

57 • The London Map Trade to 1640

LAURENCE WORMS

Although printing was introduced into England by William Caxton in the 1470s, the emergence from that point of a specialized trade in printed maps and atlases was a slow and halting process. Map publishing required skills in making and printing blocks or plates quite separate from those involved in the printing of books by letterpress: the printing of books and the printing of maps did not automatically grow in tandem. Maps were far less familiar objects than books at this stage. The incipient trade in their manufacture and sale has received significantly less attention than other facets of early English publishing, and such established facts as there are may be told relatively simply.¹ There is a natural emphasis on London because, with the merest handful of exceptions, early map publishing in the British Isles was wholly confined to that city.² Even in London, very few maps were published before the second half of the sixteenth century. In total, there were perhaps between a thousand and fifteen hundred put out under the imprint of London publishers by 1640.³ It is, however, striking that the bulk of these—some 85 percent—did not appear until after 1590. The output of new maps (or maps new to the London market) reached a peak between 1602 and 1612, with almost half the overall total first appearing in that single decade. From that point,

1554–1640 A.D., 5 vols. (London and Birmingham, 1875–94), supplemented by W. W. Greg, ed., *A Companion to Arber: Being a Calendar of Documents in Edward Arber's "Transcript of the Registers of the Company of Stationers of London, 1554–1650"* (Oxford: Clarendon Press, 1967); E. Gordon Duff, *A Century of the English Book Trade: Short Notices of All Printers, Stationers, Book-Binders, and Others Connected with It from the Issue of the First Dated Book in 1457 to the Incorporation of the Company of Stationers in 1557* (London: Bibliographical Society, 1905); Ronald Brunlees McKerrow, ed., *A Dictionary of Printers and Booksellers in England, Scotland and Ireland, and of Foreign Printers of English Books, 1557–1640* (London: Bibliographical Society, 1910); and Alfred W. Pollard and G. R. Redgrave, comps., *A Short-Title Catalogue of Books Printed in England, Scotland, & Ireland and of English Books Printed Abroad, 1475–1640*, 2d ed., rev. and enl., 3 vols. (London: Bibliographical Society, 1976–91). Edward Lynam, *The Mapmaker's Art: Essays on the History of Maps* (London: Batchworth Press, 1953), contains many details not found elsewhere. Leona Rostenberg, *English Publishers in the Graphic Arts, 1599–1700: A Study of the Printsellers & Publishers of Engravings, Art & Architectural Manuals, Maps & Copy-Books* (New York: Burt Franklin, 1963) remains valuable for its enviable ease and familiarity with the material. Hind's monumental catalog of early English engraving gives generous treatment to maps and incidentally demonstrates what a major element they were in the early history of English engraving: Arthur Mayger Hind, *Engraving in England in the Sixteenth & Seventeenth Centuries: A Descriptive Catalogue with Introductions*, 3 vols. (Cambridge: Cambridge University Press, 1952–64).

2. It is doubtful whether the production of maps outside London would have developed in any case, but an abrupt end was put to the possibility by the Star Chamber decree of 1586, which outlawed printing outside London (with the exception of a single press each for Oxford and Cambridge). The printing of "chartes" was specifically mentioned in the decree. See Marjorie Plant, *The English Book Trade: An Economic History of the Making and Sale of Books*, 3d ed. (London: Allen and Unwin, 1974), 81. Scotland was a separate entity, beyond the scope of the decree, but map printing there was limited to only a few examples (see chapter 56 in this volume).

3. This total includes large-scale wall maps, separately published single-sheet maps, maps intended for atlases, maps for book illustration, and maps for newsbooks and broadsides. Around two-thirds of them were maps that, although often also sold individually, form part of atlas series—with the remainder mainly book illustrations, principally of travel books, as one might expect, but with also a large number of Bible maps. The survival rates of separately issued individual maps are clearly much poorer, but ninety or more survive, or are at least known to have existed. There may well have been considerably more. The overall total requires considerable qualification: some of the items included, for example title pages or portraits in which a map or globe forms a dominant feature, are of debatable status. The total is also inflated by the inclusion (for purposes of analysis) of the town plans inset on the county maps of John Speed. However, there are undoubtedly many maps that have either failed to survive or that I have failed to discover.

The author acknowledges the help of Sarah Tyacke, Catherine Delano-Smith, Ashley Baynton-Williams, and Margaret Lane Ford in the preparation of this work.

1. The best general survey, with biographical detail of the principal figures, is furnished by R. A. Skelton, comp., *County Atlases of the British Isles, 1579–1850: A Bibliography* (London: Carta Press, 1970; reprinted Folkestone, Eng.: Dawson, 1978), supported by his various writings elsewhere, for which see Robert W. Karrow, comp., "Raleigh Ashlin Skelton (1906–1970): A Bibliography of Published Works," in *Maps: A Historical Survey of Their Study and Collecting*, by R. A. Skelton (Chicago: University of Chicago Press, 1972), 111–31. Catherine Delano-Smith and R. J. P. Kain, *English Maps: A History* (London: British Library, 1999), adds a good deal of thoughtful and more recent material. Laurence Worms, "Maps and Atlases," in *The Cambridge History of the Book in Britain* (Cambridge: Cambridge University Press, 1998–), 4:228–45, offers a broader if more compact companion to the present chapter, extending the narrative to the end of the seventeenth century. There is much incidental information to be filtered from the standard works of British publishing history: Edward Arber, ed., *A Transcript of the Registers of the Company of Stationers of London,*

a trade already slow to develop appears to have gone into a marked decline. By 1640, the market (even in maps of the British Isles) had largely been ceded to the powerful Dutch publishing houses. In terms of original map production, London fell back to a position of relative insignificance. Why this should be so, in what was generally a period of increasing trade, prosperity, and confidence, requires a closer examination than it has hitherto received.

IMPORTS AND IMPORTERS

There were technical problems in producing maps in England—problems relating chiefly to the supply of paper and of copperplates (fig. 57.1)—but a more conspicuous factor in the initial hesitancy of the English map trade and its later weakness was undoubtedly the prevalence of imported material. With maps requiring so little in the way of translation, there was no pressing need for maps produced specifically in English. The trade in printed maps and atlases was always inherently an international one. Throughout the period, the most substantial part of the English trade was the distribution of maps and atlases printed abroad. There is ample evidence, from libraries, inventories, catalogs, inscriptions, and other sources, for the relatively early and extensive distribution of such maps. Copies of Hartmann Schedel's *Liber chronicarum* (Nuremberg chronicle) of 1493, with its maps of the world and northern Europe as well as its famous views of cities, can be placed in England even before 1500. Robert Minucci, an Italian bibliophile residing in England, was presented with one of these by the printer Richard Pynson in 1498, the earliest certain example of a London bookseller handling imported cartographic material.⁴ Pynson, like so many of his contemporaries in the book trade, came originally from overseas, and it was this group of nonnative booksellers, with pre-existing links to the trade abroad, who came naturally to dominate the import trade. Foreign-born booksellers such as Reyner Wolfe, whose *Neue Testament* (1549) is one of the earliest English books illustrated with maps, are known to have been regular annual visitors to the great Frankfurt book fair and formed a natural conduit for imported material into England.⁵

By the mid-sixteenth century it is possible to identify specific transactions relating to the import of individual maps. Surviving ledgers show the London bookseller Nicholas England being billed for a consignment of forty-three maps from Christoffel Plantijn of Antwerp in 1558.⁶ A little later, Plantijn was sending significant quantities of material to his own London agent, Jean Desserans. A letter survives from the London engraver Nicholas Reynolds to Abraham Ortelius, dating from the early 1560s, touching upon a transaction that sent twenty-five copies of a map of Russia to Antwerp (paid for through Reyner Wolfe) and would have brought copies of Gerardus Mer-

cator's great wall map of Europe to London.⁷ There are entries too in the London port books of the period: George Bishop, perhaps the first English-born bookseller to become significant in the import trade, received a "roll with maps ad valorem £2" consigned by the *Sea Rider* of Antwerp in early August 1568.⁸ This must surely have been the *roulleau* of maps booked to him in Plantijn's ledger in late July—a consignment including copies of Mercator's 1564 wall map of the British Isles.⁹ With Plantijn also sending shipments to Scottish booksellers, it would seem that a system of some sophistication was already firmly in place. Even if it would not always have worked perfectly, it is still difficult to think that the developing British market was not adequately served by these arrangements. The number of close connections between the London trade and the leading continental map-makers would itself seem to preclude such a possibility.¹⁰

Hans Woutneel, who bought from Plantijn and is frequently mentioned in the Ortelius correspondence, was an importer who dealt almost exclusively in engraved mate-

4. Oxford, Pembroke College Library, U.5.d. Inscribed "Robert Minutij Volaterrani Hunc librum habui dono a Magistro Pynson Impressore xx(?) Aprilis MccccLxxxviii Londinj." As early as 1483 the Oxford bookseller Thomas Hunt was importing copies of Pierre d'Ailly's *Imago mundi*, with its typographic zonal diagram of the spheres. See the sale catalog of Christie, Manson and Woods International, Inc., *The Helmut N. Friedlaender Library: Part 1, Monday, 23 April 2001* (New York: Christie's, 2001), 52–55 (lot 11). I am most grateful to both Margaret Lane Ford and Ashley Baynton-Williams for information on these and other early examples.

5. For Wolfe, see Henry R. Plomer, *A Short History of English Printing, 1476–1898* (London: Kegan Paul, Trench, Trübner, 1900), 103–9; Duff, *English Book Trade*, 171–72; and C. Sayle, "Reynold Wolfe," *Transactions of the Bibliographical Society* 13 (1916): 171–92.

6. Colin Clair, "Christopher Plantin's Trade-Connexions with England and Scotland," *Library*, 5th ser., 14 (1959): 28–45, esp. 29.

7. BL, Add. MS. 63650 Q. The text is given in Abraham Ortelius, *Abrahami Ortelii (geographi antverpiensis) et vivorum eruditiorum ad eundem et ad Jacobum Colivm Ortelianvm . . . Epistulae . . . (1524–1628)*, ed. Jan Hendrik Hessels, *Ecclesiae Londino-Batavae Archivum*, vol. 1 (1887; reprinted Osnabrück: Otto Zeller, 1969), 103–4. The consignment included what is referred to as a "topographiam Londinensem, aere insculptam"—possibly the "lost" map of London (see below).

8. Brian Dietz, ed., *The Port and Trade of Early Elizabethan London: Documents* (London: London Record Society, 1972), 114. The economic context can be gauged by reference to Dietz's analysis of imports for the year 1559–60: total imports into London amounted to £643,320 of which £813 (0.13 percent) was for "bokes vnbounde" and £3304 (0.51 percent) for paper, compared, for example, with £2483 for "chese of Holland," £1699 for tennis balls, £11,852 for pepper, and £18,237 for sugar (pp. 152–55). I owe this reference to Sarah Tyacke.

9. Jan Denucé, *Oud-Nederlandsche kaartmakers in betrekking met Plantijn*, 2 vols. (Antwerp: De Nederlandsche Boekhandel, 1912–13; reprinted Amsterdam: Meridian, 1964), 1:21.

10. See Helen Wallis, "Intercourse with the Peaceful Muses," in *Across the Narrow Seas: Studies in the History and Bibliography of Britain and the Low Countries Presented to Anna E. C. Simoni*, ed. Susan Roach (London: British Library, 1991), 31–54, and R. A. Skelton, "Les relations anglaises de Gérard Mercator," *Bulletin de la Société Royale de Géographie d'Anvers* 66 (1953): 3–10.

duced in England, and there were many successes. It is also notable that two of the principal figures in the later ascendancy of Amsterdam, Jodocus Hondius the Elder and his brother-in-law Pieter van den Keere, had both mastered their craft in London. But this is to anticipate later developments—map production in England began rather earlier.

In technical terms, map printing in England followed the familiar European model of the gradual replacement of relatively simple maps printed from woodcut blocks by more sophisticated copperplate engravings printed on the intaglio rolling-press. The record might be said to begin with Caxton himself. His translation of a medieval text published in 1481 as the *Myrrour of the Worlde*, the first English-printed illustrated book, contains two simple woodcut T-O world maps. The scant lettering on the maps is not in fact printed but laboriously supplied in manuscript—according to tradition, in Caxton's own hand.¹⁵ With a few honorable exceptions, the woodcut was never wholly mastered in England: neither Caxton nor his contemporaries produced anything to compare with the maps and atlases already beginning to appear elsewhere across Europe. The stretch of years from Caxton to the death of Henry VIII in 1547 are notable for no more than a few book illustrations of passing interest and some hints of printed maps now lost.¹⁶ The only extant printed map published in England in the early Tudor period is the map that appears in the Coverdale Bible published at Southwark in 1535. Although the book bears the English imprint of James Nicholson, it was almost certainly printed overseas.¹⁷

It is not until the reign of Edward VI in the mid-sixteenth century that maps found a place in domestic book production. The earliest are three woodcut battle plans used to illustrate a book published by Richard Grafton in 1548 (fig. 57.2). Grafton, who had become Printer to the King on Edward's accession, is known to have employed a number of foreign workmen, including some specifically referred to as "gravers"—who were presumably responsible for cutting the blocks.¹⁸ Grafton's example was followed by Reyner Wolfe, who included two "cartes" in his *Neue Testament* in 1549 (fig. 57.3). Similar maps appeared in New Testaments printed for Richard Jugge in 1552 and 1553, and aside from book illustration, there is also a record from this period of a no-longer-extant world map by Sebastian Cabot—a wall map reported to have been "cut" by the Cambridge scholar Clement Adams in or about 1549.¹⁹

The accession of Queen Mary in July 1553 brought an abrupt halt to this new development in book illustration. With only a single and uncertain exception, there were no maps of this type published during the five years of her reign. The printers who had prospered under the Protestantism of Edward VI now found themselves out of favor. Grafton was dismissed from his office, and his printing

career never resumed, while Wolfe and Jugge between them published only a handful of books under Mary. Yet, despite the absence of maps in books, Mary's reign is nonetheless significant for two important maps—one of the British Isles and the other of Spain, both published by the Flemish surgeon Thomas Lambrit, better known as Thomas Geminus.²⁰ Geminus was a key figure in the in-

15. Tony Campbell, *The Earliest Printed Maps, 1472–1500* (London: British Library, 1987), 98–99.

16. For the lost "map of London, engraved on copper, dated 1497" noted by Campbell, *Earliest Printed Maps*, 214, see Peter Barber, "A Glimpse of the Earliest Map-View of London?" *London Topographical Record* 27 (1995): 91–102. John Rastell refers in *The Pastyme of People: The Cronycles of Dyuers Realmys and Most Specyally of the Realme of England* . . . [London: J. Rastell, 1530?] to a "quarto Mappa mundi" (Ai verso), probably printed by himself—see Helen Wallis, "Some New Light on Early Maps of North America, 1490–1560," in *Land- und Seekarten im Mittelalter und in der frühen Neuzeit*, ed. C. Koeman (Munich: Kraus International Publications, 1980), 91–121. Rastell's inventory of 1538 is specific in itemizing 110 "mappis of Europa" valued at one penny each (R. J. Roberts, "John Rastell's Inventory of 1538," *Library*, 6th ser., 1 [1979]: 34–42, esp. 35). There was also the map of England sold by John Bagford to Samuel Pepys for five shillings "Printed from a wooden cut by Winkin de Woorde w^{ch} is an extraordinary Rarity" (Philippa Glanville, *London in Maps* [London: The Connoisseur, 1972], 18). Bagford also describes an "Almanack with Charts of the Coasting parts of England printed on vellum by Wynken de Worde, 1520" (E. G. R. Taylor, *Late Tudor and Early Stuart Geography, 1583–1650* [London: Methuen, 1934], 179).

17. See Catherine Delano-Smith and Elizabeth Morley Ingram, *Maps in Bibles, 1500–1600: An Illustrated Catalogue* (Geneva: Librairie Droz, 1991), 26–27, and Elizabeth Morley Ingram, "The Map of the Holy Land in the Coverdale Bible: A Map by Holbein?" *Map Collector* 64 (1993): 26–31. The exact location of the first printing remains uncertain. On the basis of the use of some distinctive initials designed by Anton Woensam von Worms, it may have been at Marburg in Germany in late 1535 (L. A. Sheppard, "The Printers of the Coverdale Bible, 1535," *Library*, 4th ser., 16 [1935–36]: 280–89).

18. Hind, *Engraving in England*, 1:296, and Ernest James Worman, comp., *Alien Members of the Book-Trade during the Tudor Period: Being an Index to Those Whose Names Occur in the Returns of Aliens, Letters of Denization, and Other Documents Published by the Huguenot Society* (London: Bibliographical Society, 1906), 25.

19. The recent discovery by Ashley Baynton-Williams of a seemingly contemporary copperplate map of the English victory at Pinkie Cleugh (Musselburgh), 1547, hitherto only known in a later copy, may prove to add significantly to the record of this period (see fig. 54.4 in this volume). For the Cabot map, see E. G. R. Taylor, *Tudor Geography, 1485–1583* (London: Methuen, 1930), 17–18; Peter Barber, "England I: Pageantry, Defense, and Government: Maps at Court to 1550," in *Monarchs, Ministers, and Maps: The Emergence of Cartography as a Tool of Government in Early Modern Europe*, ed. David Buisseret (Chicago: University of Chicago Press, 1992), 26–56, esp. 44; and Rodney W. Shirley, *The Mapping of the World: Early Printed World Maps, 1472–1700*, 4th ed. (Riverside, Conn.: Early World Press, 2001), XVI.

