters are printed heavily and the ink bled into the paper around each letter. The addition of the words “Diameter Globi” seems designed to assist the purchaser of the gores, for without this indication of the diameter of the globe, the customer would have to measure the equatorial length of the gores and divide that distance by π in order to determine the correct diameter. Incidentally this phrase is a good indication that although the title of the *Cosmographiae introductio* says that it is to be accompanied by a *Universalis Cosmographiae descriptio tam in solido quam plano*, “a world map both in three dimension and in two,” the gores were sold as gores rather than already glued onto a sphere.

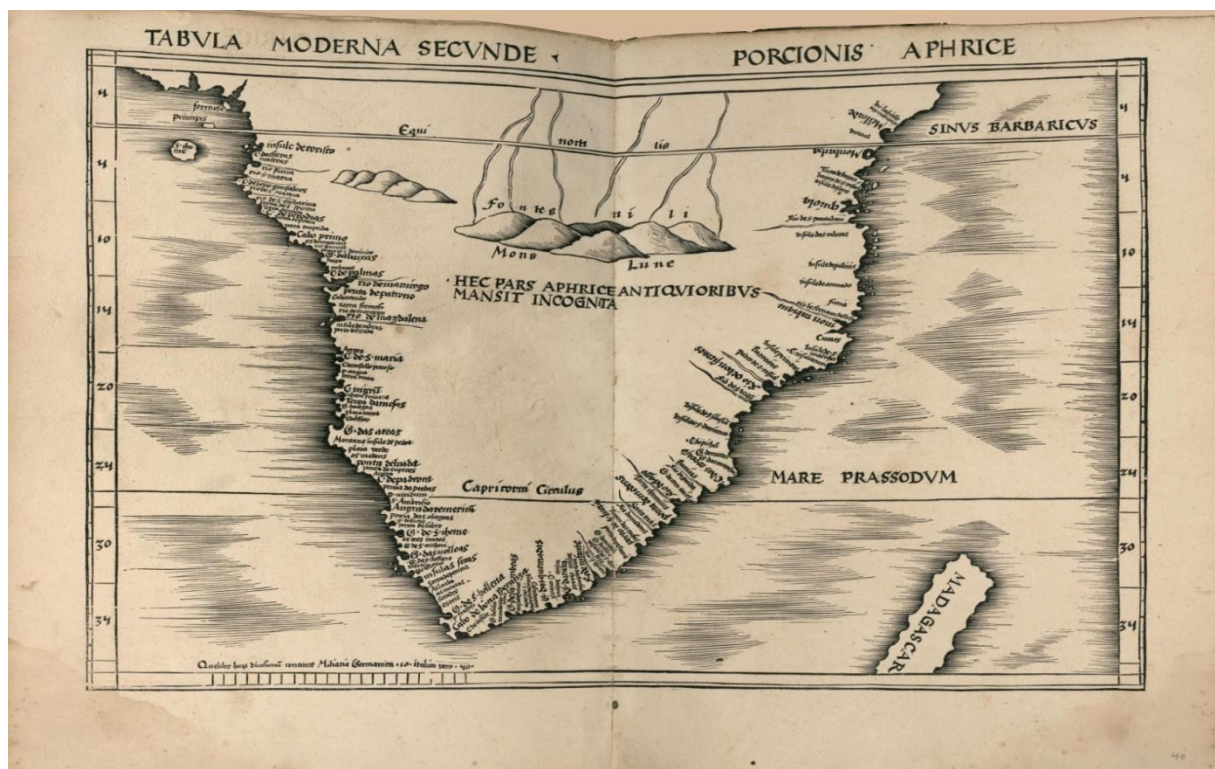
In general the LMU gores follow the cartography of the other gores very closely, with very minor variations in the contours of the shorelines that seem accidental. There are two changes that seem to be intentional. First, on the four previously-known gores, the shape of western Cuba is not well defined, while on the LMU gores it is more articulated—more like the image of the island on the large 1507 map. Thus the creator of the woodblock for this version of the gores tried to make them somewhat more accurate in this regard than the other version.

