Edited by James Raven

GLOBAL EXCHANGES *of* KNOWLEDGE *in the* LONG EIGHTEENTH CENTURY

Ideas and Materialities c. 1650–1850

Global Exchanges of Knowledge in the Long Eighteenth Century

Knowledge and Communication in the Enlightenment World

Series Editors
James Raven
Cristina Soriano
Mark Towsey

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In memory of Joseph P. McDermott,
generous friend and scholar of East and West

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1

Introduction

James Raven

THE CHAPTERS IN THIS volume share the conviction that the acceptance and influence of ideas is importantly related to the modes of their conveyance. Thirteen contributors examine how the material production and circulation of different textual objects affected the ways in which information and knowledge were formulated, transmitted and received in different parts of the world between the mid-seventeenth and the mid-nineteenth centuries. The chapters address connected concerns: the relationship between developing textual forms and the subjects of publication, the origins and effects of changing operations of long-distance communication and the consequences of differing modes of reception.

The physical and communicative forms by which ideas reach their listeners and readers, in all their great variety and in so many different locations, can reinforce, qualify, question and undermine ideological confidence and trust. That materiality (which might be loosely but not exhaustively termed 'media'), the conditions for it and the deciphering and discursive practices that proceed from it, present, filter and influence the reception of messages and knowledge. Effects range from supporting and questioning conviction to exposing or complicating falsity and propaganda. The unfamiliarity of material forms of books, pamphlets and the like to recipients in newly accessible regions of the globe added to the problematic and unpredictable manner in which knowledge was received (a complexity involving materials coming to Europe as much as from Europe).

The two hundred or so years covered by this volume were years of recurrent European wars and revolutions. The conveyance of ideas and information took on unprecedented importance. Profound social, religious, cultural, economic and technological change accompanied conflict and disorder and the formation of new habits of mind associated with the Enlightenment and Romanticism. It was also a period of unprecedented

overseas exploration and invasion, of brutal conquest and enslavement and of a re-evaluation of the human. The technological advances brought increasing possibilities for knowledge transfer and exchange between peoples in different parts of the world, many of whom, for better or worse, were in contact with each other for the first time.

In promoting an explicitly global perspective, contributors to this volume reassess long-standing scholarly paradigms that have shaped Eurocentric interpretations of the period, including the importance ascribed to the development of a republic of letters and of a public sphere, to an invention of the self and to a reading revolution. As a consequence of this evaluation, we might also explore how far western European periodisation of 'the Age of Enlightenment' maps onto processes of social, cultural, technological and intellectual change in other regions of the globe.

The materialities at issue in this volume comprise not only the physical forms of texts but the relationship of these to the technological, political and social circumstances of their creation and reception. As conveyors of thought, texts travelled in many and often developing types, from prestigious volumes in richly decorated bindings to quickly composed and printed newspapers. An increasing range of carriers enabled books and other types of print and manuscript (including letters) to enjoy wider distribution and deeper social penetration. Other agencies developed over this period, such as bookshops, book clubs and lending libraries, furthered the circulation of books, pamphlets and periodicals as well as contributing to the means of financing publications and to their material form. The changing appearance and construction of these books and tracts contributed in varying ways and at different paces to the creation and shaping (and sometimes diminution) of audiences and expectations.

Outside Europe, an even greater range of material textual forms existed, many, the result of centuries of production and evolution. All presented important contrasts, appreciated in varying degrees at the time, to the increased diffusion of texts from the 'West'. Moreover, the relationship between those physical forms and the communicative modes associated with them increased in complexity over these two hundred years. The design of the text and the nature of its container affected, for example, its access, diffusion and likelihood of interception or control, and even its translation and critical review; while the particular demands from sellers and readers or the manner in which copyright was exerted or seizures of materials made (among other responses) influenced the subsequent shaping, quite directly, of books, tracts, periodicals and newspapers. How exactly these media and communicative forms evolved and how they conveyed and altered ideas in different communities in different and connected parts of the world during

a period of exceptional change and increased global trade, travel and proselytising is the subject of this volume.

Although these issues are common to all the chapters of this volume, the chapters are also arranged in three sections. The first section (Knowledge and Reception, Chapters 2 to 6), offers greatest attention to textual objects, objectives and space, and to the processes of creation and circulation. In Chapter 2, Richard Coulton considers the developing interest in the material collection of natural knowledge, its conveyance across a global network and the capacity of print for mediating such 'crowd-sourced' understanding. In Chapter 3, Alexandra Ortolja-Baird explores the different means, methods and outcomes of translation. In Chapter 4, James Raven combines study of the publication and overseas reception of natural history with the translation, picturing and perception of the exotic. In Chapter 5, Trude Dijkstra extends the perception of the exotic, or the 'other', through the European reading of the Chinese world by means of a materially and paratextually filtered development of genre; and in Chapter 6 Sean Moore furthers understanding of the fusion of genres in the context of transatlantic book traffic and the unexpected consequences of differently practised reading.

The second section (Images and News, Chapters 7 to 10) develops the analysis of design and the different aspects of time and the speed of production and transmission. In Chapter 7, Isabelle Baudino extends earlier examples of image-rich texts in a study of international transpositions of engravings that further interrogates temporal perspectives. In Chapter 8, Jean-François Dunyach investigates innovatory printed graphics in similar transnational transit; and in Chapters 9 and 10, Francesco Morriello and Cristina Soriano move focus to the Caribbean, one British and French, and the other Spanish and South American, to consider the effects of time and distance in one of the evolving and archetypal printed products of the period, the newspaper,

The third section of this volume (Multiple Diffusions, Chapters 11 to 14) attends to the further extension of social and geographical reach in which, in particular, the promulgation and clash of religions proved the catalyst for different unions of ideas and materialities. In Chapter 11, Despina Magkanari revisits the European production, circulation, rediscovery and validation of Oriental knowledge. She analyses the different networks and actors presenting differently arranged and published texts based on new contacts, travels and the collection of Islamic and Central and East Asian manuscripts and artefacts. In Chapter 12, Alicia Montoya re-examines the literary system, intellectual and material, sustaining a new pan-European diffusion of the Qur'an. In Chapter 13, Graham Shaw explores the complex fusion of different modes of literary production employed by Protestant

missionaries in South Asia and the expectations of their reception in which the transmission of ideology was as much dependent on materialities as upon the attractiveness (or coercion) of the message. In Chapter 14, Cynthia Brokaw examines the material and intellectual diversity of the book-collecting efforts of a Protestant missionary to China in the context of the history of Chinese book collecting in Europe and what it reveals about the state of Chinese book culture and development of Western sinology. Although the arrangement is not strictly chronological, with several contributors ranging over the full period, the opening study focuses on the late seventeenth century and the later chapters on the early nineteenth century.

