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XX marks the spot - or Women with Latitude

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XX Marks the Spot - or Women with Latitude

DANIEL CROUCH RARE BOOKS

Introduction

Virginia Woolf said in 'A Room of One's Own' (1929) that "Anonymous was a woman". Historically, and even now, a woman's direct expressions have often been inhibited by the imposition of a plethora of revolving social dictates: including, but in no way limited to, access to education, ownership of property, freedom of movement, and the right to vote. This means that the visibility of women as agents of action in the historical paper trail is limited. "Some women – almost exclusively those of an elite class – managed to negotiate roles for themselves within systems structured to deny them as much, but doing so required them to circumvent the normal conduits to power and manifest their presence by much less visible means than those afforded men. How can we come to know women for whom there are scarce and scattered traces of personal experience, and for whom primary documentation is dominated by men's perspective? Where do we look for these women...?" (Postlewate, 'Women and Community in Early Modern Europe', 2018).

Since early modern times, the artistic, printing and publishing world, including cartography, has on occasion, provided women with a means of agency, expression, and visibility. The women cartographers in this selection have, against the odds, been able to publicly claim their work.

Since feudal times, in Europe, widowhood sometimes allowed women to inherit a degree of their husband's property, and to continue their business. Anne Seile, Mary Ann Rocque, Selina Hall, and Penelope Steele, all produced their best-known work, under the respected estate of widowhood - even though they had been working as, at least, their husband's assistants for many years previously.

For women of the gentler classes, non-confrontational artistic pursuits, and accomplishments, were positively encouraged and expected. As Mr. Bingley memorably said, via Jane Austen: "A woman must have a thorough knowledge of music, singing, drawing, dancing, all the modern languages, to deserve the word; and besides all this, she must possess a certain something in her air and manner of walking, the tone of her voice, her address and expressions, or the word will be but half deserved". Elizabeth and Marie Catherine Haussard's, engraved cartouches, and "J.B."'s striking maps of North and South America, may well have been founded on crafting skills, but far exceed the expectations of any resident at Pemberly.

Caroline Herschel's exceptional contributions to astronomy began as sisterly duty to her brother William, and extended to her feeding him by hand while he gazed at his Uranus through the telescope, but culminated in her discovery of 8 comets, and her becoming the first woman to have a paper read before the Royal Society.

In the nineteenth century, women for whom the marriage bell had not tolled, were permitted the role of companion, governess, and educator. Catherine Mary Webber, Lilian Lancaster, and Hester Wagstaff, successfully produced educational games, decorated with light-hearted and whimsical illustrations.

In the twentieth century, necessity become the mother of invention and the unconventional. The Suffrage Movement in the USA adopted many impelling methods to engage the disenfranchised female population: including cartography. The earliest versions of the Suffrage Map were published in 1907 and 1908, by Bertha Knobe, and underwent many iterations, reaching its apotheosis with "The Awakening", a dramatic portrait of Lady Liberty whipping up support as she crosses the Nation, in 'Puck' magazine in 1915.

WWII occupied the male workforce to the extent that women, such as Marie Tharp were able to make an earth-moving contribution of our understanding of plate tectonics; and Gertrude Williams could become an economist and social strategist whose research and writing impacted on the foundation and development of the Welfare State in the United Kingdom from the 1940s.

More recently, and with more latitude, Margaret Anderson, Phyllis Pearsall, and Carol Mendel, were inspired to comprehensively map Barbados, London, and California, by observing a distinct lack of anything currently useful for the independent woman wanting to get about town.

A lady's touch

1 SEILE, Anne

Americae Nova Descriptio.
Impensis Anae Seile, 1663.

Publication
[London, Printed for Anne Seile ouer against St. Dunstans Church in fleet Streete, 1666].

Description
Double-page engraved map.

Dimensions
350 by 420mm (13.75 by 16.5 inches).

References
Burden 379; McLaughlin 35.

One year after her husband's death, Anne Seile instructed the engraver Robert Vaughan to engrave a set of maps of the continents similar to those engraved by her husband for Peter Heylin's 'Cosmographie' in 1652. Siele then issued a third edition of the 'Cosmographie' containing these maps, which have minor geographical revisions, as well as new decorative embellishments.

California is shown as an island, with the Straits of Annian, at which the coastline terminates. Cape Mendocino is shown below the islands St. Clement and Catalina.

Fry and Jefferson reduced

2 HAUSSARD, Elizabeth; ROBERT DE VAUGONDY, Gilles

Carte de la Virginie et du Maryland Dressee sur la Grande Carte Angloise de Mr.s Josue Fry et Pierre Jefferson.

Publication
Paris, Par le Sr. Robert de Vaugondy, Geographe ordinaire du Roi, Avec privilege, 1755.

Description
Double-page engraved map, with contemporary hand-colour in outline.

Dimensions
480 by 620mm (19 by 24.5 inches).

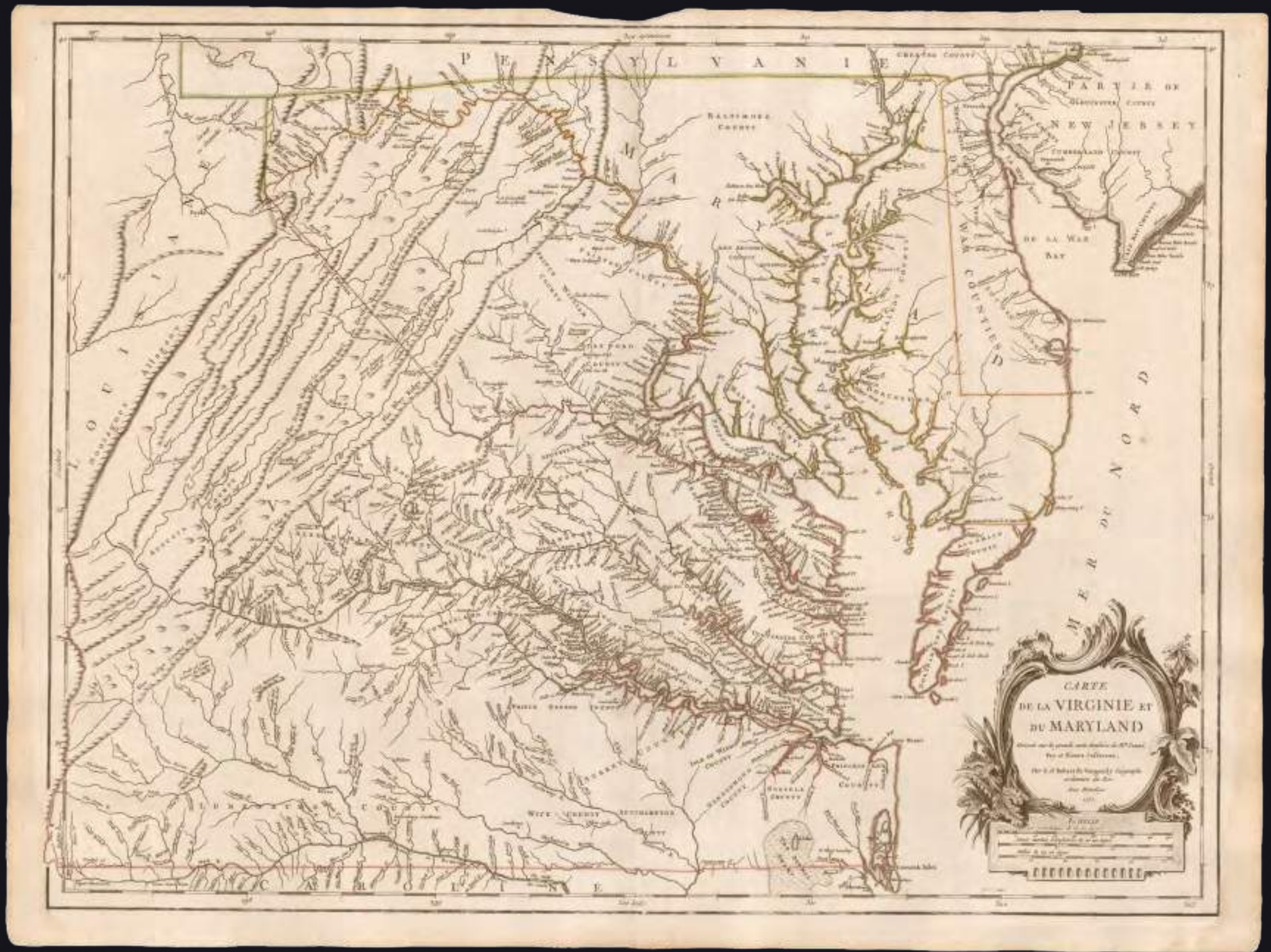
First edition, first state of Gilles Vaugondy's superb reduction of Fry and Jefferson's monumental map of Virginia, Maryland and Delaware.

Joshua Fry (1699-1754) and Peter Jefferson's (1708-1757, and father to President Thomas Jefferson) map is most important map for Virginia of the eighteenth century. It was first of Virginia by Virginians; the first to accurately depict the Blue Ridge, and to lay down the colony's road system. Many early plantations are located and identified by family name along the great rivers – including that of George Washington's family at what is now known as Mount Vernon. Showing Maryland, New Jersey, North Carolina, Pennsylvania, and Virginia. The Fry and Jefferson map of the broad area known as Virginia is the fundamental cartographic document of the region from the eighteenth century.

Fry and Jefferson are credited in the elaborate title-cartouche, engraved by Elizabeth Haussard, whose signature can be seen on the lower left, just below. Elizabeth Haussard (1700-1804) and her sister Marie Catherine (1746-1791) although trained by their father, noted French engraver Jean-Baptiste Haussard, both had significant independent careers as expert engravers, particularly of elaborate cartouches and other decorative elements of contemporary maps and charts.

The main map was engraved by Guillaume-Nicolas Delahaye, with some alterations to the original: there is a western border to Virginia, paralleling the Allegheny Mountains; "Louisiane" appears, emphasizing French claims to the interior of North America.

The Robert de Vaugondy family of cartographers was "securely based on the stock in trade of the great Nicolas Sanson, inherited in 1730 by Didier's father Gilles" (Katherine Swift). Gilles entered the map trade rather late in life, being already 46 when appointed "geographe du roi" in 1734. "He was a professor of mathematics who, according to later sources, had travelled a great deal in his youth. After befriending the ailing and aging Pierre Moullard-Sanson in 1730, he became one of the three heirs to Moullard-Sanson's geographical 'fonds' along with Jean Fremont, a lawyer, and Jacques-Simon Perrier, a priest. Robert and Fremont bought out Perrier's share of the Sanson stock, and Robert added to this collection by buying the plates of Nicolas Sanson from Jean Mariette in 1733. Robert's earliest map dates from 1731 ('Cours de la Meuse', in 'l'Historie de Verdun', 1745); much of his early work appeared as maps supplementing texts of books. Nonetheless, it is fair to say with Buache, that Gilles Robert de Vaugondy mostly issued Sanson maps with minor modifications. It was his son Didier (1723-1786) who wrote the theoretical books, taught geography and mathematics, presented memoires to the Academy of Sciences, as well as publishing new maps" (Mary Sponberg Pedley, 'New Light on an Old Atlas', for Imago Mundi, 1984, volume 36, pages 48-63).


P E N S Y L V A N I E
M A R Y
PART OF
NEW JERSEY
NORD
CARTE
DE LA VIRGINIE ET
DU MARYLAND

A cartouche with finesse

3 HAUSSARD, Marie Catherine;
ROBERT DE VAUGONDY, Gilles

Partie de l'Amerique Septentrionale, qui Comprend le Cours de l'Ohio, la Nlle. Angleterre, la Nlle York, le New Jersey, la Pensylvanie, le Maryland la Virginie, la Caroline.

Publication
Paris, Par le Sr. Robert de Vaugondy, Geographe ordinaire du Roi, Avec privilege, 1755.

Description
Double-page engraved map, with contemporary hand-colour in outline.

Dimensions
480 by 620mm (19 by 24.5 inches).

A very early map of the course of the Ohio River and British Colonies of North America, with an inset of the Carolinas. The magnificent asymmetrical rococo title-cartouche is engraved and signed by Marie Catherine Haussard (1746-1791). Marie Catherine and her sister Elizabeth (1700-1804) although trained by their father, noted French engraver Jean-Baptiste Haussard, both had significant independent careers as expert engravers, particularly of elaborate cartouches and other decorative elements of contemporary maps and charts.

Mary Ann Rocque's Rare four sheet reduction of Rocque's map of Greater London

4 ROCQUE, Mary Ann

The Environs of London. Reduced from an Actual Survey in 16 Sheets, by the Late John Rocque, topographer to His Majesty with New Improvements to the Year 1763. To the Right Honorable George Montague Earl of Cardigan, Baron Brudenell &c. This Plan of the Environs of London Is humbly dedicated By His Lordship's most humble & obliged servant, Mary Ann Rocque.

Publication
London, Printed for Carington Bowles, No. 69 in St. Paul's Church Yard, & Robert Sayer, No. 53 in Fleet Street, 1763.

Description
Engraved map, on four sheets, dissected and laid down on linen.

Dimensions
910 by 1310mm (35.75 by 51.5 inches).

References
Howgego 124 (1a).

This fine survey is a reduction of John Rocque's monumental survey of London upon 16 sheets. The map bears the name of Rocque's widow, Mary Ann, who continued his map publishing business. The plan also bears the imprint of Carington Bowles, to whom Mary would transfer much of the business at some time around 1769.

Following John Rocque's death in 1762, his wife, Mary Ann administered his estate and carried on his map business for six years as the publisher of his works.

Rocque's work began with plans of private estates, and expanded to town plans based on surveys commissioned by Rocque himself. These larger town and county plans were a response to a growing demand for improved regional cartography, borne out of civic pride. Rocque's effort in this sphere were part of a larger effort in British cartography towards more accurate surveying and cartography, but he was the only one of his contemporaries initiating projects on this scale not to declare bankruptcy. His modus operandi was to dedicate each work to an influential or wealthy figure, as the costs of surveys were rarely met by the proceeds of sales.

The first large-scale survey of Surrey

5 ROCQUE, Mary Ann; and John ROCQUE

A Topographical Map of the County of Surrey In which is Expressed all the Roads, Lanes, Churches, Noblemen, and Gentlemen's Seats, &c. &c., the Principal Observations, by the Late John Rocque, Topographer to His Majesty, Compleated and Engraved by Peter Andrews. To His Royal Highness William Henry Duke of Gloucester & Edinburgh and Earl of Connaught Ireland. This Actual Survey of the County of Surrey in most humbly inscrib'd by his Royal Highness's most humble and obliged Servant. Mary Ann Rocque.

Publication
London, Mary Ann Rocque, [c.1787].

Description
Large oblong folio (580 by 720mm), large engraved map on nine sheets, bound in plano, six sheets remargined at right, with no loss to image, green half calf over original eighteenth century marbled paper boards, rebacked and recornered, red morroco label lettered in gilt to upper board.

Dimensions
570 by 700mm (22.5 by 27.5 inches).

The second state of John Rocque's immensely detailed map of Surrey, identifiable by the inclusion of the Battersea and Richmond Bridges. Richmond Bridge was completed in 1787, the probable date of this work. The contribution of the Huguenot surveyor and engraver John Rocque (d.1762) to English regional cartography is difficult to overstate. He produced fine surveys of Berkshire, Middlesex, Shropshire and Surrey, together with two important maps of London. The Surrey map is no exception - the first of the county on this scale. Following Rocque's death in 1762 the survey was completed and the plates engraved by Peter Andrews, but it retains Rocque's unique style, suggesting that most of the survey was finished before his death. It was published by his widow, Mary Ann Rocque, who inherited the business upon Rocque's death and ran it successfully for some time after: the widows of members of the Stationer's Company in England were allowed to retain guild membership for life, even if they remarried.

Mary Ann Rocque followed her husband's example by dedicating their map of Surrey to a wealthy patron. The large and spectacular cartouche in the upper left corner contains a dedication to William Henry, Duke of Gloucester, and includes his portrait. The Duke sits on a cloud, with his attention directed towards the text by Apollo, surrounded by the nine Muses. The globe and telescope of Urania are given particular prominence. The map itself mirrors his previous productions, with a delicate use of hatching to differentiate between arable and pasture allowing land-use to be easily ascertained. It is, however, peculiar in that it is oriented to magnetic north instead of true north, and this may cause a little confusion at first glance.

A map of immense detail combined with clarity of expression, a fine example of a rare large-scale county survey of which only a handful have survived.


A
TOPOGRAPHICAL MAP
OF THE
COUNTY OF SURREY.
PART OF
BUCKINGHAM
SHIRE
PART OF MIDDLESEX
PART OF HAMPSHIRE
PART

"It is amazing to me," said Bingley, "How young ladies have patience to be so very accomplished as they all are"

6 "J.B."; after Thomas BOWEN

North America [and] South America.

Publication
1778 [and] 1779.

Description
A pair of gilt paper-cut maps on black silk; contemporary ebonised wooden frames, gilt.

Dimensions
220 by 175mm (8.75 by 7 inches) [and] 240 by 190mm (9.5 by 7.50 inches)

It is a truth universally acknowledged that the delicate art of paper-cutting was amongst the many accomplishments to which the eighteenth century lady could aspire. Often delicate, sometimes dramatic, creating intricate designs in decoupage, silhouette, collage, and above all paper-mosaics, was a very acceptable way to spend a rainy afternoon. The acknowledged doyenne of the art was undoubtedly Mrs. Mary Delany, whose iconic botanical "paper mosaicks" are an astonishing combination of art and science.

As is this pair of minutely detailed maps, by "J.B.", created from very fine gilt paper-cuts, laid down on black silk. The maps are based on those of North and South America published by Thomas Bowen, from 1774, and were made at a time when "America" would have been very much "in the news", as the tide of the Revolutionary War had begun to turn in favour of the Continental Army, led by George Washington. And it is tempting to speculate that these black maps were executed with an air of mourning.

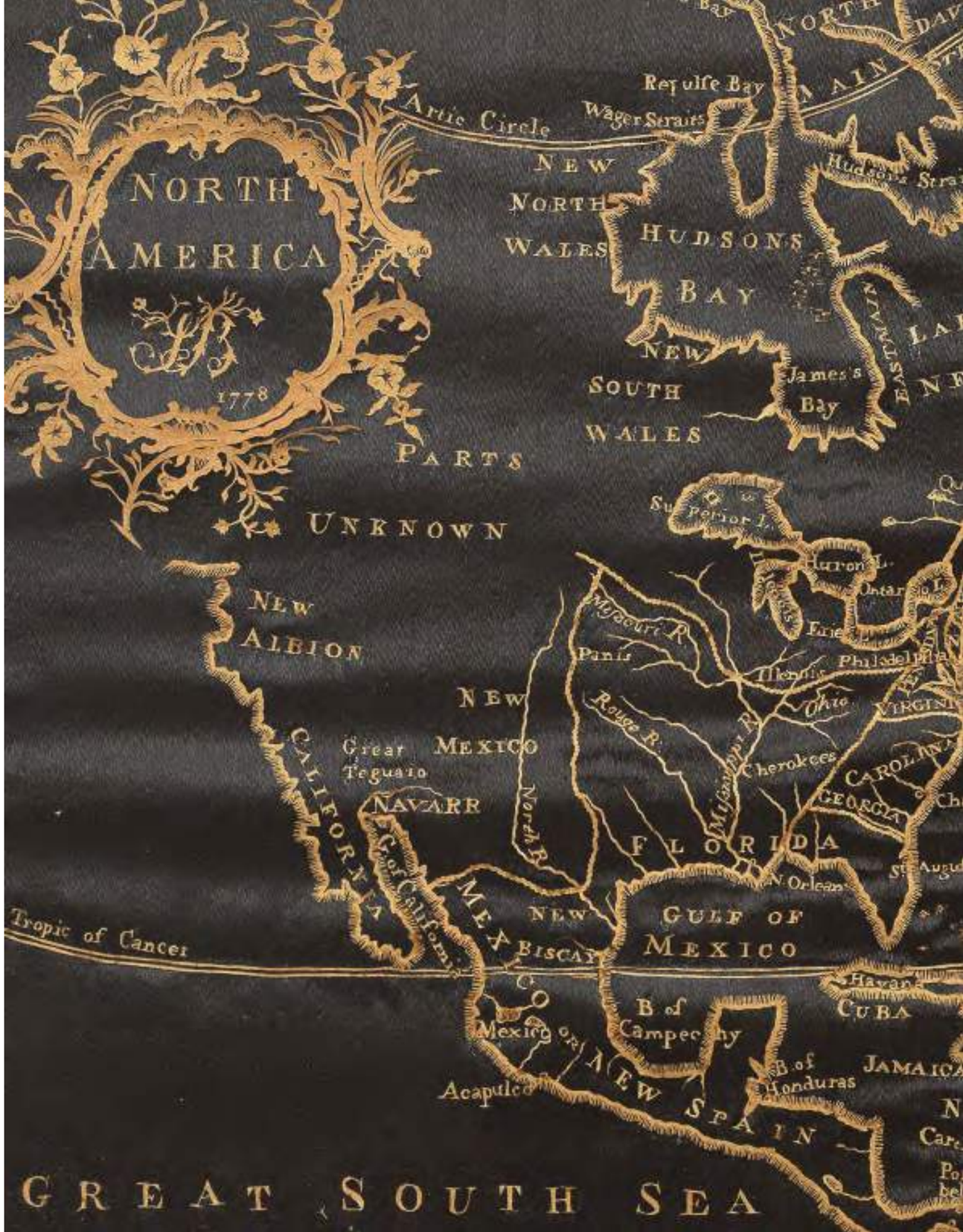
The maps are also apparently unique, as we are unaware of any other paper-cut maps of the period. Elaborately embroidered maps, and maps painstakingly copied in pen and ink and coloured wash, were the more usual cartographical pastime.

We do not know who "J.B." was, although the Bowen family of cartographers was a large one, and since the maps are based on those by Thomas Bowen, perhaps their creator was related.

Thomas Bowen (c1732 – 1790) was the son of Emmanuel Bowen, who was geographer to George II, from about 1747, and possibly (according to Chubb), geographer to Louis XV of France. Thomas Bowen officially began to work for his father early in 1748, principally contributing to the periodical commissions.

After his father's death Thomas continued to work on their joint project of large-scale English maps in the 'Atlas Anglicanus', which was issued to subscribers in 1768. Overall, his output was not as extensive as his father's, but during the 1770s he produced a number of significant maps, including 'A new and correct map of the countries twenty miles round London' (1770), contributions to British periodicals, three charts for Hawkesworth's account of the first voyage of Captain James Cook, a 'Map of the province of South Carolina' (1773), and contributions to Speer's 'Chart of part of the West Indies' (1773).

Like his father before him, Thomas is thought to have died in penury, in a workhouse, in 1790.




NORTH AMERICA
PARTS UNKNOWN
NEW ALBION
NEW SOUTH WALES
NEW BRITAIN
ATLANTIC OCEAN
GULF OF MEXICO
GREAT SOUTH SEA
TERRA FIRMA


GREAT SOUTH SEA OR PACIFIC OCEAN
ATLANTIC OCEAN
SOUTH AMERICA

The first published scientific paper, in English, authored by a woman

7 HERSCHEL, Caroline Lucretia

An Account of a New Comet. In a Letter from Miss Caroline Herschel to Charles Blagden, M.D. Sec. R.S. Read. Nov. 9, 1786.

Publication
London, Sold by Lockyer Davis, and Peter Elmsly, Printers to the Royal Society, 1787.

