The Mapping of the World:

Frieze Masters 2023

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The Mapping of the World:
Frieze Masters 2023

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Frieze Masters 2023

1	Ptolemaeus (1482)	£1,200,000
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10	Qian Yong	£400,000
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12	Azzi	£40,000
13	Anders	£75,000
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17	Hill	£16,000
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Books

The most important geographical treatise to survive from classical antiquity

1 PTOLEMAEUS, Claudius; translated by ANGELUS, Jacobus, and edited by Nicolaus GERMANUS

Cosmographia.

Publication
Ulm, Lienhart Holle, 16 July 1482.

Description
Folio (428 by 310mm), 102 leaves, double-column, 44 lines and headline, Gothic letter, 32 double-page woodcut maps with fine original hand-colour, 4 woodcut diagrams in the text, 2 large illuminated historiated initials, one showing Donnus Nicolaus presenting his book to Pope Paul II, the other of Ptolemy, 159 other woodcut initials coloured in red, green and ochre, paragraph marks and initial-strokes supplied in ochre, tear to d6, and repaired tear to the map 'Tertia Africa', some dampstaining and discolouration throughout, including spotting affecting the final three maps, skilful reinforcement to weakened lower page corners on maps, single leaf free endpaper bearing ownership inscription, re-cased in contemporary doeskin over clasped oak boards, joints reinforced with vellum waste, remnants of one clasp remaining. Contained within a velvet-lined quarter black morocco box, spine richly gilt and lettered.

[Bound after]: 'Registrum' from Johannes Reger's 1486 edition of Ptolemy's "Cosmographia", decorated with 17 5- and 6-line manuscript initials in red and blue, 30 leaves bound in 6s (not 8s as is usually the case); 9 leaves in the 'registrum' uncut, tear to d6.

Collation:
[Registrum]: a-d(6), e(5); [Cosmographia]: [i], a10, b-g8, h11, 32 maps.

Watermark:
Late fifteenth century Italian watermark of a flower with 7 petals throughout, with the exception of the front endpaper/'initial blank', which bears the watermark of an upper case letter 'B' on a crowned shield. These were used by the le Bé family of Troyes, in this case 'Ioane le Bé'. Three members of the Troyenne papermaking le Bé family bore the Christian name 'Jean': Jean I started his business in 1406. Jean II owned two paper mills around the 1470s, and Jean III lived in Troye in the first half of the 16th century. The le Bé family were accredited papermaker for the Université de Paris from 1520 onwards.

A fine example in a contemporary binding, here bound with Johannes Reger's 'Registrum' made for his 1486 edition of the work.

The text of Claudius Ptolemy's (c100-170AD) "Cosmographia" was translated into Latin from the original Greek by Jacobus Angelus (c1360-1411) and was first published, in Renaissance times, at Vicenza (1475), Bologna (1477) and Rome (1478). The sumptuous edition published at Ulm in 1482, however, far surpassed all earlier efforts and remains one of the most important publications in the history of cartography. This is the first redaction of the 'Geography' to be printed outside Italy, the earliest atlas printed in Germany, the first to depart from the classical prototype to reflect post-antique discoveries, the first to be illustrated with woodcuts rather than engravings, and the first to contain hand-colored maps, the design and execution of which were ascribed to a named cartographer, and the first to incorporate the five modern maps by Nicolaus Germanus (c1420-1490). Though printed outside Italy, the paper this magnificent atlas was printed on was imported from Italy, and payment made in part by complete copies of the finished atlas.

The maps

The 1482 edition is the first printed edition to contain the full complement of 32 maps, and its world map, extended to the northwest, is the first printed cartographical representation of Greenland, Iceland and the North Atlantic.

"The artist responsible for the woodcut maps identifies himself at the top of the world map as Johannes of Arnsheim, making it the earliest datable printed map to bear a signature" (Campbell p. 137). He has incorporated as his sign a backwards N into the woodcut text on each map.

The Ulm edition, moreover, was the first to depart from the classical prototype by expanding the atlas to reflect post-antique discoveries about the size and shape of the earth. To the canonical twenty-seven Ptolemaic maps were added five "modern maps" of Spain, France, Italy, the Holy Land and northern Europe. The world map is of particular interest as it is the first to be signed, by Johannes Schnitzer (ie woodcutter)of Armszheim, who in trade mark fashion has reversed every capital N, and inadvertently provided two Tropics of Cancer. This map is the first to be based on Ptolemy's second projection, in which both parallels and meridians are shown curved to convey the sphericity of the earth. Armszheim, furthermore, updated the Ptolemaic world picture by incorporating improvements that were probably based on a manuscript of the 1470s by Nicolaus Germanus (c1420-1490), a Benedictine monk of Reichenbach Abbey in Bavaria, who is depicted in the first illuminated letter of the atlas presenting his book to the dedicatee Pope Paul II. One notable addition is a rudimentary depiction of Scandinavia to the north, within an extension of the map's top border. This is also the earliest printed map to show the northernmost


·OCEANVS·IPERBOREVS·
·OCEANVS·DVE·CALEDONIVS·
HIBERNIA
·OCEANVS·GERMANICVS·
·OCEANVS·OCCIDENTALIS
·MARE·GERMANIE·PARS·
·CELTOGALATIE·BELGICE·PARS·
·ET·BRITANNICVS·


·MARE·BRITANNICVM·
·CELTOGALATIA·BELGICA·
·AQVITANICVM·
·LVGDVNENSIS·
·AQVITANIA·
·HARDORENSIS·

References
Camptell, T., 'Earliest Printed Maps', p. 179-210; Schreiber 5032; Skelton, R.A., Bibliographical note prefixed to the facsimile of the 1482 Ulm Ptolemy; P-J Troley, Mémoires historiques et critiques pour l'histoire de Troyes, t.2 p.636.

reaches of the Atlantic Ocean. The world map, moreover, embodies what is perhaps the most readily apparent feature of the Ulm Ptolemy: its beauty.

The text

"The text is the early Latin translation by Jacopo d'Angelo [Jacobus Angelus], and its maps are the reworking of the Ptolemaic corpus by the cartographer Donnus (Dominus) Nicolaus Germanus. Three recensions of Nicolaus's reworkings have been distinguished: the first, drawn on a trapezoid projection reputedly devised by Nicolaus himself and, therefore, also known as the Donis (Donis = Dominus) projection; the second on a homeotheric projection and with three additional modern maps; and the third on the same projection with further revisions and two additional modern maps. The Ulm Ptolemy derives from the third recension, and thus represents Nicolaus's most mature work" (Campbell, 'Earliest Printed Maps', p. 124).

Printing history

"That the stock of the 1482 edition was not exhausted by 1486 is indicated by the existence of a number of copies (some in early binding) containing the additional texts printed by Johannes Reger in the latter year for his own edition..." (Skelton) - The present work is just such a book.

"For Leinhart Holle, the handsome edition of the Cosmographia which he printed at Ulm in 1482 was an unprofitable investment. Only one more book came from his press; and by 1484 he was out of business and gone from Ulm, and his stock of type, blocks, and printed sheets passed into the hands of Johann Reger, Ulm factor or agent (pro-visor) or Giusto de Albano, of Venice...

Reger lost little time in bringing the Cosmographia back on the market. He compiled a gazeteer or geographical index to the text under the title 'Registrum alphabeticum super octo libros Ptolemei', to which he prefixed a 'Nota ad inueniendum igitur regiones;, explaining its purpose and use; and he also obtained, or composed, an anonymous tract entitled 'De locis ac mirabilibus mundi'... they were printed by Reger in 1486 and inserted into some unsold copies of the 1482 edition...

In the map Europa IV in the 1482 edition, Reger found the Ptolemaic name Chetaori, corresponding to his birthplace Kemnat in Bavaria; he introduced this into Ptolemy's list of towns in bk. II ch. 10 [not present in this 1482 edition of the main text], and inserted in his 'Registrum' the entry: 'Chemmat siue chetaori li 2 c 10 ta 4 e Hic iohannes reger duxit origine et ano etatis 32 compposuit hoc register in vlma anno domini 1486'. This is the evidence for Reger's authorship of the 'Registrum', which is otherwise unsigned." (Skelton)


·OCCEANVS·
CANTABRICVS·
HISPANIA
·OCCEANVS·OCCIDENTALIS·
LVSITANIA
BETICA
·BALEARICVM·MARE·
·MARE·EXTERIVS·
MARE TIRRENVM


·SINVS·ADRIATICVS·
ITALIA
·LIGVSTICVM·PELAGVS·
MARE·TIRRENVM
·MARE·SARDOVM·
·ADRIATICVM·

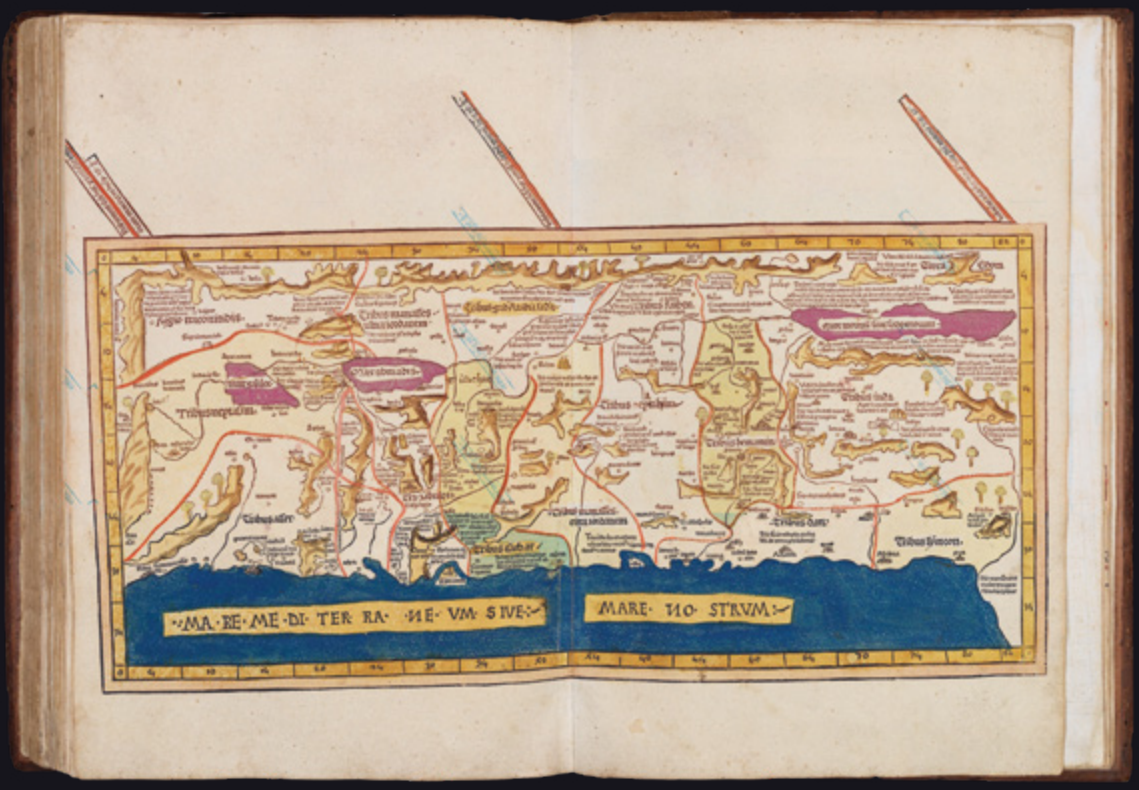

CAVRVS·CHORVS·VEL·IAPIX SIVE·ARGESTES
CIRCTVS
VEL·TRESIIAS
mare glaciale
FAVONIVS·ZEPHIRVS
EVROPA
Sinus hesperus
LIBIA INTERIOR
AFFRICA
Circulus equinoctialis
ARABIA FELIX
ETHIOPIA·INTERIOR
Terra incognita secundum ptolomeum
Sinus Barbaricus
AFRICVS·VEL·LIBS
LIBONOTVS·EVRO·AVSTER
AVSTER

...schnitzer de Armßheim

Cladius Ptolemaeus
Claudius Ptolemy was an Alexandrine Greek, and a dominant figure in both astronomy and geography for more than 1500 years. "He compiled a mapmaker's manual usually referred to simply as the 'Geography'. He demonstrated how the globe could be projected on a plane surface, provided coordinates for over 8,000 places across his the Roman world, and expressed them in degrees of longitude and latitude. Now maps drawn by Ptolemy himself are known to survive, but maps compiled from his instructions as outlined in his 'Geography' were circulated from about 1300. This Ulm edition of Ptolemy's 'Georgaphy' is one of the earliest printed.

Provenance:
1. Inscribed on front free endpaper "Donnait Le Sr. munery mon beaufrere [given by my brother-in-law Sr. Munery] anno 1672 Morel Senator"
2. Inscribed on d2 "Josephus Mattheus de Morel 1718, Franciseii de Morel"

This is probably André de Morel (Maurel) (1603-1690), Senator in the Parlement de Provence. Morel's family began their social elevation under Charles d'Anjou (1446-1481) who was also King of Naples and Earl of Provence. It is said that the King put Pierre de Morel in his will and, at his death in 1481, he inherited a part of his library. The family served the French Crown as advisors and officers during wars in Northern Italy and Spain until Henri IV of France. Then in the late 1620's André de Maurel became a prominent magistrate and member of Parliament of Provence. He ruled his office for 67 years and was known as Senator Morel. His second son, Joseph de Maurel (1658-1717) was Bishop of Saint Paul-Trois-Chatêaux between Aix and Valence. His heir and nephew, François de Maurel, Captain in the 'Regiment de Toulouse' in 1719, inherited his belongings after his death.


MARE MEDITERRANEVM SIVE
MARE NOSTRVM


SINVS PERSICVS
ARABIA FELIX
SINVS ARABICVS
INDICVM PELAGVS
RVBRVM MARE

Second Rome edition with the "finest Ptolemaic plates produced until Gerard Mercator"

2 PTOLEMAEUS, Claudius

Cosmographia.

Publication
Rome, Petri de Turre, 1490.

Description
Folio (425 by 282mm), loose endpaper/ initial blank on different paper, minor wormholes to first two gatherings, occasional minor staining to margins not affecting text, very occasional manuscript annotations in faded ink, 27 double-page engraved maps, minor staining to world map, some loss to right edge of 'Quinta Asia Tabula' not affecting printed area, 'Sexta Asia Tabula' with small closed tear to title, small open tear to right edge and some brown staining, some minor brown staining to 'Decima Asia Tabula', minor wormholes to final two gatherings. Contemporary calf decorated in blind with intricate roll tool borders enclosing central diamond with woven rope motif, clasps with cross straps replaced, some areas of repair including triangular area c50-60mm to upper cover and small area to lower left hand corner of lower cover, early paper label with manuscript lettering in iron gall ink.

Collation: A8 (first leaf blank) B-C8, D6 (second leaf incorrectly signed D3), E6, a10 (first leaf blank), b-g8, h3 (lacking final blank leaf), 27 engraved maps, 2a8 (2a1r blank, 2a1v registrum super tractum de tribus orbis partibus, 2a2r-2c5r de locis ac mirabilibus mundi et primo de tribus orbis partibus), 2b8, 2c6 (lacking final blank leaf, 2c5r colophon: Hoc opus Ptholomei memorabile quidem et insigne exactissima diligentia castigatum iucondo quodam caractere impressum fuit et completum Rome anno a nativitate Domini .M.CCCC. LXXXX die .IV. Novembris. arte ac impensis Petri de Turre, 2c5v blank).

Watermark: text leaves watermarked with a cross within a circle, maps watermarked with a cardinals hat.

References
BMC IV, 133; BSB-Ink P-861; Goff P-1086; HC 13541; Nordenskiöld 7; Sabin 66474; Shirley 4; Scammell, The World Encompassed 40; Tooley, Landmarks of Mapmaking.

The "handsome" second Rome edition of Ptolemy's 'Geographia' (Scammell).

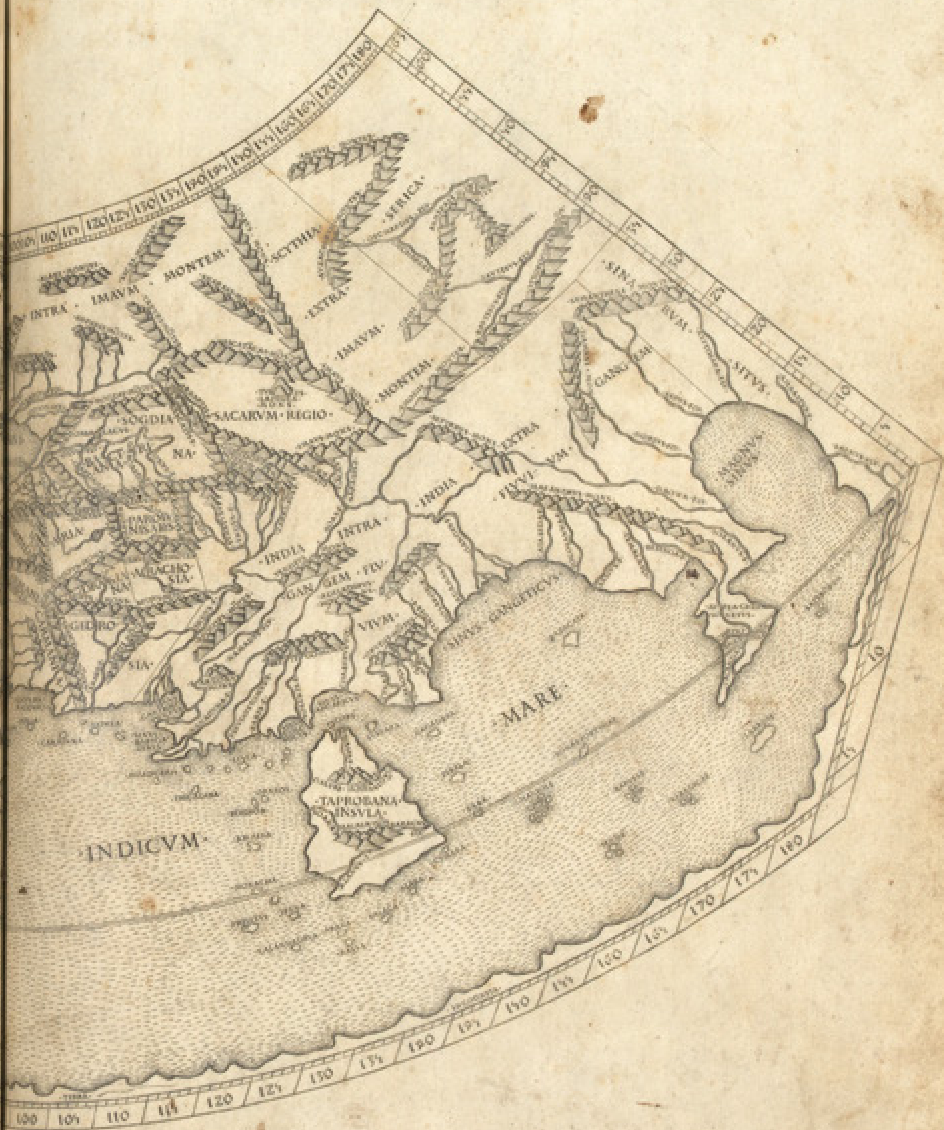
The plates for the Rome editions of Ptolemy were several years in the making, and they are considered to be "the finest Ptolemaic plates produced until Gerard Mercator engraved his classical world atlas" a century later (Shirley). They were produced by two German printers, Conrad Sweynheym and Arnold Buckinck, and "it is believed that Sweynheym was the one who first thought of applying the very new art of copper-engraving to the printing of maps, and he might have taken a hand in the actual engraving of them himself " (Scammell). The first edition was printed in 1478, and the present edition was printed 12 years later from the same plates.

While the Bologna edition of 1477 was the first atlas and edition of Ptolemy to use copperplate maps, the Rome edition is generally regarded as superior for its clear captions, accurate projections and overall design. It includes more geographical details, including names in Arabia, in particular. Unusually, the seas are pock-marked. The early Italian Ptolemys, particularly the Rome editions, are "superb testimonials of Italian craftsmanship without the picturesque but unscientific monsters of the medieval maps or the addition of the adventitious decoration of later work, relying for their beauty solely on the delicacy of their execution and the fineness of the material employed" (Tooley). As Tooley observes, the maps in the atlas have no external border decorations or co-ordinate lines, relying instead on the clarity of the engraving.


PRIMA · EVROPE · TABVLA
OCEANVS · HYPERBOREVS
OCEANVS · DEVCALEDONIVS
ANGLIA
OC · HIBERNICVS
OCEANVS · GERMANICVS
OCEANVS VERGIVS
OC · BRITANNICVS


SEXTA · EVROPE · TABVLA
SINVS · ADRIATICVS
MARE · TYRRHENVM
MARE · SARDONIVM
MARE · ADRIATICVM


CLIMA·I·
CLIMA·2·
CLIMA·7·
OCEANVS·OCCIDENTALIS
MARE·ATLANTICVM
SINVS·HESPERIVS
LIBYA
INTERIOR
DACIA
ARABIA
FELIX
AETHIOPIA · INTERIOR·
AETHI OPIA
SVB
AEGYPTO
SINVS·BARBARICVS


INTRA
IMAVM
MONTEM
SCYTHIA
SERICA
EXTRA
IMAVM
MONTEM
SINARVM
SITVS
SOGDIA
SACARVM REGIO
INDIA
EXTRA
INDIA
INTRA
MAGNVS SINVS
MARE
TAPROBANA INSVLA
INDICVM

The first atlas wholly printed in colours, incorporating the first printed map to indicate Japan

3 PTOLEMAEUS, Claudius; Bernardus SYLVANUS

Liber geographiae cum tabulis et universali figura et cum additione locorum quae a recentiorbus reperta sunt.