Together, these studies examine shifting exchange across geographical, intellectual and emotional boundaries. Together, these chapters allow consideration of different modes and vehicles for the interchange and circulation of ideas and knowledge in comparative perspective. Each provides an overview of the current state of research relevant to their particular case study, with contributors drawn from a wide disciplinary, regional and generational range, opening up new approaches and pointing to new agendas.

The definition of knowledge exchange and, with it, the concept of translation extend far beyond the linguistic, central though this is to the reproduction and circulation of ideas. As the following chapters demonstrate, exchange and translation encompass material forms that range from typography, orthography, the redrawing, reproduction and repositioning of images and *mise en page*, to physical binding, transport, shelving and cataloguing. And, as a global study, all these elements engage with the ways in which books and print operated as an obvious instrument of intellectual enquiry, colonial expansion, religious coercion and persistent communal self-identification and historical evaluation. All contributors to this volume contend that we need to challenge current spatial and temporal assumptions about such encounters by understanding the particular perspectives of readers, producers and agents in different parts of the globe. This adjustment requires an appreciation of how both metropolitan and remote cultural, political and economic realities and exigencies interacted and interfered with the circulation of texts and the mediation of ideas.

Such ambition benefits from recent and diverse foundations, and the following chapters build upon pioneering studies (almost all European) which examine how ideas travelled, were translated and, in their different ways, were received between the mid-seventeenth and mid-nineteenth centuries.[1] Notable among this suggestive scholarship are essays collected

1 Notable among these contributions are Louisiane Ferlier and Bénédicte Miyamoto (eds), *Forms, Formats and the Circulation of Knowledge: British Printscape's*

together by Lise Andries and her fellow collaborators on the 'Cultural transfers between France, Britain and Ireland' project, which examined the ideas of French translators (and translators from the French) in transforming texts 'in order to give their readership what they were supposed to expect'. This project developed from work by Ann Thomson, Simon Burrows, Edmond Dziembowski and others addressing what 'transfer' actually meant within the 'circulation of knowledge' between Enlightenment France and Britain.[2] In turn, both sets of essays drew inspiration from the understanding of a dynamic concept of transfer advanced, also collaboratively, by Michel Espagne and Michael Werner for Franco-German contexts.[3]

The contributors to this volume revisit these earlier investigations about the way in which changing media affected the circulation and reception of ideas, but the following chapters also qualify and challenge certain assumptions about the relationship between ideas and forms and expand radically the geographical and social range of such history. The physical construction of texts from paper to type and engraving, their critical apparatus and paratextual features, their coverings, their modes of travel and advertisement, the manner of their collection and the changing contemporary perception of all of these things (among numerous material aspects and conditions) have been noted and integrated within numerous earlier studies, but for most, such concerns were subsidiary to the principal aim of a 'history of

Innovations, 1688–1832 (Leiden and Boston, MA: Brill, 2020); Hanna Hodacs, Kenneth Nyberg and Stéphanie van Damme (eds), *Linnaeus, Natural History and the Circulation of Knowledge* (Oxford: Voltaire Foundation, 2018); Simon Schaffer, Lissa Roberts, Kapil Raj and James Delbourgo (eds), *The Brokered World: Go-Betweens and Global Intelligence, 1770–1820 Uppsala Studies in History of Science 35* (Sagamore Beach, MA: Watson Publishing International, 2009); and Ian Maclean, *Learning and the Market Place: Essays in the History of the Early Modern Book* (Leiden: Brill 2009); approaches to a transnational history of the book are suggested in Robert Fraser and Mary Hammond (eds), *Books without Borders*, 2 vols. (London, 2008); I.R. Willison, 'Centre and Creative Periphery in the Histories of the Book in the English-Speaking World and Global English Studies', *Publishing History* 59 (2006): 5–60; I.R. Willison, 'Towards an Agenda for Imperial and Post-Imperial Book History in India and Anglophone Sub-Saharan Africa', *Publishing History* 60 (2006): 21–9.

[2] Lise Andries, Frédéric Ogée, John Dunkley and Darach Sanfey (eds), *Intellectual Journeys: The Translation of Ideas in Enlightenment England, France and Ireland* (Oxford: Voltaire Foundation, 2013), p. 2; Ann Thomson, Simon Burrows and Edmond Dziembowski (eds), *Cultural Transfers: France and Britain in the Long Eighteenth Century* (Oxford: Voltaire Foundation, 2010).

[3] Michel Espagne and Michael Werner (eds), *Transferts: les relations interculturelles dans l'espace franco-allemand (XVIIIe–XIXe siècles)* (Paris; Éd recherche sur les civilisations: Paris, 1988); cf. Michel Espagne, *Les Transferts: culturels franco-allemand* (Paris: Presses Universitaires de France, 1999).

ideas' rather than a more broadly social understanding of the European 'Enlightenment' or of the construction of a 'Republic of Letters'. Conversely, the hugely increased interest in 'book history' (and the even more casually used 'print culture') has not always bridged material with ideological historical scholarship.

The fundamental concerns of what, for all its contestation and redefinition, is still known as the 'Enlightenment'[4] are embedded in the following collaborative history: the investigation of reason, the senses and the condition, improvement and history of humanity, the probing and disambiguating of the divine, personal belief and institutional religion, the nature and purpose of language, the promotion of science and scientific method, and the exploration and classification of the natural world. Debate compared past with present and sought both conjectural and heuristic understanding of progress, toleration, justice, liberty and (among many other concerns) the evaluation of constitutional government and the separation of Church and State. At the same time, intransigent religious and secular authorities and new forces of reaction wielded both sword and pen. From the beginning of this period, 'discovery' was the watchword. Writers agonised about the merits of ancients versus moderns and the application of natural and rationally explicable law. By the end of this period, millions of printed words were devoted to intrinsic rights, progress and economic self-interest, with fierce and derivative debate (and no little moral panic) about Republicanism and emancipation, as featured (with notable transnational cross-contacts in print and publishing activity) in many of the following chapters. Above all, knowledge itself became the central object of pursuit and thus the means for its creation and circulation –what we now might style media and mediation – became the subject of fascination and concern.

