



CAI PLINII SECUNDI NATURALIS HISTORIA
LIBER PRIMVS
CAIVS PLINIVS SECVNDVS NOVOCOMEN
SIS T VESPASIANO SVO SALVTEM
PRAEFATIO

LIBROS NATVRALIS HISTORIE
reuerentiam, carissimos quosdam tuos
epul' carissu apud me, pericula finibus
latuente spithola, narone confertus d
muraud'one, suspexat. Sic enim huc
in pericula caudina, dum tuorum colle
uolix, et non. Marq' in libris perat d
aliquid, non magis, ut ebbire, eudine, ca
et non, carissimum, non. A quibus, e
et hoc, carissimum, non. Sic enim, ut lib
pericula, pericula, et hoc, carissimum, non
tam, si facit, et hoc, carissimum, non
coll' r'ond' d' heredia. Simul, ut hoc, non
tam, si facit, et hoc, carissimum, non

PLINY'S Encyclopedia

The Reception of the *Natural History*



AUDE DOODY

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PLINY'S ENCYCLOPEDIA

The Elder Pliny's *Natural History* is one of the largest and most extraordinary works to survive from antiquity. It has often been referred to as an encyclopedia, usually without full awareness of what such a characterisation implies. In this book, Dr Doody examines this concept and its applicability to the work, paying far more attention than ever before to the varying ways in which it has been read during the last two thousand years, especially by Francis Bacon and Denis Diderot. This book makes a major contribution not just to the study of the Elder Pliny but to our understanding of both the cultural processes of ordering knowledge widespread in the Roman Empire and the reception of Classical literature and ideas.

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PLINY'S ENCYCLOPEDIA

The Reception of the Natural History

AUDE DOODY



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Finally, thanks to my parents, and my sisters, for their help in making this possible.

Note on the text

The titles of Classical works have been abbreviated in accordance with the *Oxford Classical Dictionary*.

Introduction: how to read an encyclopedia

If Pliny the Elder is famous for anything, it is probably for going too close to a volcano. Not just any volcano, the celebrity of Vesuvius has lent a kind of glamour to the story of Pliny's death, as it was told by one famous writer to another, in a tantalising moment of literary exchange between Pliny the Younger and Tacitus (*Ep.* 6.16). For later readers, the mode of his death could make Pliny an icon of scientific endeavour: on his deathbed, Francis Bacon, blaming dangerous experiments rather than too much opium for his final illness, finds a precursor in Pliny; for the radical encyclopedists of eighteenth-century Paris, Pliny's death made him a martyr for rational science in the face of ignorance and superstition.¹ It is a romantic image, one that oddly coexists with the sometimes dismissive, sometimes indulgent, criticism that nineteenth- and twentieth-century scholarship lavished on his one surviving work. The *Historia Naturalis*, or *Natural History* as I will call it, is less often read than the letters of the more popular Pliny, but it continues to be used as an indispensable source by historians of the ancient world. There is little in the way of romance about the *Natural History*. Its catalogues of dry facts, studded with fantastic stories, build a monumental account of the nature of things, always threatening to flatten the reader under the weight of its knowledge. For this, and more complex reasons, it is usually called an encyclopedia.

But if the *Natural History* is an encyclopedia, it is not because its first readers could have recognised it as one, or, at least, not on our terms. Yet the idea that the *Natural History* is an encyclopedia has had, and continues to have, a diffuse influence on how we approach the text, and how we think of its author. Pliny's *Natural History* is often called the first western encyclopedia, but it is a strange thing to stand at the beginning of a tradition, especially one as elusive as encyclopedism. The generic recognition of the

¹ See [Chapter 1](#) for a discussion of Bacon's engagement with Pliny, and [Chapter 2](#) for Denis Diderot and the *encyclopédistes*.

Natural History as an encyclopedia has profoundly affected the ways we read and use it, but the extent to which its long history of use continues to impact on scholarly approaches to it remains underanalysed. The *Natural History* is a formidably successful reference work: generations of scholars, right up until the sixteenth century, could turn to Pliny as an authoritative source for information on medicine and on nature. When his facts became less useful for practitioners, they became more interesting to antiquarians: Pliny continues to provide key information for Classicists on aspects of ancient knowledge from agriculture to zoology. In its long history of use, the *Natural History* had a role in shaping many disciplines, but this role has been discounted by most readers of Pliny, who come to the text with a set of specialist queries in mind. My aim here is to examine the history of reading Pliny's text as 'an encyclopedia'. From the subversive and revolutionary encyclopedist that Diderot found in the author of the *Natural History*, to the pedantic compiler of the nineteenth and twentieth centuries, to the Roman imperialist of recent work, perceptions of who Pliny was and what the *Natural History* stands for have changed in sympathy with prevailing ideas of what an encyclopedia is for. This book is a study in intellectual history with two distinct aims: the first is to illuminate how a Classical text is read differently in response to the demands of different eras of scholarship; the second is to change the terms on which Pliny is approached by readers today.