Publication
Venice, Jacobus Pentius de Lencho, 1511.

Description
Folio atlas (425 by 292mm), bookplate to verso of initial blank leaf, title-page in red with manuscript ownership inscription, poem on verso printed in red and black, 6pp preliminary text printed in red and black, 115pp text printed in red and black with four woodcut and letterpress diagrammatic illustrations, manuscript notes throughout in margins of text in same hand as ownership inscription, small area of abrasion damage to colophon, infilled with ink facsimile, 28 woodcut maps printed in red and black (each double-page with all but the final world map in two sections on facing pages), sixteenth century red vellum, remnants of old ties, japp fore-edges.

Collation: [4]; A8, B-H6 (first leaf of G unsigned), I8 (first leaf unsigned), 28 maps.

References
Jerry Brotton, A History of the World in Twelve Maps (London: Penguin, 2012); Patrick Gautier Dalche, 'The Reception of Ptolemy's Geography' in David Woodward (ed.), The History of Cartography, Volume 3 Part 1: Cartography in the European Renaissance (Chicago: University of Chicago Press, 2007); Nordenskiöld Collection 2:204; Phillips, Atlases 358; Sabin 66477; Sander 5979; Shirley, Mapping of the World, 32; David Woodward, 'Techniques of Map Engravings, Printing and Coloring in the European Renaissance' in David Woodward (ed.), The History of Cartography, Volume 3 Part 1: Cartography in the European Renaissance (Chicago: University of Chicago Press, 2007).

A very fine example of the Venetian edition of Ptolemy's 'Geographia'. This is the first illustrated edition of Ptolemy's work in which an attempt was made to update the information given on the maps, and the only Italian edition of Ptolemy to feature woodcut maps.

It is also one of the earliest examples of two-colour printing in cartography, with the major regional names printed in red, others in black, using inset type. Woodward suggests that the dual-colour printing style is done to mimic contemporary portolan charts, which used black and red to distinguish toponyms of various importance. The text in the book says that it used the maps of navigators to update Ptolemy's original work, and the influence may also have extended to the aesthetic (Woodward).

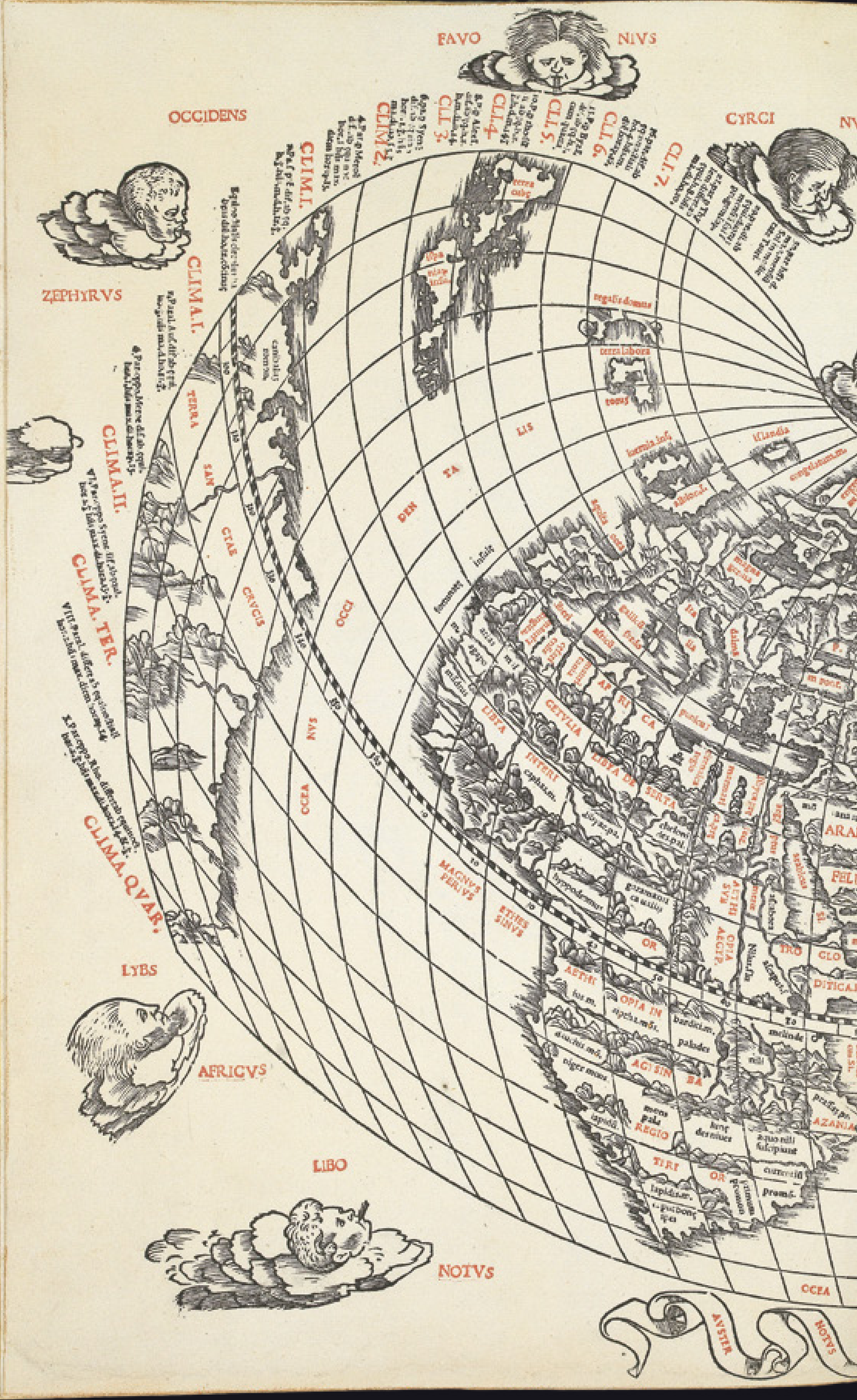
Sylvanus had already produced an edition of Ptolemy in Naples in 1490, but this was to be based on different principles. He explains in a preliminary note that Ptolemy's work must be updated, and adds that as Ptolemy himself used the work of navigators, so will he. Sylvanus was trying to tread a delicate line between critics of Ptolemy's work and those who appreciated the framework provided by the classical geographer (Dalche).

The atlas includes two world maps, one drawn to Ptolemy's specifications and the other using contemporary geographical knowledge. The modern cordiform world map is only the second map in a Ptolemaic atlas to show America, and the first western printed map to indicate Japan. Sylvanus uses a cordiform map projection, a style developed through the Renaissance to symbolise the link between inner emotions and the external world (Brotton). Sylvanus's method was subsequently adapted by Petrus Apianus and Giovanni Vavassore. In this projection, the degrees on the central meridian were in correct proportion to those of the parallels. Whereas every other map in the atlas is printed on the reverse of other maps or texts, this is blank on the reverse. This map was Sylvanus's attempt to update the picture of the world presented by Ptolemy.

The Americas are shown in three unconnected parts: "terra laboratorum", "terrae Sancta Crucis" (South America) and "terra cube". "Terra laboratorum", or North America, was supposedly named after the labourer who saw it first, according to an inscription on the Wolfenbüttel 1534 world map. The projection used distorts the coastline of South America almost unrecognisably; the words "canibalum romon" appear in the north, a product of common contemporary belief about native cannibalism.


PRIMA·EVROPAE·TABVLA
OCEANVS HIPERBOREVS
GERMANICVS OCEANVS
VERGIVIVS OCEANVS
BRITANNICVS OCEA.


SECVNDA·EVROPAE·TABVLA
OCEANVS
CANTABRI CVS
LVSITANI
TARRA
MARE BALEARICVM
EXTERIVS MARE
IBERICVM
MARE
CLIMA 5


FAVO
NIVS
OCCIDENS
CYRCI
ZEPHYRVS
CLIMA.I.
CLIMA.II.
CLIMA. TER.
CLIMA.QVAR.
LYBS
AFRICVS
LIBO
NOTVS
AVSTER
OCEA
CLI.7.
CLI.6.
CLI.5.
CLI.4
CLI.3.
CLIM.2.
CLIM.I.
TERRA
SAN
CTAE
CRVCIS
OCCI
DEN
TA
LIS
OCEA
NVS
LIBYA
GETVLIA
AF
RI
CA
LIBYA DE
SERTA
ARA
AETHI
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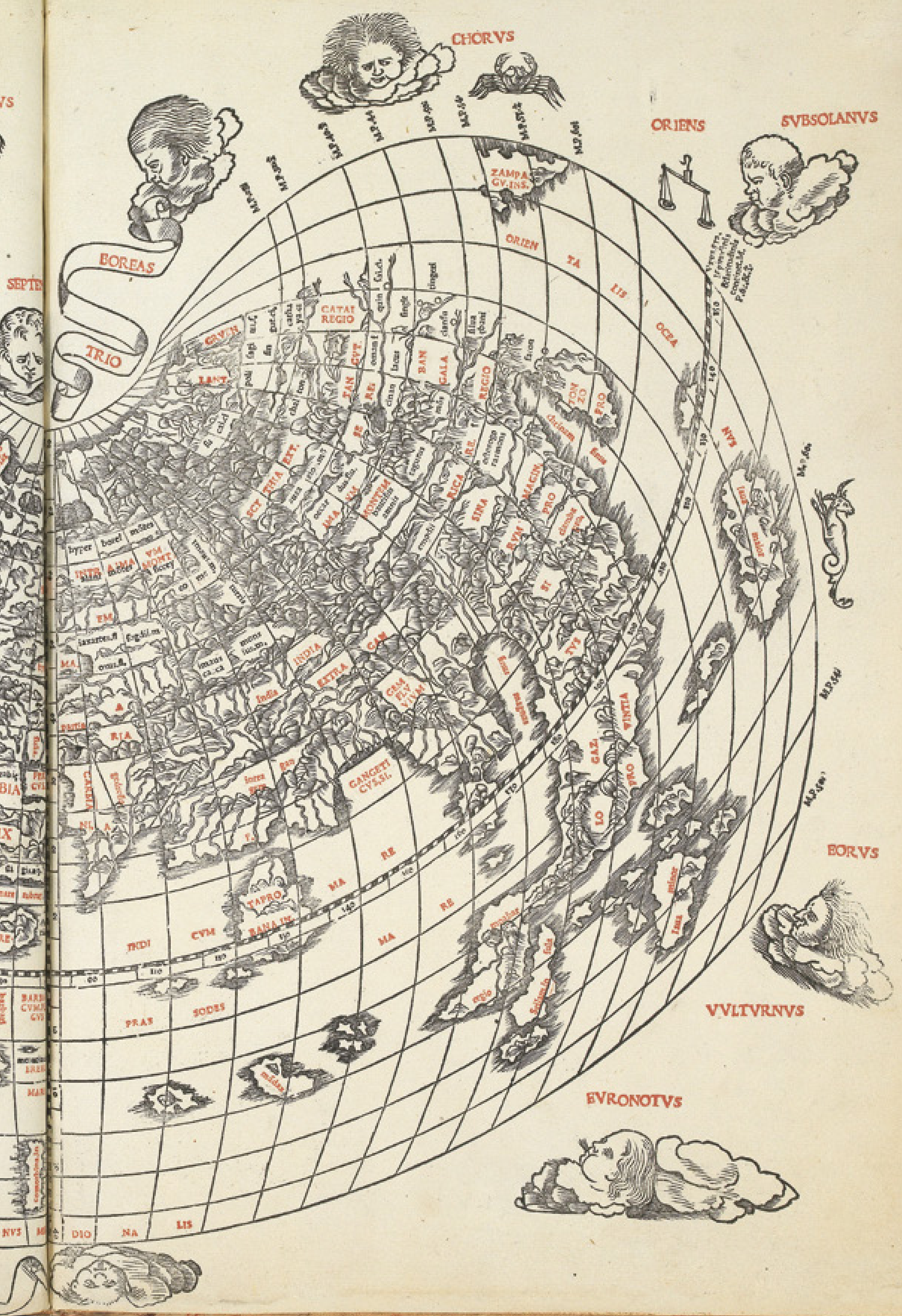
AETHI
OPIA IN
AGISIN
BA
REGIO
MAGNVS
PERVS
ETHIS
SINVS
OR
TIRI
AZANIA


CHORVS
ORIENS
SVBSOLANVS
BOREAS
TRIO
ZAMPA GV. INS.
ORIEN TA LIS OCEA
CATAI REGIO
GANGETI CVS SI.
TAPRO BANA IN.
INDI CVM MA RE
PRAS SODES
EVRVS
VVLTVRNVS
EVRONOTVS
DIO NA LIS

CLI.VII.
CLIM.VI.
CLIMA.V.
CLI.IIII.
CLIM.III.
CLIMA.II.
CLIMA.I.
CLIMA.I.
OCCI
DEN
TA
OCEA
SVS
HYPER
BRITA
GER MANICVS
OCEANV
LIBYA
LI
BIA
INTE
RI
OR
ARA
BIA
FE
LIX
MARE
RVBRV
AETHI
OPIA
LIBYC
PVNI
EGYP
TIA
MAR
MARI
PELA
GVS
INTE
RIVS
ARABICVS
SINVS
BARBA
RICVM
PELA
GVS
TERRA
INCOG
AZA
NIA
BREVE
MARE

SCY THI
SOG DIA NA
SA
CAR RE.
VM
ARI
PARO
INDI A
GAN
EX
TRA
CEM FLV
INDIA INTRA
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CEM FLVVI.
ARA CHO
DRA
DRO
GANGE TICVS SI NVS
TAPRO BANA
INSV LA
IN DI CVM MA RE
PRA SSO DES MA RE
PRA SSO DES MARE
TERRA

The geometrization of space: "the most important of all the Ptolemy editions"

4 PTOLEMAEUS, Claudius; and Martin WALDSEEMULLER

Geographiae opus novissima traductione a Grecorum archetypis castigatissime pressum.

Publication
Strassburg, Johannes Schott, 12th March, 1513.

Description
Folio (456 by 320mm), (181) ff., with 45 double-page and two single-page maps, of which one, Lorraine, is printed in three colours, some light browning and occasional marginal staining, maps mounted on vellum guards, repaired tear to blank corner of A2, 'Septima Asia' with neatly repaired tear affecting image, early ink marginalia to 'Aphricae', seventeenth-century vellum over paste-board.

Collation
A2,B-N6,45 double-page and two single-page maps, a6, b4, c6.

Watermark
fleur-de-lys.

References
Adams P2219; Nordenskiold 205 (incomplete); Phillips 359; Sabin 66478; Shirley 34; Henry N. Stevens, The First Delineation of the New World and the First Use of the Name America on a Printed Map (London, 1928).

A monumental work containing critical New World information, derived from the latest voyages of exploration, including the earliest atlas map devoted entirely to the New World ('Terra Incognita'), the earliest map printed in more than two colours - and, for many other countries, the first published maps (notably the map of Switzerland, which is styled differently and probably adapted from a manuscript map by Konrad Türst c1495). It is "the most important of all the Ptolemy editions" (Streeter).

Cartography

This masterful atlas is one of the most important cartographical works ever published. Known as the first "modern" edition of Ptolemy, it is usually accepted as the most important edition of the 'Geographia'. The first part of the atlas consists of 27 Ptolemaic maps, taken from the 1482 Ulm Ptolemy or, possibly, the manuscript atlas of Nicolaus Germanus upon which the Ulm Ptolemy was based. The second part, known as the 'Supplement', comprises 20 "modern" maps labelled either as 'Nova' or 'Moderna et Nova'. Of these, 'Orbis Typis Universalis' and 'Tabula Terre Nova,' show the New World. The latter is considered the earliest map devoted entirely to the subject and depicts the coast of America in a continuous line from the northern latitude of 55 degrees to Rio de Cananor at the southern latitude of 35 degrees, with about 60 places named. The other map, 'Orbis Typis' depicts the outline of northeastern South America, with five names along that coast, the islands 'Isabella' (Cuba) and 'Spagnolla' (Hispaniola), and another fragmentary coast, as well as an outline of Greenland. The text states that the New World maps are based upon geographical information obtained from "the Admiral", and is often known as the 'Admiral's Map' for that reason. This is possibly a reference to one of the New World explorers: Amerigo Vespucci, Pedro Cabral, or Christopher Columbus. The latter is actually referred to by name on the 'Tabula Terre Nova' map, and is described as a Genoese sailing under command of the King of Castile.

Printing

Two scholars based at the Gymnasium Vosagense in Saint-Dié, Martin Waldseemüller and Mathias Ringmann, began work on the 20 maps in the 'Supplement' around the year 1505. Their work was initially conducted under the patronage of Duke René II of Lorraine (1451-1508). In a letter written to Johann Amerbach of Basel on April 7, 1507, Waldseemüller wrote:

"I think you know already that I am on the point to print in the town of St. Dié the Cosmography of Ptolemy, after having added some new maps."


GENERALE
PTHOLEMEI
AFRICA
MARE INDICVM


TABVLA PRIMA EVROPAE
OCEANVS HYPERBOREVS
OCEANVS CALEDONIVS
HIBERNIA
OCEANVS OCCIDENTALIS
ALBION INSVLA BRITANNICA
OCEANVS GERMANICVS
OCEANVS VERGIVIVS
ET BRITANNICVS
CELTOGALATIAE BELGICAE PARS
GERMANIAE MAGNE PARS
CLIVII


ORBIS TYPVS VNIVERSALIS IVXTA
OCEANVS OCCIDENTALIS
GROENLAND
EVROPA
Mare Mediterraneum
Tropicus Cancri
AFRICA
Ethiopia
Equinoctialis Circulus
Tropicus Capricorni
Quelibet harz diuisionum


HYDROGRAPHORVN TRADITIONEM
ASIA
Sinus Magnus
MARE INDICVM

"the great prose epic of the Elizabethan period" with both the Wright-Molyneux world map and the rare suppressed 'Voyage to Cadiz'

5 HAKLUYT, Richard, and WRIGHT, Edward

The Principal Navigations, Voyages, Traffiques and Discoveries of the English Nation, Made by Sea or Over-land…

Publication
London, George Bishop, Ralph Newberies and Robert Barker, 1599–1600.

Description
3 works bound in 2 volumes, folio (286 by 181 mm), complete with the rare Wright-Molyneux world map on two sheets joined, map carefully trimmed to the neatline, with repaired closed tear and light restoration around folds, eighteenth-century bookplate of John Seale of Mount Boon, Devon, to front pastedown of second volume, vol. I sig. I6 with chip to fore edge just grazing shoulder note, a few leaves in same volume with very minor peripheral damp staining; vol. III sig. I5 with text misaligned with consequent slight shaving of shoulder note, contents generally very clean and fresh, mid-eighteenth century calf, recent red morocco labels to style, neat restoration at extremities, covers panelled in blind, light red speckled edges.

Dimensions
Map dimensions: 630 by 430mm. (24.75 by 17 inches).

References
Borba De Moraes, pp. 391–92; Church 322; ESTC S106753; Grolier English 100, 14; Hill 743; JCB (3) I:360–61; LOC European Americana 598/42; Penrose, Boies, 'Travel and Discovery in the Renaissance 1420–1620', p. 318; Pforzheimer 443; Printing and the Mind of Man 105; Quinn, p. 490; Sabin 29595-97-98; STC 12626; cf. Shirley 221.

The Wright-Molyneux Map is the first English map on Mercator's projection, it is the first map to name Lake Ontario, and one of the first maps to use the name "Virginia". Richard Hakluyt's 'Principall Navigations' is first collection of English voyages, published at the height of Elizabethan maritime prestige and "the great prose epic of the Elizabethan period".

The Wright-Molyneux Map

Gerard Mercator (1512-1594) revolutionized cartography with his development of an isogonic cylindrical projection that mapped a sphere on to a flat plane. Mercator expected that his projection would be a valuable tool for navigators but he neglected to provide practical guidelines on how use it. Edward Wright (1558?-1615), a professor of mathematics at Cambridge University, modified Mercator's system and published his results, 'The Correction of Certain Errors in Navigation', in 1599 and again in an improved edition entitled 'Certaine errors in navigation, detected and corrected' (London, 1610). Wright's book contained new mathematical tables and instructions on plotting straight-line courses on maps based on the Mercator projection. The system developed by Wright contributed to the supremacy of the British Navy and is still in use today.

Wright published 'A Chart of the World on Mercator's Projection' in 1599 based on his projection of a globe engraved by the English globe maker Emeric Molyneux in 1592. It was the first map to use Wright's improvements on Mercator's projection. It quickly became famous, even catching Shakespeare's attention: in "Twelfth Night", first performed in 1602, Maria says of Malvolio: "He does smile his face into more lines than is in the new map with the augmentation of the Indies" (Act III, Scene II).