As featured in all the case studies in this volume, agents of knowledge and information transmission convey a sense of rarefied intellectual ferment, but also of the questioning and destabilising of accepted norms at humbler levels of social communication and discussion. In contrasting and mythologised European representations of China, certain elite fiction adopted reports of apparent Confucian accommodation of Christianity, but this was countered by more widespread and negative European representations of the Orient. To give another example from the following chapters, the subtleties of intentional assimilation (or 'acculturation strategies')

[4] The term 'Radical Enlightenment' – essentially principles (sometimes adopted teleologically) of full individual liberty and freedom of thought and expression for the individual and the press, even embracing democracy and sexual and racial equality – is also employed critically by several of the contributors to this volume.

seemed lost on later missionaries to South Asia who carried with them a determined faith in the efficacy of their own printed and totemic artefacts, born, it would seem, of a simply historicised understanding of the triumph of the press in early modern Europe. The different communities of savants and clerics and of the intrigued but relatively unlearned jostled in the burgeoning literary infrastructure of these centuries. As the volume of European printing soared, so expanded new spaces for reading, conversation and the borrowing of tracts and books. Across Europe and later in North America and distant territories, bookshops, coffee shops and differently evolving forms of library accompanied escalating activity in reviewing, journalism, editing and printed and other public responses from readers. Interactions increased and became more complex, but the consolidation of literary forms with distinctive material as well as textual identities such as chapbooks, small tracts, newspapers and learned periodicals also increased and entrenched the demarcation of readerships. In all cases, the textual objects, the places in which they might be read and the differently created readerships contrasted but also interacted then (as now) with very different non-European products, traditions, institutions and practices.

More broadly still, much recent debate has focused upon the impact of social media on knowledge production and dissemination. Anxiety about 'fake news' has prompted questions about the ownership of and control over media forms, about the pace of innovation and about differential access to new modes of messaging and the methods of retrieval of information and knowledge. Concerns have increased about educational and social inequalities, about social and political polarization and about changes, both beneficial and deleterious, to reactive behaviours. Those experiences and discussions have heightened interest in the exact means by which knowledge and information (and 'misinformation') is created and exchanged and how its impact relates to changing technologies. We are increasingly asked to reassess connections between what we read, view and hear, and how that is transmitted. We are engaged anew with consideration of the medium and the message – of the relationship between the generation of ideas and the precise methods and effects of their dissemination. And the degree to which such knowledge is 'exchanged' is a moot point, as, again, are the divisions in readerships encouraged by different material textual forms.

It is also the case that few histories of the influence in this period of print and books, whether primarily bibliographical or intellectual, have attempted non-European comparisons and perspectives. Among the most

obvious exceptions are transatlantic book histories,[5] in turn built upon foundational studies in historical transatlanticism.[6] Even the much-visited transatlantic perspective, however, is often bounded by linguistic and national difference. As yet, for example, scholarship from English-speaking regions has not fully benefited from continuing French and Hispanic research in transatlantic book-trade traffic and connections.[7] Above all, South and East Asian and particularly Chinese comparative studies in book history are relatively unadvanced, despite important pioneering studies in

[5] Including Michael Winship, 'The Transatlantic Book Trade and Anglo-American Literary Culture in the Nineteenth Century', in Steven Fink and Susan S. Williams (eds), *Reciprocal Influences: Literary Production, Distribution and Consumption in America* (Columbus, OH: Ohio State University Press, 1999), pp. 98–122; Meredith L. McGill, *American Literature and the Culture of Reprinting 1834–1853* (Philadelphia: University of Pennsylvania Press, 2003); Leslie Howsam and James Raven (eds), *Books Between Europe and the Americas: Connections and Communities, 1620–1860* (Basingstoke: Palgrave Macmillan, 2011).

[6] Notably, Bernard Bailyn, 'The Idea of Atlantic History', *Itinerario* 20 (1996): 19–44; Jack P. Greene, 'Beyond Power: Paradigm Subversion and Reformulation and the Re-Creation of the Early Modern Atlantic World', in Greene, *Interpreting Early America: Historiographical Essays* (Charlottesville, VA: University Press of Virginia, 1996), pp. 17–42, Nicholas Canny, 'Writing Atlantic History, or, Reconfiguring the History of Colonial British America', *Journal of American History* 86 (1999): 1093–114; and collections of journal articles in 'The Nature of Atlantic History', *Itinerario* 23: 2 (1999); 'Forum: The New British History in Atlantic Perspective', *American Historical Review* 104: 2 (1999): 426–500; and 'Oceans Connect', *Geographical Review* 89: 2 (1999). Jorge Cañizares-Esguerra, *How to Write the History of the New World: Histories, Epistemologies and Identities in the Eighteenth-Century Atlantic World* (Stanford: Stanford University Press, 2001); J.H. Elliott, *Empires of the Atlantic World: Britain and Spain in America 1492–1830* (New Haven and London: Yale University Press, 2007); David Abulafia, *The Discovery of Mankind: Atlantic Encounters in the Age of Columbus* (New Haven and London: Yale University Press, 2008).

[7] The French Atlantic is studied in Robert and Marianne Cornevin, *La France et les Français outré-mer, de la première croisade à la fin du Second Empire* (Paris: Tallandier, 1990); Jean Meyer *et al.*, *Histoire de la France coloniale, des origins à 1914* (Paris: Armand Colin, 1991); Alain Saussol and Joseph Zitomersky (eds), *Colonies, territoires, sociétés: l'enjeu français* (Paris: L'Harmattan, 1996); Philippe Haudrère, *Le grand commerce maritime au XVIIIe siècle* (Paris: L'Harmattan, 1997); and Gilles Havard and Cécile Vidal, *Histoire de l'Amérique française* (Paris: Flammarion, 2003 and new edn, 2008); while active work on the Hispanic Atlantic such as Martha Patricia Irigoyen Troconis, *La Universidad Novohispana: Voces y enseñanzas clásicas* (Mexico City: UNAM, 2003) and more recently on the Hispanic book trade by Manuel Suárez, *Dinastía de tinta y papel. Los Zúñiga y Ontiveros en la cultura novohispana (1756–1825)* (México: UNAM-IIB, 2019) and Manuel Suárez (ed.), *De eruditione americana. Prácticas de lectura y escritura en los ámbitos académicos novohispanos* (México: UNAM-IIB, 2019) are too little known by American and British scholars.

relational publishing, communications and reading histories.[8] An especially stimulating collection of essays assembled by Simon Schaffer, Lissa Roberts, Kapil Raj and James Delbourgo, focused on the brokerage and networks of scientific knowledge in the period 1770–1820 and notably on the Atlantic, South Asian and Pacific regions.[9] The chapters which follow take certain cues from this research in the instrumental role of mediators and intermediaries, whether personnel (such as brokers, messengers, translators, missionaries, spies and entrepreneurs) or institutional, material and technological agencies (or, as Alexandra Ortolja-Baird puts it in Chapter 3, 'this entanglement of press, translators, institutions and administration'). In remapping networks of knowledge exchange that link different parts of the world in increasingly dense and entangled systems of production and circulation, chapters in this volume revisit the promotion of and comparison of natural science, and also broaden the purview to other forms of knowledge production. In introducing themes that will be pursued by subsequent volumes in this series, contributors also address a wider period and probe underexplored and less-attended global regions and connections.