The second apparently intentional change in the gores’ cartography is much more interesting; it involves the shape of Madagascar. It is clear that originally on the woodblock of the LMU gores the island had the distinctive “L” shape that Waldseemüller gave it on his large 1507 map and also on the four other extant exemplars of his globe gores: Waldseemüller probably gave the island this form through the influence of Henricus Martellus, for the island has this shape on a map evidently designed by Martellus that was printed by Francesco Rosselli.¹² On the LMU gores, the woodblock has been modified so that the part of the island north of the Tropic of Capricorn has been eliminated, replaced by hatchings that indicate water, though the former outline of the island is still visible. Although Waldseemüller shows Madagascar extending north of the Tropic of Capricorn on the new world map in his 1513 edition of Ptolemy’s *Geography* (the so-called Admiral’s Map, fig. 5),¹³ on his new map of southern Africa (fig. 6), the island is entirely south of the Tropic.

Figure 5: The so-called Admiral's Map in the 1513 edition of Ptolemy's *Geography*, courtesy of the Library of Congress.

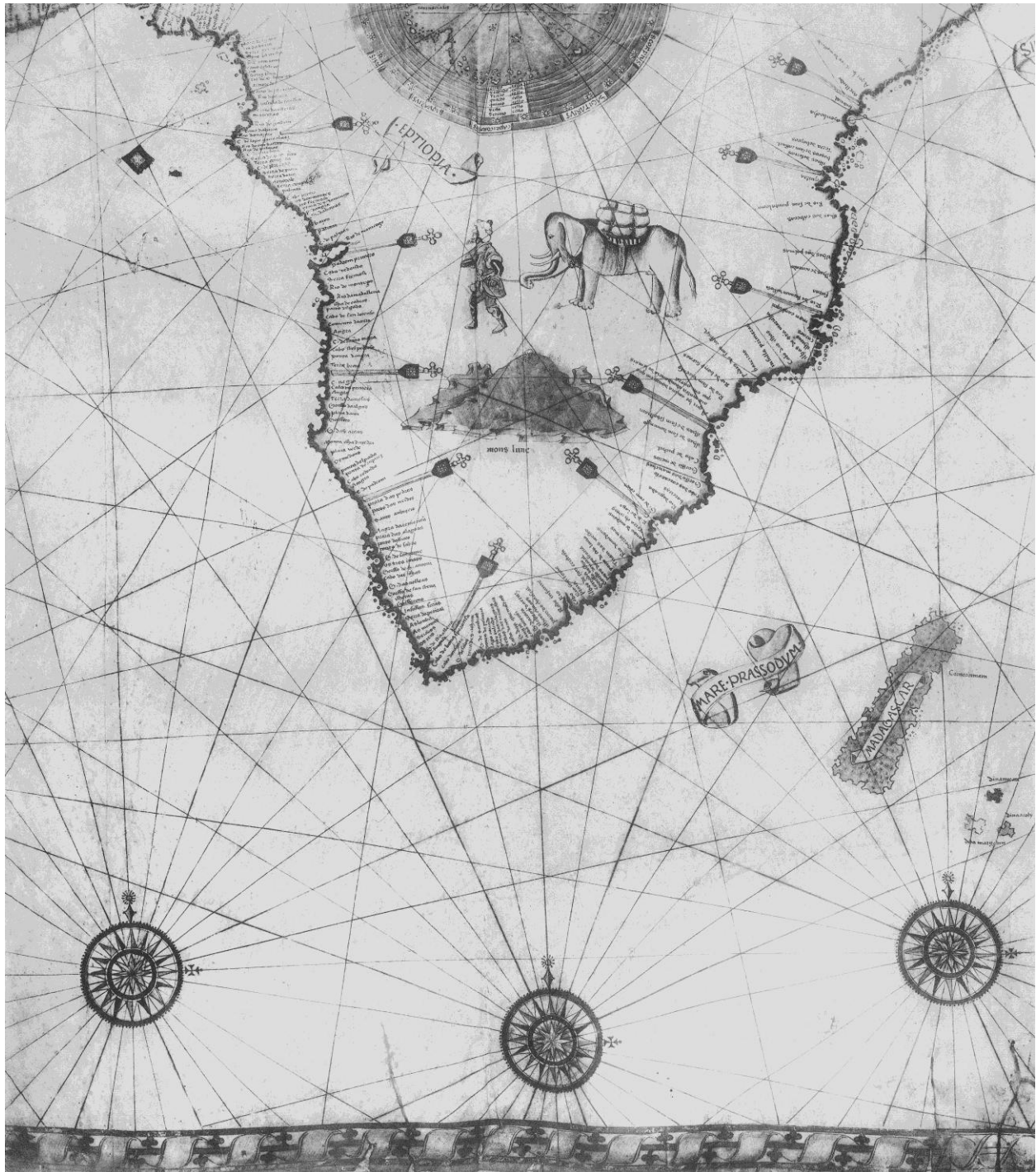


Figure 6: The new map of southern Africa in the 1513 edition of Ptolemy's *Geography*, courtesy of the Library of Congress.



So it seems that the modification of Madagascar on the LMU gores was based on Waldseemüller's following of a newer source with regard to the position of the island: the nautical chart of Nicolo de Caverio of c. 1504 (fig. 7),¹⁴ which also locates the island to the south, rather than a map by Martellus that was ten or fifteen years older.

Figure 7: Southern Africa and Madagascar on the nautical chart of Nicolo de Caverio, c. 1504. From the facsimile by Stevenson (1908), courtesy of the Library of Congress.



Thus the change to Madagascar on the LMU gores confirms the watermark evidence that the gores are later than 1507. Although Waldseemüller had Caverio's chart when he made his 1507 map, and followed it closely for placenames in the New World and Africa,¹⁵ it was only at a later date that he followed it in regard to the location of Madagascar.