My more adversarial ambition of defamiliarising the image of Pliny prevalent among modern readers gives the impetus to my approach to the history of his text. Let me begin, then, by sketching out some of the problems facing those of us who want to make sense of Pliny for the new century. The key issue is the continuing usefulness of Pliny's text. Over the years, a lot has been invested in the ability of Pliny to provide uncontroversial evidence for historians engaged in a wide range of explorations. Pliny has had a long career in the footnotes of major historical studies, lending his weight to the substructure of the argument; it is in footnotes that many battles on the accuracy of Pliny's information have been lost and won. The underlying question is one that Barbara Levick once posed in a footnote to her study on Roman colonies: 'but can Pliny be trusted?'² The question of whether Pliny is a book, or a person, to be trusted or mistrusted is an open one. It was Pliny the Younger who put the character of Pliny on the agenda for later readers of his work, and as we will see, ideas of who Pliny is change alongside changing uses of his work. It is an

² Barbara Levick, *Roman Colonies in Southern Asia Minor* (Oxford: Clarendon Press, 1967), 37 n.6.

unnerving moment, however, when we realise how many arguments over the years have been premised on the accuracy and objectivity of Pliny's work.

Objectivity is a difficult idea to defend these days. Most critics would now attest, with Foucault, that even aside from overt ideological agendas, all reference works occlude choices about what is left out and what is left in, how the information is arranged and presented, all of which affect how the work can be read.³ There has been a resurgence of interest in ancient technical writing over the past ten years, driven partly by this new awareness of these texts' complexity. In the case of Pliny, new studies have reacted against the straightforward appropriation of Pliny's facts and the piecemeal reading of his work, by probing the text for a hidden unity or cohesive message. Mary Beagon and Andrew Wallace-Hadrill looked to Roman concepts of nature for the point of the text; Trevor Murphy, Sorcha Carey and Valérie Naas found it in an imperialist worldview that has Rome at its centre.⁴ If a gap has opened between scholars who use and scholars who read Pliny, it is one historians would like to close as quickly as possible. We still need to use Pliny: he is our best, sometimes our only, written source for aspects of Roman technology and Greek art, for instance. Finding the limits of a fact's debt to Pliny's wider concerns is not easy, however, especially if we then want to use the fact to construct our own stories about Roman medicine, or Roman economics or whatever.

In one respect, the gap between reading Pliny and using his information is not a large one, in that both practices tend to share a general perception of the *Natural History* as an unoriginal, and largely self-evident compilation. Even when Pliny's rhetoric is unpacked, the result is usually an image of the 'old Roman moralist', reassuringly conservative in social and intellectual matters.⁵ Jacqueline Vons's work on *L'image de la femme dans l'œuvre de Pline l'ancien* struggled to reconcile what she saw as Pliny's idiosyncrasy and a sense that the *Natural History* was a reflection of a common cultural

³ I am thinking of *The Order of Things / Le mot et la chose* especially here, which was instrumental in sparking reappraisals of encyclopedic works: Michel Foucault, *The Order of Things* (London: Tavistock, 1970).

⁴ Mary Beagon, *Roman Nature: The Thought of Pliny the Elder* (Oxford University Press, 1992); Sorcha Carey, *Pliny's Catalogue of Culture. Art and Empire in the 'Natural History'* (Oxford University Press, 2003); Trevor Murphy, *Pliny the Elder's 'Natural History'. The Empire in the Encyclopedia* (Oxford University Press, 2004); Valérie Naas, *Le projet encyclopédique de Pline l'ancien* (Rome: École française de Rome, 2002); Andrew Wallace-Hadrill, 'Pliny the Elder and Man's Unnatural History', *Greece and Rome* 1 (1990): 80–96.