Unlike many maps and charts of the era that represented the often fantastic speculations of their makers, Wright's 'Chart of the World' offers a minimum of detail and even leaves areas blank wherever geographic information was lacking. These undefined areas are especially evident along Wright's coastlines. For example, the coast of California above Cape Mendocino is blank.

Wright's world map depicts a wider Pacific Ocean than other maps of its time. On the American continent, Wright labels upper California 'Nova Albion'; other maps designated this area 'Anian' but Wright adopted the name given the region by Sir Francis Drake. 'Quivira' still appears on the West coast. Further to the east, the map also shows a 'Lake of Tadouac' reminiscent of the Sea of Verrazano. This lake is connected to the Atlantic Ocean by a river that appears to run south of the St. Lawrence River. It is also connected to a large body of water to the north. Lake Tadouac is apparently an early reference to either the Hudson Bay or to the Great Lakes, neither of which were "discovered" by Europeans until eleven or twelve years after Wright's map was published. Wright's map is also one of the earliest maps to use the name "Virginia".


DIEU ET MON DROIT
TERRA INCOGNITA
Fretum Davis
ESTOTILAND
CANADA
VIRGINIA
TROPICUS
GUIANA
PERU
CHILI
BRASILIA
THE SOUTH SEA
By the discouerie of Sr Francis Drake made in the yeare 1577. the streights of Magellane as they are comonly called seeme to be nothing els but broken land and Ilands and the southwest coast of America called Chili was found, not to trend to the northwestwards as it hath beene described but to the eastwards of the north as it is heere set downe: which is also confirmed by the voyages and discoueries of Pedro Sarmiento and Mr Tho Candish 1587.

Christendome. An excellent discourse whereof, as likewise of the honourable expedition vnder two of the most noble and valiant peeres of this Realme, I meane the renowned Erle of Essex, *and the right honourable the lord* Charles Howard, *lordhigh Admirall of England, made 1596. vnto the strong citie of* Cadiz, *I haue set downe as a double epiphonema to conclude this my first volume withall. Both of which, albeit they ought of right to haue bene placed among the Southerne voyages of our nation: yet partly to satisfie the importunitie of some of my special friends, and partly, not longer to depriue the diligent Reader of two such worthy and long-expected discourses, I haue made bold to straine a litle curtesie with that methode which I first propounded vnto my selfe.*

And here had I almost forgotten to put the Reader in mind of that learned and Philosophical treatise of the true state of Island, *and so consequently of the Northren Seas & regions lying that way: wherein a great number of none of the meanest Historiographers and Cosmographers of later times, as namely,* Munster, Gemma Frisius, Zieglerus, Krantzius, Saxo Grammaticus, Olaus Magnus, Peucerus *and others, are by euident arguments conuinced of manifold errors: that is to say, as touching the true situation and Northerly latitude of that Island, and of the distance thereof from other places; touching the length of dayes in Sommer and of nights in Winter, of the temperature of the land and sea, of the time and maner of the congealing, continuance, and thawing of the Ice in those Seas, of the first Discouerie and inhabiting of that Island, of the first planting of Christianitie there, as likewise of the continuall flaming of mountains, strange qualities of fountains, of hel-mouth, and of purgatorie which those authors haue fondly written and imagined to be there. All which treatise ought to bee the more acceptable; first in that it hath brought sound trueth with it; and secondly, in that it commeth from that farre Northren climate which most men would suppose could not afford any one so learned a Patrone for it selfe.*

And thus (friendly Reader) thou seest the briefe summe and scope of all my labours for the common-wealths sake, and thy sake, bestowed vpon this first Volume: which if thou shalt as thankefully accept, as I haue willingly and freely imparted with thee, I shall bee the better encouraged speedily to acquaint thee with those rare, delightfull and profitable histories, which I purpose (God willing) to publish concerning the Southerne and Westerne partes of the World.

¶ *Postscriptum.*

Not knowing any other place so conuenient, I am here to aduertise the friendly Reader of certaine faultes escaped in the printing of this booke, and to request him that in the Page 51, and in the last line saue two, hee would in stead of Kine, read Swine, and he shall thereby auoid a great contradiction: likewise pag. 187, that hee would vnto the ende of the second verse of the Prologue to the English Policy, make supply of the word Rest, which is there wanting: also pag. 251, lin. 29. for woorthinesse read woorthies, &c. Other faults (if there bee any) are (I doubt not) easily corrigible.

ΕΙΣ ΑΠΟΔΗΜΙΑΣ ΒΡΕΤΤΑΝ

Then shall here, gentle reader, obserue by geographicall description of the mouth of the world as hath not hetherto bin found out and to conuey to your knowledge which we have to shew you, wherby all places here set downe have their true portraicture and distance that they hold in the orbicl frame thereof, as well in their longitudes and latitudes which they have in that behalf by the seuerall degrees which can in no wise be performed. The way to finde the true distance or course from one place to another hereon described, I suppose nothing needfull that which is vsed in the ordinarie sea charet. But to finde the distance of both places haue the same latitude for how many degrees of the meridian lodged at that latitude are contained betweene the two places so many degrees is the distance. If they differ in latitude for how many degrees of the meridian lodged about the middle of that difference are contained between them, those shall so many seuerall degrees is the distance.

The present example is in the second state, also from 1599, with the cartouche with engraved text describing Drake's discoveries in the Americas added to the lower left of the map.

Top left are the arms of Elizabeth I; top right a strapwork cartouche with a text about Francis Gaulle's discoveries in the Pacific; and bottom centre another cartouche with a general description of the chart.

The Principall Navigations

Comprising 243 narratives of voyages and travels in the New World in some 1,700,000 words, 'The Principall Navigations' is the greatest assemblage of travel accounts and navigations to all parts of the world collected up to its time, and a vital source for early New World exploration. "It is difficult to over rate the importance and value of this extraordinary collection of voyages" (Sabin).

This second edition of Hakluyt's voyages is, in fact, an entirely different book from the initial 1589 compilation and was greatly expanded from the single-volume original. Boies Penrose considered that "the first edition of the Principal Navigations transcended anything that had gone before, though it, in turn, was surpassed by the second edition". Indeed, Hakluyt devoted his life to the work and "throughout the 1590s, therefore, this indefatigable editor set himself to the formidable task of expanding the collection and bringing it up to date … this was indeed Hakluyt's monumental masterpiece, and the great prose epic of the Elizabethan period … Much that was new and important was included: the travels of Newbery and Fitch, Lancaster's first voyage, the new achievements in the Spanish Main, and particularly Raleigh's tropical adventures …The book must always remain a great work of history, and a great sourcebook of geography, while the accounts themselves constitute a body of narrative literature which is of the highest value in understanding the spirit and the tendencies of the Tudor age" (Penrose).

Hakluyt's Principal Navigations was one of the major prestige publications of the Tudor state, seeking to do for English exploration what Holinshed's Chronicles had done for the nation's history, a key work in promoting overseas ventures. Hakluyt himself never travelled further afield than France, but he met or corresponded with many of the great explorers, navigators, and cartographers including Drake, Raleigh, Gilbert, Frobisher, Ortelius, and Mercator. In addition to long and significant descriptions of the Americas in volume 3, the work also contains accounts of Russia, Scandinavia, the Mediterranean, Turkey, Middle East, Persia, India, south-east Asia, and Africa. Hakluyt owed a good deal to Sir Francis Walsingham's support and probably gathered intelligence for him in Paris; the first edition was both dedicated to and licensed for publication by him. After Walsingham's death in 1590, the patronage of Sir Robert Cecil was increasingly important to Hakluyt. Volume I of the second

THE PRINCIPAL NAVIGATIONS, VOYAGES, TRAFFIQVES AND DISCOVERIES of the *English Nation*, made by Sea or ouer-land, to the remote and farthest distant quarters of the Earth, at any time within the compasse of these 1600. yeres:

Diuided into three seuerall Volumes, according to the positions of the Regions, whereunto they were directed.

The first Volume containeth the worthy Discoueries, &c. of the *English* toward the North and Northeast by Sea, as of *Lapland, Scrikfinia, Corelia*, the Baie of *S. Nicolas*, the Isles of *Colgoieue, Vaigatz*, and *Noua Zembla*, toward the great Riuer *Ob*, with the mighty Empire of *Russia*, the *Caspian* Sea, *Georgia, Armenia, Media, Persia, Boghar* in *Bactria*, and diuers kingdomes of *Tartaria*:

Together with many notable monuments and testimonies of the ancient forren trades, and of the warrelike and other shipping of this Realme of *England* in former ages.

Whereunto is annexed a briefe Commentary of the true state of Island, and of the Northren Seas and lands situate that way: As also the memorable defeat of the *Spanish* huge *Armada*, Anno 1588.

¶ The second Volume comprehendeth the principall Nauigations, Voyages, Traffiques, and discoueries of the *English* Nation made by Sea or ouer-land, to the South and South-east parts of the World, as well within as without the Streight of *Gibraltar*, at any time within the compasse of these 1600. yeres: Diuided into two seuerall parts, &c.

¶ By RICHARD HAKLVYT Preacher, and sometime Student of Christ-Church in Oxford.

Imprinted at London by *George Bishop*, *Ralph Newberie*, and *Robert Barker*.
ANNO 1599.

edition of the Principal Navigations was dedicated to the lord admiral, Lord Howard of Effingham, but the other two were dedicated to Cecil.

Here the first volume contains the original printing of the rare 'Voyage to Cadiz', which was suppressed by order of Queen Elizabeth after Robert Devereux, the Earl of Essex, incurred her wrath by returning to England from Ireland without leave in 1599 to marry Sir Philip Sidney's widow, the daughter of Sir Francis Walsingham. This copy is the second issue of the second edition with volume I dated 1599. The first issue is dated 1598, and its title page makes reference to the Earl of Essex's voyage to Cadiz, which was ordered to be suppressed because Elizabeth was angered by Essex's status as a popular hero of the war against Spain. However, the printed leaves detailing the voyage to Cadiz, pp. 607-619, which ought also to have been suppressed, are here present in their original uncancelled state.

The third volume is devoted almost entirely to the Americas, the South Seas, and various circumnavigations of the world. It includes the accounts of Niza, Coronado, Ruiz, and Espejo relating to New Mexico; Ulloa, Drake, and others concerning California; and Raleigh's account of Guiana. "Hakluyt was a vigorous propagandist and empire-builder; his purpose was to further British expansion overseas. He saw Britain's greatest opportunity in the colonization of America, which he advocated chiefly for economic reasons, but also to spread Protestantism, and to oust Spain" (Hill).

Edward Wright's world map was, according to Quinn's 1974 census for 'The Hakluyt Handbook', only to be found in 19, of the 240, predominantly institutional, examples of the book surveyed. Quinn notes that this survival rate is, even allowing for the high mortality levels traditionally attached to decorative world maps in books, "sufficiently low to raise the possibility that not all copies were equipped with the map, either because it was made available after many sets had been sold, which would mean that its date might be later than 1599, or because it was an optional extra supplied at additional cost". Quinn's survey included all major booksellers' catalogues and public auctions in the English speaking world.

Subsequent to this 1974 census, the only other copy we know to have appeared in commerce with the map in the past half-century is the Grenville–Crawford–Rosebery copy, bound in early nineteenth-century red morocco, which lacked the map until a supplied copy was inserted sometime between its sale at auction by Sotheby's in 1933 and its reappearance in the Franklin Brooke-Hitching sale, Sotheby's, 30 Sept. 2014, lot 579. Hakluyt's use of this map in his publication was to show "so much of the world as hath beene hetherto discovered, and is comme to our knowledge".

THE SECOND VOLVME OF THE PRINCIPAL NAVIGATIONS, VOYAGES, TRAFFIQUES and Discoueries of the *English Nation*, made by Sea or ouer-land, to the South and South-east parts of the World, at any time within the compasse of these 1600. yeres: Diuided into two seuerall parts:

Whereof the first containeth the personall trauels, &c. of the *English*, through and within the Streight of *Gibraltar*, to *Alger*, *Tunis*, and *Tripolis* in *Barbary*, to *Alexandria* and *Cairo* in *AEgypt*, to the Isles of *Sicilia*, *Zante*, *Candia*, *Rhodus*, *Cyprus*, and *Chio*, to the Citie of *Constantinople*, to diuers parts of *Asia minor*, to *Syria* and *Armenia*, to *Ierusalem*, and other places in *Iudæa*; As also to *Arabia*, downe the Riuer of *Euphrates*, to *Babylon* and *Balsara*, and so through the *Persian* gulph to *Ormuz*, *Chaul*, *Goa*, and to many Islands adioyning vpon the South parts of *Asia*; And likewise from *Goa* to *Cambaia*, and to all the dominions of *Zelabdim Echebar* the great *Mogor*, to the mighty Riuer of *Ganges*, to *Bengala*, *Aracan*, *Bacola*, and *Chonderi*, to *Pegu*, to *Iamahai* in the kingdome of *Siam*, and almost to the very frontiers of *China*.

The second comprehendeth the Voyages, Trafficks, &c. of the *English Nation*, made without the Streight of *Gibraltar*, to the Islands of the *Açores*, of *Porto Santo*, *Madera*, and the *Canaries*, to the kingdomes of *Barbary*, to the Isles of *Cape Verde*, to the Riuers of *Senega*, *Gambra*, *Madrabomba*, and *Sierra Leona*, to the coast of *Guinea* and *Benin*, to the Isles of *S. Thomé* and *Santa Helena*, to the parts about the Cape of *Buona Esperanza*, to *Quiaugone* neere *Mozambique*, to the Isles of *Comoro* and *Zanzibar*, to the citie of *Goa*, beyond *Cape Comori*, to the Isles of *Nicubar*, *Gomes Polo*, and *Pulo Pinaom*, to the maine land of *Malacca*, and to the kingdome of *Iansalaon*.

¶ By RICHARD HACKLVYT Preacher, and sometime Student of Christ-Church in Oxford.

Imprinted at London by *George Bishop*, *Ralph Newbery*, and *Robert Barker*.
ANNO 1599.

The historical importance of the work cannot be overstated. It is truly "an invaluable treasure of nautical information which has affixed to Hakluyt's name a brilliancy of reputation which time can never efface or obscure" (Church). 'The Principall Navigations' "redounds as much to the glory of the English nation as any book that ever was published" (Bancroft).

Provenance
Sir John Henry Seale, 1st Baronet (1780–1844) of Mount Boone in the parish of Townstal near Dartmouth in Devon, was a Whig Member of Parliament for Dartmouth in 1838. He was created a baronet on 31 July 1838. He owned substantial lands in Devon, mainly at Townstal and Mount Boone. Together with the Earl of Morley of Saltram House near Plymouth, he built several bridges in Dartmouth, most notably the Dart crossing.

Known examples of the Wright-Molyneux map
British Library, London (3 copies); Bodleian Library, Oxford; Chatsworth House, Derbyshire; Eton College Library, Windsor; Huntington, San Marino (2 copies); Newberry Library, Chicago; Lilly Library Bloomington; Clements Library, Ann Arbor; Princeton (2 copies); New York Public Library, New York; Philadelphia Public Library, Philadelphia; Naval War College, Newport; JCB Library, Providence; University of Virginia, Charlottesville; Mitchell Library, Sydney.

THE THIRD AND LAST VOLVME OF THE VOYAGES, NAVIGATIONS, TRAFFIQUES, and Diſcoueries of the *Engliſh Nation*, and in ſome few places, where they haue not been, of ſtrangers, performed within and before the time of theſe hundred yeeres, to all parts of the *Newfound* world of *America*, or the *Weſt Indies*, from 73. degrees of Northerly to 57. of Southerly latitude:

As namely to *Engronland*, *Meta Incognita*, *Eſtotiland*, *Tierra de Labrador*, *Newfoundland*, vp *The grand bay*, the gulfe of *S. Laurence*, and the Riuer of *Canada* to *Hochelaga* and *Saguenay*, along the coaſt of *Arambec*, to the ſhores and maines of *Virginia* and *Florida*, and on the Weſt or backſide of them both, to the rich and pleaſant countries of *Nueua Biſcaya*, *Cibola*, *Tignex*, *Cicuic*, *Quiuira*, to the 15. prouinces of the kingdome of *New Mexico*, to the bottome of the gulfe of *California*, and vp the Riuer of *Buena Guia*:

And likewiſe to all the yles both ſmall and great lying before the cape of *Florida*, *The bay* of *Mexico*, and *Tierra firma*, to the coaſts and Inlands of *Newe Spaine*, *Tierra firma*, and *Guiana*, vp the mighty Riuers of *Orenoque*, *Daſſikebe*, and *Marannon*, to euery part of the coaſt of *Braſil*, to the Riuer of *Plate*, through the Streights of *Magellan* forward and backward, and to the South of the ſaid Streights as farre as 57. degrees:

And from thence on the backſide of *America*, along the coaſtes, harbours, and capes of *Chili*, *Peru*, *Nicaragua*, *Nueua Eſpanna*, *Nueua Galicia*, *Culiacan*, *Califorula*, *Noua Albion*, and more Northerly as farre as 43. degrees:

Together with the two renowmed, and proſperous voyages of Sir *Francis Drake* and M. *Thomas Caudiſh* round about the circumference of the whole earth, and diuers other voyages intended and ſet forth for that courſe.

Collected by RICHARD HAKLVYT *Preacher, and ſometimes* ſtudent of Chriſt-Church in Oxford.

¶ Imprinted at London by *George Biſhop*, *Ralfe Newberie*, and ROBERT BARKER.

ANNO DOM. 1600.

Maps

The Great Southern Continent

6 TEIXEIRA, Luis

Magna Orbis Terrarum Nova universalis et accurata tabula Geographica ac Hydrographica deli nata in hauc ajcrem formam manu celeberrimi regiae Majesatis cosmographi Ludovici Texeirae.

Dedication: Serenissimae Isabellae Clarae Eugeniae Hispan. Infanti. Belg. Principi, Sereniss. Alberti Archid Austriae Ducis Burgindiae Brae. &c. Coniugi Charissime. Joannes Baptista Vrints Antwerpia nus, hanc Ludovici Tesseirae Cosmographi Hispaniarum Regum Longi Peritissimi Mappam Generalem D.D. Anno a Christo Nato 1604.

Publication
Antwerpiae, apud Joannem Baptistam Vrient, 1604.

Description
Engraved map, printed on twelve sheets, flanked by four sheet letterpress description annotated with several woodcut animals, with fine contemporary hand-colour heightened gold, trimmed to neat lines, laid on linen, extensive areas of restoration. A full conservation report is available on request.

Dimensions
1670 by 2970mm. (65.75 by 117 inches).

References
Schilder, Günter, 'Monumenta Cartographica Neerlandica', III, pp. 1-102; ibid. pp. 39-51, No. 5 and No. 6; Shirley, Rodney, 'The Mapping of the World', No. 183 (Plancius 1592), No. 243 (van den Ende/BNF), No. 248 (Teixeira); Destombes, Marcel, 'La Mappemonde de Petrus Plancius gravée par Josua van den Ende 1604', Hanoi, IDEO, 1944, Publications de la Societé de Géographie de Hanoi; Destombes, Marcel, 'Quelques rares Cartes nautiques Néerlandaises du XVII Siècle', in: Imago Mundi 30, 1978, pp. 56-70. Woodward, David (ed.), 'History of Cartography', vol. 3, part 2, pp. 1347-1351.

A spectacular wall map of astonishing beauty made at the beginning of the Dutch Golden Age.

Cartography

The present map draws on the cartography of Luis Teixeira (fl 1564-1613), whose name appears in the large pasted title - a Portuguese cartographer from a famous mapmaking dynasty. He worked in Lisbon and the Portuguese colonies, but was also a friend of and collaborator with Dutch cartographers, contributing a map of Japan to Abraham Ortelius's atlas. Ortelius and Cornelis Claesz published five of his maps between them, and all were specifically advertised as based on his work, indicating that he was highly respected in Amsterdam.

The map is based upon a simple cylindrical projection and follows very closely the 1592 wall map drawn by Petrus Plancius, "a milestone in the emergence of Dutch cartography [and] the first large wall map of the world to be published in the north" (Schilder). The work was engraved by Baptista and Jan van Doetecum and is known only in a single extant example: that in the Colegio del Corpus Cristi in Valencia, Spain. Plancius drew heavily on Mercator's 1569 world map, as well as contemporary manuscript maps by the Portuguese cartographers Pedro de Lemos and Bartolomeo de Lasso. The present Teixeira map shows a number of significant improvements over Plancius's prototype: the redrawing of Guiana following Sir Walter Raleigh's exploration of 1595; the insertion of the Davis Strait, Novaya Zemblya, and the tributaries of the Congo; and amendments to the southern parts of South America and Africa

This updated geographical information was derived from accounts of voyages collected by Linschoten, De Bry, Hulsius, Claesz and others

The map is noteworthy for its portrayal of a vast southern continent, and its depiction of the Southern Pacific at the dawn of Dutch exploration of southeast Asia and Australasia. The true form of the island of New Guinea had not yet been ascertained, and so, bizarrely, it appears twice: once as an island on the left hand side of the map, and again as part of the mythical continent of Magellanica on the right. The Gulf of Carpentaria is tantalizingly hinted at in the sweeping bay in Magellanica at the far right of the map.