It is more difficult to know what to make of the change in the position of Calicut alluded to above. The geography of Waldseemüller's new map of the world in the 1513 edition of Ptolemy is different enough from that of the 1507 map that it is difficult to compare details of this nature, particularly as the 1513 map does not indicate longitude. But there is an interesting piece of evidence that suggests that the position of Calicut on the LMU gores represents an updating of the position on the other surviving gores and on the 1507 map. In his terrestrial globe of 1515, Johann Schöner followed Waldseemüller's 1507 map very closely,¹⁶ but he places Calicut to the northwest of Taprobana, in a position more similar to that on the LMU gores.

The LMU gores have another important feature that provides guidance as to their date: they include the name "America" in the New World. This name had been proposed in the *Cosmographiae introductio* and included on the large 1507 world map and also the other surviving globe gores, but it is not used in Waldseemüller's 1513 edition of Ptolemy's *Geography*, either in the new map of the world (the so-called Admiral's Map) or in the map of the New World, Atlantic, Western Europe, and West Africa that immediately follows it (fig. 8). Nor does the name appear on Waldseemüller's *Carta marina* of 1516: Waldseemüller had realized that Christopher Columbus rather than Amerigo Vespucci was the discoverer of the New World. Thus while the woodblock for the LMU gores were certainly made after 1507, and after Waldseemüller had abandoned Martellus's conception of the location of Madagascar, they were most likely made before 1513, and quite certainly before 1516.

There is one other map ascribed to Waldseemüller which, in a very interesting way, seems to fit into the same transitional period between the large 1507 world map and the 1513 edition of Ptolemy: namely the so-called Stevens-Brown map at the John Carter Brown Library (fig. 8).¹⁷ This undated map is very similar indeed to the new map of the world in the 1513 Ptolemy (the Admiral's Map), but was printed from a different block, and includes the name America, while the version of the map in the 1513 Ptolemy does not. Thus, the LMU gores are a new version of the gores from 1507, with a modification to Madagascar that brings that part of the map more in line with Waldseemüller's later thinking, while the Stevens-Brown map is very similar to the world map in Waldseemüller's next big cartographic project, the 1513 edition of Ptolemy, but retains an element (the name America) that harks back to his earlier work.

