OXFORD STUDIES IN BYZANTIUM

Editorial Board
James Howard-Johnston    Elizabeth Jeffreys
Paul Magdalino           Henry Maguire
Cyril Mango              Marlia Mango
Ihor Ševčenko            Jonathan Shepard
Jean-Pierre Sodini
OXFORD STUDIES IN BYZANTIUM

Oxford Studies in Byzantium consists of scholarly monographs and editions on the history, literature, thought, and material culture of the Byzantine world.
A Byzantine Encyclopaedia of Horse Medicine

The Sources, Compilation, and Transmission of the Hippiatrica

ANNE McCabe
Preface

This book is based on a thesis entitled ‘The Transmission of the Greek Hippiatrica’, submitted to the Faculty of Literae Humaniores, University of Oxford, in 2002. The original text has been revised and to some degree expanded; at the suggestion of the Press I have also given English translations of quotations from Latin and Greek texts. These are intended simply as an aid to the reader; I have no doubt that there are many points on which they could be improved. Translations of Columella’s De re rustica are, in general, adapted from that of H. B. Ash, E. S. Forster, and E. Heffner in the Loeb Classical Library, and translations of Varro’s Res rusticae from that of W. D. Hooper and H. B. Ash in the same series.

I should like to express my warmest thanks to the editorial board of Oxford Studies in Byzantium for including my work in the new series, and especially to my supervisor, Prof. Cyril Mango, for his kind advice and his patience. The text has benefited greatly from suggestions by my other teacher, Prof. Ihor Ševčenko, for improving its ‘user-friendliness’, and from Mr Nigel Wilson’s comments on earlier versions and on matters of palaeography. Very many thanks also to Dr Sebastian Brock for his help with the Syriac translation of Anatolius, and to Dr Robert Hoyland for his collaboration on the Arabic tradition of Theomnestus; Dr Fritz Zimmerman also examined the Arabic translation. Dr Anne-Marie Doyen-Higuet and Prof. Klaus-Dietrich Fischer generously provided much useful material. Mrs Hülya Baraz, Mr Michael Carey, Dr Krijnie Ciggaar, Dr Vera von Falkenhausen, Dr Jeffrey-Michael Featherstone, Prof. George Huxley, Dr Elaine Matthews, Dr Emilie Savage-Smith, Dr Nancy Ševčenko, Dr Natalie Tchernetska, and Prof. Agamemnon Tselikas kindly offered help and all sorts of items of hippiatric interest. I am grateful to the manuscript departments of the Biblioteca Apostolica Vaticana, the Biblioteca dell’ Accademia Nazionale dei Lincei e Corsiniana in Rome, the Biblioteca Mediceo-Laurenziana in Florence, the Biblioteca Nazionale of Naples, the Bibliothèque nationale de France, the British Library, the Köprülü Kütüphanesi in Istanbul, and the Universiteitsbibliotheek in Leiden, for permitting me to see their copies of the Hippiatrica; and in particular to Dr Renate Schipke of the Staatsbibliothek zu Berlin for allowing me to examine the beautiful imperial manuscript Phillipps 1538; Dr Helen Carron and the late Prof. Frank Stubbings of the Library of Emmanuel College, Cambridge; Bay Muammer Ülker of the Süleymaniye Kütüphanesi in Istanbul, Dr Clare Breay and Dr Scot McKendrick of the British Library, M. Christian Förstel of the Bibliothèque nationale and Dr Bruce Barker-Benfield of the Bodleian
Library for their answers to questions about manuscripts. Finally, I should like to thank my copy-editor, Heather Watson, for her very helpful observations. I ought in fairness to dedicate this book to my horse Calypso, who is in Patmos, with apologies for spending more time with the *Hippiatrica* than with her in the last few years. But since she (very sensibly) has more interest in juicy figs than in dry tomes, I dedicate it instead, with love, to my parents.

A.E.M.
# Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of Plates</td>
<td>ix</td>
</tr>
<tr>
<td>Abbreviations</td>
<td>xi</td>
</tr>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Manuscripts of the <em>Hippiatrica</em></td>
<td>18</td>
</tr>
<tr>
<td>Editions and Translations of the Text</td>
<td>49</td>
</tr>
<tr>
<td>Studies of the <em>Hippiatrica</em></td>
<td>55</td>
</tr>
<tr>
<td>The Form of the <em>Hippiatrica</em></td>
<td>59</td>
</tr>
<tr>
<td>The Sources of the <em>Hippiatrica</em></td>
<td>66</td>
</tr>
<tr>
<td>Anatolius</td>
<td>71</td>
</tr>
<tr>
<td>Eumelus</td>
<td>98</td>
</tr>
<tr>
<td>Apsyrtus</td>
<td>122</td>
</tr>
<tr>
<td>Pelagonius</td>
<td>156</td>
</tr>
<tr>
<td>Theomnestus</td>
<td>181</td>
</tr>
<tr>
<td>Hierocles</td>
<td>208</td>
</tr>
<tr>
<td>Hippocrates</td>
<td>245</td>
</tr>
<tr>
<td>The Compilation and Evolution of the <em>Hippiatrica</em></td>
<td>259</td>
</tr>
<tr>
<td>Conclusions</td>
<td>297</td>
</tr>
<tr>
<td>Bibliography</td>
<td>303</td>
</tr>
<tr>
<td>Index</td>
<td>323</td>
</tr>
</tbody>
</table>
List of Plates

1. Paris, Bibliothe`que nationale de France, gr. 2322 (10th c.), fo. 1r: Title and table of contents. The MS belonged to Janus Lascaris.

2. Paris, gr. 2322, fo. 25r: Apsyrtus’ dedication, the first excerpt in the Hippiatrica. The marginal note may be by Lascaris.

3. Phillipps 1538 (Staatsbibliothek zu Berlin, gr. 134, 10th c.), fo. 2r: An imperial presentation copy, beginning of the text. In the top and right margins, the title and chapter number are transliterated, possibly by Ioannes Chortasmenos; in the lower margin a passage is added from M; while in the left margin, a signature records the confiscation of the MS from the Jesuit College of Clermont in 1763.

4. Phillipps 1538, fo. 29r: Elaborate decoration and calligraphy.

5. Phillipps 1538, fo. 393v: Recipe for a warming ointment, calling for exotic materia medica, some introduced only in the medieval period.

6. Vatican, Biblioteca Apostolica Vaticana, Urbinas gr. 80 (early 15th c.), fo. 267r: a copy by Ioannes Chortasmenos, probably made from Phillipps 1538.

7. Florence, Biblioteca Medicea Laurenziana, Laur. Plut. 75.6 (late 14th/early 15th c.), fo. 124r: The MS was purchased by Janus Lascaris in Corfu. A list of authors is added in the margin at the beginning of the text.

8. Vatican, Barberinianus gr. 212 (late 15th c.), fo. 142r: This section of the MS is in the hand of Janus Lascaris. Note the list of authors as in Laur. Plut. 75.6.

9. London, British Library, Additional 5108 (early 16th c.), fo. 5v: A copy in the hand of Christopher Kontoleon, preceded by a list of authors as in the previous two MSS.

10. Cambridge, Emmanuel College 251 (13th c.), p. 327: Beginning of the fragment of Simon of Athens (1. 23), the earliest known Greek text on horses.

11. Cambridge, Emmanuel College 251, p. 306: Remedies attributed to the horse-mad Patriarch Theophylact (1. 4) and the polymath Julius Africanus (1. 22).
x  List of Plates


13. London, British Library, Sloane 745, fo. 85v: Comments of an editor, describing the hippiatric authors as ‘philosophers’ (1. 4).


15. Paris, gr. 2244, fo. 74v: At top, a drench for diarrhoea; the horse doctor’s attire is western in style. The lower illustration depicts the symptoms of twisted intestine.

16. Paris, gr. 2244, fo. 1r: Portrait of Hierocles as an orator, attached to the reconstitution of his text.

17. Paris, gr. 2244, fo. 95v: Invoking the aid of Cypriot saints, the Ἀγιοι Ἀλαμάνωι, for flocks and vineyards.

18. Leiden, Universiteitsbibliotheek, Voss. gr. Q 50 (14th c.), fo. 5v: Title of the reconstitution of Hierocles ‘the wise orator’. Hierocles’ prooimion is tidily copied but hopelessly garbled.

19. Leiden, Voss. gr. Q 50, fo. 145v: Title of RV part III, describing the hippiatric authors as ‘philosophers’.

20. First printed version of the Hippiatrica: the Latin translation by Jean Ruel (Paris, 1530), fo. iiv: List of authors, including additions from the Geoponica, and epigram by Lascaris on Ruel.

21. First edition of the Hippiatrica, the Greek text edited by Simon Grynaeus (Basel, 1537), fo. 1r: List of authors including additions from the Geoponica copied from Ruel. Isaac Casaubon’s annotated copy of the text (British Library, 779 e 4).

22. Vienna, Österreichische Nationalbibliothek, med. gr. 1 (6th c.), fo. 27r: Dioscorides on the asphodel, with excerpts on the same subject from Crateuas and Galen added in the same hand, in the lower margin. The name of the plant is transliterated into minuscule by Chortasmenos.

23. New York, Morgan Library, M652 (10th c.), fo. 21r: Galen’s comments are incorporated into the text in this recension of Dioscorides.

Abbreviations

1. THE HIPPIATRICA

CHG I–II  Corpus hippiatricorum Graecorum, ed. E. Oder and C. Hoppe vol. I: (Leipzig, 1924), Hippiatrica Berolinensia; and vol. II: (1927), Hippiatrica Parisina, Hippiatrica Cantabrigiensia, Additamenta Londinensis, Excerpta Lugdunensis (repr. Stuttgart, 1971). The text is referred to by the capital letter denoting the recension in question, e.g. M, B, C; and by the number assigned to the passage in the Teubner edition. Since the readings of M are for the most part printed as additions to the text of B, or in the apparatus criticus in vol. I, it is usually necessary to indicate for M the equivalent text in B. I have tried, as far as possible, to give the text of M.

2. PERIODICALS, SERIES, AND WORKS OF REFERENCE

| AB | Analecta Bollandiana | GAS | F. Sezgin, Geschichte des arabischen Schrifttums (Leiden, 1967–) |
| AM | Athenische Mitteilungen | GRBS | Greek, Roman, and Byzantine Studies |
| ANRW | Aufstieg und Niedergang der Römischen Welt | IG | Inscriptiones graecae |
| BCH | Bulletin de correspondance hellénique | IK | Inschriften griechischer Städte aus Kleinasiens (Bonn, 1972–) |
| BZ | Byzantinische Zeitschrift | JHS | Journal of Hellenic Studies |
| CCAG | Catalogus codicum astrologorum graecorum (Brussels, 1898–1953) | JÖB | Jahrbuch der Österreichischen Byzantinistik |
| CIG | Corpus inscriptionum graecarum (2 vol. Berlin, 1828–77) | JRS | Journal of Roman Studies |
| CMG | Corpus medicorum graecorum | LGPN | P. M. Fraser, E. Matthews, et al. (eds.), A Lexicon of Greek Personal Names (Oxford, 1997–) |
Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P. Oxy.</td>
<td>The Oxyrhynchus Papyri</td>
</tr>
<tr>
<td>RE</td>
<td>Paulys Real-Encyclopädie der classischen Altertumswissenschaft</td>
</tr>
<tr>
<td>REB</td>
<td>Revue des études byzantines</td>
</tr>
<tr>
<td>REG</td>
<td>Revue des études grecques</td>
</tr>
<tr>
<td>Rh. Mus.</td>
<td>Rheinisches Museum für Philologie</td>
</tr>
<tr>
<td>Sophocles</td>
<td>E. A. Sophocles, Greek Lexicon of the Roman and Byzantine Periods (Cambridge, Mass., 1914)</td>
</tr>
<tr>
<td>ZPE</td>
<td>Zeitschrift für Papyrologie und Epigraphik</td>
</tr>
<tr>
<td>ZSS</td>
<td>Zeitschrift der Savigny-Stiftung</td>
</tr>
</tbody>
</table>

H. Stuart Jones and R. McKenzie (Oxford, 1968)

Notices et extraits

---


Introduction

Horses for ye, and brown Greek manuscripts...

Robert Browning, ‘The Bishop Orders His Tomb at Saint Praxed’s Church’

The text known as the *Hippiatrica*¹ is the principal monument which remains of technical literature in Greek devoted to the care and healing of the horse. Compiled probably in the fifth or sixth century AD by an unknown editor out of excerpts from seven Late Antique veterinary manuals, the *Hippiatrica* is a vast work of reference organized ailment-by-ailment and author-by-author, ending with lists of recipes for drugs. The text is preserved in five recensions, in twenty-two manuscripts (containing twenty-five copies) which range in date from the tenth century to the sixteenth. Although the origins of the *Hippiatrica* may be traced back to an earlier age, and its influence detected later, in other languages and literatures, this study will focus on the sources and structure of the compilation, and on its evolution in the Byzantine period, in Greek.

The *Hippiatrica* is a precious source of information about the language, methods, and practitioners of a specialized branch of the veterinary art, a discipline whose flowering (if one may call it that) in Late Antiquity corresponded to the value attached to its patients, and to the importance of their roles in Roman life. Symptoms and maladies described in the text are, for the most part, those that continue to plague horses and their owners today: lameness, cough, colic, laminitis, glanders, parasites—but there are also some, such as affliction by the evil eye, which no longer figure in manuals of horse care (though they may still be cause for concern). The text also sheds light on other aspects of horse care such as breeding, breaking, feeding, grooming, and stable management. No other source offers such vivid glimpses into the daily life of the stables: we learn that horses were massaged

¹ The title *Hippiatrica* assigned to the compilation by its modern editors and translators has medieval precedents: the description ἱππιατρικῶν βιβλίων appears in the *Souda*, s.v. Αὐθών, τρίλη, and Χεῖρων, as well as in a 12th-c. manuscript of the compilation, Cambridge, Emmanuel College 251. *Corpus hippiatricorum Graecorum*, the title of the Teubner edition by Eugen Oder and Karl Hoppe (Leipzig, 1924–7), refers not to the Greek compilation itself, but to the ‘corpus’ of different *Hippiatrica*, i.e. recensions of the compilation, presented in that edition.
with wine and oil; that their stalls were strewn with bay and myrtle leaves or fumigated with myrrh; that they were brought down to the sea to swim. Prescriptions for medicines composed of exotic and expensive spices, sauna sessions in Roman baths, magical amulets, and chicken soup attest to the care lavished on valuable animals. Although the texts are, for the most part, written in the detached tone befitting medical manuals, there are also, in the *Hippiatrica*, expressions of affection for horses, and of distress at their suffering.

The history of this rich and complex text has been neglected in the last sixty years, whether because of a distaste, on the part of scholars, for the subject-matter, or as a consequence of the confusing state in which the text appears in its printed editions. Yet a number of paradoxes inherent in the *Hippiatrica* invite investigation: it is a technical reference-book which nevertheless contains elements of bellettristic style, a secular text which provides evidence of popular beliefs, a text viewed in the Middle Ages and the Renaissance both as an object of antiquarian interest and as a source of practical advice. The diversity of material forms in which the text is presented reflects this varied character: a text devoted to ‘complexities of mire and blood’ is copied in manuscripts of extraordinary beauty, as well as plain copies destined for handy reference in the stables. Early translations of the sources of the *Hippiatrica* between Latin and Greek and from Greek into Syriac indicate that there was demand for the texts in different areas of the Roman empire. Medieval versions of two of the source-texts into Arabic and Latin, minor products of two movements of translation that constitute milestones in the history of science, show that the influence of Greek veterinary medicine extended past the borders of Byzantium, from Palermo to Baghdad. An Italian translation provides further evidence of the reception of Greek veterinary texts in the West. These translations, which we shall touch upon only briefly, are interesting in their own right, but are additionally useful for the light that they may shed on the history of the Greek texts.

The *Hippiatrica* is a compilation, and the information it contains represents different periods, different places, and different points of view. In order to evaluate this information, it is necessary to have a clear understanding of the medium in which it is conveyed. At the most superficial level, the medium is that of manuscripts, and the recensions of the text that they contain; at the second, it is the compilation; and at a deeper level, it is the source-treatises that make up the compilation, and their own sources in turn. The history of these various strata of the text follows a well-known pattern of composition, codification, revision, and translation, so that the hippiatric corpus is also a good case-study for the transmission of technical material in the Byzantine period.
The history of the text may be divided into three chronological phases: (1) the period during which the seven source-treatises were composed; (2) the moment when these treatises were excerpted and the excerpts assembled to form the first compilation; and (3) the subsequent period during which the hippiatric encyclopaedia was used, copied, and repeatedly reworked. These divisions are not equal in duration: while the first comprises several centuries of Late Antiquity, the second, its terminus, is probably to be imagined as no more than perhaps a few weeks or months; and the third spans the remainder of the medieval period. Once assembled, the *Hippiatrix* seems to have become a standard reference-book that eclipsed other literature in the field. Little new veterinary material appears to have been added to the encyclopaedia after it was compiled: the same Late Antique treatises remained in use, being adapted without being superseded. Changes to the content and organization of successive recensions of the compilation reflect the evolving tastes of medieval editors; and it is worthy of note that the literary style and character of the source-treatises, as much as the information which they convey, influenced their fate in transmission. For this reason, rather than proceeding ‘stratigraphically’ from the manuscripts to the compilation to its sources, we shall attempt to trace the history of the text chronologically, from Late Antiquity to the end of the Byzantine period.