Description
Quarto (225 by 176mm). 5 pages, one folding engraved plate; extracted from a sammelband, bound in modern marbled paper wrappers.

References
Hoskin, for ODNB online.

The published account of the first scientific paper, authored by a woman to be read before The Royal Society of London and one of the first written by a woman to be included in the proceedings of a scientific society anywhere in the world. The discovery of what is now known as Comet C/1786 PT was made by Caroline Herschel, while her brother William was away travelling in Germany. Her deep satisfaction, on many levels, is tangible, as her paper reveals:

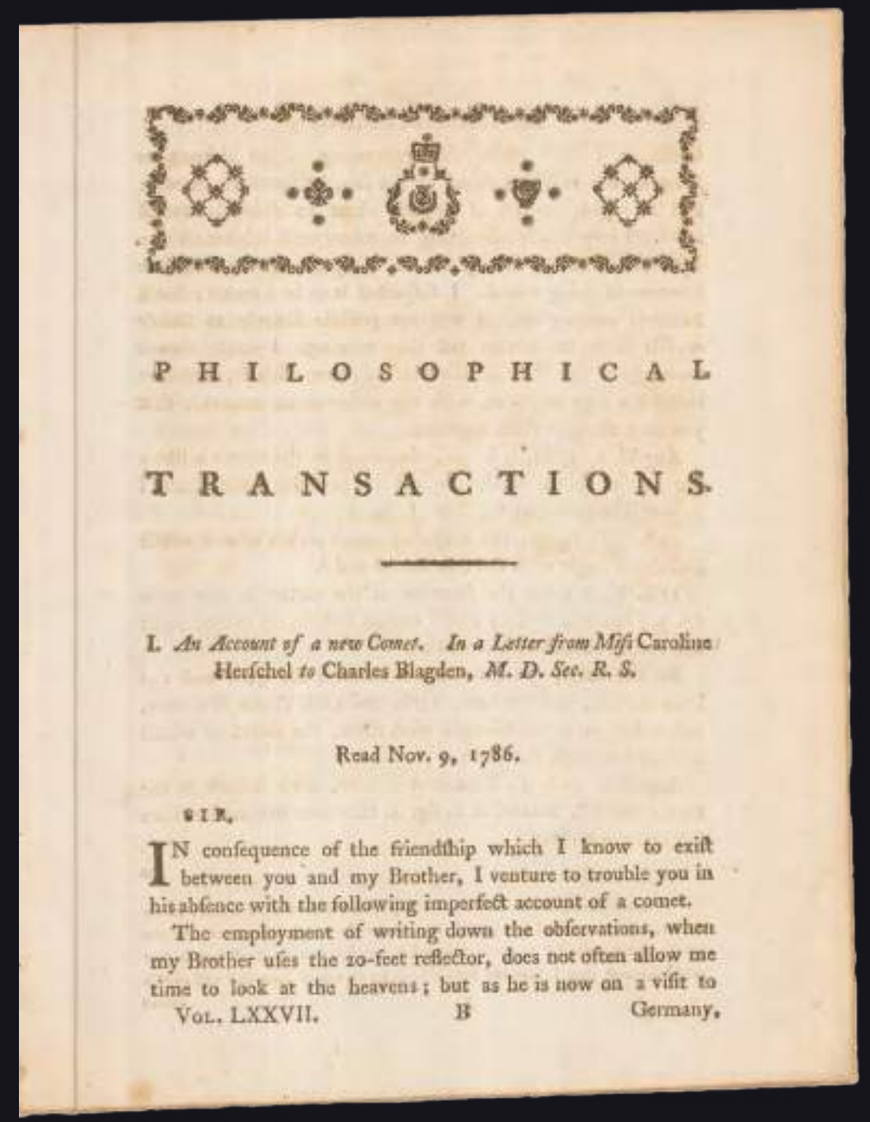
"The employment of writing down the observations, when my Brother uses the 20-feet reflector, does not often allow me time to look at the heavens; but as he is now on a visit to Germany, I have taken the opportunity of his absence to sweep in the neighbourhood of the sun, in search of comets: and last night, the 1st of August, about 10 o'clock, I found an object very much resembling in colour and brightness the 27th nebula of the Connoissance des Temps, with the difference however of being round. I suspected it to be a comet; but haziness coming on, it was not possible to intirely [sic] to satisfy myself as to its motion till this evening".

Caroline's announcement of her discovery, in the 'Philosophical Transactions', volume, LXXVII (1787), is the first published scientific paper, in English, authored by a woman. Also without precedent is her immediate reward, by George III, an ardent astronomer himself, of an annual stipend of £50.

Caroline Lucretia Herschel's (1750-1848) mother, "had no doubt that a daughter's place was in the home, helping with the housework; she opposed all attempts by Caroline to acquire anything more than the most rudimentary education, and resented even the occasional violin lesson given by her father. Caroline tried to acquire some ability in needlework from a kindly neighbour, but for this they had to meet at dawn, for at 7 a.m. her household chores would begin... eventually she was given grudging permission to attend a dressmaking school, but this lasted only a few weeks, after which she resumed her role of household drudge" (Hoskin).

Eventually, Caroline was rescued by her brother, William, who had himself escaped the dismal household, and French occupation in Hanover, by becoming an organist in Bath, England. He "gave [Caroline] two singing lessons daily, sometimes three, as well as teaching her English and arithmetic, and she had coaching from a dancing-mistress to give her the stage presence required for oratorios. Before long she was appearing at Bath or Bristol as many as five nights a week, singing leading soprano parts in works such as Messiah, Samson, and Judas Maccabaeus" (Hoskin).

For William, his interest in heavenly music soon gave way to an obsession with "the construction of the heavens". He began by visiting opticians and then fixated on building his own telescope. By the summer of 1775, Caroline was "taken up with copying Music and practising, besides attendance on my Brother when polishing [telescopic mirrors], that by way of keeping him alife, I was even obliged to feed him by putting the



PHILOSOPHICAL

TRANSACTIONS.

I. *An Account of a new Comet. In a Letter from Miss* Caroline Herschel *to* Charles Blagden, *M. D. Sec. R. S.*

Read Nov. 9, 1786.

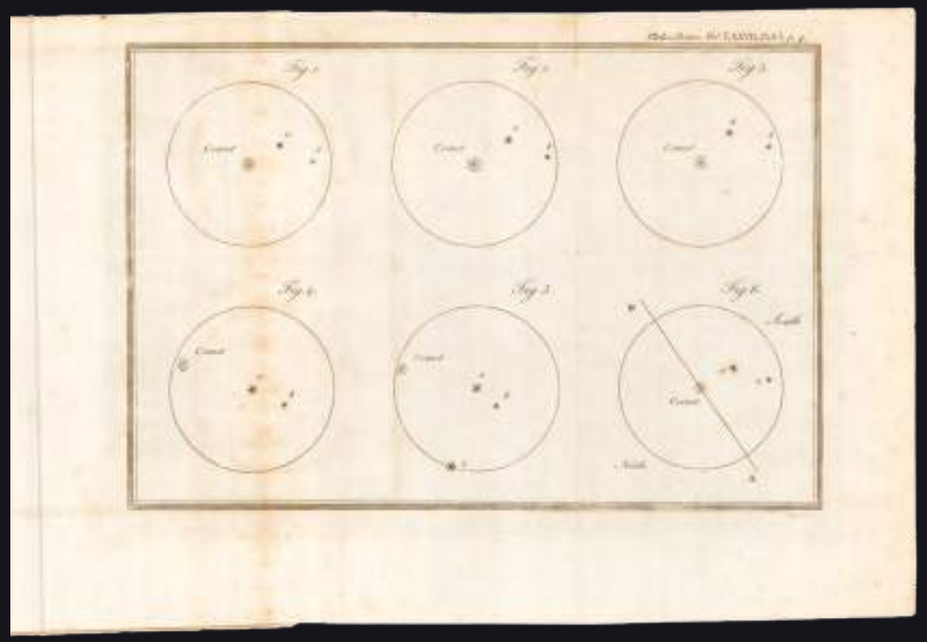
SIR,

IN consequence of the friendſhip which I know to exiſt between you and my Brother, I venture to trouble you in his abſence with the following imperfect account of a comet.

The employment of writing down the obſervations, when my Brother uſes the 20-feet reflector, does not often allow me time to look at the heavens; but as he is now on a viſit to

vitals by bits into his mouth". The struggle was made all worthwhile, when in 1781 William discovered Uranus, which secured him, and his now assistant, Caroline, Royal patronage and a move of house to Datchet, near Windsor Castle.

Caroline's principal astronomical task was to look for comets, which she did through her own dedicated telescope, the "sweeper" which William had constructed especially for her. She became famous as the discoverer, or co-discoverer, of "no fewer than eight comets, four with the sweeper made in 1783, three with its successor, and the last, found in 1797, with the naked eye. However, her earliest sweeps, in the winter of 1782–3, yielded not comets but comet-like nebulae, to add to the hundred or so already known. Later in 1783 she was to discover the companion to the Andromeda nebula... Caroline was an indispensable member of a most remarkable team that, in one of the greatest campaigns known to observational astronomy, swept the whole of the visible sky. In twenty years of unremitting toil, brother and sister increased the number of known nebulae from about a hundred to 2500. In 1787 Caroline too received a royal pension, of £50 a year; revealingly, this was the first money that she felt she could consider her own... 1796 [William] persuaded Caroline to assemble a list of these errors, a task that took her twenty months. Her list, with an index to Flamsteed's observations, was published by the Royal Society in 1798" (Hoskin).



Selina updates Australia

8 HALL, Selina; and Sidney HALL

Australia.

Publication
[London, Longman, c.1830].

Description
Engraved map, with contemporary hand-colour in outline.

Dimensions
430 by 520mm (17 by 20.5 inches).

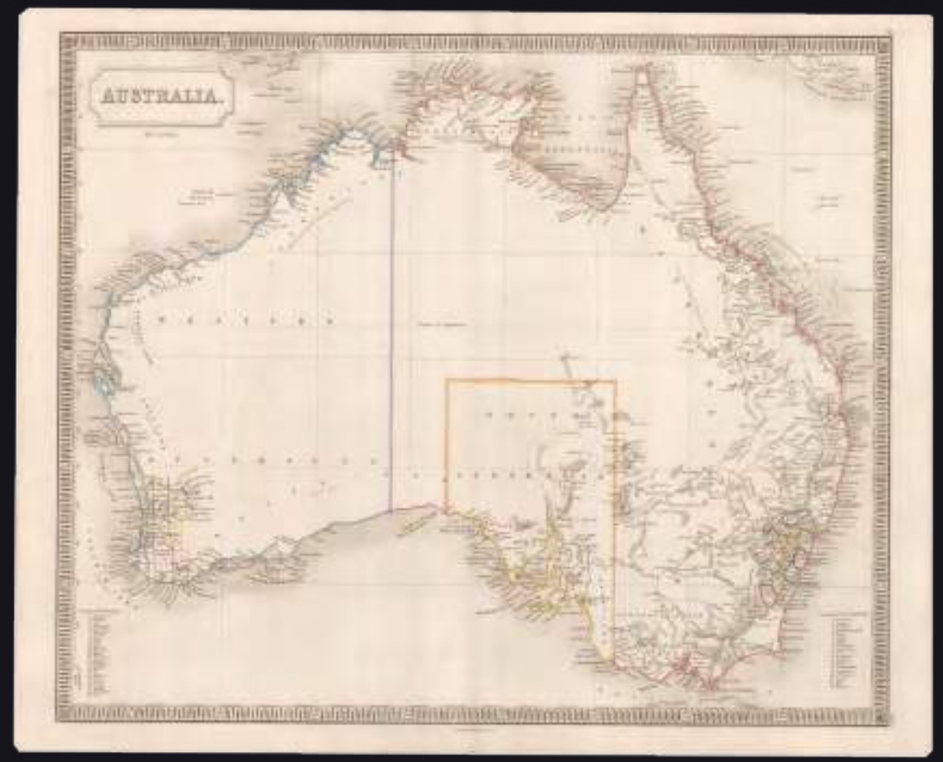
A large map of Australia showing the country's early divisions prior to the creation of Victoria, Queensland, or the Northern Territories. New South Wales dominates the eastern half of the continent, while the centre is almost entirely unknown.

From Sidney Hall's 'New General Atlas', which was published in multiple editions between 1830 and about 1860 by various iterations of the Longman firm of publishers. Editions after Sidney's death in 1831 were frequently updated by Selina Hall to show contemporary developments, for example the creation and division of Victoria and Queensland.

Sidney Hall (1788–1831) engraved maps for William Faden, Aaron Arrowsmith, and Chapman & Hall. From at least 1809 he workshop was at 5 Vine Street, Piccadilly, London. By 1814, in partnership with Michael Thomson, his business had moved to Bury Street, London. Hall is credited with "almost certainly" being the first engraver to use steel plates in map engraving (Beinecke Library, Yale, online).

Hall died at the tragically young age of 42, "and yet his engraved maps continued to appear. New works engraved by Sidney Hall were published for decades after his death. Selina Hall (1782-1853), who conveniently shared a first initial with her husband, simply continued to engrave maps and signed them "S. Hall" (this as well as the date can be used to distinguish them from her husband's work, since he usually signed "Sid.y Hall"), thus continuing to benefit from an established name.

Engraving is a highly skilled job, and Selina Hall cannot have learnt it all at once on her husband's death. It is far more likely that she was an active participant in the business throughout their marriage, but that her contribution was not acknowledged. She was certainly known to her husband's former business partner, Michael Thomson, who died in 1816, since she is mentioned in his will, so she may have been involved in the map production process for even longer. Selina lived for over 20 years after her husband's death, continuing to engrave maps, and when she died the business passed to her nephew Edward Weller; she may have been involved in his training" (Boldeian Library online).



Selina updates the United States

9 HALL, Selina; and Sidney HALL

United States.

Publication
[London, Longman, after 1845].

Description
Engraved map, with contemporary hand-colour in full.

Dimensions
420 by 510mm (16.5 by 20 inches).

A large map of the United States as far west as Texas and the Dakotas. Minnesota, Nebraska, and Indian Territory are still oversized, unorganized territories with unusual border configurations. Railways, both proposed and constructed, are marked. The date is based on the fact that Wisconsin did not gain statehood until 1848, and Texas was not annexed by the United States until 1845.

From Sidney Hall's 'New General Atlas', which was published in multiple editions between 1830 and about 1860 by various iterations of the Longman firm of publishers. Editions after Sidney's death in 1831 were frequently updated by Selina Hall to show contemporary developments, for example the creation and division of Victoria and Queensland.

Steel's rare chart of the Indian Ocean

10 STEEL, [Penelope]; NORIE, J[ohn] W[illiam]

To the Honourable the Court of Directors of the United Company of Merchants, Trading to the East Indies. Steel's New Chart of the Indian and Pacific Oceans; from the Cape of Good Hope to Canton and New Zeeland.

Publication
London, J. W. Norie and Co., July 1832; Corrected to 1833.

Description
Engraved chart on four sheets, mounted on blue paper, separation to old fold.

Dimensions
1330 by 1000mm (52.25 by 39.25 inches).

During the nineteenth century, the British Empire was approaching its peak, with territories and subjects spanning the entire globe. As such, this period saw a huge surge in the production and purchase of nautical instruments and navigational charts. To meet this demand, British mapmakers and sellers began to publish charts backed on distinctive blue manila paper, which strengthened them for practical use aboard a ship, as well as cutting costs, as the charts could be printed on lower-quality paper and then inexpensively reinforced with the ubiquitous blue backing. These charts came to be known as 'Bluebacks', and remained popular until the late nineteenth century, when the British Admiralty began issuing superior, uniform charts on high-quality paper.

One of the lesser-known producers of 'Bluebacks' was Penelope Steel, the widow of noted publisher, engraver, instrument-seller, bookseller and bookbinder, David Steel, who continued his business after his death. Shortly after, Penelope married William Mason and moved the business to Tower. Hill. During the 1810s a lack of new charts and the loss of a valuable employee to the rival Laurie and Whittle firm, Penelope entered into a new partnership with Stanley Goddard who later became her third husband. By 1819, however, Steel and Goddard went bankrupts and their stock was acquired by John Norie. Norie (1772-1843) was an important hydrographer, chartmaker and publisher, as also a writer on navigation and publisher of nautical manuals, as well as selling globes and all manner of nautical instruments. He was agent for the sale of Admiralty charts, and chart seller to the East India Company and Trinity House.

Norie continued to publish Steel's charts including the present four-sheet blueback chart of the Indian and Pacific Oceans, focusing on the trading routes from the east coast of Africa to Canton and New Zealand. Depth soundings and toponyms are given across the map; underwater obstacles are also identified and there are warnings about "little known" areas. It also includes an early label of "Town" at Singapore. Extremely rare: the National Library of Australia holds an examples of the 1813 edition of 1813 and also the upper half of the 1844 edition, but no other institutional copies have been located.

COURT OF DIRECTORS
STEEL'S NEW CHART
OF THE
INDIAN AND PACIFIC OCEANS;
FROM THE CAPE OF GOOD HOPE
TO CANTON AND NEW ZEALAND;
Including all the
PASSAGES TO INDIA AND CHINA
J. W. NORIE, Hydrographer &c.
A R A B I A
A F R I C A
B O R N E O
N O R T H
P A C I F I C
O C E A N
S O U T H
P A C I F I C
O C E A N
A U S T R A L I A
N E W
H O L L A N D
N E W
S O U T H
W A L E S
T H E
I N D I A N
O C E A N

A puzzling gift

11 DOPTER, Jules Émile

Atlas.

Publication
Paris, Émile Dopter, 29 rue Madame, [1856]-1903.

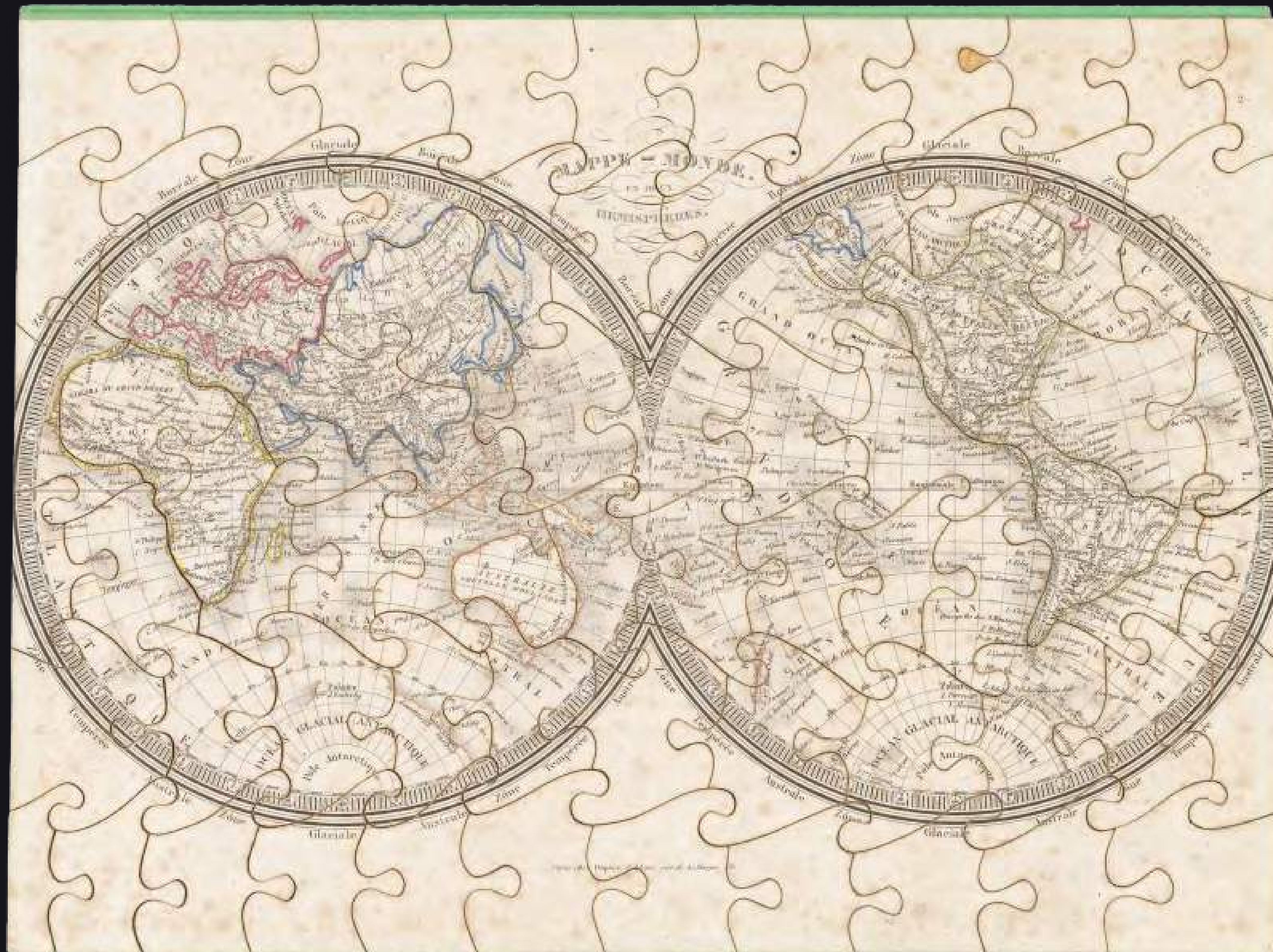
Description
Seven lithograph puzzle maps, original hand-colour in outline, housed in contemporary mahogany box, with decorative marked rules and lettering, two pieces lacking in France, and two North America.

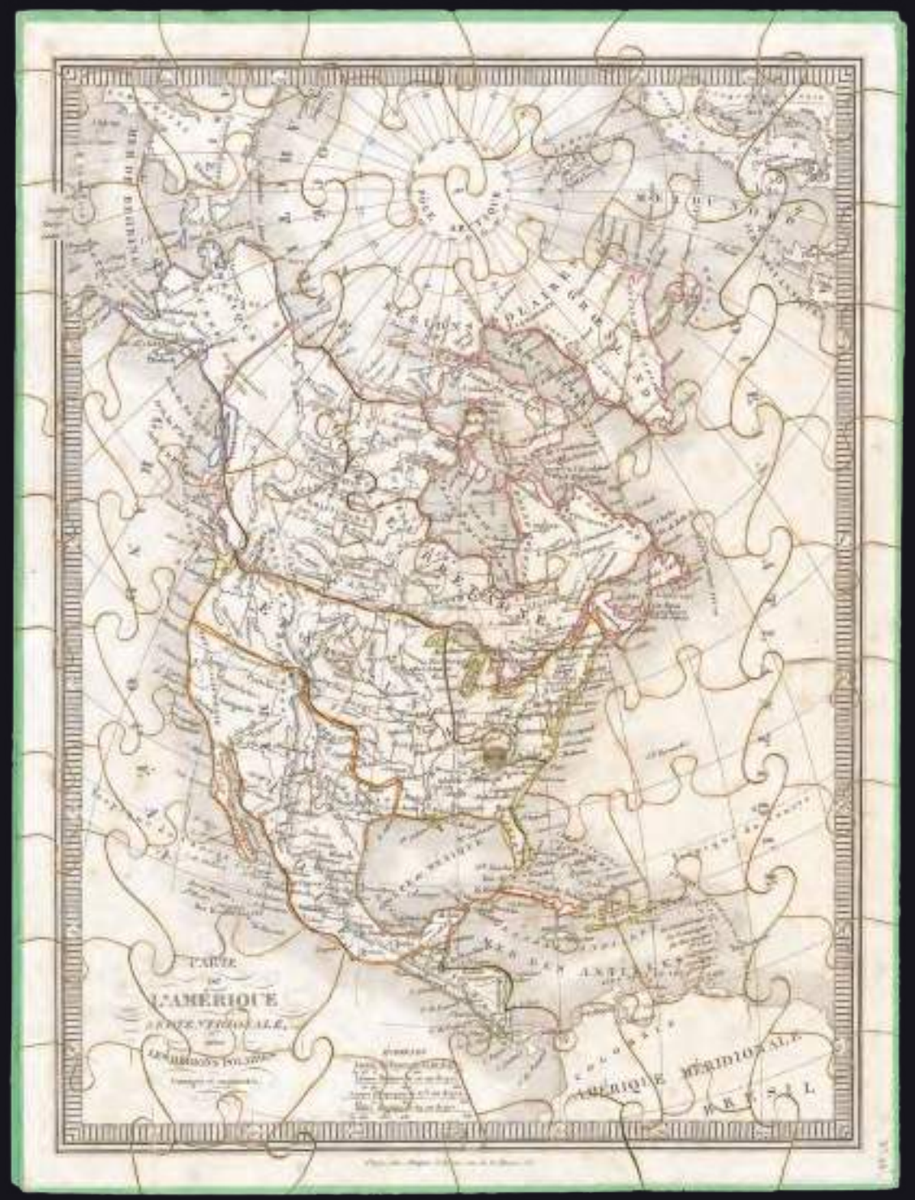
Dimensions
285 by 385mm (11.25 by 15.25 inches).

