

A Series of Early Printed Maps of India in Facsimile

COLLECTED BY SUSAN GOLE



From Thomas Herbert: *Some Yeares Travels into Divers Parts of Asia and Afrigue*, 3rd edn, London, 1665.

JAYAPRINTS

accuracy increase. When placed beside modern large-scale maps, they can tell of the changing status of towns, the spread of agriculture and market facilities with the building of canals and railways, alterations in coastlines and river-beds, and so much more.

Much of the general information about the cartographers in the preliminary notes has been taken from R.V. Tooley's *Maps and Map-Makers* (B.T. Batsford Ltd, London, 1st Edn 1949, 6th Edn 1978). The story of how the cartographers gathered their information can be found in my *India within the Ganges* (Jayaprints, New Delhi, 1983). As far as possible the maps have been reproduced as they were first printed; some have had to be reduced to fit the paper size and to avoid making the book too unwieldy. The original size of each map is given with the notes. No attempt has been made to improve on the state of the original prints; they have been reproduced as they are now, with any defects they had at the time of first printing, or which may have been acquired since.

There is no copyright on the maps reproduced here. They have been collected over several years, but the rising cost of the original prints has possibly put them beyond the means of many libraries. It is hoped, therefore, that though in reproduction they will be of interest, and they may be freely copied as illustrations wherever they are found suitable. Acknowledgement of the source would be appreciated.

When this facsimile atlas was first published in 1980, a revised version of Thomas Jefferys' map of India, no. 47, was inadvertently listed as Rennell's map of Hindoostan. In this edition, Jefferys' map has been retained as no. 42B, and the 1782 map by James Rennell has been added as no. 47. Some of the notes have been enlarged or revised, in the light of further research.

Susan Gole

1 Bernardo Sylvani Decima Asiae Tabula

After a first issue without maps in 1475 at Vicenza, Ptolemy's *Geographia* was printed at Bologna in 1477 with 26 copperplate maps — the first engraved atlas. The maps were taken from those in manuscript form that accompanied Ptolemy's text, but whether they had been drawn by Ptolemy or some time later is debatable. The second edition the following year in Rome contained 27 maps of the ancient world, and in 1482 an edition at Florence was the first to include 4 new maps with contemporary knowledge, of France, Italy, Spain and Portugal. The edition of the *Geographia* printed in Venice in 1511, from which this map is taken, contained the 27 early maps, and a contemporary heart-shaped map of the world. The maps of the ancient world show considerable variation in the different editions, and it is not possible to tell how much they differed from any maps Ptolemy might have drawn. The *Geographia* was translated into Arabic in the 8th century, and formed the basis for most of the early Islamic maps.

Original size: 51 × 35.5 cm

2 Martin Waldseemuller (1470 – 1522) Decima Asiae Tabula

Joannes Schott published a woodcut edition of Ptolemy's maps in Strassburg in 1513 under the supervision of Waldseemuller. With 27 Ptolemaic maps and 20 from contemporary knowledge, it may be called the first 'modern' atlas. The name of Ptolemy was so renowned that even though nearly half the maps were newly drawn, it was more profitable to publish an edition of Ptolemy, with the extra maps added as new tables, than to produce an atlas under a new name. It was reprinted in the same size in 1520, and in a smaller size, with decorative pillars on the reverse, by Joannes Gruninger in 1522 and 1525. In 1585 Melchior and Gaspar Treschel published it in Lyons with no decoration on the reverse and this edition was re-issued in 1541.

Original size: 52 × 35.5 cm

3 Sebastian Munster (1489 – 1552) Tabula Asiae X

This map is from the edition of Ptolemy first published in Basel by Henricus Petri in 1540. It contained 48 woodcut maps, and was edited by Munster, the first to quote his sources for the modern maps. It was re-issued in 1542, with the designs on the reverse of the maps attributed to Holbein. In 1545 it was published with 54 maps and again re-issued in 1552.

Original size: 34 × 25 cm

4 Gerhard Mercator (1512 – 1594) Tab. X Asiae Complectens Indiam intra Gangem

Mercator compiled maps for an edition of Ptolemy in 1578. The beauty of the engraving and the prestige of Mercator's name made it a very popular work, and it was re-issued in 1584, 1605, 1695, 1698, 1704 and 1730. This copy is from the 1695 issue printed at Franeker and Utrecht.

Original size: 46 × 34 cm

5 Martin Waldseemuller (1470 – 1522) Indiae Tabula Moderna

This is the first modern map of India to be included in an edition of Ptolemy. It was printed in 1513 and again in 1520, slightly larger than this copy, and without the decoration. In 1522 it was published by Joannes Gruninger in a reduced size and with the pictures added by Laurentius Frisius. It was again printed in 1525, with the decorative panels on the reverse more ornate and numbered page no. 44. In an edition of 1535 the heading was changed to 'Tabu Moder Indiae' and in 1541 to 'Tabula nova utriusque Indiae', i.e. New Map of both the Indias. This reproduction is from the edition of 1522.

Original size: 44 × 29 cm

6 Sebastian Munster (1489 – 1552) India Extrema XXIII Nova Tabula

This is one of the modern maps of the 1540 edition of Ptolemy published by Petri in Basel. The term India was used at that time for all known land beyond Persia, and subdivided as 'India intra (or citra) Gangem' — India within, or this side of the Ganges; 'India extra (or ultra) Gangem' — India outside (or beyond) the Ganges; 'India superior' — upper or further India.