Figure 8: The map of the Atlantic and environs in the 1513 edition of Ptolemy's *Geography*, courtesy of the Library of Congress

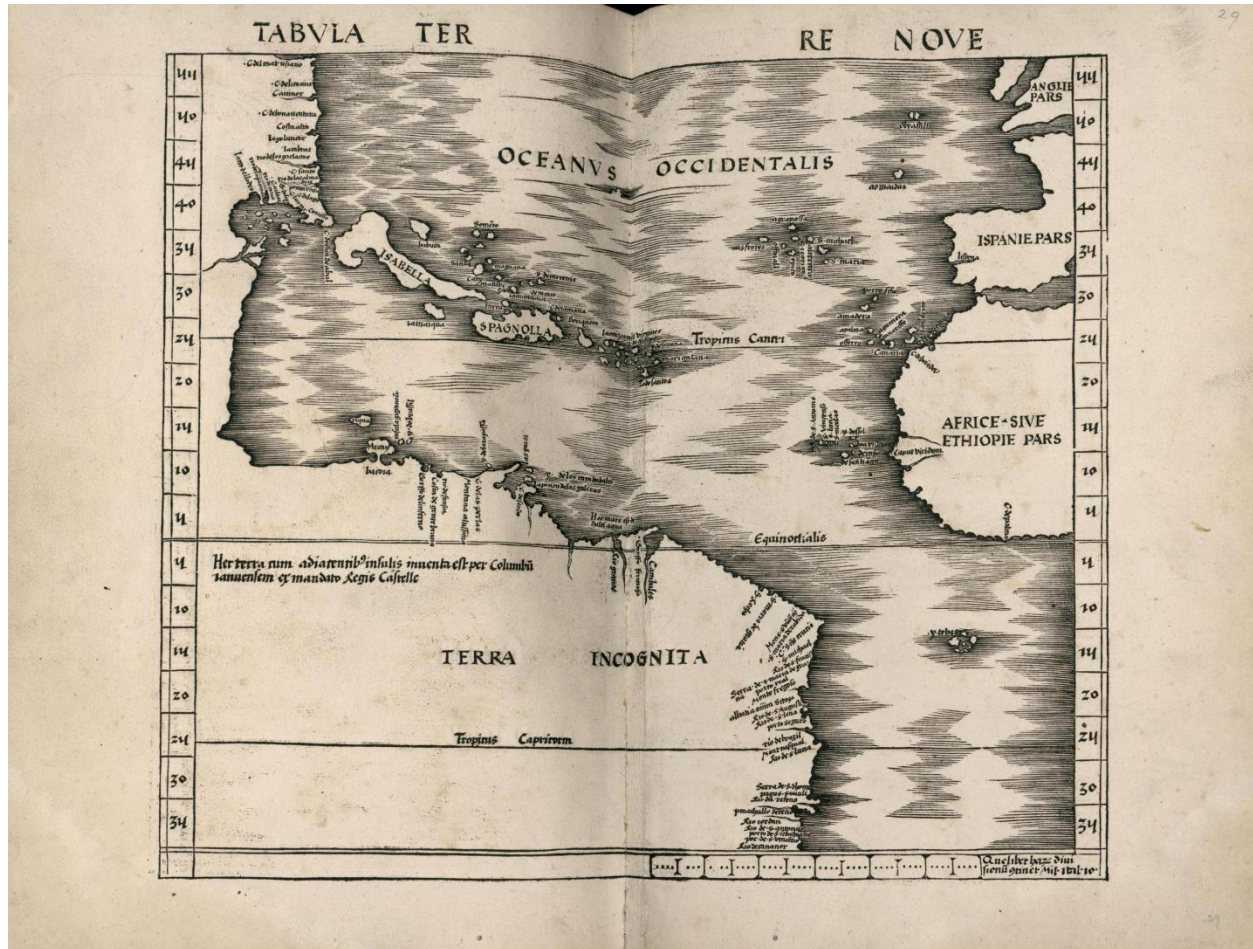


Figure 9: The Stevens-Brown map, courtesy of the John Carter Brown Library at Brown University.