**HORSES, HORSE-DOCTORS, AND HORSE-MEDICINE**

Before we turn to the text itself, a few words about horses, horse-doctors, and veterinary literature in antiquity may help to introduce the subject. The specialized genre of hippiatric literature, which makes its first appearance in cuneiform tablets of the fourteenth century BC found at Ras Shamra-Ugarit in Syria, does not appear to have been much cultivated in Greek before the Roman period. Simon of Athens, the first known Greek writer on horses (fifth century BC), is said by Xenophon to have written on horsemanship

---


(περὶ ἰππικῆς); the Souda's attribution of a medical manual to him is probably an error. A fragment attributed to Simon, describing the characteristics desirable in a horse, is preserved in the Hippiatrica. Xenophon's own treatise On the Art of Horsemanship (Περὶ ἰππικῆς) is not concerned with diseases or their treatment, though he refers in passing to three conditions: surfeit of blood, exhaustion, and laminitis. Aristotle gives a detailed account of the breeding and lifespan of horses, donkeys, and mules, and names several diseases with their symptoms, but describes only one treatment, namely bloodletting. Aristotle's allusion to the opinion of 'the experienced (ἐμπειροῦ) that horses suffer from the same diseases as humans suggests that there were people specialized in horse care, but does not make it clear that they were professional horse-doctors. The Souda ascribes a 'medical book on the treatment of donkeys' (βιβλίον ἰατρικὸν εἰς ὀνόμαθα) to

4 Xen. De re equestri I.1, where it is also said that Simon set up a bronze horse, with his deeds worked in relief on its base, near the City Eleusinion in the Athenian Agora (high on the north slope of the Acropolis, where horsemen would pass by on the Panathenaic way). Xenophon also quotes Simon on a horse's performance under compulsion, De re equestri XI.6. According to Pliny, NH XXXIV. 76, Simon 'primus de equitatu scripsit'. Simon is mentioned three times in the Hippiatrica, twice simply name-dropped, along with Xenophon, as an authority (by Hierocles, B1.11, CHG I p. 4; by Apsyrtus B115.1, CHG I p. 372); and once in a retelling of the story that he criticized a painting by Micon (Hierocles B59.6, CHG I p. 249); Aelian, NA IV.50 says that the story was told both of Micon and of Apelles. The tale also appears in Pollux II. 69. See the two entries in RE II.5: Simon (7), 173–5, and Simon (16), 180.

5 The Souda has (Adler, T 987) Τριλῆς τί σημαίνει: γέγραπται γὰρ ἐν τῷ τῶν Αθηναίων Σίμωνος Ἰππιατρικὸν περὶ γνωριμάτων φλεβῶν, ὅτι καὶ ἄπο τῆς τριλῆς εἰς ἄλλους δόο. 'Trille: what does it mean? For it is written in the work on horse-medicine by Simon the Athenian, on the subject of recognizing veins, that there are two veins leading from the trille.' The passage on veins is from Vegetius, no doubt mistakenly attributed to Simon because of its placement in the Hippiatrica after a lemma mentioning Simon, cf. C93, CHG II p. 228. This is one of several Souda entries that seem to be drawn from the 10th-c. C recension of the Hippiatrica, as we shall see below. The 10th-c. bibliographer al-Nadim attributes a book on veterinary surgery to a certain Simos; The Fihrist of Al-Nadam, tr. B. Dodge, vol. II (New York, 1970), 738. Nadim, too, may have known Simon's text from the Hippiatrica. Simon's work is also called an ἰπποκοσμικὸς βιβλίον διαμάζων in the Souda s.v. Λόφος (Adler, A 4739) and Κῆμων (Adler, K 1621) (sic—confused with the statesman who had his horses buried near his own grave, cf. Herodotus 6.103).

6 C93, CHG II pp. 228–31; repr. K. Widdra, Xenophon's De re equestri, pp. 41–4. The only other fragments of the treatise are in the Onomasticon of Pollux, I.188 ff. The fragment in the Hippiatrica is entitled περὶ ἱδεῶν ἰππικῆς, 'On the ideal equine form'. All the fragments are collected in F. Ruehl (ed.), Xenophonis Scripta minora, I (Leipzig, 1912), 193–7.

7 The owner should keep an eye on the horse so that ὅταν μὴ ἐκκομιζῇ τῶν αἰτίων ὅ ἀττός, φανερὸν γέγραπται: τοῦτος δὲ ἀν τις ἀπαισθανόμενος γιγνώσκει, ὅτι ἂ τὸ σῶμα ὑπεραμοῦντος δεῖται ἱππασίας, ἡ κόπος ἐνάκτητος ἐναπαύεται, ἡ κρίσις ἡ ἄλλη ἀρρώστα ὑποδύεται. ἦστι δὲ ὁ ὅστε χάνοντα ὄστον καὶ ἤπειρον ἀρχάμενα πάντα εισαιτέρα ἐπειδὰν ἕνακιρῆ γε καὶ ἐξαμαρτηθή τὰ νοσήματα. De re equestri IV.2, whence Pollux L.209.

8 HA VI 575b–577b; VII (VIII) 604b.
the legendary Persian magus Astrampsychus. Many texts of an occult nature and of diverse date, including spells and works on divination and dream interpretation are attributed to Astrampsychus, but the veterinary work is not known. A certain Cleodamas, from the city of Achnai in Thessaly, is said by Stephanus of Byzantium to have written on riding and horse-breaking (περὶ ἵππικῆς καὶ παιδαμαστικῆς); but there is no indication that veterinary material was included in his work.

Veterinary treatments for horses and other domestic animals appear to have figured in the lost work on agriculture by Mago of Carthage, probably composed in the third or second century BC. Little is known about its authorship or date, but it is clear that Mago’s work was very influential, so it is worth digressing for a moment to outline what is known about the history of the text. Cicero refers to Mago as the proverbial source of information about farming; for Columella, Mago is ‘the father of agriculture’ (rusticationis parens). Pliny informs us that after the destruction of Carthage in 146 BC, Mago’s work, in twenty-eight books, was translated from Punic into Latin by order of the Roman Senate, despite the fact that the work by Cato on the same subject was already available. The undertaking is said to have been entrusted to men expert in the Punic language, among whom one D. Silanus was prominent. A Greek version in twenty books, which also included material from other Greek writers, was made, apparently again from Punic rather than from the Latin, by Cassius Dionysius of Utica, who

---

9 Souda, Adler, A 4251. One cannot help wondering whether his name was confused with that of the veterinary author Apsyrtus. Astrampsychus is mentioned by Diogenes Laertius, Proem. 2.
11 Stephanus, s.v. Ἀστραμψυχος.
12 Fragments of his work have been collected most recently by F. Speranza, Scriptorum romanorum de re rustica reliquiae (Messina, 1974), 75–119; the date of the work is discussed pp. 77–9, with the suggestion that Mago be identified with Hannibal’s brother Mago, who fought in Italy and Gaul and died in 203 BC. J. Heurgon, ‘L’Agronome carthaginois Magon et ses traducteurs en latin et en grec’, CRAI (1976), 442, favours a more general dating of Mago to the time of the Punic Wars, i.e. 3rd to mid-2nd c. BC. See also K. Ruffing, ‘Mago’, in Der Neue Pauly, 7 (Stuttgart and Weimar, 1999), 702–3; R. Reitzenstein, De scriptorum rei rusticae... libris deperditis (Berlin, 1884), 44 ff. The Καρχηδόνιος σοφὸς Μάγων mentioned by Stephanus, s.v. Καρχηδόνων, probably refers to this author.
13 De oratore I.249.
14 Columella I.1.13.
15 NH XVIII.5.
16 Varro, Res rustica I.10; the list of sources given by Varro, I.8–10 is repeated by Columella I.1. 7–13; and in Pliny, NH I (sources of bk. VIII).
17 Stephanus, s.v. Ἰτόκη attributes βιοτομικὰ ‘works on root-cutting’, i.e. herbal medicine, to the same author. See M. Wellmann, Cassius (42) Dionysius, RE III (1899), col. 1722.
dedicated the work to the praetor Sextilius (c.88 BC). The title of this work seems to have been Γεωργικά (though that may simply be a descriptive term). Cassius’ work in turn was condensed into six books by Diophanes of Bithynia for the Galatian king Deiotarus (in the middle of the first century BC), and into two by Asinius Pollio of Tralles (first century BC). Through these translations and adaptations, Mago’s work was used in the agricultural compilations of Varro (first century BC) and Celsius (first century AD); Celsius’ text, now lost, was used by Columella. Veterinary material copied nearly word-for-word from Columella is also included in book 14 of the agricultural manual of Palladius, compiled probably in the mid-fifth century AD. Diophanes was a source for the Greek compilation of Anatolius of Berytus, and, through Anatolius, was incorporated into the περὶ γεωργίας ἔκλογαι of Cassianus Bassus, and the medieval Geoponica. Descriptions of the points of the horse, advice on breeding, and remedies for horses, cows, and other domestic animals common to Varro, Columella, Palladius, and Anatolius/Cassianus Bassus/the Geoponica have been attributed to Mago, or rather to Cassius Dionysius–Diophanes. Mago’s influence may also be detected in the Hippiatrica, as we shall see. Antique veterinary literature thus had close links to agricultural literature as well as to human medicine. The role of translation in the transmission of this family of texts is also worthy of note, and accounts for the kinship between Greek and Latin agricultural compilations.

The earliest occurrence of the Greek word for horse-doctor, ἰππιατρός, is in a long inscription of around 130 BC, which grants the conventional privileges of proxenia to one Metrodorus son of Andromenes, a native of Pelinna in Thessaly who, ‘being a hippiatros’ (ὑπάρχων ἰππιατρός), treated the horses of Lamia without demanding payment from their owners. The Greek word is quoted by Varro:

---

18 The title is named in a scholion to Lucian and by Athenaeus; see Speranza, fragments 42, p. 105, and 63, p. 118. 19 Varro, RR I.10; repeated by Columella I.1.7–13; Souda, s.v. Πολιον. See J. Heurgon, ‘L’Agronome carthaginois Magon’, 441–56; J. P. Mahaffy, 'The Work of Mago on Agriculture', Hermathena, 7 (1890), 30–1. 20 Ed. R. H. Rodgers, Palladii Rutilii Tauri Aemilian i... Opus agriculturae, De veterinaria medicina, De insitione (Leipzig, 1975). 21 E. Oder, Anecdota Cantabrigiensia (Berlin, 1896), 14 ff.; O. Hempel, De Varronis rerum rusticarum auctoris quaestiones selectae, diss. (Leipzig, 1908), 63 ff. 22 The accent of the word seems to have been uncertain in antiquity. According to Herodian, τά δὲ παρασύνθετα καὶ φιλάττει καὶ ἀναβιβάζει... τά δὲ ἱατρός φιλάττει ἀναβιβάζει καὶ ἐν τῷ ἀρχιατρός καὶ ἰππιατρός φιλάττει, ed. Lentz, I, p. 229. But in inscriptions and in manuscripts alike the word is presented with a great deal of variation in spelling and accent: ἰππιατρός, ἰππιατρός, etc. The spelling is not normalized in the Teubner edition of the Hippiatrica. 23 IG IX. 2. 69 (now in the Epigraphical Museum in Athens).
De medicina vel plurima sunt in equis et signa morborum et genera curationum, quae pastorem scripta habere oportet. Itaque ab hoc in Graecia potissimum medici pecorum appellati.

In the matter of treatment there are, in the case of horses, a great many symptoms of disease and methods of treatment, and the head groom should have these written out. It is for this reason that in Greece those who treat livestock are called by the special name, hippiatroi, 'horse-doctors'.

Celsus (first century AD), in the introduction to his medical encyclopaedia, refers to ii qui pecoribus ac iumentis medentur, 'those who heal cattle and horses', without using a more specific term. In Graeco-Latin glossaries, 'hippiatroi' is given as the equivalent of veterinarius and mulomedicus.

It is from Late Antiquity that we have the greatest quantity of documentary evidence about hippiatroi. Gravestones of pagan and Christian horse-doctors from all over the Roman empire are evidence of varying levels of literacy and prosperity. Private documents, such as letters and receipts for services, provide information about horse-doctors, and also attest to concern for the welfare of horses. Moreover, in this period, the practice of veterinary medicine was both regulated and encouraged by the state. In 301 Diocletian's Price-Edict set the fees to be paid to a horse-doctor for basic treatments including purging and trimming the hooves. An edict to the Praetorian

---

24 RR II.7.16. 25 De medicina, proem. 65.
26 Glossae Latino-Graecae et Graecolatinae, ed. G. Goetz and G. Gunderman = Corpus Glossariorum Latinorum, II (Leipzig, 1888), pp. 207, 332. On veterinarius and the later term mulomedicus (which appears from the 4th c. on), see J. N. Adams, 'The Origin and Meaning of Lat. veterinus, veterinarius', Indogermanische Forschungen, 97 (1992), 70–95; idem, Pelagonii and Latin Veterinary Terminology in the Roman Empire, 571.
27 O. Nanetti, 'ΠΠΙΠΠΙΠΠΙΠΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡΡRP.49–54; Adams, Pelagonioun, 53 ff.
31 7.20–1: [πιειαρποι κάρθρων [i. e. καθαρμοι?] καὶ δυνατοις; mulomedico tonsurae et aptaturae pedum . . . depleturae et purgaturae capitis. For interpretations of the latter services, see K.-D. Fischer, 'Zur den tierärztlichen Verrichtungen in Edict. Diocl. 7,21', ZPE 48 (1982), 171–4, and a different opinion in Adams, Pelagonioun, 61.
Prefect Maximus, promulgated in 337 in the name of Constantine I, exempts veterinarians (mulomedici) along with architects, doctors, and a variety of other craftsmen from public duties so that they might perfect their art and transmit it to their sons. That veterinary knowledge was indeed passed from father to son is corroborated by a monument at Dion (of imperial date) commemorating one Aurelius Lykos ἰπποιατρός dedicated by his son Valerian, also called ἰπποιατρός.

It is logical that the state should have taken an interest in those who maintained the health of horses, for the horse was essential for the functioning of three great institutions of the Roman state, the army, the hippodrome, and the public post; veterinarians were attached to all three. There exists ample documentation of the cavalry corps, including the horse-doctors who were attached to regiments; two authors in the Hippiatrica, Apsyrtus and Theomnestus, refer to their experience in the army. Horse-racing was a vast industry: hippodromes constructed across the empire in Late Antiquity provided the setting for public and imperial ceremonial; while both the setting and the races themselves were regarded as laden with cosmic symbolism. The state subsidized stud-farms in areas with grazing land, and a decree of AD 371 in the Theodosian Code honours horses from the stables of Hermogenes in Pontus and those of Palmiatus near Tyana, which were to be provided for from the stores of the imperial granaries even after they had finished their racing career. During race-meetings at Oxyrhynchus in the fourth century, a veterinarian was given payment (in wine) equal to that of a charioteer. The circus-factions also provided for the care of their horses: a papyrus receipt dated 552 records a purchase of ointment (μαλάγμα) on behalf of the Greens. The ointment was presumably prepared by a

32 Cod. Theod. XIII.4.2. 33 CIG 1953.
38 P. Oxy. I. 145.
horse-doctor; there are numerous recipes for malagmata in the Hippiatrica.39

A number of prescriptions in the Hippiatrica are specifically associated with the racecourse: πούλβερ κουδριγάριον ‘chariot-racing powder’, ἀλειμμα κουδριγάριων ‘chariot-racing ointment’, κατασκευή τεθρίπτου τοῦ λεγομένου κουδριγάριου ‘preparation of the four-horse chariot, called quadrigarion’, σύγχρισια ἄρματος, ὁπερ κουδριγάριων καλεῖται ‘salve of the chariot, which is called quadrigarion’.40 Finally, a decree of 370 in the Theodosian Code stipulates that the mulomedici who attended the animals of the public post were to be fed and clothed by the state.41

Additional insight is provided by the fourth-century astrologer Firmicius Maternus, who predicts that those who are born in the sign of the Scorpion with the Centaur ascendancy are likely to become horse-doctors:

In Scorpii parte XII oritur Centaurus. Hoc oriente quicumque natus fuerit, aut auriga erit aut equorum nutritor et cultor, aut certe exercitator aut mulomedicus, aut certe equitarius.42

In the twelfth degree of Scorpio rises the Centaur. Whoever was born with this in the ascendant will either become a charioteer or a breeder and keeper of horses, or else surely a trainer or a horse-doctor, or surely the inspector of a stud.

Doctors were a favourite butt of humour; horse-doctors, too, did not escape ridicule: in a joke based on Odysseus’ instructions to Diomedes in Iliad 10.481 an unscrupulous ἵππιατρός says to a doctor, σὺ γὰρ ἄνδρας ἐναιμέ, μελήσου τὸν at ἵπποι: ‘You take out the men, and I’ll take care of the horses.’43

A brief account of veterinary literature is given in the introduction to the treatise of Vegetius (probably to be identified with the author of the Epitoma rei militaris, and thus dated to the late fourth or early fifth century AD).44

40 M982–3 = B130.98–9, CHG I p. 419; 130.173, CHG I pp. 432–3; M1003, CHG II p. 96.
42 Mathesis VIII.13.3; cf. also VIII.17.3.
44 V. Ortoleva sees an allusion, in the Epitoma rei militaris, to repairs of the walls of Constantinople after the earthquake of 447, and dates that text to the mid-5th c., ‘Per una nuova edizione critica dei Digesta artis mulomedicinalis di Vegezio: alcune note metodologiche’, in M.-T. Cam (ed.), La médecine vétérinaire antique (Proceedings of the colloquium on ancient
Among Greek and Latin authors, there has not been the least care for veterinary medicine. Just as animals come second to man, so has the veterinary art followed behind human medicine. Horses and mules, to be sure, provide support in times of war and ornament in times of peace. But since the profession which promises the cure of beasts seemed to have less dignity, it was exercised by the less prominent and was collected in book form by the less eloquent, even if in recent times the ability to write was not entirely lacking in Pelagonius and was abundant in Columella. Still, the latter, since he was writing about farming, touched only briefly on cures for animals, with little advice; while the former, omitting the symptoms and causes of diseases as though he were writing for very learned men, neglected the basic principles of the science. And Cheiron and Apsyrtus, though certainly they investigate everything more thoroughly, are sullied by their lack of eloquence and the low level of their language. Moreover, everything is disorganized and confused, so that it is necessary for someone searching for some part of a treatment to browse through the headings, since some remedies for the same ailments are to be found at the beginning and others at the end.  

Vegetius, an amateur in the field of veterinary science as in that of military science, based his compilation upon other writers: when he names Columella, Pelagonius, and ‘Apsyrtus and Cheiron’, these seem to be his immediate sources rather than a survey of all veterinary works.

The last two names are apparently an allusion to the Mulomedicina Chironis. This enigmatic compilation has been much exploited as evidence of late and low Latin; yet the history of the text remains to be written.

---

45 P. Vegeti Renati Digestorum artis mulomedicinae libri, ed. E. Lommatzsch (Leipzig, 1903), prol.
centaur, amalgam of horse and man, is associated in Greek literature from earliest times with healing, the teaching of medicine, and the preparation of drugs.\textsuperscript{47} He is also linked with veterinary medicine: Columella alludes to Cheiron’s ‘learning in the care of cattle’ (\textit{in pecoris cultu doctrinam Chironis}), in an enumeration of semi-legendary sages such as Pythagoras and Melampus.\textsuperscript{48} Cheiron’s name appears in the \textit{Hippiatrica} twice, in a rhetorical invocation and in a spell, as a deity rather than an author. In a third instance a remedy is called \textit{χειρώνειο}.\textsuperscript{49} But a Greek work on horse-medicine going under the centaur’s name (and no longer extant) may lie behind the \textit{Mulomedicina Chironis}.\textsuperscript{50} Book II of the \textit{Mulomedicina} is a compilation of excerpts from Apsyrtus, Sotion, and Farnax; it may well represent a compilation similar to the \textit{Hippiatrica}.\textsuperscript{51}

Indeed, the invention of the discipline of horse-medicine is attributed to Cheiron by Isidore of Seville (sixth century AD), with his customary logic, and probably with the \textit{Mulomedicina Chironis} in mind.\textsuperscript{52}

Medicinam iumentorum Chiron quidam Graecus invenit. Inde pingitur dimidia parte homo, dimidia equus.