Original size: 34 × 25.5 cm

7 Jacobo Gastaldi (1500 – 1566) Tabula Asiae X

In 1548 Nicolo Bascarini published an Italian version of the *Geographia* in Venice. The maps were designed by Gastaldi after those of Munster. The book, however, proved to be too small in size to be popular and in 1561 Vincenzo Valgrisi had the maps redrawn in quarto size instead of octavo. They were re-issued by him in 1562 and 1564 with Latin text, and in Italian by Giordano Ziletti in 1564 and 1574. This print is from the first edition of 1548.

Original size: 16.5 × 12.5 cm

8 Jacobo Gastaldi (1500 – 1566) Calecut Nuova Tavola

Bascarini's edition of Ptolemy in 1548 was the largest so far, with 60 copperplate maps. The Munster maps of 1545 numbered 54, and for the Italian edition Gastaldi added 6 more, including this one of Calicut. In the first octavo edition it was numbered 50 on the reverse and measured 17 × 12.5 cm. It was enlarged in the quarto edition of 1561, and later issues can be distinguished by the page number on the reverse: 1562 — 55 in ordine; 1564 — XXVII Dd (Latin and Italian versions); 1574 — 29 Ff. This reproduction is from the 1564 Italian edition.

Original size: 24 × 18 cm

9 Jacobo Gastaldi (1500 – 1566) Seconda Tavola

This map is from the second edition of Ramusio's *Delle Navigazione et Viaggi* published in Venice in 1565. After the first edition was printed in 1554, a fire in the press destroyed the blocks, so they had to be engraved again; in the earlier edition two fish near the top border had not been included. In the Preface Ramusio wrote that he requested Gastaldi to supply him with separate maps redrawn from his world map, probably that of 1546 or 1548. However the shape of India is very different here from that given in Gastaldi's world maps, and unusual in placing south at the top of the page.

Original size: 34 × 27.5 cm

10 Jan Huygen van Linschoten (1563 – 1611)

Linschoten spent seven years in India as assistant to the Archbishop of Goa. He was already interested in cartography, and used his time to collect charts and maps of as many parts of the world as he could. He published a Nautical Directory in 1595, and his major work, *Itinerario*, came out in 1596 with maps by Petrus Plancius. He relied heavily on an earlier map by Vaz Dourado and supplemented it with his own knowledge. The *Itinerario* was reprinted many times up to 1640 and translated into several languages. It was printed at the Plantin press in Antwerp, founded by Christopher Plantin and donated in the 19th century as it was to the town of Antwerp with all its records, books, type and type foundry. It is known as the Plantin-Moretus Museum and a copy of the *Itinerario* is on view there. Plantin's was one of the finest presses for map reproduction at the time and it was fortunate that the two leading Dutch cartographers, Ortelius and Mercator, could have their vast output of up-to-date maps printed in such an excellent manner. Regrettably neither of the two drew a separate map of India but included it in that of India Orientalis which extended eastwards to the limits of the known world.

Original size: 53 × 38 cm

- 11** Petrus Bertius (1565 – 1629) a) Bengala
b) Cambaia
c) Malabar
d) Malabar
e) Narsinga

In 1598 Barent Langenes published a miniature atlas and travel book, *Caert Thresoor*, with maps engraved by various cartographers, including Jodocus Hondius I and Pieter van den Keere, and a text by an anonymous author. The text was revised by Petrus Bertius in 1600. It was very popular and many editions were produced in Latin, French, German and Dutch up to 1650. The edition of 1616 and later ones contained maps newly engraved by Jodocus Hondius II. Of the five maps shown here those of Bengal, Cambay, and Malabar (d) are from a German edition of 1612. Malabar (c) was included in a French edition of 1602, and is similar to the Narsinga map of earlier editions. That of Narsinga is from the Hondius edition of 1616.

Original size: a, b, and d) 12.5 × 8.5 cm each; c) 11.5 × 8.5 cm; e) 13 × 9.5 cm

- 12** William Baffin/Thomas Roe. A Description of East India, conteynge th'Empire of The Great Mogoll

This is the first modern map of north India. When Sir Thomas Roe returned to England after his four years' embassy to the court of Jehangir, the first mate on the ship was Baffin, better known for his surveys in North America. Together they drew this map, and Baffin completed it in London, adding some details which differ from the information given in Roe's journal. It was probably sold as a sheet map in this edition of 1619 and in another of 1632. According to the custom of the time, publishers frequently acted as their own booksellers, or sold through a single shop, in this case Thomas Sterne in Pauls Church yard. In 1625 Elstracke re-engraved the map for *Samuel Purchas his Pilgrimes*, obviously in a hurried fashion, as several errors were made and corrected on the plate. It was used again in 1663 for Thevenot's *Relations de divers voyages curieux* and in a reduced version for Terry's *A Voyage to the East Indies* in 1655. It also appeared in 1665 in Haver's translation of Della Valle's Letters and a 1777 edition of Terry. Van der Aa copied it in 1729. As a recent map of great importance and drawn from personal knowledge, it was the source for most maps of north India for over a hundred years. (Reproduced from the copy in the British Library with permission.)