The myth of the Great Southern Continent was propagated by the belief that, in order to balance the earth, there must be a landmass in the southern hemisphere of a size commensurate with that in the north. It was, in part, this erroneous assumption that spurred Dutch exploration of Australia in the seventeenth century, and Captain Cook's voyages over one hundred years later. It was not until the twentieth century, and the explorations of Captain Scott and Roald Amundsen, that the lands of the southern hemisphere were finally charted with any degree of accuracy.


neata in hanc majorem formam maglu celeberrimi regiæ Majestatis cosmographi Ludovici
ARCTICUS
AGAMA
OCEANUS
SEPTENTRIO
NA
NOVA FRAN
Lago de Caribas
REGNUM TOLM
ZUBGARA
MAR DEL
NORT
SINUS MEXICANUS
OCEANUS
PERUVIANUS
MAR DEL
CAPRICORNI
ZUR
PERU
OCEANUS
ÆTHIOPICUS
MARE PACI
FICUM
AUSTRALIS
TERRA
DEL FUGO
CIRCULUS ANTARCTICUS


"I have always imagined that Parad
MAGNA ORBIS TERRA


ise will be a kind of library"
Jorge Luis Borges

Towards the lower corners of the map are representations of the northern and southern hemispheres, and along the bottom of the map are ten small panels containing detailed maps of Magellan's Strait (according to Drake in 1579, Noort in 1599, and De Weert, also in 1599); of Rio de la Plata; Northern Europe; Novaya Zemlya (according to Barentsz in 1598), and the straits of Sona (off Java); Anian; Manilla; and Gibraltar. Below the map, printed on separate strips, are long engraved panels presenting the four continents, each personified by a woman riding a symbolic mount. Background scenes show the typical architecture or dwellings of each region, indigenous animals, and the local peoples engaged in battle. These scenes relate to the text panels flanking the map, which are printed in letterpress interspersed with depictions of local flora and fauna. This text is trimmed from the only known institutional example of this map, making the present example, together with a further privately held copy, one of only two known maps surviving in its original form.

Publication.

The existence of an extremely large wall map of the world by Luis Teixeira, sold by Jean Baptiste Vrients and Cornelis Claesz, is recorded by Schilder in 'Wall Maps of the World published in Amsterdam before 1619' (MCN, vol. III, p. 39 No. 5), and Shirley in 'Mapping the World' (248). Although neither Schilder nor Shirley record any extant examples, the evidence for its production comes from two contemporary sources; first in the archives of the publishing house of Plantin-Moretus:

"On 14 December 1604 the Antwerp publisher and map dealer Joan Baptista Vrients delivered to Balthasar Moretus several maps of the world, among which were the maps of Teixeira: 'Adi 14e Decembre [1604], 2 Groote Mappa Texerae 6 fl., 2 Cleyn Mappa Texeirae 3 fl. 10'" (Schilder).

And second in a catalogue by Cornelis Claesz:

"A much more detailed description of Teixeira's world maps is provided by Cornelis Claesz in his catalogue of 1609. As was mentioned in the description of map no. 1 [i.e. Plancius's world map of 1592], this is not a stock list, but a catalogue comprising only of the engravings and maps that were printed from copper plates owned by Cornelis Claesz. In the section 'All kinds of large maps' two maps of the world by Teixeira of different sizes were offered for sale, whilst the customers could choose the language in which he wanted the accompanying description. 'Mappa Mundi Lodovici Tessairae, 22. large folios in Latin, Italian, Spanish, French, English, Dutch and German" (Schilder).

Although neither of the sources refers to a date of publication, the Spanish writer Leon Pinelo referred in 1629 to two Teixeira maps dated 1598 and 1604 respectively. Whether or not they were two unique maps, or simply different editions of the same work, is unclear.


raphica ac Hydrographica
phi Ludovici Texeiræ
Dom. 160
OCEANUS
SEPTENTRIO
OCEANUS EARTARICUS
MARE
ARABICUM
ET
INDI
CUM
OCEANUS
ÆTHIOPICUS
OCEANUS
ORIEN
TALIS
MARE
LANTCHI
DOE

As well as bearing the names of Teixeira and Vrients, the present map also carries the name of the engraver Joshua van den Ende. Both Shirley (243) and Schilder (MCN III, p.45 No. 6), record a large wall map on twelve sheets engraved by van den Ende, and dated circa 1604. The sole institutional copy referenced by both Shirley and Schilder – in the Bibliothéque Nationale in Paris - is undated, untitled, and unsigned by any author or publisher. Only van den Ende's name, as the engraver, appears on the sheets. After consultation of the BNF map, it is clearly printed from the same plates as the present example. The discovery of the present work therefore allows us to confirm Schilder's date of 1604, and to add both Vrients as vendor and Teixeira as the work's cartographer. It also allows us to correct the map's erroneous attribution to Willem Blaeu. The editors of the 'History of Cartography', Destombes (in his monograph on the BNF's van den Ende map) and Schilder all suggest that Willem Blaeu may have published the map, for three reasons. First, neither Hondius nor Claesz in his 1609 catalogue mention such a map; second, van den Ende is known to have engraved much of Blaeu's earliest published work; third, in 1604 Claesz and Plancius' privilege for their 1592 wall map ended, thus allowing Blaeu (or any other publisher) to reproduce the map.

However, with the discovery of the present work, we can conclude that it was in fact Vrients, in association with Claesz, who decided to publish the new map in 1604, updating the hugely successful Plancius map of 1592 with the latest developments from Teixeira.

Rarity

Dutch world wall maps from this era are incredibly rare. Due to the rapid rate of discovery at the beginning of the seventeenth century "many maps soon lost their value; the owners replacing the obsolete maps with new ones. This development is one of the causes of the great percentage of losses which wall maps of the world suffered; they are extremely rare nowadays" (Shirley).

The present work is only the third surviving, and second complete, example of the Teixeira/Vrient map of 1604. The example in the BNF lacks the accompanying text and title. Schilder records five examples prior to the present map in his census of Dutch world wall maps published in Amsterdam before 1619 (MCN III, p. 19-102):

1. PLANCIUS, Petrus. 'Nova et Exacta Terrarum Orbis Tabula Geographica ac Hydrographica'. Amsterdam, 1592. Map on 19 sheets. One recorded example, Collegio del Corpus Cristi in Valencia.

2. LANGREN, Hendrik van. 'Nova et Accurata, Totius Orbis Terrarum Geographica et Hydrographica'. [Amsterdam, c.1600]. Map on (?)20 sheets. One recorded example Stadtbibliothek of Breslau, now lost due to military action during World War II.

3. CLAESZ, Cornelis. [No Title] [Amsterdam, Cornelis Claesz., c.1602]. Map on four sheets. No known extant example of the first edition.

4. HONDIUS, Jodocus. 'Nova et Exacta Totius Orbis Terrarum Descriptio Geographica et Hydrographica'. [Amsterdam, Cornelius Claesz, 1603]. Map on four sheets. No known extant example of the first edition.

5. TEIXEIRA, Luis. [No Title] [Amsterdam, Joan Baptist Vrients, (?) 1604]. Map on nine sheets. No known extant example of the first edition.

As the list shows, the present work is only the second surviving example from the first twelve years of world wall map publication in Amsterdam. In fact, of the seven further maps that Schilder goes on to list as published before 1619, only four are known to exist in their first edition.

A map of the world, for the father of the modern state system

7 DE CAUS, Jean Salomon

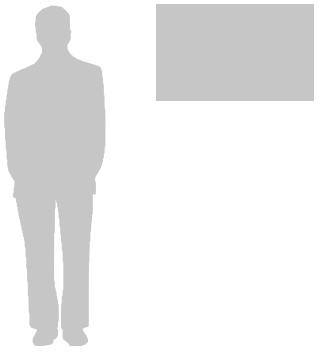
Carte Universelle.

Publication
[Paris], par S.de Caus Ingenieur et Architecte du Roy, 1624.

Description
Original manuscript world map on an oval projection, pen and ink and colour wash on vellum.

Dimensions
508 by 810mm (20 by 32 inches).

References
Jean-Vincent Blanchard, Éminence: Cardinal Richelieu and the Rise of France, (New York: Bloomsbury, 2011); Alan James, The Navy and Government in Early Modern France 1572-1661 (Suffolk: Boydell and Brewer, 2004); Henry Kissinger, Diplomacy, (New York: Simon and Schuster, 1994); Robert J. Knecht, Richelieu, (Routledge, 2014); Richard Lodge, The Life of Cardinal Richelieu, (New York: A.L. Burt, 1903); Luke Morgan, Nature as Model: Salomon de Caus and Early Seventeenth-Century Landscape Design, (Philadelphia: University of Pennsylvania Press, 2006).



A magnificent manuscript map of the world, probably made for Cardinal Richelieu (1585-1642), the "father of the modern state system" (Kissinger), given the author and content. The map was drawn in 1624, the year in which Richelieu was made principal minister to Louis XIII of France, and de facto ruler of the country. He occupied this position until his death.

Richelieu was keen to expand the power of the French navy, realising that it was essential to establishing France as a global power. He came from a maritime family, and wrote in a memorandum, "It has been till now a great shame that the king who is the eldest son of the Church is inferior in his maritime powers to the smallest prince in Christendom" (Knecht). His efforts began in the year this map was made, with the foundation of a Conseil de Marine to bring naval proposals before the king's council. At the time, there was no permanent fleet in the Atlantic and a handful of galleys in the Mediterranean; a decade later, there were three squadrons of round ships in the Atlantic, and one in the Mediterranean. Richelieu was spurred on in his efforts by the Protestant privateers blocking Catholic towns on the Atlantic coast during the Wars of Religion and the Huguenot Rebellions, and the subsequent loss of much of the Atlantic trade to the English and Dutch (James).

In line with France's new outward-looking foreign policy, the map shows the global reach and ambitions of the French empire. It concentrates in particular on New France in the Americas, which in 1624 included the shores of the St. Lawrence River, Newfoundland, and Nova Scotia (Arcadia), shown on the map as 'Canada' and 'Estotiland'. 'Virginne' (Virginia) and 'Floride' (Florida), also appear. Amongst the vignettes in the margin is an early image of an 'habitation en Virginie et floride' and an Indian village in Virginia, drawn after Theodor de Bry (who published some of de Caus' works). Another vignette, 'Quebec habitation de francois en Canada', is drawn after the travel account of Samuel de Champlain.

Generally speaking, the cartography is based on that of Jean le Clerc's second separately issued world map, engraved by Jodocus Hondius, and published in Paris in 1602. However, de Caus' map includes some important updates, including in Le Maire's Strait and in northern Canada, where the results of Champlain's expedition ten years earlier are shown.

Richelieu had a particular interest in the French territory of Canada. In 1627, he authorized an association of merchants, the Compagnie de la Nouvelle-France, popularly known as the Compagnie des Cent-Associes, or The One Hundred Associates, to take all steps it might think expedient for the protection of the colony and the expansion of trade and commerce, including a complete monopoly on the fur trade. Both Richelieu and Champlain were members. Richelieu was nominal governor of New France, but Champlain was appointed acting governor. Apart from a brief interruption when the English blockaded the Saint Lawrence River

SEPTEMTRION
NALE
INCOGNEV
MER GLACIALE
OCCEAN SCITIQVE
GROENLAND
ISLAND
noua zembla
CAÑADA
RVSIE
MOSCOVIE
ALEMAIGNE
FRANCE
ESPAIGNE
ITALIE
MER MEDITERANEE
NATOLIE
mer maior
VIRGINNE
MER DV NORT
BARBARIE
EGIPTE
ARABIE
PERS
IVDEE
GVINEE
ETIOPIE
CASTILLE DOR
GVIANA
BRESIL
OCCEAN ETIOPIQ
AMERIQVE MERIDIONALE
CHILI
chica
patagones
CAP DE BONNE ESPERANCE
CERCLE ANTARTIQVE
AVSTRALE INCOGNEVE
MIDI


CARTE V
TERRE SEPTEMTRIO
MER GLACIA
CERCLE
ARTIQVE
en lan 1492 Cristofle colomb Geneuois
descouurit ceste partie de terre occidentale
arriuant premierement aus isles espagnolle et
Cube et peu de temps apres Americ de uespuse
Florentin descouurit la partie, et toute ces
terres furent nommees de son nom Amerique
AMERIQVE
SEPTENTRIONALE
CANADA
VIRGINNE
FLORIDE
QVIVIRE
nouuelle grenade
TROPIQVE DE CANCER
OCCIDENT
LIGNE ESQVINOCTIALLE
NOVVELLE GVINEE
Isles de Salomon
MER DV SV OV
PACIFIQVE
TROPIQVE DE CAPRICORNE
PERV
GVIANA
AMERIQVE
MERIDIONALE
CHILI
chica
patagones
TERRE
AVSTRA
HAVANE
CVSCO
habitations en VIRGINIA et Floride
PEÑON DE VELE

VNIVERSELLE

NALE INCÕGNEVE

OCCEAN SCITIQVE

RVSIE MOSCOVIE Scythie TARTARIE CHINE PERSE INDE ARABIE HEVREVSE MER ROVGE ETIOPIE PHILIPPIANE INSVLE

OCCEAN ETIOPIQ~ MER INDIQVE

CERCLE ANTARTIQVE

ALE INCÕGNEVE

par S. de Caus Ingenieur et Architecte du ROY

and captured Quebec between 1629 and 1633, the Compagnie remained proprietor of New France until 1663.

In all, 17 settlements are shown on the map: Rome, 'Mecha' (Mecca), Mosco(w), Constantinople, Quebec, Quinsay (Hangchow), Beijing, Jerusalem, 'La Babylone', 'Mexique' (Mexico City), Leon, Lima, Cusco, 'Arica Potosi', 'ville de la plate', 'Fernanborg' (in Brazil), and 'Cambalu' (in Cathay). Regional names and tribal names appear in red and gold.

Those locations of most interest to the French are depicted in eight roundels, each a small masterpiece, in the margin of the map: a map of the port of Havana, with tall ships in the harbor, 'Havane port en lisle de Cube'; the fortified citadel of 'Quebec - habitation de francois en Canada'; maps of 'La Goulette surla coste de barbarie pres de tunis', 'Isle St. Thomas', Rodes', 'Penon de Velez'; an important and early view of an Indian village in Virginia, 'habitation en Virginie et floride'; and of 'Cusco ville metropolitaire du Peru'.

Jean Salomon de Caus (1576-1626) was an architect, engineer, mathematician and author. He is known not only for his works, but also for his extensive writings on how he achieved them, including 'Hortus Palatinus' (1620) on his Heidelberg garden designs, and 'Les raisons des forces mouvantes' (1615) on the principles of hydraulics behind the automata and fountains in his gardens.

De Caus' influence was widespread in the courts of the Southern and Northern Netherlands, Germany, and England, where his younger brother Isaac de Caus (1590-1648) worked, long before he became 'Ingenieur et Architecte du Roy' for Louis XIII. James I brought him to the English court as drawing-master to his children, Elizabeth and Henry Frederick. At the palace of Richmond, he created amusing fountains and other novel waterworks for the ailing Henry Frederick. On his death, in 1612, de Caus left England. It was for Elizabeth, when she married Elector Friedrich V, that de Caus created the design of the Hortus Palatinus in Heidelberg, begun in about 1614 and left unfinished in 1619.

De Caus arrived in France in 1620, at first in Rouen and then in Paris. He first worked for Louis XIII as an hydraulic engineer, responsible for sanitation and water supply.

Towards the end of his life, de Caus also worked as a cartographer. There are records of a plan of Paris from 1622; a world map, first mentioned by J. Desnoyers in 1870; and another map, also bearing his signature, rediscovered in 1980, and dedicated to Richelieu. This map was probably also made for Cardinal Richelieu; de Caus also dedicated to Richelieu a treatise published in the same year, 'La pratique et demonstration des horloges solaires'. On a more personal level, in this map, de Caus betrays his interest in human engineering and architecture by including several of the wonders of the world on his map: the Great Wall of China, Babylon; and also Bohemia, where he had spent much of his adult life (Morgan).

Provenance:
1. From the collection of Philip Stanhope, 2nd Earl Stanhope (1714-1786), bound in an example of 'Atlas sive cosmographicae meditationes de fabrica mundi et fabricata firuga', (Amsterdam: Gerard Mercator and Jodocus Hondius, 1619), with a presentation inscription dated 9 February 1771 to, and with the bookplate of, Stanhope.
2. With Christie's, 24 May 1995, lot 78 (as part of the above atlas).
3. Separately, as part of a private collection.

Longhi's monumental and exceptionally rare double-hemisphere wall map of the world

8 LONGHI, Giuseppe; and Frederick de WIT, [after]

Nova Totius Terrarum Orbis Tabula.

Publication
Bologna, Olim a Friderico de Wit in lucem primum edita, nunc vero nouis relationibus auctior atque correctior studio, et impensis Iosephi Longi Bononiae. Carolus Scottus, sculpsit [c1675].

Description
Large engraved wall map on 12 sheets, hand-coloured in outline, joined and mounted on archival paper, skilful facsimile reinstatement to areas of loss to printed border at sheet edges. A full conservation report is available on request.

Dimensions
1258 by 1880mm (49.5 by 74 inches).

References
Cesari, 'New Evidence for the Date of Five Rare Dutch-Italian Wall Maps: F. de Wit's World Mapand W. J. Blaeu's Four Continents', Imago Mundi, 2012, Vol. 64, No. 1 (2012), pp. 41-59; Shirley cf 471.

"One of the most active map printer-publishers in Bologna in the later seventeenth century. Longhi's cartographical enterprise - the publication of ten large multi- sheet wall maps in a single decade - must stand as a unique achievement in Bologna's publishing history" (Mariarosa Cesari).

Impressively proportioned and beautifully decorated, Longhi has incorporated into the geography of his map important revisions that surpass the ambitions of its closest relatives. The map includes the addition of a tentative coastline of "Terra Jessi" between North America and Japan, incorporates the coastline of the large Antarctic continent, divides the large island in Hudson's Bay into three, and adds the "Desertum Amo" (pocked to resemble sand) in northern China.

In spite of these innovations, the imprint to Longhi's map humbly acknowledges his debt to an earlier twelve-sheet map of the world, published by Frederick de Wit in 1660 – 1661: "Published for the first time by Frederick de Wit, now improved with the latest reports and further revised with accuracy, [and consigned to press] at the expense of Giuseppe Longhi in Bologna. Carlo Scotti engraved [it]".

In fact, Frederick de Wit's (1630-1706) first world map, 'Nova Totius Terrarum Orbis Tabula Auctore F. de Wit' (1660), had been printed on a single sheet. This was followed soon afterwards by a large wall map, printed on twelve sheets, 'Nova totius terrarum orbis tabula' (c1661). It was this map that Longhi used as a model for his wall map of the world. In turn, de Wit had based his map on Joan Blaeu's twenty-one sheet map of the world published in 1648. De Wit had apprenticed with the Blaeus when he moved to Amsterdam in 1648, and may well have worked on their monumental map.

While clearly drawing on some aesthetic elements of de Wit's map, Longhi made subtle and significant changes to the border that reflect cultural differences between the time and place of the maps' separate origins. The combined effect is to give Longhi's map a more scientific aspect: new detailed polar projections have been placed between the celestial hemispheres and the Copernican and Braheian hemispheres, in the lower border; most of the more fanciful elements of de Wit's map, which included putti and garlands, have been replaced by scenes from the natural landscape of the nationalities that people the corners of the map; de Wit's map was prominently dedicated, beneath his arms and portrait in a plinth on the map, to Prince Johann Maurits of Nassau-Siegen, in Longhi's map this has been replaced by an armillary sphere.

Publication date
Longhi issued his map without a date, however Cesari draws on circumstantial evidence to date the map after 1675, the year that Giovanni de' Rossi issued a very similar twelve-sheet map in Rome. While the geography expressed is the same, there are significant differences to the border: the


ZONA FRIGIDA
MARE GLACIALE
OCEANVS TARTARICVS
OCEANVS SEPTENTRIONALIS
OCEANVS DEVCALEDONIVS
MARE MEDITERRANEVM
MARE ARABICVM, et INDICVM
OCEANVS ORIENTALIS Quiet
MARE INDICVM
ÆTHIOPICVS
OCEANVS
Tropicus Capricorni
Tropicus Cancri
Æquator
Circulus Antarcticus
TERRA AVSTRALIS INCOGNITA
POLVS
ZONA FRIGIDA


NOVA TOTIVS TERRA
AMERICA SEPTENTRIONALIS
MAR DEL NORT
MAR DEL ZVR
MARE PACIFI
AMERICA
MERIDIONA


RVM ORBIS TABVLA
OCEANVS
ORIENTALIS
MARE INDICVM

legend "Copernici Herronea Hipothesis" has been omitted from the Copernican diagram on Longhi's map, suggesting that, "by the late seventeenth century, Bologna, although a papal city, enjoyed a greater measure of intellectual and scientific freedom than Rome" (Cesari); the dedicatory portrait of Queen Christina in de' Rossi's map has been replaced by an armillary sphere in Longhi's; and at the bottom of de' Rossi's map, the long panel beneath the celestial hemispheres is blank on Longhi's.