Cheiron, a certain Greek, invented horse-medicine. For this reason he is depicted as half man, half horse.

In the twelfth-century chronicle of George Cedrenus, credit is given instead to one Sosandros, said to have been the brother of Hippocrates: the relation of human and veterinary medicine is symbolically expressed as a fraternal one.

\begin{quote}
Τούτῳ [Δημοκρίτῳ] συνήκμαζε καὶ Ἰπποκράτης φιλοσοφῶν καὶ ἱατρικῆς ὡς ἁριστα κατορθούμενος, ὃς ἦν ἀδελφὸς Ζώσανδρος ὄνομαζόμενος καὶ τὴν ἱππιατρίκην, ἀμα δὲ καὶ πάντων τῶν κτηνῶν τέχνην μετέχόμενος πρὸς ὅν φασιν εἰρήκεναι τὸν Ἰπποκράτην· ἦ τὸ ὄνομα μετάβαλε ἢ τὴν τέχνην μετάμαθε.\textsuperscript{53}
\end{quote}

At the same time as [Democritus] flourished Hippocrates [i.e. ‘lord of horses’], who was a philosopher and most greatly accomplished in medicine. He had a brother,

\begin{itemize}
\item \textsuperscript{47} \textit{Iliad} 4.218–19; 11.829–32; cf. F. Graf, ‘Chiron’, \textit{Der Neue Pauly}, 2. 1127–8.
\item \textsuperscript{48} I pref. 32.
\item \textsuperscript{49} B1.24, \textit{CHG} I p. 4; M691, \textit{CHG} II p. 83; M460, \textit{CHG} II p. 65.
\item \textsuperscript{50} Oder, \textit{Mulomedicina}, pp. viii ff.; cf. \textit{Souda} (Adler, X 267), Χείρων Κένταυρος ὃς πρώτος ἔβρεν ἱατρικὴν ἀλλ’ ἰατρικὴν, ‘Ὑποθήκαι δ’ ἐπὸν ἄμε ποιεῖν πρὸς Ἰχθυλέα καὶ ἰππιατρικῶν. ‘Cheiron: a centaur, who first discovered healing with herbs. Instructions in verse, which he created for Achilles. And a work on horse-medicine.’
\item \textsuperscript{52} \textit{Isidori Hispalensis Etymologiarum sive Originum libri xx}, ed. W. M. Lindsay (Oxford, 1911), IV. ix. 12.
\item \textsuperscript{53} Cedrenus, ed. Bekker, I, p. 213.
\end{itemize}
Sosandros [i.e. ‘saviour of men’], who developed the healing of horses, as well as that of all beasts. They say that Hippocrates said to him ‘Either change your name or exchange your discipline.’

The last sentence is a clue that the origin-myth related by Cedrenus may simply be the echo of an epigram (preserved in the Planudean anthology) which elaborates a pun on the name of the ‘father of medicine’:

\[
\text{Εἰς Σώσανδρον ἱππατρόν}
\]
\[
\text{Ἀγήρα μερόσων, Ἰπποκράτες, ἄλλα καὶ ἱππῶν,}
\]
\[
\text{Σώσανδρε, κρυφής ἵστορ ἄκεστορίης,}
\]
\[
\text{ἡ τέχνην μεταμείφας ὡς οὐνόμα μὴ δὲ καλεῖσθω}
\]
\[
\text{ἀτέρος ἐκ τέχνης, ὡς ἄτερος κρατέει.}\]

On Sosandros the horse-doctor
Healer of mortals, Hippocrates; and also of horses,
Sosandros, master of an obscure healing art,
Either exchange your professions, or your names: let neither be called after a profession in which the other excels.

In the fourteenth-century allegorical poem of Meliteniotes, a statue of Sosandros appears among those of the pagan poets, philosophers, sages, and sorcerers:

\[
\text{kai Σώσανδρος ὁ θεῖος}
\]
\[
\text{ὅς τὴν ἱπποιατρικὴν εὗρε τῶν ἄλλων πρῶτος}
\]

and divine Sosandros,
who invented horse-medicine before anyone else.

The names Osandros and Sostratos in the titles of fifteenth-century manuscripts of the Epitome of the Hippiatrica may also allude to this myth.56

**THE HIPPATRICA**

The most copious evidence for the nature of Greek veterinary medicine and the extent of its literature comes from the Hippiatrica itself. The earliest text that may be identified in any recension of the compilation is the fragment attributed to Simon from the fifth century BC; the latest element is a pair of

56 The MSS are Par. gr. 1995 (Σώσαντρατος) and Par. gr. 2091 (Σοσαντρος); the connection to AP XVI.271 noted by E. Miller, ‘Notice sur le manuscrit grec No. 2322’, in Notices et extraits, 21 (1863), 5–6.
recipes attributed to the notorious hippomane Theophylact, patriarch of Constantinople 933–56. But the core, so to speak, of the encyclopaedia is drawn from authors who belong to the period of Late Antiquity.

The principal sources of the *Hippiatrica* are seven Late Antique texts: the veterinary manuals of Eumelus, Apsyrtus, Theomnestus, Hierocles, and Hippocrates; a translation into Greek of the Latin text of Pelagonius; and the chapter on horses from the agricultural compilation of Anatolius. The Latin treatise of Pelagonius is the only one of these sources transmitted independently in its original language and something akin to its original form: the Greek veterinary texts are known primarily from excerpts in the various recensions of the compilation. Although the authors of these texts allude to Simon and Xenophon, venerable predecessors deep in the Classical past, the roots of their tradition lie in the agricultural literature of the Hellenistic period derived from Mago of Carthage. The earliest treatises, those of Eumelus (third century AD?) and Anatolius (fourth century?), remain close to those roots. The treatises of Apsyrtus (third or fourth century) and Theomnestus (fourth century) represent scientific progress resulting from the interaction between written tradition and their own personal experience and criticism: the λόγος and πείρα that Galen had called the two legs of medicine. Pelagonius and Hierocles (fourth or fifth century?) repackaged the work of others for elite audiences in different parts of the empire, while the text of Hippocrates represents the lower end of the literary market. These texts are rich in technical vocabulary and information, and, on the whole, not lacking in literary style. The apparent homogeneity of their content belies the diversity of their characters. Since, in the *Hippiatrica*, the attributions of excerpts and the traits of their character are, in general, preserved, one may discern the distinct identities of the authors: soldiers, orators, compilers; professional horse-doctors and amateurs; writers of Latin and of Greek.

A passage in which Theomnestus describes his journey over the Alps, apparently to the wedding of the emperor Licinius in AD 313, provides the only evidence, in the source-treatises, for a precise date. Approximate or relative dates for the other authors may be deduced from the manner in which they refer to one another. The earliest author in the corpus is Eumelus, whom Apsyrtus cites. Apsyrtus in turn is cited by Pelagonius, Theomnestus, and Hierocles, who therefore post-date him. The treatises that make up the core of the *Hippiatrica* provide us with evidence of the growth of a genre within a relatively brief period between the third and fifth or sixth centuries, primarily in the Greek-speaking parts of the Roman empire, but with some instances of translations into and from Latin.

In addition to the seven, two more sources, apparently also of Late Antique date, were added to the compilation in the tenth century: that of Tiberius and
an anonymous set of *Prognoseis kai iaseis*. Embedded in the excerpts are references to more than thirty other authors and practitioners. Among them are a few well-known writers on medicine such as Diocles of Carystus and Celsus. The majority, however, are more obscure. Nephon, Agathotychus, Hippasios, and Cassius are quoted by Theomnestus; Hierocles refers to Gregory, Stratonicus, and Hieronymus. Often remedies are simply attributed to παθή or ζωοι—whether these are written or oral sources is not clear. In the C recension, cameo appearances are made by illustrious antique authors: Homer and St John Chrysostom, Simon of Athens and Julius Africanus. In later recensions, new problems arise as a number of questionable attributions to famous sages and sophists—Ambrose, Choricius, Apollonius of Tyana, Galen—creep into the compilation.

The relation of the sources to one another is made obvious by virtue of their juxtaposition in the encyclopaedia. Citations and parallel passages show that treatises are closely dependent upon one another with respect to their scientific content: this ‘family resemblance’ may have been one of the reasons that they were gathered in the compilation. One may also discern a literary interaction between the various authors in instances of quotation, paraphrase, criticism, imitation of style, and translation.

Worthy of note is the diversity of literary forms contained in the sources of the *Hippiatrica*: letters, incantations, proverbs, poetry, prooimia, reminiscences, medical definitions, instructions, and recipes. There is also a great variety of styles: although the treatises consist for the most part of plain technical writing, the *Hippiatrica* also contains the formal language of medical theory and the formulaic language of traditional remedies, as well as recipes with no syntax at all. In different recensions one may find magical formulas, flowers of the rhetoric of the Second Sophistic, or a specimen of Attic prose of the fifth century BC. Even a single author’s work may contain a number of these forms and styles; in identifying them one must be aware of each author’s sources and models. The language of the sources is the Greek of Late Antiquity, characterized by the presence of Latin loanwords. It combines the rich technical language of medicine with the equally rich vocabulary of the stables.

There is no discussion of horsemanship in the text: veterinary medicine was evidently a specialized and separate discipline. There is a certain amount of material on choosing a horse, and on different breeds, instructions for breeding horses and mules, and some for stabling, feeding, grooming, and early training. But the greatest part of the text consists of descriptions of diseases and prescriptions for their cure. The prescriptions on the whole belong to the three classical divisions of therapy as we know them from the

---

57 See the index of names, CHG I pp. 451–3.
tradition of human medicine: diet, drug therapy, and surgical intervention.\textsuperscript{58} Only two case-studies are present. The \textit{Hippiatrica} is a reference-book within the Graeco-Roman paradigm of medicine, to use T. S. Kuhn’s model;\textsuperscript{59} intended for the horse-doctor interested in comparing the opinions of his predecessors, or perhaps for the horse owner seeking not only advice, but also a second, third, or fourth opinion.

Celsus classified horse-doctors among the Methodists;\textsuperscript{60} nevertheless, the hippiatric texts cannot easily be identified as belonging to a distinct school of medical thought or practice. They belong to the same paradigm, in which they represent works of ‘normal science’, in Kuhn’s terminology. One may nevertheless trace the development of the discipline through the texts preserved in the \textit{Hippiatrica}. The earlier authors in our compilation draw their content verbatim from the ancient tradition of agricultural manuals and offer simple remedies. Later authors present greater affinities to human medicine, from which they borrow more sophisticated theory, vocabulary, pharmacology, and techniques.

In all of the sources of the \textit{Hippiatrica}, emphasis is overwhelmingly on practical treatment rather than on medical theory or aetiology. There is a near-complete absence of introductory or abstract material: the \textit{Hippiatrica} does not represent an attempt at a systematic exposition of the veterinary art; it contains no discussion of the nature of the states of sickness and health, or of the categories of therapy, or of the forms of medical instruments. Medical theory is nowhere elaborated, but is in the background, so to speak, occasionally alluded to in mentions of humours and ducts. Pharmacology draws not only upon products of the Mediterranean area, but also upon a variety of spices provided by far-ranging networks of trade, one whose routes and stations were expanded and developed during the first centuries of the Christian era to make commodities from the Far East readily accessible in the Roman world.\textsuperscript{61} Some of the \textit{materia medica} of the \textit{Hippiatrica} is still used in modern medicine, for example willow bark (from which aspirin is derived), and poppy milk (opiates). The antibiotic properties of other \textit{materia medica} ubiquitous in the antique veterinary texts, such as cinnamon, ginger, pepper, and garlic, are being rediscovered, so to speak.\textsuperscript{62}

\textsuperscript{58} Cf. Celsus, \textit{De medicina}, proem. 9.
\textsuperscript{59} T. S. Kuhn, \textit{The Structure of Scientific Revolutions} (Chicago, 1970).
\textsuperscript{60} \textit{De medicina}, proem. 65.
In addition to what one might term ‘medical’ cures, all but one of the hippiatric authors prescribe amulets, incantations, or other irrational treatments. Some of these are simple superstitious remedies, based upon sympathy and antipathy; others are more elaborate appeals to the shadowy pantheon of the Late Antique occult. Attitudes toward magic, both official and private, were, to be sure, ambiguous. A decree of Constantine I in the Theodosian Code, while condemning the dark arts of soothsayers and astrologers, makes a concession for incantations of a beneficial nature in two specific contexts: to cure the ailments of the human body, or in an agricultural domain. On the other hand, Ammianus Marcellinus describes the brutal punishment, under Constantius II, of those who engaged even in benign forms of healing magic, such as the wearing of amulets, or the curing of fevers with incantations. The *Mulomedicina Chironis* contains a condemnation of magical cures; at the same time, however, the text contains allusions to superstitious practices. But the juxtaposition of rational and irrational cures in the veterinary treatises is paralleled in the third-century *Kestoi* of Julius Africanus, which give instructions for rational medical treatments, and also for amulets for healing and protection. Africanus was an educated man, and his compilation cannot be dismissed as crude superstition; rather, it is evidence of the prevalence of magical practices. In the sixth century, Alexander of Tralles, hardly an ignorant or unsophisticated writer, includes a selection of irrational treatments in his medical manual, explaining that even though he himself does not believe in their efficacy, the patient often does. (This sort of placebo effect obviously would not work on horses, but might satisfy their owners.)

---

65 ‘Nullis vero criminationibus inplicanda sunt remedia humanis quaesita corporibus aut in agrestibus locis . . .’ , *Cod. Theod.* IX.16.3 (AD 321), confirmed in Justinian’s code, IX.18.4.
67 ‘minus intelligentes . . . veterinariorum iudico, qui putant praecantationibus aut remediis dolorem ventris posse sanari’, ed. Oder 205, but cf. 952 (spitting as a remedy), 497 (*fascinatio*), and 974 (incantation to cure the swallowing of a bone).
69 Björck’s comment that the father of Christian chronography could only have composed the *Kestoi* if afflicted by senile dementia (‘Apsyrtus, Julius Africanus’, 23) is unjustified; see Viellefond, *Les Cestes*, 53–4 for a response to Björck and a revised judgement of Africanus (including the instructive parallel of the Abbé Migne).
70 Ed. Puschmann, II, pp. 375–7, II. 579 (amulets); II. 475 (on incantations, citing his experience of their efficacy).
Certainly some people had doubts about the use of magic. In the sixth century, outside of Gaza, a pious villager put the following question to John and Barsanouphios, the local holy men:

"Ερώτησις τὸ ἀλογόν μου ἐπειδή ἀσθενεῖ, μὴ ἄτοπον ἐστὶ τὸ ποιήσαι τινά ἐπιλαλήσαι αὐτῷ;

Question: My horse is unwell; would it really be wrong to have someone perform an incantation over it?

Father John replied,

"Ἀπόκρισις Ἐπιλαλία ἀπαγορεύεται ὑπὸ τοῦ θεοῦ, καὶ οὐ δεῖ αὐτὴ ὅλως χρήσασθαι ἀπώλεια γὰρ ἐστὶ φυχῆς τὸ παρεξελθεῖν τὴν κέλευσιν τοῦ θεοῦ. τὰς άλλας θεραπείας μᾶλλον, τῶν ἱππιατρῶν, προσένεγκε αὐτῷ οὐκ ἔστι γὰρ τούτο ἀμαρτία ἐπίγεις δὲ αὐτῷ καὶ ἀγίασμα.

Response: The casting of spells is forbidden by God, and must not be employed at all, for to transgress God’s command is the ruination of the soul. Administer to it rather the other sort of treatments, those of the horse-doctors, for they are not a sin. Also—sprinkle holy water over it.\(^{71}\)

Notwithstanding their condemnation of magic, the holy fathers themselves recommend an ‘irrational’ treatment, holy water, along with the ‘rational’ treatments of the \textit{hippiatroi}.\(^{72}\) The various recensions of the \textit{Hippiatrica} provide evidence that horse-doctors could prescribe magic too. Moreover, the censoring and the return of magic discernible in various recensions show that contradictory attitudes persisted throughout the Byzantine period, and illustrate the perennial appeal of magical cures.


\(^{72}\) According to the 5th or 6th-c. \textit{Life} of St Hypatios, when a demon was killing off post-horses in a stable on the Asiatic side of the Bosporus near Rufinianae, the distressed \textit{σαβλισθής} sought help from the saint, whose monastery was near by. The saint gave him holy water to sprinkle over the stable and the horses, as well as an amulet (\textit{εἰλογία}) to hang up in the stable—and no more horses died. \textit{Callinicos, Vie d’Hypatios}, ed. G. J. M. Bartelink (Paris, 1971), 38.
Manuscripts of the *Hippiatrica*

The texts of the *Hippiatrica* exist in twenty-two manuscripts, some of which contain more than one copy of the text, so that there are twenty-five copies altogether. These manuscripts range in date from the tenth century to the sixteenth; they represent a variety of levels of production, and contain five principal recensions of the compilation. The practical nature of the *Hippiatrica* may have contributed to the preservation of the text, but also contributed to its mutation in transmission: as is the case with other technical literature, the compilation was added to, subtracted from, adapted, and rearranged in accordance with the tastes and needs of its editors and users, with the result that nearly every one of the early manuscripts contains a substantially different version of the text.

Of the five principal recensions, three (M, B, and D) represent the complete encyclopaedia, while the other two (RV and E) are shorter versions, E being an abridgement or ‘epitome’. The ten copies of the *Epitome* represent the fluid transmission of a vernacular text, containing five distinct, though closely related versions of the treatise. Only one version of the *Epitome* concerns us here, namely that which is included in the RV recension.

