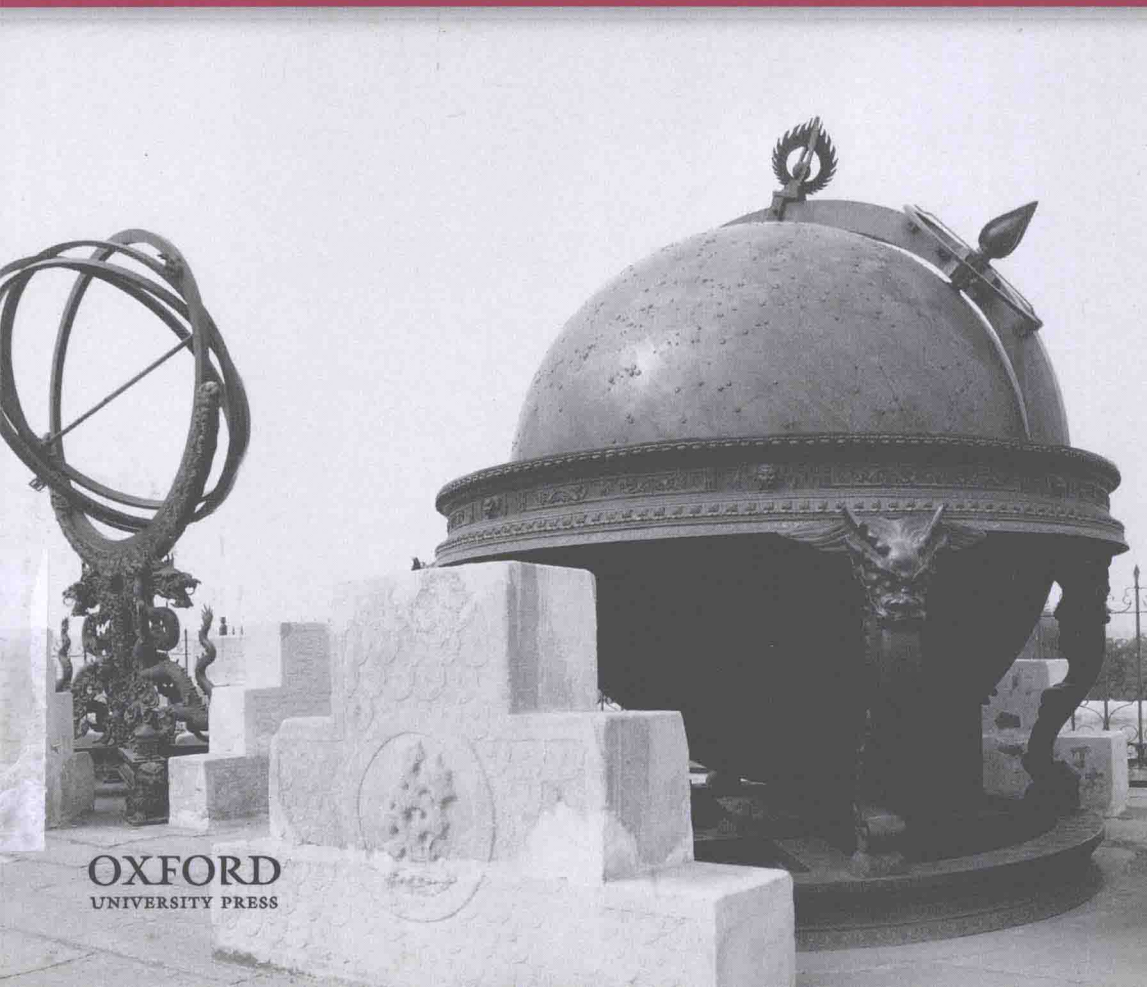


The Scientific Revolution *in Global Perspective*

WILLIAM E. BURNS



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THE SCIENTIFIC
REVOLUTION
IN GLOBAL
PERSPECTIVE

by



WILLIAM E. BURNS

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To Evelyn McCleary

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ABOUT THE AUTHOR

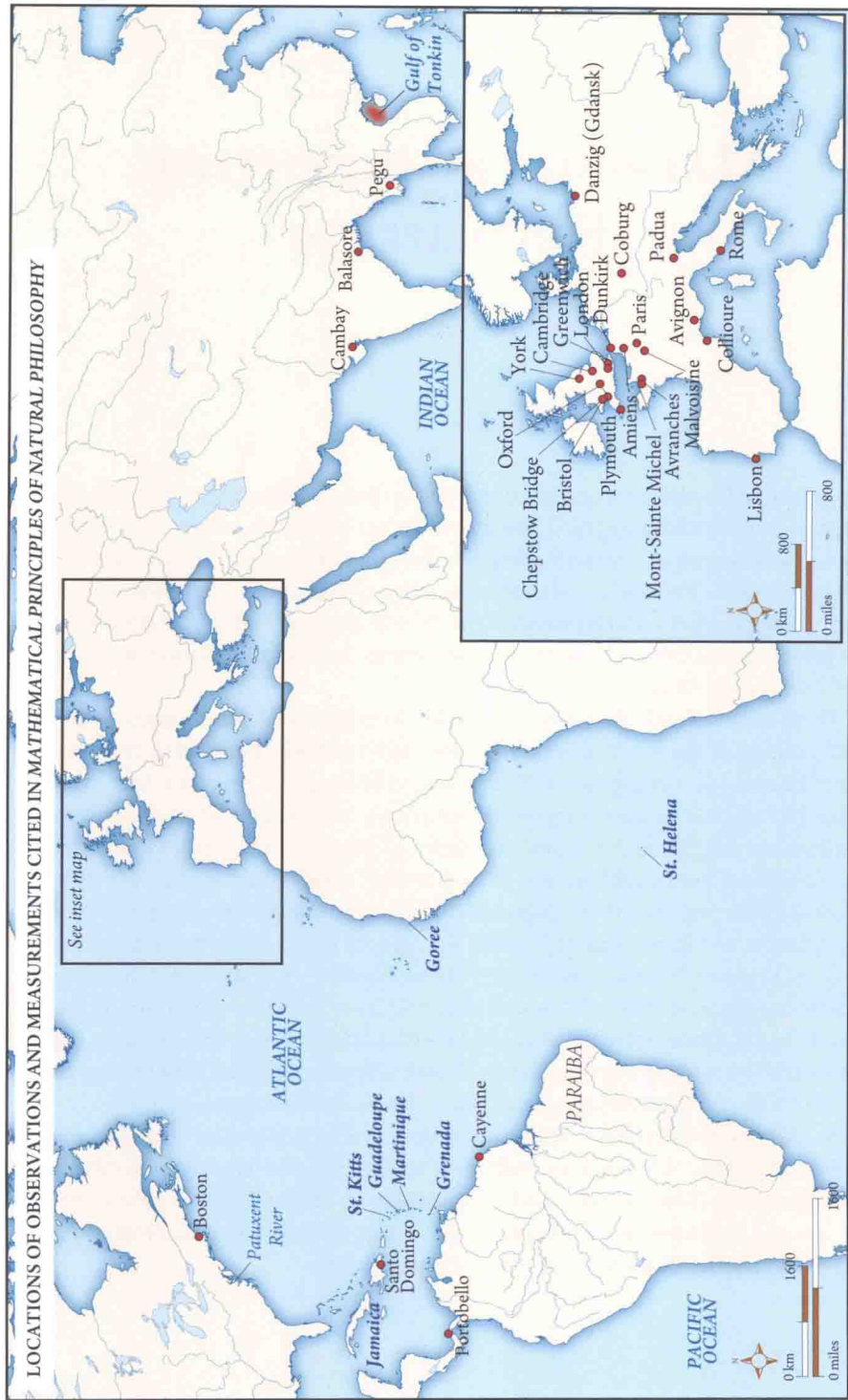
William Burns is a historian who lives in the Washington, DC metro area with interests in the early modern world and the history of science. His previous works include *The Scientific Revolution: An Encyclopedia* (2001), *Science in the Enlightenment: An Encyclopedia* (2003), *Science and Technology in Colonial America* (2005), and *Science in World History* (2011).

MAPPING THE SCIENTIFIC REVOLUTION

The Scientific Revolution was an event not just in time, but also in space. Cartography helps us understand the spread and globalization of science in the early modern period, a phenomenon inextricable from the other changes in science that make up the Scientific Revolution. Scientific societies spread north from their origin in Italy. Isaac Newton's *Mathematical Principles of Natural Philosophy* (1687) drew not just from English and European observations, but from the Americas, Africa, and Asia as well (Map 1).