What is clear is that in the two centuries between 1650 and 1850, different types of writing and printing enabled the long-distance transmission of knowledge in multiple and contrasting parts of the world. The expansion in the output and reach of books, as well as prints, periodicals and newspapers, with their concomitant impact, is one of the most significant features of these years of human history. There were, of course, regions where writing, let alone printing (in its various forms), was rare or even unknown. Knowledge was primarily exchanged orally and visually in numerous, sometimes nomadic, communities in great swathes of North America, Africa and central Asia, and also in many other regions, notably East and South Asia. But even in many parts of Asia, Europe and the Middle East where so much knowledge was imparted orally, written and printed texts were never far

8 Including Joseph P. McDermott and Peter Burke (eds), *The Book Worlds of East Asia and Europe, 1450–1850: Connections and Comparisons* (Hong Kong: Hong Kong University Press, 2015); Cynthia J. Brokaw and Peter F. Kornicki (eds), *The History of the Book in East Asia* (Farnham: Ashgate, 2013); Peter F. Kornicki and Francesca Orsini, *The History of the Book in South Asia* (Farnham: Ashgate 2013); Geoffrey Roper, *The History of the Book in the Middle East* (Abingdon: Routledge, 2013); Caroline Davies and David Johnson (eds), *The Book in Africa: Critical Debates* (New York: Palgrave Macmillan, 2015); Rasoul Aliakbari (ed.), *Comparative Print Culture: A Study of Alternative Literary Modernities* (New York: Palgrave Macmillan, 2020).

9 Simon Schaffer, Lissa Roberts, Kapil Raj and James Delbourgo (eds), *The Brokered World: Go-Betweens and Global Intelligence, 1770–1820* Uppsala Studies in History of Science 35 (Sagamore Beach, MA: Watson Publishing International, 2009).

away. Material and oral/aural modes of communication overlapped and cross-fertilised. In all the following case studies, whether of the collection of natural history in Scandinavia and North America, or the abridgement and translation of canonic publications in central Europe, or the transmission of news in the Caribbean, or the creation of texts in and about India, China and the Arabic world, spoken communication remained integral to both production and reception. Conversely, texts supported conversation and performative and recitative practices, from liturgies and sermons and Qur'anic Tilawah and Qira'at to communal instruction, lectures and scientific demonstrations.

This entanglement underscores another feature of the following studies: the avoidance of the linear assumptions that all too often pervade histories of the Enlightenment world. Instead, attention is paid to resistances in space and time. The progress and 'improvement' to which so many writers aspired was not inevitable. The global encounters detailed below were often problematic and not uni-directional, however remorseless and effortless certain colonial expansion might have been regarded. Gaps and setbacks – if setbacks they really were – interrupt and complicate any easy account of discovery and advancement, ranging from reimagined pasts and recycled images of natural phenomena to the differential reception and collection of the Qur'an and to the rediscovery later in the period of what was known and discussed more than a hundred years before.

Similarly questioned are assumptions about global comparisons in the processes and materials of literary production and the means of their communication. Take, for example, the history of printing in South Asia, which not only reassesses the relationship between script and print but in exploring the residual dominance of orality offers insights into interactions between texts, speech and the aural that are so often ignored in the history of European communications. Again, glib assertions about the efficiency and superiority of printing by moveable type (the so-called Gutenberg revolution) are strikingly challenged by histories of the printing technologies and the replication and storage of texts in East Asia and elsewhere. There is, in fact, a dual revisionism in play here: the avoidance of a primitivist historical take on non-Western societies and their interaction with the apparently more complex developing nations of the seventeenth to nineteenth centuries, but also the contemporary Enlightenment history of the often unexpected complexity of engagement. A notable example focuses on understanding that the magical powers of books and their ritualistic uses that were apparent (in various ways) to far-travelled missionaries might also be apparent in communities close to their original production. In different societies, by different means, material forms promote perceptions

of the power of texts; in addition to the words read and heard it is the way that the text is physically created and embodied – graphics, imprinting, engraving, inking, coverings, bindings, paper type and much more – that contributes to the effect on readers and listeners. Materiality effectively becomes animate.

All this suggests that, whatever its current limitations in geographical reach, historical research in the social history of knowledge and the cultural contexts of intellectual, political and religious thought has constructively changed in recent years, much prompted by a repositioning of bibliographical study. Book history and the history of the impact of print have moved over the last quarter century from niche topics based around primary bibliographical research in noted collections, libraries and national archives to the mainstream of early modern and eighteenth-century research in history and literary studies. The study of the transmission of texts now brings together historians of science, ideas, religion and empire, as well as scholars working at the interface between literature and popular culture. Alert to past imbalances and further comparative possibilities (some enabled by advancing digitisation[10]), we are able to examine in new ways how the organisation of knowledge changed and the ways in which this organisation – including cataloguing, indexing and interleaving – affected modes of knowledge transmission and reception. Study of this organisation of textual transmission further questions how the movement of texts and ideas between public and private spaces is both facilitated and controlled. As modern parallels with social media confirm, the potential in new material forms of messaging for greater empowerment and subversion prompted new policing and political interventions.

The further transformation we revisit is geographical: the expansion of Europe to attain global reach by the mid-nineteenth century, but also the concomitant development of other networks of commerce and military extending from the Americas, Africa and Asia. By trade, territorial acquisitiveness and adventuring, the emissaries of European rulers and governments, merchants, combatants, explorers and many others besides traversed the oceans and interior lands and rivers. Colonial and trade wars inevitably resulted, but so also did diplomatic missions, cultural and religious encounters and the transfer – efficiently or imperfectly – of diverse forms of knowledge. A greater appreciation of this diffusion has moved

[10] Numerous digitization projects have enabled research underpinning the following chapters. All, however, also attest to the importance of the physical examination of texts, even though many online resources are now invaluable in identifying items and enabling basic textual and archival comparisons.

the trajectory of book history, which had been largely framed by national and linguistic interests, to global connections and comparisons. Such geographical spread is especially germane to the period of this volume and series. During the eighteenth century, precise interactions advanced in bulk and complexity in the trade in books, translation, reprinting and the communication of news and regulations. The global context, so long overlooked, offers an important subject for new investigation. What are the political, cultural and social effects of knowledge transfer and global encounters?

In understanding the transformation in the book trade and its social interactions we start with one critical development: changes to the form, shape and production frequencies of the actual 'book'. 'Book' is itself a clumsy descriptor when 'the history of books' now routinely includes prints, newspapers and a variety of printed and manuscript forms. This awkwardness is the more so in a period when the European codex, the material book which has been the focus of most studies, so diversified in shape and substance. These changes affected production methods and schedules and distribution procedures and possibilities, but also the reading, valuation and perception of these objects, now including newspapers, periodicals and magazines, ready-bound 'library' series and other distinctive products of the press. In material form but also in design, typographical *mise en page* and imaginative construction, the message conveyed elided into other normally discrete forms such as written correspondence and small works of jobbing printing. Thus (of only a few more obvious examples) the increasingly popular novel spawned a genre of epistolary fiction, the play book became a separate more standardised production, the appearance of text in columns moved from bibles and certain works of scholarly explication to be the normative format of magazines and newspapers, and engraved plates were more regularly adopted in serials and books of instruction and scientific explication.