**M recension:**
Parisinus gr. 2322, 10th c. M

**B recension:**
Phillippicus 1538 (Berolinensis gr. 134), 10th c. B

---


Manuscripts of the Hippiatrica

Vaticanus Urbinas gr. 80, early 15th c.  U
Parisinus gr. 2245, second half 15th c.  P
Phillippicus 1539 (Berolinensis gr. 135), 1539–42  b
Oxoniensis Baroccianus 164, second half 16th c.  O
Florentinus Laurentianus Pluteus 75. 6, late 14th/early 15th c.  l
Vaticanus Barberinianus gr. 212, late 15th/early 16th c.  K
Londinensis Additional 5108, first half 16th c.  a
Romanus Bibliothecae Corsinianae 43. D. 32 (Rossi 358),
first half 16th c.  c
Neapolitanus Borbonicus III. d. 26, first half 16th c.  N
D recension:
Cantabrigiensis Collegii Emmanuelis 251 (III. 3. 19), 13th c.  C
Londinensis Sloane 745, 13th or 14th c.  L
RV recension:
Parisinus gr. 2244, 14th c.  R
Lugdunensis Vossianus gr. Q 50, 14th c.  V
E = the Epitome:
Parisinus gr. 2244
Parisinus gr. 2244, a second copy in another hand (14th c.)
Lugdunensis Vossianus gr. Q 50
Parisinus gr. 2091, late 14th/early 15th c.
Vaticanus Ottobonianus gr. 338, 16th c.
Vaticanus gr. 1066, 15th c.
Vaticanus gr. 114 (first section), 15th c.
Vaticanus gr. 114 (second section)
Parisinus gr. 1995, 14th c.
Vaticanus Palatinus gr. 365, 15th c.

The texts contained in these five recensions bear enough resemblance to
one another that they may be assumed to descend from a single original
compilation, which was designated by Björck ‘A’.³

THE M RECENSION

Parisinus gr. 2322, or ‘M’ (168 by 130 mm, 263 folia), is written on fine parchment
in a plain hand attributed to the eleventh century by Omont,⁴ but which,
Mr Nigel Wilson has suggested to me, is more likely to belong to the late tenth.

⁴ H. Omont, Inventaire sommaire des manuscrits grecs de la Bibliothèque nationale (Paris, 1898),
The title Ἀφώρτων, Διοκλέους, Πελαγωνίου κ(α)ι λοιπῶν κεφάλαια π(ερί) θεραπείας ἔποιον precedes the pinax or table of contents on fo. 1r (Pl. 1). The only decoration of the manuscript consists of a pyle decorated with palmettes coloured in red, blue, and gold which frames the first lemma of the text (fo. 25v) (Pl. 2). The end of the manuscript is lost, so that while the table of contents lists 1223 excerpts, the final passage of extant text is that numbered 1166.

M was in the possession of the Greek humanist Janus Lascaris (1445–1534): it is inscribed with his monogram (M) and with shelfmarks in the distinctive hand of Matthaios Devaris (c.1500–81).6 Devaris (Δεβαρής), a Corfiote, studied at the Greek college in Rome founded c.1516 at Lascaris’ instigation by Pope Leo X, and became Lascaris’ secretary.7 These shelfmarks, and the title on fo. 1r, correspond to an entry in Devaris’ list of books that had belonged to Lascaris, made after the latter’s death.8 Marginal notes in faded gold-brown ink, in a hand not unlike Lascaris’, repeat the lemmata of many excerpts, with numbers different from those in the text.9 Notes in a different hand, in black ink, throughout the pinax and the text comment with great enthusiasm and poor spelling that various treatments are useful or that the


8 Vaticanus gr. 1414, fo. 99v. The list is entitled ‘lista de libri che furon del Sr. Lascheri’; the MS is described as ‘ίππιατρικόν ἐκ διαφόρων. Ν° 19. 5’; P. de Nolhac, ‘Inventaire des manuscrits grecs de Jean Lascaris’, Mélanges d’archéologie et d’histoire, 6 (1886), 255. Among Lascaris’ autograph notes in VAT. gr. 1412 is a list of ‘books he has with him’ (Πινας τῶν βιβλίων τοῦ Λασκάριος, ἀπερ ἐχει παρ’ ἑαυτόν), which includes an ‘old Hippiatrica’ and a ‘new Hippiatrica’, both apparently on parchment (ιππιατρικῶν καυμόν, περί ιππιατρικῶν παλαιῶν, περι). One of the entries presumably refers to M; but there are only two other parchment manuscripts of the Hippiatrica, namely B and C, neither of which has any clear connection to Lascaris, R, as we shall see, also has shelfmarks in Devaris’ hand; it is on paper though. See K. K. Müller, ‘Neue Mitteilungen über Janos Laskaris und die Medizinsche Bibliothek, Centralblatt für Bibliotheks-wesen, I (1884), 410. Both VAT. gr. 1412 and VAT. gr. 1414 belonged to Fulvio Orsini: de Nolhac, La Bibliothèque de Fulvio Orsini, 349.

claims made for the remedy are true.10 After Lascaris’ death, many of his books, including M, passed to Cardinal Niccolò Ridolfi (d. 1550), grandson of Lascaris’ patron Lorenzo de’ Medici and nephew of Leo X (Lorenzo’s son Giovanni de’ Medici).11 Devaris subsequently became secretary and librarian to Ridolfi, compiling a catalogue of the cardinal’s library as well; M figures in that catalogue, among 618 Greek manuscripts.12 Along with other manuscripts from Ridolfi’s collection, M was purchased in 1550 by Marshall Piero Strozzi, who was campaigning at the head of a French army in Italy.13 Strozzi died in 1558; his library remained at his house in Rome until at least 1560; it was then transported to France with the aid of Catherine de’ Medici (a relative), who eventually took possession of the books. Catherine’s library entered the royal collection of France under Henri IV.14 The binding of M is stamped with the arms of Henri IV and the date 1603.

The recension of the *Hippiatrica* in Parisinus gr. 2322 is referred to as ‘M’ after Emmanuel Miller, who, in 1865, drew attention to the manuscript, pointing out that its text differs substantially from that presented in the only printed edition available at the time, the *editio princeps* of Simon Grynaeus (Basel, 1537).15 Having learned of Charles Daremberg’s intention of including a revised *Hippiatrica* in the *Collection des médecins grecs et latins*, Miller renounced his plan of editing the text, and published only an expanded table of contents, with transcriptions of passages not found in the printed edition.16 Although, of all the surviving versions of the *Hippiatrica*, M appears

10 202r: καλάγιον κ(α)ί αλλαβαστάτων, 209r: μι το ἀφάσης ἀλλα πιησ(ον) αυτο, 219r: βλεπε κ(α)ί μαθε οτι καλον εστη το φαρμακον κ(α)ί μι υπερβιλι, 225r: τουτο αρτι εστην καλον τας αρχας μαρτιον, 245v: εις θελης εχην λαπαρον υπον μι το παραβιβασης.

11 On Ridolfi, see C. Frati and A. Sorbelli, *Dizionario bio-bibliografico dei bibliotecari e bibliofili italiani dal sec. XIV al XIX* (Florence, 1933), 496–7.


16 Ibid. 13 ff.
to be closest to A, the text of this recension has still not been published in complete form. The text of M is simply organized. There is no preface: the text begins with an excerpt from Apsyrtus, which contains the introduction to his treatise as well as a chapter on fever. Excerpts labelled with Apsyrtus’ name introduce almost every subject, beginning with fever and continuing through various maladies and injuries, with no discernible logic in their order. Apsyrtus’ information is fleshed out with a series of passages taken from six other authors. These excerpts are listed in consistent order—Ἀψυρτος, Ἀνατόλιος, Ἕμηλος, Θεόμνηστος, Ἰπποκράτης, Ἰεροκλῆς, Πελαγώνιος—that is, more or less alphabetically, according to the first letter only of each author’s name. Excerpts are labelled with lemmata stating their subject; the author’s name is also given in the lemma, but not repeated if a series of excerpts from the same text appear consecutively. Occasionally the names of ‘embedded’ sources cited by one of the seven authors appear in the lemmata. Not all the authors are represented for every subject: the complete series of authors appears only four times. Whereas excerpts from Apsyrtus introduce nearly every one of the first 116 series of excerpts, after excerpt 1062 Apsyrtus’ name no longer appears. Anatolius heads the next series, and then drops out; Eumelus introduces six series, Theomnestus two, Hippocrates five, Hierocles two, and finally Pelagonius one series.

The excerpts are numbered in continuous sequence in the left margin. These numbers and the ones in the table of contents are not entirely in harmony: a few excerpts, omitted from the table, are unnumbered in the text, and the table also lists chapters not present in the body of the text. The last few excerpts which appear in the pinax, but are lost from the end of the manuscript, may include accretions to the text of the seven authors, since they include excerpts attributed to Dioscorides and to a certain Christodoulos, (the only obviously Christian name). Also present at the end of the table of contents is a list of authors, alphabetically arranged by their first name only. The manuscripts of the Hippiatrica

17 Oder and Hoppe, CHG II p. xviii.
18 The new edition, with an English translation, which I am preparing will, I hope, make the text more accessible.
19 The alphabetical order of authors is disrupted only twice, M121 (Theomnestus) preceding M122 (Eumelus), and M530 (Hierocles) preceding M531 (Theomnestus).
21 This arrangement is described in CHG II p. xviii; Bjorck, ‘Apsyrtus, Julius Africanus’, 31.
22 These disturbances to the text listed in CHG II pp. xxii–xxiii. Anonymous: M81 and 621, both attributed to Apsyrtus by their placement in the series; one may note that in content they are (as are many passages of Apsyrtus) very similar to Anatolius in Geop. XVII.5.3/ XIX.5.4 and VII.13, respectively.
23 According to the numbering of the table of contents, 737 Θεομνήστων πρὸς τοὺς ἀναφέρνων τὴν τροφὴν διὰ τοῦ στόματος καὶ τῶν μελῶν, and 1025 Ἰάσπρου πρὸς ὁστέων ἀναγωγὴν.
24 Lost excerpts: M1067 ff., CHG II pp. 26–8; Christodoulos and Dioscorides M1211 ff., CHG II p. 28.
Manuscripts of the Hippiatrica

23

contents, but not in the manuscript, are two metrological texts: ἐκ τῶν τῆς Κλεοπάτρας κοσμητικῶν περὶ σταθμῶν καὶ μέτρων, and περὶ μέτρων καὶ σταθμῶν ἱπποιατρικῶν.

THE B RECENSION

The text of the B recension exists in ten copies. Of these, the most important is the magnificent Phillipps 1538, Berolinaensis 134, or ‘B’, used as the basis for the Teubner edition.\(^{25}\) This manuscript has been identified on the basis of its size (265 by 296 mm, 394 folia) and rulings as a product of the imperial scriptorium of the tenth century;\(^{26}\) according to Irigoin, it is the only one of this important group which can be called a ‘manuscrit de grand luxe’.\(^{27}\) B receives this appellation because of the extraordinary fineness of its parchment, calligraphy, and decoration. The splendour of the manuscript has led to its mutilation: several folia are missing, and a number of the ornamented bands have been cut out.\(^{28}\) The decoration does not replicate a model from Late Antiquity, but is in a purely medieval style.\(^{29}\) The pylae which frame the title at the start of each chapter are decorated in gold and brilliant colours with patterns of medallions containing blossoms or palmettes, related in design to those on enamels, ivories, and architectural sculpture of the Middle Byzantine period (Pls. 3–4).\(^{30}\) Within the pylae, chapter-headings are written in gold, in large, round, lacy uncials.\(^{31}\) Narrower bands of decoration divide excerpts within the chapters. Capital

\(^{25}\) CHG II pp. xiv–xv; W. Studemund and L. Cohn, Verzeichnis der griechischen Handschriften der königlichen Bibliothek zu Berlin (Berlin, 1890), 55.


\(^{27}\) Irigoin, ‘Pour une étude’, 180.

\(^{28}\) Missing folia are listed in CHG II pp. xiv–xv.

\(^{29}\) On the contrast between the medieval style of bands of decoration in the text of another imperial MS of the 10th c., Paris, gr. 139, and the Late Antique style of the borders of the miniatures, see M. A. Frantz, ‘Byzantine Illuminated Ornament: A Study in Chronology’, Art Bulletin, 16 (1934), 74–5.


\(^{31}\) Similar letter-forms appear in the headings of Lond. Add. 28815 (mid-10th c.), and the inscription on the ivory staurothèque of Nicephorus Phocas in the monastery of St Francis at Cortona.
letters at the start of excerpts extend into the margins; they are coloured, often outlined in gold, with foliate, beaded, or zoomorphic decoration. The hand of the main text is a large, curlicued minuscule with some uncial letters—the so-called ‘minuscule bouleutée’, used for a number of other luxury manuscripts of the tenth century. The table of contents, and a recipe at the end of the manuscript, are in purple-red ink, in a script resembling Coptic uncial (Pl. 5). On the first parchment leaf are painted two birds: the first, on the recto, with short tail, brown back, pink breast, and green beak; and the second on the verso, with brown back and blue-green breast and feet. The presence of these birds led W. Studemund and L. Cohn to suggest that an Orneosophion or treatise on the care of falcons figured originally in Phillipps 1538, as it does in three later copies of the text. The manuscript is in a modern binding covered with purple and gold cut velvet.

There are a few later annotations. On fo. 33r ᾲρ(αἵον) καὶ χρ(ήαμον) has been added in the margin in a large, curlicued script. Asterisks in black ink mark several titles in what survives of the table of contents. On 331r, a short and colloquial description of what to look for in the conformation of the horse is added in a hand of the twelfth century. Some of the chapter-headings are transliterated in minuscule in the margins; these notes are cut where the edges of the pages have been trimmed. An excerpt from the M recension is added in the lower margin of fo. 2r, in a hand of the sixteenth century. That no early copies appear to have been made from Phillipps 1538.

32 They are compared by Weitzmann, Die Byzantinische Buchmalerei, 17, to initials in other manuscripts of the 10th c.
33 J. Irigoin, ‘Une écriture du Xe siècle: la minuscule bouleutée’, in La paléographie grecque et byzantine (Paris, 1977), 191–8. It has been noted that the hand of Phillipps 1538 is identical to those of Barb. gr. 310, a smaller manuscript (130×160 mm, one quarter the size of B) containing a collection of anacreontic verse: N. G. Wilson, Scholars of Byzantium, 2nd edn. (London, 1996), 143. Among the poems listed in the index of that MS is one (now lost) that may be the same as Symeon Metaphrastes’ ethopoeia on the death of Leo VI: see I. Ševčenko, ‘Poems on the Death of Leo VI and Constantine VII in the Madrid Manuscript of Scylitzes’, DOP 23–4 (1969–70), 199—a further association with the imperial court of the 10th c.
34 Studemund and Cohn, Verzeichnis der griechischen HSS, 56–7. The suggestion was repeated by Oder and Hoppe (CHG II p. xv), who assumed that the Orneosophion would have been the same as the one dedicated to an emperor Michael which is present in three later manuscripts of the B recension (PbO). Oder and Hoppe identified the emperor as Michael II (820–9) or Michael III (842–67), and on this rather flimsy basis attributed Phill. 1538 to the 9th c.: CHG I p. vi; CHG II p. xv.
35 Δις ταῦτα ἔχειν τὸν ἐπειν’ μακρὸν τράχηλον, μακρὸν κορμὸν καὶ μακρὸς πόδας, φαρδὸς στῆθος, φαρδὰ ἀνάπνευσικά, καὶ φαρδεῖς ἄρμοις, πλατῶν ἀντικέφαλοι, πλατὺ μέτωπον, καὶ πλατέα νεφρά, κοτάτα νεφρά, κοτάτα κοινοπλεύρα, καὶ κοινοῦ δακτύλους; CHG I p. 375 apparatus; CHG II p. xvi.
36 M1, printed as Bl.2. CHG I p. 1. It could have been added from Par. gr. 2322 between 1594 and 1603, when the royal library was brought from Fontainebleau to Paris and kept at the Collège de Clermont; see Delisle, Le Cabinet des manuscrits, 194–5.
itself supports the view that B was a dedication copy that remained in the imperial library.\textsuperscript{37} Cohn suggested that B might be identified with manuscript no. 22 in the late sixteenth-century inventory of the library of Michael Cantacuzenus in cod. Vind. hist. gr. 98.\textsuperscript{38} It appears in the list after a work attributed to Oribasius:\textsuperscript{39}

By the same Oribasius the iatrosophist, [dedicated] to the Emperor Constantine Porphyrogenitus, son of Leo the Wise, \textit{Hippiatrica}. And the paper is quires of parchment.

The first recorded appearance of B is in the catalogue prepared for the sale of the library of the Collège de Clermont in Paris, confiscated following the suppression of the Jesuit order in 1763; the manuscript is described as already mutilated.\textsuperscript{40} A signature in the left margin of fo. 2' records this confiscation (Pl. 3).\textsuperscript{41} How and when the manuscript found its way from Constantinople to the Jesuit College is unclear. Most of the Greek manuscripts of the Collège de Clermont came from the collection of Guillaume Pellicier (c.1490–1567), bishop of Montpellier and ambassador of François I to Venice between 1539 and 1542.\textsuperscript{42} While dispensing vast sums in acquiring manuscripts for the French king, and also in ordering specimens of trees and plants from Crete, Syria, and Alexandria,\textsuperscript{43} Pellicier at the same time collected and had

---


\textsuperscript{39} R. Foerster, \textit{De antiquitatibus et libris manuscriptis Constantinopolitanis} (Rostock, 1877), 27. Another possibility is no. 28 in the same inventory, written ‘on quires of silk’; the title reflects its placement in a series of items attributed to Galen: τοῦ αὐτοῦ Ἀφρόδην πρὸς Κωνσταντῖνον τὸν βασιλέα τῶν πολιορκυνόντων, ὑδὸν Λέωντος τοῦ σοφοῦ, ἵππηστρική, καὶ τὸ χαρτὶ ἐν κόλλαις βεβραίας [sic].

\textsuperscript{40} Catalogus manuscriptorum codicum collegii Claromontani (Paris, 1764), 112, no. 344, ‘paucis tamen avulsis caputis titulis et ornamentis’.

\textsuperscript{41} ‘Paraphé au désir de l’arrest du 5e juillet 1763. Mesnil’.

\textsuperscript{42} Studemund and Cohn, \textit{Verzeichniss der Griechischen HSS}, pp. i–xxxvi, on B, p. xxxv.