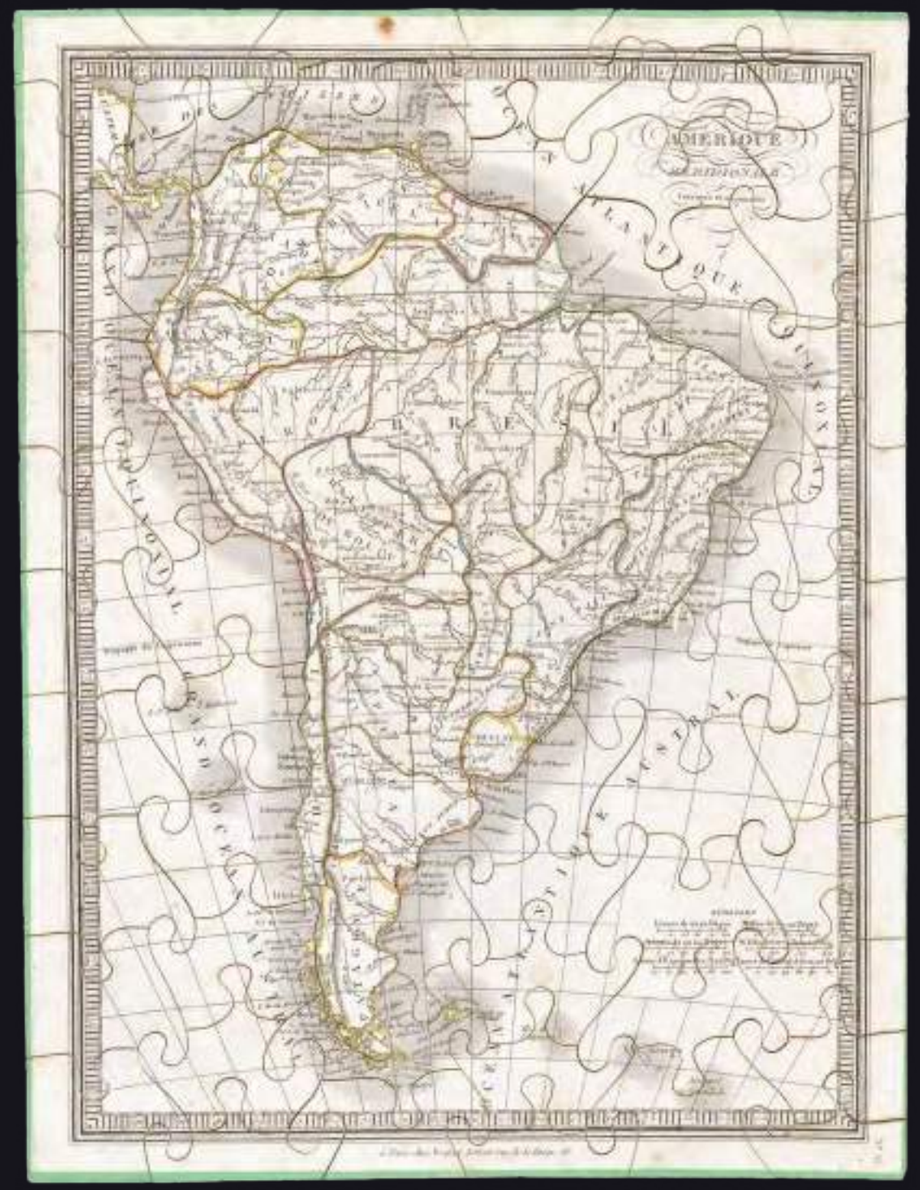
References
Lefebvre, Nicholson-Smith, 'The production of space' (Blackwell: Oxford, 1991); Norcia, 'Puzzling Empire: Early Puzzles and Dissected Maps as Imperial Heuristics', (Children's Literature, 2009); Norgate, 'Cutting borders: Dissected maps and the origins of the jigsaw puzzle', (The Cartographic Journal, 2007).

Presented in a decorative wooden case, these geographical jigsaws were given as an extravagant gift to two girls, Yvon and Henriette Pasquet, according to the dedicatory panel inside. The emerging children's culture of the mid-eighteenth century produced toys and games that were often as ornamental as they were practical, and the demand for increasingly unique and interesting items eventually resulted in such puzzles. Although John Spilsbury is widely credited with creating the first dissected map in 1766, there are earlier references to these sorts of geographical games made by a Madame de Beaumont in France, where this example was also produced. Jean Vincent Marie Dopter became a prominent Parisian lithographer and printer in the 1830s, specialising in religious and political pamphlets, which were considered by some so outrageous that he was eventually sentenced to ten days in prison. Far less controversially, he also produced these puzzle maps, which earned him medals and honourable mentions at various exhibitions, including l'Exposition universelle de Paris, and the Great Exhibition in London. The dissected maps show named countries, exploration routes and the relief of major mountain ranges, making the puzzles an effective educational aid, and a literalisation of Lefebvre's claim that "knowledge of spaces wavers between description and dissection".

Such ornate sets were predictably expensive, and became popular mainly with the elite, among whom these items were made into symbols of status. In Jane Austen's 1814 novel 'Mansfield Park', for example, the poor protagonist is mocked by her wealthy cousins because she "cannot put the map of Europe together". This set of games, then, would have been an extravagant present, worthy of the Countess de Turgot who gifted them. The wooden box contains seven jigsaws, displaying one world map, a map of France divided into departments, and maps of the continents of Europe, North America, South America and Asia. The engraved maps were printed, hand-coloured, glued onto card, and then dissected into 70 to 80 pieces. They are separated by boards bordered with the same green paper that lines the inside of the box. They all identify Dopter's address as 58 rue de la Harpe, apart from the map of Europe, which lists number 66 as its place of publication. As is the inevitable fate of almost all toys, a few parts have been lost, leaving two holes in the maps of North America and France. Other examples of Dopter's Atlas set also contain a puzzle depicting Oceania, which is not included here. We have been able to trace only two institutional examples of this set of geographical puzzles, at the State Library of New South Wales and the Bibliothèque nationale de France.


MAPPE-MONDE.
OCEAN GLACIAL ANTARCTIQUE


CARTE
DE
L'AMERIQUE
SEPTENTRIONALE,
AMERIQUE MERIDIONALE
BRESIL


AMERIQUE
MERIDIONALE
BRESIL

Geology Personified

12 W[EBBER] C[atherine]. M[ary]

Geology, Familiarly Illustrated by C. M. W.

Publication
London, J. B. Goodinge, 21 Aldergate Street, 1859.

Description
Oblong octavo (130 by 150mm), continuous strip view, measuring 320 cm in length, containing thirty-one numbered and captioned hand-coloured lithographed scenes illustrating geology in a humorous vein, imprint label pasted to inside of back cover, original marbled covers with publisher's label.

References
Abbey, Life, 607.

Humorous panorama illustrating geological features and stratification.

Catherine Mary Webber (1831-1900), the wife of the Anglican clergyman Rev. William Fynes Webber, is known to have published three comical illustrated works such as this. The other two are 'The Experiences of an Amateur Artist' published in 1858 and 'Miss Scratchley, an Amateur in Art and Crinoline' in 1863. She also contributed to 'The English Woman's Journal' under the moniker 'A Clergyman's Wife.'

The scenes are captioned:
1. "Gneiss on Granite".
2. "Cumbriam System".
3. "Cambriam System".
4. "Flags, and Transition Conglomerate".
5. "Silurian System".
6. "Transition Period".
7. "Antient Crater showing traces of eruption".
8. "Trap".
9. "Serpentine".
10. "Old Red".
11. "Carboniferous System".
12. "Coal Beds"
13 "New Red".
14. "Lias".
15. Oolite Formation".
16. "Lower Chalk".
17. "Upper Chalk".
18. "Extensive Denudation".
19. "Kentish Rag".
20. "Slips on the South Coast".
21. "Dip".
22. "Erratic Blocks with Quartz".
23. "Protrusion of Antient Deposits".
24. "Antidinal Axes".
25. "Strike, Dip, and Cleavage".
26. "Valley of Elevation".
27. "Bag-shot sand".
28. "Clear proofs of Metal".
29. "The London Basin".
30. "The Paris Basin".
31. "Fault in an Antient Bed, containing Terrestrial Mammalia".


"Silurian System"
"Transition Period"


"Silurian System"
"Transition Period"
"Trap"
"Old Red"
"Coal Beds"

“A present from the Isle of Man” (front cover)

13 [HARVEY, William, as “ALEPH’; after Eliza Jane TENNANT, otherwise known as “Lilian LANCASTER”]

Geographical Fun; being Humorous Outlines of Various Countries. With an Introduction and descriptive lines.

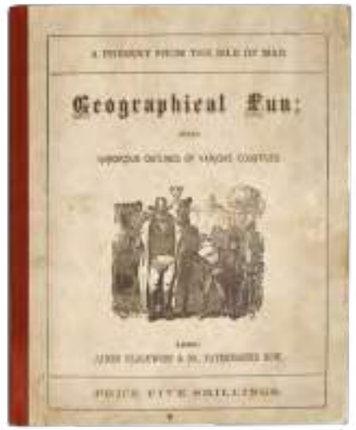
Publication
London, Hodder and Stoughton, 27, Paternoster Row, [c.1868].

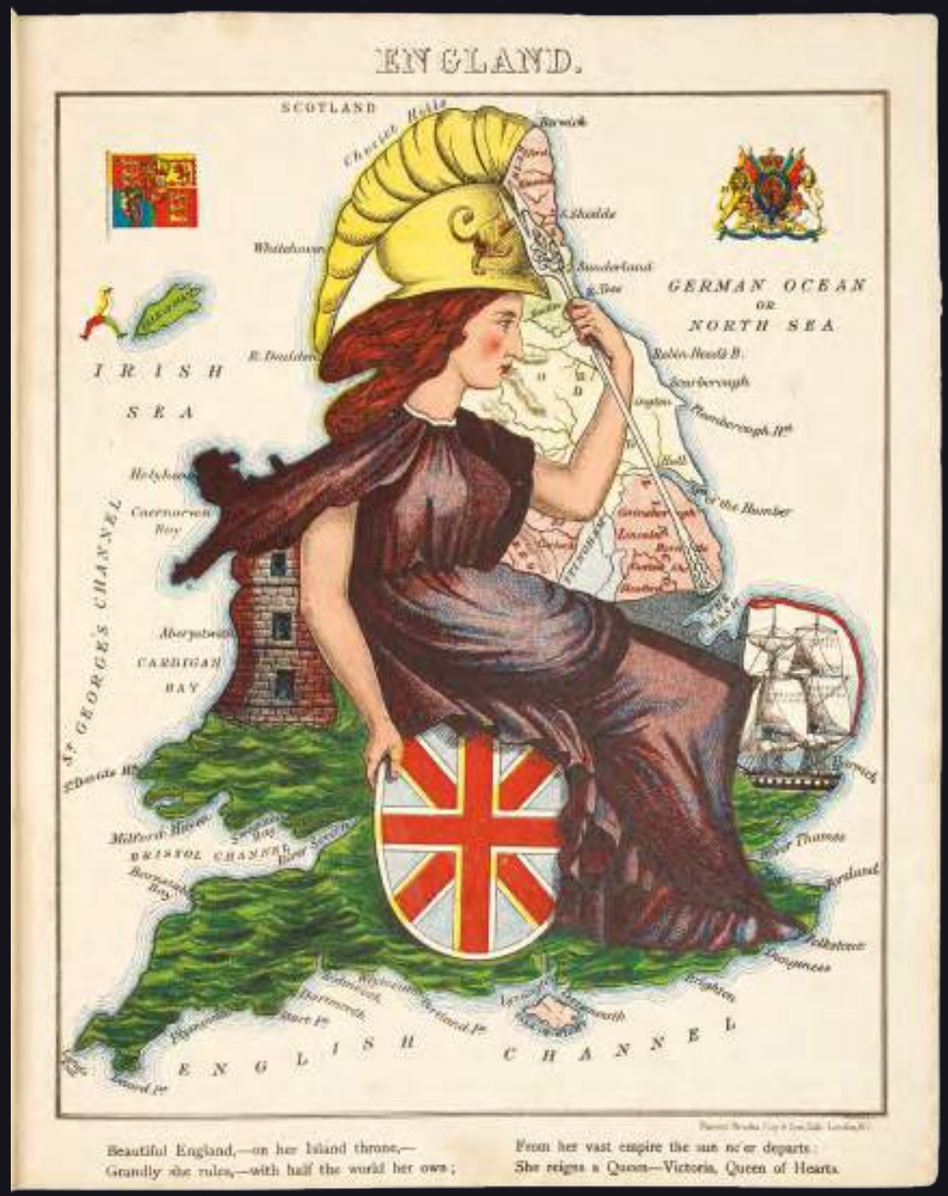
Description
Quarto (275 by 235mm). 12 colour printed lithographed maps, with text beneath; original publisher’s pictorial grey paper boards, ochre cloth spine.

References
Baynton-Williams, ‘Curious Map Book’, pages 170-173; see Manasek #115; Slowther, ‘Map Collector’, 16, pages 48-50.

A series of twelve humerous allegorical maps of Europe depicting the political landscape of the time in human form, the work of a “young lady... in her fifteenth year... seeking to amuse a brother confined to his bed by illness” (’Introduction’). Eliza Jane Tennant, later known by her stage name as Lilian Lancaster, created the original drawings for these maps, when she was a young girl, to amuse her sick brother.

William Henry “Aleph” Harvey (1796-1866) was a London doctor and journalist. He was also known for writing and illustrating works for children. He stated as the purpose to create the work that “If these geographical puzzles excite the mirth of children; the amusement of the moment may lead to the profitable curiosity of youthful students, and imbue the mind with a healthful taste for an acquaintance with foreign lands. No history, no journal can be understood without a knowledge of maps, and good service is done when we make such information more easy and agreeable”.





SCOTLAND.

A gallant piper, struggling through the bogs,
His wind bag broken, wearing his clay clogs;
Yet, strung of heart, a fitting emblem makes
For Scotland—land of heroes and of cakes.

WALES.

Geography bewitch'd—Owen Glendowr,
In Bardic grandeur, looks from shore to shore,
And sings King Arthur's long, long pedigree,
And cheese and leeks, and knights of high degree.

Keeping a watch on Women's Suffrage

14 [NATIONAL AMERICAN WOMAN SUFFRAGE ASSOCIATION]

Ladies' wristlet watch.

Publication
[U.S.A., c.1910].

Description
Chrome ladies' wristlet watch, Swiss movement, enamel face (25mm in diameter) decorated by hand, set with a pair of slender gold hands.

A beautiful, small, and yet incredibly powerful symbol of Women's Suffrage in America during the first decade of the twentieth century. The face of this "wristlet" watch (later wrist watch) is decorated with a deceptively delicate yellow rose, and the numbers of the dial replaced with letters spelling out "Vote for Women".

Three colours, "white, purple and yellow, played a prominent role in the iconography of suffrage. They appeared on banners, sashes, pamphlets, and all manner of tricolour badges. White was chosen to represent liberty, purity, and feminine grace. Purple, or violet, represented the vote as well as loyalty, constancy, and steadfastness. Yellow and gold were by far the most widespread colors of the movement. They emerged in 1867 when Elizabeth Cady Stanton and Susan B. Anthony were in Kansas advocating for a state suffrage referendum. The pair adopted the state flower, the sunflower, as a symbol of the suffrage cause. Suffragists began wearing gold pins and yellow ribbons to advertise their cause. Yellow roses were also popular, and served as floral badges distinguishing suffragists from anti-suffragists, who wore red roses instead" (State of Oregon online).

The Awakening … the iconic map of the campaign for women's suffrage

15 MAYER, Henry

The Awakening.

Publication
[New York, Puck Publishing Co., February, 1915].

Description
Double-page colour printed pictorial map.

Dimensions
335 by 508mm (13.25 by 20 inches).

References
Persuasive Maps: PJ Mode Collection (online), #1176; Schulten, 'Make the map all white: the meaning of maps in the prohibition and suffrage campaigns', University of Colorado Law Review, volume 92.

A "great rarity of persuasive mapping" and "the most striking of the suffrage maps, which played a major role in the successful fight for women's suffrage in the U.S." (Mode).

1915 was a big year for the Suffrage Movement. Although ten states west of the Mississippi had already passed amendments giving women the right to vote, all eastern states remained reluctant, as did Federal government. On January 12th, the House of Representatives had voted for the first time on a Federal amendment, but the motion was defeated.

The frontline of the fight for women's suffrage then moved to New York State. 'Puck' magazine went all-in on the first New York referendum, scheduled for November, 1915, and in February produced a special "Woman Suffrage" issue illustrated with Henry Mayer's striking centrefold, 'The Awakening', dramatically depicting the west-to-east progress of women's suffrage across the nation, whipped along by Lady Liberty. In October, over 25,000 women marched up Fifth Avenue in New York City to advocate for women's suffrage, the largest parade in the City for the time. But to no avail, as the amendment failed to pass.

The illustrator was Henry "Hy" Mayer (1868-1954), a German-born artist who was chief cartoonist for 'Puck' at the time. Below the map is a poem by Alice Duer Miller (1874-1952), a novelist, playwright, screenwriter, member of the Algonquin Hotel Round Table and "popular poet of tremendous range and skill" (Chapman). Miller was an active and tireless feminist who produced a substantial volume of "defiant, witty suffrage verse" (Chapman).

Rarity: 'Puck' was, and is, an icon of American publishing, but by 1915 it was on its last legs, and circulation had dwindled to perhaps 10,000 copies, the vast majority of which would have been read and promptly disposed. Hence the great rarity of this issue in general and 'The Awakening' in particular.

Look forward, women, always; utterly cast away
The memory of hate and struggle and bitterness;
Hours may endure for a night, but freedom comes with the day,
And the free must remember nothing less.

Forget the strife; remember those who strove—
The first defiant women, gallant and few,
Who gave us hope, as a mother gives us love,
Forget their sin, and this remember, too:

How at the later call to come forth and vote,
Women untaught, unconscious, alone and apart,
Rose upon each came forth in unpassed might,
Each one answering the call of her one true heart.

They came from toil and want, from leisure and ease,
Those who knew only life, and learned women of fame,
Girls and the mothers of girls, and the mothers of these,
No one knew whence or how, but they came, they came.

The faces of some were stark, and some were gay,
And some were pale with the terror of unreal dangers;
But their hearts knew this: that hereafter come what may,
Woman to woman would never again be strangers.

Alice Duer Miller

Making the Polls Attractive to the Anti-Suffragists

Prominent Anti-Suffragists Give Notable Interviews

“Our country has been a busy, lively place”

16 WHITE, Ruth Taylor; and Frank J. TAYLOR

Our U.S.A. A Gay Geography.

Publication
Boston, Little, Brown and Company, 1935.

Description
Oblong quarto (240 by 325mm). Half-title; Colour printed pictorial frontispiece, 53 further maps with text on versos; original publisher’s red and blue pictorial cloth.

“In this Gay Geography we try to see our United States not only as Nature, in a generous mood, made the land, but also as many men and women, with varied ideas of a Promised Land, discovered it and used it. Our country has been a busy, lively place ever since it took its stand among the nations, a century and a half ago. During that time it has grown by leaps and bounds, faster than any other nation” (text for US map).

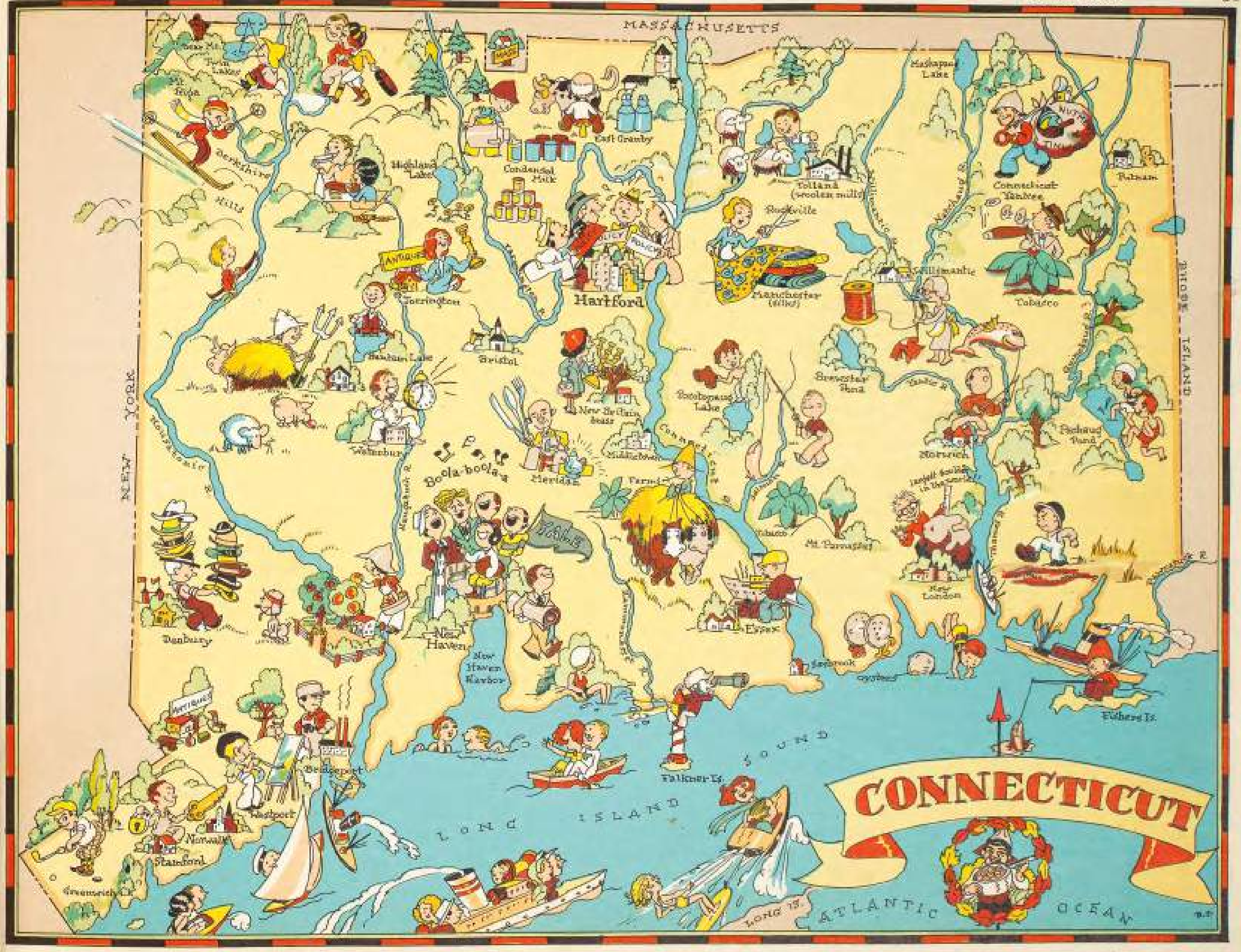
White and Taylor’s light-hearted atlas includes a pictorial frontispiece map of the United States, 53 further maps with text on versos, and endpapers decorated with double-hemisphere maps of the world. There is a map for each of the then (1935) 48 states plus the Territories of Alaska, Hawaii, American Samoa and the Commonwealth of the Philippines, and a map of the Caribbean showing Puerto Rico, the Virgin Islands and the Panama Canal Zone as well as the rest of the Antilles. “Numerous small drawings on the map of each state depict sights, people, activities, crops, animals, relief, populated places, etc. A product of the 1930s, it depicts stereotypical images of people” (David Rumsey).