⁵ For a more nuanced account, see Sandra Citroni Marchetti, *Plinio il Vecchio e la tradizione del moralismo romano* (Pisa: Giardini, 1991).

system.⁶ More dynamically, Mary Beagon and Gian Biagio Conte place Pliny's 'typicalness' at the heart of what they think is important about him: his ability to provide us with an idea of the average interests and competence of a Roman man in the first century.⁷ Whether consciously or unconsciously, these ideas about Pliny's ordinariness are informed by assumptions of what it means to write an encyclopedia. An encyclopedia is rarely imagined to have literary ambitions, often seen instead as a repository of the general knowledge or common culture of the era in which it first emerged.⁸ In the case of the *Natural History*, the idea that its encyclopedism might represent 'an epitome of first-century culture' or 'an encyclopedia of all contemporary knowledge' is an enticing prospect for modern Classicists, offering a glimpse of shared cultural horizons between writer and reader in the first century.⁹ But equating what Pliny gives us in the *Natural History* with general cultural knowledge is a perversely difficult claim to keep up, without the bulwark of a particular vision of encyclopedism to support it.

I intend to open up the more alarming possibility of a radical Pliny, writing a peculiar and innovative natural history that is profoundly and thoughtfully unlike other scholarship that survives from antiquity. As I will suggest, the *Natural History* represents an odd idea of what one should know about nature – and how one should know it – in the context of Roman writing. Reading it through the lens of a later genre of encyclopedia has too easily naturalised the strangeness of Pliny's text. My first step is to address the difficulties of assimilating the *Natural History* into an *ancient* genre of encyclopedia. On this score, historians of encyclopedism have colluded with ancient historians in making Pliny one of the first encyclopedists, setting him at the start of a tradition of writing that spans centuries and cultures in its attempts to make a text of all human knowledge. This is an overtly teleological narrative, one which in recent works has been tempered by caveats about the dangers of etymology and anachronism, and a greater desire to distinguish between the philosophical impulse towards complete knowledge and the production of an encyclopedic book. An

⁶ J. Vons, *L'image de la femme dans l'œuvre de Pline l'ancien* (Brussels: Latomus, 2000).

⁷ I will discuss Conte and Beagon's views in more detail later, in [Chapter 1](#) and [Chapter 2](#).

⁸ On the encyclopedia as a repository or summary of popular culture or general knowledge, see for instance Robert L. Collison and Warren E. Preece, 'Encyclopaedias', in *Encyclopaedia Britannica*, 15th edn, ed. Mortimer J. Adler, Robert McHenry, Warren E. Preece *et al.* (Chicago, 1992), 18, 261.

⁹ Beagon, *Roman Nature*, 15; N. Purcell, 'Pliny the Elder', in *The Oxford Classical Dictionary*, 2nd edn, ed. S. Hornblower and A. Spawforth (Oxford University Press, 1996), 1197. Cf. 'the most complete image of ancient common wisdom': Gian Biagio Conte, 'The Inventory of the World: Form of Nature and the Encyclopedic Project in the Work of Pliny the Elder', in *Genres and Readers*, trans. G.W. Most (Baltimore, London: Johns Hopkins University Press, 1994), 72.

older generation of scholars, most notably Pierre Grimal, could trace a progression from the beginnings of encyclopedic thought in the aspirations of Platonic philosophy to the more book-based model offered by Romans such as Varro, or Cato, or Pliny.¹⁰ This triad has retained its importance in accounts of Roman encyclopedism offered by Carmen Codoñer and Robert Fowler, although both give extensive thought to the nuances of the anachronism involved in finding encyclopedism in pre-modern contexts.¹¹

It is a question of whether the concept of encyclopedism can helpfully be applied to antiquity at all. Christian Jacob has argued that it simply cannot:

L'affaire semble entendue. Il y a erreur sur les mots, et la fantaisie d'un Rabelais qui . . . fabrique 'l'encyclopédie' à partir de l'*enkyklios paideia* des Grecs. L'historien est pris au piège des mots et des choses.¹²

Jacob goes on to suggest that the project of looking for encyclopedism in Greek antiquity challenges the project of writing a history of encyclopedism in the first place – this in a volume that gathers articles on an array of encyclopedic enterprises, grandly titled *Tous les savoirs du monde. Encyclopédies et bibliothèques, de Sumer au XXI^e siècle*. In the end, his answer to where encyclopedism might happen in Greece rests on an examination of consciously diverse modes of omniscience, from Homeric rhapsode to sophist to Alexandrian librarian. This is an explicit challenge to the idea of a continuity of encyclopedism between ancient and modern contexts, one that threatens to collapse its usefulness altogether in dealing with the Classical past.

I believe, paradoxically perhaps, in the relevance of encyclopedism for understanding Pliny's text, at the same time as I argue that the easy assimilation of the *Natural History* to a modern encyclopedic genre needs to be reassessed. The problem is not with calling Pliny 'encyclopedic', so much as with calling his text 'an encyclopedia', though, as I will discuss, the two ideas are difficult to disentangle. But it is not a question of simple

¹⁰ Pierre Grimal, 'Encyclopédies antiques', *Cahiers d'histoire mondiale* 9 (1965): 459–82. I discuss this and other formulations of ancient encyclopedism in [Chapter 2](#).