In such ways, it is the purpose of this volume to interrogate these interactions between material form and conditions and intellectual developments between the mid-seventeenth and the mid-nineteenth centuries. Such an extended history, by case studies and comparative analysis of script, print, material culture and communication networks, aims to transform our understanding of the social history of knowledge in this critical period of change and in global terms. By meticulous and comparative study of interaction between writers, readers and texts of all kinds, from philosophical texts to everyday ephemera, we might explore the fuller social history of knowledge. These endeavours forge fresh connections between different research subjects, conceptual approaches and disciplinary frameworks

that have the potential profoundly to revise the transnational European and global history of communication. Here, the global, boundary-crossing dimension is fundamental and reflects some of the most exciting new work currently happening in book and media history.

PART ONE

Knowledge and Reception

2

Crowd-Sourcing Global Natural History: James Petiver's Museum

Richard Coulton

On 27 November 1695, James Petiver (c.1663–1718) surely revelled in self-congratulation when he numbered among three members of the medical professions who newly 'subscrib'd their Names and were admitted fellows' at the annual meeting of the prestigious Royal Society of London for Improving Natural Knowledge.[1] A flourishing urban apothecary with substantial ambitions in natural history, this was for Petiver an intellectual and social achievement. To commemorate the privilege, he issued his first substantial venture in print, proudly supplementing his name on the title page with the qualifications '*Pharmacop*[ola] *Londinen*[sis] *& Regiae Societatis Socio*' ('Apothecary of London & Fellow of the Royal Society'). He also dated a postscript 'Advertisement' to 30 November 1695, the institutional anniversary on 'the feast of St Andrew' stipulated in the Society's royal charter.[2] The title of Petiver's text was *Musei Petiveriani Centuria Prima, Rariora Naturæ Continens: viz. animalia, fossilia, plantas, ex variis mundi plagis advecta, ordine digesta, et nominibus propriis signata*: 'The first century of Petiver's museum, containing rarities of nature: namely animals, fossils, plants, imported out of the various places of the world, classified by rank and distinguished by their proper names'.[3] As its name

1 Royal Society, London, Journal Book, 1690–96, JBO/9, fol. 203.

2 'Translation of First Charter, granted to the President, Council and Fellows of the Royal Society of London, by King Charles the Second, a.d. 1662', *The Royal Society*, https://royalsociety.org/-/media/Royal_Society_Content/about-us/history/2012-Supplemental-Charter.pdf [accessed 11 Mar. 2021].

3 James Petiver, *Musei Petiveriani Centuria Prima, Rariora Naturæ Continens* (London: S. Smith & B. Walford, 1695) (trans. Richard Coulton). An online edition of a bound copy in the Library of the Netherlands Entomological Society, containing all

portentously signals, *Musei Petiveriani Centuria Prima* lists 100 objects from Petiver's collection of natural curiosities. Heralding the inception of a serial publication that ran to ten 'centuries' by 1703, *Musei Petiveriani* is at once singular and heterogeneous in its authorship, local and global in its means of knowledge production, the metropolitan scientist choreographing natural objects that have been '*ex variis mundi plagis advecta*' by a wide range of actors.

This chapter analyses the material, geographical and social features of *Musei Petiveriani* in order to exemplify the generative (if also potentially exploitative) cultures of global transaction with which *Global Exchanges of Knowledge* is concerned. The first section outlines Petiver's purposes and priorities in authoring and distributing his publication, above all his commitment to acknowledging the many contributors to his 'museum' by name. The metaphor of 'crowd-sourcing' is adopted from the contemporary digital world to supply one means for conceiving the networked multiplicity of these collaborators. The second section outlines the bibliographical dimensions of *Musei Petiveriani* within the context of its ideological configuration of the museum as textual space. In the third section a critical and quantitative analysis of *Musei Petiveriani* particularises Petiver's 'crowd'. Who were its members, what did they collect and where in the world were they distributed? While the focus is necessarily on those whom Petiver names, the conclusion raises some pressing questions concerning how our reading of this crowd's heterogeneity might move beyond the explicit commemoration of European travellers, to rehabilitate global contributions that Petiver seemed less inclined to acknowledge in print. Such an approach begins to make it possible to glimpse processes of cultural hybridity that *Musei Petiveriani* at once embodies yet also occludes from the historical gaze.

Crowd-sourced Collecting: Science in the Making

James Petiver both epitomised and defied the conventions of London's scholarly communities at the turn of the eighteenth century.[4] Raised in the City (although briefly educated at Rugby School in Warwickshire),

six parts and the two engraved plates comprising *Musei Petiveriani* (1695–1703) as a whole, can be viewed via the *Biodiversity Heritage Library (BHL)*, https://www.biodiversitylibrary.org/item/255668 [accessed 11 Mar. 2021].

[4] For a recent account of Petiver's biography, his early life especially, see Richard Coulton, 'What He Hath Gather'd Together Shall Not Be Lost: Remembering James Petiver', *Notes and Records of the Royal Society*, 74 (2020): 189–211, https://doi.org/10.1098/rsnr.2020.0012. See also Raymond Phineas Stearns, 'James Petiver:

he worked an apprenticeship to Charles Feltham, apothecary to St Bartholomew's Hospital, between 1677 and 1685. By 1687, Petiver was established in business at the sign of the White Cross on Aldersgate Street (where he resided until his death in 1718), conducting medical consultations and trading as a retailer and wholesaler of drugs.[5] An upwardly mobile man of the middling sort, Petiver excelled at leveraging his contacts and skills to construct webs of metropolitan intelligence and international correspondence. Through identifying the best suppliers, composing detailed instructions for his agents and managing the transportation of precious goods, he furnished his cabinet with natural objects harvested from across the world (as Europeans knew it). He greedily accumulated dried plants and preserved invertebrates from North and South America, Europe and Africa, continental Asia (from Arabia to China's eastern seaboard) and the islands of Indonesia and the Philippines. This collection functioned both personally as a magazine of global objects for study and professionally (in the case of botanical material) as a stockpile of potential novel medicaments to bring to market. It also comprised social capital with which he could advance his own status, secure the friendship of those he valued and prime new pipelines of exchange whenever a promising opportunity arose.

Petiver's knack for positioning himself strategically to advantage within networks of intellectual sociability earned him the patronage and friendship of Hans Sloane (among others), physician to the elite and Secretary of the Royal Society whose own collection ultimately inaugurated the British Museum.[6] Sloane was to conclude in a posthumous tribute that Petiver exercised 'great Pains to gather together the Productions of nature in England and by his Correspondents and Acquaintance, all over the World procured, I believe, a greater Quantity than any Man before him[,] [...] many of them such as were not taken Notice of by any Natural Historian before him'.[7] The physician had by then purchased his late friend's books, papers and curiosities, doubling the size of his already impressive *hortus*

Promoter of Natural Science', *Proceedings of the American Antiquarian Society*, 62 (1952): 243–365.