De' Rossi's map is known in only one example, sold at Sotheby's London sale, 15 April 1980, lot 551. He dedicated his map to Queen Christina of Sweden beneath an engraving of the Queen's impresa, featuring the smiling sun with the motto "Nec falso alieno". This strongly suggests a date shortly afterwards for Longhi's map. Shirley reports that it "is uncertain whether the De Wit-Longhi issues pre-date the De Wit-De Rossi map or are later. A detailed examination of one of the De Wit-Longhi copies in the University of Kansas kindly undertaken for [Shirly] by Professor T.R. Smith disclosed no trace of any erasures or previous imprints. It could be that two very similar but distinct sets of plates are involved, although this seems unlikely" (Shirley).

Only six other examples of Longhi's map are known, five of which are institutional: at Kansas University, the Newberry Library in Chicago, the Maritime Museum at Rotterdam, the Istituto Geografico Militare in Florence, and in Bologna, in the archive of the Opera Pia dei Poveri Vergognosi.

Giuseppe Longhi (1620-1691)

Longhi was one of the leading book and print publishers and sellers in Bologna, "well known for his entrepreneurship and the variety of his productions.

These included illustrated works such as academic theses, encomiastic lyrics, comedies, and historical and geographical texts, which often concerned local topics. Towards the end of his career, he became "archiepiscopal printer" under the Archbishops of Bologna Girolamo and later Giacomo Boncompagni. Longhi was active in publishing for some forty years, from 1650 to his death in 1691, during which he changed the location of his workshop at least three times. In the last three decades of the seventeenth century, when he embarked on the wall maps discovered in Opera Pia, he was occupying a group of small rooms in the Vicolo della Scimia. In 1677, he rented a house from the church of San Petronio, and in 1682 he moved his workshop to Palazzo Montecuccoli in Via Orefici, where he also lived" (Cesari).

In addition to his wall map of the world, Longhi published two issues of his version of Blaeu's wall maps of the four continents. The first set appeared in 1672-1673 (state 1) and then again between 1677 and

about 1680 (state 2). In the meantime, he published two issues of Greuter's very large wall map of Italy between 1675 and 1676. All these maps were engraved by Pietro Todeschi, who worked extensively with Longhi over many years.

Carlo Scotti (fl 1667-1693)
For his wall map of the world, Longhi chose Carlo Scotti as his engraver. He is recorded as working in Venice (1667), Bologna (1685) and Modena (1693). While in Bologna, "Scotti was employed by several publishers, as can be seen from engravings bearing his name in local print collections. An analysis of the graphic style of Longhi's de Wit map suggests that, for the engraving of the new plates, Scotti was helped by at least two other artists. The high quality of his own work is recognizable in the allegorical scenes in the corners of the map; an engraver of average competence produced the armillary sphere and the figures of Hercules and Minerva; while an artist of modest skill was responsible for the astronomical circles and the background of the allegorical corner scenes" (Cesari)

The "Blue Map" of the World

9 HUANG, Qianren

Daqing wannian yitong dili tu 大清萬年一統地理圖*[Complete Geographical Map of the Everlasting Unified Qing Empire].*

Publication
China, August (lunar calendar), 1812.

Description
Large woodcut map printed on eight sheets, a few minor repairs.

Dimensions
1320 by 2210mm (52 by 87 inches).

References
Richard A. Pegg, Cartographic Traditions in East Asian Maps (Hawai'i: Maclean Collection and University of Hawai'i Press, 2014), 18-27; Yan Ping et al., China in Ancient and Modern Maps, (London: Philip Wilson for Sotheby's Publications, 1998), 141.

An extraordinarily rare cartographic document that is based on research originally presented to the Qianlong emperor by Huang Qianren (fl. 1760- 70) in 1767. The title of the map is as much a political programme of the Qing as it is a geographical record. It shows China at the height of the Qing empire, celebrating the "unified status of all of Chinese borders" (Pegg).

"[This] 'complete' map minimizes the European notion of a map of the world, its centralized and marginalizing construct confirming the Qing/ Chinese notion of the Central Kingdom" (Pegg).

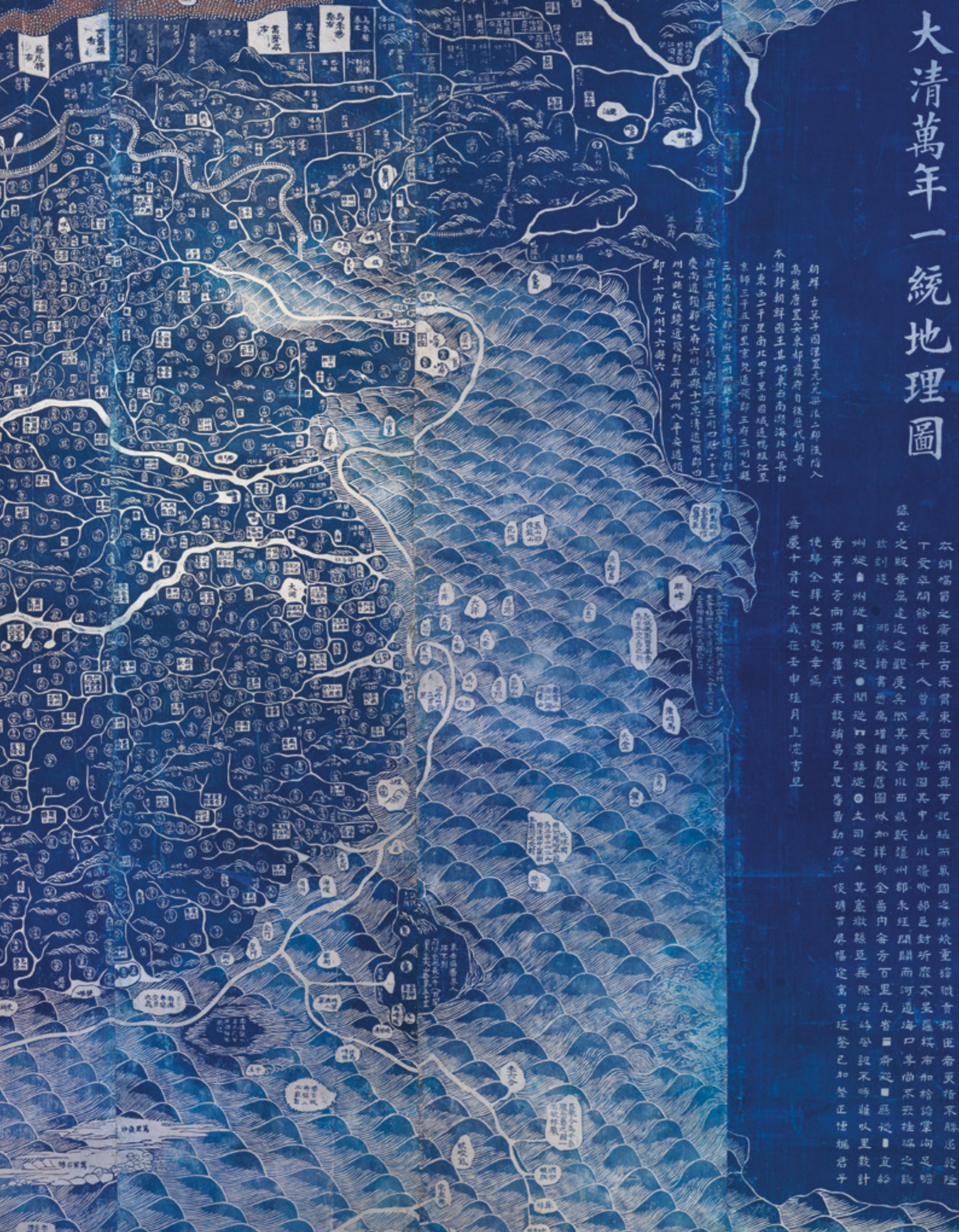
The map was designed to act not only as a grand political statement of the Kingdom's place in the world, but also as an administrative tool. Its surface is dotted with provincial capitals (sheng), a square with a small rectangle on top; prefectures (fu), a square; independent district magistrates (zhilizhou), a square with a triangle on top; departments (zhou), a vertical rectangle; sub-prefectures (ting), a diamond; districts (xian), a circle; frontier passes (guan), a small building; local headmen or western tribute states (tusi), a triangle; with the name appearing within each pictogram. The borders of each province are denoted by dotted lines.

As well as administrative areas, the map depicts topographical and geographical information. Much attention is given to the waterways: the source of the Yellow River is correctly located in the Bayan-har mountain and is accompanied by an expansive explanatory note; the Minjiang River is given as the source of the Yangtze. Mountain ridges and the Great Wall are depicted in elevation, and desert areas are stippled. Several neighbouring countries are marked including Russia, India, Siam, Vietnam, Japan, and, most notably, Korea, who, as the chief vassal state, receives a great deal of commentary. To the upper left of the map are both the Mediterranean or "Small Western Ocean", and Atlantic or "Great Western Ocean", with Holland and England depicted as islands in the Atlantic.

One of the more striking aspects of the map is that the "intentionally vague geopolitical lines of the [empire's] frontiers and beyond clearly indicate the Qing's perception of the world around them ... [when] ... all foreign entities simply inhabited the fringes of the empire" (Pegg). This together with the empire's size reaffirms the status of the kingdom as the geographical, political, and cultural centre of the world.

The map which the present example is based upon was first produced in 1767 for the Qianlong Emperor to celebrate the unification of the Qing empire. No example of the original survives. However, a painted copy of the map was produced in 1800 by Huang Zhengsun, and now resides in the Beijing National Library.

The map was then revised and enlarged in around 1811, resulting in the present work. This version was printed in two colours: blue and white, and black and white. There are examples of this version in the Maclean Collection in Chicago, the Library of Congress, and the Beijing National Library.


大清萬年一統地理圖


大清萬年一統地理圖


欽定四庫全書

Charting the Unfathomable Sky

10 QIAN Yong, [HUANG Shang 黃裳]

Huntian yitong xingxiang quantu 渾天壹統星象全圖 *[Complete Celestial Chart]*

Publication
[China], April 1826.

Description
Large woodblock-printed celestial map printed on eight sheets.

Dimensions
1230 by 2160mm (48.5 by 85 inches).

References
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Zhang Jiafeng 張嘉鳳. Zhongguo gudai de tianwen yu lifa gaishuo 中国古代的天文與历法概说. Taiwan: Guojia tushuguan, 2009.

A monumental Chinese celestial chart Huntian yitong xingxiang quantu, one of the largest planispheres published during the Qing dynasty (1636-1912). The work combines both Chinese and Western astronomy, highlights the fundamental role that knowledge of the heavens played in Chinese politics, and illustrates the Qing dynasty's endeavours to seek authentic truth in ancient texts.

Historical context

Chinese scholarship in the late Qing dynasty was dominated by 'Kaozheng' or 'evidence based' scholarship, which was a response to, and reaction from, the Neo-Confucianism that had held sway during the Song (960-1279) and Ming (1368-1636) dynasties. 'Kaozheng' sought to strip away the layers of Taoist and Buddhist interpretations of Confucian teaching that had accrued during the Song and Ming dynasties, and which they saw as obscuring its true meaning and nature. In doing so the Qing scholars hoped to not only shed new light on the ancient texts but that the texts might be better guides for contemporary policy and politics. 'Kaozheng' with its emphasis on critical thinking, and search for authentic texts, was not only confined to the realm of Confucian scholarship but also bled though into all aspects of Chinese intellectual enquiry, such as science and in the present case astronomy.

The Celestial Chart

The present chart is based on the oldest recorded celestial planisphere, the Tianwen tu 天文圖 produced, during the Southern Song dynasty (1127-1279), by Huang Shang 黃裳 (1146-1194) tutor to Emperor Guangzong's son. The work was engraved on stone by Wang Zhiyuan 王致远 (1193-1257) in 1247, and set up in the Confucian Temple in Suzhou, where it still stands. As well as depicting the heavens, and providing an introduction to the birth of the cosmos, the planisphere bore an overt political message: that the tian 天 (Sky or Heaven), would bestow tianming 天命 ("The Will of the Sky," or "The Mandate of Heaven") on just rulers of China – named Tianzi 天子 (Son of Heaven), similar to the divine right of kings prevalent in Europe. The chart thus reassures the Song Emperor that, despite recently losing the north of China to the Jurchen, he still had the 'Mandate of Heaven' and was still China's rightful ruler. A message that would not have been lost on the Qing scholars, whose own times were beset by internal rebellion and encroachment from belligerent Western powers.

The present chart is no mere copy of Huang Shang's work, and shows significant revision and updating to include new constellations and western geographical information. One of the most intriguing differences can be seen to the title, which contains the characters Huntian 渾天, and illustrates the Qing scholars continuing interest in the Later Han 後漢

渾天一統星象全圖

太極未判天地人三才涵於其中謂之混沌云者言天地人渾然而未分也太極既判輕清者為天重濁者為地清濁混者為人輕清者氣也重濁者形也形氣合者人也故凡氣
發見於天者皆太極中自然之理運而為日月分而為五星列而為二十八舍會而為斗極莫不皆有常理與人道相應可以理而知也今爰舉其梗槩列之於下天體圓地體方
圓動而方靜天包地地依天是也**天體**渾圓周圍皆三百六十五度四分度之一經一百二十一度四分度之三凡一度為百分四分度之一即百分中二十五分也四分度之三
即百分中七十五分也天左旋東出地上西入地下動而不息一晝一夜行三百六十六度四分度之一除日東行一度天左旋三百六十六度然後日出于東方**地體**徑二十四度其厚半之勢傾東南其西
北之高不過一度鄒衍謂水火土石合而為地今所謂徑二十四度者乃土石之體爾土石之外水接於天皆為地體地之徑亦得一百二十一度四分度之三也**兩極**南北上下
樞是也北高而南下自地上觀之**北極**出地上三十一度有餘**南極**入地下亦三十五度有餘兩極之中皆去九十一度三分度之一謂之**赤道**橫絡天腹以紀二十八宿相距之
度大抵兩極正居南北之中是為天心中氣存焉其動有常不疾不徐晝夜循環斡旋天運自東而西分為四時寒暑所以平陰陽所以和此後天之太極也先天之太極造天地
於無形後天之太極運天地於有形三才妙用盡在是矣**日**太陽之精主生養恩德人君之象也人君有道則日五色失道則日露其慝譴告人主而儆戒之如史志所載日有食
之日中烏見日中黑子日色赤日無光或變為孛星夜見中天光芒四溢之類是也日體徑一度半自西而東一日行一度一歲一周天所行之路謂之**黃道**與赤道相交半出赤
道外半入赤道內冬至之日黃道出赤道外二十四度去北極最遠日出辰日入申故時寒晝短而夜長夏至之日黃道入赤道內二十四度去北極最近日出寅日入戌故時暑
晝長而夜短春分秋分黃道與赤道相交當兩極之中日出卯日入酉故時和而晝夜均焉

月太陰之精主刑罰威權大臣之象大臣有德能盡輔相之道
則月行一度或大臣擅權貪威宦官用事則月蔽其
愆而變異生焉如史志所載月有食之月掩
五星五星入月月光亦見或變為妖星
陵犯執宮侵掃列舍之類是也月
晝徑一度半一日行十三度
分度三十七分七日
餘一周天所行之路謂
之**白道**與黃道相交
半出黃道外半入

經星三垣八十八舍中外官星是也計二百八十三官一千五百六十五星其
星不動三垣紫微 市垣也二十八舍東方七宿角亢氐房心
其色蒼龍之体北方七宿斗牛女虛危室壁為玄龜之
體西方七宿奎婁胃昴畢觜參為白虎之
方七宿井鬼柳星張翼軫為朱雀之
外官星在朝象官如三台諸侯九
騎官羽林之類是也在野象物
鳴狗狼魚龜鱉之類是也在
象事如離宮閣道華蓋五
之類是也其餘同長錯
則可知其義也經星


此圖釋天之名義也日月星辰皆繫出於天安得豁然於心目玆剟稽
攷其連行希別爰繪其圖以備藝林之華易於指趨雖先我而爲之者
盛行於世然未免紛謬有所漏畧余乞仰觀宇宙之大舉亓全體而言
亦非敢謂繪圖出奇庶少錯也質之博雅君子聊以共賞鑑焉可耳
龍飛御光卯年歲在甲申季冬之月
金匱梅溪錢泳書


渾天一統星象全圖

dynasty (25-220) (especially Confucian) philosophy and philology. The term refers to Huntian shuo 渾天說 (Spherical-Heaven Theory) which was formulated during the Later Han, and argued that a spherical earth was suspended within a celestial sphere. It displaced an ancient celestial theory, Gaitian shuo 蓋天說 (Canopy-Heaven Theory), which stated that the earth was a square and covered umbrella-like by a celestial hemisphere.

The present chart can be seen as an embodiment of the Qing 'Kaozheng' scholars' principles: the study of ancient, primary sources, in this case the Tianwen tu celestial planisphere, in order to better understand the past, so that it might be a truer and more accurate guide to the present.

Content

The content of the chart can be divided into four sections: the title to the far right, the text surrounding the chart, the celestial chart itself, and the colophon to the far left.

Colophon

Author: QIAN YONG. Date: April 1826.

"道光六年歲在丙戌孟夏之月" (The sixth year of the Daoguang reign period (1826) April in the lunar calendar), "金匱梅溪錢泳書" (Written by Mei Xi (Pseudonym) Qian Yong (Author) from Jingui (A town in Jiangsu Province)).

Title

The title: Huntian yitong xingxiang quantu contains more information than the Song chart. The first two characters, Huntian渾天, refer to Huntian shuo, the second of the three main celestial theories in ancient Chinese astronomy. It was proposed by the Later Han scholar Zhang Heng 張衡 (78-139) who compared the earth and the celestial sphere with the structure of an egg, with earth being the egg yolk and the celestial sphere being the shell. This theory is stated at the beginning of the paragraph entitled Tiandi xing 天地形 (The Shape of Heaven and Earth) printed on the fifth panel from the right below the chart.

Text

The text is a revised version based on the Song chart, with additional celestial and geographical information; most notably information drawn from European Jesuit sources such as Matteo Ricci's Kunyu wanguo quantu 坤輿萬國全圖 (Complete Map of the World).

Layout and Content

The text on the present chart runs from right to left and is divided into sixteen sections with titles positively printed in blue on white; eleven in the upper half of the work and five in the lower.

The introduction reads:

太極未判，天地人三才函於其中，謂之混沌，言天地人渾然而未分也。太極既判，輕清者為天，重濁者為地，兼清帶濁者為人。輕清者氣也，重濁者形也，形氣合者人也。故凡氣之發見於天者，皆太極中自然之理。運而為日月，分而為五星，列而為二十八舍，會而為斗極，莫不皆有常理，與人道相應，可以理而知也。今畧舉其梗概，列之於下。

Before the Great Absolute had unfolded itself the three primal essences, Heaven, Earth, and Man, were involved within it. This was termed original chaos because the intermingled essences had not yet separated. When the Great Absolute unfolded, the light and pure formed Heaven, the heavy and impure formed Earth, and the mingled pure and impure formed Man. The light and pure constitute spirit, the heavy and impure constitute body, and the union of spirit and body constitutes man. Hence all manifestations of spirit emanate from Heaven, for a natural reason, as they are inherent in the Great Absolute. This evolves into the sun and the moon, divides into the five planets, arranges in order as the twenty-eight mansions, and meets to form the directors and the circumpolar stars. All of these, being involved in the immutable reason, are also in harmony with the rational principle in Man, hence they may be interpreted by reason. Now let us consider and expound the general essentials of the subject as follows.

This introduction explains the celestial system as perceived in China using sixteen astronomical entities, which are given printed in blue text in white boxes: Tianti天體 (The Celestial Body), Diti 地體 (The Terrestrial Body), Liang ji 兩極 (The Two Poles), Riti日體 (The Sun), Yueti 月體 (The Moon), Jingxing 經星 (The Fixed Stars), Weixing 緯星 (The Planets), Tianhan 天漢 (The Milky Way), Shi'er chen 十二辰 (The Twelve Branches), Shi'er ci十二次 (The Twelve Positions), Shi'er fen ye十二分野 (The Twelve Kingdoms), Jiu tian 九天 (The Nine Skies), San ji 三際 (The Three borders), Xingbian 星變 (Star Transformations), Kexing客星 (The New Star), and Tiandi xing 天地形 (The Shape of the Heaven and Earth).

When compared with the Song chart, the most notable change is the addition of the last five sections, i.e. the Nine Skies, Three Borders, Star Transformations, New Star, and the Shape of Heaven and Earth.

The text goes on to deal with geographical matters: much of the 'new' geographical information added is drawn from knowledge brought into China by the Jesuits during the sixteenth century. One of the most notable examples is contained in the last paragraph which references

Tiandi xing, "地名墨瓦蠟泥加洲…" (The continent called Magallanes…). The "Magallanes" (now Australia) "墨瓦蠟泥加洲" was first introduced to China by Matteo Ricci 利瑪竇 (1552-1610) and was included on his Kunyu Wanguo Quantu 坤輿萬國全圖 (Complete Map of the World).