¹¹ Carmen Codoñer, 'De l'antiquité au moyen âge: Isidore De Seville', in *L'encyclopédisme: actes du colloque de Caen 12–16 janvier 1987*, ed. Annie Becq (Paris: Éditions aux amateurs de livres, 1991), 19–35; Robert Fowler, 'Encyclopaedias: Definitions and Theoretical Problems', in *Pre-modern Encyclopedic Texts*, ed. Peter Binkley (Leiden, New York: Brill, 1997), 3–30.

¹² 'The matter seems closed. It was a mistake over terms, a fantasy of Rabelais . . . who invented "the encyclopedia" from the Greek *enkyklios paideia*. The historian is caught between words and things.' Christian Jacob, 'Athènes-Alexandrie', in *Tous les savoirs du monde. Encyclopédies et bibliothèques, de Sumer au XXI^e siècle*, ed. Roland Schaer (Paris: Bibliothèque nationale de France / Flammarion, 1996), 44.

anachronism, easily set aside: there is a basic instability in the opposition between ancient and modern concepts of the encyclopedia that Jacob, for one, appeals to. To begin with, there have been many different models of modern encyclopedia: it is a particularly mobile genre, propelled along by changes in what counts as common knowledge and by developments in the technology of the book. Recently, it has undergone a crisis of authority and relevance, with the opening up of the Internet, a crisis that familiar brands like the *Encyclopaedia Britannica* are attempting to weather profitably. Modern encyclopedism has always been in flux, changing from one concretisation to another. A history of the encyclopedia will tell us that the word first appears in the title of a book in the sixteenth century: one yardstick by which we might judge the emergence of a self-aware genre.¹³ But how far should our recognition of what counts as an encyclopedia be determined by a sequential history of a genre?

Genre is a powerful matrix for understanding texts, not least because it sets up alternative means of relating one text to another, different from one based exclusively on historical contingency. Genre is important because it provides readers with one means of relating one text to another across time and place; it has a powerful action in mediating and refracting the particular context of composition. On one level, Pliny's *Natural History* is an encyclopedia because it displays certain features characteristic of that genre – it is a grand-scale reference work with retrieval devices – and this is the case whether or not Pliny was aware of the genre while writing it. To put it more strongly, the *Natural History* is an encyclopedia precisely because people read and use it as one. Dismissing this usage as simply anachronistic is a simplification of the terms on which we can read it, and the processes by which we come to have it. Abandoning the idea that the *Natural History* is an encyclopedia outright would only drive the premises and assumptions that colour our current readings underground. But we have to be aware of the historicity of the particular models we adopt: part of the problem with assumptions about Pliny's encyclopedism is that they tend to unconsciously align the *Natural History* with a by now outdated model of nineteenth- and early twentieth-century nationalistic, book-based encyclopedias. What we need, what I hope to provide, is an excavation of those assumptions, an archaeology of Pliny's encyclopedia that will open up different vistas, new and old approaches to the *Natural History*.

¹³ Robert Collison's 1964 annotated bibliography of encyclopedias is still one of the best introductions to the field as a whole: my references throughout are to the expanded second edition of 1966: Robert Collison, *Encyclopedias: Their History throughout the Ages* (London, New York: Hafner, 1966). See also Foster Stockwell, *A History of Information Storage and Retrieval* (London: McFarland, 2001).

My plan, then, is to isolate and examine some significant moments of Pliny's reception. Reception studies is in some respects still negotiating its way into mainstream Classics, producing competing models of how and what we might want to know about our texts and the long period of their use.¹⁴ The focus here is both narrow and wide-ranging: it centres on a single text, in various manifestations and in several eras of scholarship. My aim is not to offer a linear narrative of changes in the ways in which Pliny has been read and used since antiquity. Instead, I hope to use my explorations of some key moments in Pliny's reception history to illuminate the ways in which we continue to use and read his text. The perspective from which I understand Pliny's later reception is an explicit part of my readings.¹⁵ I am interested in the meanings and significances that different communities of readers have found in the *Natural History*, but my readings of that history are intended to provoke new understandings of and, as Charles Martindale puts it, dialogues with, Pliny's text.¹⁶ The first half of this book will deal with the ways in which the *Natural History* has been viewed through the prism of prevailing attitudes towards science and encyclopedism; the second focuses on the ways encounters with it have been shaped by the availability of retrieval devices and specialist books of extracts.