Original size: 48.5 × 38.5 cm

- 13** Henricum Hondius (1597 – 1651) Magni Mogolis Imperium

The Hondius family was second only to the Blaeus in Dutch cartography. Jodocus Hondius I (1563 – 1612) emigrated to London and began as a type founder and engraver. He returned to Amsterdam in 1593 and in 1604 bought 111 plates of the Mercator atlas. Adding plates from his own stock and continually enlarging the atlas with new maps, he built up a flourishing business. He was followed by his sons Jodocus (1594 – 1629) and Henricum and later by his son-in-law Jansson. There were at least 45 editions of the Mercator atlas between 1606 and 1642. The map shown here was probably first included in the edition of 1636 and is obviously derived from that of Roe. However there are many differences in the geography, e.g. the big lake north of Bengal and the shape of Cambay.

Original size: 49 × 37 cm

- 14** Joan and Cornelis Blaeu Magni Mogolis Imperium

Guilielmus Blaeu and his two sons are probably the most renowned cartographers of any age. From a small beginning in 1599 Willem Janszoon Blaeu (1571 – 1638) as he was earlier known and his sons Joan (1596 – 1673) and Cornelis (d. 1642) progressed from makers of terrestrial and celestial globes to the *Atlas Maior* in nine to twelve volumes and five languages. Their maps are now among the most treasured by collectors, both for their fine engraving and artistic decoration. Unfortunately the only map of India included in the atlas is almost devoid of embellishment. It was possibly among the 37 plates acquired from Hondius in 1629 and reprinted with minor changes. Hence the blank space around the title where the cartouche of the Hondius map has been removed. It was reprinted many times after its first appearance in 1640 until 1667, and it is difficult to tell which edition any particular map is from, unless it is found in the complete atlas with the date on the title page.

Original size: 52 × 41.5 cm

- 15** Nicolas Sanson a) L'Empire du Grand Mogol
b) Presqu'Isle de l'Inde

By the end of the 17th century initiative in cartography had passed from Holland and Belgium to France, largely due to the enterprise of the Sanson family. Nicolas Sanson (1600 – 1667) and his sons Nicolas (d. 1648), Guillaume (d. 1703) and Adrien (d. 1708) were the forerunners of the great school of French cartography. These two maps were published in *L'Asie*, the third of four volumes devoted to the four known continents, which were issued in 1652, 1653, 1658, 1662 and 1683. They were also re-engraved for use in other travel books and atlases and widely copied. Often the maps gave only the first date of publication and once they are removed from the atlas, it is rarely possible to know which edition they were bound in, whether they were printed in excess for the first edition, and used up later, or reprinted without any change in the date. At a later date the watermark in the paper can sometimes be a guide to the actual date of printing.

Original size: a and b) 24.5 × 19 cm each

- 16** Jan Jansson (1596 – 1644) Sinus Gangeticus vulgo Golfo de Bengala

Jansson was the brother-in-law of Henricum Hondius and they worked closely together bringing out revised versions of the Mercator atlases, and as rivals to the Blaeu family. This map was included in Part 5 of *Atlantis Maioris* in 1650, and in several other sea and land atlases. Jansson also reprinted maps by earlier cartographers, and took over the business from the Hondius family.

Original size: 54 × 47 cm

- 17** Pierre Duval (1618 – 1683) a) Empire du Mogol
b) Presqu'Isle de l'Inde

Duval was Sanson's son-in-law, and the family influence can be seen in the style of the maps. These two are from a miniature atlas *L'A.B.C. du Monde* published in 1670 and re-issued in 1676 and 1682. There are several editions of the maps with minor alterations of the plates, for example in the spelling of Kashmir.

Original size: a and b) 12.5 × 10 cm each

- 18** Alain Manesson Mallet (1630 – 1706)
a) Partie de la Terre Ferme de l'Inde
b) Presqu'Isle de l'Inde

These maps are from a miniature French atlas published in 1683, called *Description de l'Univers*. It was in five volumes and a German edition came out in 1686. Such small books were very popular at the time; they were easy to carry about and there had been a rapid increase in the number of people interested in the strange lands that were being discovered. The same atlas also included a sketch of Goa and a map of ancient India showing the places mentioned in classical texts.

Original size: a and b) 10 × 14 cm each

- 19** Robert Morden (d. 1705) a) Empire de Mogol
b) India on this side Ganges
c) The Maldives and Ceylon Ilands

Morden was an English map-maker better known for his county maps of England. These three were drawn for a miniature geography book published in 1680. It was revised in 1688 and again issued in 1693 and 1700. Morden's version of the Maldives is surprising. These islands had been exaggerated in some early maps, e.g. Gastaldi's Calecut, possibly as an expression of the relief felt by sailors at seeing land again after the dangerous crossing from Africa, but such a solid bank of orderly placed islands must surely have stretched the imagination even in that age of credulity.

Original size: a) 12.5 × 11 cm; b) 13 × 11 cm; c) 10.5 × 12.5 cm

- 20** Vincenzo Maria Coronelli (1650 – 1718) Impero del Gran Mogol

After the early excellence in cartography, map-making in Italy declined during the 17th century. This was largely due to the loss of supremacy at sea, once the route round Africa was opened, and the subsequent decline as a maritime power. The few maps that were drawn were elaborately florid in design and showed little new geographical knowledge. Coronelli, a Franciscan friar, was Cosmographer to the Republic of Venice. He founded in 1680 the first geographical society, *Accademia Cosmografica degli Argonauti*.