\textsuperscript{43} H. Omont, \textit{Catalogue des manuscrits grecs de Guillaume Pellicier (sic), évêque de Montpellier, ambassadeur de François Ier à Venise} (Paris, 1886), repr. from \textit{Bibliothèque de l’École des Chartes} 46 (1885), 45–83 and 594–624. In a letter to Pierre Duchatel, the royal librarian, dated 8 Oct. 1540, Pellicier implies that he has seen and would like to acquire 220 manuscripts which were in the hands of one man (Antonios Eparchos), and appeared to represent ‘le garderobbe et despouille de toute la librairie des empereurs Paleologues’; Omont, 71. Could B have been among these? It does not figure in the 1538 catalogue of Eparchos’ books, though Par. gr. 1995 does. See Omont, ‘Catalogue des manuscrits grecs d’Antoine Eparque’, \textit{Bibliothèque de l’École des
A catalogue of his library datable to the late sixteenth century lists three manuscripts of hippiatric texts, but the precision with which the titles of the manuscripts are transcribed permits these manuscripts to be identified as Parisinus gr. 1995 (no. 65), Phillipps 1539 (no. 73), and Parisinus gr. 2244 (no. 165). The books of the College of Clermont were never auctioned, but were purchased virtually en bloc by the Dutch jurist and bibliophile Gerard Meerman (1722–71). Upon the death of Meerman’s son, the collection was put up for auction and B was acquired, along with many other manuscripts, by Sir Thomas Phillipps (1792–1872), the self-professed ‘vello-maniac’ who has been called ‘the greatest collector of manuscript matter the world has ever known’. Phillipps’s renowned library, kept first at Middlehill and later at Cheltenham, was dispersed over a long period after his death; B was sold in 1887, together with all the Meerman manuscripts, by private contract to the German government, and entered the collection of the then Royal Library in Berlin.

The text of B differs from that in M most obviously in its organization. Instead of being numbered straight through, the excerpts are divided into some 130 chapters, identified in their titles as κεφάλαια, which correspond to different subjects, so that for example under the heading ‘On fever’, περὶ πυρετοῦ, are listed all the passages on fever. The order of subjects has also been altered: B begins with chapters on the grave diseases, continues with ailments of the horse more or less from head to foot, disorders which require surgery, then bites, stings, and other accidental wounds, and concludes with recipes for different types of drugs. The numbers of three chapters, 63, 83, and 53 (1892), 13, no. 64. And if indeed B is one of the manuscripts in the Cantacuzenus inventory, it was still in the East at the time that Pellicier was in Venice.

45 Parisinus gr. 3068, ed. by Omont, Catalogue des manuscrits grecs de Guillaume Pellicier, 30–1 and 45; the catalogue republished in idem, Catalogues des manuscrits grecs de Fontainbleau sous François Ier et Henri II (Paris, 1889), 393–427. See also A. Cataldi Palau, ‘Les vicissitudes de la collection de manuscrits grecs de Guillaume Pellicier’, Scriptorium, 40 (1986), 32–53; and ibid. 40, on the dating of Par. gr. 3068, and a copy of the same catalogue in Par. gr. 3064.
46 Omont (Catalogues des manuscrits grecs de Fontainbleau, 404) believed that no. 65 was Phill. 1538; the title, however, corresponds to that of the Epitome, as pointed out by Studemund and Cohn, Verzeichniss der griechischen HSS, p. xiii, n. 3.
47 Bibliothecae Meermanniana; sive Catalogus librorum impressorum et codicum manuscriptorum, quos maximam partem collegerunt viri nobilissimi Gerardus et Joannes Meerman; morte dereliquit Ioannes Meerman ... quorum publica fiet auctio die VIII sqq. Junii, anni MDCCCXXIV Hagae Comitum (The Hague, 1924); B is no. 234, vol. IV, 36.
49 See de Ricci, English Collectors, 127.
Manuscripts of the Hippiatrica

95, do not appear in B. That these omissions represent chapters omitted from Phillipps 1538 rather than simply skipped numbers is revealed by the fact that the text of these chapters figures in the C and L recensions. Within the chapters of B, the order in which excerpts are presented is changed. While Apsyrtus remains in first place, Hierocles now follows immediately after him, with excerpts from other authors appended in no consistent order.

The B recension contains most of the excerpts in M, with several additions and subtractions. First, to the seven principal authors—Apsyrtus, Anatolius, Eumelus, Theomnestus, Hippocrates, Hierocles, and Pelagonius—are added two new sources: these consist of a set of anonymous προγνώσεις καὶ λάσεις (‘diagnoses and cures’), and excerpts from the veterinary treatise of Tiberius. An excerpt from Dioscorides is also present. Next, a far greater amount of Hierocles’ text is present, including the rhetorical prooimia of the two books of his treatise. All passages of a magical or poetic nature present in M are omitted from B. Recipes for drugs are gathered at the end of the compilation into chapters entitled περὶ ἐγχυματισμῶν σκευασίας (on the composition of drenches, i.e. liquid medications administered through the mouth or nose) and περὶ μαλαγμάτων (on ointments). Tables showing equivalents in different systems of weights and measures are appended to the veterinary excerpts; some of these metrological texts correspond to titles listed in the pinax of M. Also present, at the very end of the manuscript, is an elaborate recipe for a warming ointment (ἀλοιφὴ ἁπεμή) which includes imported materia medica such as ambergris, aloeswood, and galangal, introduced only in the medieval period (Pl. 5). The text of B has also been subjected throughout to editing: we shall return to this phenomenon later.

OTHER MANUSCRIPTS OF THE B RECENSION

Nine more recent manuscripts contain the text of the B recension. One of these, Vaticanus Urbinas gr. 80, fos. 267v–279r, is a partial copy, containing only the

50 B63 must have been περὶ ἀθματος = C51 which appears between C50 περὶ δρτηριας ἐλκαθέντως = B62 and C52 περὶ τῶν ἀδιά κανακαστῶν = B64. Similarly, B83 may be restored as περὶ θρύμβων, and B96 as περὶ κεντρίτων; see CHG II p. xxv. As noted by Björck, the tables of contents of P, b, a, K, l, and N contain the titles of the three excerpts not copied in B, ‘Apsyrtus, Julius Africanus’, 51. O lacks a table of contents.
51 B69.24, CHG I p. 276; cf. M1215 (preserved only in the pinax).
52 B129 and 130, CHG I pp. 385–400 and 400–39.
54 B Appendices 7–8, CHG I pp. 446–9.
first chapter and part of the second, in the hand of Ioannes Chortasmenos (c.1370–1436/7); it is bound in a miscellaneous volume (287 by 202 mm, 279 folia) together with excerpts from Theon, Ptolemy, Theodore Metochites, Libanius, Plato, and documents relating to the patriarchate of Constantinople copied by Chortasmenos and others. The excerpt from the Hippiatrica is on two ‘artificial’ quires of nine and four folios, whose paper has the same watermark as that of a manuscript dated 1404. The large, rounded script (Pl. 6) which, according to P. Canart and G. Prato, represents an early phase of Chortasmenos’ hand, is to be assigned probably to the period before 1410. The manuscript has been damaged by water at its upper edge so that a quarter of each page is stained. The interest of U lies not so much in the incomplete text as in its distinguished copyist: Chortasmenos (later in life Metropolitan Ignatius of Selymbria) was notary of the patriarchal chancery at Constantinople, a copyist and book-collector whose interest in manuscripts and the identification of handwriting has led him to be described as ‘avant la lettre, un codicologue et un paléographe’. Copies in his hand of what one might call ‘scientific’ texts attest to a fascination with geography, medicine, mathematics, and especially astronomy. Chortasmenos had access to old and precious books: he is well known for rebinding the Vienna Dioscorides (Vindobonensis medicus gr. 1) in 1406—and perhaps notorious for adding his transcription in minuscule of the uncial text in the blank spaces of the beautiful sixth-century manuscript. It has been suggested that the model from which he copied this excerpt from the Hippiatrica was Phillippus 1538. Indeed, it is tempting to think that the transcriptions in minuscule of chapter-headings which appear in the margins of the Berlin manuscript might be in Chortasmenos’ hand (Pl. 3 top margin; Pl. 4, top and right margin).

---

63. The marginalia in B are very brief (unfortunately for the purpose of their identification, but fortunately for the appearance of the manuscript), so although the hand is not unlike that of Chortasmenos, it is impossible to be certain. I am grateful to Mr Nigel Wilson for examining them.
Federigo, duke of Urbino (d. 1482), whose arms adorn the index page; after the death of the last duke of Urbino, the family's library entered the Vatican library in 1657 under Pope Alexander VII.64

Apart from U, all later manuscripts of the B recension are copies of the entire compilation; all of them are derived from Phillipps 1538. E. Oder and C. Hoppe, who knew only five (P, b, O, l, and N), noted that they incorporate into the main text the short passage describing the points of the horse which is written in a later hand in the margin of fo. 331r of Phillipps 1538.65 A.-M. Doyen-Higuët has observed that the same is true for a, c, K, and L. Other instances noted by Oder and Hoppe in which the *editio princeps* differs from B have been identified by Doyen-Higuët as characteristics common to all the later manuscripts:66 several excerpts whose text is incompletely copied in Phillipps 1538 are omitted altogether in the others;67 the text on a displaced folio in B appears in the same incorrect location in all the later copies;68 and the later copies all contain two other misplaced passages.69 A shared innovation is the addition of short prescriptions for hellebore to be inserted into the skin as a cure for various maladies.70 These later manuscripts have a different set of metrological tables from the ones in B: one attributed to Diodorus (ἐκθέσεις Διοδότου περὶ μέτρων καὶ σταθμῶν), another described as ‘most accurate’ (ἐκθέσεις περὶ μέτρων καὶ σταθμῶν ἀκριβεστάτη), and one on liquid measures (περὶ μέτρων ὕγρων). In all but ON, these tables are placed before the text, instead of after it as in B. In several copies (PbONac), the prooimion of Hierocles’ second book71 is labelled as though it indicated a division of the compilation into two sections—in B, no division is indicated, and the prooimion is only preceded by a narrow band of decoration rather than an elaborate pyle. But the later representatives of B have their origin in a copy made before Phillipps 1538 was damaged by the cutting out of many of the decorated headpieces, and their evidence is thus essential for restoring the complete text of the B recension.

Three manuscripts, P, b, and O, contain the full text as it appears in B, up to B130.209, including the recipe for the ἀλοιφή θερμή at the end, and another

65 CHG I p. 375 apparatus, CHG II p. xvi.
67 B3.5, CHG I p. 42; B85.1, CHG I p. 306; B113.3, CHG I p. 371.
68 B85.6–7, CHG I pp. 307, l. 16–308, l. 2.
69 CHG I p. 318, apparatus; CHG I p. 44, apparatus.
70 CHG I p. 62, apparatus; CHG I p. 384, apparatus.
recipe for κονδρῳγάρα κόνις or ‘charioteer’s powder’. After these follows a note recommending the use of hellebore inserted in a piercing in the skin as a treatment for epilepsy. O is damaged at the beginning, but P and b are prefaced with the three metrological passages. P, b, and O share another feature: the text of the Hippiatrica is followed by an Orneosophion, or manual on the selection and care of birds of prey, whose title indicates that it was ‘made at the command of the renowned emperor lord Michael’ (κελεύσει γεγονός τοι δούλιον βασιλέως κυρίου Μιχαήλ). These manuscripts appear to have been produced within a fairly short period of time in Venice and Crete (then a Venetian possession), by professional Greek scribes, for French and Italian patrons; the same phenomenon has been observed in the transmission of the text of Thucydides.

Parisinus gr. 2245, or ‘P’ (287 by 202 mm, 138 folia), is signed at the end of the text by Antonios Damilas (Δαμιλᾶς), a native of Crete whose family was originally from Milan. Damilas was active as a notary in Candia in the third quarter of the fifteenth century; he worked as a copyist along with Michael Apostolis and the latter’s son Aristoboulos. The paper on which the text is copied has watermarks of the 1430s–1470s. The manuscript is inscribed with the ex-libris and shelfmark of Gian Francesco d’Asola (1498–1557/8), brother-in-law of Aldus Manutius. D’Asola was given an introduction to

72 CHG I pp. 448–9. The recipe, which consists of the same quantity (1½ oz) of 87 ingredients, listed in alphabetical order from alpha to kappa, was identified by Oder and Hoppe as a joke.
73 CHG I p. 450.
74 Ed. R. Hercher, Cl. Aeliani De natura animalium ... (Leipzig, 1866), vol. II, 575–84. The date of the Orneosophion is unclear; it is different from the 15th-c. text attributed to Demetrius Pepagomenos, ed. Hercher, ibid. 333–516, on which see A. Diller, ‘Demetrius Pepagomenus’, Byzantion, 48 (1978), 35–42.
76 Fo. 138 r: Αντώνιος Δαμιλᾶς και τούτο έξεργάζεται. Antonius was brother of the copyist Demetrius who designed the typeface for the Erotemata of Constantine Lascaris, the first book to be printed in Greek (Milan, 1476); see P. Canart, ‘Demetrius Damilas, alias le “librarius florentinus”’, Rivista di studi bizantini e neoellenici, ns 14–16 (xxiv–xxvi), 281–347.
78 A. Cataldi Palau, Gian Francesco d’Asola e le tipografie Aldine: La vita, le edizioni, e la biblioteca dell’ Asolano (Genoa, 1998), 514: C. M. Briquet, Les Filigranes (Geneva, 1907), ‘Ciseaux de toîler’ 3756 (1450, 1470); Briquet, ‘Lettre R’ 8946 (1451) and Harlfinger, ‘Lettre 37’ (1431); Briquet, ‘Monts’ 11662 (1432).
79 On the verso of the 6th flyleaf, ‘xxxvii’ ‘A me Io(anne) Francisco Asulano’; cf. Cataldi-Palau, Gian Francesco d’Asola, 9. D’Asola owned another manuscript copied by Damilas, and three others from the scriptorium of Michael Apostolis: see Cataldi-Palau, 511.
François I by Guillaume Pellicier in 1542; his books entered the royal collections not long afterward. The blue binding of P bears the arms of Henri II of France; a note in the hand of the Cretan calligrapher Ange Vergèce (Ἀγγελος Βεργίκος) indicates that it was part of the library at Fontainebleau; the manuscript also figures in Vergèce’s 1545 inventory of that library. The beginning of the manuscript appears to have been damaged: the text begins in Damilas’s hand mid-stream on fo. 4r (B1.4; B1.1–3 are copied by a different hand).

Phillips 1539, Berolinensis 135, or ‘b’ (330 by 250 mm, 173 folia, with a binding of unlined white parchment), was copied by the Greek émigré Nikolaos Kokolos (Κόκολος), who, along with his brother Georgios, was part of the scriptorium of Guillaume Pellicier. Pellicier’s copyists, numbering at one point up to twelve, produced some 141 manuscripts between 1539 and 1542. Nicholas copied sixteen manuscripts for Pellicier: of these, two are dated, to 1540 and 1541 respectively; their watermarks are similar to those of Phillips 1539. Cohn has suggested that b is an apograph of P; certainly Pellicier might have had a copy made of d’Asola’s manuscript. (Would he have done so if he also possessed B at the time?) The manuscript shared the fate of most Pellicier’s library: after the bishop’s death in 1567, it was inventoried by a friend of his, the notary Claude Naulot Duval of Autun, who inscribed his name in the book in 1573 in Greek, Latin, and French. From Naulot, b passed to the library of the Collège de Clermont; a note on the verso of the third flyleaf, listing the contents of the manuscript in Greek and in Latin, may be in the hand of Jacques Sirmond (1559–1651), librarian

---

80 Cataldi-Palau, Gian Francesco d’Asola, 386–7.
81 Gamillscheg and Harlfinger, Repertorium, IA, 25, no. 3.
82 Cataldi-Palau, Gian Francesco d’Asola, 387; Miller, ‘Notice sur le manuscrit grec No. 2322’, 7; H. Omont, Catalogue des manuscrits grecs de Fontainebleau, 103.
83 Gamillscheg and Harlfinger, Repertorium, IA, 162, no. 310; IIA, 159, no. 429.
86 Studemund and Cohn, Verzeichniss der Griechischen HSS, 56–7; CHG II p. xvi, Vogel and Gardthausen, Die griechischen Schreiber, 349 (where the MS is erroneously assigned the date of 1539).
89 On the recto of the third flyleaf: ἀνέγραψεν ὁ Ναουλός τὸ βιβλίον τοῦτο, Hunc Legeóndi agnovit Librum: ha Léu et recognu ce Liure. τῷ θεῷ χάρις.
of the college. The manuscript is marked with the signature recording its confiscation after the dissolution of the Jesuit college in 1763, and appears in the catalogue prepared for the sale of the library. It was acquired by Meerman along with B and most of the other Pellicier manuscripts, and subsequently by Sir Thomas Phillipps, and by the German government for the Royal Library in Berlin.

Oxford, Barocci 164, or ‘O’ (270–3 × 204–7 mm, 165 folia), known to Oder and Hoppe but not used in their edition, belongs to this group as well. The copyist of O has been identified by J. Wiesner as Petros Daklozaos (Δακλώςαυσ) of Rethymnon, who was active in the second half of the sixteenth century, and copied five other manuscripts for the Veneto-Cretan mathematician and sorcerer Francesco Barozzi (1537–1604). The paper, watermarked with the winged and haloed lion of St Mark, is Venetian; while the fine red leather Cretan binding (which is coming apart from the pages) resembles the bindings of other manuscripts from Barozzi’s collection. No pages appear to be missing from the beginning of the manuscript, yet the text begins mid-stream in the same place as Parisinus gr. 2245, which suggests that O was copied from P. O features in the 1617 catalogue of the Barozzi library. Francesco’s manuscripts, inherited by his nephew Iacopo, were brought to England by the bookseller Henry Featherstone in 1628, and deposited with Archbishop William Laud. At Laud’s encouragement, the collection was purchased by William Herbert, third earl of Pembroke,

Another family is made up of the manuscripts \textit{IKac}, whose text ends just before the end of the B recension, after B130.184.\footnote{99}{CHG I p. 436.} In all these, as in PbO, the metrological tables are placed before the text instead of after it. This group is related to the circle of Janus Lascaris in Florence and in Rome. Lascaris may have had a hand both in the copying of the text and in its appearance in printed form; as we shall see later, the first Latin and Greek editions are related to this family. Finally, N contains elements derived from both branches of the B recension.