20. Both maps survive in unique examples in the BNF. See Rodney W. Shirley, *Early Printed Maps of the British Isles, 1477–1650*, rev. ed. (East Grinstead: Antique Atlas, 1991), 28; Hind, *Engraving in England*, 1:56–58; and Robert W. Karrow, *Mapmakers of the Sixteenth Century and Their Maps: Bio-Bibliographies of the Cartographers of Abraham Ortelius, 1570* (Chicago: For the Newberry Library by Speculum Orbis Press, 1993), 250–54. Geminus was also a mathematical instrument-

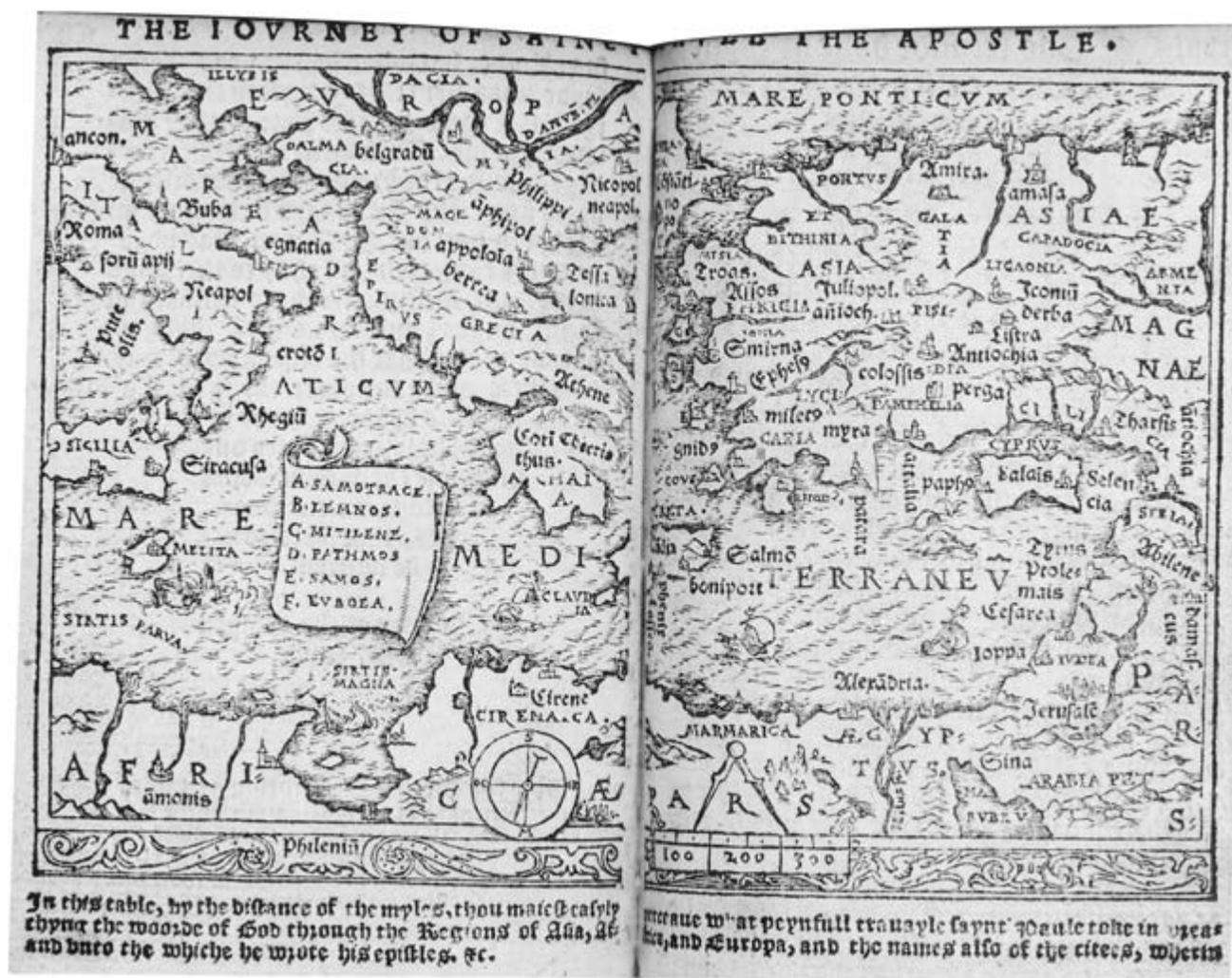


FIG. 57.3. *THE IOVRNEY OF SAINCT PAULE THE APOSTLE*, 1549. A woodcut map of the Eastern Mediterranean from Wolfe's edition of the New Testament, and one of the earliest maps to be used as a book illustration in England. Wolfe comments on this innovation with an interesting early plea for the acceptance of maps: "Wherfore I consydering that in the perplexite, & varietee and multitude of places nothing doth

perhaps fifteen). No impression of the printed map exists, and its status remains uncertain, although recent scholarship tends increasingly to the view that the map was probably produced in the Netherlands.²⁵ With the second of the early Elizabethan wall maps there is less hesitation about stating that the map was produced in London—for this is the splendid 1562 four-sheet map of Russia by Anthony Jenkinson that Nicholas Reynolds exported to Ortelius in Antwerp (fig. 57.6).²⁶ In a list of prints registered at Stationers' Hall between 1562 and 1563, Giles Godet, a religious refugee from France naturalized in 1551, included both a "Carde of London" and a "mappe of Englonde and Skotlande."²⁷ Neither has been conclusively identified. If the first is a map, it might conceivably be the

helps the memory so much, no: yet can be so profitable, as the use & commodities of tables or cartes." Size of the original: ca. 12 × 15.5 cm. *The New Testament: Diligently Translated by Myles Couerdale and Conferred with the Translacion Willyam Tyndale, with the Necessary Concordances Truly Alleged* (London: Reynolde Wolfe, 1549). Photograph courtesy of the BL (C.36.a.3, Z7v-Z8r).

"lost" map of London. Equally well it might be the map *Civitas Londinum*, long erroneously attributed to Ralph Agas.²⁸ This is a wall map, which although surviving only

25. See figure 54.16. For recent work on this map, see Ann Saunders and John Schofield, eds., *Tudor London: A Map and a View* (London: London Topographical Society, 2001).

26. Karrow, *Mapmakers of the Sixteenth Century*, 318 (43/1), and Johannes Keuning, "Jenkinson's Map of Russia," *Imago Mundi* 13 (1956): 172–75.

27. Arber, *Transcript of the Registers*, 1:90–91. I owe this and a number of other references to Arber to Ashley Baynton-Williams. The maps are further noted in Taylor, *Tudor Geography*, 29 and 176.

28. James L. Howgego, *Printed Maps of London circa 1553–1850*, 2d ed. (Folkestone: Dawson, 1978), 10–11. The entry may simply refer



FIG. 57.4. *NORDOVICVM, ANGLIÆ CIVITAS ANNO 1558 I.B.F.*, 1559. The earliest extant printed English town plan, a woodcut of Norwich produced for Cuningham's *Cosmographical Glasse*. If the initials "I.B." after the title may be accepted as those of John Bettes, the map may also be regarded as the earliest that can be assigned to a known English engraver—although the existence of a "JF" monogram on the very earliest state of the map may perhaps throw this into doubt (I am grateful to Raymond Frostick for information on this point). The map itself offers a tranquil image of a city still

in harmony with its rural surroundings, but another aspect of mid-sixteenth-century life is offered by the letterpress key printed on the reverse. At a point marked by the letter C, just beyond the city, at the edge of Thorpe Wood, is, we are told, "the place where men are customablie burnt." Size of the original: 30 × 41 cm. William Cuningham, *The Cosmographical Glasse, Conteynyng the Pleasant Principles of Cosmographie, Geographie, Hydrographie or Navigation* (London: Ioan Daij, 1559), folding map bound between fols. 8–9. Photograph courtesy of the BL (G.6583).

in later and somewhat altered versions, is a woodcut (almost certainly a copy of the "lost" map) datable from internal evidence to exactly this period. If "Englonde and Skotlande" was also a woodcut it is not a map that is known to survive.²⁹ Other woodcut maps continued to appear in increasing numbers as book illustrations, mirroring a general increase in scientific and scholarly publishing.³⁰ The earliest English-printed world map appeared in

29. The entry might possibly refer to George Lily's map of the British Isles reissued by Geminus in 1555. Godet and Geminus were neighbors in Blackfriars. That Godet should register copyright at just the time of Geminus's death may suggest that he had acquired some portion of his neighbor's stock: this is evidently what happened with the two anatomical woodcuts, *Interiorum corporis humani patium viva delineatio* and *Perutlis anatomies interiorum muliebris partium cognitio*, usually found bound with Geminus's *Compendiosa totius anatomie delineatio* (London: T. Gemini, 1559) and later entered to Godet at Stationers' Hall in 1562–63.

30. See Ruth Samson Luborsky and Elizabeth Morley Ingram, *A Guide to English Illustrated Books, 1536–1603*, 2 vols. (Tempe, Ariz.: Medieval and Renaissance Text and Studies, 1998). I am much indebted to the authors for information supplied to me in advance of publication.

to Godet's undated woodcut view, *The City of London, as It Was before the Burning of St. Pauls Steeple*. For Godet's significance in the Anglo-French print trade, see Tessa Watt, *Cheap Print and Popular Piety, 1550–1640* (Cambridge: Cambridge University Press, 1991), 182–83.



FIG. 57.5. ENGLAND AND WALES, 1568. A woodcut map of the Anglo-Saxon heptarchy used to illustrate the *Archaionomia* of the antiquary William Lambarde. This would appear to be the earliest map of the country actually cut in England and, although offering very little detail, is interesting in incorporating Anglo-Saxon lettering. The influence of the kind of antiquarianism represented by Day and Lambarde on the wider use of maps was a powerful one.

Size of the original: 17 × 12.5 cm. William Lambarde, *Archaionomia, sive depriscis anglorum legibus, libri, sermone Anglico . . .* (London: Joannis Daij, 1568), opposite Ej. Photograph courtesy of the BL (C.108.c.32).

Sir Humphrey Gilbert's *Discourse of a Discoverie for a New Passage to Cataia* (1576), published by Richard Jones.³¹ Henry Bynneman printed both Raphael Holinshed's *The Chronicles of England, Scotlande, and Irelande* (1577), with a striking town plan of Edinburgh, and George Best's *True Discourse of the Late Voyages of Discoverie, for the Finding of a Passage to Cathaya* (1578), with maps of the world and the North Atlantic.³² Even before the death of Richard Juge in 1577, Christopher Barker, who followed him as Printer to the Queen, had begun publishing his own long series of map-illustrated Bibles.

The woodcut map was already beginning to be replaced in book illustration by more detailed copper en-

gravings. A fine early example from 1574 is shown in figure 57.7, but such maps were still unusual. It is against this limited background that the assembling of Christopher Saxton's atlas of England and Wales between 1574 and 1579 can be seen as such a significant event.³³ With its thirty-five folio copperplate maps, this was a larger and more elaborate book than any previously produced in the British Isles. Almost from nowhere, the English had stepped to the forefront of European mapping with the first national atlas. Admittedly the project enjoyed official backing and was engraved mainly by craftsmen from the Netherlands, but in terms of organization and production it completely outstripped any previously known capability. Saxton had no background in printing or publishing, but there is nothing to link the project with any existing member of the book trade, and the assumption must be that he himself oversaw both production and distribution. This would seem to tie in with the terms of the royal privilege he was granted for manufacture and sale, his subsequent production of the twenty-sheet wall map of England and Wales, *Britannia Insularum in oceano maxima a caelo*, completed in 1583, and with the known pattern of his further career.³⁴ Comparable to Saxton, at least in terms of production, was the second English-published atlas: an edition of Lucas Jansz. Waghenaer's sea charts, originally published in a Dutch edition in 1584 and regarded as "perhaps the greatest single advance in the history of hydrographic publication."³⁵ Published as *The Mariners Mirrour* in 1588, the London edition comprised forty-five folio maps printed from new plates. Again the project owed much to official backing, and the plates were once more mainly the work of foreign engravers. And once again the atlas owed as little to mainstream publishing as that of Saxton had done.

31. Shirley, *Mapping of the World*, 158–60 (no. 136).

32. Bynneman had taken over much of Reyner Wolfe's stock of type and ornaments. He is considered the first London bookseller to essay a sustained attempt at printing academic books.

33. See Skelton, *County Atlases*, 7–16, for the bibliographical history.

34. A copperplate bearing what appears to be a portion of an abandoned earlier version of *Britannia* is known but adds little to our knowledge of the publication history: see Tony Campbell, "A False Start on Christopher Saxton's Wall-Map of 1583?" *Map Collector* 8 (1979): 27–29. The existence of a separate map of Wales printed on a paper associated with the atlas also underlines how little is actually known of Saxton's activities at this time: see D. Huw Owen, "Saxton's Proof Map of Wales," *Map Collector* 38 (1987): 24–25. For Saxton's wider career, see Ifor M. Evans and Heather Lawrence, *Christopher Saxton: Elizabethan Map-Maker* (Wakefield, Eng.: Wakefield Historical Publications and Holland Press, 1979).

35. R. A. Skelton, "Bibliographical Note," in *The Mariners Mirrour, London 1588*, by Lucas Jansz. Waghenaer (Amsterdam: Theatrum Orbis Terrarum, 1966), V–XI, esp. V. See also David Watkin Waters, *The Art of Navigation in England in Elizabethan and Early Stuart Times*, 2d ed. (Greenwich: National Maritime Museum, 1978), 168–75.



PLATE 57. ORONCE FINE, *REGENS ET INTEGRA ORBIS DESCRIPTIO*, 1534/1536. (See p. 1465.) Wood engraving with watercolor (Paris, Jérôme de Gourmont).

Size of the original: 51 X 57 cm. Photograph courtesy of the BNF (Cartes et Plans, Rés. Ge DD 2987 [63]).



PLATE 58. ANDRÉ THEVET, ENGRAVED AND COLORED FRONTISPIECE. (See p. 1472.) Intended for “Le grand insulaire et pilotage,” the original title is visible underneath the pasted-over new title, “Le monde maritime ov description gen-

erale des mers & de la navigation.” Photograph courtesy of the BNF (Estampes, Vx 1 P. 453 [collection Lallemand de Betz]).



PLATE 59. JEAN JOLIVET, "LA CARTE GENERALE DV PAYS DE NORMANDIE," 1545. (See p. 1484.) Manuscript on two sheets of parchment. The cartouche remains empty, its frame decorated with scientific instruments, the motto *Moyzis et Paix*, and four satyr figures. The map has an Italian-inspired

decorative border, the names of the winds, the date, and the author's signature.

Size of the original: 92 X 137 cm. Photograph courtesy of the BNF (Cartes et Plans, Rés. Ge A 79).

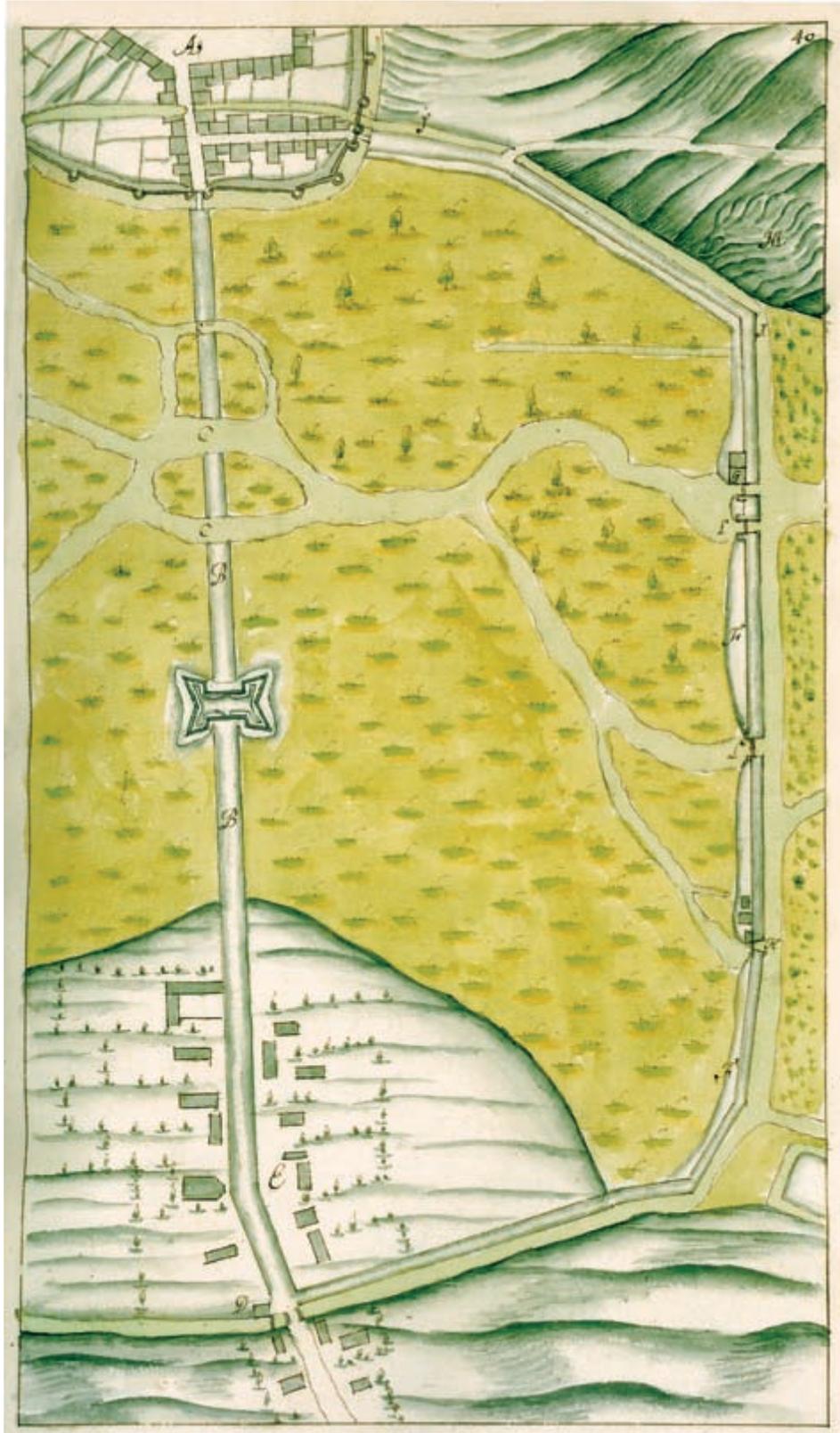


PLATE 60. MAP FROM "LIVRE DES PLANS, DES PASSAGES ET CHAUSSÉES DE LA RIVIERE DE SOMME," CA. 1644. (See p. 1515.) This map, made by the sieur Lenin, royal engineer, shows one of the many crossings of the river Somme, with a small fortress in the middle of the causeway. It shows

how the engineers of this period could design maps to cover specific military problems.