Waldseemüller and his colleagues in Saint-Dié and Strasbourg were experimenters, always seeking the best way to do things. To mention just two examples, in a few copies of the 1513 edition of Ptolemy, the sea is printed in a greenish-grey on the map of the British Isles, and in all copies of the book, the map of Lorraine is printed in three colors (fig. 10), both early experiments in the color printing of maps.¹⁸ The LMU gores provide additional evidence of their desire to improve what they had done before. In addition, the existence of a separate edition of the gores may perhaps lend credence to Waldseemüller's claim in a textblock on his 1516 *Carta marina* that he had printed 1000 copies of his earlier map (i.e. the 1507 map). Perhaps the most important aspect of the LMU gores is that they shed light on the activities of Waldseemüller's circle in Saint-Dié between the production of the large 1507 map and the 1513 Ptolemy, a period about which otherwise we know very little.

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Notes:

¹ Chet Van Duzer is an Invited Research Scholar at the John Carter Brown Library in Providence, Rhode Island. He has published extensively on medieval and Renaissance maps in journals such as *Imago Mundi*, *Terrae Incognitae*, and *Word & Image*. He is also the author of *Johann Schöner's Globe of 1515: Transcription and Study* (2010), the first detailed analysis of one of the earliest surviving terrestrial globes that includes the New World. Much of his work has involved the search for the sources of both texts and images on early maps. Currently he is a resident scholar at the John W. Kluge Center at the Library of Congress and is working on a detailed study of Waldseemüller's Carta marina, and also finishing a study of Henricus Martellus's large world map of c. 1491 which is at Yale. His book *Sea Monsters on Medieval and Renaissance Maps* will be published by the British Library in 2013.

² This work has been translated by David C. Lindberg as *John Pecham and the Science of Optics: Perspectiva communis* (Madison: University of Wisconsin Press, 1970).

³ The four other exemplars of the gores are at the University of Minnesota, at the Bayerische Staatsbibliothek in Munich, in the Stadtbucherei Offenburg, and at Charles Frodsham and Co. Ltd., purchased at the Christie's sale of June 8, 2005. For discussion of the gores see Henry Harrisse, *The Discovery of North America* (London: H. Stevens, 1892; Amsterdam: N. Israel, 1961), pp. 440-442, no. 67, and 467-468, no. 82; Joseph Fischer and Franz von Wieser in *The Cosmographiae introductio of Martin Waldseemüller in Facsimile, Followed by the Four Voyages of Amerigo Vespucci, with their Translation into English* (New York: The United States Catholic Historical Society, 1907), pp. 23-30; Edward L. Stevenson, *Terrestrial and Celestial Globes: Their History and Construction* (New Haven: Yale University Press, 1921), vol. 1, pp. 70-71; *Americana vetustissima: Fifty Books, Manuscripts, & Maps Relating to America from the First Fifty Years after its Discovery (1493-1542)* (New York: H. P. Kraus, 1990), pp. 30-31; and *Cartography, Including the Waldseemüller Gores: Wednesday 8 June 2005* (London: Christie, Manson & Woods Ltd., 2005). A facsimile of the gores was published as *Erster gedruckter Globus, Martin Hylacomylus (Waltzemüller): gehört wahrscheinlich zu seinem 1509 herausgegeben Buch 'Globus mundi'; Zweiter gedruckter Globus, Peter Apianus: in dessen 'Cosmographicus liber', 1524, sich bereits ein Globus mit Gestell abgebildet befinden* (Vienna, 1879). A globular facsimile was also published by Greaves and Thomas of London in 2007.

⁴ For biographical information about Waldseemüller see Hans Wolff, "Martin Waldseemüller: The Most Important Cosmographer in a Period of Dramatic Scientific Change," in Hans Wolff, ed., *America: Early Maps of the New World*, trans. Hugh Beyer et al. (Munich: Prestel, 1992), pp. 111-126; and Chet Van Duzer and Benoît Larger, "Martin Waldseemüller's Death Date," *Imago Mundi* 63.2 (2011), pp. 217-219.