Ruth Taylor White’s (born 1899) pictorial maps, often known as cartographs, combine graphic style, colour and comical observations, and on publication the New York Times reviewed ‘Our U.S.A.’: “Any one who remembers his childhood efforts to visualize Kentucky as something more than the green spot on the map, or New York as the pink State, will appreciate this volume. Brilliantly coloured pictorial maps of the same order which have been amusing adults for the past decade show the United States and their Territories as active, picturesque entities” (November 17th, 1935).

The accompanying text is provided by Ruth’s brother Frank J. Taylor (1894-1972), a well-known journalist. One of Ruth’s earliest commissions was for Frank’s alma mater, Stanford University: the front cover of ‘The Stanford Illustrated Review’, November 1927.

California 17

Florida 27


MASSACHUSETTS
East Granby
Condensed Milk
Highland Lake
Tolland (woolen mills)
Rockville
Connecticut Yankee
Putnam
Berkshire Hills
Torrington
Hartford
Manchester (silks)
Willimantic
Tobacco
Bristol
Waterbury
New Britain brass
Middletown
Boola-boola-a
Meriden
Brewster Pond
Pachaug Pond
Norwich
NEW YORK
Danbury
New Haven
New Haven Harbor
Essex
Saybrook
New London
Fishers Is.
oysters
Bridgeport
Westport
Norwalk
Stamford
Greenwich
ANTIQUES
LONG ISLAND SOUND
Falkner Is.
ATLANTIC OCEAN
LONG IS.
RHODE ISLAND
CONNECTICUT


TERRITORY of HAWAII
ISLAND OF KAUAI
NIIHAU
ISLAND OF OAHU
Honolulu
Schofield Barracks
Old Royal Fish ponds
ISLAND OF MOLOKAI
LANAI
KAHOOLAWE
ISLAND OF MAUI
Lahaina
Old lava flows
ISLAND OF HAWAII
Hilo
Coffee
Tobacco
Mauna Loa
Kilauea Active Volcano
HAWAII NAT PARK
Big Game fish
Outrigger Canoe
Kealakekua Bay where Capt. Cook was hailed as a god when he landed in 1778
SAMOA
SAVAII I. (New Zealand)
UPOLU I. (New Zealand)
TUTUILA I. (U.S.)
Pago Pago Harbor
MANUA I. (U.S.)
ROSE I. (U.S.)
Note ~ Drop this bit of ocean 2000 miles south of Hawaii and you have the location of the Samoan Islands.

An Eton collAge

17 WAGSTAFF, Hester M.

A Map of Eton College and its Environs.

Publication
[Eton], Published at the Petersfield Workshops, Printed by Emery Walker Ltd., [1937].

Description
Lithographed pictorial map with contemporary hand-colour in full; laid down on board.

Dimensions
430 by 530mm (17 by 20.75 inches).

This whimsical map of Eton College, lustrating its location, traditions, activities and attractions, has been drawn by the successful and well known illustrator Hester M. Wagstaff who, on this occasion has been heavily influenced by Macdonald Gill.

The map focuses on all the activities available to Eton's pupils, from sports to the drawing schools. The School Houses are detailed as are some of the more unique activities associated with Eton, such as the Wall Game.

Hester M. Wagstaff was Born in Leighton Buzzard in 1892, she ran the Petersfield Workshops in Petersfield, Hampshire (1918-1948) with Flora Twort and Maria Brahms. This map was drawn in 1937, and in 1948 she gave permission for her map to be used as an end plate in B. R. J. "Bud" Hill's book about Eton College, entitled 'Eton Medley'.

A woman's work is never done

18 WILLIAMS, Gertrude Rosenblum; and Otto NEURATH

Women and Work.

Publication
London, Nicholson & Watson, 1945.

Description
First edition. Octavo (215 by 140mm). 13 numbered colour printed charts, illustrated throughout from photographs; original publisher's grey cloth, gilt, dust jacket.

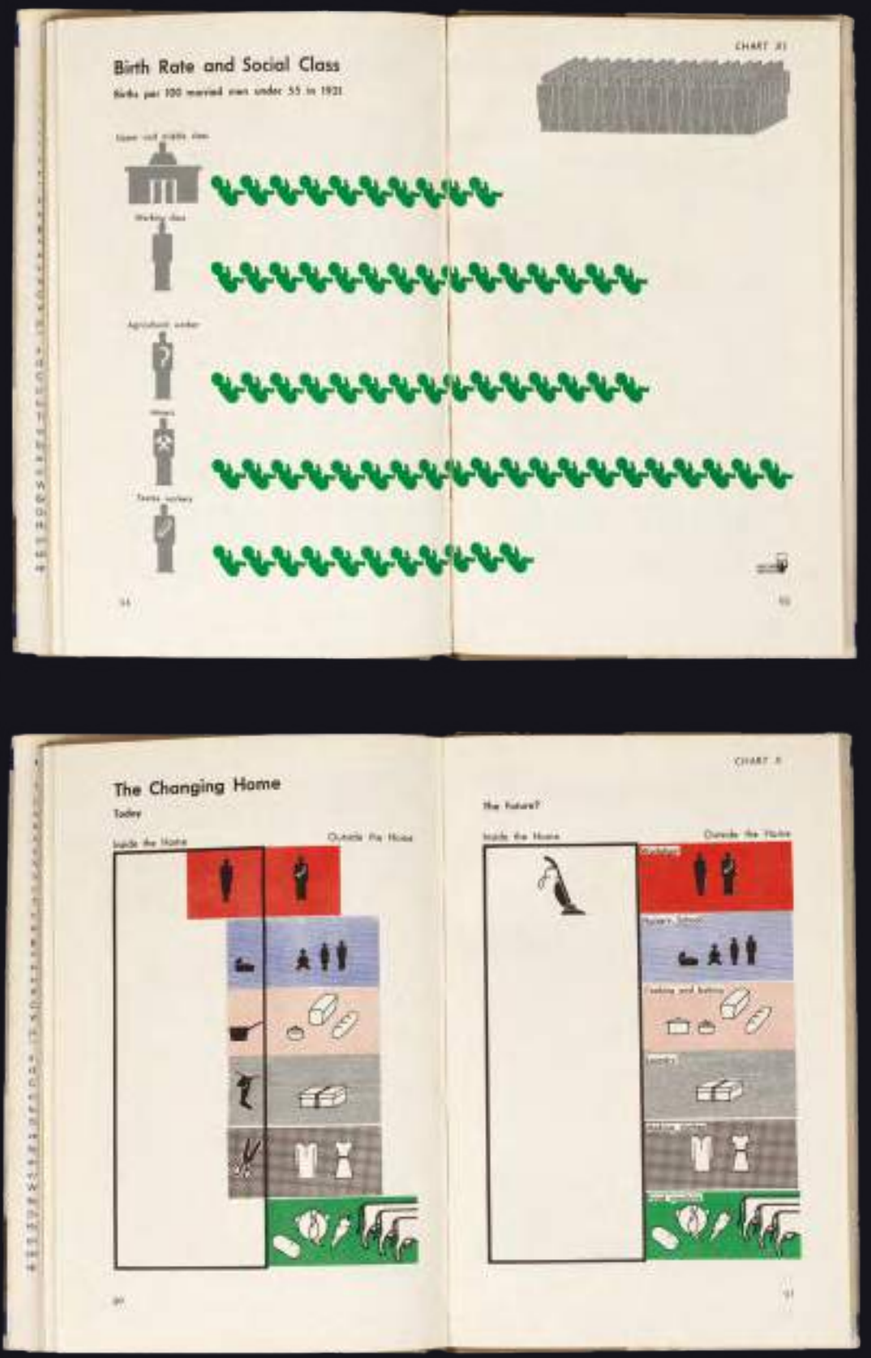
References
Harper, 'Maps and women', BL 2017.

One of 'The New Democracy Series', which attempted to "see to it that twentieth-century democracy is tuned up to twentieth-century conditions" (foreword). In a contemporary review "Mrs. Williams's" book is described as "little" three times,... but the issues were, and remain, large.

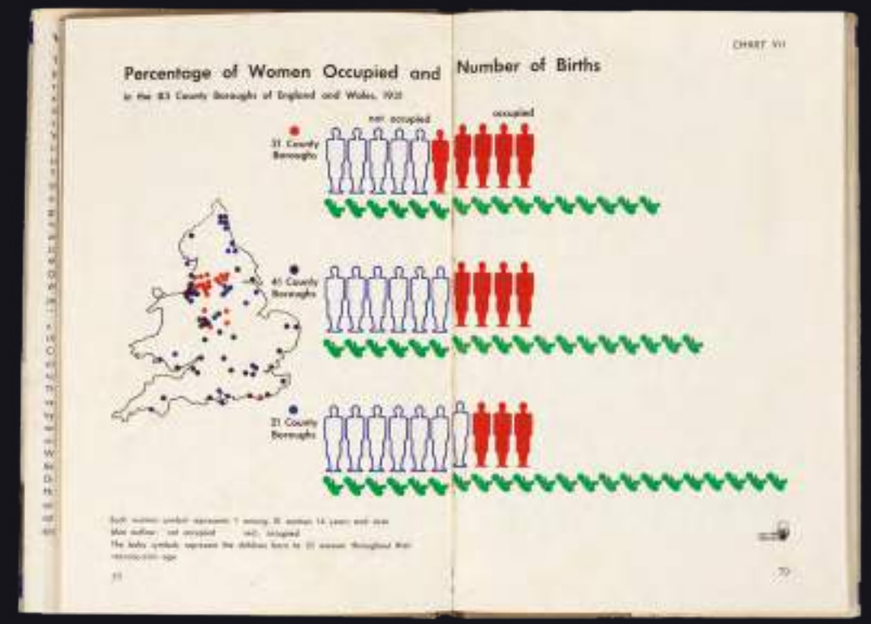
Lady Gertrude Rosenblum Williams (1897-1983) was an economist and social strategist whose research and writing impacted on the foundation and development of the Welfare State in the United Kingdom from the 1940s. Of Williams's books of the 'New Democracy' series, the 1945 publication on 'Women in Work' contains some of the most distinctive infographic maps to make statistics more intelligible. These infographics were by Otto Neurath's Isotype Institute. 'The occupation of women by regions' using 1931 census data is one of the best. Williams' social mapping sits in a tradition begun by Booth and Webb, and continued into the 21st century by, for example, Bethan Thomas and Danny Dorling" (Harper).

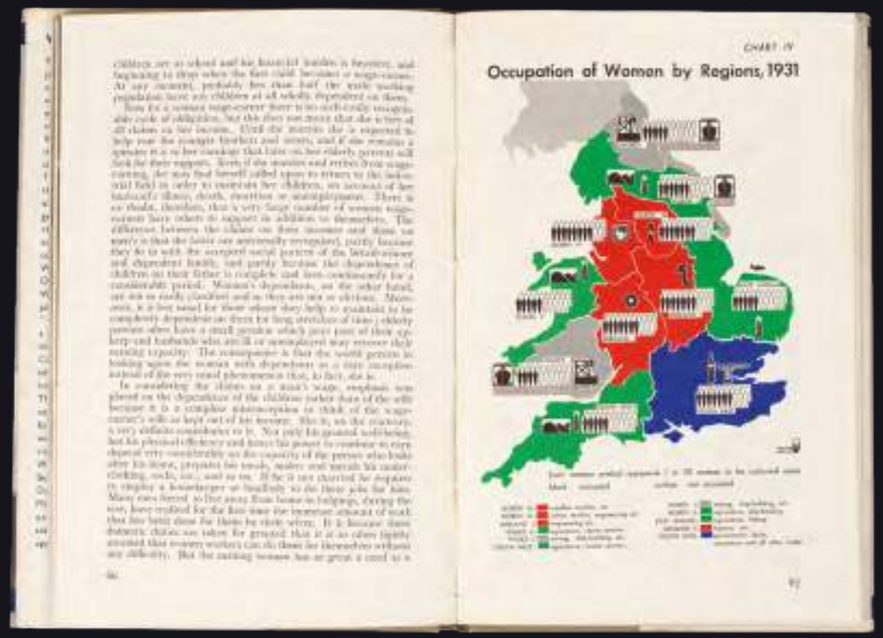
The statistical charts are:
'The Development of Men's Occupations - Development of Women's Occupations' between 1881 and 1931
'Age Groups and Occupation in England and Wales 1931', males versus females
'Professions of Women in 1911 - Professions of Women in 1931'
'Occupation of Women by Regions, 1931'
'Weekly Earnings of Men and Women, 1940'
'Membership of Trade Unions in 1939', males versus females
'Percentage of Women Occupied and Number of Births... 1931'
'Women at Work in Greater London, 1931 - Women at Work in South Wales, 1931'
'The Changing Home - Before the 19th Century - the 19th Century' inside versus outside the home
'The Changing Home Today - The Future' inside versus outside the home
'Birth Rare and Social Class... in 1921'
'Family Sizes in Great Britain, 1931'
'Occupations of Women about 1930'

"This war has shown that there are few jobs which women cannot undertake successfully. But how many of the new societal habits formed to meet the needs of a democracy at war do we want to carry over into the post-war world? What part can and should women play in the field of employment when this time of special emergency is over? This book is an attempt to disentangle the issues involved in this matter. It outlines the scope of the problem in general and goes on to consider the various factors that must be taken into account when we think out the answers to such questions as the following: - What types of work can women do? Ought they to get the same pay as men? Why don't they? Is the home a



full-time job? - all the time? - sometimes? Is it "unfair" for a married women [sic] to earn a living and, if so, unfair to whom? Has the part-time worker come to stay? Can women expect to get the responsible jobs if their main interest is the home and family? The pictures show at a glance the great variety of work not actually being done by women, and the charts - which are worth close scrutiny - make clear and vivid many of the arguments. Mrs. Williams is lecturer in Economics at Bedford College (University of London). During the war she has worked at the Ministry of labour and National Service on problems connected with the mobilisation of women, and has recently been appointed a member of the Catering (Cafes) Wages Board under the Catering Wages Act, 1943. She has written several books on social economics of which 'The State and the Standard Security' (a study of the problem of labour mobility) are the most important, and several pamphlets on economic problems for the Army Bureau of Current Affairs" (Williams).





Mother's Union Map

19 CHICHESTER, Francis

The Mother's Union World Map.

Publication
United Kingdom, L xxxx & Co., [1950s].

Description
Chromolithographed map.

Dimensions
680 by 1010mm (26.75 by 39.75 inches).

Inspired by the meetings her mother used to hold for local mothers at their home in Herefordshire, and her struggles after the birth of her own daughter, Mary Sumner founded the Mothers' Union in 1876. Intended as a Christian group to support mothers and to nurture the family, the Union rapidly spread across the United Kingdom and in 1897, Queen Victoria became a patron. The association then opened branches throughout the British Empire, including in New Zealand, Canada and India. Sumner led the Mothers' Union until her death in 1921 at the age of 92.

Throughout the twentieth century the Mothers' Union continued to expand across the world, and now has four million members in 84 countries. The group's mission include supporting disadvantaged families, promoting Christian values, and campaigning on an international level.

During the first half of the twentieth century, membership of the Mothers' Union soared from 169,000 in 1900 to half a million in 1950. Shortly after hitting the 600,000 members mark, the association produced a commemorative map showing their global presence. Made by map publisher Francis Chichester, the map highlights the expansion of the Mothers' Union across six continents, with red lines delineating areas where its branches were located. There appear to have been no members in the United States, Scandinavia and the U.S.S.R. 11 illustrations across the map depict native mothers, including an American Indian in southern Canada and an Aboriginal family in Australia.

The border displays 22 crests depicting the different countries or regions in which there were members of the Union, illustrated with the land's coat of arms, its flag or a representative vignette. In the lower centre is a portrait of Mary Sumner flanked by images of Mary Sumner House, in London, which continues to serve as the group's headquarters, and the chapel within.

THE MOTHERS' UNION

FOUNDED 1876

OVER 4000000 MEMBERS

WORLD MAP

The first “good road map” of Barbados

20 ANDERSON, Margaret Swainson

Road Map of Barbados. Compiled from Admiralty Charts 502 and 2485, with additions and corrections,...

Publication
Glasgow, Scotland, Robert MacLeHose & Co., November, 1952.

Description
Folding lithographed map, with additional colour printing.

Dimensions
560 by 460mm (22 by 18 inches).

A detailed roadmap of Barbados, including an inset of Bridgetown. The roads are marked in a bold red, and features useful to the visitor or traveller, such as hotels and petrol stations, are keyed on the lower right.

Margaret Swainson Anderson (1902-1952) was known to her family as “Ba”. On leaving Girton College, Cambridge, in 1924 “she taught for a year at Malvern Girls’ College before becoming assistant lecturer in Geography at the Victoria University of Manchester. She returned to Cambridge in 1928 as a demonstrator in the Geography Department. She spent a sabbatical term in 1931 in South America. In 1933 she went to Barbados to marry Frank Anderson, whose family had for many years been friends and neighbours in Cambridge. They spent several years in Barbados while he worked for the Barbados Telephone Company. While in Barbados Margaret Anderson helped to found the Barbados Museum and Historical Society. She also produced the first good road map of the island and, in collaboration with a Commander Wynne, she produced a chart of part of the harbour. Margaret and Frank returned to London in 1936 and in 1937 their daughter Margaret [known as Nan] was born. On the outbreak of war Margaret returned to Cambridge and worked as a Plotter, Eastern Regional HQ, Civil Defence, 1939-40. In 1944 she began to direct studies in Geography at Girton, and also became a staff fellow and a university lecturer in Geography. Her publications include ‘Systematic Geography: Part I World Relations’, George Philip & Son 1937, and ‘Geography of Living Things’, English Universities Press 1951. Harriet Steers wrote in her obituary for Margaret Anderson (see GCPP Anderson 1/1) that her “approach to geographical work was in many ways unique because of her grip of, and interest in, the Natural Sciences. It was this distinction in geographical technique which led to the hope in Cambridge of a further and thorough treatment of Biogeography in the Tripos course”. During the 1940s and early 1950s Margaret Anderson lived at Old Victoria Farmhouse in Hardwick, where she kept animals and poultry, her wide knowledge of flowers and birds adding to her enjoyment of life in the country. Margaret Anderson died on 15 September 1952 at the age of 50. At the time of her death her latest book, an anthology of travel, was in galley proof: it was published with the title ‘Splendour of Earth’ by George Philip and Son Ltd in 1954, including her own introduction dating from circa June 1952” (University of Cambridge online).

More than just an “A-Z”

21 PEARSALL, Phyllis Isobella

The Premier Map of London & Suburbs. Produced under the direction of Ph. Pearsall F.R.G.S.

Publication
Kent, Geographers’ Map Co., Ltd., [after 1957].

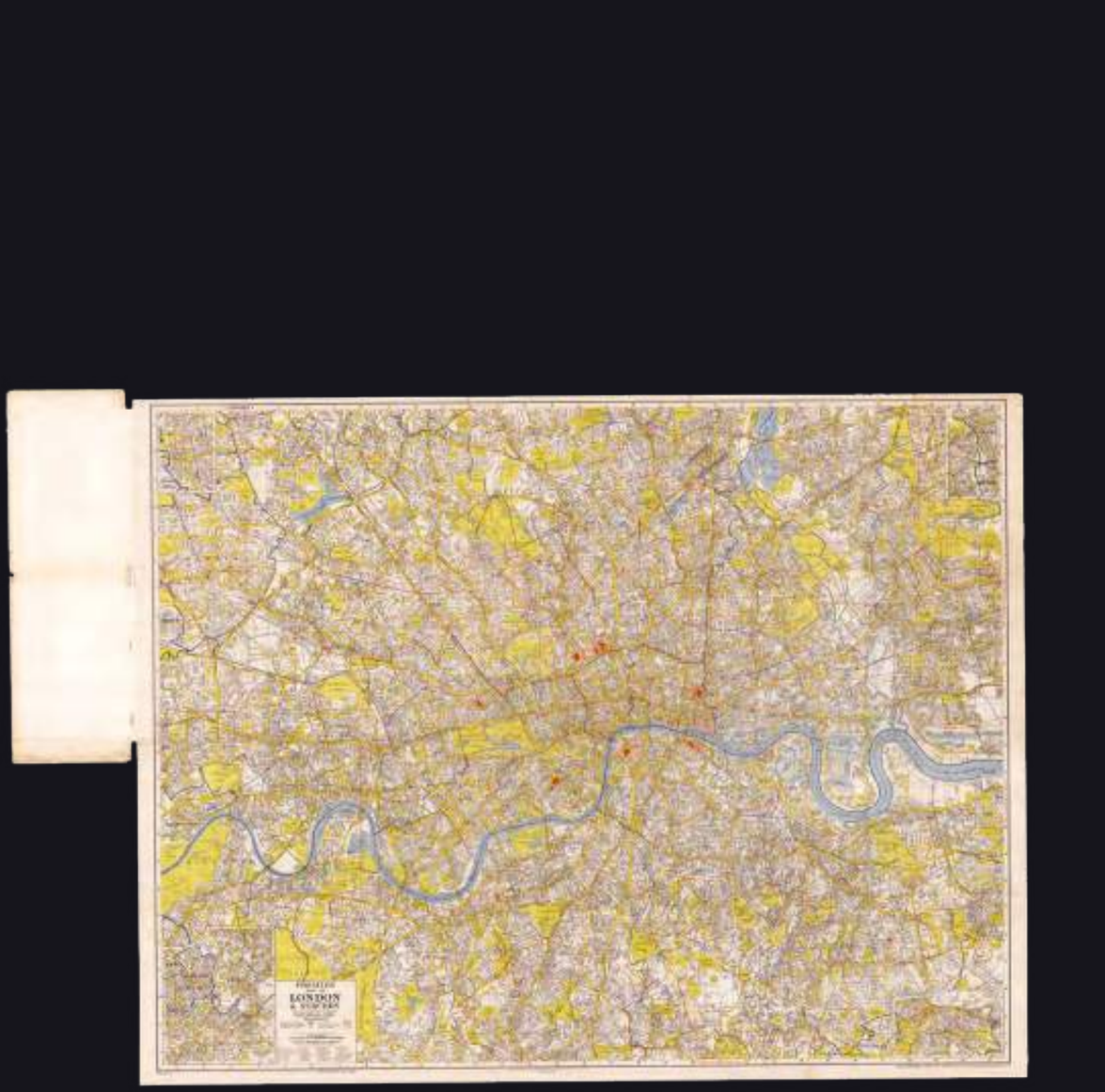
Description
Large colour printed map, folding into blue printed white self-wrappers.