The earliest of this group, and the only one of medieval date, is Laurentianus Pluteus 75. 6, or ‘I’ (190 by 270 mm).\footnote{100}{A. M. Bandini, \textit{Catalogus Codicum Graecorum Bibliothecae Laurentianae}, III (Florence, 1770; repr. Berlin, 1961), cols. 147–51.} The \textit{Hippiatrica} occupies fos. 124\textsuperscript{v}–247\textsuperscript{v}, and is copied on paper whose watermark belongs to the late fourteenth or early fifteenth century.\footnote{101}{Two circles connected by a line with a cross at the end; cf. Briquet, ‘Cercle’ 3158–95, of the mid–late 14th and early 15th c.; D. and J. Harlinger, ‘Cercle’ 12, 13, 15, 16, 21, 31, of similar date.} The red binding of the Medici library is missing several metal bosses and coming apart from the pages, but still has its chain attached. The manuscript is made up of several texts: the first two are a medical treatise dedicated to an emperor Constantine, and military treatises attributed to Leo VI. These items appear in Janus Lascaris’ autograph list, in Vaticanus gr. 1412, of books purchased on the island of Corfu in 1491:\footnote{102}{Fo. 48; Müller, ‘Neue Mittheilungen über Janos Laskaris’, 380.} the \textit{Hippiatrica}, which begins in the middle of a quire, and is in the same hand as the end of the military handbook, clearly has always been part of the same volume.\footnote{103}{D. F. Jackson, ‘Janus Lascaris on the Island of Corfu in AD 1491’, \textit{Scriptorium}, 57 (2003), 137.} Lascaris’ patron Lorenzo de’ Medici was passionate about horses and horse-racing: his horses won \textit{palii} in Florence in 1478 and 1481 and in Arezzo in 1483; he acquired horses from Naples, Sicily, and North Africa in the 1470s and 1480s; in 1487 the classical scholar Angelo Ambrogini...
(Politian) wrote a poem in Latin on one of Lorenzo’s Barb racehorses;¹⁰⁴ and in a letter of 1490 to his stable manager, Lorenzo discusses the medical treatment of one of the horses.¹⁰⁵ It is hardly surprising in this context that books on horse-medicine should have figured among Janus’ acquisitions. But marginal notes and underlinings in the manuscript seem to represent the interests of a humanist rather than those of a horse-doctor.¹⁰⁶

The manuscript does not appear in the 1495 inventory of the Medici library compiled during the family’s exile from Florence; it does, however, appear as no. 318 in Vigili’s inventory of 1508 (Vaticanus Barb. lat. 3185).¹⁰⁷ and in the inventory in Hannover, K. Bibliothek XLII, 1845. The last list is entitled ‘Auctores graeci: quos impensis Laurentii Medicis Lascaris ex peloponneso in Italiam nuper advexit’, and has been identified by D. F. Jackson as a list of the new Greek texts and authors introduced to Italy by Janus Lascaris.¹⁰⁸ In this list, the *Hippiatrica* appears simply as a list of authors, more or less recognizable as the principal sources of the compilation and some minor contributors: ‘Absyrtus, Hierocles, Theomnestus, Pelagonius, Anatolius, Tiberius, Eumnomes, Archidemus, Hippocrates, Aemilius hispanus, Clitorius, Beneventanus, Himerius: Omnes de morbis equorum & remediis eorum’ (*sic*).¹⁰⁹ This selection of names duplicates the list of authors added in two later hands to Laurentianus Plut. 75. 6 in the lower margin of fo. 124*: Ἀψύρτου Ἡεροκλέους Θεομνήστου Πελαγώνιου Ανατόλου Τιβερίου Εὐμόλου Ἀρχεδήμου Ἰπποκράτους Ἡμερίου (by Lascaris?) and, in the second hand, placed so that they appear to precede Himerius, Ἀμιλλίου Ἰστανοῦ Ἀιτωρίου Βενεβεντάνου (Pl. 7). The name-lists express a desire to draw attention to the sheer number of authorities available to be consulted; Archedemus, Emilius Hispanus, Litorius Beneventanus, and Himerius are quoted by other authors but are certainly not major sources of the text. The same list figures, as we shall see, in the first printed editions of the *Hippiatrica*, but with the addition of Didymus, Diophanes, Pamphilus, and Mago of Carthage. The absence of these last four names from the Florence manuscript

¹⁰⁴ I. del Lungo, *Prose Volgari inedite e Poesie Latine e Greche edite e inedite di Angelo Ambrogini Poliziano* (Florence, 1867), 130.


¹⁰⁶ Fo. 182: Μάγων Καρχηδόνος, fo. 183*: Ἅρακτονός, fo. 187*: the Latin words στάβλων, βοῶν, ἐντυγχανόν, κάνδιτων, 196*: Marullus, 205*: Κέλασος, Φλώρος.


¹⁰⁹ Fo. 108*, ibid. 86 and 101.
would seem to suggest that the list was not added to the manuscript from the edition; it may appear for the first time in Laurentianus Plut. 75. 6. The same list appears in Vatican Barberinianus gr. 212, British Library Additional 5108, Parisinus ital. 58, and Corsini 43. D. 32, but copied as part of the title in the hand of the scribe; we shall see that the first three of these manuscripts also have connections to Lascaris and his circle.

Vatican Barberinianus gr. 212, or ‘K’ (285 by 205 mm, 163 folia, in a plain green leather binding), is copied on paper datable from its watermarks to the late fifteenth century by nine different hands, presumably from an unbound exemplar. The copy is not entirely finished: one scribe has omitted all the lemmata, which were presumably to be added later in red. Three quinios have been identified as being in the hand of Janus Lascaris (Pl. 8); one wonders whether the other copyists might have been his students. The same list of authors added to the Florence manuscript precedes the text in K, in the hand of the first scribe. The manuscript is marked with a note of possession of the scholar and senator Carlo di Tommaso Strozzi (1587–1670), known to have given books to Cardinal Francesco Barberini (1597–1679). The library of the Barberini family was purchased by the Vatican in 1902.

British Library, Additional 5108, or ‘a’ (225 by 331 mm, 157 folia, in a brown leather binding with gold tooling), is copied on paper belonging to the first half of the sixteenth century. Although it is not decorated (apart from rubrications), it is a fine copy, large in size and with generous margins. The copyist was identified by Omont as Arsenios (in secular life, Aristoboulos) Apostolis (1468/9–1535), sometime bishop of Monemvasia; however,

---

110 One may note that Harley 5760 (Maximus of Tyre) is inscribed on the flyleaf ‘Questo autore fu di Grecia portato a Lorzo de Medici da Gio. Lascari’. Omont, ‘Notes sur les manuscrits grecs du British Museum’, Bibliothèque de l’École des Chartes, 45 (1884), 329.

111 Briquet, ‘Aigle’ 82; Briquet, ‘Balance’ 2450; Briquet, ‘Chapeau’ 3370; Briquet, ‘Fleur’ 6659; see J. Mogenet, Codices Barberiniani graeci, II (Vatican, 1989), 52. Twelve hands according to S. de Ricci, Liste sommaire des manuscrits grecs de la Bibliotheca Barberina (Paris, 1907; repr. from Revue des Bibliothèques, April–June, 1907), 17.

112 Fos. 109–118'; 131–130'; Gamillscheg and Harlfinger, Repertorium, 3A, 95–6, no. 245.

113 Fo. 1'; ‘Caroli Strozze Thomae filii 1635’.

114 Vat. Barb. gr. 127 bears a similar note, cf. G. Mercati, Scritti d’Isidoro il cardinale Ruteno e codici a lui appartenuti che si conservano nella Biblioteca Apostolica Vaticana (Studi e Testi, 46; Rome, 1926), 90–3; Bignami-Odier, La Bibliothèque Vaticane, 115.


Gamillscheg and Harlfinger attribute the manuscript instead to Christopher Kontoleon (active in the first half of the sixteenth century). Kontoleon, a native of Monemvasia, was, along with Devaris, a student at the Greek college founded by Lascaris and Leo X in Rome. A member of the circle of Cardinal Ridolfi (and at some point part of the cardinal’s household), he also copied manuscripts for Guillaume Pellicier. One may note the use of the ‘classical’ form of sigma in titles; also worthy of note are the alternative readings in the margin, in the same hand as the main text, throughout the manuscript. A list of authors precedes the text (Pl. 9) as in K. The text is followed by a note describing a Corsican practice of silencing horses by cutting out their tongues. The manuscript entered the collection of the British Museum in the last decades of the eighteenth century.

No. 43. D. 32 (Rossi 358) of the Biblioteca dell’Accademia Nazionale dei Lincei e Corsiniana, or ‘c’, is copied on paper with watermarks similar to those of BL Additional 5108, but that has been folded two more times so the pages are in octavo, one quarter the size (163 by 112 mm) of those of the London manuscript. Corsini 43. D. 32 is, on the other hand, much fatter, at 575 folia. The text is prefaced by the same list of authors as in BL Additional 5108; it is also followed by the note about the Corsican practice for silencing horses. The manuscript belonged to the Florentine bibliophile Niccolò

118 A. Meschini, Cristoforo Kontoleon (Padua, 1973); Gamillscheg and Harlfinger, Repertorium, IA, 188–9, no. 383; cf. Vogel and Gardthausen, Die griechischen Schreiber, 430.
120 Ἐν Κύριῳ τῇ νήσῳ ἀποστέμνουσι τοῖς ἐπιστον τῆς γλώσσης ἵνα μὴ χρεµατίζωσιν. ἄλλοι δ᾽ ἱλατί περισφέγγονιν.
121 F. Madden and E. A. Bond, Index to the Additional Manuscripts, with those of the Egerton Collection, preserved in the British Museum, and acquired in the years 1783–1835 (London, 1849), s.v. Apsyrtus, Hierocles, Tiberius, Theomnestus, etc. Björck has noted that a lost manuscript described as ‘Apsyrtus græce, (in) f(olio), c(hartaceus)’ belonged to the Danish physician Johan Rode (1587–1659), professor of botany at Padua; ‘Apsyrtus, Julius Africanus, et l’hippiatrique grecque’, 44. The London manuscript is perhaps the only surviving one that corresponds to the description.
123 Briquet, ‘Sirène’ 13884 and 13888; Harlfinger, ‘Arbalète’ (with fleur de lys) 65 (1534) and 66 (1536).
Rossi (1711–85); his collection of 415 manuscripts, 1300 incunabula, and also later printed books was bought by Bartolomeo Corsini in 1786, and became part of the library of the Accademia dei Lincei in 1883. The binding alla greca has been identified by A. Hobson as the product of a workshop in Rome that bound manuscripts and printed books (and possibly also produced copies of manuscripts) for Cardinals Salviati and Ridolfi in the first half of the sixteenth century. A binding by the same workshop has left traces on Parisinus ital. 58, an Italian translation of the Hippiatrica that belonged to Lascaris and Ridolfi.

Naples, Borbonicus III. d. 26, or ‘N’, another manuscript of modest size (161 by 112 mm, 396 folia, with a mottled brown leather binding badly worm-eaten) is copied on paper with a mermaid watermark of the first half of the sixteenth century, similar to that present in Corsini 43. D. 32 and BL Additional 5108. But the contents are slightly different from the other manuscripts in this family, and include additions from the other family BPbO. The author-list appears before the table of contents in a short form: Αἱρότον, Ἡροκλέως, Πελαγωύς, Τριαντόνος, καὶ Θεομενήστου περὶ θεραπείας ἰππὼν. At the end of the text, as in PbO, are the two elaborate recipes for ‘warming ointment’ and the ‘charioteer’s powder’. After the two recipes follow the metrological passages which precede the text in Ikac, and another present only in the other branch of the B recension. The note about Corsica is not present. The ‘classical’ sigma is used by the scribe at the beginning of the first chapter. Many of the Greek manuscripts in the National Library of Naples came from the collection of Cardinal Alexander Farnese (1520–89), archaeologist and patron of the

---


125 O. Pinto, Storia della biblioteca Corsiniana e della biblioteca dell’Accademia dei Lincei (Florence, 1956), 35–6.


127 Hobson, 96; see also Miller, ‘Notice sur le manuscrit grec No. 2322’, 4. The manuscript is marked on fo. 152 with Lascaris’ monogram and shelfmark N°. XXXIX della 21 capsa, written in Devaris’ hand. It contains a translation of the B recension, copied by several different hands, with the author-list as in Ikac on fo. 152”. A. Marsand, I Manoscritti italiani della regia biblioteca parigina (Paris, 1835), 21–2, no. 7248.


129 392: ἑτέρα ἐκθέσεις περὶ μέτρων καὶ αὐτημοῖ ἰπποατρικῶν.
The Hippiatrica does not figure in the 1584 inventory of the Farnese library, but some other manuscripts known to have been in the library at that time are not listed.\footnote{G. Guerrieri, \textit{Il Fondo farnesiano: Quaderni della R. Biblioteca nazionale Vittorio Emanuele III di Napoli}, ser. II, 2 (Naples, 1941); F. Benoit, \textquoteleft Farnesiana\textquoteright, \textit{Mélanges d\’archéologie et d\’histoire}, 40 (1923), 165–206.} If the manuscript is from the Farnese library, one might speculate that Matthaios Devaris, Lascaris’ student, who was employed by the cardinal at Rome for twenty-eight years, had a hand in acquiring it or having it copied. The Farnese books were transferred to Naples between 1734 and 1738 by Charles de Bourbon, upon his accession as king of Naples. Borbonicus III. d. 26 does appear in the catalogue of Greek manuscripts in the royal library of Naples published by Harless in 1796.\footnote{G. C. Harless (ed.), Ioannis Alberti Fabricii \ldots Bibliotheca Graeca sive Notitia scriptorum veterum Graecorum, 3rd edn., vol. 5 (Hamburg, 1796), 774 no. 7.}

\textbf{THE D RECENSION}

The D recension is based on the same core of text as B: that is, excerpts from Apsyrtus, parallel texts from Hierocles, Anatolius, Eumelus, Theomnestus, Hippocrates, Pelagonius, Tiberius, and the \textit{προγνώσεις καὶ ἱάσεις}.\footnote{That C and L are not derived from Phillipps 1538 itself is shown by the fact that both manuscripts contain the three chapters not copied in B; \textit{CHG} II p. xxv.} Preceding the medical texts is a chapter on the conformation and temperament of the horse, and on breeding and different breeds; this section, made up of excerpts from several authors, has no parallel in either the B or the M recension. D also contains additions from a number of other well-known authors, including Aristotle, Aelian, and Julius Africanus, the medical compilers Oribasius, Aëtius of Amida, and Paul of Aegina (the last two appearing anonymously); as well as the earliest and the latest datable texts in the \textit{Hippiatrica}, namely the fragment of Simon of Athens and two recipes attributed to the Patriarch Theophylact. These last provide a \textit{terminus post quem} for this recension: Theophylact was Patriarch between 933 and 956.

These excerpts are gathered into chapters, as they are in B, and the order of these chapters is essentially the same as in B. The Teubner edition contains only those excerpts from the two manuscripts which do not figure in M or B.\footnote{C is edited in part as \textit{Hippiatrica Cantabrigiensia} in vol. II of the Teubner edition; selections from L are edited in the same volume as \textit{Additamenta Londinensia}.} Although their content is nearly the same, the character of text in the...
two manuscripts is different enough that one may speak of the C and L recensions.

Emmanuel College, Cambridge, 251 (formerly III. 3. 19), or ‘C’, is in three sections, two of parchment and one of paper (245 by 165 mm, 185 folia, numbered as pages). The first parchment section, pp. 1–222, is palimpsest; the next, pp. 223–333 is on clean parchment, while the third section, pp. 334–69, is on paper. At least two hands or groups of hands are discernible: the first on pp. 1–222, the second on pp. 223–369. The script of the second group hangs from the rulings, which are clearer than those on the palimpsest leaves. The hands are attributed by M. R. James to the twelfth and fourteenth centuries without indication of which hand belongs to which date; more recently N. Tchernetska has noted the resemblance of the first hand or group to Terra d’Otranto script of the thirteenth century and that of the second to slightly later, perhaps fourteenth-century scripts (Pls. 10–11). It should be noted that the changes of hand do not correspond to major divisions in the text, nor is there reason to imagine that different parts of the compilation should have been copied at very different dates. Throughout all parts of the manuscript are interlinear glosses in vernacular Greek; these are in a black ink different from that in which the text is written, and in a hand attributed by James to the fifteenth century. In the first section, tabs of red or black leather mark the folia on which chapters begin. Folia are missing at various points throughout the manuscript, and at the beginning and end. An old label does not provide obvious clues about the history of its ownership. C was in the library of Emmanuel College by 1673, when it was collated against Isaac Casaubon’s copy of Grynaeus’ edition of the Hippiatrica


137 Tchernetska identifies the ruling of the new sections of the MS as Leroy, type 00C1; and notes that that of the earlier section is unclear and may be left over from the first use of the parchment.

138 The label is inscribed liber magni pretii quoad partem primam scriptus accuratus. plurima continet quae in libro typis excuto (scil. Basileae 1537) non comparent; James dates it to the 17th or 18th c.: The Western Manuscripts of Emmanuel College, p. 148. Most of the manuscripts in the collection were gifts from fellows or members of the college: F. Stubbings, A Brief History of Emmanuel College Library (Cambridge, 1981), 11.
(Casaubon had died in 1614).\textsuperscript{139} A manuscript copy of C in the library of Trinity College, Cambridge bears the same date of 1673.\textsuperscript{140} C was used by Peter Needham for his 1704 edition of the \textit{Geoponica}.\textsuperscript{141}

The text of C is in two parts. The first consists of twelve excerpts on the choice of a horse, on breeding and the early handling of the foal, and a list of breeds in alphabetical order.\textsuperscript{142} Oder has attributed the first excerpts to Anatolius, on the basis of their resemblance to passages from Anatolius in the M recension and book XVI of the \textit{Geoponica}. The list of breeds is nearly the same as a list in the Bestiary of Constantine VII preserved in a manuscript on Mt. Athos, Dionysiou 180;\textsuperscript{143} this latter list, which is not in alphabetical order, figures in the Bestiary among excerpts from Aelian, but is attributed to Timothy of Gaza by Moritz Haupt.\textsuperscript{144}

The second part of the text is the hippiatric compilation proper, and begins with the title \textit{Τετραποτηρικων βιβλιων, του ουστο καλοιμενον η Μέλισσα}.\textsuperscript{145} As in B, the excerpts are gathered into chapters, of which there are 109. The numbering of these chapters coincides with that of B from C1 to C100. The excerpts which C shares with B are on the whole unaltered; in several cases, however,
excerpts from two or three authors are run together under a composite lemma. C also contains texts of the principal authors which do not exist in B, but are present in M, and others which figure neither in M nor in B, including two letters of Apsyrtus, seven excerpts from Hierocles, nine from Tiberius, and a long passage from Theomnestus on the selection and care of the young horse. On the other hand, Hierocles’ prooimia are omitted from C, as are several passages in which he copies Apsyrtus closely.