⁵ On Waldseemüller's cartographic work generally see Robert W. Karrow, Jr., *Mapmakers of the Sixteenth Century and their Maps* (Chicago: Published for The Newberry Library by Speculum Orbis Press, 1993), pp. 568-583. Waldseemüller's 1507 world map has been published in facsimile in Joseph Fischer and Franz Ritter von Wieser, *Die älteste Karte mit dem Namen Amerika aus dem Jahre 1507 und die Carta marina aus dem Jahre 1516 des M. Waldseemüller (Ilacomilus)* (Innsbruck: Wagner'schen Universitäts-Buchhandlung, 1903; Amsterdam: Theatrum orbis terrarum, 1968), with a good but brief introduction; and now in John W. Hessler and Chet Van Duzer, *Seeing the World Anew: The Radical Vision of Martin Waldseemüller's 1507 & 1516 World Maps* (Washington, DC: Library of Congress and Delray Beach, FL: Levenger Press, 2012). There are two excellent high-resolution scans of the map available on the internet site of the Library of Congress.

⁶ On the *Cosmographiae introductio* see Henry Harrisse, *Bibliotheca americana vetustissima: A Description of Works Relating to America, Published between the Years 1492 and 1551* (New York: G. P.

Philes, 1866), #44-47, pp. 89-96^c; and M. d'Avezac, *Martin Hylacomylus Waltzemüller, ses ouvrages et ses collaborateurs* (Paris: Challamel aîné, 1867), pp. 36-59. The first edition is reproduced in facsimile and translated into English by Fischer and von Wieser in *The 'Cosmographiae introductio' of Martin Waldseemüller*. A new translation of the *Cosmographiae introductio* by John Hessler, together with detailed analysis of the work, may be found in his *The Naming of America: Martin Waldseemüller's 1507 World Map and the 'Cosmographiae introductio'* (London: D. Giles, 2008).

⁷ See Fischer and von Wieser, *The 'Cosmographiae introductio' of Martin Waldseemüller*, chapter 9, p. xxx in the Latin, and p. 70 in the English translation; and Hessler, *The Naming of America*, p. 101. Fischer and von Wieser's facsimile and translation is available in PDF via www.archive.org; the first (April, 1507) edition of the work is available in high-quality PDF via the online catalog of the Library of Congress, and a high-quality PDF of the August 1507 edition is available at http://epub.ub.uni-muenchen.de/11046/1/Cim_74.pdf. For discussion of the naming of America see Franz Laubenberger (trans. Steven Rowan), "The Naming of America," *The Sixteenth Century Journal* 13.4 (1982), pp. 91-113, with some corrections in Christine R. Johnson, "Renaissance German Cosmographers and the Naming of America," *Past & Present* 191 (2006), pp. 3-43.

⁸ News of the discovery began to be broadly disseminated on July 3, 2012. For the account referred to here, see for example the Chronicle of Higher Education for July 7, 2012, at <http://chronicle.com/blogs/tweed/unknown-copy-of-map-that-gave-america-its-name-turns-up-in-munich-library/29773>.

⁹ Gerhard Piccard, *Die Wasserzeichenkartei Piccard im Hauptstaatsarchiv Stuttgart: Findbuch* (Stuttgart: Kohlhammer, 1961-1997), vol. 4.2, p. 180.

¹⁰ See Elizabeth Harris, "The Waldseemüller World Map: A Typographic Appraisal," *Imago Mundi* 37 (1985), pp. 30-53.

¹¹ This is the typeface that Harris, "The Waldseemüller World Map: A Typographic Appraisal," designates as R1: see her pp. 42-45.