Dimensions
875 by 1135mm (34.5 by 44.75 inches).

References
Baker, for ODNB online. 24064

With insets of ‘Hanwell & West Ealing’, ‘Croydon District’, ‘Ilford & East Ham’, ‘Woolwich & Plumstead’, and ‘Hanwell & West Ealing’.

One dark evening in 1935, Phyllis Pearsall (1906-1996) became lost. Hoping to pre-empt the recurrence of this annoying event, Pearsall realized that “the most recent street map of London dated from 1919, [and so] she decided to produce her own. Starting with the Ordnance Survey sheets she walked the streets of London for eighteen hours a day, compiling a 23,000 card alphabetical index of streets, which she kept in shoeboxes under her bed, and produced the first ‘London A–Z Street Atlas’ in 1936. After W. H. Smith had taken her first 250 copies the “A–Z” was in great demand, and she founded the Geographers’ A to Z Map Co. Ltd in the same year. Her father [Alexander Gross, mapmaker, bankrupt, and bolter - ed.] had started a new map-publishing business in New York, producing street maps, and in order to help him re-establish himself as a map publisher in England she insisted, until his death in 1957, that all her publications carry the inscription “produced under the direction of Alexander Gross”, although he was not involved in the business in any way. She did all the research, printing, and distribution, and employed Mr Fountain, who had worked for her father, as her draughtsman. Her next publications included the ‘Premier Map of London’, ‘Thirty-Five Miles Round London’, and ‘London to the Sea’, as well as maps of England and Wales, and the world. As war became increasingly likely she turned her attention to war maps, producing maps of northern France, Norway and Denmark, the Netherlands and Belgium, and Finland. With government restrictions on the production of large-scale maps, in 1941 she joined the civil service, and worked in the home intelligence department of the Ministry of Information from 1942 to 1945, but at the end of the war she turned down the offer of a permanent senior civil service job at the Board of Trade and returned to the Geographers A to Z Map Co. Ltd” (Baker).



Earth shattering – the first maps of the world's ocean floors by Marie Tharp

22 THARP, Marie; Bruce HEEZEN; Tanguy DE REMUR; Heinrich C. BERANN; and others

Tharp's personal collection of her most important maps.

Publication
USA, 1964 – 1982.

Description
6 large chromolithographed wall maps; 4 double-page colour printed maps; 25 wood and zinc printer's blocks; 2 colour printed post cards; and 2 colour printed panoramas.

In 1997, Marie Tharp (1920-2006) was acclaimed by the Library of Congress as "one of the four greatest cartographers of the 20th Century", the other three (Arthur Robinson, Hal Shelton, and Alan Voorhees) were all men.

Originally from a rural community in Michigan, Tharp was born with mapmaking in her blood - her father was a surveyor for the U.S. Department of Agriculture – and she pursued her own career from an early age, gaining a master's in geology from the University of Michigan, and a degree in mathematics from the University of Tulsa, all while working as a geologist for an Oklahoma oil company, despite being unable to attend field-trips because of her gender. Indeed, her position was only made available to a woman, because the majority male workforce was away fighting WWII.

After WWII, in 1948, Tharp began working at the Lamont Geological Laboratory (now the Lamont-Doherty Earth Observatory at Columbia University), studying the structure of the ocean floors of the world. Her results, combined with those of her close colleague Bruce Heezen (1924-1977), helped to prove the controversial and revolutionary theory of plate tectonics. This, again, in spite of the fact, that she was prohibited as a woman from going aboard ship for the necessary data-gathering expeditions.

Tharp donated her comprehensive archive, resulting from more than 35 years' work, to the Library of Congress in 1995, but retained this selection of her most important and influential maps for herself.

Mapping the world's ocean floors

As early as 1952 Marie Tharp was convinced that the Rift Valley "was real, in part because of the high correlation between shallow-focus earthquakes and the ridge's central axis, although two years passed until Heezen accepted her interpretation. This was a significant development: Heezen then came to accept that the Rift Valley in Africa was morphologically similar to the central valley of the mid-Atlantic Ridge, and he visited the Rift Valley to better understand its geology. Heezen also believed that the structure of the world-encircling mid-ocean ridge system supported the theory of the expanding earth, which held that the earth's major geophysical features were best explained if the planet was slowly swelling over time... Both Heezen and Tharp understood how much was at stake in developing theories of the earth, and both felt passionate about their, at times differing, interpretations of the North Atlantic seafloor. Sometimes mapping disagreements between them boiled over. Occasionally, Heezen grabbed a power eraser to vanquish Tharp's interpretation of the trend lines for undersea mountain chains; after reviewing their data, Tharp frequently redrew these landforms along her preferred orientations, employing all available seismic, magnetic, coring, and bottom-photography data. What is clear is that this creative couple in science mutually produced the North Atlantic physiographic map" (Doel, Levin, Marker).

Marie Tharp and Bruce Heezen met at Columbia University in 1948, where they worked for Maurice "Doc" Ewing (1906-1974), drafting and plotting ocean floor profiles.

Starting with sounding data collected between 1946 and 1952 on cruises of the 'Atlantis', supplemented by data from USN 'Stewart', which in 1921 had been the first Navy ship to take a continuous sounding track across the Atlantic, and then information from a newly invented Precision Depth Recorder installed on the 'Vema', Tharp and her colleague Hester Haring, plotted topographical profiles on a mapsheet: "Eventually, after the plotting, drawing, checking, correcting, redrawing and rechecking were done, I had a hodgepodge of disjointed and disconnected profiles of sections of the North Atlantic floor... After another six weeks to arrange and piece together the profiles in proper order from west to east, I completed six more-or-less parallel, transoceanic profiles of the North Atlantic. I noticed immediately the general similarity in the shape of the ridge in each profile. But when I compared the profiles, I was struck by the fact that the only consistent match-up was a V- shaped indentation in the center of the profiles. The individual mountains didn't match up, but the cleft did, especially in the three northernmost profiles. I thought it might be a rift valley that cut into the ridge at its crest and continued all along its axis. When I showed what I found to Bruce, he groaned and said, "It cannot be. It looks too much like continental drift". At the time, believing in the theory of continental drift was almost a form of scientific heresy. Almost everyone in the United States thought continental drift was impossible. Bruce initially dismissed my interpretation of the profiles as "girl talk"" (Tharp).

The first comprehensive scientific map of any ocean floor

A THARP, Marie; and Bruce C. HEEZEN

Physiographic Diagram of the North Atlantic Ocean.

Publication
Boulder, Colorado, The Geological Society of America, Inc., 1968.

Description
Chromolithographed map, a bit frayed at the edges. Revised edition.

Dimensions
710 by 1410mm (28 by 55.5 inches).

References
Robert S. Dietz, U.S. Coast and Geodetic Survey, 'Geological Society of America Charts', in 'Science', May 1965, Vol. 148, Issue 3671, pp. 809; Doel, Levin, Marker, 'Extending modern cartography to the ocean depths: military patronage, Cold War priorities, and the Heezen–Tharp mapping project, 1952–1959', 2006; Tharp, 'Connect the Dots: Mapping the Seafloor and Discovering the Mid-ocean Ridge', Chapter 2 in: Lamont-Doherty Earth Observatory of Columbia 'Twelve Perspectives on the First Fifty Years 1949-1999', Edited by Laurence Lippsett.

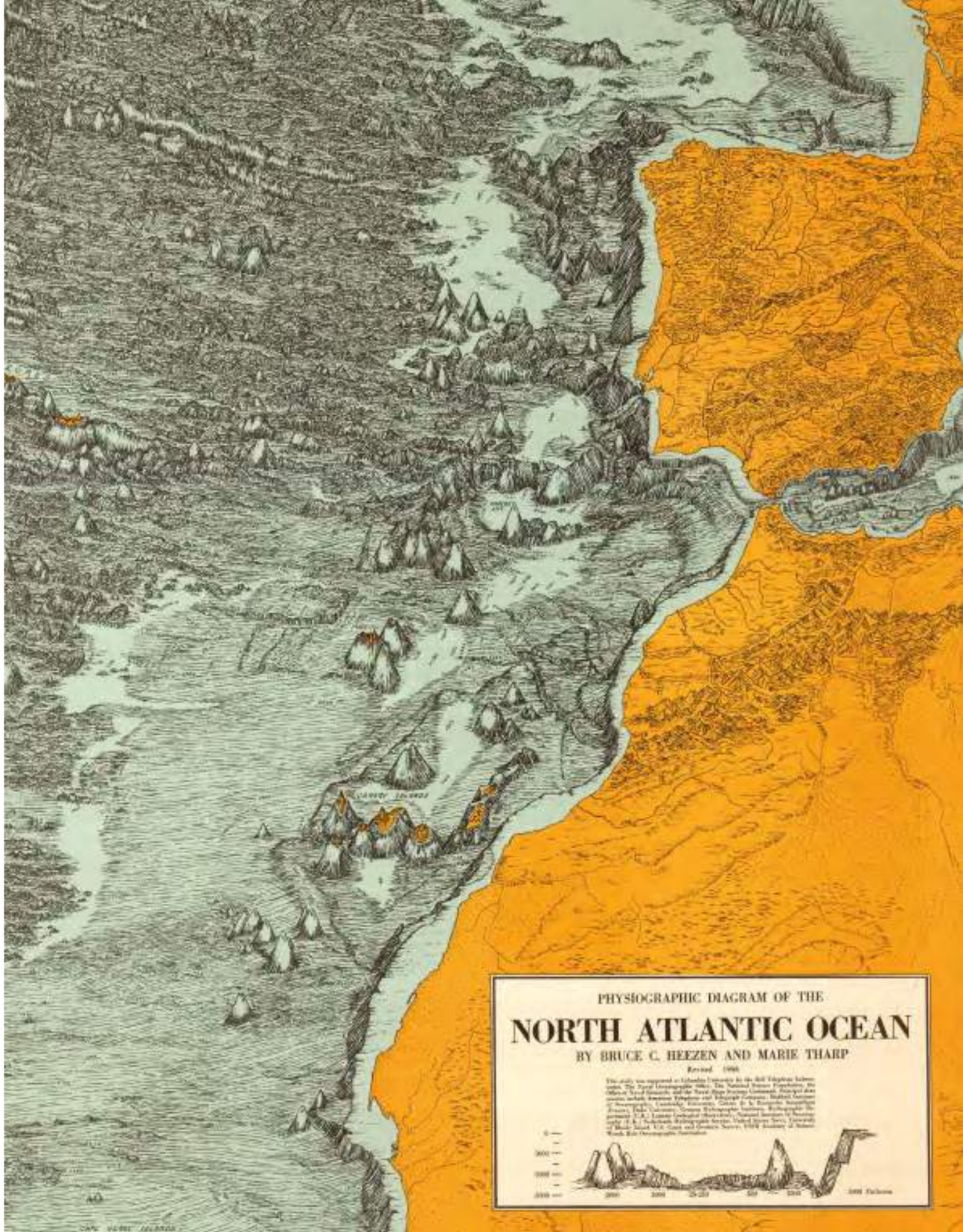
First published in 1957, to accompany G.S.A. Special Paper 65: 'The Floors of the Oceans', "a descriptive text treating the nomenclature and the morphological geological and geophysical characteristics of the area". This is the first comprehensive scientific map of any ocean floor, covering an area of nearly 12 million square miles. It provided "critical evidence in support of the theory of plate tectonics, accepted by a majority of earth scientists by the end of the 1960s. In terms of its cartographic significance, the first published Heezen-Tharp map, initially controversial, ranks among the most innovative mapping achievements of the last half-century" (Doel, Levin, Marker).

Tharp and Heezen's map clearly defines, in large-scale, the physiological features of the ocean floor, in particular highlighting the Rift Valley of the mid-oceanic ridge, which Tharp observed, and immediately understood the significance of, in support of the then controversial ideas of continental drift and plate tectonics. But Heezen disagreed. As early as 1952 Tharp was convinced that the Rift Valley "was real, in part because of the high correlation between shallow-focus earthquakes and the ridge's central axis, although two years passed until Heezen accepted her interpretation. This was a significant development: Heezen then came to accept that the Rift Valley in Africa was morphologically similar to the central valley of the mid-Atlantic Ridge, and he visited the Rift Valley to better understand its geology. Heezen also believed that the structure of the world-encircling mid-ocean ridge system supported the theory of the expanding earth, which held that the earth's major geophysical features were best explained if the planet was slowly swelling over time... Both Heezen and Tharp understood how much was at stake in developing theories of the earth, and both felt passionate about their, at times differing, interpretations of the North Atlantic seafloor. Sometimes mapping disagreements between them boiled over. Occasionally, Heezen grabbed a power eraser to vanquish Tharp's interpretation of the trend lines for undersea mountain chains; after reviewing their data, Tharp frequently redrew these landforms along her preferred orientations, employing all available seismic, magnetic, coring, and bottom-photography data. What is clear is that this creative couple in science mutually produced the North Atlantic physiographic map" (Doel, Levin, Marker).

The early stages of the Cold War provided extensive military funding for oceanographic research which gave Tharp and Heezen some of their raw data. However, military secrecy also dictated that Heezen and Tharp use their now characteristic physiographic way of depicting that information, rather than the more conventional two-dimensional expressions of contour lines, as disclosing depths at precise positions was restricted. In this, revised, version of the map, Tharp and Heezen are able to acknowledge openly the sources of their information: "This study was supported at Columbia University by the Bell Telephone Laboratories,

The Naval Oceanographic Office, The National Science Foundation, the Office of Naval Research, and the Naval Ships Systems Command. Principal data sources include American Telephone and Telegraph Company, Bedford Institute of Oceanography, Cambridge University, Centre de la Researche Scientifique (France), Duke University, German Hydrographic Institute, Hydrographic Department (U.K.) Lamont Geological Observatory, National Institute of Oceanography (U.K.) Nederlande Hydrographic Service, United States Navy, University of Rhode Island, U.S. Coast and Geodetic Survey, USSR Academy of Science, Woods Hole Oceanographic Institution".

Provenance
Marie Tharp (1920-2006)



The first scientific map of the floor of the Indian Ocean

B THARP, Marie; and Bruce C. HEEZEN

Physiographic Diagram of the Indian Ocean The Red Sea, the South China Sea, the Sulu Sea and the Celebes Sea.

Publication
New York, The Geological Society of America, Inc., 1964.

Description
Chromolithographed map.

Dimensions
1650 by 1270mm (65 by 50 inches).

This revolutionary map shows for the first time the general geomorphology of the Indian Ocean. Tharp and Heezen used bathymetric data obtained by soundings to show physiographic provinces, including continental margins, "microcontinents", ocean-basin floors, plateaus and aseismic ridges, mid-oceanic ridges, and fracture zones. Crucially confirms theories of continental drift, and that the Indian subcontinent may have moved northwards by as much as fifty degrees.

The third in Tharp and Heezen's physiographic diagrams of the world's ocean floors, it is preceded by those of the North and South Atlantic. Their first map was published as an accompaniment to the Bell Telephone System's 'Technical Journal' (1957), followed by a Geological Society of America edition in 1959. Most of the data was collected in association with the International Indian Ocean Expedition, including Australian, South African, Japanese, UK, USA, and Russian cooperation, with USSR's ships 'Vitiaz' and 'Ob'.

Unlike flat contour maps, physiographic maps show the terrain as it would look from a low-flying plane. It captures the seafloor's "many textured variations, contrasting the smoothness of the abyssal plains, for example, with the ruggedness of the mountains along the ridges" (Tharp). As detailed contour maps of the ocean floor were classified by the U.S. Navy, physiographic diagrams enabled Tharp and Heezen to publish their data, and to reach a wider audience who could visualize the seafloor, as a result.

The entire Pacific Ocean floor

C THARP, Marie; Bruce C. HEEZEN; and Heinrich C. BERANN

Pacific Ocean Floor.

Publication
[Washington DC], Produced in the Geographic Art Division for National Geographic Magazine, October 1969.

Description
Folding colour printed map, printed on both sides.

Dimensions
480 by 620mm (19 by 24.5 inches).

References
Rumsey 8817.

Supplemental map for volume 136, number 4, of the 'National Geographic Magazine', October 1969; one of 200 examples separately printed for Marie Tharp. While the map is based "on the bathymetric studies of Bruce C. Heezen of the Lamont-Doherty Geological Observatory and Marie Tharp of the U.S. Naval Oceanographic Office,... Compiled by Leo J. Boberschmidt", unlike the Tharp and Heezen 'Physiographic Diagram of the Western Pacific Ocean' of 1971, this map covers the entire Pacific Ocean, and a lot of the surrounding landmass too: the Americas, Eastern Europe, Asia and Australia.

The choice of Heinrich Berann (1915-1999) to paint this map was made by Tharp, who recognized the similarity of the ocean terrain to that of mountainous regions on land. She greatly admired the way that these were captured by Berann, who first caught the attention of the artistic world with his prize-winning panorama map of the newly opened 'Großglockner Hochalpenstraße' mountain pass in Austria in 1934. This was followed in 1937 by his famous depiction of the 'Jungfraubahn' mountain railroad in Switzerland. Between 1956 and 1998 he created the panoramic views of the snowcapped resorts for the Winter Olympics; the Alps; the Himalayas; and the floors of the world's oceans for Bruce Heezen and Tharp.

Provenance
Marie Tharp (1920-2006).


PACIFIC OCEAN FLOOR
National Geographic Society
for THE NATIONAL GEOGRAPHIC MAGAZINE
SIBERIA
ASIA
NORTH AMERICA
CENTRAL AMERICA
SOUTH AMERICA
AUSTRALIA
ATLANTIC OCEAN
BERING SEA
SEA OF OKHOTSK
JAPAN
NEW ZEALAND

Original printer's blocks after drawings by Tharp

D THARP, Marie; Bruce C. HEEZEN; and G. Leonard JOHNSON

Printer's blocks to illustrate the 'Mediterranean Undercurrent and Microphysiography West of Gibraltar', in the 'Bulletin de l'Institut Oceanographique', volume 67, Issue 1382.

Publication
[Paris, Musee Oceanographique, 1969].

Description
25 wood and zinc printer's blocks.

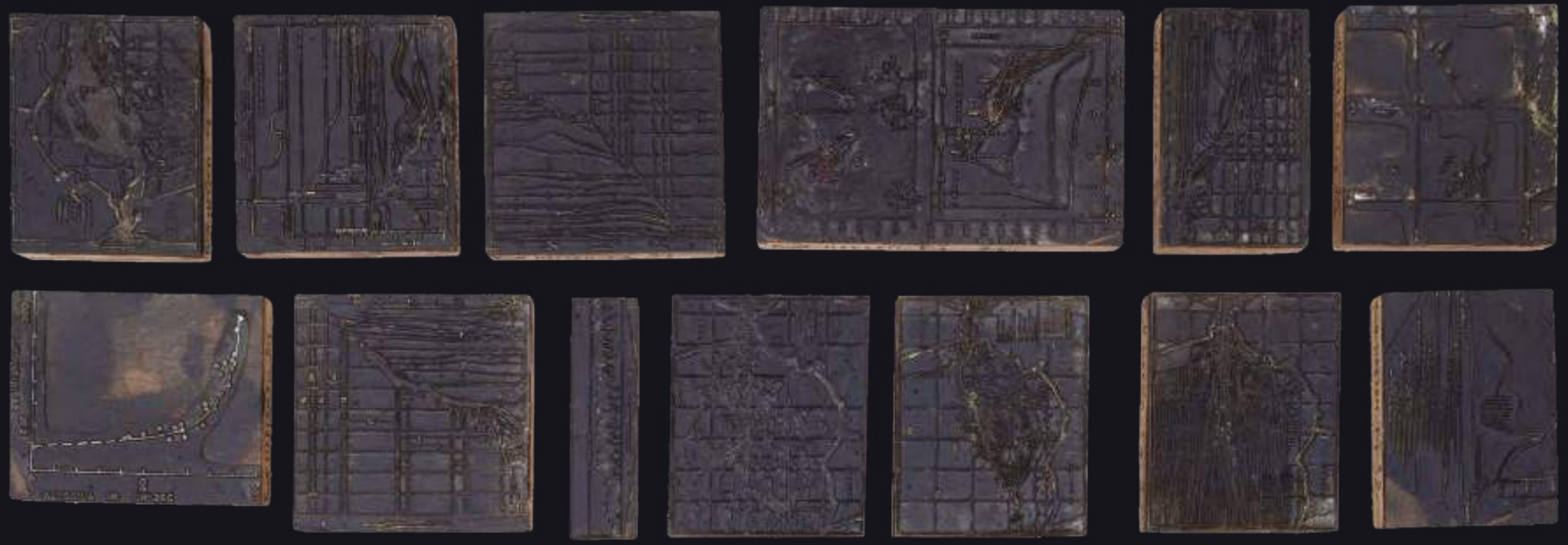
Dimensions
Various sizes.

References
Grant Gorge Buff 'Seismic Oceanography: A New Tool to Characterize Physical Oceanographic Structures and Processes' Barcelona, 2011; Robert S. Dietz, U.S. Coast and Geodetic Survey, 'Geological Society of America Charts', in 'Science', May 1965, Vol. 148, Issue 3671, pp. 809; Doel, Levin, Marker, 'Extending modern cartography to the ocean depths: military patronage, Cold War priorities, and the Heezen–Tharp mapping project, 1952–1959', 2006; Tharp, 'Connect the Dots: Mapping the Seafloor and Discovering the Mid-ocean Ridge', Chapter 2 in: Lamont-Doherty Earth Observatory of Columbia 'Twelve Perspectives on the First Fifty Years 1949-1999', Edited by Laurence Lippsett.

Heezen and Johnson's paper, which focused on observing the flow and mixing of waters between the Mediterranean and the Atlantic Ocean, showed how the process was affected by differences in temperature, velocity, and salinity, over different ocean floor terrain. From their work, extrapolations can and have been made about how the process of the circulation of water throughout the world's oceans might work, with profound implications for climate. These woodblocks, created from drawings by Marie Tharp, illustrate all factors taken into consideration in the observed area, but place a particular emphasis on the effect of the terrain of the sea/ocean floor on the mixing process, which was Heezen and Tharp's principal interest.

Although the energy needed to circulate the world's ocean waters is mainly provided by tides and wind, the effects of that are transformed into internal wave energy, "cascading through a range of smaller scales leading finally into turbulence and molecular dissipation. Water masses in the ocean are stratified and often separated by relatively thin layers with strong gradients in temperature and/or salinity across which heat and mass transfer occur in order to maintain global circulation and stratification. However, these processes are difficult to observe in practice. Below a few meters, the ocean is opaque to light, and thus to direct optical observations of deep processes" (Buff).

Diagrams present: 1,2,3,4,...7,...10,...14,...16-33



Australia and the Pacific Ocean floor

E THARP, Marie; and Bruce C. HEEZEN

Physiographic Diagram of the Western Pacific Ocean.

Publication
Boulder, Colorado, The Geological Society of America, Inc., 1971.

Description
Chromolithographed map, some fraying to edges.

Dimensions
1040 by 1320mm (41 by 52 inches).