Size of the original: 33.5 X 20 cm. Photograph courtesy of the Newberry Library, Chicago (Case MS. 5004).



PLATE 61. DETAIL OF THE MAP REPRESENTING THE COURSE OF THE AA RIVER, END OF THE FIFTEENTH CENTURY. (See p. 1523.) Watercolor drawing. This is an excellent example of a detailed, artistic perspective view of the topography and structures of the city of Saint-Omer, to be used in the resolution of a legal dispute. The entire map

goes from Saint-Omer to the mills of the Cistercian abbey of Blendecques.

Size of the entire original: 31 X 325 cm; size of the detail: ca. 31 X 99.3 cm. Photograph courtesy of the Bibliothèque de l'Agglomération de Saint-Omer (MS. 1489).



PLATE 62. CHART OF THE EAST OF TERRA AUSTRALIS (TERRA JAVA), VALLARD ATLAS, 1547. (See p. 1555.) Sometimes the same illustration seems to appear in more than one chart. For example, the procession that is taking place in this part of the Terra Australis recalls that which Jean Rotz depicts in the representation of Sumatra in his 1542 atlas: it includes the same houses on piles, the same warriors, and the same important personage on horseback carefully shaded with

a parasol. The scene is too precisely rendered for the source to be other than an eyewitness account—perhaps the narrative of a voyage, perhaps another oral or written account, or even sketches made by one of the artists that sometimes accompanied these expeditions. Manuscript on parchment. Size of the original: 39 X 57 cm. Photography courtesy of the Huntington Library, San Marino (MS. HM 29, fols. 5v-6).



PLATE 63. LYON CITE OPULENTE, SITUÉE ES CONFINS DE BOURGONGNE, DAULPHINÉ, & SAUOYE, PUBLISHED BY NICOLAS LEFEBVRE, 1555. (See p. 1572.) One of the rare detached leaves from a workshop of *imagiers* on rue Montorgueil in Paris that has survived. The legend draws attention to the noteworthy elements of Lyonnais typography, such as the principal religious edifices, the bridges over the Saône and the Rhône, and the hill of Fourvière. The plan is

copied from the second edition of the *Epitome de la corographie de l'Europe* by Guillaume Guéroult (Lyons: B. Arnoullet, 1553). With the same frame, this image appears again in *Plantz, pourtraitz et descriptions de plusieurs villes et forteresses . . .* by Antoine Du Pinet (Lyons: Ian d'Ogerolles, 1564). Woodcut illuminated with blue and vermillion. Size of the original: 26 X 34.5 cm. Photograph courtesy of the BNF (Cartes et Plans, Rés. Ge D 25714).



PLATE 64. ANTHONY ANTHONY, PLAN OF THE ATTACK
ON BRIGHTON, CA. 1539-49. (See p. 1605.)

Size of the original: 61 X 91 cm. Photograph courtesy of the
BL (Cotton MS. Aug. I.i.18).



PLATE 65. ROBERT ADAMS, MAP OF GIRONDE, 1593. Size of the original: 22 X 58 cm. Photograph courtesy of the BL (Cotton MS Aug. I.ii.80). (See p. 1611.)



PLATE 66. CHRISTOPHER SAXTON, MAP OF KENT, SUR-
REY, SUSSEX, AND MIDDLESEX, 1575. (See p. 1626.)

Photograph courtesy of the BL (O.R. LIB 18.D.III, map 24).



PLATE 67. ROBERT JOHNSON, MAP OF CRICKHOWELL.
(See p. 1646.)
By permission of Llyfrgell Genedlaethol Cymru/The National

Library of Wales, Aberystwyth (Badminton vol. 3, fols. 68v-69r).



PLATE 69. MARK PIERSE, MANUSCRIPT MAP OF LAXTON, 1635. (See p. 1662.)

Photograph courtesy of the Bodleian Library, University of Oxford (MS. C 17:48).



plate is unfinished. The engraving, a handsome and confident piece of work, has sometimes been attributed to Jodocus Hondius the Elder; but another (if disputed) candidate is Mercator's grandson, Michael (Michel) Mercator, who was in London at this time and was responsible for the engraving of a silver medal commemorating Drake's circumnavigation. He is described in a lay subsidy of 1590 as a "servaunte to Baptista."
 Size of the original: 25.5 X 34.2 cm. Photograph courtesy of the BL (Maps C.2.a.11).

PLATE 71. BAPTISTA BOAZIO, *THE TRUE DESCRIPTION OR DRAFFTE OF THAT FAMOUS ILE OF WIGHTE, 1591.* (See p. 1705.) Line engraving with original hand color. The only known copy of the earliest printed map of the island, probably produced from a military defense survey, by Baptista Boazio. It is one of a number of puzzling late sixteenth-century London published maps that give no indication at all as to who may have published them, although in this case the lack of a scale bar and the partial stippling of the sea suggest that the



PLATE 72. GABRIEL TATTON, CHART OF THE PACIFIC OCEAN, CA. 1600. (See p. 1742.) Drawn in the Low Countries and in the style of the Dutch. Note the signature in Dutch, and also the "lady on the armadillo" motif for America, which was

used by Dutch chartmakers (see figs. 58.12 and 58.13). Size of the original: 72 X 147 cm. Biblioteca Nazionale Centrale, Florence (Port. 33). By concession of the Ministero per i Beni e le Attività Culturali della Repubblica Italiana.



PLATE 74. ANDERS STRENG, NAAPPILA AND RAJA-LAHTI, ORIVESI PARISH, FINLAND, 1634. (See p. 1804.) A sample of the first generation of geometrical maps (*geometriska kartor*) produced by the Landmäterikontoret. The scale is in Swedish *alnar* (1:15,000), and color is also used. The *Notarum explicatio* identifies the precise features of the individual farmsteads for taxation purposes. Size of the original: 46 X 58 cm. Photograph courtesy of the Kansallisarkisto (National Archives of Finland), Helsinki (A1, pp. 226–27).

PLATE 74. ANDERS STRENG, NAAPPILA AND RAJA-LAHTI, ORIVESI PARISH, FINLAND, 1634. (See p. 1804.) A sample of the first generation of geometrical maps (*geometriska kartor*) produced by the Landmäterikontoret. The scale is in Swedish *alnar* (1:15,000), and color is also used. The *Notarum explicatio* identifies the precise features of the individual farmsteads for taxation purposes. Size of the original: 46 X 58 cm. Photograph courtesy of the Kansallisarkisto (National Archives of Finland), Helsinki (A1, pp. 226–27).



PLATE 75. JOHANNES HONTER'S WOODCUT BLOCKS, CA. 1541–42. (See p. 1831.) The maps of *Rudimenta cosmographica* were cut into wood by Honter in 1541–42. Some of the original wood blocks are still preserved in Braşov. The half

of the map of Germania and Gallia, as well as the printer's device of Honter's workshop survive. Braşov, Romania. Photograph courtesy of Zsolt Török.

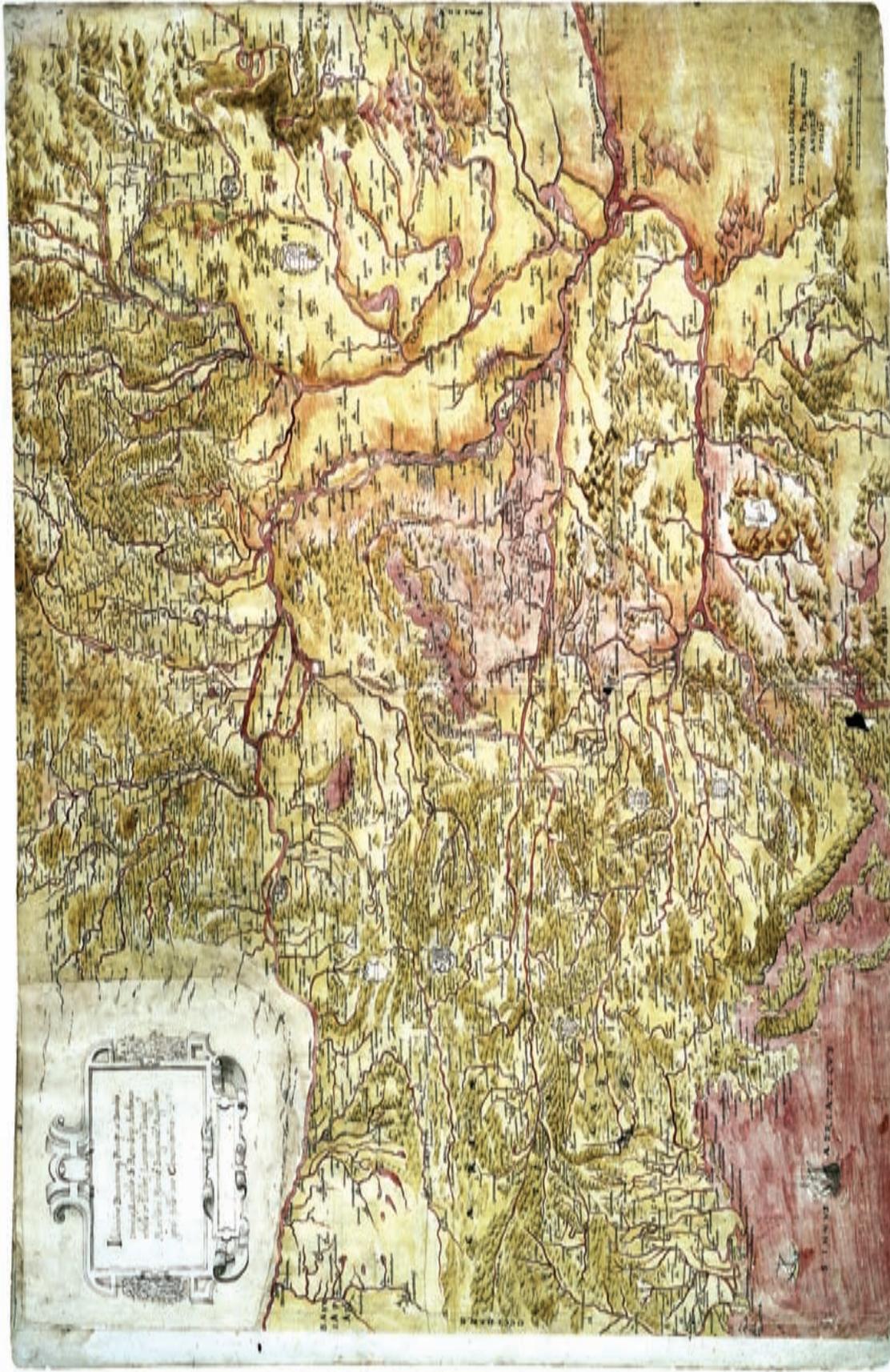


PLATE 76. NICOLO ANGIELINI, MAP OF HUNGARY, CA. 1570. (See p. 1837.) This remarkable general map of Hungary is attributed to Nicolo Angelini, an Italian military architect. The comparison of this “Vngaria loca precipua descripta . . .” with Sambucus’s 1571 map (fig. 61.14) suggests their common source. Angelini’s map served as a geographical reference in a manuscript military atlas that contained fifty-one plans and

views of the castles and fortresses of the Habsburg defensive zone in Hungary. Although the name of the author is given on the map, the similar Angelini atlases in the collections of Dresden, Vienna, and Karlsruhe are probably compilations. Size of the original: ca. 55.8 X 86.4 cm. Photograph courtesy of the Hauptstaatsarchiv Dresden (Schr. 26, F. 96, Nr. 11, Bl. 1).



PLATE 77. MARTIN STIER, MANUSCRIPT MAP OF THE STYRIAN FRONTIER, 1657. (See p. 1850.) The southeastern section of the Habsburg military defensive zone is represented. In the upper left is the capital of Styria, Grätz (Graz, Austria). The river Mura flows in a southeastern direction toward Canischa (Nagykanizsa, Hungary). In the bottom left a section

of the river Trah (Drava) is shown. The decorative Baroque style cartouche in the upper right shows the legend, with flags expressing the military significance of the map. Size of the original: ca. 37.1 X 50.3 cm. Photograph courtesy of the Bildarchiv, Österreichische Nationalbibliothek, Vienna (Handschriftensammlung, Cod. 8608, fol. 4).



PLATE 78. DETAIL FROM A NINETEENTH-CENTURY COPY OF A SEVENTEENTH-CENTURY MAP OF THE TOWN OF KASHIN AND ITS SURROUNDINGS. (See p. 1869.) The manuscript map follows common color conventions: blue for water; green for vegetation, yellowish-brown for roads, and red for buildings. Size of the entire original: ca. 62 X 80 cm; size of the detail: ca. 31 X 42 cm. Rossiyskaya Gosudarstvennaya Biblioteka, Moscow. Photograph courtesy of Alexey Postnikov.

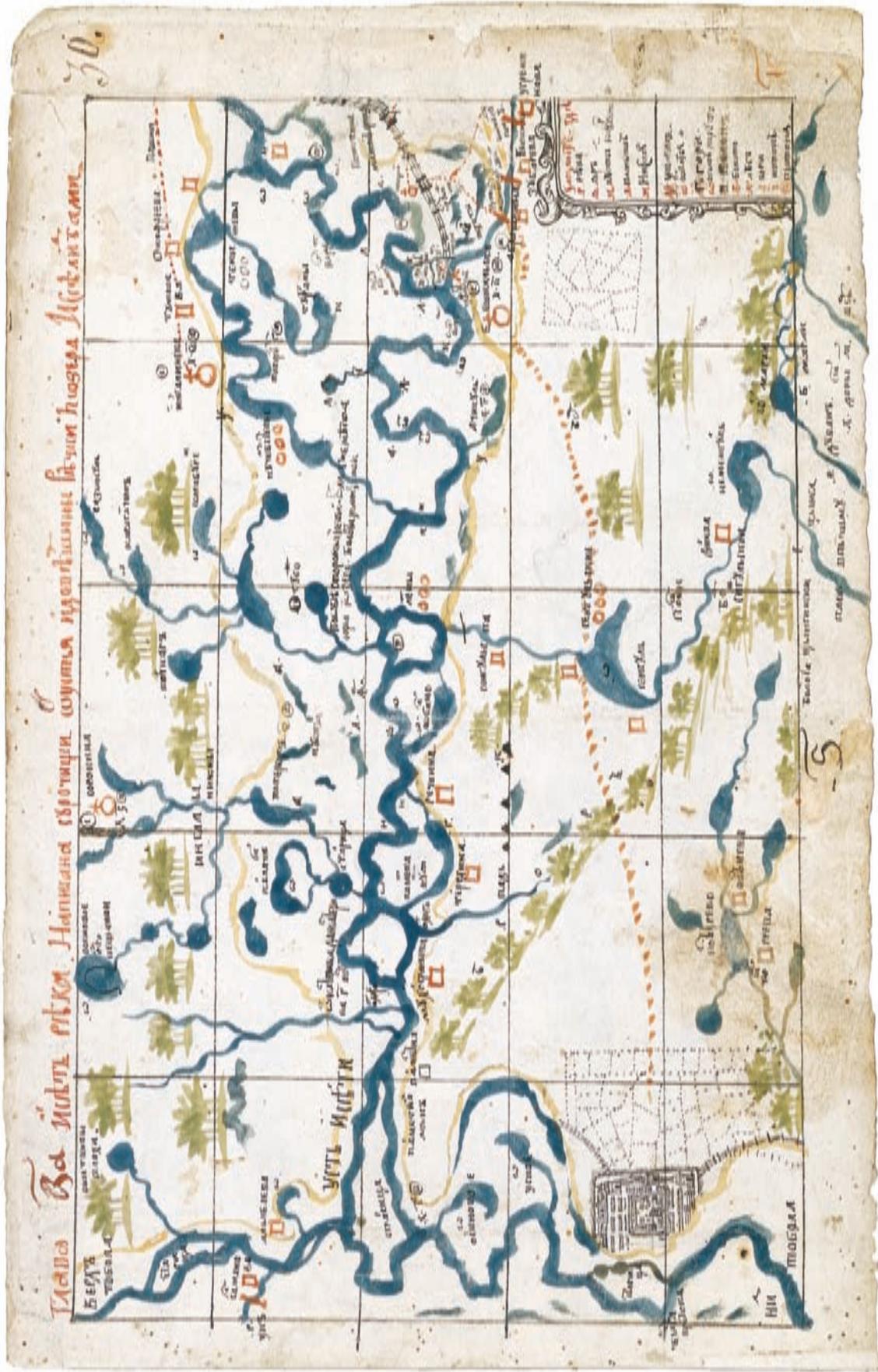


PLATE 79. SEMYON ULIANOVICH REMEZOV, MAP OF THE ISET RIVER. (See p. 1888.) Above the upper frame is the title: "Chapter 21. The Iset River drawn with *urochishcha* and with settlements." In the lower right is a cartouche with a list of standard abbreviations. Size of the original: 16.5 X 25.3 cm. From Remezov's "Khorograficheskaya chertzhnaya kniga," p. 30. By permission of Houghton Library, Harvard University.