There were several centers of the global circulation of science. Rome was the headquarters of the Jesuit order, a scientific leader in both the Spanish colonies in America and the Philippines and represented throughout much of Asia as well (Map 2). Paris in the late seventeenth century was the headquarters of numerous institutions, including the Royal Academy of Sciences, the Paris Observatory, and the Royal Botanical Garden, as well as the French government, which had scientific interests of its own. Together they generated a stream of expeditions in the Atlantic, to China, and in Europe, the Middle East, and Africa embracing a range of sciences from astronomy to botany. London's Royal Society, not nearly as well funded as its Parisian rival, did not yet have the same global reach; however, it had a dense network of contacts with Britain's American colonies. Less dominated by scientific organizations, Dutch science expanded with the reach of Dutch trade and the development of the Amsterdam market (Maps 3–5).

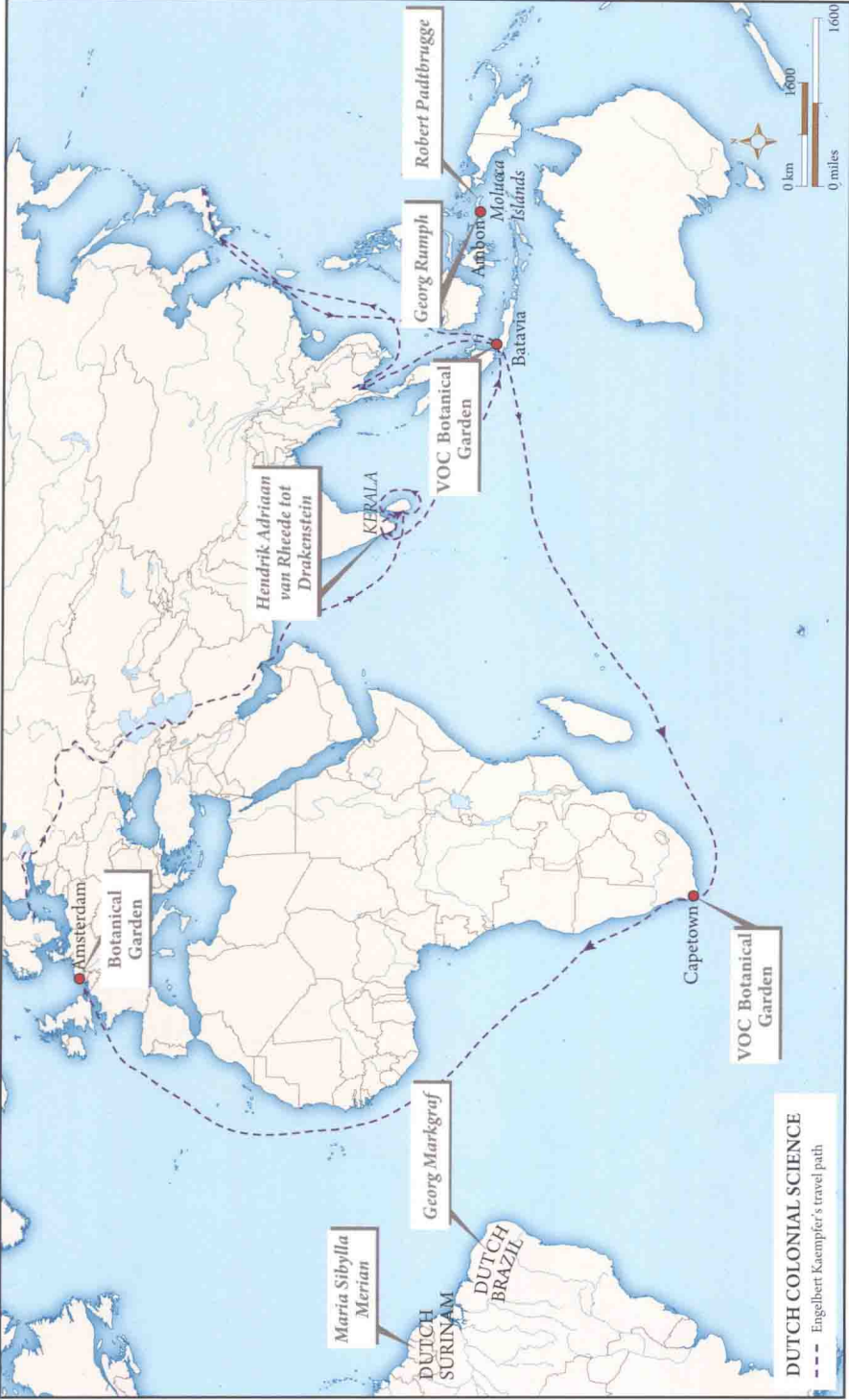
As part of this expansion, the individual scientist was also growing more mobile (Map 6). Few were as well traveled as Edmond Halley, who traveled throughout the Atlantic basin and Europe (Map 7). Halley's travels were often in the role of a civil servant—a presage of the development of scientific professionalism in the service of the state in the centuries to come.