References
Robert S. Dietz, U.S. Coast and Geodetic Survey, 'Geological Society of America Charts', in 'Science', May 1965, Vol. 148, Issue 3671, pp. 809; Doel, Levin, Marker, 'Extending modern cartography to the ocean depths: military patronage, Cold War priorities, and the Heezen–Tharp mapping project, 1952–1959', 2006; Tharp, 'Connect the Dots: Mapping the Seafloor and Discovering the Mid-ocean Ridge', Chapter 2 in: Lamont-Doherty Earth Observatory of Columbia 'Twelve Perspectives on the First Fifty Years 1949-1999', Edited by Laurence Lippsett.

"The Pacific was a hard map. You know, different ocean. And so we never did the whole ocean. Neither us nor the Geographic [Survey] did the whole thing. We did the West Central part" (Tharp).

The resulting map still covers a vast area, showing for the first time the general geomorphology of the western Pacific extending from the Indian Ocean, to encompass the whole of Australia, the islands of the Southeast Asian archipelago; north to the Philippines, the southeastern coast of China, and the southern islands of Japan; and east to New Zealand and beyond, to Samoa and the Hawaiian Islands.

The map is based on information collected by a newly invented Precision Depth Recorder installed on the 'Vema', Scripps Institution of Oceanography, early Dutch soundings from the 'Snellins', and the U.S. Navy vessel 'Glacier' operating out of San Francisco, laid over US Navy master bathymetric sheets and nineteen other contributing countries. Unlike flat contour maps, physiographic maps show the terrain as it would look from a low-flying plane. It captures the seafloor's "many textured variations, contrasting the smoothness of the abyssal plains, for example, with the ruggedness of the mountains along the ridges" (Tharp). As detailed contour maps of the ocean floor were classified by the U.S. Navy, physiographic diagrams enabled Tharp and Heezen to publish their data, and to reach a wider audience who could visualize the seafloor, as a result.

This is the fourth in Tharp and Heezen's series of physiographic diagrams of the world's ocean floors, it is preceded by those of the North and South Atlantic, and the Indian Ocean. Their first map was published as an accompaniment to the Bell Telephone System's 'Technical Journal' (1957), followed by a Geological Society of America edition in 1959.

Provenance
Marie Tharp (1920-2006)

Tharp and Heezen's first map of the Arctic Ocean floor

F THARP, Marie; Bruce C. HEEZEN; and Heinrich C. BERANN

Arctic Ocean Floor.

Publication
[Washington DC], Produced in the Geographic Art Division for National Geographic Magazine, October 1971.

Description
Folding colour printed map, printed on both sides.

Dimensions
470 by 620mm (18.5 by 24.5 inches).

Supplemental map for volume 140, number 4, of the 'National Geographic Magazine', October 1971; one of 100 examples separately printed for Marie Tharp. The map is based "on the bathymetric studies of Bruce C. Heezen of the Lamont-Doherty Geological Observatory and Marie Tharp of the U.S. Naval Oceanographic Office,... Compiled by Leo J. Boberschmidt", and encompasses the entire Arctic Circle, including landmass. In an interview with the American Institute of Physics in 1995, Tharp emphasised that they were largely dependent on Russian data for the details of the map.

Provenance
Marie Tharp (1920-2006)

First printing of the first map to show the entirety of the world's ocean floors

G THARP, Marie; Bruce C. HEEZEN; and Tanguy DE REMUR

The Floor of the Oceans. Based on Bathymetic studies by Bruce C. Heezen and Marie Tharp of the Lamont Doherty Geological Observatory Columbia University Palisades, New York, 10964. Supported by the United States Navy Office of Naval Research.

Publication
Paris, Editions Pierre Charron, 1976.

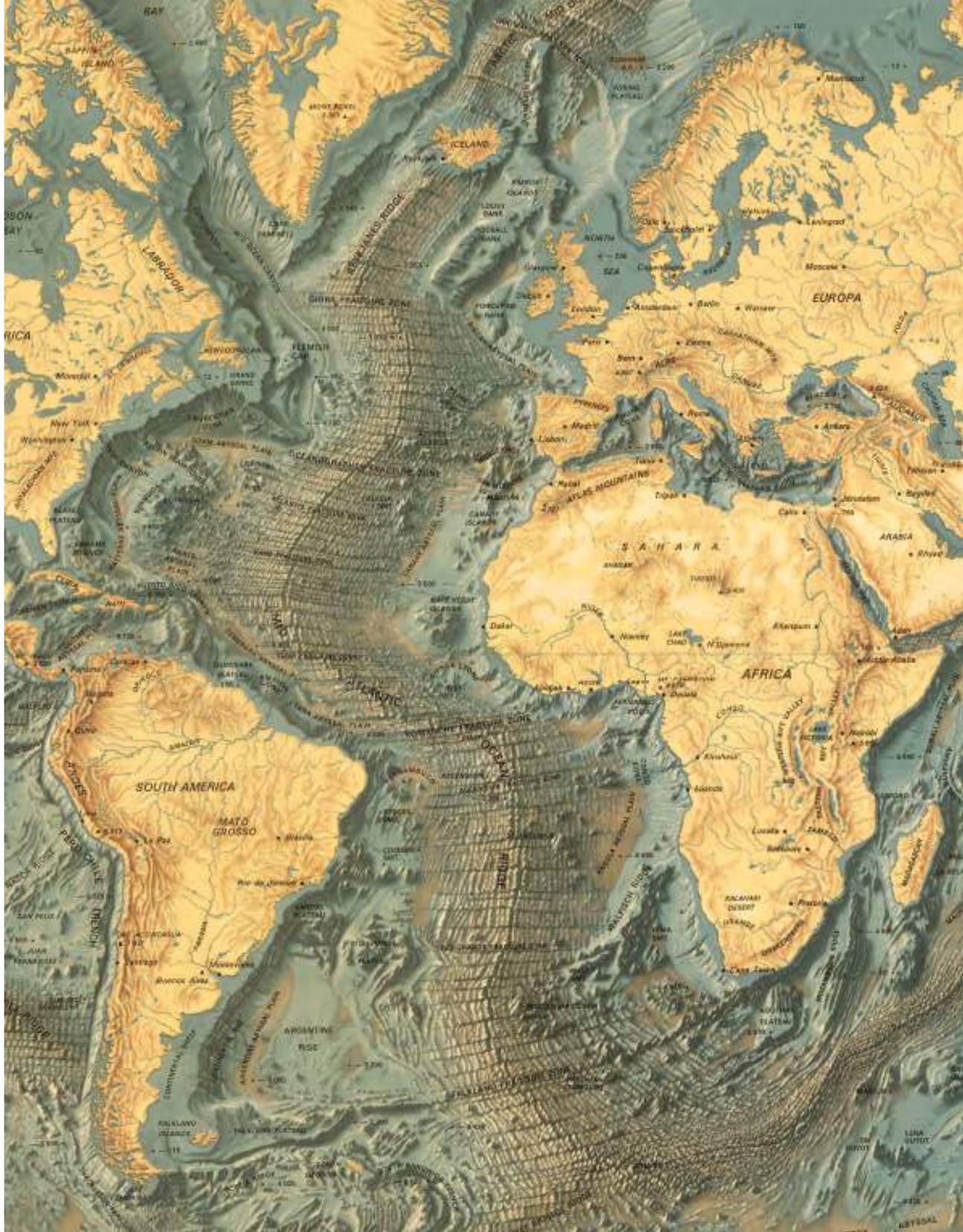
Description
Chromolithographed wall map.

Dimensions
115 by 662mm (4.5 by 26 inches)

First issue of this, literally, ground-breaking, map of the entirety of the world's ocean floors. Published in 1976 to commemorate the 30th Anniversary of the founding of the Department of the Navy Office of Naval Research, in August of 1946, based on bathymetric data collected from worldwide sources and compiled by Bruce C. Heezen and Marie Tharp of Lamont Doherty Geological Observatory, Columbia University.

This map, of all of the world's ocean floors, represents the culmination of many decades of collaborative work between Tharp and Heezen, which made an astonishingly visual and important contribution to the understanding of plate tectonics.

The artist, of the map, Tanguy de Remur had famously illustrated Xavier Le Pichon's theory of plate tectonics in his article 'Sea-floor spreading and continental drift', in the 'Journal of Geophysical Research', 1968. Pichon was the first to "develop a global model based on quantitative analysis. The motions of rigid plates are defined by giving outlines of about a dozen plates, the geographic location of their pole of rotation and the associated angular velocities. The principles of this approach were presented by W.J. Morgan and D.P. McKenzie & R.L. Parker in 1967. Using their methodology, Xavier Le Pichon constructed a global map of the motions related to the six major plates in 1968. This became the basis for a better understanding of the distribution of earthquakes and for the large scale reconstruction of the configuration of continents and ocean basins in the past. His book of 1973, 'Plate Tectonics', with Jean Bonnin and Jean Francheteau, became the standard reference work on the Theory of Plate Tectonics for many years.



THE FLOOR OF THE OCEANS

Based on Bathymetric studies by
Bruce C. Heezen and Marie Tharp
of the Lamont Doherty Geological Observatory
Columbia University Palisades, New York, 10964

SUPPORTED BY THE UNITED STATES NAVY
OFFICE OF NAVAL RESEARCH

Tharp's own view of the first map to show the entirety of the world's ocean floors, signed by its creator

H THARP, Marie; Bruce C. HEEZEN; and Heinrich C. BERANN

World Ocean Floor by Bruce C. Heezen and Marie Tharp Lamont Doherty Geological Observatory, Palisades, New York 10964. Based on Research and Exploration Initiated and Supported by the United States Navy Office of Naval Research. Mercator Projection. Submarine Depths in Corrected Meters. Land Elevations in Meters. Horizontal Scale 1:46,460,600. Painted by Heinrich C. Berann, assisted by Heinz Vielkind.

Publication
Milwaukee, Wisconsin, Copyright Marie Tharp. Film Work by MCP Co., 1977 [but 1982].

Description
First edition thus. Colour printed panoramic map, signed by Marie Tharp lower right.

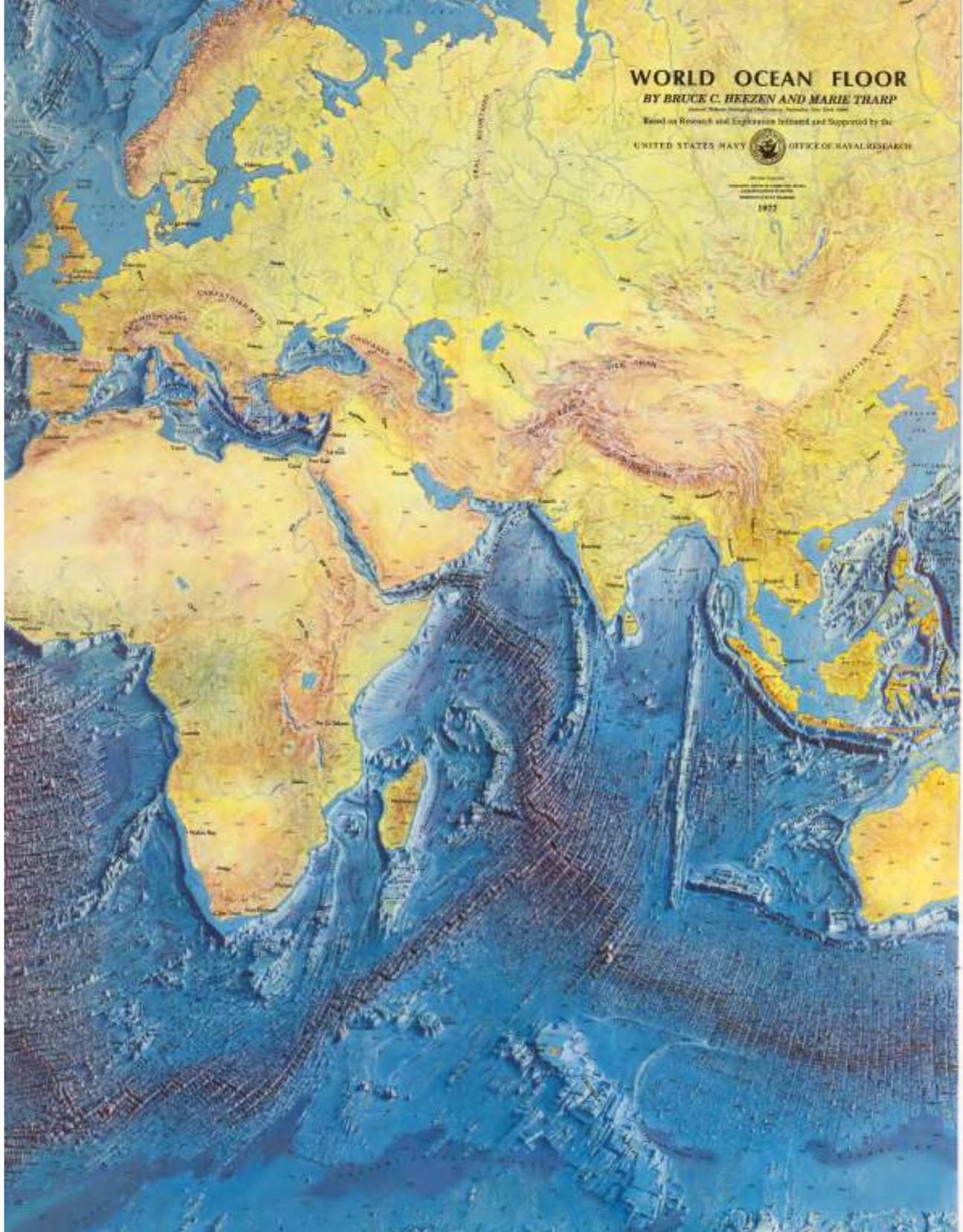
Dimensions
609 by 965mm (24 by 38 inches).

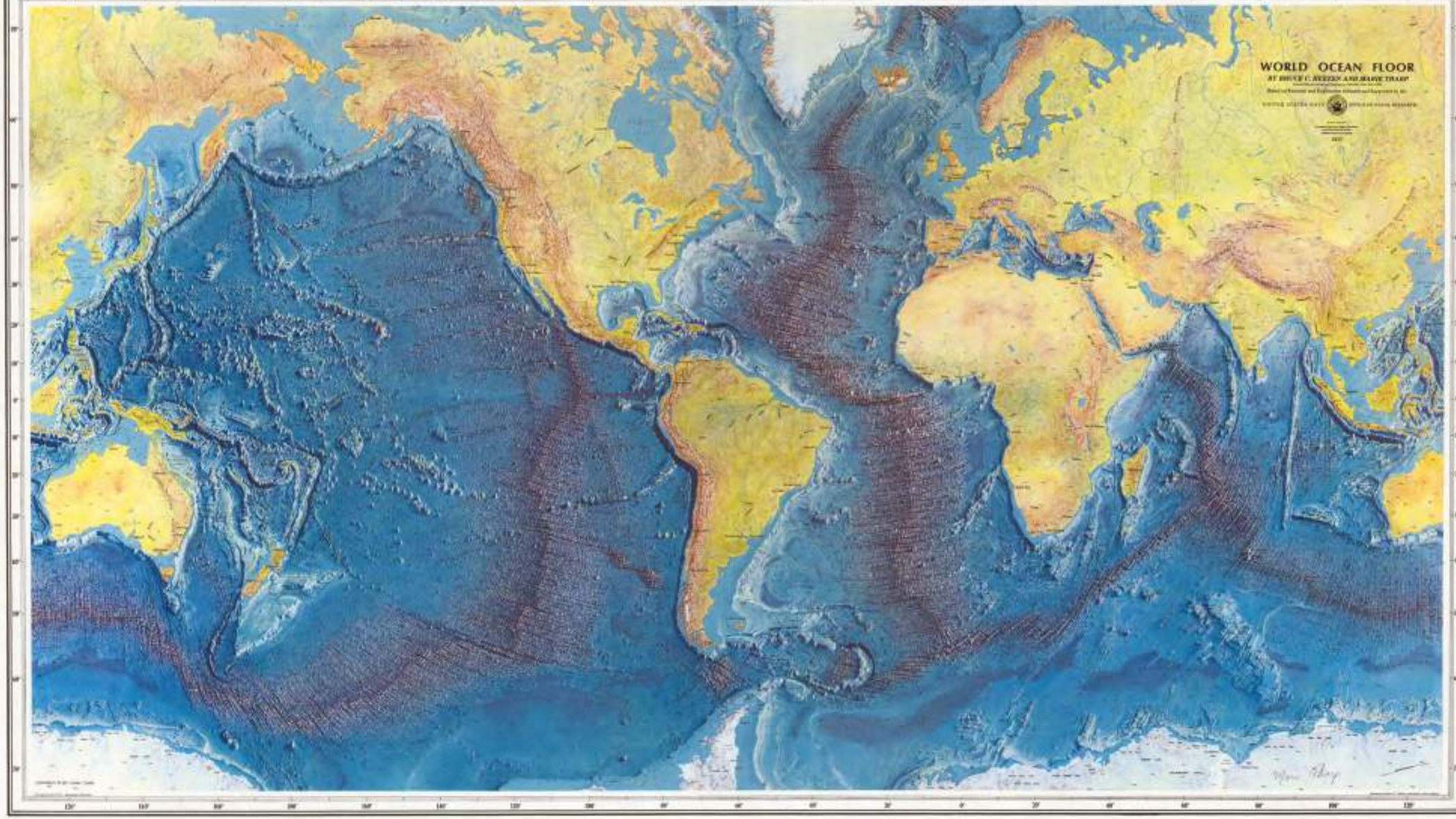
The culmination of thirty years of accumulated bathymetric data, reprinted to coincide with 'The Ocean Floor: Bruce Heezen Commemorative volume' (1982), edited by R. A. Scruiton and M. Talwani. First published shortly after the death of Bruce Heezen in 1977.

The fourth in Tharp and Heezen's physiographic diagrams of the world's ocean floors, their magnum opus is preceded by maps of the North and South Atlantic, and the Indian Oceans. Their first map was published as an accompaniment to the Bell Telephone System's 'Technical Journal' (1957), followed by a Geological Society of America edition in 1959.

First published in 1977, but preceded by a very different version drawn by de Remur and published in Paris in 1976, the original artwork for this map, painted by Heinrich Berann (1915-1999), is now in the Library of Congress. It clearly depicts for the first time, all the ridges and continental plates of the whole earth, including the Mid-Atlantic Rift Valley, that Marie first observed in the 1950s. As detailed contour maps of the ocean floor were classified by the U.S. Navy, this physiographic panorama enabled Tharp and Heezen to publish their data, and to reach a wider audience who could visualize the seafloor, as a result.

Provenance
Marie Tharp (1920-2006).




WORLD OCEAN FLOOR

The first map to show the entirety of the world's ocean floors – in miniature

I THARP, Marie; Bruce C. HEEZEN; and Tanguy DE REMUR

The Floor of the Oceans.

Publication
New York, Marie Tharp, 1980.

Description
Colour printed post card.

Dimensions
90 by 140mm (3.5 by 5.5 inches).

One of a limited number of post cards printed specially for Marie Tharp commemorating "the thirteenth year of support to oceanographic studies by the Office of Naval Research, this unique map brings out the topographic features of the world's ocean floors in striking detail. Based on bathymetric data collected from worldwide sources and compiled by Bruce C. Heezen and Marie Tharp of Lamont Doherty Geological Observatory, Columbia University". A reduced version of the large wall map of the same title published in 1976.

Provenance
Marie Tharp (1920-2006).

Tharp's own view of the first map to show the entirety of the world's ocean floors – in miniature

J THARP, Marie; Bruce C. HEEZEN; and Heinrich C. BERANN

World Ocean Floor.

Publication
New York, Marie Tharp, 1977 [but 1982].

Description
Colour printed post card.

Dimensions
90 by 140mm (3.5 by 5.5 inches).

One of 2000 post cards printed specially for Marie Tharp, of the first complete physiographic map of the world's ocean floor.

Provenance
Marie Tharp (1920-2006).

Rings of Fire

K THARP, Marie; Bruce C. HEEZEN; Heinrich C. BERANN; Alvaro F. ESPINOSA; and Wilbur RINEHART

Seismicity of the Earth 1960-1980.

Publication
[Washington, DC], United States Navy through the Office of Naval Research, 1982.

Description
Colour printed map on laminated paper.

Dimensions
510 by 920mm (20 by 36.25 inches).

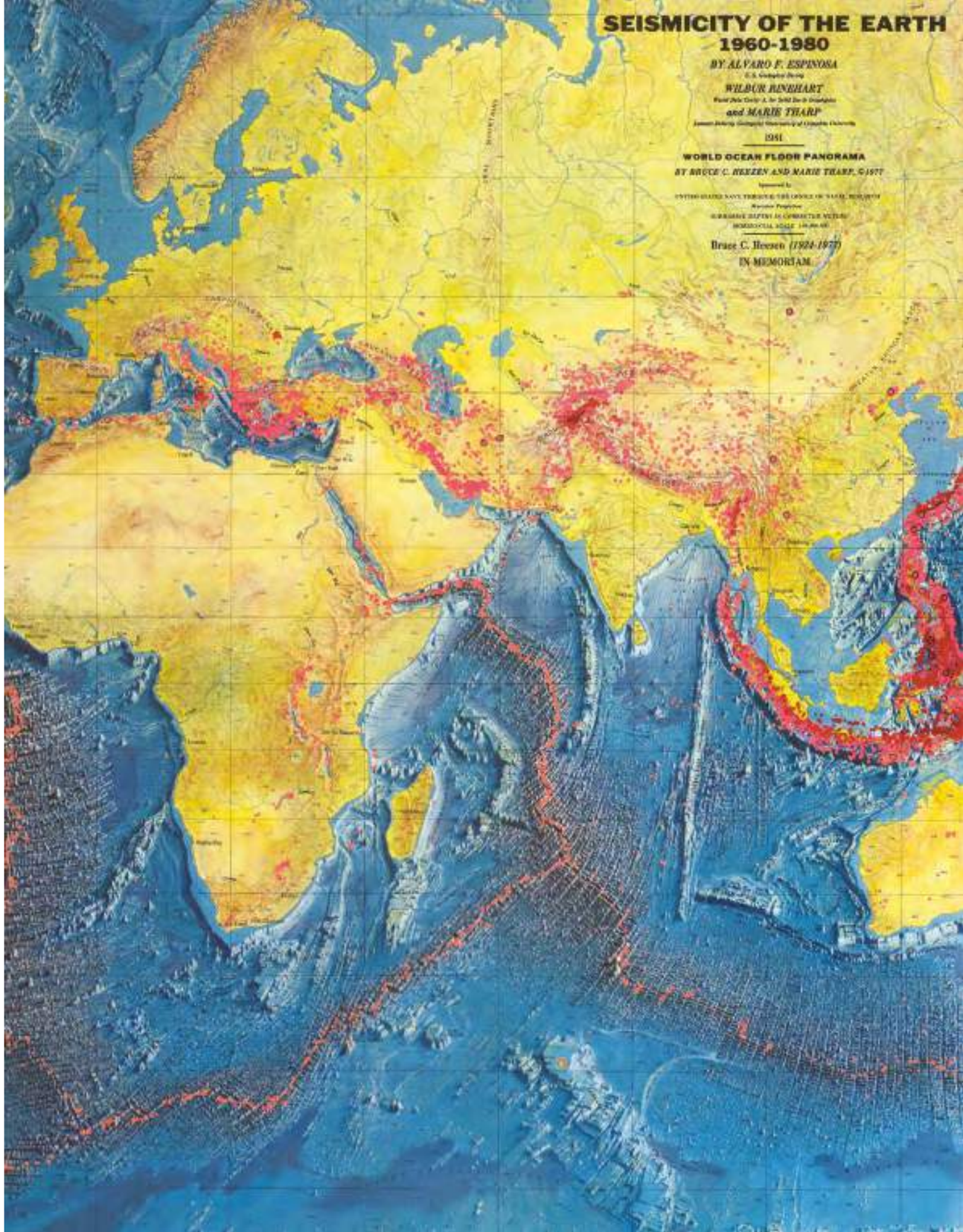
Based on the 'World Ocean Floor' (1977) map by Marie Tharp and Bruce Heezen, the first complete physiographic map of the world's ocean floor, here overlaid with the magnitude and depth of earthquake activity recorded by Alvaro Espinosa and Wilbur Rinehart. Over 50,000 events, with a magnitude of greater than 4.5 on the Richter scale are recorded: clearly illustrating the so-called "Ring of Fire" around the Pacific rim, as well as other chains of seismic activity associated with plate tectonics.