The Planisphere

The work preserves the key features of the Song chart, i.e. centred on the North Pole, giving the outline of the Milky Way, providing the circle of constant visibility (the smallest circle) and the equator (the third concentric circle from the center), and depicting all the constellations, and the diameters of the chart and the equator are the same. However, the Qing chart not only adds new constellations but is also rotates the chart by 180 degrees and omits the ecliptic. Furthermore, it adds two further concentric circles: the Tropic of Cancer (inside the equator, the second from the centre) and the Tropic of Capricorn (outside the equator, the fourth from the centre).

Unlike the twelve houses of the zodiac devised by Western astronomy, Chinese astronomers identified 28 divisions in the sky known collectively as the Ershi ba xingxiu 二十八星宿 (28 Lunar Lodgings). These divisions are termed xiu 宿 (Mansions or Lunar Lodges), and were used to measure the coordinates of celestial bodies and constellations along the equator. The Song chart only shows the divisions in the outermost ring, where the Qing depicts divisions throughout the chart stemming from the innermost circle.

We have been able to identify three states of the chart:

1. Author: YUNYOU SANREN. Date: March 25th 1822.
2. Author: SONG TAO. Date: March, 1826.
3. Author: QIAN YONG. Date: April 1826.

There are slight differences between the 1822 and 1826 editions in terms of the textual content and layout. Curiously, the later 1826 editions are more faithful to the earlier Song chart, as the text is almost identical with only minor variations of the characters.

Rarity

We have been able to trace five extant examples of the 1822 edition:

a) Konko Library, Japan.

b) Collection of Prof. Miyajima Kazuhiko 宮島一彦, Japan.

c) Collection of Tsujiyoshi family, Japan.

d) Two in private collections, China.

Two copies with the same colophon as the 1822 edition can also be found in the Omura City Archives and Matura Historical Museum in Japan, but with shorter text and two fewer panels than the present example.

We are only able to trace one institutional example of the March 1826 edition:

a) Tsuyama City Museum, Japan.

We are only able to trace two institutional examples of the April 1826 edition:

a) Jissoin Temple in Japan.

b) Adler Planetarium in the USA.

Pivot to the Pacific

11 ARROWSMITH, Aaron

Hydrographical Chart of the World: According to Wrights, or Mercators Projection Delineated by A. Arrowsmith 1811... Additions to 1814.

Publication
London, Aaron Arrowsmith, 1814.

Description
Engraved map, fine original hand-colour in outline, dissected and mounted on linen, in eight sections.

Dimensions
1525 by 2590mm (60 by 102 inches).

References
Weinreb and Douwma, Catalogue 16, 1976 p.3; Wheat, Mapping the Transmississippi West.

The last and largest of Aaron Arrowsmith's world maps, representing the culmination of a career. It is one of the earliest world maps to reflect the explorations of, and map made by, Captain Meriwether Lewis and William Clark during their 1804-06 exploration of North America. Aaron Arrowsmith (1750-1823) was a well-respected mapmaker and publisher who had made his reputation through his commitment to representing the most up-to-date information on all his maps, especially the rapidly changing events in North America. His works "to this day retain a well merited reputation for their accuracy, distinctness and fine engraving" (Wheat).

The map advertises in the title that it uses "Wrights, or Mercators Projection". Arrowsmith has used this projection to construct this map, unusually centred on the Pacific Ocean. The title cartouche is a monolith with a globe on top, divided to represent the method of projection. Of particular interest is a note on Greenland reading

"Discovered in 983 See Egede p 8." According to early Icelandic sagas, Greenland was settled by Erik the Red in 983, a Norse warrior outlaw. He supposedly named the island Greenland to make it more attractive to potential colonists. A settlement was eventually founded there, lasting until it mysteriously died out in the twelfth century. Hans Egede was a Lutheran pastor who began the Danish colonization of Greenland in 1721, when he founded a mission in present day Nuuk, or Godthåb.

Weinreb and Douwma give at least six editions of this map. We have not been able to trace any institutional examples of this edition.


A R C T I C   S E A
I N D I A N   O C E A N
GULF OF GUINEA
BAY OF BENGAL
C H I N E S E


GREENLAND
ARCTIC SEA
ARCTIC S
INDIAN OCEAN
NEW HOLLAND
NORTH


WORLD
BAFFINS BAY
NORTH AMERICA
PACIFIC OCEAN
SOUTH PACIFIC OCEAN

Size matters!

12 AZZI, Evangelista

Emisfero Occidentale [and] Emisfero Orientale.

Publication
Parma, Studio Toschi, 1838.

Description
Lithograph with original outline colour in 12 sheets.

Dimensions
2200 by 4200mm (86.5 by 165.25 inches).

References
M. Dall'Acqua & V.A. Vecchiarelli, Il terratoria rappresentato. Temi e problemi dell cartografia nelle collezioni pubbliche paremensi – sec. XIV – XIX (Bibliotece Palatina, Parma, Exhibition Catalog, September 20-29, 1979); R.V. Tooley, Dictionary of Mapmakers, p. 29; V. Valerio, 'Dell Cartogrfia di Corte all Cartografia die Militari: Aspetti Culturali, Tecnici e Instituzionali', in Atti dell Società Liguere di Storia Patria, Nuova Serie, vol. XXVIII, fasc. 1 (1986), p. 76; British Library: BL: Cartographic Items Maps S.T.W.223-224; OCLC: 558022225.

A colossal world map made on the orders of the ducal court of Parma, created by the state engineer Evangelista Azzi and published in Parma by the fine art printer Paolo Toschi: one of only three known examples.

The map was commissioned by the court of Duchess Marie Louise of Parma, the ex-wife of Napoleon Bonaparte, and a great patron the arts and sciences. It shows the geographical and political divisions of the mid-nineteenth century. In North America, the area beyond the Rocky Mountains is largely conjectural, shown before the expeditions of the 1840s and 1850s. Texas appears as part of Mexico, as it was yet to be recognised as a republic, despite its declaration of 1836. The edges of Antarctica are visible in the South Atlantic, including the 'Terre della Trinità', where Admiral von Bellingshausen discovered the continent in 1820.

Europe is shown with its post-Vienna Congress boundaries, with Germany and Italy (prominently featuring Parma) divided into numerous states; Russia, controlling much of Poland and all of Finland; a large 'Imperio Austria' (Habsburg Empire); and much of Southeast Europe being 'Turchi Europea' (Ottoman Europe). The Arctic regions above Europe feature new information, such as the point to the north of the Spitsbergen Archipelago reached by the British explorer William Edward Parry in 1827 (82°45'N), which was the northernmost point on the globe ever reached, a record that would last for the next 49 years.

The Indian subcontinent is dominated by British India, which is divided into the three Presidencies of the East India Company, while in Southeast Asia 'Singhapour' is visible (founded in 1819). The far north of Siberia shows that some areas had been discovered by Europeans only quite recently, such as 'Na. Siberia' (the New Siberia Islands), encountered in 1810. Australia has a nearly complete coastline, following the surveys of Matthew Flinders, although its interior is almost completely blank. The only major detail that appears is the Murray River, explored by Charles Sturt in 1829.

Maria Louisa of Austria (1791–1847) was the eldest child of Emperor Francis II. She married Napoleon Bonaparte in 1810, but after his defeat and exile in 1814 was inserted into the Duchy of Parma and Piacenza by her father to rule it as a client state of Austria. She was a popular ruler and a key patron of the arts and sciences, reinvigorating the Ducal Academy and supporting the Teatro Real, the opera house that launched the careers of Giuseppe Verdi and Vincenzo Bellini. She also had a sophisticated appreciation of cartography, commissioning the first scientific survey of the entire Duchy in 1821, popularly known as the 'Carta di Maria Luigia'.

Evangelista Azzi (1793-1848) was an Italian cartographer and surveyor. In 1820, he joined the mapmaking division of the Imperial Austrian Army, and played a leading role in the creation of the 'Carta di Maira Luigia'. He was subsequently appointed the chief of topographical engineering and the drawing-master at the ducal military college. He had already completed surveys of the three main cities in the duchy - Parma, Piacenza and Guastalla - making him the ideal candidate for the large world map project.

The map is one of the last great examples of court patronage of cartography in Italy and was issued in limited quantities. Only two other examples are known, those in the British Library, and the Archivo di Stato di Parma. The rarity of the map is due not only to the fact that very few examples were ever published, but also to the exceedingly low survival rate of maps of such enormous dimensions.


EMISFERO OCCIDENTALE
POLO ARTICO o SETTENTRIONALE
MARE GLACIALE
GRONLANDIA
AMERICA SETTENTRIONALE
OCEANO ATLANTICO
GOLFO DEL MESSICO
MARE DELLE ANTILLE
GRAN MARE DEL SUD o PACIFICO
AMERICA MERIDIONALE
Tropico del Cancro
Equatore
Linea Equinoziale
Tropico del Capricorno
LA PLATA
PARAGUAY
OCEANO ATLANTICO
OCEANO o MARE MAGELLANO
Circolo Polare Antartico
POLO ANTARTICO o MERIDIONALE


EMISFERO ORIENTALE
POLO ARTICO o SETTENTRIONALE
MARE GLACIALE
OCEANO ATLANTICO OCCID.
EUROPA
ASIA
AFFRICA
MAR PACIFICO
MARE D'OMAN o D'ARABIA
MARE DELLE INDIE
OCEANO ATLANTICO
OCEANICA
NUOVA OLANDA o AUSTRALIA
Equatore
Tropico di Cancro
Tropico di Capricorno
Circolo Polare Antartico
MARE MERIDIONALE
POLO ANTARTICO o MERIDIONALE

Photograph

Earthrise

13 ANDERS, William

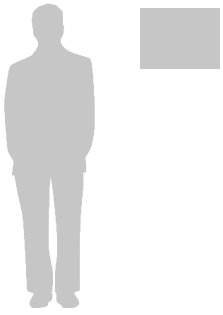
APOLLO 8 – Earth view.

Publication
Houston, Texas, Manned Spacecraft Center, 29 December 1968.

Description
Large format chromogenic print, "A Kodak Paper" watermark on verso; accompanied by single-leaf original official printed NASA press-release, confirming the NASA image ID "68-HC-870".

Dimensions
350 by 458mm (13.75 by 18 inches).

References
Poole, 'Earthrise: How Man First Saw the Earth', p. 2; Schick and Van Haaften, 'The View From Space: American Astronaut Photography 1962-1972', p. 98.



Arguably "the most iconic photograph of the 20th century" (The Smithsonian), capturing the first earthrise, seen by human eyes, during the first manned voyage to orbit the moon, on the 24th of December 1968. The photograph was taken by Pilot William Anders after the Apollo 8 emerged from the far side of the moon on their third orbit. Anders said of the moment: "We'd spent most of our time on Earth training about how to study the Moon, how to go to the Moon; it was very lunar oriented. And yet, when I looked up and saw the Earth coming up on this very stark, beat-up lunar horizon, and Earth that was the only color that we could see, a very fragile-looking Earth, a very delicate looking Earth, I was immediately almost overcome by the thought that here we came all this way to see the Moon, and yet the most significant thing we're seeing is our own home planet, the Earth".

The official press-release, accompanying this photograph states: "This view of the rising earth greeted the Apollo 8 astronauts as they came from behind the moon after the lunar-orbit invertion burn. Earth is about five degrees above the horizon in this photograph. The unnamed surface features in the foreground are near the eastern limb of the moon as viewed from earth. The lunar horizon is approximately 783 kilometers from the space craft. With of the photographed area at the horizon is about 175 kilometers. On the earth, 240,000 statute miles away, the sunset terminator bisects Africa".

For decades, there was a good-natured difference of opinion between Frank Borman and Bill Anders about exactly who had taken the photograph. However, a detailed study of the transcript of the in-flight recording, twenty-five years after the event, finally confirmed it was an awe-struck Anders who captured a moment that has fired the human imagination ever since.

Earlier in the mission, Anders had photographed the far side of the moon for scientific purposes, and the near side looking for potential landing sites.

"It didn't take long for the moon to become boring. It was like dirty beach sand,.. Then we suddenly saw this object called Earth. It was the only colour in the universe" (Anders).

Apollo 8, launched via a Saturn V rocket, from the Kennedy Space Centre, Cape Canaveral, Florida, on the 21st of December 1968. Inside were Anders, Frank Borman and James Lovell. They orbited the earth twice before reaching the moon nearly three days later; and completed ten lunar orbits, before splashing down in the north Pacific on the 27th of December.

Two days later, the film was processed, and NASA released the photograph to the public, as here.

Globes

The Boncompagni Rosary Globes

14 [ANONYMOUS after DEMONGENET, François]

[Ivory rosary with celestial and terrestrial globes].

Publication
[Italy, c1580s].

Description
11 engraved ivory spheres and one engraved ivory cross, on brass chain.

References
Carol Cofone, The Dragon's Tail: "Branding" the Boncompagni family (Archivio Digitale Boncompagni Ludovisi, 2018).
Elly Dekker, Globes at Greenwich: a catalogue of the globes and armillary spheres in the National Maritime Museum, Greenwich (Oxford: Oxford University Press and the National Maritime Museum, 1999).
Mark Häberlein, The Fuggers of Augsburg: Pursing Wealth and Honour in Renaissance Germany (Virginia: University of Virginia Press, 2012).
Augustín Hernando, The Construction of Terrestrial and Celestial Globes in Spain (Globe Studies, 2014).
Hatto Küffner, 500 Jahre Rosenkranz (Köln, 1975).
J. Kügel, Spheres: The Art of the Celestial Mechanic (Kügel, 2002).
Christ Laning, The beads of Bishop Jakob (Paternosters: A Journal about Historical Rosaries, Paternosters and Other Forms of Prayer Beads, Focusing on those in Use before 1600AD, 2007).
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A newly-discovered sixteenth century rosary telling the story of creation and the early ages of man. Only the second known example of such an extraordinary devotional object, the Boncompagni Rosary features two miniature globes. These celestial and terrestrial spheres, bearing many of the hallmarks of contemporary cartography and astronomy, are part of a globe-making tradition that spanned Europe during the sixteenth and seventeenth centuries. Originally commissioned by one of Italy's leading noble families, the rosary is now offered for the first time in over four centuries.

François Demongenet

François Demongenet was a French physicist and geographer active in Vesoul in eastern France during the mid- and late-sixteenth century. He is best known for a set of terrestrial and celestial globe gores made in 1552. These gores were distributed throughout Europe, particularly through Italian printing houses, and used as a model for numerous miniature globes during the sixteenth century.

It appears that the Demogenet family counted some esteemed figures among its later members, including an advisor to King Louis XIV and several military commanders. François' cartographic legacy, however, was continued only by the various European globemakers inspired by his gores, as exemplified by the first and second bead on the present rosary.

Antonio Spano

Antonio Spano was an Italian artist from the town of Tropea in Calabria, styling himself Antonio Spano Tropiensis on some occasions. His presence in Naples in 1575 is evidenced by records of his appearance in court for failure to marry his betrothed, which he did the following year. At some point in the following decade, Spano travelled to Madrid to work as a sculptor in the decorating of the recently completed El Escorial, a contract he had secured through his master and father-in-law, Marco de Pino.

The earliest dated known work by Spano is an ivory globe held by the Morgan Library and Museum, New York, inscribed near the South Pole: "Antonius Spano tropiensis facie 1593", by which time he was already enjoying the patronage of Philip II of Spain. Spano was granted a pension by Philip until his death in 1615, at which time it was passed onto his son, Francisco, and continued under Philip III.

Although investigations into Spano's contributions to El Escorial have been made, and one painting briefly attributed to him, his known artistic output has thus far been limited to the globe of 1593 and an ivory rosary owned by Jacob Fugger, Bishop of Constance in the early seventeenth century, which has the attribution 'Antonius Spanus Tropien incidebat' on the celestial globe. As discussed below, the present rosary is in many

ways very similar to the Constance prayer beads, but shows several small but significant variations, from spelling to cartography, which raises an interesting question about its attribution.

The Rosary

The rosary, or prayer beads, have been used by Christians as early as the Desert Fathers, the hermits who lived in the Egyptian deserts and used string tied in knots to keep track of their prayers. While the style changed significantly across the ensuing millennia, the principle and the form has remained essentially the same: with the beads, knots or notches keeping count of one's prayers, the mind is free to meditate fully on the mysteries of God. They are typically arranged with ten beads to represent a 'decade' of Aves (Hail Mary), with each decade preceded by a Pater Noster (Lord's Prayer) and followed by a Gloria Patri (Glory Be).

This pattern is often repeated five or 15 times to create a much longer rosary, although single-decade rosaries are also used. Historically, they even proved popular during times of Catholic persecution, where they could be concealed more effectively than a string of 60 or more beads! Although the Catholics of sixteenth and seventeenth-century Spain certainly faced no persecution, the present example is a single-decade rosary, formed of a cross patonce and 11 beads, representing the decade of Aves and one Pater Noster.

The cross and beads that make up the present rosary are intricately engraved with Biblical images. Quotations from the Latin Vulgate Bible are inscribed upon each bead, most often around the lower pole, which serve to caption the scenes depicted.

The engravings on this rosary are near-identical to those found on Spano's rosary made for Bishop Fugger, which are described by Küffner as 'depictions from the prophecies of the Holy Saturday liturgy: Creation of the World, Fall of Man, Noah's Ark and Other Old Testament Scenes'. The present beads display the same scenes taken from a selection of Old Testament books; the quotations used are from the same verses, albeit with various strange errors; and the illustrations and stylistic elements differ slightly from the Fugger rosary. Likewise, the cross is more elaborate here, and all elements connected by a chain rather than by wire links. The details of each element of the rosary are as follows:

The Cross –

A patonce cross (30 x 30mm) with each arm terminating in three floriated points, with an engraving of two figures encircled by the words of Francis of Assisi: tu es pastor ovium. tu es vas electionis ("you are the pastor of the flock. You are the vessel of the election"). The first refers to Jesus Christ and the second to the apostle St Paul, revealing the identity of the men. On the four arms of the cross are four further male figures

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seated at desks, representing the Church fathers: Ambrose, Jerome, Augustine and Pope Gregory I. The back of the cross has at its centre a tree, with the circular caption reading: "egredietur virga de radice Jesse" ("a rod will come from the stem of Jesse" - Isaiah 11:1). On the four arms are the four evangelists, each seated beside scrolls or paper, and each accompanied by the living creature with whom he is symbolically associated: Matthew with man, Mark the lion, Luke the Calf, and John the Eagle. The edges of the cross are engraved with designs including a ladder, perhaps a reference to Jacob's dream of a stairway to heaven (Genesis 28:12), and a cross.

Bead 1: Genesis 1:1 –
The first and largest bead of the rosary (27mm diameter) is a miniature celestial globe, reflecting the opening words of the Latin Vulgate Bible: "in principio creavit Deus caelum et terram" ('In the beginning God created the heavens and the earth' - Genesis 1:1). Indeed, these words are written in the southern hemisphere besides the Argo Navis (Ship) constellation. The globe is filled with these constellations, illustrated and labelled in Latin, and it also bears the celestial equator and ecliptic. They are viewed in reverse of how they are seen from earth, as if to provide God's external view, looking in at the heavens from without.

The astronomy for the first bead is taken from the celestial globe of François Demongenet. Certain details, such as the male figure seated on the Eridanus constellation, indicates that the design was taken not from the very first edition of Demongenet's globe, but from one of the numerous later states.

Bead 2: Genesis 1:6 –
Following the celestial sphere is a bead engraved to form a tiny terrestrial globe (24mm diameter). Written in the Antarctic circle is the verse: "dixit quoque Deus: fiat firmamentum in medio aquarum: et dividat aquas" ('And so God said, "Let there be a firmament in the middle of the waters and divide them"' - Genesis 1:6). The globe has been engraved with impressive detail for such a small sphere, with several countries and seas labelled by name. It is different to Spano's later globe of 1593, which took its cartography from Mario Cataro's globe of 1577, and displays notable cartographical advances compared to earlier globes of the sixteenth century such as the Lenox Globe.

Again, the cartography is taken from Demongenet's influential globe. Based on the world maps of Gerard Mercator, his terrestrial gores were themselves influenced by Gemma Frisius, who had produced an important globe in 1536. Frisius' cartography appears to have been transmitted to Demogenet through Georg Hartmann's terrestrial globe gores of 1547.

Bead 1

Bead 2

At least six different variants of Demongenet's terrestrial gores are known to exist, which can generally be identified through the spelling of the name for Japan: Sipannge, Suango, Sipangi or Sipange. This globe, however, has Sipango, which appeared on Frisius' original 1536 globe; whether the change here was intentional or a misreading of the source material is unclear.

Notably cartographic features include several fictitious islands given, and large landmasses at both poles, the northern marked "Groenlandia" and attached to Northern Russia, the southern continent marked "Terra Incognita", with a large bulge where Europeans would find Australia the following century. America displays the distinct Verrazzano-shape to North America, so-named for the early Italian explorer, who made an expedition to the New World in 1524. Looking in at the waters of the Outer Banks from his ship, La Dauphine, Verrazzano concluded that they must be the Pacific. Thus on the map published after the ship's return to Europe, and thenceforth on many maps and globes of the subsequent century, North America appears as a long, narrow isthmus, almost divided in two except for a narrow stretch of land.