PLATE 80. SEMYON ULJANOVICH REMEZOV, ETHNOGRAPHIC MAP OF SIBERIA. (See p. 1900.) The title of the map is "Chertëzh i skhodstvo naltchie zemel' vsej Sibiri, Tobol'skogo goroda i vseh roznykh gradov i zhilich i stepi." To compile this map Remezov used the map of 1673 as a basis, but he updated its geographic content. Among the features of the map should be noted the depiction of Kamchatka as a peninsula and not an island, as on Remezov's other general

maps. All the inscriptions characterize not so much the ethnographic nomenclature of Siberia, largely rather archaic, as the interest of the author in studying the "native" boundaries of the Siberian peoples and tribes. Size of the original: 42.2 X 62.8 cm. From Remezov's "Chertëzhnaya kniga Sibiri," sheets 47v-48. Photograph courtesy of Rossiyskaya Gosudarstvennaya Biblioteka, Moscow (Manuscript Division, stock 256, no. 346).

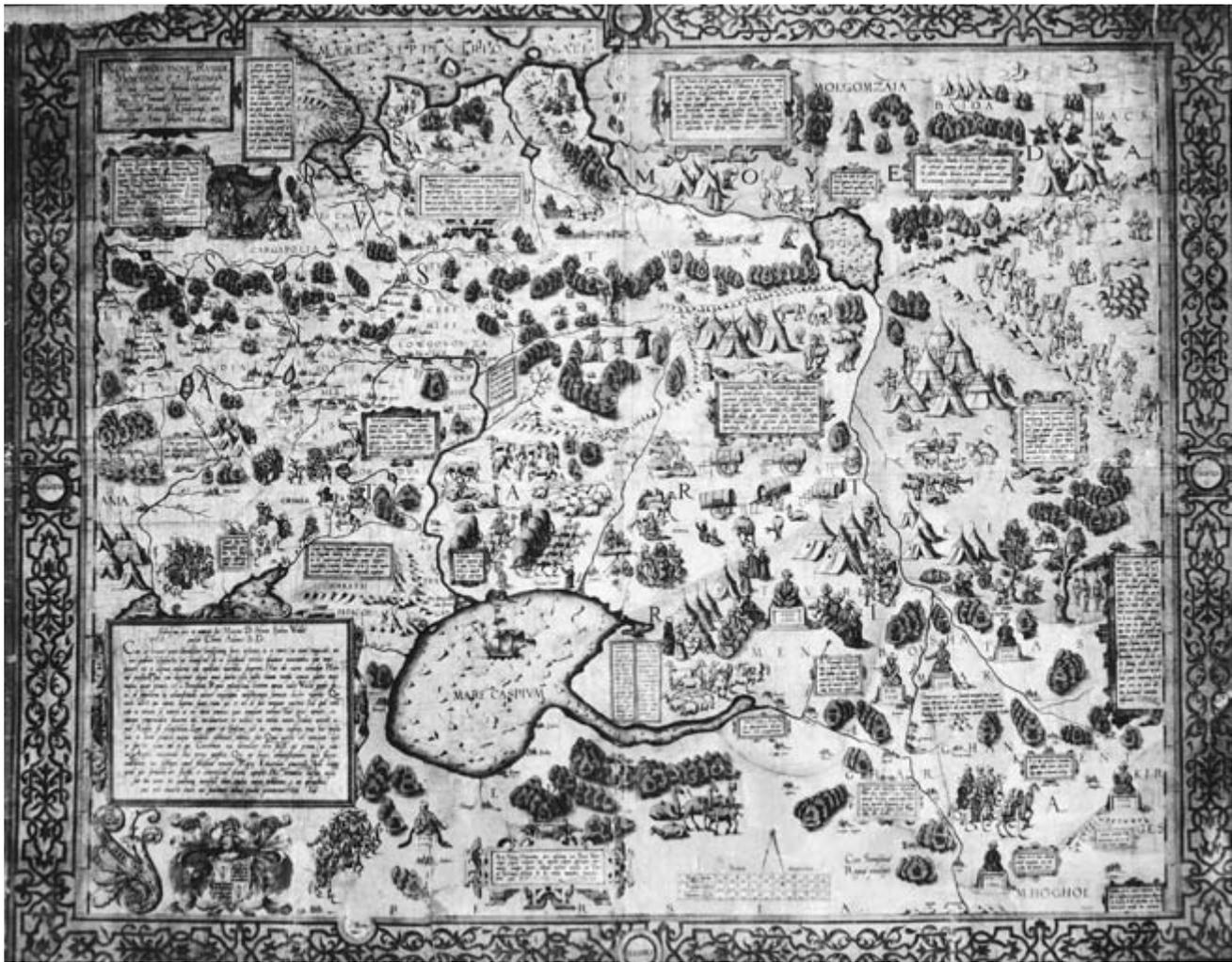


FIG. 57.6. ANTHONY JENKINSON, *NOVA ABSOLVTAQVE RVSSIAE, MOSCOVIAE, & TARTARIAE*, 1562. Line engraving with contemporary hand color. The unique surviving copy of Anthony Jenkinson's four-sheet map of Russia was prepared for publication by Clement Adams and engraved in London by Nicholas Reynolds. Although this example of the map only came to light in 1988, the existence of the map has long been known through a variety of contemporary references. That the capacity existed in London to produce such a large and impressive map at such a relatively early date raises

a number of unanswered questions, not least on the activities of the somewhat shadowy figure of Nicholas Reynolds. It is clear from his letter to Ortelius that he was involved in the import and export of maps, but his only other known engraved work of any kind is the map of Hertfordshire that he engraved for Saxton in 1577. (Fig. 62.3 shows the version published by Ortelius).

Size of the original: 81.7 × 101.7 cm. Photograph courtesy of the Biblioteka Uniwersytecka, Wrocław, with thanks to Krystyna Szykula.

The defeat of the Spanish Armada in 1588 has long been recognized as a watershed in English history—a watershed reflected in the map trade as elsewhere. It is the point at which the modest output of the regular London publishers and the great if rather different successes of the state-subsidized Saxton and Waghenar atlases began to coalesce. It is the point from which there is evidence of continuous rather than sporadic activity. It is also the point at which local supplies of sheet copper became briefly available in London (see fig. 57.1). Individual mapmakers and engravers begin to appear for whom one can claim a sub-

stantial and connected body of work. The instrument-maker and engraver Augustine Ryther celebrated the victory over the Armada with an atlas of eleven folio maps, *Expeditionis Hispanorum in Angliam vera descriptio* (1590), illustrating the progress of the naval action up the English Channel (fig. 57.8).³⁶ This was the third English at-

36. The atlas was engraved from designs by Robert Adams and has an accompanying narrative by Petruccio Ubaldini, *A Discovrse Concerninge the Spanishe Fleete Inuadinge Englande in the Year 1588 . . .* (1590). See D. Schire, *Adams' & Pine's Maps of the Spanish Armada*

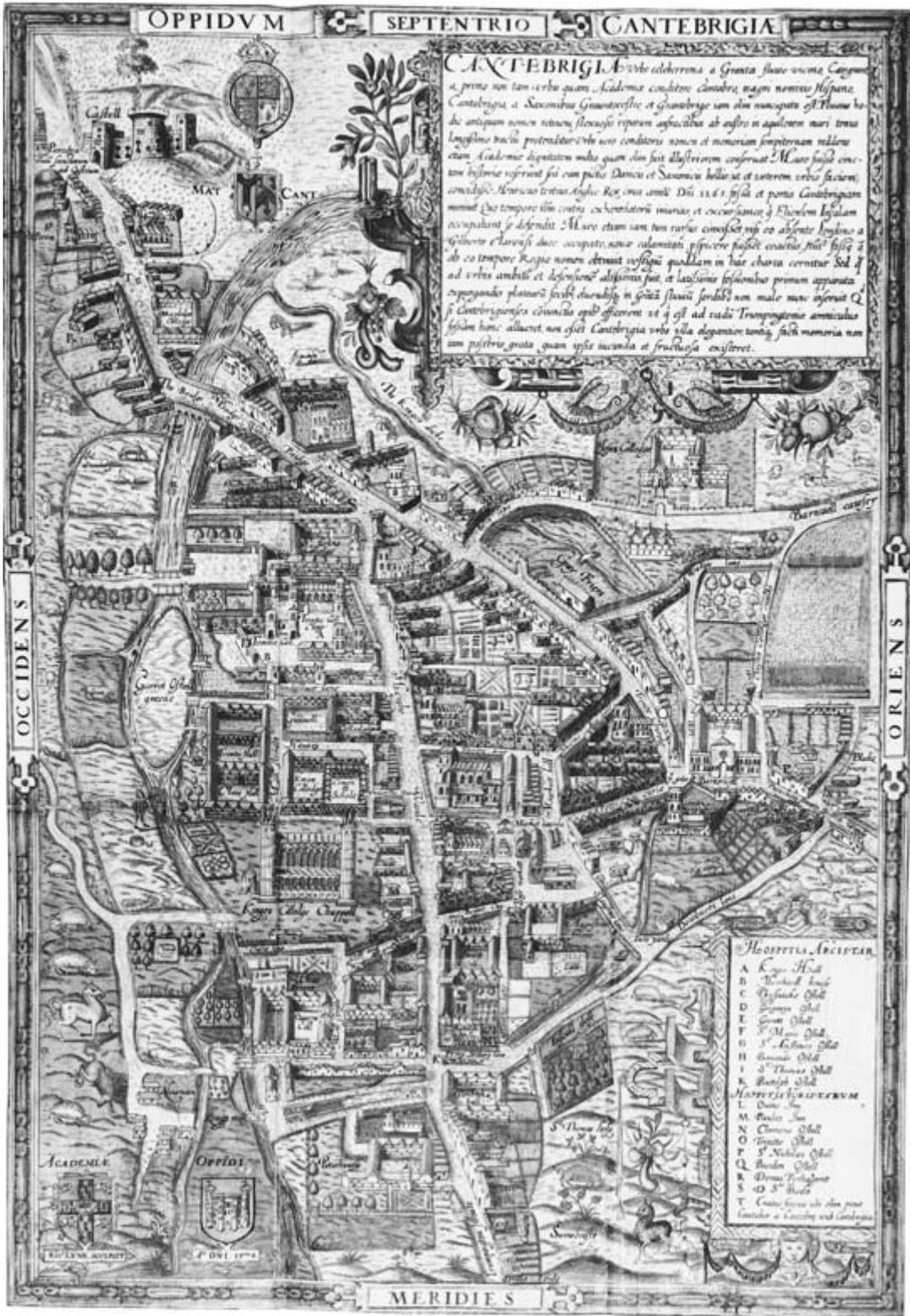


FIG. 57.7. *OPPIDVM CANTEBRIGIÆ*, 1574. A map of Cambridge engraved by Richard Lyne for John Caius's *Historiæ . . .*; copper engraving with contemporary hand color. Lyne's map was one of the earliest copper engraved English maps for book illustration and is of particular importance in that some of the costs of printing (sponsored by Archbishop Matthew Parker) have been preserved. The "copper to grave in" cost twelve shillings, and Lyne himself was paid thirty

shillings "for carving it" and a further two shillings "for cullers." The final leaf of the book bears John Day's *Horum Charitas* emblem of a burning heart and a globe, elements of symbolism that may well suggest a connection with the international group known in English as the Family of Love. Size of the original: 43 × 30 cm. John Caius, *Historiæ Cantabrigiæ Academiæ ab vrbe condita* (London: Inædibus Iohannis Daij, 1574). Photograph courtesy of the BL (C.24.a.27[3]).

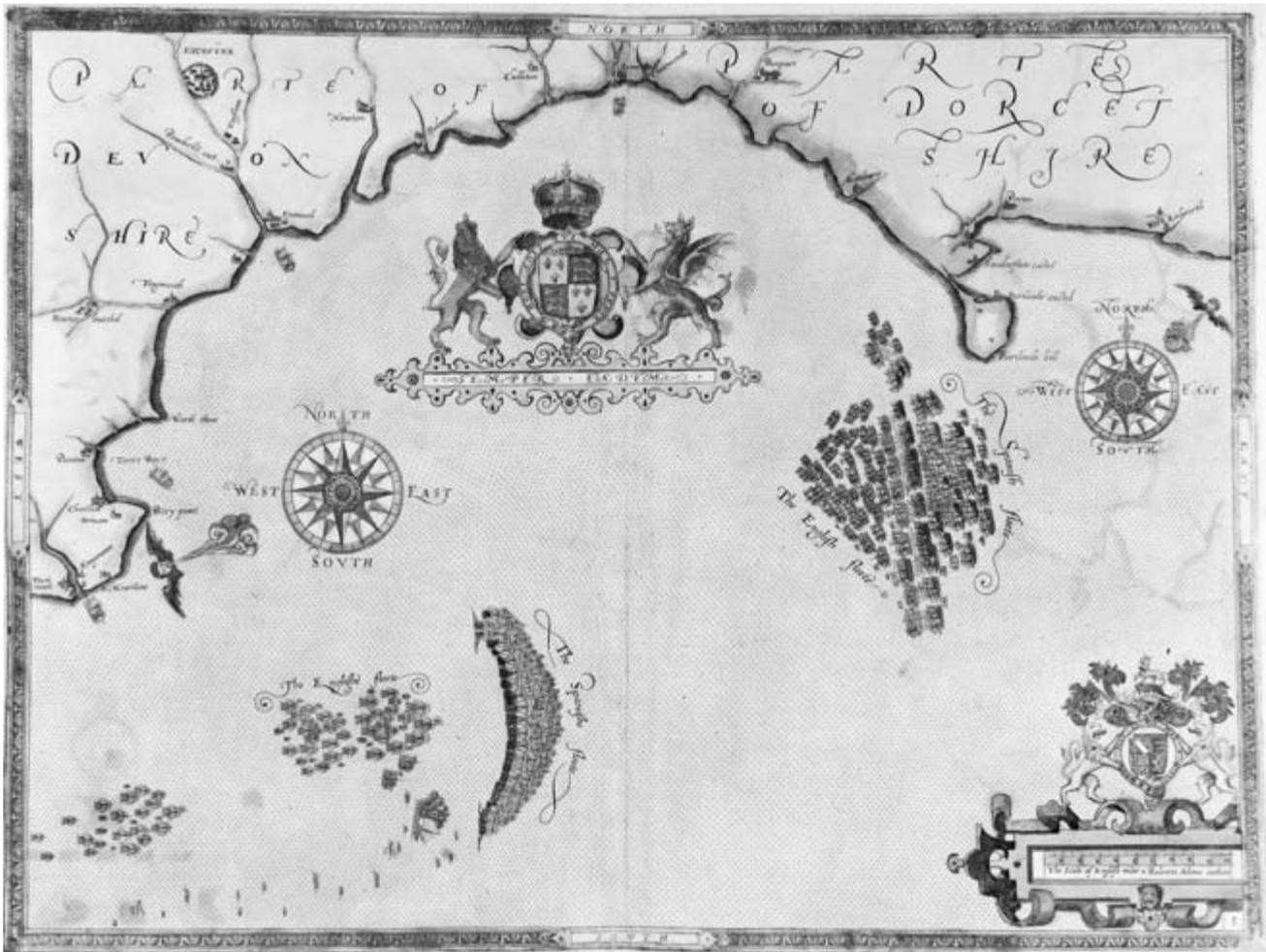


FIG. 57.8. ROBERT ADAMS, ENGAGEMENT OFF PORTLAND BILL, 1590. Line engraving with original hand color. One of a series of plans by Robert Adams engraved and published by Augustine Ryther in atlas form as *Expeditionis Hispanorum*. The English fleet harries the crescent formation of the Armada and engages off Portland Bill. Ryther, perhaps a

pupil of Humfrey Cole, was a gifted engraver as well as a highly influential instrumentmaker.

Size of the original: 37.5 × 49 cm. Robert Adams, *Expeditionis Hispanorum in Angliam vera descriptio* (London: [Augustine Ryther], 1590), chart 5. Photograph courtesy of the BL (Maps C.7.c.1[2]).

las, but the first to be undertaken without government backing. Ryther had earlier engraved some of Saxton's county maps and some of the Waghenauer charts. He thus worked on all three sixteenth-century English atlases and provides their sole connecting link. He is also generally credited with engraving Saxton's 1583 wall map of England and Wales. He engraved maps of Oxford (1588) and of Cambridge (1592). In 1590 he engraved the curious William Bowes pack of geographical playing cards, with miniature maps derived from Saxton.³⁷ He engraved planispheres (fig. 57.9) to illustrate Thomas Hood's *The Vse of*

(London: Map Collectors' Circle, 1963). Ryther was possibly the pupil of Humfrey Cole—the similarity between their extant theodolites is striking. In this case there may be a direct line of descent from Geminus and even Mercator—Osley uses analysis of their italic lettering to trace

a line from Mercator through Geminus to Cole (A. S. Osley, *Mercator: A Monograph on the Lettering of Maps, etc. in the 16th Century Netherlands with a Facsimile and Translation of His Treatise on the Italic Hand and a Translation of Ghim's Vita Mercatoris* [London: Faber and Faber, 1969], 91–99). In an English context, Ryther stands quite literally at the head of the instrumentmaking profession—his is the first name in an unbroken master-apprentice chain of immense distinction. See Gerard L'Estrange Turner, "Mathematical Instrument-Making in London in the Sixteenth Century," in *English Map-Making, 1500–1650: Historical Essays*, ed. Sarah Tyacke (London: British Library, 1983), 93–106, esp. 99 and 102 (pl. 49), and Joyce Brown, *Mathematical Instrument-Makers in the Grocers' Company, 1688–1800, with Notes on Some Earlier Makers* (London: Science Museum, 1979), 58–61.