¹² The map printed by Rosselli is in Florence, Biblioteca Nazionale Centrale, Landau Finaly, Carte Rosselli, planisfero. For discussion and illustration of the map see Roberto Almaggia, "On the Cartographic Work of Francesco Rosselli," *Imago Mundi* 8 (1951), p. 27-34, esp. 31-32; and Tony Campbell, *The Earliest Printed Maps, 1472-1500* (London: British Library, 1987), pp. 70-78, esp. 72-74. The Martellus-Rosselli planisphere is also discussed and illustrated in Guglielmo Cavallo, ed., *Cristoforo Colombo e l'apertura degli spazi: Mostra storico-cartografica* (Rome: Istituto Poligrafico e Zecca dello Stato, 1992), vol. 1, pp. 521-524; and in Rodney W. Shirley, *The Mapping of the World: Early Printed World Maps, 1472-1700* (London: Holland Press, 1983), #18, pp. 16-17. The island of Madagascar also has this "L" shape on Martin Behaim's globe of 1492, probably through the influence of Martellus.

¹³ The 1513 edition of Ptolemy's Geography was published by Johann Schott, and is titled *Claudii Ptolemei viri Alexandrini Mathematic[a]e discipline Philosophi doctissimi Geographi[a]e opus*. A PDF of a copy with hand-colored maps can be downloaded from the Bayerische Staatsbibliothek's Digitale Sammlungen at <http://www.digitale-sammlungen.de>, and high-resolution images of all of the pages of a copy of the book can be accessed via the online catalog of the Library of Congress. For discussion of the Admiral's map see Samuel McCoskry Stanton, "The Admiral's Map: What Was It? And Who the Admiral?" *Isis* 22.2 (1935), pp. 511-515.

¹⁴ The Caverio chart is Paris, Bibliothèque nationale de France, Cartes et plans, SH archives 1. The chart is well reproduced in Kenneth Nebenzahl, *Atlas of Columbus and the Great Discoveries* (Chicago: Rand McNally, 1990), pp. 41-43, and at a larger scale in the eleven sheet black-and-white facsimile which accompanies Edward L. Stevenson's study of the map, *Marine World Chart of Nicolo de Caneiro Januensis 1502 (circa)* (New York: American Geographical Society and the Hispanic Society of America, 1908).

¹⁵ For discussion of Waldseemüller's use of Caverio's chart in making his 1507 map see Joseph Fischer and Franz Ritter von Wieser, *Die älteste Karte mit dem Namen Amerika aus dem Jahre 1507 und die*

Carta marina aus dem Jahre 1516 des M. Waldseemüller (Ilacomilus) (Amsterdam: Theatrum orbis terrarum, 1968), pp. 26-29.

¹⁶ For discussion of Schöner's 1515 globe see Chet Van Duzer, *Johann Schöner's Globe of 1515: Transcription and Study* (Philadelphia: American Philosophical Society, 2010) = *Transactions of American Philosophical Society* 100.5.

¹⁷ For discussion of the Stevens-Brown map see Henry Newton Stevens, *The First Delineation of the New World and the First Use of the Name America on a Printed Map* (London: H. Stevens, Son and Stiles, 1928). This book is reviewed for example in *Geographical Journal* 74.1 (1929), pp. 75-77. A more recent discussion of the map may be found in Toby Lester, *The Fourth Part of the World: The Race to the Ends of the Earth, and the Epic Story of the Map That Gave America its Name* (New York: Free Press, 2009), pp. 399-403. An image of the Stevens-Brown map may be accessed through <http://jcb.lunaimaging.com>.

¹⁸ See Rodney W. Shirley, "Karte der Britischen Inseln von 1513: eine der ersten farbig gedruckten Karten," *Cartographica Helvetica* 19-20 (1999), pp. 13-17; and Jean-Marie Gérardin, "1508-2008: A propos de la première carte imprimée du duché de Lorraine et du Vastum Regnum," *L'Annuaire de la Société du Val de Villé* 33 (2008), pp. 57-77. The copy of the 1513 Ptolemy in the Geography and Maps Division at the Library of Congress is one that has the color-printed map of the British Isles, but unfortunately the image of that map available via the library's online catalog was taken in black and white.