While the globe bead of the Constance rosary is near-identical in cartographic terms, there are several notable differences: while Bishop Fugger's rosary presents more illustrative details such as sea-monsters, the engraving is more heavy-handed and geographical details such as the shape of the Yucatan peninsula are less accurate than on the present globe. Interestingly, however, this globe has occasional spelling mistakes and mis-quotations in Latin. The caption 'devicat anno 1530' in America is a mistaken interpretation of Demongenet's 'devicta anno 1530', which first appeared on Frisius' globes, and is engraved correctly on Spano's prayer beads for Bishop Fugger. Likewise the ghost islands in the southern Indian Ocean are also strangely rendered with spellings seen on neither any other Demogenet-inspired globes, nor the Constance rosary.

These errors, compiled with others found in the Latin engravings across the entire rosary, indicate that the present designs were executed by a different hand than the Fugger rosary, and that language may not have been the engraver's forte!

Bead 1

Bead 2

Bead 3: Genesis 1:11 –
The third bead on the rosary (22mm diameter) shows a rugged natural landscape comprised of rolling hills covered in rivers, streams, trees and bushes. The circular text around the lower pole provides a continuation of the creation story: "et protulit terra herbam virentem, et facientem semen juxta genus suum, lignumque faciens fructum, et habens" ('and the land brought forth vegetation, yielding seed of its own kind, and the tree bearing fruit and having…' - Genesis 1:11).

Bead 4: Genesis 1:16 –
Following the creation of the earth and its greenery, the fourth bead (21mm diameter) depicts the creation of sun, moon and stars: "fecitque Deus duo luminaria magna: luminare maius, ut praeesset diei: et luminare minus, ut praeesset nocti: et stellas" ('and God made two great lights: the larger light to preside over the day, and the smaller light to preside over night; and the stars' - Genesis 1:16). The scene engraved on the bead looks out on an ocean from a wooded hillside, the sun, moon and stars all visible in the vast sky at once.

Bead 5: Genesis 1:25 –
The rosary's fifth bead (20mm diameter) illustrates God's creation of animals on earth, with charming details including elephants, a rhinoceros, various birds, tortoises, giraffes and sea-creatures. The text around the lower pole reads: "et fecit Deus bestias terrae juxta species suas" ('and God made the beasts of the land, each according to its kind' - Genesis 1:25). Bizarrely, the engraver has added the word "prophetia" (prophecy) to the end of his phrase, a word neither found in the Vulgate Latin Bible nor making sense. This is another example of several such instances of strange errors, additions and changes in Latin.

Bead 3

Bead 4

Bead 5

Bead 6: Genesis 1:27 –
Another instance is found on bead six (20mm diameter), on which the text surrounding the lower pole reads: "et creavit Deus hominem ad imaginem et similitudinem suam dies sextus". The canonical Biblical verse has only: et creavit Deus hominem ad imaginem suam ('and God made man in his image' - Genesis 1:27). The addition here of "et similitudinem suam" refers back to God's speech in Genesis 1:26 (faciamus hominem ad imaginem et similitudinem nostram - 'I will make man according to my image and likeness') while "dies sextus" does not appear until Genesis 1:31, when the 'sixth day' is complete. Bizarrely, comparing this inscription to Spano's rosary for Bishop Fugger offers no further insight, as that also displays an erroneous inscription, placing the creation of man on the fifth day!

The scene on the bead is set in the Garden of Eden. First, Adam is shown lying on the ground with Eve growing out of his side, extending her arms towards a large fog probably representing the breath of life. Next is shown Eve's temptation by the serpent, as she reaches to pluck fruit from the tree of knowledge of good and evil. Finally, an angel is shown pursuing the two humans out of Eden after God discovered their disobedience.

Bead 7: Genesis 2:2 –
"Complevitque Deus die septimo opus suum quod fecerat: et requievit" ('and on the seventh day God finished the work which he had done, and he rested' - Genesis 2:2). The seventh bead (19mm diameter) on the rosary interprets the final day of creation, God's sabbath. The earth already shows signs of civilization, with buildings of various sizes constructed on the sea shore, and boats on the water. On the other side of the bead is an engraving of the trinity in a star-studded heaven. The Father and Son are seated and holding between them an open book bearing the letters alpha and omega, the beginning and end of the Greek alphabet, in reference to the Lord's statement in the final book of the Bible: 'I am the Alpha and the Omega' (Revelation 1:8). Above them flies the Holy Spirit in the form of a dove.

Bead 8: Genesis 7:5 –
The eighth bead (17mm diameter) displays the damage that time can reap on even the most durable of materials. Much of the text is near-indecipherable, but the few discernable Latin words allow the inscribed verse to be identified as: "fecit ergo Noe omnia quae mandaverat ei Dominus" ('Therefore Noah did everything that God had ordered him' - Genesis 7:5). On the less-damaged side of the bead can be seen the great ark, with Noah's family and the assorted animals waiting to get on board. The other side may perhaps show the colossal rains beginning to fall from heaven.

Bead 6

Bead 7

Bead 8

Bead 9 –
Bead nine (17mm diameter) strays from the chronology set up by the earlier beads. The first scene shows Moses leading the fleeing Israelites from Egypt through the Red Sea; they stand gathered on the shores as the prophet follows God's instruction: "extende manum tuam super mare" ('Extend your hand over the sea' - Exodus 14:16). Then, however, the story seems to skip 20 books to the Book of Isaiah, from which the two other quotations around the base of the bead are taken:

"apprehendent septem mulieres virum unum" ('seven women will take hold of one man' - Isaiah 4:1) and "audite, audientes me, et comedite bonum" ('listen, my listeners, and eat what is good' - Isaiah 55:2). Furthermore, the second scene shows Isaiah seated on a rock before five men, with a banner extending from his hand into the air reading: "omnes sitientes, venite ad aquas" ('All those who thirst, come to the waters' - Isaiah 55:1). In effect, the Latin appears to be written backwards and the words flow upwards, as if from the prophet's mouth.

There are well-established links between the Book of Exodus and the Book of Isaiah, both of which contain an exodus narrative, the first from captivity in Egypt to the Holy Land, and the second from captivity in Babylon back to Jerusalem. It is not entirely clear, however, why these particular quotations and scene were chosen to ornament the ninth bead of his rosary.

Bead 10 –
The Biblical references chosen for the tenth bead (15mm diameter) are also something of an enigma. Apart from the obvious themes of God and worship, the scenes do not seem to share an obvious link or connection.

The verse from the second book of laws, which is canonically tollite librum istum, et ponite eum in latere arcae ('take this book and put it in the side of the ark' - Deuteronomy 31:26), is here shortened to "tollite librum hunc, et ponite in arcam". Although the corresponding illustration is corrupted by damage to the ivory, it is possible to make out the Levite priests carrying the Ark of the Covenant through the desert.

The canonical crediderunt viri Ninivitae in Deum, et praedicaverunt jejunium, et vestiti sunt saccis ('the Ninevites believed in God and proclaimed a fast, and wore sackcloth' - Jonah 3:5) has also been abbreviated to read: "crediderunt...Ninivitae... et vestiti sunt saccis". Again the image has been worn away, but the city of Nineveh can be distinguished on a cliff overlooking the sea. In this case, the maker seems to have confused his stories. The prophet Jonah was ordered by God to go to the inland city of Nineveh to preach (Jonah 1:1) but instead went to the port at Joppa and boarded the boat that led him to the mouth of the famous whale (Jonah 1:17).

Bead 9

Bead 10

Bead 11

The third quotation appears as it does in the Bible: "Nabuchodonosor rex fecit statuam auream" ('King Nebuchadnezzar made a golden statue' - Daniel 3:1). This line begins the story of Nebuchadnezzar's great statue of gold, which his Jewish advisors refused to worship. For this slight, he ordered them to be burned alive, a punishment from which the Lord saved them (Daniel 3:28). The corresponding scene on the bead shows the king's statue, which appears to be of a woman and, interestingly, to have been erected on cliffs overlooking the sea. The sentence from which the quotation is taken actually ends by naming the statue's location as "the plain of Dura in the province of Babylon", making the insistence on depicting the scenes in coastal settings strange.

Bead 11 –
The eleventh and final bead on the rosary (14mm diameter) also bears three Old Testament scenes, once more taken from disparate books.

Chronologically, the first scene shows six Israelites, wearing wildly anachronous hats, standing around a fire pit roasting an animal. It is captioned with the verse: "et edent carnes festinanter illa assas igni" ('And they will hurriedly eat meat roasted on the fire'). The original adverb 'nocte' ('by night' - Exodus 12:8) has been replaced with 'festinanter' ('hurriedly'). A few verses later, in Exodus 12:11, God does tell Moses that the Israelites will eat 'festinanter', but it is not apparent why the artist has chosen to substitute the word here. It is also interesting that he seems to have set the scene in the desert, as if after the flight from Egypt, when in reality God is explaining the Passover feast, which is held before the Israelites fled to the sands of Sinai.

The next scene shows Ezekiel's vision of himself in the Valley of Dry Bones, during which the bones of the dead are brought to life once more, symbolizing both the resurrection of the dead and the restoration of the house of Israel after the Bablyonian captivity. The caption describes the prophet's vision: et accesserunt ossa ad ossa, unumquodque ad iuncturam suam ('They came together, bone to bone, each to its own joint' - Ezekiel 37:7). There is also a speech banner on the illustration, showing Ezekiel to be addressing the bones: ossa, audite verbum Domini ('bones, hear the word of God' - Ezekiel 37:4), although an adjective found in the original verse has been omitted.

The third quotation around the lower pole reads: "post haec super terram visus est et cuas hom"..., an interpretation of the verse: post haec in terris visus est, et cum hominibus conversatus est ('After this he was seen on earth, and conversed with men' - Baruch 3:38). While the truncation of the quotation can be attributed to lack of space, the decision to replace the canonical 'in terris' ('on the earth') with 'super terram' ('above the earth') is inexplicable, especially with its theological implications.

Bead 9

Bead 10

Bead 11

The scene shown above the verse depicts Baruch seated in front of a small audience (Baruch 1:3), a banner extending from his mouth reading: "sed qui ?os novit sapientiam". This quotation cannot be found, either complete or paraphrased, in the Vulgate Latin Bible. The closest verse, semantically and linguistically, is: sed qui scit universa novit eam, et adinvenit eam prudentia ('but he who knows [knowledge] knows all things, and found her through his own wisdom…' - Baruch 3:32), with 'sapitentiam' potentially serving as a synonym for 'prudentia'.

Provenance and Rarity

The only known rosary that can be definitively attributed to Antonio Spano is held in the Cathedral of Constance, having been owned by, and likely made for, Jacob Fugger, Bishop of Constance (1604-1626), a scion of the extraordinarily wealthy banking family. "The Fugger family were among the largest book collectors in central Europe of the sixteenth century. Holdings from the Fuggers's collections are now among the treasured possessions of the Bavarian State Library in Munich, the Austrian National Library in Vienna, and the Vatican Library in Rome … The Fugger libraries were investments in education and learning; they represent the progressive turn of the family, which had become wealthy in commerce, towards learned and literary interests" (Haberlein).

The original owners of the present rosary may have been another wealthy and prominent family: the Boncompagni, from which hailed a number of historic figures, including numerous bishops, cardinals and Pope Gregory XIII (1572-1585), who commissioned Ignazio Danti to paint the Vatican's famous 120 metre Gallery of Maps (1580-1583). When the family migrated from Saxony to Italy in the tenth century, they changed their name from the Germanic Dragon von Saxon to Boncompagni, meaning 'good friend'. Nonetheless, later records indicate an attempt to honour their true name with the addition of 'Dragoni'. It is unsurprising, then, that the family symbol is a dragon.

The celestial globe that forms the first bead of this rosary displays two coats of arms; one is certainly the Boncompagni dragon, and the other perhaps a lion rampant. Notably, the former shows only the dragon on a decorative shield, not combined with the three stripes that characterise the coat of arms of the famous Boncompagni-Ludovisi branch of the family formed later.

Among the most prominent members of the family was Giacomo Boncompagni (1548-1612), the illegitimate son of Gregory XIII and a great patron of the arts, who sponsored many artists, writers and composers. In 1575, King Philip II of Spain, who was also Spano's patron, named Giacomo commander-in-chief of the Spanish armies in Lombardy and Piedmont. His wife, Constanza Sforza, was the daughter of the Count of Santa Fiora, whose coat of arms displays a lion rampant holding a quince.

These facts all point to Giacomo Boncompagni as the original owner, and perhaps commissioner, of this rosary.

Whether the rosary was made for Boncompagni by Spano himself or a different artist, it is not clear; nor is it obvious whether, if Spano, these beads preceded or followed the Fugger rosary. What is evident is that one undoubtedly informed the other, and given that the mistakes in the Latin found on the present rosary are, in general, not found on that in Constance, it seems most likely that latter was made after the former, replicating its design and correcting (most of!) the inscriptions.

It may therefore be the case that it was made for Giacomo Boncompagni, and that it went with the Italian to Madrid during one of his visits to his patron there. Present at Philip's court was Antonio Spano and, on occasion, representatives of the Fugger family, with whom the Spanish king held numerous financial contracts. And so it may have come about that Spano was commissioned to make a similar rosary for the Jacob Fugger who would later become Bishop of Constance, correcting the erroneous Latin as he did so.

Scientific Analysis

Extensive laboratory examination of the Boncompagni Rosary has "confirmed the rosary's material as an animal product consisting of the mineral hydroxyapatite, thus ivory, tusk, bone or tooth. Microscopic examination "included visual study for surface features that might complement the results of the material analysis. However, no features characteristic of particular types of material were noted - no Schreger lines (features characteristic of elephant ivory), dentine rings (characteristic of killer or sperm whale), secondary dentine or cementum rings (characteristic of walrus) or other identifying features were observed... Only bone can be ruled out, due to the lack of visible pore structure present on the surface of the bead.

"The radiocarbon date of the sample material removed from the bead was determined as 512 years b.p. ±26 years. After calibration, this yielded a date range of 1397-1446 CE at 95.4% probability. It is important to note that the dates determined by this technique correspond to the age of the animal from which it was taken when the material was formed; that is, for example, elephant tusks are formed over the lifetime of the animal, in rings, similar to how a tree grows in rings. Material from different locations from a single tusk taken from an elephant of significant age will have different ages; each of which will represent the year/s in which that material was produced by the animal, as a measure of the atmospheric carbon imbibed in those year/s. Equally, such materials will undergo wear during an animal's lifetime. As noted, the type of animal the material originates from could not be determined.

"In consideration of these factors, it may be suggested that the material could have first been available for use either:

• At the earliest, not much before circa 1400, if 3 years are added to the earliest date of 1397 under the assumption that some time for trade and supply of the material to the craftsman should be added.

• At the latest, not much after circa 1449 (again adding 3 years to the latest date in the range, 1446).

"It should also be noted that radiocarbon dating cannot provide information regarding the date in which a material was actually worked, only the dates after which it would have been available. Thus, given the data obtained, we may say that the bead may plausibly have been carved from the 15th century onwards."

Having been in private hands for over four centuries, the Boncompagni Rosary is a new discovery that contributes not only to Spano's extant body of work, but also to the understanding of late-sixteenth and early-seventeenth century devotional objects.

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Homann's rare pocket armillary

15 HOMANN, Joh[ann] Bap[tiste]

Globus Terrestris [and] Globus Coelestis.

Publication
Nuremberg, Opera loh. Bapt. Homanni Geographi, [c1702-1715].

Description
Globe, 12 hand-coloured engraved paper gores, over two wooden concave hemispheres, paste-board armillary sphere inside, housed within original black morocco over paste-board clamshell case, decorated with fine gilt daisy flower tools and fillets, with hook and eye, lined with two sets of 12 hand-coloured engraved celestial gores. Short split to globe in the northern hemisphere with early repair. In addition to the terrestrial and celestial globe, this pocket globe features a rare armillary sphere, which is revealed by opening the hollow wooden terrestrial globe.

Dimensions
Diameter: 64mm (2.5 inches).

References
Dekker and van der Krogt, pl.20; Sumira 22.

The earliest state, previously unrecorded, of Homann's only known pocket globe, here with rare 'nesting' armillary.

Biography

Johann Baptist Homann (1664-1724) was a German geographer and cartographer. He was educated as a Jesuit and destined for an ecclesiastical career, but converted to Protestantism and then worked as a notary in Nuremberg. He founded a publishing business there in 1702, and published his first atlas in 1707, becoming a member of the Academy of Sciences in Berlin in the same year. He collaborated with Johann Gabriel Doppelmayr on his book 'Kosmotheoros', which represented the solar system based on the Copernican system laid down by Christiaan Huygesn.

Homann was appointed Imperial Geographer to Charles VI in 1715, and produced his great work the following year, 'Grosser Atlas uber die ganze Welt'. Homann was well placed to take advantage of the decline of Dutch supremacy in cartographic publishing, and he became the most important map and atlas producer in Germany. After his death, the company was continued by his son Johann Christoph. When Johann Christoph died in 1730, the company continued under the name of Homann Heirs until 1848.

Geography

Homann is only known to have produced one pocket globe. Although the present example reflects an earlier issue than previously identified, it does not include Homann's title as Imperial Geographer, which he received in 1715. The globe features cartography plotted from recent observations of the Académie Royale des Sciences in Paris. In addition to his collaboration with Doppelmayr, Homman published the gores of George Christoph Eimmart's globes in his atlases, which would have provided additional cartographic information. The equator is graduated and shows ecliptic and prime meridian. None of the Antarctic continent appears, nor is there a coast to northwestern Canada, or eastern Australia. "New Zeeland" and "Diemans Land" are shown only in part, and California is shown as an island.


CHINA
MARE INDICUM
Oceanus

The "unknown parts" of Hudson Bay

16 CUSHEE, R[ichard]

A New Globe of the Earth by R. Cushee 1731.

Publication
[London], R. Cushee, 1731.

Description
Globe, 12 hand-coloured engraved paper gores, clipped at 70 degrees latitude, with two polar calottes, over a papier mâché and plaster sphere, housed within original shagreen over paste-board clamshell case, with hooks and eyes, lined with two sets of 12 hand-coloured engraved celestial gores, clipped at 70 degrees declination, varnished.

Dimensions
Diameter: 70mm (2.75 inches).

References
Dekker GLB0044; van der Krogt Cus 1 (terrestrial), Cus 3 (celestial); Sumira 26; for reference see Worms and Bayton-Williams, pp.176-177.

Biography

Richard Cushee (1696-1733) was a globemaker, surveyor and publisher who worked at the sign of the Globe and Sun between St Dunstan's Church and Chancery Lane. He was apprenticed in 1710 to Charles Price and was made a freeman in 1721. In 1731, Cushee took on Nathaniel Hill as an apprentice. In the same year, in collaboration with the instrument maker Thomas Wright, Cushee published the popular book by Joseph Harris, 'The description and use of the globes, and the orrery'. He also began to make pocket globes: these small terrestrial globes were also used by Wright for his own orreries. Cushee died young, and his wife Elizabeth took over his business, later marrying one of his relatives, Thomas Cushee. In the following years she went on to work both with her younger brother William Wyeth and her husband's former apprentice Hill.

Geography

In North America, the area west of the Hudson Bay is marked "Unknown parts" and California is drawn as an island. The title cartouche has been strategically placed in the Pacific Ocean between America and Asia to avoid having to define the area more clearly, although Cushee has chosen to show the two continents as separate, perhaps after news of the exploration of the Bering Strait in 1728 reached Britain. Australia is named "New Holland", and William Dampier's explorations are indicated by "Sharks Bay" on the west coast. Australia is joined to New Guinea; however Dampier's Strait is not marked, as on Senex's globe. Tasmania is named "Dimens Land", and New Zealand "N. Zeeland". Both North and South Poles are marked, as is the meridian from London; the equator and the line of the Ecliptic, with signs of the zodiac; trade winds are marked by hatched lines in the ocean between the tropics. In Asia, the Great Wall is identified as "Ch. Wall".

Astronomy

The celestial globe is pasted to the inside of the case, and the projection of the celestial gores is geocentric but the constellations are seen from the back. Cushee has reversed the human figures. The stars are represented by different symbols to denote magnitude, but there is no key. The Milky Way is labelled: "Via Lactea". The 48 Ptolemaic constellations are marked, with five of the non-Ptolemaic. Six of Plancius' southern constellations are named, but two not drawn; all those of Hevelius are shown, though Triangulum Minus is not labelled.


AMERICA
WESTERN
OCEAN
Gulf of
Mexico
GREAT
SEA
PACIFICK
SEA
AMAZONE
ATLANTIC

Showing the results of Bering's expedition to the Kamchatka Peninsula

17 HILL, Nath[aniel]

A New Terrestrial Globe by Nath Hill 1754.

Publication
[London], Nath Hill, 1754 [but c1755 or later].