Original size: 60 × 45 cm

- 21** Vincenzo Maria Coronelli (1650 – 1718) Penisola dell' Indo

This map like the previous one was included in the second edition of *Corso geografico universale* in 1694 and in Vol. II of *Atlante Veneto* in 1697.

Original size: 60 × 45 cm

- 22** John Thornton (d. 1706) The Coast of Mallabar

As the English became more powerful on the seas, so their maritime charts increased in accuracy and detail. John Seller's *English Pilot* was first published in 1671; Book III, *Oriental Navigation* appeared in 1675. In 1703 it was published by John How with maps by John Thornton and the maps were later produced by his son Samuel Thornton and then by Mount and Page. It continued to be revised up to 1761. Marine atlases usually vary very much in their contents, individual charts being bound to suit the requirements of the customer. Later English atlases with similar charts of the Indian coast include those of William Herbert, 1758 – 1787; Sayer and Bennett, 1775 – 1784; S. Dunn, 1787; Laurie and Whittle, 1798, 1800, 1803.

Original size: 53 × 43.5 cm

- 23** Nicolas de Fer (1646 – 1720) a) Les Vrays Indes
b) Plan de Pondichery

De Fer was a prodigious map-maker with little regard for accuracy or incorporating the latest knowledge. *Les Vrays Indes* was included in his *Atlas curieux* in 1705. *Plan de Pondichery* appeared in 1705 and again in Beaurain's *Atlas de geographie ancienne et moderne* in 1751.

Original size: a) 31.5 × 22.5 cm; b) 35.5 × 24 cm

24 Fredrick de Wit (father, 1613 – 1706 and son, d. 1710)
Magni Mogolis Imperium

De Wit was a comparatively late Dutch cartographer who copied the works of many early map-makers. He and his son signed their works in the same way, but this map is probably by the younger de Wit. De Wit purchased many of the Blaeu and Jansson plates and re-issued them in atlases of his own. After the death of the younger de Wit, his stock was taken over by Covens and Mortier. This map first appeared sometime after 1688. It is called 'newly corrected and divided', but there is little improvement over the maps of nearly a hundred years earlier. It was included in David Mortier's *Atlas Novum* in 1708 and then in Schenk's *Atlas Contractus* in 1713, and in Otten's *Atlas sive Geographia compendiosa* in 1755 and 1775. At some stage the plate was altered, as there are issues without de Wit's name, but barely visible traces of it remain.

Original size: 51.5 × 41.5 cm

25 Pieter van der Aa (1659–1733) a) Mouths of the Ganges
b) The Kingdom of Bengale
c) The Empire of the Great Mogol
d) The Kingdom of Guzaratte

Van der Aa was a prolific map-maker of Leiden. He drew maps to illustrate the route of any traveller whose journeys were recorded in the travel books. None of the maps were original, and many of them showed scant regard for geographical fact. However, his atlases were popular, and the maps printed many times, often in wide ornamental borders and with elaborate cartouches. The first two of these four maps were probably included in his *Cartes des itinéraires et voyages modernes* first published in 1707. They appear both separately and together on one sheet. The second two with borders and French titles added, were in *Atlas nouveau et curieux* printed in 1714.

Original size: a and b) 22 × 15 cm each; c and d) 29 × 22 cm each

26 Pieter van der Aa (1659 – 1733) a) Royaume de Grand Mogol
b) Goa, Indiae Orientalis Metropolis

In 1729 van der Aa published his most ambitious work, *Le Galerie Agreeable du Monde*, in 66 volumes with 3000 plates. It was limited to 100 sets and two volumes related to India. Apart from maps it contained views of cities, descriptive pictures of local customs, incidents of historic importance. The map of the Mughal empire is copied from that of Baffin a hundred years earlier, although Aa claims in the title 'newly given to the public'. The map of Goa is copied from *Civitates Orbis Terrarum* published by Braun and Hogenburg in 1572. Linschoten had enlarged and embellished it for his *Itinerario* in 1596 and it was reprinted many times up to 1644. In 1601 it was printed in a reduced edition showing the central portion only, and it is thus that it appears here.

Original size: a) 35 × 29 cm; b) 45 × 32 cm

27 Herman Moll (d. 1732) a) India Proper
b) The West Part of India

Moll was a Dutchman who settled in London in 1680, at first engraving for other publishers and then setting up on his own. His first map of India appeared in *A System of Geography* in 1701 and showed what is usually recognized as the Mughal empire. These two came later, b) in *Atlas Geographus* in 1712 and a) in *Atlas Minor* of 1729. Unusual for the period, they showed the whole of the subcontinent on one page, instead of dividing it between the Mughal empire of the north and the various kingdoms of the south. The titles show the confusion over the term India, one distinguishing it from the East Part of India or India Orientalis and both of them implying that the empire covered the whole peninsula. They are both small maps with no embellishment, in contrast to the larger decorative ones Moll drew of other countries.