37. The general map is signed "A. RYT. S." See Sylvia Mann and David Kingsley, *Playing Cards Depicting Maps of the British Isles, and of the English and Welsh Counties* (London: Map Collectors' Circle, 1972), 4–5; Arthur Mayger Hind, "An Elizabethan Pack of Playing Cards," *British Museum Quarterly* 13 (1938–39): 2–4; and Skelton, *County Atlases*, 16–18.



FIG. 57.9. THOMAS HOOD, NORTHERN CELESTIAL PLANISPHERE, 1590. Line engraving with hand color. One of a pair of celestial planispheres drawn by the mathematician Thomas Hood and engraved by Augustine Ryther. Hood gave public lectures on their use, and they could be bought either separately or with the text of his lecture, *The Use of the Celestial Globe in Plano, Set Foorth in Two Hemispheres* (London: Thobie Cooke, 1590). For the practicing navigator they

represented a cheaper alternative to the celestial globe or the planispheric astrolabe. They were the first printed celestial charts produced in England and serve to emphasize not only how gifted an engraver Ryther was but also how large a contribution he made to the emerging London map trade. Size of the original: 56 × 56 cm. Photograph courtesy of the BL (Maps 184.h.1).

the Celestial Globe in Plano in 1590 and also produced a fine chart of the North Atlantic for the same author in 1592.³⁸ He appears to have acquired Saxton's plates and reissued the county maps, which are sometimes found bound together with his Armada charts. There is no doubt

38. Waters notes that the chart is "a beautiful example of what must be the first printed English plane chart designed expressly for navigation and instruction . . . a delicate piece of work, and as a sailing chart much superior to Hondius's engraving of the coasts of north-west Europe in *The Mariners Mirrour*" (Waters, *Art of Navigation*, 198–99).

of Ryther's talent and importance, but somewhere his career took a wrong turn. He perhaps ran into debt, but whether this was the case or whether it was a matter "onely upon malice and not of any Just cause," he is last heard of imprisoned in the Fleet in 1595—"this poore Gent. Mr Ryther."³⁹

A striking contrast to Ryther's career is offered by that of Jodocus Hondius the Elder, who, from outwardly similar beginnings, went on to become one of the most successful international publishers of his time. His network of family and trade relationships eventually led to his becoming the pivot on which the whole of the map trade in northern Europe turned—but this is to anticipate his later career in Amsterdam, and the emphasis here is on the years he spent in England. Although certainly in London as early as 1583, no work can confidently be ascribed to him earlier than the charts he engraved for the English edition of Waghenauer's *Mariners Mirrour* in 1588.⁴⁰ From this date on, a number of important and interesting maps appeared in rapid succession: the miniature world map of 1589⁴¹ and the roundel maps of 1589–90,⁴² the sheet maps of the world and continents of similar date,⁴³ the *Typus Angliæ* map of 1590 (fig. 57.10),⁴⁴ a similar map of France in 1591,⁴⁵ a map of Ireland, *Hyberniæ novissima descriptio* (1591),⁴⁶ and the maps combined with genealogical tables of England and Portugal (both 1592).⁴⁷ Also from 1592 are the celebrated Emery Molyneux globes, the first engraved in England and, as Hondius later pointed out, the largest yet produced anywhere (fig. 57.11).⁴⁸ It was a crucial period in shaping his career, and he maintained lasting contacts in the London trade that ensured him a continuing role in English map production long after his departure.

Ryther's Armada plates were printed by the London bookseller John Wolfe, who registered copyright in both text and plates at Stationers' Hall in 1590. Wolfe's turbulent career, his clashes with his old master John Day and the Stationers' Company, his imprisonments, secret presses, and faked imprints have sometimes obscured his other achievements.⁴⁹ He had an extensive international trade and was "the father of news publishing" in London.⁵⁰ He was moreover the first London bookseller to produce a substantial sequence of books illustrated with maps. Some of these are well known—most notably his edition of Jan Huygen van Linschoten's *Discours* in 1598 (fig. 57.12). Others are less familiar, but here was a London bookseller regularly commissioning maps in a way that had not happened before.⁵¹

Other notable contributions at this time include the various separately published maps of the Italian cartographer Baptista Boazio, including *The Famous West Indian Voyage Made by the Englishe Fleete* (1589?), *The True Description or Draffte of that Famous Ile of Wighte* (1591) (plate 71), and *Irelande . . . Diligently and Truly Collected* (1599).⁵² The surveyor John Norden had in-

tentions in the 1590s to improve upon Saxton's county maps.⁵³ Although initially given encouragement and some fitful financial support, his series of maps lan-

39. Quoted in Brown, *Mathematical Instrument-Makers*, 60.

40. Hondius appears on a 1583 parish list of aliens as Jost de Hondt, a Dutch "grauer," dwelling in the parish of St. Thomas the Apostle in Southwark. See R. E. G. Kirk and Ernest F. Kirk, eds., *Returns of Aliens Dwelling in the City and Suburbs of London from the Reign of Henry VIII to that of James I*, 4 vols. (Aberdeen: Huguenot Society of London, 1900–1908), 2:332.

41. Figure 3.29 in this volume and Shirley, *Mapping of the World*, 183–84 (no. 164).

42. Figure 44.5 in this volume and Günter Schilder, "An Unrecorded Set of Thematic Maps by Hondius," *Map Collector* 59 (1992): 44–47.

43. The maps are only known in states bearing a Paris imprint of 1602, but the map of the Americas is dated 1589 and, although the point is disputed, this is probably the date at which they were originally engraved. See Hind, *Engraving in England*, 1:27–28; Burden, *Mapping of North America*, 174–76; and Shirley, *Mapping of the World*, 247–49 (no. 233).

44. Shirley, *Maps of the British Isles*, 70.

45. Günter Schilder, "Jodocus Hondius, Creator of the Decorative Map Border," *Map Collector* 32 (1985): 40–43.

46. Hind, *Engraving in England*, 1:206, and J. H. Andrews, *The "Hyberniæ Novissima Descriptio" by Jodocus Hondius* (Belfast: Linen Hall Library, 1983).

47. Shirley, *Maps of the British Isles*, 72–73, and Tony Campbell, "Laying Bare the Secrets of the British Library's Map Collections," *Map Collector* 62 (1993): 38–40.

48. Helen Wallis, "'Opera Mundi': Emery Molyneux, Jodocus Hondius and the First English Globes," in *Theatrum Orbis Librorum: Liber Amicorum Presented to Nico Israel on the Occasion of His Seventieth Birthday*, ed. Ton Croiset van Uchelen, Koert van der Horst, and Günter Schilder (Utrecht: HES, 1989), 94–104.

49. See Harry R. Hoppe, "John Wolfe, Printer and Publisher, 1579–1601," *Library*, 4th ser., 14 (1933–34): 241–88; Clifford Chalmers Huffman, *Elizabethan Impressions: John Wolfe and His Press* (New York: AMS Press, 1988); and Denis B. Woodfield, *Surreptitious Printing in England, 1550–1640* (New York: Bibliographical Society of America, 1973).

50. P. M. Handover, *Printing in London from 1476 to Modern Times: Competitive Practice and Technical Invention in the Trade of Book and Bible Printing, Periodical Production, Jobbing, etc.* (Cambridge: Harvard University Press, 1960), 103–9, quotation on 103. See also Matthias A. Shaaber, *Some Forerunners of the Newspaper in England, 1476–1622* (Philadelphia: University of Pennsylvania Press, 1929), esp. 284–88.

51. See, for example, John Eliot, *The Survey or Topographical Description of France: With a New Mappe . . .* (London: John Wolfe, 1593); Cornelius Gerritsz., *An Addition to the Sea Journal of the Hollanders unto Java* (1598); and Barent [Bernardt] Langenes, *The Description of a Voyage Made by Certaine Ships of Holland* (London: I. Wolfe, 1598). Some of Wolfe's newsbooks also contained maps.

52. For the first of these, see Burden, *Mapping of North America*, 87–88. For the map of the Isle of Wight, see R. A. Skelton, "Two English Maps of the Sixteenth Century," *British Museum Quarterly* 21 (1957–59): 1–2. For the map of Ireland, see J. H. Andrews, *Shapes of Ireland: Maps and Their Makers, 1564–1839* (Dublin: Geography Publications, 1997), esp. 57–88. For Boazio generally, see Lynam, *Mapmaker's Art*, 75–78.

53. See Frank Kitchen, "John Norden (c. 1547–1625): Estate Surveyor, Topographer, County Mapmaker and Devotional Writer," *Imago Mundi* 49 (1997): 43–61; Alfred W. Pollard, "The Unity of John Norden: Surveyor and Religious Writer," *Library*, 4th ser., 7 (1926–



FIG. 57.10. JODOCUS HONDIUS THE ELDER, *TYPVS ANGLIÆ*, 1590. A delicately engraved map with an elaborate border featuring a portrait of Elizabeth I and representative figures of a nobleman, his wife, and London citizens. The Latin text praises an orderly and prosperous nation, and alongside the instruments of music and war there are Tudor roses and emblems of wealth and wool. It was in England that Hondius first developed this style of decorated map. One of the purposes of such maps is suggested by the fact that in the late

nineteenth century a fragment of *Typvs Angliæ* was discovered in a shelter erected on Novaya Zemlya by the crew of Willem Barents. The fragment was a relic of a parcel of prints and maps taken by Barents on his voyage of 1596 and presumably intended for purposes of barter or communication with the peoples he was to meet.

Size of the original: 15.3 × 21.5 cm. Photograph courtesy of the BL (*Maps 1175[21.]).

guished, with some never reaching print.⁵⁴ It is nonetheless possible to see from the maps that were published, *London, Myddlesex, and Westminster* (all 1593),⁵⁵ *Surrey* 1594,⁵⁶ *Hartfordshire* 1598,⁵⁷ and *Sussex* 1595, why his contemporaries regarded him so highly. But Norden was not the only project to fail of completion and the uncertainty of the developing market is suggested by the similar failure of other ventures—not least the unfinished county series prepared by the herald and topographer William Smith (fig. 57.13).⁵⁸

Given the extensive personal contacts that Ortelius had in England, it is surprising that no English editions of the

25–28 (reprinted from *Cartographic Journal* 22 [1985]: 54–56). Norden's views of London and London Bridge, as well as his textbook of surveying, *The Surueyors Dialogue . . .* (1607) are also worthy of note.

54. A manuscript volume presented to the queen in 1595 (BL, Add. MS. 31,853) contains “a pathetic letter describing his plans, labours, sacrifices and disappointments,” Lynam, *Mapmaker's Art*, 70.

55. In John Norden, *Speculum Britanniae: The First Parte an Historicall, & Chorographicall Discription of Middlesex* (London, 1593), between 26–27, 14–15, and 42–43, respectively. See Henry B. Wheatley, “Notes upon Norden and His Map of London, 1593,” *London Topographical Record* 2 (1903): 42–65.

56. R. A. Skelton, “John Norden's Map of Surrey,” *British Museum Quarterly* 16 (1951–52): 61–62.

57. In John Norden, *Speculi Britanniae Pars: The Description of Hartfordshire* (1598), between 8–9.

58. See R. A. Skelton, “Four English County Maps, 1602–3,” *British Museum Quarterly* 22 (1960): 47–50.

27): 233–52; and Heather Lawrence, “John Norden and His Colleagues: Surveyors of Crown Lands,” *Map Collector* 49 (1989):



FIG. 57.11. DETAIL OF THE MOLYNEUX TERRESTRIAL GLOBE, 1592. Although it was reported from London as early as 1497 that John Cabot had produced a globe showing the tracks of his voyages, the only surviving globes made in England before 1640 are the twin terrestrial and celestial globes engraved by Jodocus Hondius and printed and manufactured by Emery Molyneux in 1592. The terrestrial globe shows details of English discoveries in the Atlantic and Pacific quite unmatched in any other representation of the period. Molyneux was an instrumentmaker, mathematician, and maker of ordnance, who had sailed with Drake, quite plausibly on the voyage of circumnavigation. Of his further activities there is little record, although it seems certain that a smaller pair of globes was also manufactured, and Thomas Jenner published an engraved “The mariners compass” bearing his name in 1623. Diameter of the original: ca. 64 cm. Photograph courtesy of the BL (Maps 8.bb.10).

Theatrum orbis terrarum were attempted during his lifetime. The earliest to appear were two early seventeenth-century miniature editions. One, *An Epitome of Ortelius: His Theatre of the World* (1601?), bears the imprint of John Norton, while the other, perhaps a better production with revised text and plates, and the maps now graduated for latitude and longitude, was published by James Shaw. Shaw is as obscure as Norton is well known. Only recorded for a handful of titles, his *Abraham Ortelius: His Epitome of the Theater of the Worlde* (1603), is the only one of consequence. The appearance of these rival productions just at the close of the Elizabethan period encapsulates the various contradictions inherent in the map trade at this time. They appear to look forward, for, in whichever order they appeared, “these two little books were the earliest world atlases to be published in England.”⁵⁹ In fact they look backward. The Ortelius maps had largely been superseded, and, to judge from the number of surviving copies, neither publication had any significant success. In the number of maps they contain they far exceed any previous London publication, but both were “bought-in” productions, actually printed in Antwerp from plates already in existence.

The reign of James I (James VI of Scotland) opened with the appearance of brightness and promise. The early years of his reign saw more maps launched on the British market than at any other time in the period. Four-sheet wall maps of the British Isles produced by Woutneel and John Speed both appear at about the time of the accession in 1603, presumably intended to communicate in a graphic way the union of the crowns of England and Scotland.⁶⁰ Norton followed his miniature edition of the Ortelius atlas with a full-sized folio edition, published in association with John Bill. The title page is dated 1606, although a reference to Speed’s *Theatre of the Empire of Great Britaine* (1611) as “lately set forth” casts some doubt on the real date of publication. The maps were printed from the original plates in the Netherlands, but in this case the text was added in London. It was an ambitious project—the most extensive of all the many editions of Ortelius’s atlas, with 166 engraved plates, the largest collection of intaglio plates yet to appear in England and physically the largest

59. R. A. Skelton, “The First English World Atlases,” in *Kartengeschichte und Kartenbearbeitung: Festschrift zum 80. Geburtstag von Wilhelm Bonacker*, ed. Karl-Heinz Meine (Bad Godesburg: Kirschbaum, 1968), 77–81, esp. 80. See also R. A. Skelton, “Bibliographical Note,” in *The Theatre of the Whole World, London, 1606*, by Abraham Ortelius (Amsterdam: Theatrum Orbis Terrarum, 1968), V–XVII. One would suppose from bibliographical and other internal evidence that the Norton version, undated but printed for him at Antwerp by Henricus Swingenius, is in fact the earlier production.

60. Shirley, *Maps of the British Isles*, 103–4 and 106–7; Edward Lyman, “Woutneel’s Map of the British Isles, 1603,” *Geographical Journal* 82 (1933): 536–38; and Günter Schilder and Helen Wallis, “Speed Military Maps Discovered,” *Map Collector* 48 (1989): 22–26.