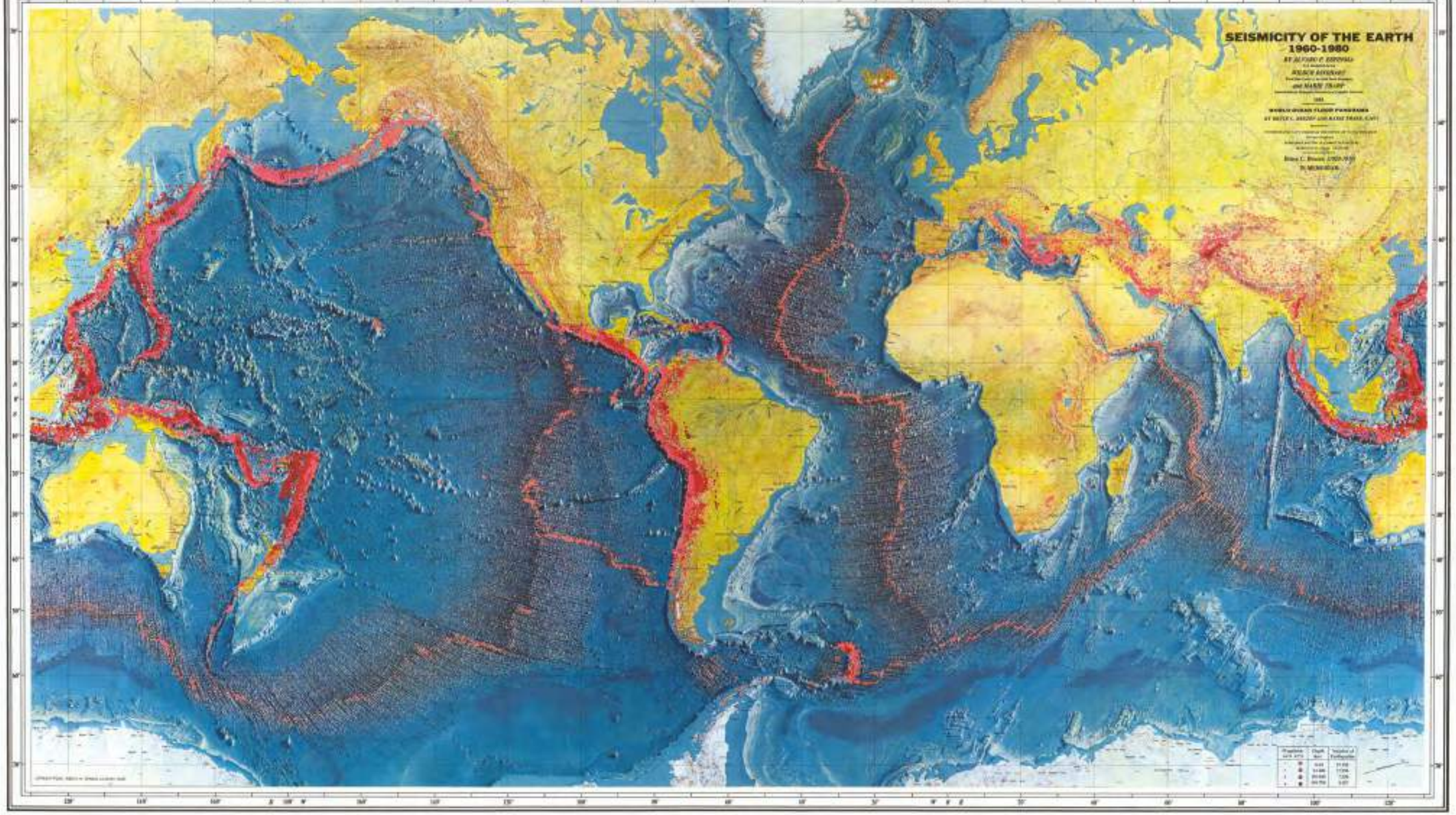
Dr. Espinosa (1933-2015), one of the world's leading geophysics research scientists, worked for the U.S. Department of Commerce and the Department of the Interior, spending most of his career with the U.S. Geological Survey. He published several hundred maps, including this of 'Seismicity of the Earth' map, considered the definitive map of its time.

Dedicated to the memory of Bruce Heezen, who died of a heart attack aboard a US Naval submarine while observing the crest of the mid-ocean ridge in the North Atlantic off Iceland in 1977, before the 'World Ocean Floor' map was published.

One of the earliest scientifically researched seismographic maps of the world was the... 'Seismographic Map of the World, showing the surface distribution in space of Earthquakes, as discussed from the British Association Catalog...' (1857) by the father of seismography, Robert Mallet and his son, John.

Provenance
Marie Tharp (1920-2006).




SEISMICITY OF THE EARTH
1960-1980

Rings of Fire - waterproofed

L THARP, Marie; Bruce C. HEEZEN; Heinrich C. BERANN; Alvaro F. ESPINOSA; and Wilbur RINEHART

Seismicity of the Earth 1960-1980.

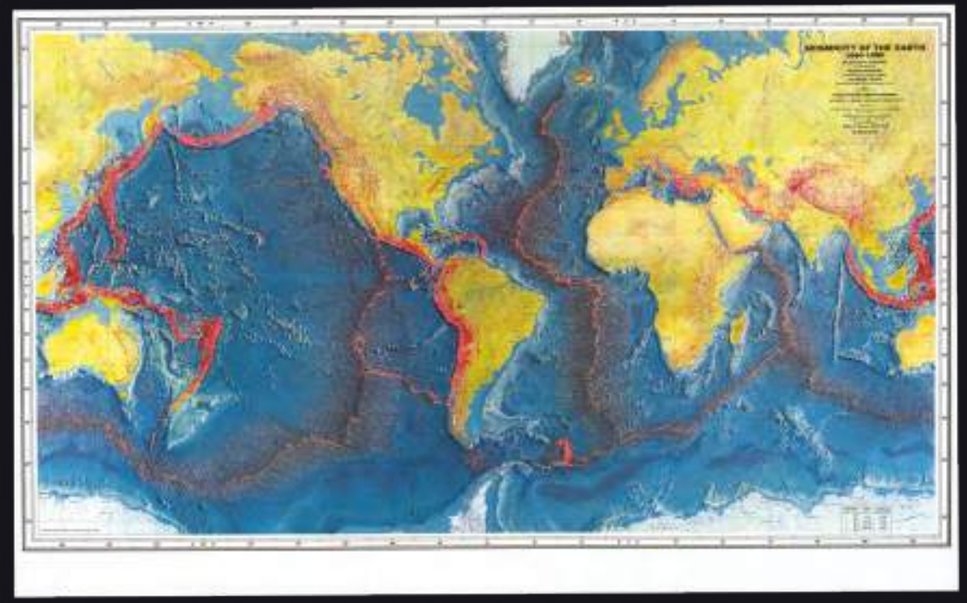
Publication
[Washington, DC], United States Navy through the Office of Naval Research, 1982.

Description
Colour printed map on kimdura waterproof paper.

Dimensions
510 by 920mm (20 by 36.25 inches).

Another example, specially printed on kimdura waterproof paper.

Provenance
Marie Tharp (1920-2006).



The artist that inspired an oceanographer

M BERANN, Heinrich C.; and Marie THARP

[Monumental Panorama of the Alps in Winter].

Publication
[1976-1977].

Description
Colour printed panorama on 2 joined sheets.

Dimensions
318 by 1854mm (12.5 by 73 inches).

First and only edition of this sweeping bird's-eye view snowscape panorama of the Alps, oriented with the southeast to the top, extending all the way from Vienna, to the left, all the way to Marseille and the Golfe du Lion, to the right; almost twice the length of any of Berann's other published depictions of the Alps.

From the library of oceanographer, Marie Tharp, who took inspiration from Heinrich Berann's panoramas of the world's mountains, to create the first maps of the world's oceans. Tharp had a close relationship with Berann, who painted the only known portrait of her in 1976.

Tharp first published her map of the 'Whole Ocean Floor' in 1977, painted by Heinrich Berann (1915-1999) the original artwork for which map is now in the Library of Congress. The choice of Berann was made by Tharp, who recognized the similarity of the ocean terrain to that of mountainous regions on land. She greatly admired the way that these were captured by Berann, who first caught the attention of the artistic world with his prize-winning panorama map of the newly opened 'Großglockner Hochalpenstraße' mountain pass in Austria in 1934. This was followed in 1937 by his famous depiction of the 'Jungfraubahn' mountain railroad in Switzerland. Between 1956 and 1998 he created the panoramic views of the snowcapped resorts for the Winter Olympics; the Alps; the Himalayas; and the floors of the world's oceans for Bruce Heezen and Tharp.

Provenance
Marie Tharp (1920-2006).

The Alps in Summer

N BERANN, Heinrich C.; and Marie THARP

The Alps Europe's Top Attraction All Year Round.

Publication
Innsbruck, Austria, for the Governments of Austria, France, Germany, Italy, Monaco, Switzerland and Yugoslavia by Wagner sche Univ.-Buchdrckerei Buchroithner & Co., 9078 [1966-1967].

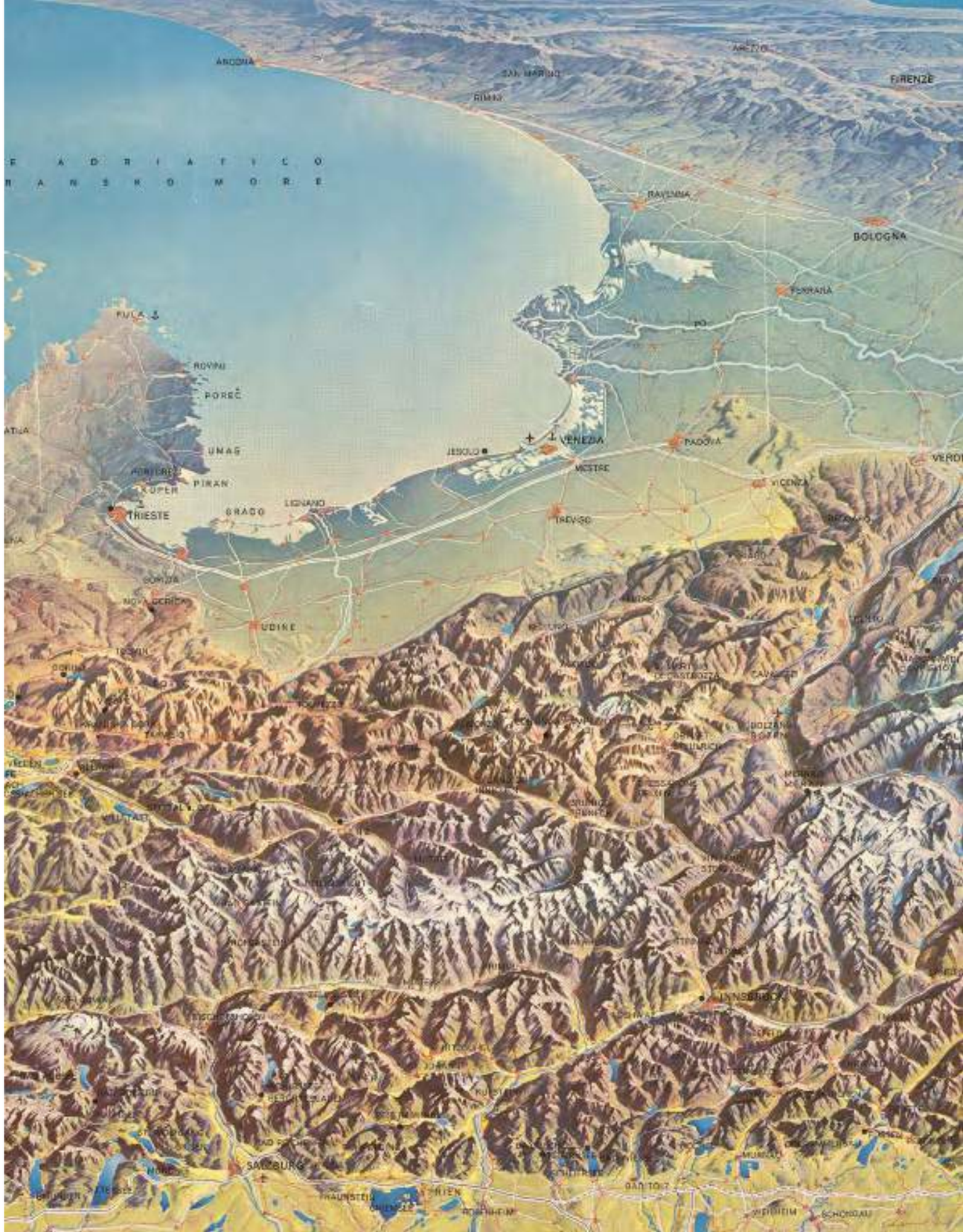
Description
Colour printed panorama, with index to mountains and passes and 2 insets showing location of the world's alpine countries and international boundaries within the Alps region; a bit creased.

Dimensions
420 by 800mm (16.5 by 31.5 inches).

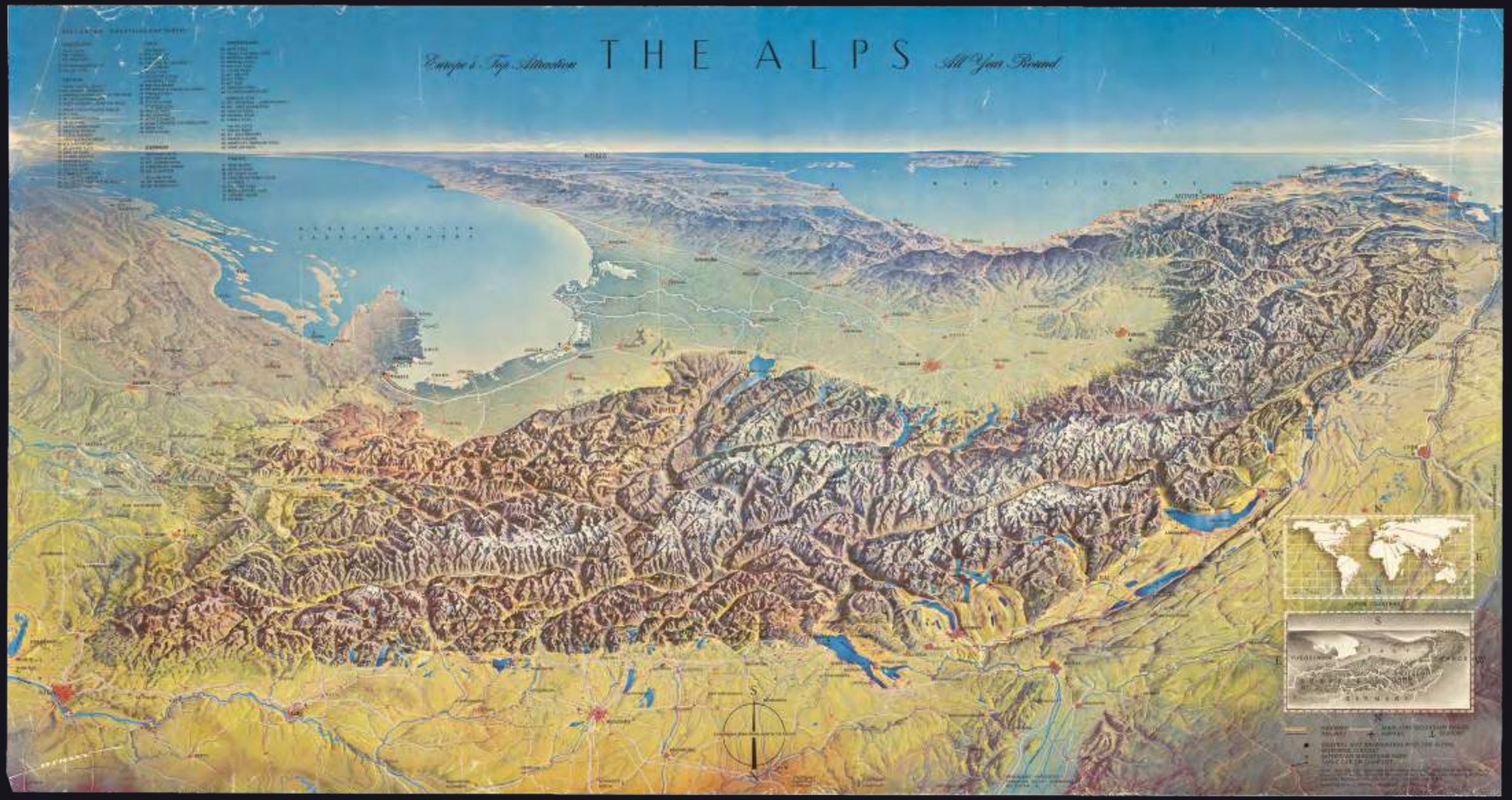
First edition of this bird's-eye view panorama of the alps in summer, unusually oriented with the southeast to the top, extending all the way from Vienna, to the left, to Marseille to the right, and to Rome in the south.

From the library of oceanographer, Marie Tharp, who took inspiration from Heinrich Berann's panoramas of the world's mountains, to create the first maps of the world's oceans. Tharp had a close relationship with Berann, who painted the only known portrait of her in 1976.

Provenance
Marie Tharp (1920-2006).



Europe's Top Attraction **THE ALPS** *All Year Round*



Real and imaginary - the pictorial maps of Carol Mendel

23 MENDEL, Carol; Gaston LOKVIG; Janetmarie COLBY; and others

The comprehensive archive: from original artwork to first publication and beyond.

Publication
San Diego, Carol Mendel, 1976 - 2003.

Description
Visitors Maps: 'San Diego Visitors Map' (1976) - a folder of original artwork (pen and ink, and felt pen, on paper and transparent overlays) for front and reverse of the map, including the main map (San Diego County Map), and the vignette maps (Mission Bay, Old Town, Balboa Park) on the reverse; a folder of camera ready art; a folder of colour separations; a folder of printer's proofs; 3 examples of the first printing of the main map (unfolded); a folder of miscellaneous sheets of revisions for the 1987, 1989, 1998, in various formats; a complete set of folding published maps. 'Los Angeles & Orange County Visitors Map' (1989) - a folder of original artwork (pen and ink, and felt pen, on paper and transparent overlays) for front and reverse of the map, including the main map (Los Angeles), and the vignette maps (Griffith Park, Downtown Los Angeles, Southern Orange County, Exposition Park) on the reverse; a complete set of folding published maps; 'San Francisco Bay Area' (1991) - a folder of original artwork (c500 sketches, pen and ink on paper mounted in groups on card, transparent overlays); a complete set of folding published maps; a complete set of folding published maps, including every issue of every other map by Mendel created by digital printing processes. Books: 'San Diego by Bike & Car' (1973) - a folder of original artwork (pen and ink on paper); a folder of printer's layouts annotated by Mendel; a complete set of published books; 'San Diego on Foot' (1973) - a folder of original artwork (pen and ink on paper); a folder of printer's layouts, annotated by Mendel; a complete set of published books; 'San Diego Coloring Book' (1975) - small format: a folder of original artwork (pen and ink, and felt pen on paper); a folder of page proofs; the published book; 'San Diego Coloring Book' (1985) - large format: a folder of page proofs; the published book. Source Material - USGS maps (c35) - folding colour printed maps with a direct bearing on the information in the Mendel 'Vistors Maps'.

Carol Mendel, has been a highly successful lady cartographer of the San Diego area for 50 years. Her first, best known, and most successful pictorial map 'San Diego Visitors Map' was first published in 1976, and has been updated frequently to 2003. At the peak of her career, in the late 1980s, Mendel was selling just shy of 80,000 visitors maps of Californian destinations a year. Her map of Los Angeles is notorious, having played a prominent part in the first (and best) of the 'Speed' (1994) films, when it literally took a front row seat, and provided the backdrop for Sandra Bullock as she grabbed the wheel of the runaway bus.

Mendel's Visitors maps are both practical and whimsical: usefully showing major roads, and popular destinations; and illustrated throughout with detailed vignettes of places and people by local artists, Gaston Lokvig and Janetmarie Colby. However, some personal landmarks have been added, such as "Chuck's Point", near Bird Rock,La Jolla, named for her son, who used to surf there as a young man and boy. Stretching the truth often extends to the entire map, as the legends on Mendel's maps state: "This map is not to scale. Metropolitan San Diego is greatly expanded to show its many important roads. Mileages are shown to popular county destinations. They are measured from downtown San Diego, at the intersection of Interstate highway 5, and California highway 94". In all of Mendel's maps, one side of the sheet is a large-scale general map of the whole area, and the verso, a series of vignette maps, highlighting local hotspots.

The Mendel archive is comprehensive, and includes all of the material from which she created her Visitors maps, and guide books: source material, original artwork, working proofs, from all aspects of what was once a very hands-on and labour intensive process. Together with every issue of every map and book, the archive provides a unique record of a niche aspect of printing history.

Mendel published her first guidebook to San Diego 'San Diego by Bike & Car' in 1973. Two books later ('San Diego on Foot' (1973), and the 'San Diego Colouring Book' (1975), Mendel decided to emulate her pictorial carto-graphic hero, Jo Mora, and produce a 'Visitors Map to San Diego'. Those books, this map, and her subsequent two maps, of Los Angeles and San Francisco, were published before the dominance of digital reproduction, and this archive retains the artifacts, of this now obsolete process, for those maps. Mendel's later maps (Santa Barbara, Palm Springs, Washington DC, Salt Lake City, Las Vegas, California, and Oregon) were all created digitally, and so, as a direct consequence, while there are published versions of each issue of these maps in the archive, they have not left the same archaeological imprint.

Additionally, the archive includes the source material for Mendel's maps: about 30 USGS maps, with a direct bearing on the content of Mendel's maps.