5 Katrina Maydom, 'James Petiver's Apothecary Practice and the Consumption of American Drugs in Early Modern London', *Notes and Records of the Royal Society*, 74 (2020): 213–38, http://doi.org/10.1098/rsnr.2019.0015.

6 James Delbourgo, *Collecting the World: The Life and Curiosity of Hans Sloane* (London: Allen Lane, 2017); Alice Marples, 'James Petiver's "joynt-stock": Middling Agency in Urban Collecting Networks', *Notes and Records of the Royal Society*, 74 (2020): 239–58, https://doi.org/10.1098/rsnr.2019.0013.

7 Hans Sloane, *A Voyage to the Islands Madera, Barbadoes, Nieves, St Christophers and Jamaica*, 2 vols. (London: Hans Sloane, 1707–25), 2: iv–v.

siccus that subsequently became a foundation deposit of the Natural History Museum in London. In no small part due to Petiver's 'great Pains' the Sloane Herbarium now constitutes the world's most extensive extant early modern botanical repository.[8]

Recent research has focused productively on these aspects of Petiver's biography, not least by interrogating his manuscript corpus at the British Library and bringing it into dialogue with botanical and entomological specimens at the Natural History Museum.[9] By contrast, there has been little scrutiny of Petiver's energies as an author, yet print was integral to his methods.[10] As well as contributing regularly to *Philosophical Transactions of the Royal Society* (and the less rarefied *Monthly Miscellany; or, Memoirs for the Curious*), he was responsible for around thirty stand-alone publications. Despite modest resources, Petiver's commercial nous equipped him to engage creatively with the book trade. His oeuvre employed a variety of strategies including self- and subscription financing, collaborations with the editors of periodicals, letterpress and copperplate printing and the serial issue of major works.[11] The material characteristics of his publications imply the economic constraints he faced, appearing typically in formats requiring no more than a single printed sheet per copy, whether as folio, quarto or octavo pamphlets, or as single half-sheets. The typesetting tends to be tightly composited, while the physical quality of the product is often poor. Indeed, although a handful of ambitious projects (including *Musei Petiveriani*) were undertaken with respected booksellers, many of Petiver's ventures were self-funded, often with restricted print-runs that seem to have accepted a limited readership. It was surely nonetheless of advantage

[8] Katie Pavid, 'Hans Sloane: Physician, Collector and Botanist', *Natural History Museum*, https://www.nhm.ac.uk/discover/hans-sloane-physician-collector-botanist.html [accessed 16 Mar. 2021].

[9] See, for example, Richard I. Vane-Wright, 'James Petiver's 1717 *Papilionum Britanniae*: An Analysis of the First Comprehensive Account of British Butterflies (Lepidoptera: Papilionoidea)', *Notes and Records of the Royal Society*, 74 (2020): 275–302, http://doi.org/10.1098/rsnr.2019.0014; Charles E. Jarvis, '"The most common grass, rush, moss, fern, thistles, thorns or vilest weeds you can find": James Petiver's Plants', *Notes and Records of the Royal Society*, 74 (2020): 303–28, http://doi.org/10.1098/rsnr.2019.0012.

[10] Exceptions to this rule include Arnold Hunt, 'Under Sloane's Shadow: The Archive of James Petiver', in Vera Keller, Anna Marie Roos and Elizabeth Yale (eds), *Archival Afterlives: Life, Death and Knowledge-Making in Early Modern British Scientific and Medical Archives* (Leiden: Brill, 2018), pp. 194–222; and Charles E. Jarvis, 'An Annotated Bibliography of the Printed Works of James Petiver (c. 1663–1718)', *Archives of Natural History*, 48 (2021): 346–67.

[11] See Jarvis, 'Annotated Bibliography'.

that this lightweight output could both be produced expeditiously and communicated practicably to distant correspondents, while remaining at a price-point suited to the pockets of not just monied gentlemen but his peers among tradesmen and merchants.[12]

Petiver's works principally comprise catalogues of specimens that are sometimes accompanied by relatively unprepossessing engravings. He also printed directions for collecting and preserving natural history objects, intended to provision and expand his network of collaborators.[13] Most frequently Petiver's inventories detail his own collections, although some specify desiderata, extract lists from other naturalists or itemise observations from his own fieldwork. *Musei Petiveriani*, the first of Petiver's three major works, publicly enumerates his most prized curiosities.[14] It signals his scientific abilities, documents the global provenance of his cabinet and disseminates new knowledge about the world. Importantly, however, Petiver's works index people and places as well as plants and insects.[15] Explicitly acknowledging his collaborators by name, *Musei Petiveriani* was designed to bestow a mark of gratitude or favour upon patrons and dependents. Moreover, it set the standard for Petiver's future publications, which advertise more than conceal the complex and various genealogies of his museum. The text does not just depose 'ready-made science' (as Latour puts it) in the form of abstract matters of fact – such as an attentive and systematic polynomial determination for a new species – but also exposes 'science in the making' through delineating and reinforcing the networked multiplicity upon which Petiver's knowledge production was predicated.[16]

In an international environment of European aggrandisement that supported his regular acquisition of novel plants and insects, Petiver's decision to publish little and often enabled him regularly to circulate official updates concerning his ever-expanding collections and to claim the kudos of priority in describing previously unknown specimens. As Elizabeth Yale

[12] This argument springs in part from as yet unpublished work by Arnold Hunt on 'James Petiver and the Book Trade', presented at the *Remembering James Petiver* conference (Linnean Society of London, 26 Apr. 2018).

[13] Charles E. Jarvis, '"Take with you a small Spudd or Trowell": James Petiver's Directions for Collecting Natural Curiosities', in Arthur MacGregor (ed.), *Naturalists in the Field: Collecting, Recording and Preserving the Natural World from the Fifteenth to the Twenty-First Century* (Leiden: Brill, 2018), pp. 212–39.

[14] His other major works were *Gazophylacii Naturæ et Artis* ('A Treasure-House of Nature and Art') (1702–11), a kind of illustrated recasting of *Musei Petiveriani*; and *A Catalogue of Mr Ray's English Herbal Illustrated* (1712–15).

[15] James Delbourgo, 'Listing People', *Isis*, 103 (2012): 735–42.