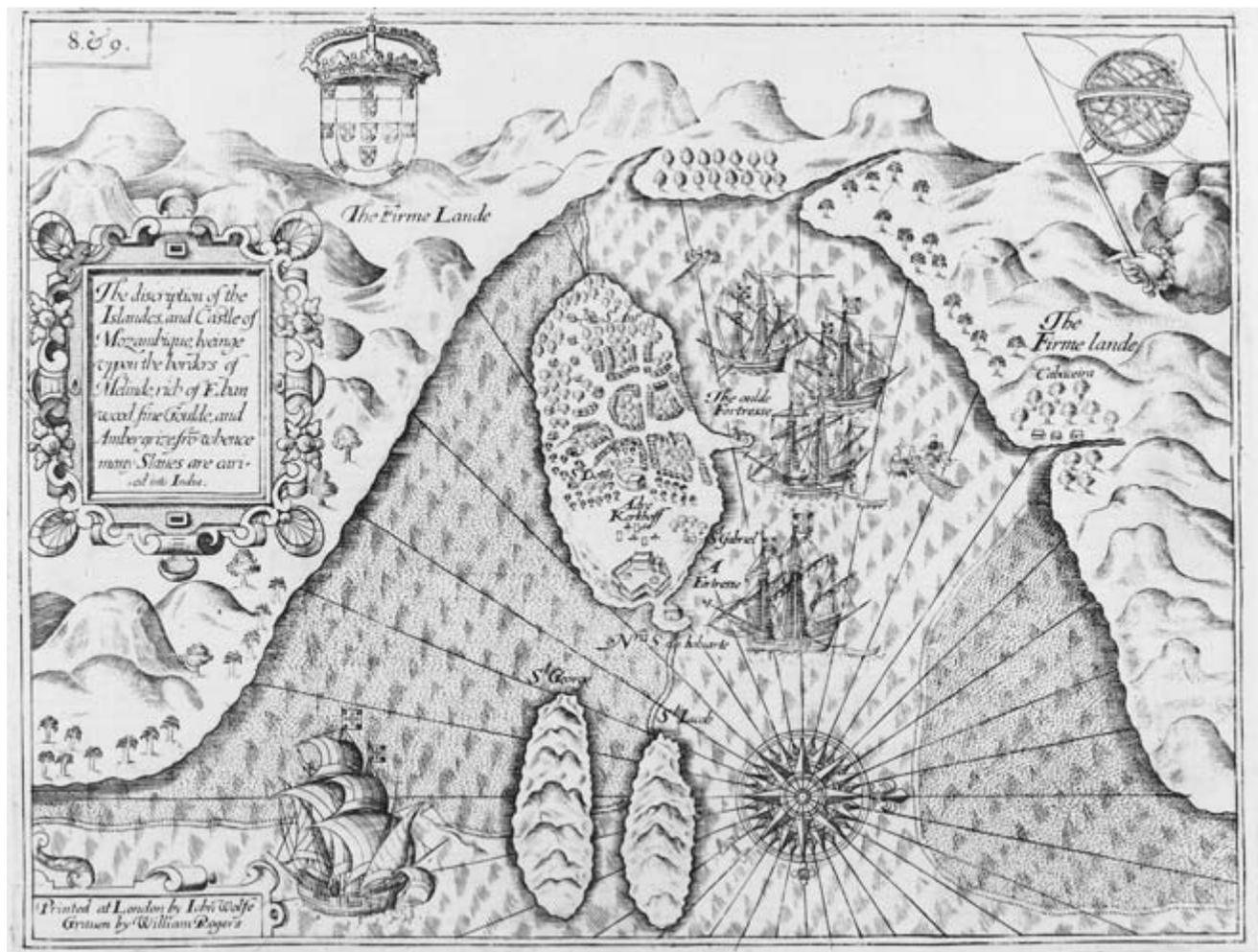


FIG. 57.12. *THE DISCRIPTION OF THE ISLANDES, AND CASTLE OF MOZAMBIQUE*, 1598. One of the maps engraved by William Rogers for John Wolfe's edition of Linschoten's *Discours* (1598). Wolfe was the first of the London publishers to use maps regularly for book illustration. His motives were of a practical kind and in this instance perfectly clear. The translation from the Dutch had been suggested to him by Richard Hakluyt and, in editing the book himself, he is explicit in his intention to encourage further English explo-

ration for the purposes of trade—"for the further benefite and commodity of this Land by exportation of such thinges wherein we doe abound, and importation of those *Necessities* whereof we stand in Neede" (opp. A3 verso).

Size of the original: 18.6 × 24.6 cm. Jan Huygen van Linschoten, *His Discours of Voyages into ye East & West Indies* (London: Iohn Wolfe, 1598), map bound between pp. 8–9. Photograph courtesy of the BL (G.7008).

volume yet put out by the London trade.⁶¹ As with his earlier miniature edition it does not survive in large numbers and was never reprinted. Undoubtedly more popular, and perhaps more relevant to the context of London map production, were the map-illustrated editions of William Camden's *Britannia* that Norton copublished with George Bishop in 1607 and 1610.⁶² Here for the first time was a full set of folio maps (fifty-seven in all) produced entirely by engravers permanently based in London.

The partnership established by John Sudbury and his nephew George Humble around the turn of the sixteenth century is well known in British cartographic history for publishing the maps of John Speed.⁶³ The partners also have a wider significance in the history of publishing be-

cause they dealt in more than just maps, carrying a wide range of engraved material—prints, portraits, patterns, emblem-books, and writing masters.⁶⁴ They were the first specialist London printsellers, and it is the breadth of their output that probably provides the clue to their viability and continuing success. It is tempting to speculate that they took over John Wolfe's rolling press: their premises were in Pope's Head Alley, where Wolfe had

61. Skelton, "First English World Atlases," 78.

62. Skelton, *County Atlases*, 25–29.

63. Skelton, *County Atlases*, 242.

64. The range and flavor of their stock is well summarized in Rosentberg, *Graphic Arts*, 7–16.



FIG. 57.13. WILLIAM SMITH, “VIGORNIENSIS (VULGO WORCESTERSHIRE) COMITAT: DESCRIPTIO,” 1602. A manuscript in ink and colors by William Smith. One of a never completed series of county maps apparently intended for publication by Hans Woutneel. The manuscript shows clear signs of having been used by the engraver (almost certainly Jodocus Hondius the Elder) in the preparation of the printing plate: the circles and dotted circles at the center of each symbol for a town or village are represented only by holes. The manuscript

was presumably punched clean through from the back directly on to the plate. Surviving printed versions of the map (which omit both Woutneel’s name and the date) suggest that the design and arrangement of the decorative features were left to the expertise and judgment of the professional engraver. No attempt was made to reflect or even adapt Smith’s own designs. Size of the original: 36.5 × 48.9 cm. Photograph courtesy of the BL (Maps C.2.cc.2[15]).

once been, and early in their career they certainly used his London-based engravers. Nonetheless, when it came to the production of the Speed county atlas, they sent all or most of the work to Amsterdam to be engraved in the workshops of Hondius. The resultant atlas, published in 1611–12 under the title *The Theatre of the Empire of Great Britaine*, was the most successful British map publishing venture of the period. The ornate maps, with their inset plans of the major towns, struck an immediate and lasting chord with the public, and through this and many subsequent editions the maps remained, as far as the London trade was concerned, “the most valuable cartographic property of the 17th century” (fig. 57.14).⁶⁵

The appearance of such a number of major projects clustered together in a short space of time was the high-water mark of London map production in the period under review. It is nonetheless noticeable that, these projects apart, very little else was being produced. The array of separately published wall maps that appeared in the last years of the previous reign dried up. The theoretical maps published by the mathematicians of the 1590s ceased to appear. Even the kind of map-illustrated travel books put out

65. Skelton, *County Atlases*, 30–44, quotation on 234, and R. A. Skelton, “Tudor Town Plans in John Speed’s *Theatre*,” *Archaeological Journal* 108 (1951): 109–20.



FIG. 57.14. JOHN SPEED, *GLAMORGAN SHYRE: WITH THE SITUATIONS OF THE CHEIFE TOWNE CARDYFF AND ANCIENT LANDAFFE DESCRIBED*, 1607. A proof state dated 1607 of the engraving by Jodocus Hondius the Elder for Speed's *Theatre of the Empire*. In this unfinished state the sea has not yet been shaded, and the names of those involved, Hondius, Speed himself, and his publishers, John Sudbury and George Humble, have not yet been inserted. It is indicative of the time and expense involved in putting together a major project that the date was altered before final publication

by John Wolfe were no longer being produced. The number of fresh maps put on the market after 1612 reduced to a trickle. Sudbury retired in 1618, but the enduring success of Speed's *Theatre* provided a platform for Humble eventually to publish Speed's *A Prospect of the Most Famous Parts of the World* (1627), the first general world atlas of British authorship. The plates were again engraved in Amsterdam. Humble also acquired from the Low Countries the plates of the miniature county maps engraved by Pieter van den Keere, which he augmented and published as a pocket edition of Speed.⁶⁶ But although Humble was not without competition in the relatively new

to 1610, and the finished atlas was not published until 1612, several years after the engraving of the plates had commenced, and four years after Humble had received his royal privilege for publication.

Size of the original: 38 × 50.5 cm. John Speed, *The Theatre of the Empire of Great Britaine: Presenting an Exact Geography of the Kingdomes of England, Scotland, Ireland . . .* (London: John Sudbury and Georg Humble, 1611), insert between 105–6. Photograph courtesy of the BL (Maps C.7.c.5[20]).

trade in prints and portraits, his rivals seem hardly to have dealt in maps at all. The printseller Thomas Jenner later became prominent, but did not deal much in maps until the Civil War (an exception is shown in fig. 57.17 below). William Web, who at some stage came into possession of

⁶⁶ *England Wales Scotland and Ireland Described and Abridged . . . from a Farr Larger Voulume done by John Speed* ([London: G. Humble], 1627). See Skelton, *County Atlases*, 22–25, 50–51, and 57–61. The date and context of an earlier version, *England, Wales, and Ireland: Their Severall Counties, Abridged from a Farr Larger, Vollume by J. Speed* (London: G. Humble), are uncertain.

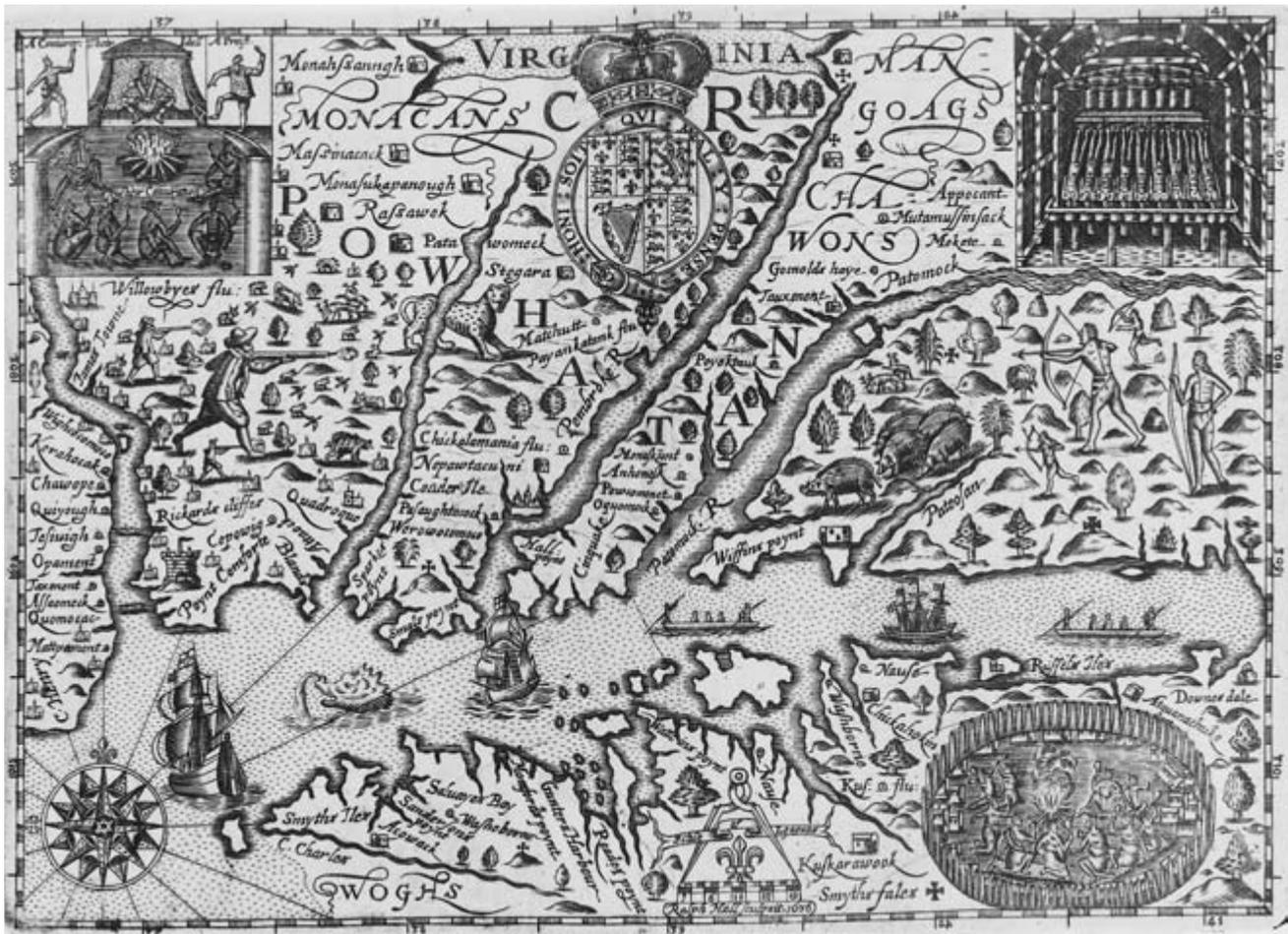


FIG. 57.15. RALPH HALL, VIRGINIA, 1636. A map dated 1636 engraved by Ralph Hall and produced as a postpublication insertion for Michael Sparke's and Samuel Cartwright's edition of Mercator's atlas. Sparke asserted on the last page of the book that the reason the map was not ready in time for the original publication was that there was "a more exact Map drawing in that Country [Virginia], whose Platforme is not yet come over." Hall's map would nevertheless appear to be little more than an indifferent copy of the earlier map by Captain John Smith with embellishments from the drawings of John White already published by Theodore de Bry. Hall has named

a promontory in the center of the map after himself ("Hall: poynnt") and produced a rumbustious piece of engraving, but the map is perhaps indicative of a lack of ambition in the latter part of the period.

Size of the original: 17 × 24 cm. Gerardus Mercator, *Historia Mundi; or, Mercator's Atlas, Containing His Cosmographically Description of the Fabricke and Figure of the World*, trans. Wye Saltonstall (London: T. Cotes for Michael Sparke and Samuel Cartwright, 1635), opp. 904. Photograph courtesy of the BL (Maps C.3.b.1).

the plates for the Saxton county maps, seems not to have published them until the 1640s.⁶⁷

As far as the mainstream book trade was concerned, there were by now no more than a handful of ventures involving maps. The bookseller Henry Fetherstone illustrated Samuel Purchas's *Purchas His Pilgrimes* (1625) with what are listed in the preliminaries as "Maps and Peeces cut in Brasse or Wood," some freshly engraved, but mainly comprising second-hand plates originally produced by Hondius in Amsterdam for his *Atlas minor* (1607). Michael Sparke published John Smith's *Generall Historie of Virginia* (1624) and Luke Fox's *North-West Fox* (1635), both with individual maps of significant his-

torical interest. Sparke also brought out a more elaborate book of "eye-travell" in 1635—a reduced format Mercator atlas reusing the by-now third-hand Hondius *Atlas minor* plates and introducing a number of new ones, slightly larger in format and for the most part engraved in London (fig. 57.15).⁶⁸ John Bill produced a pocket edition of Camden's *Britannia* with miniature county maps

67. Skelton, *County Atlases*, 70–72.

68. Gerardus Mercator, *Historia Mundi; or Mercator's Atlas, Containing His Cosmographically Description of the Fabricke and Figure of the World*, trans. Wye Saltonstall (London: T. Cotes for Michael Sparke and Samuel Cartwright, 1635). This was the first British publication to use the word "atlas" in its title.

in 1626, evidently to rival Humble's pocket Speed, although not enjoying the same success.⁶⁹ Matthew Simmons published a similar pocket book, *A Direction for the English Traveller*, in 1635.⁷⁰ This book ultimately fared better than the Bill atlas, and the plates were later taken over by Jenner, remaining in print for a number of years. It was nonetheless a modest enough piece of work when compared with the great atlases of the British Isles already in preparation in Amsterdam. The booksellers Thomas Archer and Nathaniel Newbery, neighbors of Humble in Pope's Head Alley, were both publishers of *corantos* (newsbooks) and produced a number of news-related maps, not all of which survive.⁷¹ But no outright specialists in map or atlas production emerged, and such publishers of engraved and pictorial material as there were, Sudbury and Humble included, dealt mainly in other things. The map trade in London had become hardly more than a peripheral activity.

THE ENGRAVERS

It has been customary to suppose that one of the principal constraints on the development of a fully fledged map trade was a dearth of skilled engravers. Skelton advanced this case, making the undeniable point that all the early English-language world atlases were engraved abroad and arguing that it was "for want of native engravers . . . [that] the demand for printed maps in England during this period had to be mainly satisfied by the cartographic industry of the Netherlands."⁷² This proposition has been echoed in other studies of the period, but it is one that perhaps requires more rigorous examination. Skilled engravers were an essential requirement for map publishing, but a brief survey of the map engravers actually at work in London and the range and especially the quantity of their work may lead to a somewhat different conclusion.

From the mid-sixteenth century at least, work of excellent quality was occasionally produced in London. Geminus and Reynolds were both first-rate engravers, as was Richard Lyne (the engraver of figure 57.7 above), yet they are known for only a handful of maps between them. The instrumentmaker Humfrey Cole engraved only a single map, the beautifully worked Canaan, "said to be grav'd on a silver plate," that was made for Juggle's "Bishops' Bible" in 1572.⁷³ Of the various engravers employed on the earliest English atlases, only Reynolds, Ryther, Hondius, and Remigius Hogenberg are known for further cartographic work in England, work limited in Hogenberg's case solely to the John Hooker map of Exeter (1587). Charles Whitwell, apprenticed to Ryther in 1582, is known for no more than a recently discovered small silver globe⁷⁴ and five maps, including Norden's *Surrey* (1594) and *A New Description of Kent* (1596) by

Philip Symonson (fig. 57.16). Robert Becket engraved five splendid maps for Wolfe's edition of Linschoten's *Discours* in 1598 but is otherwise virtually unrecorded. Christopher Schwytzer, originally from Zurich, is known only for two maps, Norden's *Sussex* and a small map of Durham, both in 1595. Theodore de Bry, who engraved ten maps for the Waghenaer atlas, soon moved on to Frankfurt. Pieter van den Keere followed Hondius to the Netherlands.⁷⁵ Benjamin Wright, who engraved a pair of celestial and terrestrial charts apparently intended to illustrate John Blagrave's *Astrolabium vranicum generale* (1596), also migrated to Amsterdam, there producing Gabriel Tatton's maps of California and the Pacific (both dated 1600).⁷⁶ He later moved on to Bologna to work for Giovanni Antonio Magini.