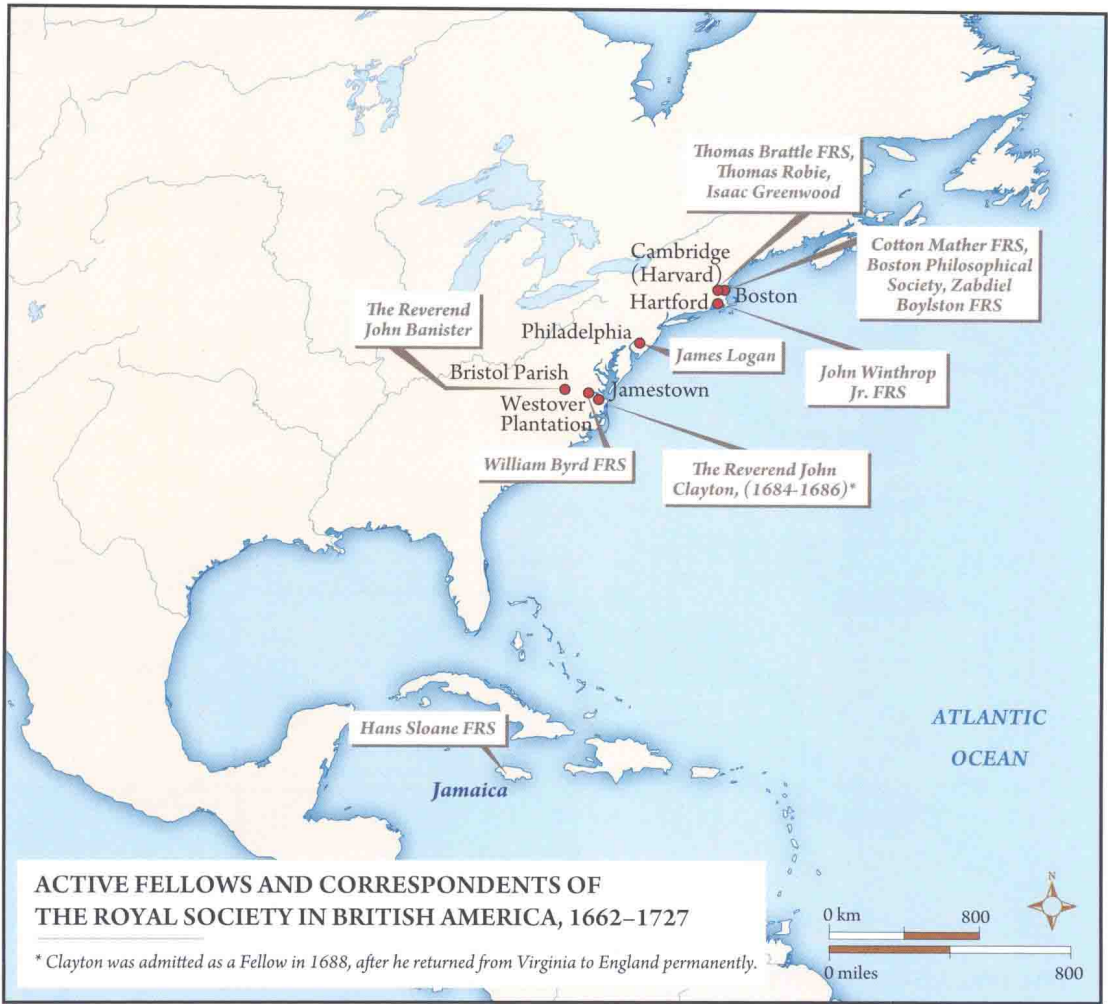
Map 1. Locations of Observations and Measurements Cited in *Mathematical Principles of Natural Philosophy*