C also contains excerpts attributed to sources other than the veterinary writers. Notable among these is a fragment of the work of Simon of Athens, the earliest known Greek writer on horses. The title in the lemma of C93 is Σύμων Ἄθηναῖος Περί εἴδους καὶ ἐπιλογῆς ἐπιστοι, the passage describes the conformation and temperament of the horse (Pl. 10). Thirty-nine excerpts are attributed to Julius Africanus, and are evidently drawn from his Kestoi (Pl. 11). Several excerpts in C are attributed to well-known medical writers; these, as well as a number of anonymous excerpts, have been identified by Oder and Hoppe and Björck as passages from the medical compilations of Oribasius, Aétius, and Paul of Aegina. A couplet in hexameters is attributed to St John Chrysostom.

British Library, Sloane 745, or ‘L’ (245 by 170 mm, 245 folia), is written on fibrous paper with no watermarks; the script, which hangs from the rulings, is of the thirteenth century. The manuscript appears to have been wet at some point, so that the pages are stained and the ink of the rubrications has run; however, it is legible, and otherwise intact. A pyle of red interlacing squares frames the title of the table of contents; throughout the manuscript, divisions between chapters are indicated with bands of simple decoration in red and black ink. A note of ownership indicates that it belonged to one Jo. Chalceopylus of Constantinople; known as a scribe in the fifteenth century.

From Chalceopylus, it passed, along with an illustrious companion, an early
tenth-century manuscript of Lucian (now Harley 5694), to Henricus Casolla and then to his friend the Neapolitan scholar Antonio Seripando, who also inherited Parrhasius’ books. (Harley 5694 was given by Casolla as a gift.) When Seripando died in 1539, his library passed to his brother Cardinal Girolamo Seripando (d. 1563), whose name is inscribed at the end of the text. Seripando’s books were willed to the Augustinian monastery of S. Giovanni a Carbonara at Naples; from there both manuscripts were purchased by Jan de Witt (1662–1701), son of the Dutch statesman of the same name. At the sale of de Witt’s collection of manuscripts, printed books, and antiquities at Dordrecht in 1701, the two manuscripts were purchased by Jan van der Marck. Their next owner was the antiquary and topographer John Bridges (1666–1724). At his death the two manuscripts parted company, the Lucian purchased by Robert Harley, Earl of Oxford, and the *Hippiatrica* by the physician, collector, and scientist Sir Hans Sloane (1660–1753). A description of L made by Humfry Wanley, employed by Sloane as librarian from 1701 to 1703, provides an indication of the date by which the manuscript was purchased. The subject-matter of L is in keeping with the predominantly scientific character of Sloane’s library. His collection was purchased for the newly-founded British Museum in 1753. A copy of the manuscript made in 1861 by U. C. Bussemaker is in the Bibliothèque nationale in Paris.

L contains all the additions of C: the fragment from Simon of Athens, the anonymous excerpts on conformation and temperament, and the various

---

154 Harley 5694 has a similar note of possession of Chalceopylus, and another which says ‘Antonii Seripandi ex Henrici Casolle amici optimi munere’. See Omont, ‘Notes sur les manuscrits grecs du British Museum’, 331; and, on the various owners of the two MSS, C. E. Wright, *Fontes Harleiani: A Study of the Sources of the Harleian Collection of MSS Preserved in the Department of Manuscripts at the British Museum* (London, 1972), 82, 97, 100, 233–4, 249, 302, and 357.

155 Fo. 244: ‘F. Hieronymi Seripandi’.

156 Frati and Sorbelli, *Dizionario bio-bibliografico dei bibliotecari e bibliofili italiani*, 516.

157 *Catalogus bibliothecae luculentissimae, et exquisitissimae et rarissimae in omni disciplinarum et linguarum genere libris, magno studio, dilectu, et sumptu quae sitis, instructissimae, a Joanne de Witt, Joannis Hollandiae Consiliarii et Syndici, magnisque Sigilli custodis, filio (Dordrecht, 1701), 57 (Libri manuscripti in quarto, no. 1). No. 765, p. 147 is a copy of the 1537 edition of the *Hippiatrica*.

158 M. A. E. Nickson, ‘Books and Manuscripts’, in A. MacGregor (ed.), *Sir Hans Sloane, Collector, Scientist, Antiquary, Founding Father of the British Museum* (London, 1994), 266; the description in Sloane 3972B, fos. 15r–27r, no. Ixx. As Nickson points out, Wanley ‘obviously enjoyed’ making this long, detailed, and beautifully hand-written inventory of the contents of the manuscript. He gives no indication, however, of where the MS was acquired. Wanley suggests that a note on fo. 1r ‘In hoc codice non modo longe aliud ordo est; sed et longe plura habentur quam in editione Basiliensi anni 1537’ is in de Witt’s hand; certainly the latter possessed a copy of the printed text against which to compare the MS.

borrowings from texts on human medicine. Several more excerpts from Tiberius are included; the end of the table of contents also lists the chapters of a work by Tiberius on cows, not present in the text.\footnote{Texts present only in L are edited in CHG II pp. 253–71.} Another text which figures only in L is a letter from Teuthris the Arab on how to use the viscera of a vulture for various medical purposes.\footnote{CHG II (Add. Lond.), 253. Cf. John Lydus, De mensibus, ed. Wünsch, IV, 143, a remedy for epilepsy concocted from the innards of a vulture, whose source is described as an ἐπιστολή περὶ τῆς δι’ ὄρθιον θεραπείας sent to the emperor Claudius by Arethas, τῶν Σκηντῶν Ἀράβων φώλαρχος. A similar letter attributed to one Bothros exists in two copies (ed. P. Boudreaux, CCAG VIII (3), 126–7); cf. F. Cumont ‘Le sage Bothros ou le phylarque Arétau?’ Revue de philologie, 50 (1926), 13–33. Uses for the vulture also in the Cyranides: D. Kaimakis (ed.), Die Kyraniden (Meisenheim am Glan, 1976), 199–201.} The organization of the text in L is somewhat different from that of C. Each excerpt is identified in L as a κεφάλαιον or chapter; these are grouped by subject into ninety-nine τμήματα, or sections. The beginning of each section is indicated by a simple band of decoration and a rubric in the margin. The text of L begins with a selection of advice about breeding made up of excerpts from Apsyrtus, Hierocles, and Tiberius, as well as the anonymous passages on conformation and temperament, which are falsely ascribed to Hierocles. Numerous other excerpts that appear in M, B, and C attributed to different authors are falsely ascribed to Hierocles in the lemmata of L. Many are attributed to Julius Africanus; fourteen of these do not appear in other recensions, and may well be excerpts from the Kestoi; but others are excerpts attributed in M and B to other hippiatric authors, and only labelled with Africanus’ name in L.\footnote{All, however, are rejected by Vieillefond because of the other spurious attributions in L; Les Cestes, pp. 220–1.} Additional, and more obvious falsifications in the lemmata include attributions to Choricius the Sophist and Apollonius of Tyana; we shall return to these below.

After these introductory chapters, the title Τεροκλέους ἱπποσοφίκων, ἐν ᾧ προοίμιον καὶ περὶ πυρετοῦ καὶ πώς αὐτὸ θεραπεύειν χρή introduces the sequence of subjects as in the B recension. Hierocles’ prooimion, omitted from C, does figure in L. The text of L is divided into two books: Hierocles’ second preface begins the second section, at the end of chapter 49. The numbering of the sections of the second book begins again from 1 to 50, and the text concludes with an appendix of recipes for drugs.

Although the sections, for the most part, follow the order of B and C, within them the excerpts have been rearranged. In every section in which they are both represented, excerpts attributed to Hierocles are placed before those of Apsyrtus: juxtaposed, as in B, but their order reversed (Pl. 12). Excerpts from Tiberius figure more prominently than they do in B and C, and are often
grouped with Hierocles and Apsyrtus at the beginnings of the sections. Another distinctive feature of L is that the editor interjects his observations about the relation of these three authors either in the margin or after the excerpt in question, in the central column of text (Pl. 13). These comments are not printed in the Teubner edition, though a selection from them is given in the preface to CHG II.\textsuperscript{163}

\textbf{THE RV RECENSION}

Two manuscripts, Parisinus gr. 2244 and Lugdunensis Vossianus gr. Q 50, contain the heterogeneous assortment of texts known as the RV recension. These texts, ill-represented in the Teubner edition, were identified and partly catalogued by Björcck.\textsuperscript{164} The two manuscripts R and V have in fact attracted more attention than have the major recensions of the compilation MBCL; this attention has been focused almost entirely on the lively illustrations which accompany the texts.\textsuperscript{165} Detailed inventories of the contents of the two manuscripts figure in Doyen-Higuet’s forthcoming edition of the Epitome; here a few brief remarks will suffice.

The first text in RV appears, on initial inspection, to be the treatise of Hierocles preserved independently of the hippiatric compilation. But, as Björcck has shown, the RV recension seems in fact to be a reconstitution of the text, patched together from excerpts labelled with Hierocles’ name in the B

\textsuperscript{163} See CHG II p. xxvii.

\textsuperscript{164} ‘Le Parisinus graeus 2244 et l’art vétérinaire grec’, REG 48 (1935), 509–10. V is described in the preface to CHG II and is partly edited as Excerpta Lugdunensiia, CHG II pp. 272–313; R, on the other hand, is not mentioned at all, though its readings appear in the apparatus twice: CHG I p. 136; CHG II p. 45.

Manuscripts of the Hippiatria

Recension of the Hippiatria. In both of the manuscripts the text of Hierocles appears in the company of the Epitome and of a collection of excerpts from Apsyrtus, Tiberius, and the Epitome. The first two texts in RV, namely the reconstitution of Hierocles and the Epitome, are endowed with one of the most extensive cycles of illustration attached to a Greek medical text. Each excerpt is preceded by a single image of an ailing horse, occasionally with an attendant, which fills about half of the page (Pls. 14–15). At the division between Hierocles’ two books, before the second prooimion, is an author-portrait (Pl. 16). We shall return to the character and origins of the RV recension, and of its intriguing illustrations, in the chapter on the evolution of the Hippiatria.

Parisinus graecus 2244, or ‘R’ (285 by 195 mm, 319 folia), is written on Italian paper of the fourteenth century. The hand is archaizing: such imitation of the script of the Middle Byzantine period is perhaps more typical of ecclesiastical manuscripts. The first part of the manuscript is mutilated, and has been repaired. Several different texts in different hands are bound together in the volume; they include pharmacological glossaries, fragments of the De alimentorum facultatibus of Symeon Seth, and astrological texts. These, and the title of the Epitome in R, Παληνόν καὶ Ἰπποκράτους ἐκ τῶν πλεονεκτημάτων αὐτῶν διόρθωσις καὶ διαταγή τῶν ζώων ἱππῶν τε ὑσών καὶ τῶν λοιπῶν κτηνῶν πῶς ὀφείλουσιν αὐτά ἱερουργῆν καὶ τὰ φάρμακα θέτειν καὶ τοὺς πυτοὺς ποιεῖν (sic), correspond to the contents of no. 165 in the catalogue of Guillaume Pellicer (a medical miscellany, counted among the ‘very old books’, παλαιότατα βιβλία). Shelfmarks and a title in the hand of

166 Björck, ‘Le Parisinus graecus 2244 et l’art vétérinaire grec’, 509–10. The text consists of 115 chapters which correspond to the excerpts attributed to Hierocles in B, but do not include all of them. Excerpts attributed to Hierocles in M but not present in B (e.g. the two spells) are absent from RV, and excerpts attributed to Hierocles in M but anonymous in B are also, tellingly, not included. R and V contain the excerpts that are not in B but do figure in C: πέρι καρδιακῶν (C 20.1, CHG II p. 156), πέρι θρόμβων (C 68, CHG II p. 200), and πέρι κεντρίτιδος (C 75, CHG II pp. 213–14), as well as a passage which is not in B, πέρι σάθματος (M 1043, CHG II p. 100). One excerpt (πέρι μογαλῆς) occurs twice; moreover, two fragments of Apsyrtus’ text have been included (πέρι φθοράς τροχίων, πέρι σκορπίων). The order of the excerpts is closer to that of B or L rather than M, and the lemmata are in the simplified form of B rather than the verbose form of those in M.

167 The watermarks are identified by Doyen-Higuet (‘Un manuel grec’, 66) as similar to Briolet, ‘Mons’ 11684 (1400) and V. A. Mośin and S. M. Traljic, Filigranes des XIIIe et XIVe siècles (Zagreb, 1957), no. 6305.


169 Par. gr. 2244 fo. 62r (the title in Voss. gr. Q 50, fo. 90r is shorter). Is this intended to resemble a rhyming title in the Arabic style? The poetical sensibility of the compiler of the archetype of the two MSS is evident in the fact that lemmata or captions with twelve or fifteen syllables (the two conventional metres of the Middle and Later Byzantine period) are marked στίχος. Cf. M. D. Lauxtermann, Byzantine Poetry from Pisides to Geometres, I (Vienna, 2003), 187.

170 Par. gr. 3068, fo. 21r; Omont, ‘Catalogue des manuscrits grecs de Guillaume Pellicer’, 45.
Devaris\textsuperscript{171} correspond to entries in inventories of Cardinal Ridolfi’s library.\textsuperscript{172} From Ridolfi, it was acquired by Piero Strozzi, then passed to Catherine de’ Medici, and entered the royal collections during the reign of Henri IV, with whose arms, and the date 1604, the red leather binding is stamped.\textsuperscript{173} The manuscript is not only mangled, but misbound so that folia at the beginning of the manuscript are not in consecutive order.\textsuperscript{174} The reconstitution of Hierocles is incomplete, as is the Epitome, but the collection of excerpts which constitutes the third part of the RV recension is more extensive in R than in V (Pl. 17).\textsuperscript{175}

Lugdunensis Vossianus gr. Q 50, or ‘V’ (210 by 140 mm, 223 folia),\textsuperscript{176} is written on Italian paper of the fourteenth century;\textsuperscript{177} the manuscript is signed twice by the otherwise unknown scribe Demetrius Drosinos.\textsuperscript{178} The text is carelessly written, with many errors of spelling and comprehension, notably in the prefaces of Hierocles (Pl. 18). The illustrations of V are similar in iconography to those of R, but are more crudely executed; several pictures have the addition of fantastical animals. Paint has flaked off from the illustrations, especially at the beginning of the manuscript. Marginal notes and glosses in Italian appear throughout the manuscript. The plain cream leather binding is of the seventeenth century. A note of possession on fo. 2r (now

\textsuperscript{171} On the recto of the first flyleaf: ‘Nº. 48’ (crossed out), ‘Nº. 47, octavae, septimae’.

\textsuperscript{172} R is not in the catalogue of Ridolfi’s library published from Vallicell. C. 42 by Omont, ‘Un premier catalogue des manuscrits grecs du cardinal Ridolfi’. It is listed, however, in Par. gr. 3074, partly published by B. de Montfacon, \textit{Bibliotheca manuscriptorum nova} (Paris, 1739), vol. II, 769, no. 47; ‘Hieroclis de equorum curatione, Apsyrti et Hieronis de re eadem, De cometa et alia astronomica’. It also appears in Vat. gr. 1567, fo. 19\textsuperscript{v}, no. 48 (also numbered 148): \textit{ιεροκλέως \ περὶ ἑπτων \ θεραπείας \ αὐτῶν καὶ \ ἑρωμάτων \ περὶ τῶν \ αὐτῶν \ περὶ \ τροφῶν \ δυνάμεων \ περὶ \ κυμάτων καὶ \ ὀλλὰ \ τινα \ ἀστρονομικά}.

\textsuperscript{173} Miller, ‘Notice sur le manuscrit grec N° 2322’, 6–7; Delisle, \textit{Le Cabinet des manuscrits}, 207–12.

\textsuperscript{174} The arrangement of these leaves has been reconstructed by Björck, using V for comparison: ‘Le Parisinus gr. 2244’, 512–13.

\textsuperscript{175} Other texts in R, including another version of the Epitome, are in different hands and on different papers. They are catalogued in Doyen-Higuet, ‘Un manuel grec’, I, 66–70.


\textsuperscript{177} The watermarks are identified by de Meyier and Doyen-Higuet as Briquet, ‘Cloche’ 3934 (1345) and Mosín 2831 (1354); Briquet, ‘Colonne’ 4345 (1338) and Mosín 3111 (1338–73); Briquet, ‘Colonne’ 4347 (1353) and Mosín 3114 (1336); and Briquet, ‘Cruche’ 12475 (1336); ‘Un manuel grec’, 57–8. Doyen-Higuet, ibid., and ‘Contribution à l’étude des manuscrits illustrés’, 80, points out the inconsistency between the dating of these watermarks and the dating of the MS to the 15th c. in de Meyier’s catalogue; the discrepancy has since been corrected in the Universiteitsbibliotheek copy of the catalogue, but not in the copy of the catalogue-entry pasted into the MS itself.

\textsuperscript{178} Fo. 144\textsuperscript{v}: \textit{πληρωθῇ τῷ παρῷ ἐπισκεπτομένῳ διὰ χειρὸς ἑμῶν Δημητρίου τοῦ Δρωσονίου}; fo. 223\textsuperscript{v}: \textit{ἐπιληφθῇ} διὰ χειρὸς Δημητρίου τοῦ Δρωσονίου. See Vogel and Gardthausen, \textit{Die griechischen Schreiber}, 101.
erased) once indicated that the book belonged to Pierre Michon Bourdelot (b. 1610),\(^{179}\) physician of Queen Christina of Sweden (r. 1650–4) between 1651 and 1653. V also appears in the catalogue of Bourdelot’s manuscripts in Lugdunensis Vossianus lat. O 11.\(^{180}\) Bourdelot, who had inherited the library (and adopted the surname) of his uncle, the Hellenist Jean Bourdelot, gave the collection of 370 manuscripts to the queen.\(^{181}\) The manuscript was among those given to Isaac Voss (1618–89) from the queen’s collection in compensation after his library had become inextricably mixed up with hers.\(^{182}\) Voss arrived in England in 1670, evidently bringing the manuscript with him: it was collated against Isaac Casaubon’s copy of Grynaeus’ edition of the *Hippiatrica* in 1673,\(^{183}\) and used by Needham in his 1704 edition of the *Geoponica*.\(^{184}\) Voss’s manuscripts were acquired by Leiden University in 1710. V contains a slightly abridged version of the text in R, but has the advantage of being intact. The text begins with the reconstitution of Hierocles in two books; these are followed by the collection of miscellaneous excerpts as in R (Pl. 19), and by one version of the *Epitome*. Fewer of the excerpts from Apsyrtus and Tiberius are present in V, and the spells are abbreviated. A copy of V made by Bussemaker in 1862 is in the Bibliothèque nationale in Paris.\(^{185}\)

The five principal recensions of the *Hippiatrica*, M, B, C, L, and RV, based on a core of the same veterinary texts, nevertheless differ considerably from one another in organization and character. The following stemma, based upon that of Björck,\(^{186}\) depicts their relationships. The *Epitome* has an exceedingly complicated transmission of its own, which does not concern us here.\(^{187}\)

\(^{179}\) Fo. 2r. See K. A. de Meyier, ‘Notes sur quelques manuscrits de Pierre Bourdelot conservés à Leyde’, *Scriptorium*, 3 (1949), 259.