The most prolific of the native map engravers was William Hole, who produced twenty-one maps for the 1607 edition of *Britannia*, the seminal John Smith map, *Virginia: Discovered and Discribed* (1612),⁷⁷ maps for Sir Walter Raleigh's *History of the World* (1614), some

69. *The Abridgment of Camden's Britan[n]ia with the Maps of the Seuerall Shires of England and Wales* ([London]: Iohn Bill, 1626); Skelton, *County Atlases*, 53–55.

70. *A Direction for the English Traveller* . . . (London: Mathew Simmons, 1635). There was perhaps also an earlier edition now lost. See Skelton, *County Atlases*, 20, 63–65, and 243.

71. Two surviving examples of Archer's news maps are *A Thirde and Last Mape, Both of the Sedg of Breda by Spinola* . . . (BL, Maps 150.e.13[50]) and *A Compendious Card or Map of the Two Armies Lying by the R[hine]* . . . (Oxford, Corpus Christi College). Both are engraved maps with explanatory letterpress published in London about 1624. Richard Norwood, *A Plott or Mapped of Bermudas* . . . (later utilized by Speed) was entered to Newbery at Stationers' Hall in 1621 (Arber, *Transcript of the Registers*, 4:25 and 39).

72. Skelton, "First English World Atlases," 77.

73. A tradition preserved by George Vertue (quoted in Hind, *Engraving in England*, 1:80).

74. Elly Dekker and Gerard L'Estrange Turner, "An Unusual Elizabethan Silver Globe by Charles Whitwell," *Antiquaries Journal* 77 (1997): 393–401.

75. For his limited work in England, see Hind, *Engraving in England*, 1:203–9; Johannes Keuning, "Pieter van den Keere (Petrus Kaerius), 1571–1646(?)" *Imago Mundi* 15 (1960): 66–72. Van den Keere claims further attention as the publisher of the first series of English-language *corantos*—in effect the first English newspapers—from Amsterdam in 1620–21. See Folke Dahl, "Amsterdam—Cradle of English Newspapers," *Library*, 5th ser., 4 (1949–50): 166–78, and R. A. Skelton, "Pieter van den Keere," *Library*, 5th ser., 5 (1950–51): 130–32.

76. Plate 72 in this volume; Hind, *Engraving in England*, 1:216–17; and Burden, *Mapping of North America*, 162–65.

77. Figure 59.12; the map was separately published, but generally found bound with John Smith, *A Map of Virginia, with a Description of the Countrey* . . . (Oxford: J. Barnes, 1612). Burden, *Mapping of North America*, 202–5, and Coolie Verner, *Smith's Virginia and Its Derivatives: A Carto-Bibliographical Study of the Diffusion of Geographical Knowledge* (London: Map Collectors' Circle, 1968). I am indebted to both Philip Burden and Joseph Walker for these references.



FIG. 57.16. DETAIL FROM PHILIP SYMONSON, *A NEW DESCRIPTION OF KENT*, 1596. Detail of the Rochester and Maidstone area from a fine late-sixteenth-century engraved map of Kent made at about double the scale that Saxton had employed. The map is regarded as technically the most accomplished county map printed in England before the eighteenth century. Symonson, who was surveyor of the Rochester Bridge Estates, renders the physical appearance of the terrain with much telling detail—the navigable limit of the Medway is indicated by a change in the delineation of the current. The representation of the churches is not simply a matter of convention, and the tall spire of All Saints at Maidstone can be clearly picked out. Although engraved by Charles Whitwell and dated 1596, the circumstances of the map's original publication are unknown. The printing plates later passed, along with those for a number of other maps of this period, into the hands of the seventeenth-century printseller, Peter Stent. Size of the original: 53 × 80 cm; size of this detail: ca. 13.6 × 9.4 cm. Photograph courtesy of the BL (Maps M.T.6.f.1[4]).

miniature maps on a set of playing cards,⁷⁸ and almost certainly the curious poetic maps for Michael Drayton's *Poly-Olbion* (1612–22).⁷⁹ His output is matched by that of William Kip, who engraved Norden's *Hartfordshire* (1598), thirty-four maps for Norton and Bishop's 1607 edition of Camden's *Britannia*, Woutneel's wall map of

the British Isles (1603), and Edward Wright's two-sheet map of the world of 1610.⁸⁰ This list does not, however, represent a remarkable tally for someone who arrived in England from Utrecht almost certainly as early as 1585. Like other early engravers, Kip appears to have had a parallel and perhaps more regular career as a goldsmith, probably engraving decoration and coats of arms on gold and silver plate.⁸¹ The same is almost certainly true of William Rogers, most gifted of the early native engravers. Rogers's modest cartographic output comprised maps for John Wolfe (such as fig. 57.12), for a Bishop edition of Camden's *Britannia* (1600) and an intriguing early proof or sample of Speed's map of Cheshire dating from about 1604.⁸² Rogers's apprentice, Thomas Cockson, engraved the Boazio map of Cádiz in 1596, but (apart from some portraits with cartographic backdrops) he seems not to have been required to produce any further maps.⁸³ The London-born Renold Elstracke was a specialist copper-plate engraver, known for around a hundred separate printed engravings, yet these were mainly portraits and illustrations.⁸⁴ His modest output of maps includes three examples for Wolfe in 1598, Boazio's *Irelande* in 1599, Speed's wall map of the British Isles of about 1603, Speed's 1611 map of Canaan designed to be inserted in Bibles, William Baffin's *Description of East India* (1619; see fig. 59.9), and some maps for *Purchas His Pilgrimes* (1625).

For the latter part of the period, with much of the work now being, for whatever reason, sent abroad, the number of maps signed by engravers working in London is very small indeed. Competently engraved maps are known by Simon van de Passe, Robert Vaughan, Thomas Cecil,

78. Mann and Kingsley, *Playing Cards*, 5–16 and 30–31, and D. Hodson, *The Printed Maps of Hertfordshire, 1577–1900* (London: Dawsons, 1974), 223.

79. Skelton, *County Atlases*, 45–47 and 51–52, and Gilbert Cope, "The Puzzling Aspects of Drayton's Poly-Olbion," *Map Collector* 17 (1981): 16–20.

80. For Kip's work, see Hind, *Engraving in England*, 1:210–11; Shirley, *Maps of the British Isles*, 103–4; and idem, *Mapping of the World*, 291–92 (no. 272).

81. Kirk and Kirk, *Returns of Aliens*, 3:146, 160, 177, and 194, stating his place of origin, the length of time he had been resident, and describing Kip variously as "jowler" and "goaldsmith." See also Antony Griffiths, *The Print in Stuart Britain, 1603–1689* (London: British Museum, 1998), 41 and 44–45.

82. Hind, *Engraving in England*, 1:280, and Skelton, *County Atlases*, 35.

83. Hind, *Engraving in England*, 1:239–57. Cockson was apprenticed to Rogers in 1584 (London, Library of the Worshipful Company of Goldsmiths, Apprentice Book 1:57). I owe this and other information from the records of the Worshipful Company of Goldsmiths to the generous assistance of David Beasley and his colleagues at Goldsmiths' Hall.

84. Hind, *Engraving in England*, 2:163–214, and Griffiths, *Print in Stuart Britain*, 45–53.

and Vaughan's apprentice Ralph Hall, but none of them was ever required to undertake any significant amount of cartographic work. Even though by 1640 one can point to a great variety of map work engraved in London—with more than one hundred separate maps engraved by English-born engravers—what is striking is how few of the engravers produced more than a handful of maps. Although it would be foolish to argue that there was a superfluity of skilled hands, it would seem that problems other than a lack of engravers may have been of more critical importance.

REGULATION AND CONTROL

An impediment to the development of the map trade sometimes adduced is the degree of regulation and control exercised over publishing in England. Although not always wholly efficient—and although the apparatus of control was in large part administered by booksellers and printers themselves under the aegis of their powerful trade guild, the Worshipful Company of Stationers—that control was rigorous and far-ranging. The primary purpose was plainly censorship—to prevent the publication and distribution of material deemed seditious, subversive, irreligious, or otherwise unwelcome.⁸⁵ A subsidiary purpose was to protect, by some form of copyright, the producers of original work from the plagiarism that might otherwise undermine the economic basis of their activities. These somewhat disparate purposes were sometimes jointly addressed by the device of granting a monopoly—allowing publication rights in a whole class of material to a single individual—a strategy that came to cause difficulties of its own. There were also some significant restrictions on trading and the way in which individuals were admitted to and allowed to function within the trade.

CENSORSHIP

Although maps have an innate political dimension and their circulation and content have often been made subject to official restriction, they were not so regulated in England during this period. The two most extensive projects of the sixteenth century, the atlases of Saxton and of Waghenauer, owed much to government support. In both cases the state was prepared not only to authorize but actively to encourage the publication of detailed maps of sovereign territories and sea coasts, even at a time when a Spanish invasion was probable and even imminent. Although occasional examples are found of the kind of strategic suppression that kept, for example, the full extent of Drake's Pacific discoveries from appearing on published maps for some years after his return, the general policy was nonetheless a liberal one.⁸⁶ License to publish was necessary for all printed matter, but for purely car-

tographic material this seems to have been a formality. Straightforward censorship of maps was not a factor, but what did affect the development of the trade was the loss or suppression of so many other publications in which maps might have appeared. Although digests of foreign news were permitted from time to time, newspapers or journals containing domestic news were prohibited until 1641.⁸⁷ As maps are almost indispensable to news reporting, it is easy to imagine that significant numbers of maps were never produced and an obvious market for them was simply never created.

COPYRIGHT

Maps are particularly vulnerable to plagiarism, but although they were sometimes copied, outright piracy does not seem to have been a pressing problem. Physical possession of the elaborately engraved and expensively produced printing plates would generally have offered publishers as much copyright protection as they actually required.⁸⁸ Even so, formal mechanisms for protecting copyright did exist, and mapmakers certainly availed themselves of them. The normal method was simply to register or "enter" the title of the work or "copy" at Stationers' Hall. The Stationers themselves from that point on had ample scope to protect "right" in "copy" so entered, with legal powers to arbitrate, confiscate, and even to destroy presses used for printing piracies.⁸⁹ Although after 1598 it became necessary to be a member of the Station-

85. Censorship predates the introduction of printing, but as far as printed books are concerned a proclamation was issued against fourteen named titles as early as 1530—and earlier licensing arrangements are inferred. See Alfred W. Pollard, "The Regulation of the Book Trade in the Sixteenth Century," *Library*, 3d ser., 7 (1916): 18–43, and D. M. Loades, "The Theory and Practice of Censorship in Sixteenth-Century England," *Transactions of the Royal Historical Society*, 5th ser., 24 (1974): 141–57.

86. For the suppression of Drake's discoveries, see Helen Wallis, "The Cartography of Drake's Voyage," in *Sir Francis Drake and the Famous Voyage, 1577–1580: Essays Commemorating the Quadricentennial of Drake's Circumnavigation of the Earth*, ed. Norman J. W. Thrower (Berkeley: University of California Press, 1984), 121–63, esp. 133–37.

87. Plant, *English Book Trade*, 47.

88. Skelton, *County Atlases*, 231.

89. The Stationers' Company, which traces its origins to the Middle Ages, was formally incorporated by royal charter in 1557 and given quite exceptional powers. In a perhaps cynical tradeoff, the Stationers accepted a complete monopoly of printing (except where special license under royal letters patent was obtained) in return for policing the output of the press. Further layers of licensing arrangements were also usually in force, but the Stationers maintained rights of search and seizure, powers to fine, and even to imprison without trial. The company had "so far as printing was concerned—nation-wide powers, almost as if it were an executive arm of the Government" (Cyprian Blagden, *The Stationers' Company: A History, 1403–1959* [Cambridge: Harvard University Press, 1960], 31). See also C. J. Sisson, "The Laws of Elizabethan Copyright: The Stationers' View," *Library*, 5th ser., 15 (1960): 8–20.

ers to benefit from this arrangement, map and print-sellers (who were seldom members of the company) could often come to some amicable arrangement with colleagues in the wider trade who were (fig. 57.17).⁹⁰ Many maps and map-illustrated books were registered in this fashion, but an alternative method of securing protection, one used by Saxton and others, was to seek a royal privilege or patent covering the work in question. Unlike the copyright conferred by entry in the Stationers' register, which appears to have been regarded as perpetual, these royal privileges, although granting prestige and more broadly drawn, generally ran only for a fixed period. That granted to Saxton in 1577 expired after ten years, which may have been too short wholly to achieve its purpose. Similar privileges later granted to George Humble in 1608 for the Speed county maps and to Aaron Rathborne and Roger Burges in 1618 for an abortive series of town plans were both for twenty-one years.⁹¹ The failure of the latter project illustrates the weakness of the system. The patent was granted, reasonably enough, to enable Rathborne to recoup his investment of time and expense, but the terms were so widely drawn, sweeping in books and printed descriptions as well as maps, that the whole of urban topography was in effect denied to everyone else. This may have been pardonable if Rathborne had produced any of what he promised, but as he did not, the fact is that there are no printed English town plans at all from the period of his privilege. That market was simply closed.

MONOPOLY

Rathborne's patent was not quite a monopoly. It gave him rights not over all town plans, merely over those of the principal towns named in the patent. But there were monopolies covering whole classes of publication. The earliest of these was that of 1544, by which Grafton and his then partner Edward Whitchurch were given a general patent covering all service books. This may well have made political sense in a period of acute religious controversy. The monopoly granted in 1552 covering all law books may have had similar merit, as too the grant to Bynneman in 1580 of the privilege of printing "all *Dictionaries* in all tongues," a class of book necessarily costly to produce and previously not attempted in the British Isles.⁹² Many such grants, which piled up in increasing numbers and reached into every area of the economy, were originally designed to protect and encourage enterprise and ambition. All too often, however, they became a cynical exercise in favor granting or revenue raising. The accretion of patents and privileges that eventually enmeshed the book trade undoubtedly came to damage the quality of printing and to stifle innovation. As far as maps were concerned the precise consequences are more difficult to unravel. A patent generally known as the "gram-

mar patent" was granted to Reyner Wolfe in 1547 principally relating to Greek and Latin grammars—more or less a monopoly over the provision of school textbooks. The patent also conferred not fully defined rights in maps, charts, and "other things of that kind."⁹³ Through several modifications and amplifications, this patent eventually passed to John Norton in 1603, by which time it may possibly have come to confer rights over the production of "all maps and charts."⁹⁴ The patent was, however, by this time under legal challenge from the holders of an overlapping patent, and it is difficult to be certain what the limits of Norton's privilege actually were. But with the exception of the maps of John Speed (which had their own royal patents), it is difficult to identify more than a handful of maps produced during the next few years other than those in which Norton was involved. Norton produced editions of the *Theatrum* and the *Britannia*, but those to whom the patent passed in rapid succession after his death in 1612 seemed to have had no interest in maps. To what extent the patent holders may have prevented others from entering the field remains unclear. This clouded position clearly did little to promote the map trade, and if this were not enough, there was worse in store. In 1618 the privilege was sought for a somewhat eccentric monopoly covering everything printed on one side of the paper only. The following year this extraordinary patent was formally granted for a period of thirty-one years. It was vigorously contested by the trade and equally vigorously defended by the patentees, Thomas Symcock and Roger Wood, both in reality assignees for the principal beneficiary, the royal favorite Marin de Boisloré. That maps were included under this "one side only" heading is made clear by their specific mention in various documents produced as the case rumbled on until the patent was finally annulled in 1631.⁹⁵ Both Speed and Humble were among the group of publishers that peti-

90. See Griffiths, *Print in Stuart Britain*, 15.

91. Arnold Hunt, "Book Trade Patents, 1603–1640," in *The Book Trade & Its Customers, 1450–1900: Historical Essays for Robin Myers*, ed. Arnold Hunt, Giles Mandelbrote, and Alison Shell (Winchester: St Paul's Bibliographies, 1997), 27–54, esp. 43 and 47.

92. Quoted in Mark Eccles, "Bynne-man's Books," *Library*, 5th ser., 12 (1957): 81–92, esp. 81.

93. The original Latin text is given in Joseph Ames, *Typographical Antiquities: Being an Historical Account of Printing in England . . .* (London, 1749), 224–25.

94. Such at least is the interpretation given by Skelton in *County Atlases*, 242. The patent may merely have covered maps and charts printed in Latin and Greek—but even contemporaries were unclear—see Nancy A. Mace, "The History of the Grammar Patent, 1547–1620," *Papers of the Bibliographical Society of America* 87 (1993): 419–36.

95. See William Alexander Jackson, ed., *Records of the Court of the Stationers' Company, 1602 to 1640* (London: Bibliographical Society, 1957), xvi–xxii, for a lucid narrative; Greg, *Companion to Arber*, 59, 65–66, 102, 164–69, and 172–75, for various documents; and Hunt, "Book Trade Patents," 34–35, 48, and 50–51.