The possibility of innovations on the part of Pliny in the context of first-century scholarship has been made difficult by our awareness of a later genre of encyclopedism. In the first chapter, by turning to Francis Bacon's reading of the *Natural History* in the context of his own encyclopedic project, I explore how a modern dichotomy between science and encyclopedism has contrived to obscure the intellectual polemics of the *Natural History*. Against this background, I offer my own reading of the *Natural History*, which sees the structures of Pliny's text as a dynamic part of its

¹⁴ The best introductions to the field are volumes edited by Lorna Hardwick and Chris Stray, by Craig Kallendorf, and by Charles Martindale and Richard Thomas, where the range of articles indicates the plurality of approaches possible: Lorna Hardwick and Christopher Stray, eds., *A Companion to Classical Receptions* (Malden, MA, Oxford: Blackwell, 2007); Craig Kallendorf, *A Companion to the Classical Tradition* (Malden, MA, Oxford: Blackwell, 2007); Charles Martindale and Richard F. Thomas, eds., *Classics and the Uses of Reception*, *Classical Receptions* (Malden, MA, Oxford: Blackwell, 2006).

¹⁵ On this issue, see William W. Batstone, 'Provocation: The Point of Reception Theory', in *Classics and the Uses of Reception*, ed. Charles Martindale and Richard F. Thomas (Malden, MA, Oxford: Blackwell, 2006), 14–20.

¹⁶ See Charles Martindale, *Redeeming the Text: Latin Poetry and the Hermeneutics of Reception* (Cambridge University Press, 1993); Charles Martindale, 'Reception', in *A Companion to the Classical Tradition*, ed. Craig Kallendorf (Malden, MA, Oxford: Blackwell, 2007), 297–311; see also his introduction to *Classics and the Uses of Reception* (ed. Martindale and Thomas).

meaning. Pliny's conceptualisation of nature as the sum of its parts, accessible in its entirety, finds textual expression in his hierarchical catalogues of discrete facts; his sense that the proper attitude to nature is wonder and contemplation results in a text that is meant to be enjoyed as well as used. A greater awareness of the historicity of our own reading methods and scholarly conventions allows for a more nuanced view of Pliny's originality in his own intellectual context. This is the springboard for an interrogation of the three most prevalent methods of reading Pliny today: reading for an overriding political or rhetorical point; using for isolated facts; reading in specialist sections.

The second chapter turns to the question of what happens when we try to find a coherent message in the text by reading it as a cohesive work. It is also the point where I probe the reflexivity of studying reception, and consider the extent to which my own concerns are embedded in a particular, contemporary politics of reading the encyclopedia. I examine the relationship of *enkyklios paideia* to the concept of encyclopedism and argue that there was no ancient genre of encyclopedia to which Pliny belonged: if the *Natural History* is an encyclopedia, this is a function of its reception history. I re-examine Pliny's geographical chapters and the analysis of the text as a product of Roman imperial power dynamics, an influential approach adopted by Carey, Murphy and Naas, who examine the links between empire and encyclopedism, power and knowledge, in their readings of the *Natural History*. My elaboration focuses on naming structures within the text to explore the differences between Pliny's accounts of Europe and of Africa and Asia. This is a productive approach to the text, yet there is something almost inevitable about it, drawing, as it does, on new issues in the study of encyclopedism. Modern encyclopedias are very aware that their organisation of knowledge is supposed to represent a powerful circumscribing of what counts as common cultural knowledge. New encyclopedic projects, and scholarly work on the subject, have had to grapple with the politics of feminism and multiculturalism in trying to define what counts as common knowledge, reacting against the univocal nationalism of the nineteenth-century *Encyclopaedia Britannica et al.* This strand of thought has had a huge impact on new readings of Pliny's politics, particularly in his geographical and ethnographical writing, my own included. In an attempt to find a different politics in the text, I turn to the unexpected image of Pliny as a subversive *philosophe* that emerges in the writings of the Enlightenment encyclopedist Denis Diderot (1713–84) particularly in his letters to the sculptor Étienne-Maurice Falconet (1716–91). The idea of a subversive Pliny that was possible in eighteenth-century France has faded

completely from current discourse on the *Natural History*. As we will see, it is difficult to rehabilitate this Pliny without abandoning or renegotiating prior commitments to the politics of modern encyclopedic projects.