Description
Globe, 12 hand-coloured engraved paper gores, clipped at 65 degrees latitude, with polar calottes, over a papier mâché and plaster sphere, varnished, housed within original shagreen over paste-board clamshell case, with hooks and eyes, lined with two sets of 12 hand-coloured engraved celestial gores, varnished. The terrestrial globe a bit toned.

Dimensions
Diameter: 70mm (2.75 inches).

References
For Hill's 1754 pocket globe see Dahl and Gauvin, pp.93-95 (Stewart Museum 1979.28.2); for reference see Dekker, pp.355-357; van der Krogt, Hil 1 and Hil 4; Worms and Baynton-Williams, pp.318-319.

Biography

Nathaniel Hill (fl1746-1768) was a surveyor, mathematician and instrument maker based in London. He started his career as an apprentice globemaker to Richard Cushee, and he later took on Cushee's nephew, Leonard, as his apprentice. His shop was at the Globe and the Sun in Chancery Lane, and his trade card advertised "New and Correct Globes of 3, 9, 12 and 15 inches". Hill's most popular items were the three and nine-inch globes, which he published either as pocket globes, mounted on a stand or for orreries. After Hill's death, his business was continued by Thomas Bateman, who took on John Newton and William Palmer as apprentices.

Geography

This pocket globe by Hill shows the rapid changes in European knowledge of the world. Although it bears the same date as another globe he published in 1754, it shows some significant revisions, the most obvious of which is the addition of trade winds. In Asia, the Caspian Sea has been reduced in width to reflect the findings of the Russian nautical surveyor, Feodor Soimonov, who thoroughly surveyed the sea for the first time between 1719 and 1727, and published his findings in 1731. The most significant development is the redrawing of eastern Russia, influenced by Vitus Bering's second expedition to the Kamchatka Peninsula. Bering spent ten years (1733-1743) exploring along northern Russia, mapping the Arctic coast of Siberia, and reaching Alaska in North America. Bering died of scurvy during the voyage, and an island off the Kamchatka Peninsula was eventually named in his honour. Stephan Krasheninnikov published the first detailed description of the peninsula, 'An Account of the Land of Kamchatka' in 1755, which is possibly where Hill acquired the new information.

Astronomy

The celestial gores, lining the case, are geocentric in orientation and, in a departure from most previous pocket globes, are concave, thus depicting the constellations as seen from earth. Previous pocket globes, most notably John Senex's pocket globe of 1730, simply used gores intended for celestial globes, thus rendering the night sky in reverse when pasted to the inside of the case. The difference is most noticeable in the orientation of Ursa Major, with the bear facing in the other direction.

Showing the track of Cook's 'Endeavour' voyage

18 [ANONYMOUS, after MOLL, Herman]

A Correct Globe with the new Discoveries [and] A Correct Globe with ye new constelations of Dr. Halley &c.

Publication
[London, c1775].

Description
Globe, 12 hand-coloured engraved paper gores, clipped at 70 degrees latitude, with two polar calottes, over a papier mâché and plaster sphere, housed within original shagreen over paste-board clamshell case, rim painted red, with hook and eye, lined with two sets of 12 hand-coloured engraved celestial gores, clipped at 70 degrees declination, varnished. Globe with a crack extrending from the south pole in two directions to the southern tip of Africa and just south of New Zealand, other small areas of abrasion.

Dimensions
Diameter: 70mm (2.75 inches).

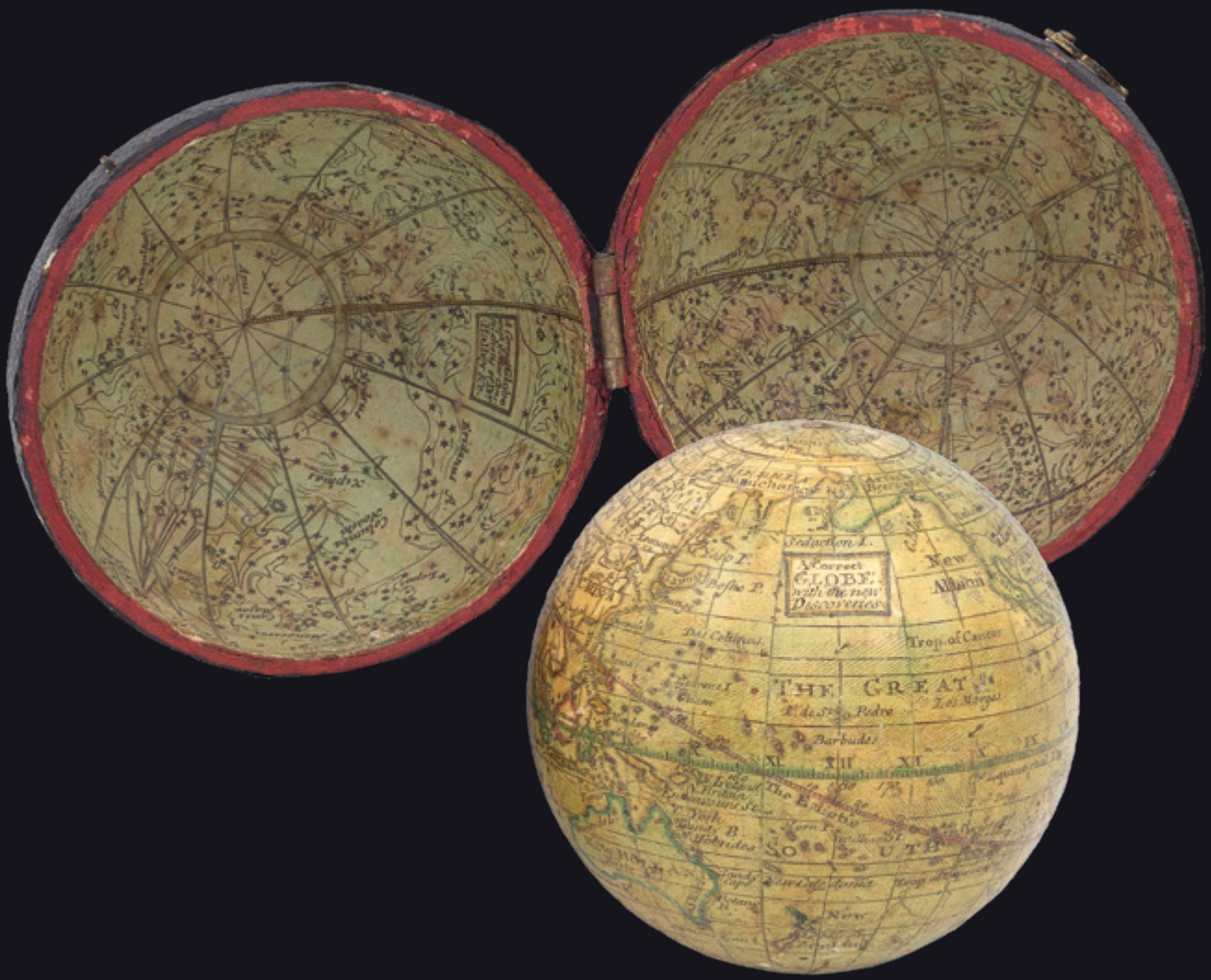
References
Dekker GLB0196; for Moll's globe see Dekker GLB0197; Lamb, Collins and Schmidt 5.4; Sumira 21; for reference see Worms and Baynton-Williams, pp.456-458.

Biography
A firm attribution for the maker of this globe has proven elusive. However, it is now recognised to have been at least designed after the work of the globemaker Herman Moll. Herman Moll (?1654-1732) moved to London from Germany or the Low Countries, sometime before 1678. His career in London would span some 60 years and see him move from a jobbing engraver to a successful publisher of maps and atlases. He was part of the intellectual circle that gathered at Jonathan's Coffee House, counting Robert Hooke, Daniel Defoe and Jonathan Swift amongst his acquaintance. Moll even provided a map for Defoe's work 'Robinson Crusoe' showing the track of Crusoe's supposed voyage, and is mentioned by Lemuel Gulliver in 'Gulliver's Travels'.

This globe was formerly attributed to George Adams Snr. on the basis that it appeared in one of his instruments. However, it also appears in the instruments of several other publishers, which makes this unlikely.

Geography
The tracks of Dampier's voyage have been partially erased and overlaid with the track of the first voyage of Captain James Cook (incorrectly dated "Cook's Track 1760"), and the geography of Australasia adjusted accordingly, including the labelling of Cook Strait. It also adds the label "North.n Ocean" to the North Pole, although this is a preference of the cartographer rather than any new information, as the area was still largely unexplored.

Astronomy
The celestial cartography lines the inside of the case, and the ecliptic is graduated and provided with the signs of the zodiac. The polar circles and tropics are drawn but not named. A magnitude table (1-6) sits below Ursa Major. The 48 Ptolemaic constellations are marked along with four non-Ptolemaic constellations. Only five of the 12 southern Plancian constellations are named, and Scutum is not labelled among the Hevelian constellations.


A Correct
GLOBE,
with the new
Discoveries
THE GREAT
SOUTH

Newton's first pocket globe

19 NEWTON, J[ohn]

A New Terrestrial Globe J. Newton 1783.

Publication
London, 1783.

Description
Globe, 12 hand-coloured engraved paper gores, clipped at 65 degrees latitude, with two polar calottes, over a papier mâché and plaster sphere, varnished, housed within original shagreen over paste-board clamshell case, with hooks and eyes, lined with 12 hand-coloured engraved celestial gores, with two polar calottes, varnished. The case split in both halves where hinge would have been, loss to exterior and minor loss to celestial gores.

Dimensions
Diameter: 70mm (2.75 inches).

References
Dekker GLB0029; Dekker and van der Krogt, fig.57; for reference see Dahl and Gauvin, pp.93-95; van der Krogt Hil 1 and Hil 4; Worms and Baynton-Williams, pp.318-319.

Biography

During the first half of the nineteenth century the firm of Newton, together with Bardin and Cary, occupied a leading position in the manufacture of globes in London. The firm was established by John Newton in 1783 and operated originally from the Globe & Sun 128 Chancery Lane, moving to 97 Chancery Lane in 1803, before settling at 66 Chancery Lane in 1817.

John Newton (1759-1844) was trained by Thomas Bateman (fl1754-81), who had previously been apprenticed to Nathaniel Hill (fl1746-1768). Newton's first globe was a revised edition of Hill's 1754 pocket globe, which he published in 1783 in association with William Palmer. The partnership dissolved shortly after, and Newton continued to publish the pocket globe under his own name. John's second son William Newton (1786-1861) joined the firm between 1814-1816, which traded under the name J. & W. Newton. In the same year the firm produced a new series of globes, including a new pocket globe.

By the 1830s the firm was also active as a patent agent and was joined by Miles Berry, a civil engineer and patent agent, after which the firm was known as Newton, Berry & Son. In 1842, William's eldest son, William Edward Newton (1818-1879), joined the business, followed by his brother Alfred Vincent Newton (1821-1900). The firm became known as W. Newton & Son, or once again, on the death of William, as simply Newton & Son from 1861 until about 1883.

Perhaps the greatest triumph for the Newton family was the Great Exhibition of 1851, where, aside from the globes they exhibited from 150 to 635mm (1 to 25 inches) in diameter, they were awarded a prize medal for a manuscript terrestrial globe of six feet in diameter.

Geography

Newton used Hill's copper plates from his 1754 pocket globe for the present globe with a number of alternations and updates. He has changed the text within the cartouche to feature his own name, however he retains the rococo cartouche that Hill used. Newton added Captain Cook's track and updated the Australian coastline with his discoveries, including "New Holland", "New South Wales", "Botany Bay", "Dimens Land", "Lewins L[and]", the "I[sles of] St Francis" and "New Zeeland".


A NEW Terrestrial GLOBE by J. Newton
Tropic of Cancer
Ladrone Iles
Japon
THE
SOUTH
Tropic

A toymaker's globe

20 MINSHULL, George after LANE, Nicholas

Minshull's 1816.

Publication
[London], 1816.

Description
Globe, 12 hand-coloured engraved paper gores, clipped at 70 degrees latitude, with two polar calottes, over a papier mâché and plaster sphere, paste-over imprint to cartouche, varnished, housed in original shagreen over paste-board clamshell case, with hooks and eyes, lined with two sets of 12 hand-coloured engraved celestial gores.

Dimensions
Diameter: 70mm (2.75 inches).

References
Dekker, pp.393-394; Sumira 35 and 45; Worms and Baynton-Williams, p.451.

Biography

George Minshull (fl1800-1835) was a toymaker and carver. Although based in Birmingham, there was a "George Minshull & Son" registered in Hatton Garden in London in 1814, suggesting the globe was sold there. It was common for small cartographic items and scientific instruments to be sold alongside toys.

Geography

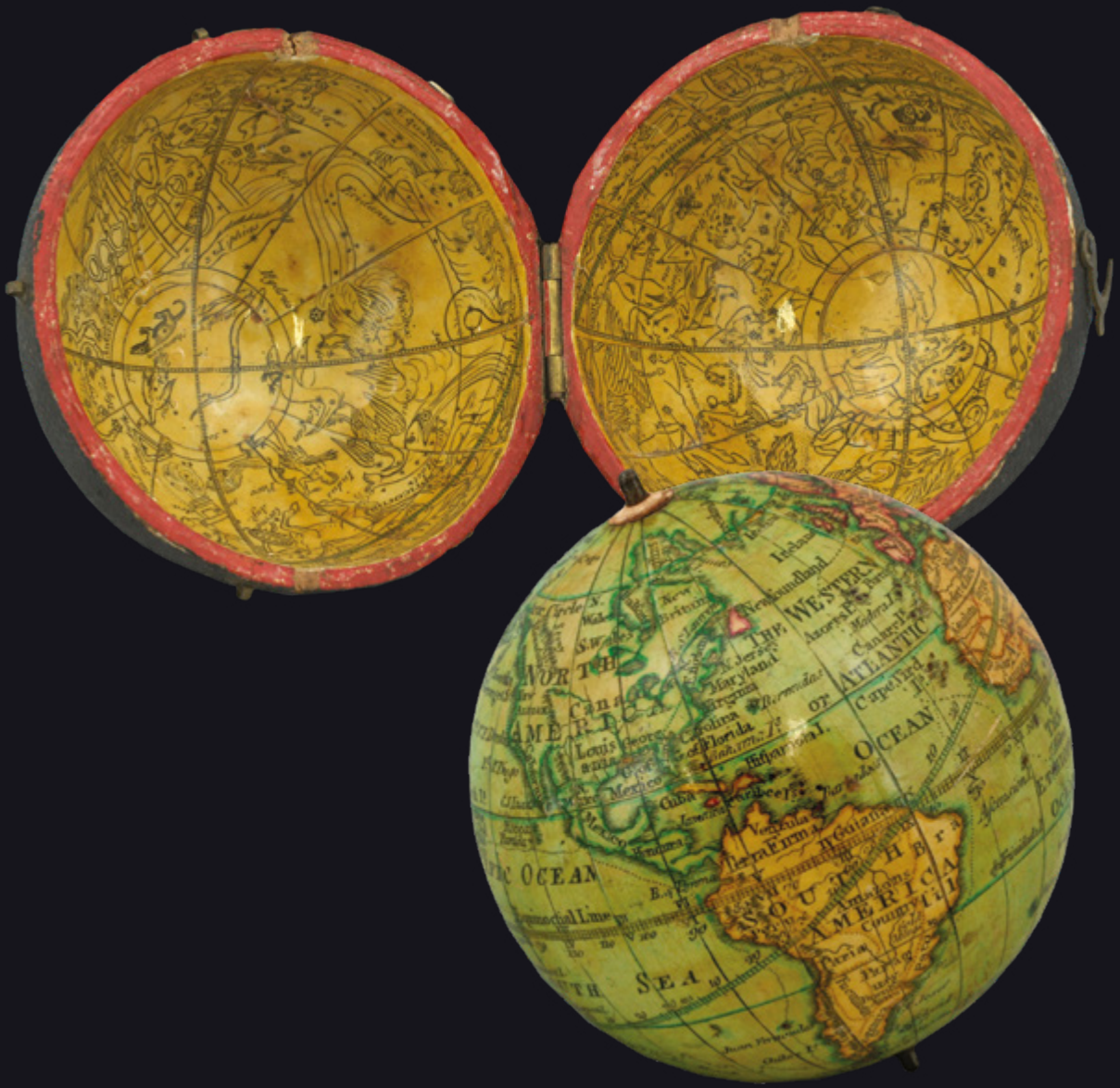
Minshull's globe is an updated version of Thomas Lane's issue of his father's pocket globe. Minshull was one of several makers who reissued Lane family globes - his imprint has been pasted over the original. Nicholas Lane's pocket globe, with completely new terrestrial plates, was first issued in 1779. His son, Thomas, updated the plates in 1807 and sold them wholesale. The present globe is based on Thomas's updated plates.

"New South Wales, Botany Bay and Cape Byron are depicted in New Holland (Australia), and "Buenos Ayres" (Buenos Aires) appears in South America. Two years later there were more changes: Dimens Land (Tasmania) is separated from New Holland by the Bass Strait; Port Jackson (Sydney) is added to the eastern coast of the mainland; and Sharks' Bay and 'South C.' are newly marked on the western side. The Antipodes of London are also shown. In northwest America, "New Albion" and the "Stony Mountains" (the Rockies) have been added. Curiously, the date of Captain Cook's death, 14 February 1779, is another late addition squeezed in below the Sandwich Islands" (Sumira).

By 1816, the date of the globe shown here, the geography has been altered yet again: "At the southern tip of the Californian peninsula, "C. S. Lucas" (Cape San Lucas) is now shown... "Dampier's Anchor", where William Dampier first reached Australia, is marked off the north west coast of New Holland, and we see a mysterious "Labyrinth" [The Great Barrier Reef] off the north-east coast" (Sumira).

Astronomy

The celestial gores, which were acquired by Nicholas Lane from Richard Cushee sometime in the mid-eighteenth century, are geocentric in orientation. The difference is most noticeable in the orientation of Ursa Major, with the bear facing the other direction. The deep green colour is characteristic of Lane globes. Minshull has put his own stamp on the celestial gores by only colouring the constellations in green.


WESTERN
ATLANTIC
OCEAN
SOUTH
AMERICA
SEA

A celestial and terrestrial globe

21 LANE, [Thomas after ADAMS, Dudley and FERGUSON, James]

Lane's Improved Pocket Globe [and Lane's Celestial Globe].

Publication
London, [c1833].

Description
Two globes, one terrestrial and one celestial, each with 12 hand-coloured engraved paper gores, one calotte at north pole, over a papier mâché and plaster sphere, varnished, housed within original shagreen over paste-board clamshell case, with hooks and eyes, lined with two sets of 12 hand-coloured engraved celestial gores, varnished.

Dimensions

References
Dekker, pp.393-394; Sumira 35 and 45; Worms and Baynton-Williams, p.387.

A magnificent pair of Lane's terrestrial and celestial pocket globes.

Biography
The present globe is the work of Nicholas Lane (fl.1775-1783) whose business was particularly associated with pocket globes. Little is known about Lane's output, but Dekker suggests that his three inch globes were produced from the earlier works of Ferguson and Dudley Adams. When Dudley went bankrupt in about 1817, the copper plates appear to have come into the hands of the Lane firm, now run by Thomas Lane (fl1801-1829), where the old cartouche was completely erased in favour of a new circular one. However, the name of the engraver, J. Mynde, was kept just below the cartouche. Later on, after 1820, Lane would erase Mynde's name from the plates.

Geography
There have been several additions to this "improved" globe: compass points to the west of Cape Horn, monsoons in the Indian Ocean and the Great Wall of China. "Enderby's Land 1833" is marked (part of Antarctica) discovered and named by the John Briscoe.

The tracks of Captain James Cook's voyages are shown and the coastline of Australia drawn according to his reports. The most notable addition is the marking on the west coast of Australia of the "Swan R. Settlement".

The Swan River Colony was the brainchild of Captain James Stirling who in 1827, aboard HMS Success, had explored the Swan River. On his return to London he petitioned Parliament to grant land for a settlement along the river. A consortium was set up by the MP Potter McQueen, but was disbanded after the Colonial Office refused to give them preference over independent settlers. One of the members of the consortium, Thomas Peel, did, however, accept the terms set down by Colonial Office. In late 1829, Peel arrived with 300 settlers and was granted 250,000 acres. The first reports of the new colony arrived back in England in late January 1830. They described the poor conditions and the land as being totally unfit for agriculture. They went on to say that the settlers were in a state of "near starvation" and (incorrectly) said that the colony had been abandoned. As a result of these reports, many people cancelled their migration plans or diverted to Cape Town or New South Wales.


PACIFIC OCEAN
SEA
ATLANTIC
OCEAN

Astronomy

The celestial gores, which were acquired by Nicholas Lane from Richard Cushee sometime in the mid-eighteenth century, are geocentric in orientation. The difference is most noticeable in the orientation of Ursa Major, with the bear facing the other direction. All three sets of celestial gores nave been coloured differently, in order to highlight different aspects of the heavens. The concave set housing the terrestrial globe, in a yellow wash, mark and highlight the ecliptic in red; the celestial globe richly colours the constrellations, whereas the concave set housing the globe the night sky is coloured blue with the constellations left uncoloured.


PISCES

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