FIG. 57.17. THOMAS JENNER, *A TRVE DESCRIPTION OF THE CITIE OF ROCHELL*, [1621]. An engraved map overprinted on a letterpress broadside. A rare example of a separately published English newspaper. Maps of this type survive in such small numbers that they have been largely ignored in accounts of the cartography of the period. Sometimes used to illustrate early newspapers (*corantos*) and sometimes, as in the present example, separately published with surrounding descriptive letterpress, they almost certainly began to appear in the late sixteenth century. The present example bears the

imprint of the London printer, William Jones, to whom copyright was entered at Stationers' Hall on 11 June 1621, but bears the further legend "to be sold by Thomas Jenner at the white Beare in Cornhil." Jenner was probably the actual publisher, but not belonging to the Stationers' Company, he would have needed to have come to an arrangement with someone like Jones, within the Company, to register copyright. Size of the original: 50 × 34.4 cm. Photograph courtesy of the BL (Maps 150.e.13[51]).

tioned the Commons concerning the matter in 1621.⁹⁶ During its period of dubious legitimacy the patentees could impound material not printed by themselves, destroy printing presses and plates, and confiscate imported material. There seems little doubt that the incipient trade in maps and charts, which might have benefited from the granting of a percipient monopoly, was a major casualty of the system. As far as is known, no printed maps at all were produced by the holders of the various later patents. Their sole contribution would appear to have been to prevent anyone new entering the trade for a generation.

FREEDOM TO TRADE

Over and above the limitations placed on what might be printed, where, and by whom, there came into existence further regulations restricting access to the trade itself. By the late sixteenth century, limits had been placed on the number of master printers, with further restrictions on how many presses each might own, and rules limiting the number of apprentices.⁹⁷ It is doubtful how much direct effect this had on the map trade. The Stationers, although normally jealous in the extreme of their monopoly of all printing, seem not to have been especially concerned about the production of prints, maps, and other engraved material. It has already been remarked that the specialist printsellers were rarely even members of the Company.⁹⁸ Why this should be so, in what was generally such a thoroughly regulated environment, is a puzzle that deserves further study.

Of more particular relevance to the map trade were the difficulties encountered by foreign craftsmen bringing their skills to London. Although a statute of 1484 had given foreign printers freedom to practice their craft in England, this freedom was “systematically attacked and undermined” by both the Stationers and the civic authorities.⁹⁹ Foreign workmen became progressively more disadvantaged, with restrictions on how they might trade and where they might work. Popular feeling and even violence were readily aroused against the strangers, particularly in times of economic difficulty. In the troubled early months of 1593 a manifesto was pinned to the Dutch Church threatening that unless the foreigners had departed by July “apprentices will rise to the number of 2336, and all the apprentices and journeymen will down with the Flemings and Strangers.”¹⁰⁰ This appears to be exactly the point at which Hondius and Van den Keere left England. For all the references in this account to booksellers and engravers from overseas who worked in London for a time, none would appear to have become sufficiently established to leave any kind of business or tradition to the next generation. The overall quality of English printing remained poor and, as Plant concluded, “the effect of this narrow policy was not, after all, to fos-

ter English industry, but rather to drive some of the best work abroad.”¹⁰¹ This flight of skill and experience is precisely what happened in the map trade.

FINANCE AND PATRONAGE

The production of maps and atlases was necessarily an expensive business. Such major projects as there were, in the earlier part of the period at least, are invariably linked to official subsidy. Geminus enjoyed some kind of royal pension. Saxton, too, had patronage from the state. Although the first level of this support was very often the granting of privileges and monopolies of the sort that had such unfortunate long-term consequences, in the short term, and when linked to clearly defined and specific aims, they were not without success. For an administration itself endlessly short of funds they represented a cheap, easily granted, and often well-meant form of assistance. Saxton was no doubt glad of his printing privilege and the further awards of lands and offices. There was practical help too, with official passes enabling him to draw on local assistance in his survey. There can be little doubt that the atlas would simply not have appeared without this kind of support, and the same is true of the English edition of Waghenaer’s sea charts, with the project emanating from the Privy Council itself. In the absence of similar sponsorship there were no further editions of Waghenaer’s atlas produced in London:¹⁰² indeed, there were no other maritime atlases at all produced in the British Isles throughout the period.

Norden and Speed received similar assistance to that received by Saxton, with printing privileges and passes, and Speed was similarly rewarded with land and official positions.¹⁰³ Patronage also sometimes worked on a more im-

96. Greg, *Companion to Arber*, 168.

97. See Sheila Lambert, “The Printers and the Government, 1604–1637,” in *Aspects of Printing from 1600*, ed. Robin Myers and Michael Harris (Oxford: Oxford Polytechnic Press, 1987), 1–29.

98. Sudbury and Humble, for example, were members of the Leathersellers and Ryther and Jenner were Grocers. Although it was unlawful to trade in the City of London without belonging to a livery company, membership of any of them afforded some protection from the Stationers’ powers: the ancient custom of the City that a freeman could deal in any class of merchandizable goods had considerable legal force.

99. Loades, “Theory and Practice of Censorship,” 145.

100. Charles Nicholl, *The Reckoning: The Murder of Christopher Marlowe* (London: Jonathan Cape, 1992), 39–40.

101. Plant, *English Book Trade*, 29.

102. The plates were, however, used again for a Dutch edition published by Hondius in Amsterdam in 1605 (Koeman, *Atlantes Neerlandici*, 4:501).

103. Peter Barber, “England II: Monarchs, Ministers, and Maps, 1550–1625,” in *Monarchs, Ministers, and Maps: The Emergence of Cartography as a Tool of Government in Early Modern Europe*, ed. David Buisseret (Chicago: University of Chicago Press, 1992), 57–98, esp. 82–83.

mediate and personal level. John Day and others were much encouraged and supported by Archbishop Matthew Parker (see fig. 57.7). Christopher Barker enjoyed the backing of Sir Francis Walsingham, whose Tiger's Head crest he adopted as his device, and Sir Christopher Hatton gave similar patronage to Bynneman. Beyond these measures of public and private patronage, the financial structure of the trade is difficult to penetrate. To judge from surviving evidence, booksellers were not generally a prosperous group.¹⁰⁴ Bynneman provides an interesting case study because a full inventory of his stock and other property survives, listed and valued in 1583 as a consequence of his inability to repay a loan of a thousand pounds—probably taken to provide capital for the dictionary monopoly granted to him in 1580.¹⁰⁵ His entire estate amounted to under eight hundred pounds, including all his stock and the leases of various premises, a total rather less than that of the loan. The cost of financing the dictionary project was clearly insuperable, and similar considerations must have haunted the producers of maps and atlases. A handful, like Norton and Humble, came to be prosperous and even wealthy men, but others, such as Ryther and Shaw, disappeared into oblivion. It was a period that had much of that kind of uncertainty: Van den Keere even adopted as his shop sign on his return to Amsterdam the legend “in the uncertain time.”¹⁰⁶ Some publications were successful, but many others failed even to be completed.

MARKETING AND DISTRIBUTION

A particular barrier to our further understanding of the period is a lack of precise knowledge of how cartographic publications were marketed and distributed. Beyond the assumption that they were sold through existing bookshops there is little concrete evidence, although the basic options must have been to sell from retail premises, to sell retail through the annual round of fairs, to sell wholesale to other retailers, or to combine various of these activities.¹⁰⁷ Publishing by subscription was all but unheard of at this time, and the system of publishing in periodical installments or parts, adopted for atlases with considerable success in the eighteenth century, was a publishing technique that lay wholly in the future.

ADVERTISING AND CATALOGS

The earliest specific mapsellers' imprints, giving details on the face of the map of where similar maps might be bought, appeared just before 1600, tied in with the emergence of London shops, like that of Sudbury and Humble, specializing in the sale of engraved material. Little tangible evidence of other forms of advertising survives. Ben Jonson makes reference to booksellers advertising

their wares through some form of placard held in a cleft stick, presumably paraded through the streets, as well as to the more widely documented posting of bills.¹⁰⁸ The latter may well have involved using the maps themselves as posters, or else pulls of the elaborately engraved atlas title pages that seem so evidently intended for display. The sole example of this type of poster advertisement that seems to have survived is the Ephraim Pagitt advertisement of 1636: not indeed an advertisement for a map, but a map used as a broadside advertisement for a book (fig. 57.18). The earliest English newspaper advertisement for a book appeared in Thomas Archer's *Mercurius Britannicus* in 1626, but there is no record of maps being advertised in this manner until the second half of the seventeenth century.¹⁰⁹ By 1640 a sufficiently reliable network of carriers was in place to enable the ready distribution of articles across the country, but, although printed catalogs are known from elsewhere in Europe, the earliest surviving English example to feature maps, a simple broadside headed *A Catalogue of Plates and Pictures* put out by Peter Stent, was not issued until 1654.¹¹⁰

BUYERS AND USERS

Implicit in any discussion of the map trade must be some consideration of the potential market for the products. In the British Isles, as elsewhere, statesmen and courtiers

104. See Plant, *English Book Trade*, 216–22.

105. See Eccles, “Bynneman's Books”; John Barnard and Maureen Bell, “The Inventory of Henry Bynneman (1583): A Preliminary Survey,” *Publishing History* 29 (1991): 5–46; Handover, *Printing in London*, 27–34; and Graham Pollard, “The English Market for Printed Books: The Sandars Lectures, 1959,” *Publishing History* 4 (1978): 7–48, esp. 21–25.

106. Koeman, *Atlantes Neerlandici*, 2:217.

107. For general discussions see Pollard, “English Market,” and A. S. G. Edwards and Carol M. Meale, “The Marketing of Printed Books in Late Medieval England,” *Library*, 6th ser., 15 (1993): 95–124.

108. Henry Sampson, *A History of Advertising from the Earliest Times* (London: Chatto and Windus, 1874), 57.

109. Graham Pollard and Albert Ehrman, *The Distribution of Books by Catalogue from the Invention of Printing to A.D. 1800: Based on Materials in the Broxbourne Library* (Cambridge: Roxburghe Club, 1965), 163 and 319. Newspaper advertisements for maps are reasonably plentiful for the period from 1668 on: see Sarah Tyacke, *London Map-Sellers, 1660–1720: A Collection of Advertisements for Maps Placed in the London Gazette, 1668–1719, with Biographical Notes on the Map-Sellers* (Tring: Map Collector Publications, 1978).

110. Pollard and Ehrman, *Distribution of Books*, 152; Alexander Globe, *Peter Stent: London Printseller, circa 1642–1665, Being a Catalogue Raisonné of His Engraved Prints and Books with an Historical and Bibliographical Introduction* (Vancouver: University of British Columbia Press, 1985), 171; and Griffiths, *Print in Stuart Britain*, 173. For methods of distribution, see Tessa Watt, “Publisher, Pedlar, Pot-Poet: The Changing Character of the Broadside Trade, 1550–1640,” in *Spreading the Word: The Distribution Networks of Print, 1550–1800*, ed. Robin Myers and Michael Harris (Winchester: St Paul's Bibliographies, 1990), 61–81, esp. 71.

first became interested in maps as tools of government. Scholars were also among the earliest users, but it would be wrong to make too large an assumption about the extent of this kind of demand. Although surviving inventories make individual references to maps, atlases, and geographies, cartographic material nevertheless formed a very small part of the typical sixteenth-century academic library.¹¹¹ By the 1570s it is just possible to sense printed maps moving out into a wider world beyond the confines of the court and the university. Explanatory textbooks such as Byneman's *Certain Brief and Necessary Rules of Geographie, Seruing for the Vnderstanding of Chartes and Mappes* (1573) began to make an appearance.¹¹² The atlases of Saxton and Speed in particular gained a currency among the landed gentry, but there is as yet little feeling of printed maps being used for what would now be regarded as major functions—as aids to travel and tools of commerce. There is some attempt to address the needs of travelers with the pocket atlases produced by Van den Keere, Bill, and Simmons, but it is difficult to be optimistic about the practical value of these tiny roadless maps. In commerce, too, it is difficult to find evidence of maps in routine use. Even at the end of the period, Lewes Roberts, a director of the East India Company, in an economic treatise that he pointedly called *The Merchants Mappe of Commerce* (1638), made a plaintive appeal to his fellow merchants to begin using maps more routinely. His tone makes it clear that mapmakers and mapsellers had not yet broken through to what would later become a lucrative market.¹¹³ Without that breakthrough there could hardly have been enough buyers to support a fully specialized map trade. Harvey has suggested that “cartographic techniques were substantially in advance of the market in Tudor England, ready to be put to use when demand arose.”¹¹⁴ The same was almost certainly true of the capacity for their reproduction and sale.

The preoccupations of such buyers as there were can readily be gauged from a brief analysis of the material that did appear. The geographical coverage offers few surprises, with maps of the British Isles, the world, and the Holy Land by far the most popular, reflecting readily understood cultural and religious preoccupations. Almost 40 percent of the total are national, regional, or town maps of the British Isles (with Ireland and especially Scotland significantly less well represented than elsewhere). The rest of Europe is also well covered, and it is particularly noticeable that the maps added to the London editions of atlases first published abroad (those of Ortelius and Mercator, for example) tend not to be maps of new and far-flung discoveries but simply better and more recent maps of parts of Europe already tolerably well known. The Netherlands are solidly represented with about 5 percent of all maps, but despite the heavy Dutch and Flemish influence on map production, there seems to

be no particular bias: there are almost twice as many maps of France and its regions (more than one hundred maps in all), with Italy and German-speaking Europe not far behind. Trade relationships in northern Europe and the Baltic are also echoed, particularly in the Waghenauer charts. Coverage of the wider world is evenly spread, with about fifty separate maps each of Africa and America and their regions, although a much higher proportion of the American maps represent original work, reflecting British ties to North America already strong even at this early period. Asia would be significantly less well represented were it not for the large number of Bible maps.

CONCLUSION

That the London map trade failed to become securely established in the period before 1640 is self-evident. Having achieved technical proficiency and having produced some fine individual maps and a number of full-scale atlases, enterprise then failed, for some or all of the reasons outlined here, to go on to a phase of outright specialization. The contrasting strength of the Dutch publishers can be gauged from their success in producing English-language editions of atlases aimed specifically at the

111. The one such library genuinely rich in cartographic material was that of Andrew Perne, Master of Peterhouse: his quite exceptional library of some three thousand books was perhaps three times as large as that of Cambridge University itself. At the end of his life it contained maps by Mercator and Waldseemüller, Saxton's “great mappe of England,” “a table of the viage of Sir Francis Drake,” “an vniversal mapp cut like a flower deluce” and another “cut like an eagle,” as well as atlases and “Mercators globe of the earth with a lether case.” See E. S. Leedham-Green, *Books in Cambridge Inventories: Book-Lists from Vice-Chancellor's Court Probate Inventories in the Tudor and Stuart Periods*, 2 vols. (Cambridge: Cambridge University Press, 1986), 1:422 and 458, and Catherine Delano-Smith, “Map Ownership in Sixteenth-Century Cambridge: The Evidence of Probate Inventories,” *Imago Mundi* 47 (1995): 67–93. I am indebted to Elisabeth S. Leedham-Green for the suggestion that Perne's library may well have been available to Edward Wright and other of the English mathematicians.

112. The book was written by “D. P.,” perhaps David Powell, Sir Henry Sidney's domestic chaplain. Its appearance almost certainly relates to the availability of Ortelius's *Theatrum orbis terrarum* from 1570.

113. Even at sea there was still surprising resistance to the use of charts and other printed aids. Luke Fox, “although supplied, according to his own account, with plenty of money to buy books for his North-west voyage, he took none, declaring that, in the first place there was no leisure at sea for reading, and in the second that in an emergency the important thing was not to rush away and consult a ‘Waggoner,’ but to act” (Taylor, *Late Tudor and Early Stuart Geography*, 83). In fairness, one ought to add that Fox did not lose “one Man, nor Boy, nor Soule, nor any manner of Tackling” on his legendary voyage to the Arctic; C. H. Coote, rev. Elizabeth Baigent, “Fox, Luke (1586–1635),” in *Oxford Dictionary of National Biography*, 60 vols. (Oxford: Oxford University Press, 2004), 20:668–69.

114. P. D. A. Harvey, *Maps in Tudor England* (London: Public Record Office and the British Library, 1993), 15.

British market. The 1630s alone saw no less than nine editions of Dutch-produced English-language maritime atlases and five English-language editions of Mercator's general world atlas.¹¹⁵ In a trade as tightly controlled as printing it would be surprising if there were no attempts to prohibit or control the flow of imports that in the end so overwhelmed the London-based trade. There had indeed been bans and restrictions on imports of printed matter in one form or another almost throughout the period, but, except in the case of overtly seditious material, it is difficult to see much evidence of the will, or perhaps merely the ability, to enforce them.¹¹⁶ When Sparke brought out his reduced-format Mercator atlas in 1635 he managed to invoke his copyright and get a ban on the importation of rival English-language Mercator atlases from Amsterdam. It is entirely symptomatic that his warrant to seize copies was quickly withdrawn.¹¹⁷ Yet despite these clear indications of competition in the marketplace, demand was nonetheless not as strong as might have been expected, for maps had not yet broken through to general commercial use. From the beginning, the trade in

maps had been overly dependent on Dutch and Flemish assistance. Wherever the fault lay, that inability to break free meant that ultimately the emerging trade broke down. What might have been the story of the meshing together of a trade with strengths and traditions beyond those of its component parts is more honestly seen as a collection of disparate and largely fragmented individual contributions. If the position of the trade was weak in 1640, it grew worse during the Civil War. After the Restoration it had virtually to begin again.

115. I owe this calculation to Sarah Tyacke.

116. Import restrictions specifically relating to maps are included both in Saxton's 1577 privilege and the Rathborne and Burges patent of 1618. The disputed Boisloré patent of 1619 would in theory have excluded the import of all separately printed maps for thirty-one years.

117. R. A. Skelton, "Bibliographical Note," in *Atlas; or, a Geographical Description of the World, Amsterdam, 1636*, by Gerardus Mercator, 2 vols. (Amsterdam: Theatrum Orbis Terrarum, 1968), 1:V–XXVII, esp. XV–XX; and Greg, *Companion to Arber*, 93, 106, 312, and 314–18.