Original size: a) 19 × 26 cm; b) 18 × 25.5 cm

28 Henri Abraham Chatelain (1684 – 1743) **Carte Nouvelle des Terres de Cuan, de Canara, de Malabar, de Madura, et de Coromandel**

Chatelain followed a common French practice of combining map and text, and using type similar to hand writing. This map and the following one were published in his *Atlas historique* in 1719. The shape of the peninsula is an improvement over many earlier maps, but little accurate detail was yet known. Chatelain was a publisher, not a geographer as were most of the famous French cartographers. In 1706 he had published a small book with the interesting title of *La Science des Personnes de la Cour, de l'Epee et de la Robe*, which in several volumes provided all the information supposed necessary for a well-read gentleman at court. It included the small map of India that was re-engraved for the *Atlas Historique* with the bare title of 'Mogol'.

Original size: 43.5 × 36.5 cm

29 Henri Abraham Chatelain (1684 – 1743) **Genealogie des Empereurs Mogols**

It is interesting to note that the shape of India shown here follows earlier maps, although it was corrected in the separate map bound in the same atlas. The map of Kashmir was copied from the one published by Francois Bernier in 1699. Bernier had travelled to Kashmir with the Mughal court.

Original size: 42.5 × 36.5 cm

30 Gerard van Keulen (1678 – 1728) **Nova Tabula Terrarum, Cuan, Canara, Malabar, Madura, & Coromandelia**

Johannes van Keulen (1654 – 1715) was well known for his marine charts and atlases during the last twenty years of the 17th century. His most famous publication was the *Zee Atlas*. His son Gerard succeeded him in 1704 and ran the business on more scientific lines. Gerard was appointed hydrographer to the Dutch East India Company in 1714. The map originates from France, most likely from information collected by de l'Isle. It was published first in 1720 and reprinted in 1728, 1738, 1744, and bound in an edition of *Zee Fakkel* in 1758.

Original size: 58.5 × 49 cm

31 Guillaume de l'Isle (1675 – 1726) **Carte des Cotes de Malabar et de Coromandel**

De l'Isle was the Premier Geographe du Roi at an early age, and it is said that he began drawing maps when only eight years old. Son of a geographer and historian, he was an original cartographer and with his position at the French court he was able to obtain the most recent information. He maintained a wide correspondence from many parts of the world, and was much respected for his geographical knowledge. He obtained a new map of south India from the Jesuit Bouchet, one of the few the order permitted to be made public, and on de l'Isle's request it was followed by larger, more detailed sketches. The first recorded publication of this map is in 1722, but it is likely that the maps of Chatelain and van Keulen were copies, and not the other way round. Covens and Mortier included it in their *Atlas Nouveau* published in Amsterdam in 1730, 1733, 1741, 1745, 1757 and 1774. It was also published by Schenk in 1740 and Otten in 1775, and bound in many other atlases.

Original size: 56 × 43 cm

32 Homann Heirs **Malabar & Coromandel**

The Homann family were the most important map-makers in 18th century Germany, bringing about a revival in cartography after a century of dormancy. However their maps were mostly copies, as there were few German travellers at that time supplying information. The family business flourished from 1702 to 1813. The founder was Johann Baptist Homann (1663 – 1724). His son died in 1730 and the house was taken over by J.M. Franz and J.B. Epersberger who continued to use the same name calling themselves 'Homann heirs'. This map is dated 1733 and was bound in the *Grosser Atlas* of 1737 and *Atlas Maior* of 1780. It was also used by Seutter, the rival of the Homann family, to complement Seutter's own map of the Mughal empire in the *Atlas Novus* of 1740.

Original size: 48 × 54.5 cm

33 Jean Nicolas Bellin (1703 – 1772) a) Carte de l'Indoustan
b) Coste de Malabar, Canara
c) Suite de la carte de l'Indoustan
d) Carte du Port de Goa
e) Plan de Bombay
f) Carte des Costes de Concan et Decan

Bellin was attached to the French Marine Office and was an industrious cartographer. These six maps are from his *Petit Atlas Maritime* published in five volumes in 1763 and 1764. It contained 581 maps, of which 18 are of the Indian coast. Many of the maps had already been published by Antoine Prevost from 1746, and were re-engraved for this atlas, without much change in the information given.

Original size: a and b) 31 × 22 cm each; c-f) 17 × 21.5 cm each

34 Jean Nicolas Bellin (1703 – 1772) **Carte reduite de la Presque Isle de l'Inde**

This large marine map of the peninsula was included in the *Hydrographie Francaise* which was compiled over a long period, various editions being dated 1756 – 65 and 1737 – 76 and containing differing numbers of charts in two or three volumes. Central India was little known to Europeans at this time, hence the large blank area which Bellin refused to fill with doubtful information.