[16] Bruno Latour, *Science in Action: How to Follow Scientists and Engineers through Society* (Cambridge, MA: Harvard University Press, 1987), pp. 1–17.

puts it, the methodology of 'exchange encouraged scholars to think of their work as never fixed and never finished. Instability and incompleteness came to mark the production and consumption of natural knowledge in both print and manuscript.'[17] *Musei Petiveriani* fulfils this science-in-the-making approach through its open-ended documentation of an ever-accreting series of objects and data. Moreover, pragmatically managing such publications not only allowed Petiver to advance projects relatively rapidly, but also reinforced the representation of ceaseless scholarly sociability – through repeated public expressions of obligation to named individuals – that was so vital to sustaining his museum's ecosystem of donors and correspondents. This was a deliberate strategy. If he established himself as a pre-eminent collector of global natural history curiosities, Petiver could procure for himself the highest degree of cachet within the leading echelons of Enlightenment natural philosophy. Yet his key technological innovation was far from elitist. Petiver deployed ordinary people as his functionaries, enthusing them with a confidence that natural history was a discipline in which they could participate by acting vicariously on his behalf.

A productive analogy can be drawn with twenty-first-century digital crowd-sourcing, 'a distributed problem-solving and production model' dependent upon 'outsourcing a function or activity of an organisation to a network of people in the form of an open call.'[18] 'Crowd' in this sense means not the spontaneous *mobile vulgus* but, rather, a large body of people who voluntarily assemble for a common purpose (the 'conventionalized crowd' whose 'behavior […] is expressed in established and regularized ways.')[19] In particular, business theorists have identified 'micro-task crowdsourcing' as an aggregating process to 'engage a crowd to undertake work that is often unachievable through standard procedures due to its sheer size or complexity.'[20] In these terms, Petiver assigned to his networked 'crowd' the relatively straightforward 'micro-task' of gathering specimens for transmission to him in London, where they formed a museum of a 'sheer size' and

[17] Elizabeth Yale, *Sociable Knowledge: Natural History and the Nation in Early Modern Britain* (Philadelphia: University of Pennsylvania Press, 2016), p. 3.

[18] C. Devece, D. Palacios and B. Ribeiro-Navarrete, 'The Effectiveness of Crowdsourcing in Knowledge-Based Industries: The Moderating Role of Transformational Leadership and Organisational Learning', *Economic Research*, 32 (2019): 335–51, https://doi.org/10.1080/1331677X.2018.1547204.

[19] Herbert Blumer, 'Collective Behaviour', in Alfred McClung Lee (ed.), *New Outline of the Principles of Sociology* (New York: Barnes and Noble, 1946), pp. 165–222 (p. 178).

[20] John Prpić et al., 'How to Work a Crowd: Developing Crowd Capital through Crowdsourcing', *Business Horizons*, 58 (2015): 77–85 (p. 79), http://dx.doi.org/10.1016/j.bushor.2014.09.005.

'complexity' that was necessarily 'unachievable' for a lone individual. Moreover, Petiver understood intuitively how to support 'user engagement' across this crowd by appealing to his collaborators' 'inherent personal interest' in natural history, ensuring 'goal clarity' through scripting standard instructions and sustaining their 'motivation to contribute' by rewarding them with published acknowledgements.[21] Print was Petiver's essential lubricant for his crowd-sourced collecting machine and via *Musei Petiveriani* he applied it in earnest for the first time.

Musei Petiveriani: of Petiver's Museum

The Latin title of *Musei Petiveriani* performs a series of knowing manoeuvres enveloped in the language of learning. 'Musei', the genitive form of 'Museum', signals a material and spatial concept very much in transition at the turn of the eighteenth century, as the older meaning of a repository of objects for private study gradually gave way to notions of public accessibility and benefit.[22] Petiver's designation recalled printed precedents, too, above all *Museum Wormianum* (1655) by the Danish physician Ole Worm and *Musæum Tradescantianum; or, A Collection of Rarities Preserved at South-Lambeth neer London* by John Tradescant (1656).[23] In similarly assigning his name as the proprietor of a 'Museum' he deemed worthy of a published catalogue, Petiver was claiming the heritage of internationally respected scholarship (Worm) and instructive spectacle (the Tradescants). While he did not operate his collection formally as a public display, in certain respects the text itself became Petiver's 'museum' venue via which its author–collector postulated and reached an audience. The 'impulse to textualize collections', as Marjorie Swann describes such early modern catalogue making, was integrated with the practice of collecting, contributing to a dialectical interplay through which Petiver could locate 'a nonproprietary audience to validate the noteworthy status of the collection and its

[21] Triparna de Vreede et al, 'A Theoretical Model of User Engagement in Crowdsourcing', in Pedro Antunes et al (eds), *Collaboration and Technology* (Berlin: Springer, 2013), pp. 94–109.

[22] Oliver Impey and Arthur MacGregor (eds), *The Origins of Museums: The Cabinet of Curiosities in Sixteenth- and Seventeenth-Century Europe* (Oxford: Oxford University Press, 1985).

[23] Ole Worm, *Museum Wormianum, seu historia rerum rariorum* (Ledien: Jean Elzevir, 1655); John Tradescant, *Musæum Tradescantianum; or, A Collection of Rarities Preserved at South-Lambeth neer London* (London: Nathanael Brooke, 1656).

owner.'[24] *Musei Petiveriani* at once beseeches and asserts public value for the private cabinets of curiosity in Petiver's shop on Aldersgate Street.

Petiver had begun his own herbarium no later than the early 1680s and soon began to cultivate the correspondence of anyone in whom he saw a potential gatherer of specimens. By June 1695, he had conceived the 'centuries' of his *Musei Petiveriani*, which he mentioned in writing to his kinsman and fellow naturalist William Sherard (1659–1728).[25] The same letter reports that Sloane was then preparing the initial sheets of his *Catalogus Plantarum quae in insula Jamaica sponte proveniunt* ('Catalogue of plants that grow indigenously in the island of Jamaica'), while the botanical Superintendent of Hampton Court gardens, Leonard Plukenet, was completing the lavishly engraved plates of his *Phytographia* ('Images of Plants').[26] As Petiver knew, print was an increasingly respectable and powerful means for natural historians to claim the credit of public scholarship within the economies of intellectual exchange that structured the so-called Republic of Letters. Petiver wanted in. If he lacked Sloane's or Plukenet's connections to the royal and noble households of the quality, he would do it his own way by capitalising upon the quantity of his acquaintance among merchants and medical men.

The first century of *Musei Petiveriaini* itemises 100 specimens from Petiver's collection arranged into two broad groupings that align with his principal interests in entomology and botany: twenty 'Insects, Shells, Fossils, &c.', followed by eighty 'Trees, Herbs, &c.'.[27] The former are organised into broad classificatory groups, such as butterflies and snails, while the plants in the second section are listed alphabetically by Latin name. Pre-Linnaean polynomials typically commence with a generic name that approximates to the modern family or genus determination, so this method partially arranges similar species together. Nonetheless, it is important to grasp that while the text demonstrates Petiver's capacity as the natural historian who identifies and names these 'rariora naturæ', they are selected fundamentally as objects within his museum and only secondarily – if still vitally – for their scientific significance. While disseminating knowledge

[24] Marjorie Swann, *Curiosities and Texts: The Culture of Collecting in Early Modern England* (Philadelphia: University of Pennsylvania Press, 2010), p. 10.