The third chapter addresses the question of the extent to which the text of the *Natural History* allows for a methodology of extracting facts rather than reading the narrative. Encyclopedias are predicated on the practice of using rather than reading, and the development of retrieval devices has gone hand in hand with the evolution of the genre and its current reinvention in new digital media. My argument, then, is located in the history of Pliny's text as a published book, examining the significant differences between incunabula and modern editions of the *Natural History* to determine how changing methods of publication alter the possibility of finding facts in the text. I focus on the idea of the summarium as a retrieval device, and the relative ease with which it can be used to find information in the text of early and modern editions. Pliny provides a summarium, or list of contents, in the first book of the *Natural History*, but this should not be mistaken for a modern table of contents or index. The tendency of new editions of the *Natural History* to format the summarium as a table of contents or index naturalises the text, and makes an implicit claim that this is a reference work, to be read in segments. Retracing the history of the summarium's form points to different potential uses, and different potential meanings.

The theme of how far individual passages or sections can be understood in isolation from the rest of the *Natural History* continues in the final chapter. Here, I look at the history of reading Pliny in subject-defined sections, and the emergence of books of excerpts organised to meet specialist needs. I am interested in how attitudes towards the author of the text and his authority and control over his data are made problematic by the desire of specialist readers to make the work useful. I focus on two contrasting volumes produced at key periods in the development of their particular specialisms: the *Medicina Plinii* and *The Elder Pliny's Chapters on the History of Art*. In the case of Pliny's medicine, I deal with Alban Thorer's editorial decisions in his sixteenth-century edition of this fourth-century text; the book of extracts on art history was edited by Eugenie Sellers in the late nineteenth century, at a point when Classical art history was emerging as an academic discipline. I explore the ways in which books of extracts change the material they excerpt by transplanting it from its encyclopedic context, and how these changes reflect choices about the nature of the specialism constructed. In the case of Pliny's art history, not only is Sellers' edition still used by scholars, but the practice of reading the art history as a specialist discourse separate from the concerns of the rest of the work is

still very much in use. I explore the limitations of specialist approaches to Pliny's text by examining how continuities in narrative structures across the *Natural History* affect our ability to find a simple story on artists and attributions in Books 34 to 37.

Reading the *Natural History* is a tricky business, but one that continues to be a necessary task for historians. It is a fascinating book, in the information it highlights and the ways it inveigles its facts into ever more tendentious hierarchies of knowledge. The story of Pliny's usefulness is a long and complex one, and I have picked out only parts of it, ignoring, in particular, the medieval period, perhaps the highpoint of Pliny's authority in the West.¹⁷ The usefulness of the *Natural History* has largely obscured its entertainment value, and the quirkiness of the world that Pliny offers us. Hopefully this interrogation of what it means to read an encyclopedia will open a new space for discovering meanings in the text, new questions we want to ask of it.

¹⁷ There are several excellent studies of this period, however. In particular, see Arno Borst, *Das Buch der Naturgeschichte. Plinius und seine Leser im Zeitalter des Pergaments* (Heidelberg: Winter, 1994); M. Chibnall, 'Pliny's *Natural History* and the Middle Ages', in *Empire and Aftermath*, ed. T.A. Dorey (London, Routledge: 1975), 57–78.

*Science and encyclopedism: the originality
of the Natural History*

Pliny's *Natural History* is a peculiar book. The scope of its subject matter and the strangeness of its organising principles are almost unique in surviving Latin literature. But despite its apparent singularity, and despite Pliny's rhetorical insistence on its originality in his preface, there has been very little speculation as to where the *Natural History* might fit in the landscape of Roman *historia*. This is partly the result of the traditional marginality of ancient scholarship to Classical studies, but the lack of speculation about the provenance of the *Natural History* is in large part due to its self-evident but anachronistic recognition as 'an encyclopedia'. The form and content of the *Natural History* have been naturalised as markers of an encyclopedic text; it is commonly called 'an encyclopedia' within the field of Classics,¹ and maintains an important position in any attempt to trace the history of encyclopedism into antiquity.²

Genre has a diffuse influence on the expectations which we bring to the text, and the methods of reading we apply to it. It provides an important framework for understanding the terms on which we should approach the work, suggesting a context for its production or performance and parameters for its content and conclusions. But once we move outside the well-policed genres of 'high literature', we can run into difficulties. There has been much debate as to how particular branches of *historia* demarcate their boundaries; these new studies have been concerned to examine the interactions between different types of prose writing, to discover the disjunctions and continuities between fiction and non-fiction, biography, and history,

¹ See, for instance: Beagon, *Roman Nature*, 15; Conte, 'The Inventory of the World'; Purcell, 'Pliny the Elder', 1197; Vons, *L'image de la femme*, 9.