The mapmakers, in Mendel's own words:

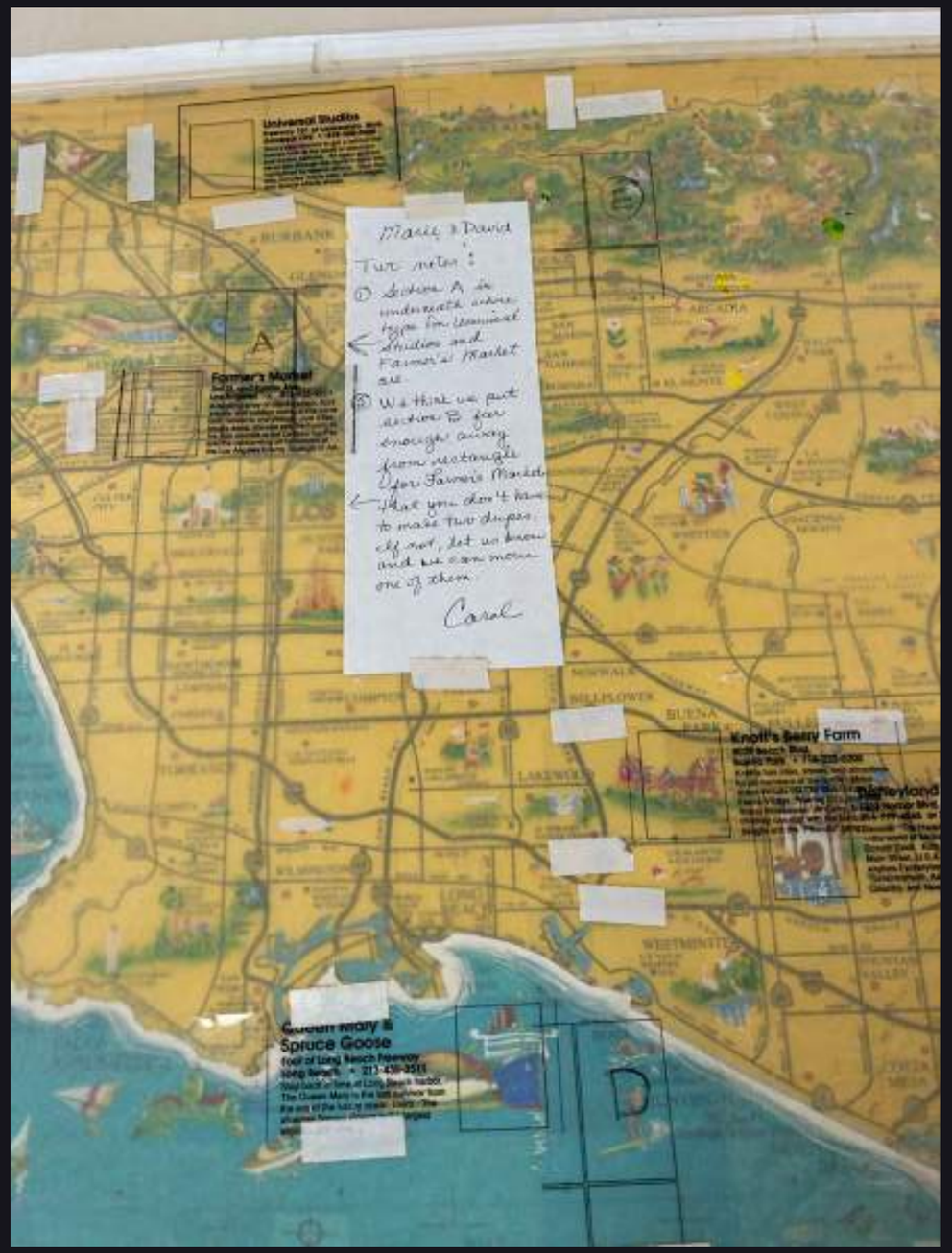
Carol Mendel
"In 1970, my husband and I took a copy of the book 'Turn Right at the Fountain', by George Oakes, along with us on a trip to Europe. The walking tours in that book were the highlight of our trip, and inspired me to produce a book of walking tours for San Diego, my home town. The success of that book led me to develop a variety of other products about San Diego, including the 'San Diego Visitor's Map' (1976), which featured pictorial maps of the San Diego area.

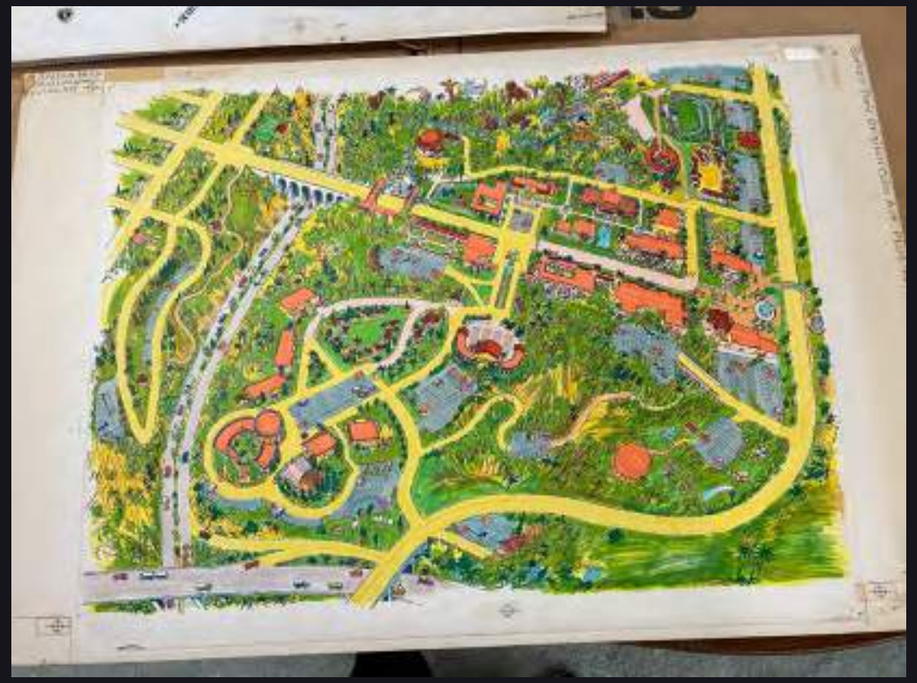
Gaston Lokvig – illustrator for 'San Diego' and 'Los Angeles'
I first met Gaston in 1973, when I was looking for illustrations for my book of walking tours. Born in 1912 and a native of Denmark, he began his career at some of the largest printing companies in Copenhagen. Soon he was working for one of Denmark's leading magazines, illustrating children's books, and drawing film posters for major movie studios. In 1959, Gaston and his family moved to Southern California. His love of pen-and-ink illustrations led him to make dozens of drawings of San Diego landmarks. Many of those drawings were perfect for the San Diego-focused products I published.

Gaston eventually retired, and moved to Santa Fe, New Mexico. He passed away in 2009, at age 96. His charming illustrations can still be seen in the illustrated maps of the San Diego, Los Angeles, and Orange County areas.

Janetmarie Colby – illustrator for 'San Francisco'
Janetmarie is the illustrator for my maps of the San Francisco Bay Area, Santa Barbara, Palm Springs, Sacramento, Portland, Las Vegas, Salt Lake City, Washington, D.C., and the states of California, Oregon, and Utah.

When my husband and I moved to San Diego in 1965, Janetmarie was one of the first friends we made here. Our friendship has now lasted for more than 40 years. Over the years, she has worked for advertising agencies and publishing companies, created illustrations for San Diego's major newspaper, worked freelance, and taught art to children's classes. In 1990, we decided to combine business with our friendship, as she took on the project of illustrating my maps of the San Francisco Bay Area. The collaboration worked well, and led to her creating the illustrations for the maps of many other areas".





Foundation map of Silicon Valley - inscribed by the artist

24 HOBURG, Maryanne Regal

Silicon Valley.

Publication
Fremont, City Graphics of America, P.O. Box 261, Fremont, California, 94537, Price $3.95 1982.

Description
Colour printed pictorial map.

Dimensions
390 by 510mm (15.25 by 20 inches).

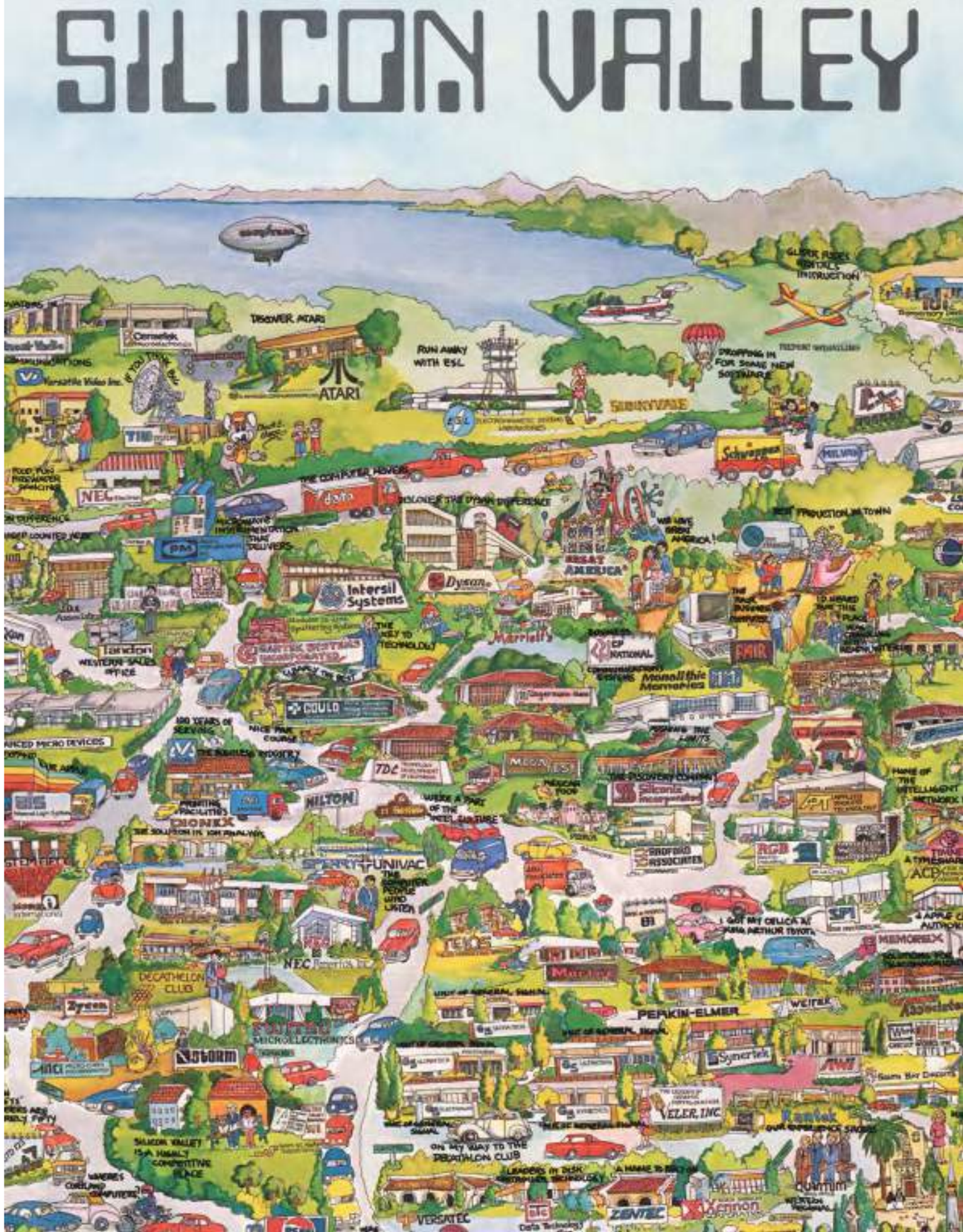
References
See Rumsey 11492, for published issue.

First issue, pre-publication state, of this first map of Silicon Valley, inscribed by the artist. With "Decathelon" Club misspelled, which is ironic, given that it is spelled correctly in at least two other places on the map: a teacher near the center of the lower edge asks her pupils "to spell decathlon"; and the track where "Bruce Jenner trained for the decathlon" is shown. The latter is one of the many suggested captions for the published issue, present in this map in a form of overprinting. In this printing the zip code is given as 94537.

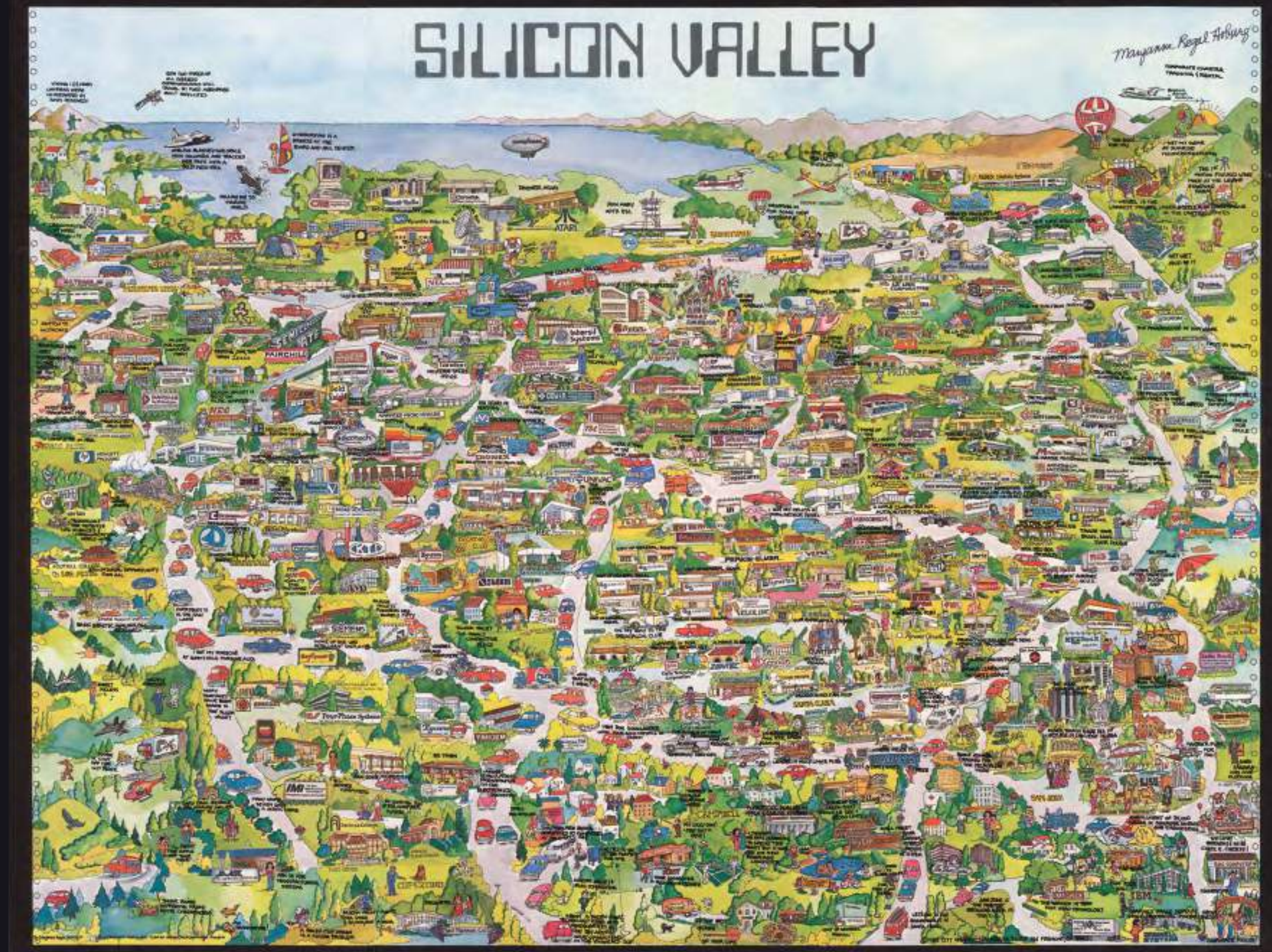
Hoburg famously took her camera, drove around the burgeoning community of technical companies, sketched what she saw, and created what would be recognised as the foundation map of Silicon Valley: providing a fascinating snapshot into the early days of the tech boom in California, and the map is filled with the logos and buildings of software and computer companies. Some of the companies shown have survived, and are now household names: IBM, Toshiba, and Hewlett Packard. At the lower edge is the distinctive original rainbow logo of what is arguably now the most famous software company in the world, Apple. The map also shows some of the victims of the failure of the market. Atari, at the upper right, would fold in 1984, following the recession in the video game industry in North America. VisiCorp, in the centre, suffered ongoing legal battles, and is now owned by Paladin. For the companies in the map, however, the risks were worth it to be at the cutting edge of technology.

The map was produced by a small graphic design company, City Graphics of America, who offered local businesses a place on the map for a fee. They would then simplify the urban landscape to make room for the names of the businesses and comic illustrations. The next issue, dated 1983 and printed on the same scale as the current map, not surprisingly includes many more businesses.

We know of no other example of this proof state of the map. The David Rumsey Map Collection includes an example of the published version, and a later edition on a larger scale.



SILICON VALLEY



The cradle of the computer industry

25 HOBURG, Maryanne Regal

Silicon Valley Courtesy of EATON Addington Yig-Tek.

Publication
Fremont, City Graphics of America, P.O. Box 261, Fremont, Calif. 94538, 1983.

Description
Colour printed pictorial map.

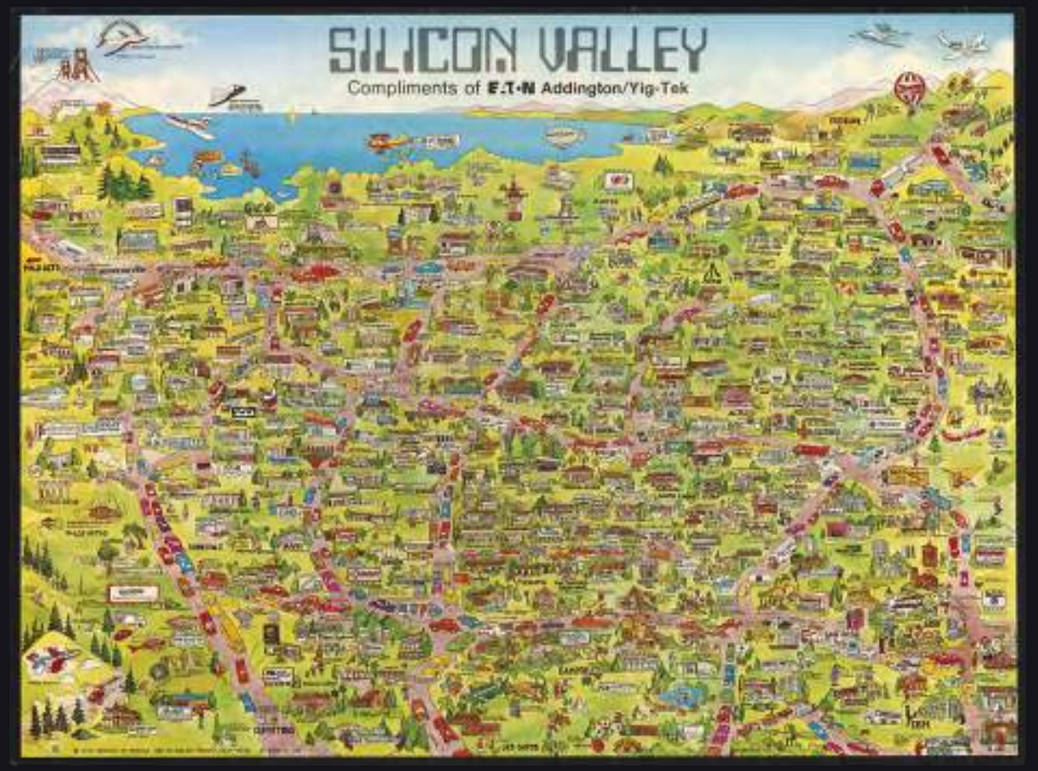
Dimensions
760 by 1010mm (30 by 39.75 inches).

A charming map of Silicon Valley, providing a fascinating snapshot into the early days of the tech boom in California. The map is filled with the logos and buildings of software and computer companies. Some of the companies shown have survived, and are now household names: IBM, Toshiba, and Hewlett Packard, which is accompanied by one disk saying to another "You must be a floppy disk!". At the lower edge is the distinctive original rainbow logo of what is arguably now the most famous software company in the world, Apple. Just above the Apple building, one computer attempts to chat up another with the line "You must be a smart terminal"! Underneath Fujitsu, a man tries to restrain his dog, assuring the other dog that "His byte is worse than his bark". The map also shows some of the victims of the failure of the market. Atari, at the upper right, would fold the year after the map was made following the recession in the video game industry in North America. VisiCorp, in the centre, suffered ongoing legal battles, and is now owned by Paladin. For the companies in the map, however, the risks were worth it to be at the cutting edge of technology: a little caveman at the lower edge is labelled "B.C., Before Computers!".

The map is also an affectionate record of life in Silicon Valley outside of the tech bubble, filled with facts, local legends and attractions. The importance of the two major universities, Stanford and Santa Clara, in innovations and education is emphasised: Stanford was where the first heart transplant took place in 1968 and the University of Santa Clara was the oldest Catholic university on the west coast. There are several prominent vineyards, including one that "serves the White House". Gary Dahl, the man who became a millionaire by selling 1.5 million 'Pet Rocks' for four dollars each, is shown with one on a lead below Measurex. And the local Chuck E. Cheese (their headquarters is at the top of the map) is labelled as a great place to have a birthday.

The map was produced by a small graphic design company, City Graphics of America. City Graphics would produce fun pictorial maps and ask businesses to buy a place on the map. They would then simplify the urban landscape to make room for the names of the businesses and comic illustrations.

We have only been able to trace one institutional copy in the Computer History Museum, California, and no other copies offered for sale. The California copy is subtitled "Courtesy of ELXSI" rather than "Courtesy of EATON Addington Yig-Tek", suggesting that companies paid to have different versions of the map with their names attached. In this printing of the map the zip code appears as 94538; earlier examples appear with the zip code as 94537.



Cisco's "Original Silicon Valley Map and Calendar"

26 GATTO, Diane [for] Cisco Systems

Silicon Valley '96.

Publication
San Jose, CA, Amen International Inc., 1995.

Description
Colour printed poster on glossy paper, with areas embossed in gold. Old fold at center, light wear to edges.

Dimensions
965 by 608mm. (38 by 24 inches).

A colourful poster illustrated with a map of Silicon Valley, showing the locations of major technology companies and what their offices looked like.

Published in 1995, with a calendar for the following year, this map was made during a pivotal time in the technology industry, when commercial use of the internet started to become widespread. Consequently, 1995 was the beginning of a surge of internet startups, many of which followed their software predecessors to Silicon Valley. Cisco Systems, the company that commissioned this map, was one of Silicon Valley's companies that caught the internet wave at its crest.

Cisco was founded in 1984 by Sandy Lerner and Leonard Bosack. The company's name is derived from nearby San Francisco, and their logo represents the Golden Gate Bridge. The company's first product was a close adaptation of the Stanford computer network's router, copying both its software and hardware, that they called Cisco IOS. It was released in 1986, but not without Stanford contemplating filing charges. The problem was resolved in 1987, when Cisco agreed to lease the relevant intellectual property. Cisco systems went public in 1990, at which point the founders walked away. The company's success during the 90's lay in their production of the first commercially successful network router. This allowed for great advances in corporate communications - for example, a company's headquarters could connect seamlessly with its far-flung branch offices. In 1995, John Chambers became the CEO of Cisco Systems, and he ushered the company into its heyday. Among other products, Cisco held a de facto monopoly on the GSR router, which was vital to internet service providers. Cisco's control of this critical segment of the internet industry allowed them, in March 2000, to surpass Microsoft as the most valuable company in the world, with a market capitalisation of over 500 billion dollars. However, Cisco was trading at around 240 times its earnings, and their overly high valuation was not sustainable. When the dot-com bubble burst in 2001, Cisco's valuation plunged, becoming a cautionary tale for all of Silicon Valley. However, Cisco survived the crash, and the company is still active today.

We have been unable to locate a copy of this poster an institutional collection.