Original size: 84 × 60 cm

35 Isaac Tirion (c. 1705 – 1765) *Nuova Carta dell' Impero del Gran Mogol*

Tirion was a map and book publisher in Amsterdam. His map of the Mughal empire, drawn by J. Keyser and dated 1730, was printed in Vol. III of *Hedendaegsche Historie of Tegenvoordige Staet van alle Volkeren*, published in Amsterdam in 1730–31, a translation of Thomas Salmon's *Modern History* of 1726. An Italian edition, *Lo Stato presente di tutti i paesi e populi del Mondo*, was published by Giambatista Albrizzi in Venice in 1738. For this the maps were re-engraved, closely copying the Dutch original, but not as well drawn; for example, on the right of the map above Il Regno Tipora a river can be seen coming straight over the peak of a mountain, whereas in the Dutch edition it is shown rising in the valley. Though the map was bound in Vol. IV, in the copy in the Bibliotheque nationale, Paris the volume and page numbers were not printed, as they are in this copy, over the outer margin top right. Two years later, in 1740, Albrizzi published the maps separately in an atlas, *Atlante Novissimo*, acknowledging Tirion in the titles, but spelling his name in seven different ways in the 34 maps. Five editions of the Dutch atlas are known, one dated 1744 and the others without dated title page, but with new index pages listing additional maps, issued up to 1784. An edition was also issued by J. de Groot and G. Warnars in 1789 in Amsterdam. These atlases all include the map of the original plate of the *Historie* of 1730. If there was a Dutch atlas edition prior to the atlas in Venice, no copy is known to exist now. At some time another (pirate?) edition of the Italian maps appeared, using the same Albrizzi plate but with the title altered to read 'Impero del Gran Mogol'; the conventional signs used to show many of the towns have been altered into round citadels with bastions and an outer wall.

Original size: 36 × 28.5 cm

36 Jean Baptiste Bourguignon d'Anville (1697 – 1782) *Carte de l'Inde*

D'Anville was the official cartographer for the French East India Company. He spent his whole life studying geography and amassed a large number of maps which were acquired by Louis XVI in 1779. He was particularly interested in Asia and published an atlas of China and maps of Tibet. His maps were scientifically prepared and he took great pains to verify his information. They may be taken as showing the exact knowledge current in Europe at the time, which those drawn for decoration or armchair travellers frequently did not. His map of India in 1752 was accompanied by the *Eclairissement* in which he detailed his source material and gave his reasons for adhering to or differing from earlier cartographers. This was translated into English by William Herbert in 1759.

Original size: a) 104 × 40 cm; b) 104 × 48 cm

37 J.B.B. d'Anville (1697 – 1782) *Coromandel*

This large map, usually bound in two parts, was prepared at the same time as d'Anville's large map of India, but published the following year, early in 1753. It was bound in many atlases, and was very popular, as it was the most accurate depiction of the area in which the British and the French were fighting for supremacy. It was the basis for many smaller maps, and later amended editions were also drawn.

Original size: 50 × 96 cm

38 Emmanuel Bowen (1720 – 1767) *A Map of India on the West Side of the Ganges*

John Harris published a travel book *Navigantium atque Itinerantium Bibliotheca* in two volumes in 1705 which included maps by Moll. This map comes from an edition of 1748 revised and enlarged by J. Campbell. The maps for this edition were drawn by Emmanuel Bowen. The volume also included a classical map of 'India as described by all authors before the fifth century'. This was freshly compiled from the texts and not taken from Ptolemy; it shows the area known to Alexander.

Original size: 22.5 × 32.5 cm

39 Thomas Jefferys (d. 1771) *The Seat of War on the Coast of Choromandel*

Jefferys used d'Anville's map when he wrote the English version of the war in India in 1754. Like d'Anville he also published a *Memoir* stating his sources, particularly for details in which he differed from the Frenchman. This map was reprinted in Cambridge's *An Account of the War in India* published in 1761, the year after the French defeat at Wandiwash, and again in 1780. On some editions Jefferys described himself as 'Geographer to His Majesty'.

Original size: 36.5 × 47 cm

40 Gilles Robert de Vaugondy (1688 – 1766) *Presqu'Isle des Indes Orientales*

The Robert de Vaugondy family (Gilles 1688 – 1766 and Didier 1723 – 86) were popular map-makers at the French court. Their *Atlas Universel* was published in 1757 with engravings by well known artists and the venture was supported by Madame Pompadour. The basic material had been acquired from the Sanson family, and the maps are prized more for their elegance than geographical originality. This map was issued in 1758 in a supplement to the *Atlas Universel*.

Original size: 62.5 × 47.5 cm

41 G. Robert de Vaugondy (1688 – 1766) *Les Indes Orientales en deca du Gange*

This map was published four years later than the previous one, in 1762, yet it is less accurate in many respects. It was possibly produced in a hurry to accompany a narrative of the military events in south India.

Original size: 30 × 37.5 cm

42A Thomas Jefferys (d. 1771) *The East Indies with the Roads*

Jefferys was a bookseller and publisher in London and had his shop in St Martin's Lane, Charing Cross from 1753 to 1765. The business was taken over by Faden in 1771 after the death of Jefferys, although the *Public Advertiser* was still announcing a new atlas by 'Jefferys and Faden' on 8 March 1778. This large map of India was very popular, and within a few months of its appearance in 1768 a second edition was printed. It was bound in Kitchin's *General Atlas* of 1777 and 1787 and in Faden's *General Atlas* of 1778. The copy from which this print was taken was a re-issue by Laurie and Whittle in 1794.

Original size: a) 137 × 53 cm; b) 137 × 55.5 cm

42B Thomas Jefferys (d. 1771) *A New Map of Hindoostan*

After Rennell's two maps of India appeared in 1782 and 1788, many earlier ones were rendered obsolete. They continued to be printed however, either in the original state, with a changed imprint if the plates had been acquired by another publisher, or with corrections made to the plate. This version of Jefferys' 1768 map was re-engraved by Robert Sayer in 1789, acknowledging Rennell's surveys, but omitting Jefferys' name. In 1794 Laurie and Whittle issued an atlas which included all three versions of Jefferys' map.