² For ancient encyclopedism and Pliny in general studies, see Collison, *Encyclopedias*, 25–6; T. McArthur, *Worlds of Reference – Lexicography, Learning and Language from the Clay Tablet to the Computer* (Cambridge University Press, 1986), 16; S.H. Steinberg, 'Encyclopaedias', *Signature: A Quadrimetrial of Typography and Graphic Arts* n.s. 12 (1951): 6–7; Stockwell, *History of Information Storage*, 13.

rhetoric and philosophy.³ When it comes to scientific writing in antiquity, a wide range of genres were in play, and, as Liba Taub has shown, the choice of genre had a profound impact on the way in which a text could be understood.⁴ It is in this context that the effect of understanding the *Natural History* as part of a genre of encyclopedia needs further examination.

Encyclopedism is a fluid concept that becomes a self-aware literary genre only at a much later period in the history of western literature; in fact, the title 'encyclopaedia' only begins to appear in the sixteenth century with the publication of Paul Scaliger's *Encyclopaedia, seu orbis terrarum* in 1559.⁵ The encyclopedia is a difficult genre to define, and its boundaries are hard to ring-fence. As a concept, encyclopedism can encompass the aspiration towards universal knowledge or the sum of general knowledge of a particular culture. It is used as a conceptual tool in debates within the field of semiotics about language use and meaning;⁶ within literary criticism, certain texts such as *Ulysses* or *The Divine Comedy* can be termed encyclopedic in this sense of an attempt to contain a complete set of cultural reference points.⁷ These concepts inform the more concrete idea of the encyclopedia as a book that gathers and organises either the entire set of general knowledge or an exhaustive array of material on a specialised

³ For example, see C. Gill and T.P. Wiseman, eds., *Lies and Fiction in the Ancient World* (University of Exeter Press, 1993); C. Shuttleworth Kraus, ed., *The Limits of Historiography: Genre and Narrative in Ancient Historical Texts*, Mnemosyne (Leiden, Boston, Cologne: Brill, 1999).

⁴ Liba Taub, *Aetna and the Moon: Explaining Nature in Ancient Greece and Rome* (Corvallis: Oregon State University Press, 2008). See also Aude Doody, and Liba Taub, eds., *Authorial Voices in Greco-Roman Technical Writing* (Trier: Wissenschaftlicher Verlag Trier, 2009); Burkhard Meißner, *Die technologische Fachliteratur der Antike: Struktur, Überlieferung und Wirkung technischen Wissens in der Antike (ca. 400 v. Chr. ca. 500 n. Chr.)* (Berlin: Akademie Verlag, 1999); Christiane Reitz, 'Dichtung und Wissenschaft', in *Antike Fachschriftsteller: Literarischer Diskurs und sozialer Kontext*, ed. Marietta Horster and Christiane Reitz (Stuttgart: Franz Steiner Verlag, 2003), 61–71.

⁵ Collison, *Encyclopedias*, 79–80. See also Joachimus Fortius Ringelbergius' *Lucubrationes vel potius absolutissima kyklopaideia* (Basel, 1541). Rabelais seems to have been the first to use the term in the vernacular in 1532 in his book *Pantagruel*.

⁶ D. Alan Cruse, 'Word Meaning and Encyclopedic Knowledge', in *Understanding the Lexicon: Meaning, Sense and World Knowledge in Lexical Semantics*, ed. Rainer Schulze and Werner Hüllen (Tübingen: Niemeyer, 1988), 73–84; David Crystal, 'The Encyclop(a)edic Word Game', *English Today: The International Review of the English Language* 6, no. 2 (1990): 3–12; Umberto Eco, 'Metaphor, Dictionary, and Encyclopedia', *New Literary History: A Journal of Theory and Interpretation* 15, no. 2 (1984): 255–71; Umberto Eco, 'Texts and Encyclopedias', in *Text vs. Sentence: Basic Questions of Text Linguistics*, ed. Janos S. Petofo (Hamburg: Buske, 1979), 585–94; J. Haiman, 'Dictionaries and Encyclopedias', *Lingua* 50 (1980): 329–59; J. Haiman, 'Dictionaries and Encyclopedias Again', *Lingua* 56 (1982): 353–5.

⁷ Northrop Frye, *Anatomy of Criticism* (Princeton University Press, 1957), 315–26; Hillary A. Clarke, 'Encyclopedic Discourse', *SubStance: A Review of Theory and Literary Criticism* 21 (1992): 95–110; Edward Mendelson, 'Encyclopedic Narrative from Dante to Pynchon', *Modern Language Notes* 91 (1976): 1267–75.

subject. In its grand vision, the encyclopedia claims to provide easy access to an objective and complete set of information about everything the individual needs to know about the world in which they live.