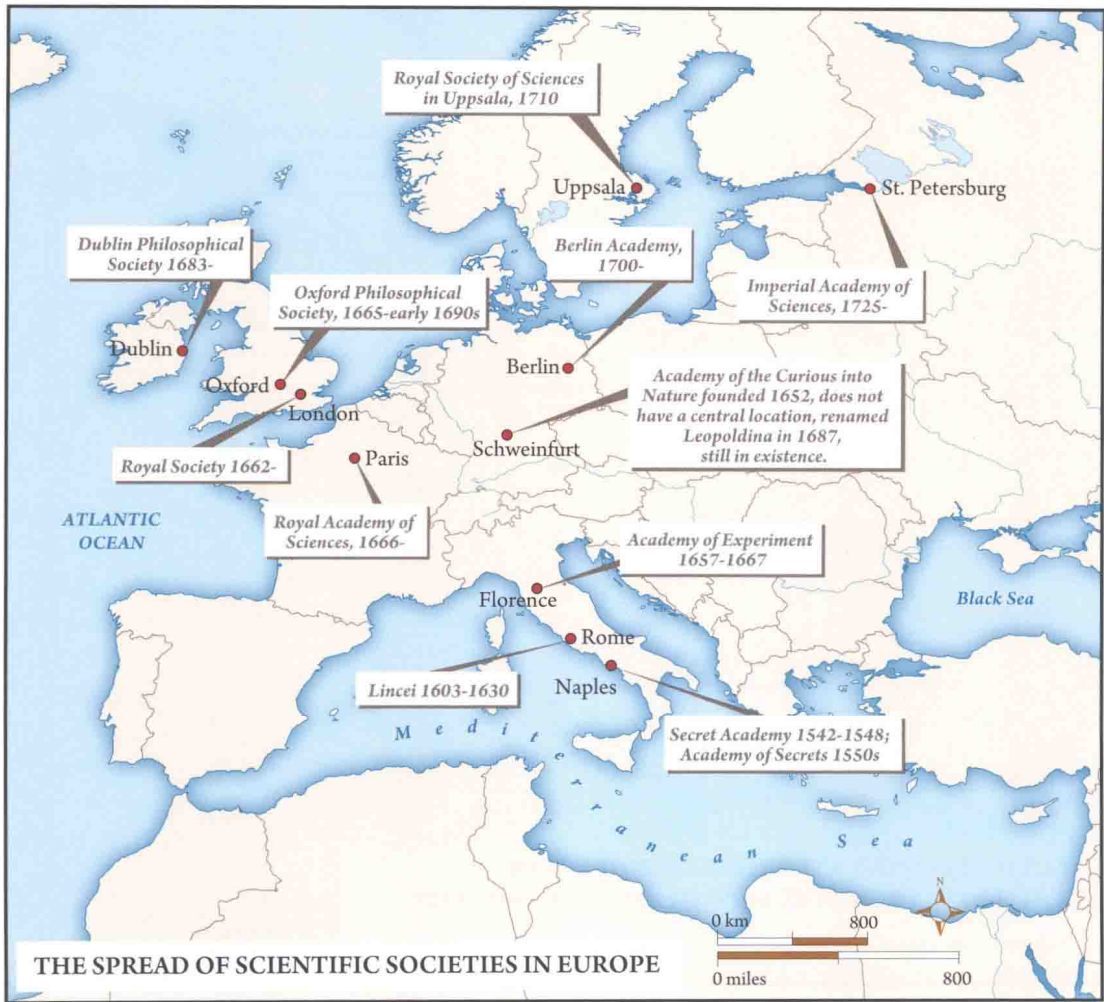
Map 2. Global Dispersal of Jesuit Scientists, and Jesuit and Jesuit-Influenced Scientific Institutions



Map 3. Dutch Colonial Science



Map 4. Active Fellows and Correspondents of The Royal Society in British America, 1662–1727



Map 5. The Spread of Scientific Societies in Europe