Original size: a) 143 × 57.5 cm; b) 143 × 59.5 cm

43 Thomas Kitchin (d. 1783) a) *A Map of the Countries round Surat and Bombay*
b) *A new and accurate Map of Bengal*

* Many of Kitchin's maps were described as 'new and accurate' though in fact he frequently used maps drawn by others. He was however a prolific map-maker himself too, as well as being his own engraver and publisher. He moved his premises several times, being at the Star, Holborn 1738–65, opposite Ely House, Holborn in 1766 and at 59 Holborn Hill 1767–78. He had been apprenticed to Emmanuel Bowen, known for his *A Complete System of Geography* published in 1747, and named his son Thomas Bowen Kitchin after his teacher. He also worked with Jefferys for some time. These two maps were drawn for *The London Magazine* and appeared in 1759 and 1769 respectively.

Original size: a) 23.5 × 18.5 cm; b) 25 × 18 cm

44 Rigobert Bonne (1729 – 1794) a) *Carte de la Partie Superieure de l'Inde*
b) *Carte de la Partie Inferieure de l'Inde*

Bonne published these two maps in 1771 in his *Atlas Moderne* in a slightly larger size. They were reduced for Raynal's *Histoire philosophique et politique des etablissements et du commerce des europeens dans les deux Indes* of 1780 from which these copies are taken. Of interest are the trade winds for the different seasons.

Original size: a and b) 32.5 × 21.5 cm each

45 James Rennell (1742 – 1830) *An Actual Survey of the Provinces of Bengal, Bahar, Etc.*

James Rennell is justly called the 'father of Indian cartography', and he is still remembered on the emblem of the Survey of India. Appointed Surveyor General of Bengal in 1767, he was ordered by Clive and Verelst to survey all the territory acquired by the Company in eastern India, and then to extend the work as far as possible. Apart from undertaking much field work himself, he organised the department and arranged training and despatch of survey teams. From 1772 to 1777 he settled in Dacca to compile sheet maps from the many sketches already collected and still coming in. He returned to England in 1778 and was actively engaged in publication of maps on behalf of the East India Company for the next fifty years. The manuscript of this map was sent to England in 1774 and it was engraved in 1776 before Rennell's return home. It was re-issued in 1776, 1786 and 1794. This print is taken from the 1794 issue by Laurie and Whittle. (For a discussion of Rennell's work see "Major James Rennell and A Bengal Atlas" by Andrew S. Cook in *India Office Library & Records, Report for the year 1976, London 1978.*)

Original size: a) 150 × 53.5 cm; b) 150 × 44 cm

46 James Rennell (1742 – 1830) A Map of the Provinces of Delhi, Agrah, Oude and Ellahabad

Dury intended this map of 1777 (re-issued 1786 and 1794) to complement his map of Bengal, but when Rennell returned to England in 1778 he was very disappointed to see the two together. The map of Bengal and Bihar was based on surveys made in 1772 although Rennell had sent back an improved manuscript in 1775, with the manuscript for this map. Dury had not bothered to make the corrections, with the result that the two maps did not fit together. Rennell decided to engrave a completely new set of maps which would incorporate the later surveys and be divided into eight parts of to be conveniently folded into a quarto book for the use of 'Gentlemen who travel'. Hence the famous *Bengal Atlas* which was the standard map for the East India Company for so many years. (*A Bengal Atlas* was reproduced by B.P. Ambashthya at Patna in 1975.)

Original size : a and b) 106 × 54 cm each

47 James Rennell (1742 – 1830) Hindoostan

By 1782 Rennell had been back in England for four years and had been able to sort through the mass of manuscript maps accumulated in the office of the East India Company. He drew a map of the whole of India which was published in December 1782 and followed it a few months later with the *Memoir* in which he detailed all his sources and reasoning. The *Memoir* was re-issued in 1783 and an enlarged edition appeared in 1788, to accompany a revised version of the map. The large medallion above the title shows Britannia accepting the sacred scriptures of India being offered by her priests. This was dropped in the second edition of the map.

Original size : 79 × 39.5 cm each

48 A Correct Map of Bengal

This map was printed in the *Political Magazine* in 1785. No name is given in the title but the engraver was John Lodge who had been an apprentice to Jefferys. In style and information it is somewhat similar to a map of Bengal Jefferys had engraved for William Bolt's *Considerations of Indian Affairs* in 1772. This was before Rennell's map had been published, when the public was eager to learn about the newly acquired territories in India. Rennell's maps were the property of the Company and it was not easy for booksellers or magazines to obtain accurate surveys for reproduction.

Original size : 55 × 39 cm

49 L.S. d'A. de la Rochette (1731 – 1802) Hind, Hindoostan or India

William Faden published most of de la Rochette's maps, including this one of 1788. It was published on the same day as Rennell's revised edition of his map of India, and lists the sources for the new material in the lower left corner. The title reflects the still prevalent confusion about the correct name for the subcontinent.