This overview of what we might mean by calling a text encyclopedic in a contemporary context should point to the particular difficulties we face when we try to find encyclopedic texts in other eras and in other cultures. Some of these difficulties are common to any attempt to trace an intellectual history of a specific subject area: the danger of being anachronistic, of constructing a teleological narrative which views past ideas in terms of an evolution towards modern fulfilment. Classical aetiologies have a particular usefulness in providing legitimating and explanatory narratives for western culture and it is perhaps not surprising that the history of the encyclopedia has been traced to ancient origins; later encyclopedists, as we will see, had no difficulty in seeing Pliny as a kind of precursor. It is not an accident that much of recent scholarship on ancient encyclopedism is published in the context of wider projects, which trace encyclopedism into later time periods, at least as far as the Middle Ages.⁸ Pliny's impact on later encyclopedists is wide-ranging, from the wholesale pillaging of his work in medieval religious compilations, to his role as an inspirational forefather in the eighteenth century. It is in some ways impossible to disentangle the *Natural History* from its legacy, to imagine an initial moment of reception without a modern genre of encyclopedism to govern it.

Encyclopedism is at the centre of current scholarly approaches to Pliny, which divide, by and large, into two camps. One sees a pedantic Pliny, compiling an unoriginal but all-encompassing encyclopedia which modern historians can use, more or less cautiously, for information on the ancient world. The second, newer school of criticism recoups a sort of originality for Pliny by focusing on the underlying politics of Pliny's text. I will discuss this second mode of approach in the next chapter; for the moment, I want to examine the premises behind the still-prevalent image of Pliny the pedant, compiling his facts in a self-evident, useful manner. The paradox is that although the *Natural History* is quite unlike anything else that survives from antiquity, its author is a byword for pedantic unoriginality. An alternative to this vision of the *Natural History* is discernible in the power and longevity

⁸ This is true of Collison, *Encyclopaedias*; Codoñer, 'De l'antiquité au moyen age'; Francesco della Corte, 'Enciclopedisti Latini', in *Opuscula* (Genoa: Istituto di Filologia Classica e Medievale, 1978), 9–107; H.-J. Diesner, 'Lexikographie und Enzyklopädie in der Antike', in *Lexika Gestern und Heute*, ed. G. Gurst and H.-J. Diesner (Leipzig: Bibliographisches Institut, 1976), 11–60; Fowler, 'Encyclopaedias'; Grimal, 'Encyclopédies antiques'; Christian Hünemörder, 'Antike und mittelalterliche Enzyklopädien und die Popularisierung naturkundlichen Wissens', *Sudhoffs Archiv* 65 (1981): 339–65; Jacob, 'Athènes-Alexandrie'.

of Pliny's hold over how nature was written about in the centuries after his death. Pliny's text represented a powerful conceptualisation of what it meant to know about *rerum natura* in first-century Rome. Pliny imagines nature as exactly the sum of its parts: knowing about the nature of things in the *Natural History* means knowing the details, but knowing all of them, in their correct place in the elaborate hierarchies of nature that Pliny constructs. I will discuss the ways in which this version of nature is embedded in the basic structures of Pliny's text, in the lists of names that make up his narrative.

Before we can envisage a radical or an inventive Pliny, however, we need to examine the frameworks of our current readings and, in particular, the dichotomy between science and encyclopedism that informs current perceptions of Pliny's project. Pliny, of course, also stands near the start of a teleological narrative that traces the antecedents of modern science in earlier periods. Natural history is often subsumed into the category of encyclopedism: the natural world is perhaps the most characteristic subject matter of the encyclopedia in any history of the genre. But where the *telos* of a contemporary history of encyclopedism is Wikipedia or the Internet more generally, the history of natural history is usually seen as a more or less problematic progression towards modern scientific enquiry. At a certain point, then, the generalising comprehensiveness of encyclopedism can be seen to define itself in opposition to the specialised intellectualism of science. If Pliny is a natural historian, a proto-scientist, are we to compare the *Natural History* with Aristotle's original research of the *Historia Animalium* or the philosophical evangelism of Lucretius' *De rerum natura*? If Pliny was setting out to provide a theory on the essence of nature then he seems to have failed – a failure that may suggest a different intellectual project. On the other hand, taking Pliny in the context of 'encyclopedists' Varro or Cato means accounting for differences in subject matter. Defining the *Natural History* as encyclopedia or natural history is a matter of privileging form or content in the process of categorisation, but the problem remains that none of the other ancient texts which focus on nature is structured like the *Natural History*, and none of the other texts with a comparable totalising scope takes nature as its theme.

SCIENCE AND ENCYCLOPEDIA: THE NATURE
OF PLINY'S SCHOLARSHIP

Opinions on Pliny's scholarly achievements have varied hugely over the course of his reception history. From the high point of his success in the

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