[25] James Petiver to William Sherard, London, 21 June 1695 [draft], London, British Library, Sloane MS 3332, fols. 126^{v}–128^{r}.

[26] Hans Sloane, *Catalogus plantarum quae in insula Jamaica sponte proveniunt* (London: D[aniel] Browne, 1696); Leonard Plukenet, *Phytographia*, 4 vols. (London: Leonard Plukenet, 1691–96).

[27] James Petiver, *Musei Petiveriani centuria prima* (London: Samuel Smith and Benjamin Walford, 1695).

about previously unknown species is crucial to *Musei Petiveriani*, this is not a work of systematic taxonomy. Rather, it is one of deliberate curation: both of Petiver's private museum and of his public status.

Petiver ruthlessly exploited typographical possibilities to cram as much useful detail as possible into *Musei Petiveriani*. All 100 items are denoted with Latin polynomials in roman type. English commentary and bibliographical references (qualified with a question mark where there is uncertainty) are set in italic, with vernacular English names sporadically in black letter. Around two-fifths of the 'century' are designated by additional marks either 'not to have been known before' in natural history publications (an asterisk) or to be 'new, or but doubtfully describ'd' (a manicule). A similar proportion are acknowledged to have been contributed from specific people (twenty-five different individuals are named in this respect). An 'A.' indicates a specimen that is a 'Native of *England*' and is applied to eighteen of the twenty 'Insects, Shells, Fossils, &c.' and thirty-five of the eighty 'Trees, Herbs, &c.'. Six of the plants are flagged as 'Offic.', indicating they are official drugs 'of Medicinal Use in the Shops': while Petiver's study of botany extended well beyond the *materia medica*, he had self-evident intellectual and commercial interests in the pharmacological viability of both new and known species.

Musei Petiveriani eventually comprised ten centuries across six octavos printed on single sheets over eight successive years. The first (issue 1) and eighth (issue 5) centuries were afforded their own pamphlets, while the remainder were paired in issues each listing 200 specimens. Along with the first century, centuries two and three (issue 2, 30 May 1698) and four and five (issue 3, 31 August 1699) were printed by Samuel Smith and Benjamin Walford (proclaimed as 'Reg[iae] Societatis Typograph[ica]', or 'Printers to the Royal Society').[28] Although no printer is named for centuries six and seven (issue 4, dated '1699'), centuries eight (issue 5, 31 December 1700) and nine and ten (issue 6, 16 January 1703) were again published by Smith, this time in partnership with Christopher Bateman.[29] Sequential pagination runs throughout the issues (six gatherings totalling ninety-six pages) but only the first bears a formal title page. A consistent format catalogues all 1,000 objects: a Latin specimen denomination,

[28] James Petiver, *Musei Petiveriani centuria secunda & tertia* (London: Samuel Smith and Benjamin Walford, 1698); *Musei Petiveriani centuria quarta & quinta* (London: Samuel Smith and Benjamin Walford, 1699).

[29] James Petiver, *Musei Petiveriani centuria sexta & septima* (London: James Petiver, 1699); James Petiver, *Musei Petiveriani centuria octava* (London: Samuel Smith and Christopher Bateman, 1700); *Musei Petiveriani centuria nona & decima* (London: Samuel Smith and Christopher Bateman, 1703).

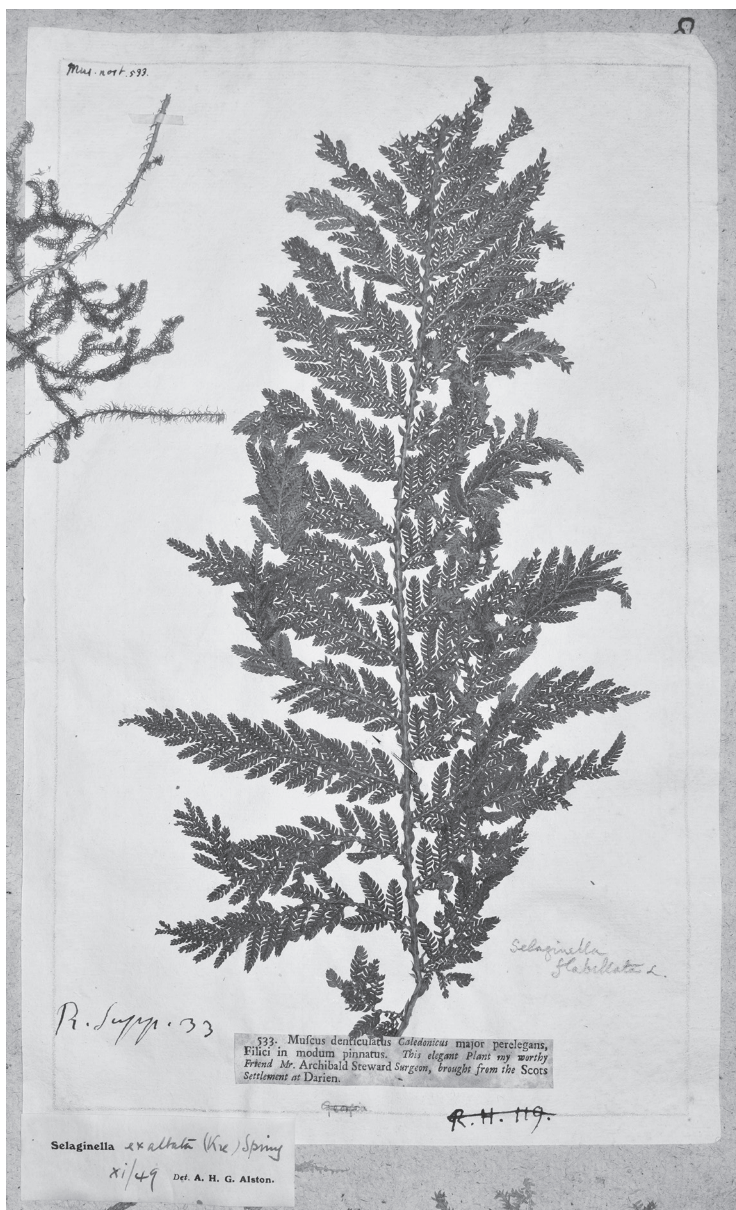

FIG. 2.1. Specimen of *Selaginella exaltata* (Kuntze) Spring collected by Archibald Steward from New Caledonia (Darién, Panama), 1690s, Natural History Museum (London), Sloane Herbarium, HS 157, fol. 8. Item 533 in *Musei Petiveriani*. Note the label excised from p. 52 of Petiver's printed text and the manuscript annotation 'Mus. nost. 533.' Credit: © The Trustees of the Natural History Museum. Photo: Charles E. Jarvis.