Original size : 52 × 68 cm

50 William Faden (1750 – 1836) Map of the Peninsula of India

This map of the peninsula was very popular and there were several editions, with reprints in each. They were drawn under the direction of Rennell, and the first edition published by Faden in 1792. These reprints are from the second edition of 1795. A third edition by Faden appeared in 1800, although the northern sheet still bore the date of 1795. In that edition the dates when the British acquired various areas were added. They were again printed in 1824 and 1835 by James Wyld, successor to Faden after his retirement in 1823.

Original size : a and b) 82 × 49.5 cm each

51 Laurie and Whittle A New Map of the Jagher Lands

The British possessions in south India were first surveyed by Thomas Barnard in 1767 – 73, and he drew a very elegant map published by Dalrymple in 1778 on a scale of four miles to an inch. The Northern Circars were surveyed by Stevens and Cotsford and drawn to a scale of one mile to 2½ inches. The map printed here was drawn later, possibly compiled from the same survey material but in a different style. The name of the cartographer is not given. Robert Laurie (c. 1755 – 1836) was an engraver and map and print seller in London. He took over the business of Robert Sayer on the latter's death in 1794 and traded as Laurie and Whittle until 1812. He then retired and his place was taken by his son Richard Holmes Laurie, trading under the name of Whittle and Laurie until 1818 when Whittle died and Richard Laurie was alone. The firm survived into the 20th century as Imray, Laurie, Norie and Wilson Ltd.

Original size : 50 × 70 cm

52 Aaron Arrowsmith (1750 – 1823) India

Aaron Arrowsmith was the official cartographer for the East India Company in addition to his own business of map production and sales. His sons Aaron and Samuel carried on the family name until 1840 when it passed into the hands of their cousin John Arrowsmith who produced maps until 1873. The first Aaron was a friend of Rennell and Dalrymple. This map was published in 1804 and was followed by a larger one on nine sheets in 1816. They were the last important maps to depend on route surveys. By 1822 Arrowsmith was able to publish a large map of south India on a scale of four miles to an inch based on the triangulation surveys of William Lambton. These were the basis for the first sheets of the *Indian Atlas* published from 1827 onwards. Arrowsmith had planned this huge work — 177 sheets on a scale of four miles to the inch — but died before it could be undertaken and it was entrusted to Horsburgh and then John Walker. Engraving carried on throughout the century with many plates being redrawn as new surveys were made.

Original size : a, b and c) 160 × 63 cm each

53 Aaron Arrowsmith (1750 – 1823) Map of the Province of Malabar

This is an enlargement published in 1809 from Arrowsmith's map of India. It shows very clearly the problems faced by the cartographer who wished to be accurate. Two routes to Seringapatam are shown but the area between, for which no surveys had yet been made, is almost blank.

Original size : 65 × 98 cm

54 John Thomson Hindoostan

Thomson was one of the few British map publishers outside London, having his business in Edinburgh. He published a *New General Atlas* in 1817 from which this map is taken. The sketches of the Ganges were taken from Rennell and emphasise the role played by water-borne transport at the time.

Original size : 69 × 48 cm

55 J. Thomson British India

These maps are also from the *New General Atlas* of 1817. They owe much to Rennell and Arrowsmith and in fact once the main geographical features were known and charted, originality in cartography was largely a thing of the past. Subsequent maps varied only in the skill of their lettering and clarity of the depiction. Thomson's use of the term 'British India' the year before the final subjugation of the Marathas is indicative of British policy.

Original size : a and b) 58.5 × 50 cm each

56 William Allen Map of the Western Provinces of Hindoostan, the Punjab, Rajpootana, Sindh, Kabool Etc.

In 1826 Kingsbury, Parbury and Allen published a map of the Western Provinces of Hindoostan inscribed to Maj. Gen. Sir John Malcolm and added an 'index, containing the Names and Geographical Positions of all the places in the map of the India'. By 1846, when this map was published by Allen alone, some of the triangulation surveys for this area had been completed, but none of them were yet available to the public. It was, however, a part of the country with great topical interest. Sind had been annexed in 1843, and in the Punjab Ranjit Singh's death in 1839 was followed by the two Sikh wars. Hence the demand for a large map of the area. The engraver John Walker was already busy on the sheets for the *Indian Atlas* and sketch maps were available from which to compile this map as an interim measure until the whole area could be accurately surveyed, and sheet maps engraved and published.

Original size : a – d) 61 × 58 cm each

Throughout the nineteenth century, survey work in India was undertaken with zeal. The triangulation surveys begun in the south in 1802 were gradually extended to cover the whole peninsula, and beyond. Mapping of the difficult terrain of the Himalayas, an area for long closed to Europeans, provides one of the most thrilling chapters in the story of world surveying. The bare but accurate features determined by the triangulation surveys were then embellished by the topographical surveys. Cadastral surveys followed, then thematic maps of varying scales and the maps of the Geological Survey. Engraving and printing of maps for the *Indian Atlas* was moved to Calcutta after 1869, and the sheets were constantly being revised. During the early years of the twentieth century all the surveys were again undertaken, so that India was among the best mapped countries of the world. Details of modern maps of the subcontinent can be found in 'Maps' by Andrew S. Cook in *South Asian Bibliography: A handbook and guide*, ed. J.D. Pearson (Harvester Press, 1979).