\(^{180}\) Fo. 4 r, no. 28: ‘Hippı ¨atrosophion sapientis Rhetoris Hieraclis [sic], Hippocratis, et sapientis Galeni. cum figuris’; see H. Omont, ‘Catalogue des manuscrits de Jean et Pierre Bourdelot, médecins Parisiens’, *Revue des Bibliothèques*, 1 (1891), 86.


\(^{183}\) British Library 779 e. 4.

\(^{184}\) *Γεωπόνικα* . . . p. xxii and notes to ch. XVI, 416 ff. Voss had come to England as protégé of John Pearson, master of Trinity College, Cambridge, and later bishop of Chester; Pearson is quoted by Needham in the introduction to the *Geoponica*, p. v.


\(^{186}\) ‘Zum CHG, 29 and ’Le Parisinus gr. 2244’, 521.

\(^{187}\) This transmission is analysed by Doyen-Higuet, ‘Un manuel grec’, I, 146–7.
Manuscripts of the Hippiatrica

[A]
[transliteration]

Tiberius
Prognoseis kai iaseis

decomposition

M
Epitome

reconstitution of Hierocles
excerpts from Apsyrtus
and Tiberius

RV

B

U

[D]

X

C

L

Kac

P

bO
Editions and Translations of the Text

The *Hippiatrica* first appeared in print in a Latin translation by Jean Ruel (Ruellius), published in Paris by Simon de Colines in 1530. Ruel (1474–1537), a native of Soissons, was dean of the faculty of medicine in Paris and personal physician to King François I. He had previously made a Latin translation of the *De materia medica* of Dioscorides (Paris, H. Estienne, 1516), an edition that was reprinted many times: the Hellenist Guillaume Budé called him ‘l’aigle des interprêtes’. Ruel also produced editions of Celsus and John Actuar-ius; the plant genus *Ruellia* is named after him. The title of Ruel’s translation of the veterinary compilation, *Veterinariae medicinae libri II*, initiated an error that would persist in several editions and translations, namely the notion that the text was divided into two books. The source of the error was, no doubt, a manuscript in which Hierocles’ prooimion was treated as the beginning of the second section of the compilation. Which manuscript did Ruel use? Miller suggested that the translation was made from Parisinus gr. 2245 and another, unknown, copy. But d’Asola’s library, including (presumably) Parisinus gr. 2245, entered the French royal collections only after 1542, well after Ruel published his translation. Furthermore, K. Hoppe has shown that Ruel used a text different from that of P, one which ends earlier, and also has a note at the end describing the Corsican practice of cutting out the tongues of horses to stop their neighs. British Library Additional 5108 and Corsini 43. D. 32, unknown to Hoppe, are closer to Ruel’s text than is P. Evidently a manuscript of this family was used as the basis for the translation; the source of the manuscript may well have been Janus Lascaris, who, as we have seen, is associated with this family of the text. An epigram by Lascaris in praise of Ruel, in Latin elegiacs, appears on fo. ii* of Ruel’s edition (Pl. 20). The same allusion to Plutarch’s Life of Cicero that features in the epigram on Ruel was apparently also used by Lascaris to

1 *Veterinariae medicinae libri II, Johanne Ruellio Suessionensi interprete.*
4 Cataldi-Palau, *Gian Francesco d’Asola*, 386.
praise his friend and correspondent Guillaume Budé. Lascaris had a connection to Ruel’s (and Budé’s) patron François I, having been entrusted by Pope Leo X with a diplomatic mission to the French king when the latter was campaigning in Italy in 1515. In 1518 Lascaris also went to France.

The translation of the *Hippiatrica* was apparently commissioned by François I; it is a handsome in-folio volume with a woodcut frontispiece depicting the monarch on horseback. The book begins with Ruel’s preface, addressed to the king, and containing a short encomium of the horse; next follows a list of authors, the epigram by Lascaris (see Pl. 20), a table of contents listing each excerpt and its author, and a glossary of Greek and Latin medical terms. After the text follow metrological passages. A number of excerpts in Ruel’s text have no parallel in Greek manuscripts of the B recension or in Grynaeus. The additions are not concealed: both the list of authors on p. ii and the table of contents include, after Apsyrtus, Hierocles, Theomnestus, Pelagonius, Anatolius, Tiberius, Eumelus, Archedemus, Hippocrates, Aemilius Hyspanus, Litorius Beneventanus, and Himerius—as in the manuscripts l, K, a, and c, and the list of authors introduced to the West by Lascaris—the names of Africanus, Didymus, Diophanes, Pamphilus, and Mago of Carthage as well. These additions were identified by Hoppe as borrowings from the Greek *Geoponica*, translated into Latin with the aid of analogous passages in Varro and Columella. In fact, as Hoppe has demonstrated, the Latin agricultural writers are used by Ruel throughout to translate the Greek hippiatric authors. We shall see that Pelagonius had used a similar technique a thousand years earlier.

The Greek text, edited by Simon Griner (Grynaeus), appeared in 1537, in a modest quarto volume published in Basel by Johann Walden under the title *Veterinariae medicinae libri duo, a Ioanne...*
Ruellio Suessionensi olim quidem latinitate donati, nunc vero idem sua, hoc est Graeca, lingua primum in lucem aediti. The title of the text refers to Ruel (Grynaeus is not named at all), and Hoppe concluded from collation of the two texts that Grynaeus used the same manuscript as had Ruel.¹⁰ The text is close to that of Additional 5108.¹¹ Grynaeus (1493–1541), a theologian and classicist who drew his pseudonym from an epithet of Apollo, was professor of Greek and Latin in Heidelberg and later in Basel; he is perhaps best known for the discovery of a manuscript containing five books of Livy.¹² Grynaeus' preface to the Hippiatrica, dedicated to John Zobelus, says little about the text, but much in praise of the horse.¹³ Grynaeus reproduces the list of authors from Ruel’s edition, even including the names of Didymus, Diophanes, and Pamphilus—sources added by Ruel to his translation, but which do not figure in Grynaeus’ text (Pl. 21).¹⁴ The text ends at same place, and is followed by the note on Corsican practices for silencing horses.¹⁵ None of the metrological material is present.

Two translations were made on the basis of Grynaeus’ edition. The first, into Italian, was published by Michele Tramezzino, and entitled Opera della medicina de’ cavalli composta da diversi antichi scrittori, et a commum utilita di greco in buona lingua volgare ridotta (Venice, 1543; repr. 1548, 1559).¹⁶ The other, in French, was made by Jean Massé, L’Art vétérinaire, ou grande mareschallerie (Paris, Charles Perier, 1563). Massé, who describes himself as ‘médecin ordinaire et domestique de feu messire François de Dinteuille Evesque d’Aucerre’, dedicates the work to the stablemaster to the late King Henri (i.e. Henri IV).¹⁷ A German translation of Ruel’s Latin was made by

¹⁰ Hoppe, ‘J. Du Rueils lateinische Übersetzung’.
¹¹ Some of the alternate readings in the margin of Add. 5108 are printed as marginalia in Grynaeus’ edition, e.g. Add. 5108, fo. 30r, at B11.37, CHG I p. 69 προσπαθεία τῷ ὀφθαλμῷ, (same text as in B) has in the margin: ἔγινεν προσπαθεία, which also appears in the margin in Grynaeus p. 48. Add. 5108, fo. 35r, at B14.9, CHG1 p. 82, where the text is the same as Grynaeus but different from that of B: ἡ παιδοποίησις ἀρίστη, has in marg. καλλίστη, which is the reading of B, and also appears in the margin in Grynaeus, p. 56. But some of the readings in the margins of Add. 5108 are incorporated into Grynaeus’ text, with the reading of Add. 5108 in the margin, e.g. Add. 5108, fo. 35r has σκληριῶ in the text, as in B14.10, CHG I p. 83, and δθωνιῶ in the margin; while Grynaeus, p. 56, has the reverse.
¹⁴ As noted by E. Miller, ‘Notice sur le MS 2322’, 3.
¹⁵ B130.184, CHG I p. 436.
¹⁶ Tramezzino also published the veterinary work of Lorenzo Rusio (Venice, 1548). This Italian translation is different from that in Paris. ital. 58.
¹⁷ Fos. 3r–4r.
Gregor Zechendorfer (Nuremberg, 1571), with the title Zwei nützliche sehr gute Bucher von allerley Gebrechen und Krankheiten, damit die Rosse Maulesel u.s.w. geplagt sind.

Although a new edition of the *Hippiatrica* was to be included in the *Collection des médecins grecs et latins* published under the auspices of Charles Daremberg,¹⁸ that project was never completed. Handwritten copies of the Cambridge, London, and Leiden manuscripts executed to this end by U. C. Bussemaker in the 1850s–1860s, as well as a copy of Grynaeus’ edition collated with the Berlin manuscript were deposited in the Bibliothèque nationale in Paris.¹⁹

The Teubner edition, in two volumes (1924 and 1927) is the work of Eugen Oder and Karl Hoppe, students of Usener and Bücheler.²⁰ Oder began the preparation of a new edition in 1890, at Usener’s instigation, after the acquisition by the then Royal Library in Berlin of Phillipps 1538.²¹ In the meantime, Oder was also called upon to produce an edition of the newly discovered *Mulomedicina Chironis* in time for that text to be included in the *Thesaurus Linguae Latinae*.²² Hoppe, who aided Oder in the edition of the Latin veterinary compilation, continued to collaborate with him on the Greek text. Hoppe assumed responsibility for the indices (some of which were unfortunately not published) and the texts of volume II, and completed the preface left unfinished at Oder’s death.²³

The shortcomings of the Teubner edition are amply excused in view of the unfavourable circumstances surrounding the appearance of the book, not only the outbreak of the First World War, but also the ill-health of Oder, who died as the second volume was in press.²⁴ One may regret in particular the absence of a complete census of manuscripts (for example, Par. gr. 2244,

---


²¹ See *CHG* II p. v.

²² *Mulomedicina Chironis*, p. vi.

²³ *CHG* II p. v. Froehner (above, n. 20) notes that Hoppe’s contribution was greater than is implied in the preface to *CHG* II.

²⁴ See *CHG* I pp. v–vi; *CHG* II pp. v, xvi; Oder, ‘De hippiatricorum codice Cantabrigensi’, 53.
which appears in a few places in the apparatus, is not mentioned elsewhere),
or tables of contents and concordance for the various recensions and for
individual authors in the compilation.

A more serious obstacle to understanding the transmission of the compil-
ation is that the principal text presented in the Teubner edition is that of the B
recension, what one might call the ‘metaphrastic’ version, in which the styles
of the different authors have been obscured, and their names in many cases
detached from the excerpts by the reworking of the tenth-century editors. The
edition of B is very faithful, completely superseding Grynaeus’ edition.

Lacunae in B (where folia are missing or ornaments cut out) are restored
using Phillipps 1539 (b), Par. gr. 2245 (P), and the edition of Grynaeus,
 accorded the status of a manuscript (g). Although the manuscripts O, l, and
N are listed in the preface to volume II, they were not used for the edition.

That the text of M is in many places fuller than that of the B recension had
been pointed out by Miller and Maximilian Ihm (who edited Pelagonius for
the Teubner series in 1892); Oder and Hoppe were well aware of this fact.25

The central position accorded nevertheless to Phillipps 1538, whose folio
numbers appear in the margins of the text, may be explained in part by the
antiquity and splendour of that manuscript, and its presence in Berlin; and in
part by the fact that political circumstances rendered the other manuscripts
difficult of access to the German scholars. Considerations of economy, in that
turbulent period, also seem to have dictated the eclectic method of presenting
the other recensions.26

Those passages of B that are also present in M are indicated with the
excerpt-number of the M recension in Greek (alphabetic) numerals in the
margin of the page. The readings of M are for the most part printed as
variants (with no siglum) in the apparatus to the later text of B. Significant
additions from M (e.g. the second half of Apsytus’ preface, and the details
of Theomnestus’ crossing of the Alps) are inserted in brackets into the text of
B; other passages of M omitted from B or altered beyond recognition
by stylistic reworking (in particular many passages of Hippocrates), are
printed separately in the second volume of the Teubner edition, along with
other passages not present in B (Hippiatrica Parisina, pp. 1–114). The πιεως
of M is edited in volume II with great concision: though the titles of
excerpts printed as part of the B recension in volume I are listed, titles of
excerpts printed in volume II are omitted and only their numbers given. The
text of C is printed only if it is not present in B or M (Hippiatrica Cantab-
rigiensia in volume II, pp. 115–252); L is represented only where different

26 Cf. CHG I p. vi, CHG II p. xxix.
from C (Additamenta Londinensia, pp. 253–71), and the same process of elimination determined the selection of excerpts from V (Excerpta Lugdunensia, pp. 272–313). The ‘Corpus of Greek Hippiatria’ of the Teubner edition thus consists of the texts of five recensions of the Hippiatria, more or less inextricably entwined. The text of the Hippiatria has been entered in the Thesaurus Linguae Graecae from the Teubner edition, but the method of the edition makes significant analysis of the text by electronic means virtually impossible.

A certain amount of specialized material has been extracted from the Hippiatria and edited separately. Tables of weights and measures have been published by Michael Neandrus of Joachimsthal (Basel, 1555), and by F. Hultsch. The spells of the M recension are included in R. Heim’s collection of Greek and Latin magical incantations. The short passage from Simon of Athens in C, first published by Daremberg, has been re-edited no fewer than eight times, nearly always without reference to the context in which it is preserved. Excerpts attributed to Julius Africanus in the Cambridge manuscript of the Hippiatria were republished from the Teubner edition by Vieillefond, with a clear discussion of the transmission of the text. F. Speranza has published passages attributed to Mago or Cassius by the hippiatric authors among the fragments of Mago in his collection of Roman agricultural writers.

---


28 Σύνοψις mensurarum et ponderum ponderationisque mensurabilium secundum Romanos, Athenienses, χειρογράφος, και ἑπτάμετρου (Basel, 1555).

29 Metrologicorum scriptorum reliquiae, I–II (Leipzig, 1864–6), 129 ff.; Griechische und römische Metrologie (Berlin, 1882), 634.


31 CHG II pp. 228–31; other editions listed in Widdra, Xenophonis De re equestri, p. 40.


33 Scriptorum romanorum de re rustica reliquiae, 75–119.
Studies of the *Hippiatria*

The *Hippiatria* has been in print for more than four and a half centuries, but has attracted relatively little scholarly attention in this time.1 That is not to say the text has languished unread. Isaac Casaubon’s copy of Grynaeus’ edition bears copious annotations in his hand, including the deduction that Hierocles was not the compiler of the *Hippiatria*.2 Nicolas Rigault (Rigaltius), Casaubon’s successor as one of the keepers of the royal library in Paris, pointed out in the introduction to his edition of the Greek works on falconry that the *Hippiatria* is also an anonymous compilation.3 Peter Needham, as we have noted, compared Grynaeus’ text to that of the Cambridge and Leiden manuscripts in his 1704 edition of the *Geoponica*.

The *Hippiatria* was recognized early by lexicographers as a rich source of obscure vocabulary: Guillaume Morel (Morelius) used the text as a source for his *Verborum Latinorum cum Graecis Gallicisque coniunctorum commentarii* (Paris, 1588). Grynaeus’ edition was also used by Jan van Meurs (Meursius), who included many words of Latin origin from the *Hippiatria* in his *Glossarium graecobarbarum* (Leiden, 1614); and by Charles Du Fresne Du Cange, who consulted in addition a manuscript of the *Epitome* in Paris for his *Glossarium ad scriptores mediae et inae Graecitatis* (Lyon, 1688).4 In LSJ (ninth edition, 1940; repr. 1994) the *Hippiatria* appears frequently, but with references inconsistently to Grynaeus’ edition and to that of Oder and Hoppe.

It is to be regretted that Eugen Oder and Karl Hoppe, who were probably better acquainted with the *Hippiatria* than anyone before or after them, should have treated the history of the text only in the brief introduction to the second volume of the Teubner edition.5 Eugen Oder’s articles on the

---

2 British Library 779. e. 4, p. 236.
3 ἼΠΑΚΟΣΦΙΟΝ, Rei accipitrariae scriptores nunc primum editi. *Accessit KYNO-
4 Cod. Reg. 3496, now Parisinus gr. 2091; listed in the index of authors as *Hipposophilum*, p. 36.
5 *CHG* II pp. vi–xxix.
Geoponica touch briefly on the Hippiatrica, referring to the text of Grynaeus’ edition, the only one available at the time. His edition of chapters on the selection, breeding, and care of the horse from the Cambridge manuscript also identifies the relation of these chapters to similar material in Greek and Latin agricultural texts, and identifies the common source as Cassius Dionysius. Other articles focus on individual veterinary writers: Oder wrote briefly on Apsyrtus and Theomnestus, while Hoppe devoted two studies to Pelagonius, and, as we have seen, elucidated the nature of Ruel’s translation and its relation to the Greek text.

The first analysis of the texts presented in the modern edition was undertaken by the Swedish philologist Gudmund Björck. Björck’s dissertation, ‘Zum Corpus hippiatricorum Graecorum’, published in 1932, remains the only monograph devoted to the compilation and to its Greek sources; while his three other articles on the Hippiatrica contribute substantially to our understanding of the text. In the first Björck challenges the dates accepted for Apsyrtus and Theomnestus, examines the authenticity of the excerpts attributed to Julius Africanus, draws attention to magical texts, and lists manuscripts containing translations of the Hippiatrica into the languages of the medieval West. A second is devoted to the collection of texts in Parisinus graecus 2244; in the third Björck noted the existence of Arabic veterinary texts which seem to be related to the Greek. Björck, professor of Greek at Uppsala and editor of Eranos, died from a riding accident in 1955. Any study of the Hippiatrica, not least the present one, builds upon the foundations laid by his work.

The vernacular Epitome of the compilation is the focus of the most recent study of the Hippiatrica, that undertaken by A.-M. Doyen-Higuet, a classicist at the University of Namur, and the daughter of a veterinarian. Her unpublished doctoral thesis (Louvain, 1983) adds to the ‘corpus’ of hippiatric texts

---

7 Anecdota Cantabrigiensi, Wissenschaftliche Beilage zum Jahresbericht des Friedrichswerderschen Gymnasiums zu Berlin (Berlin, 1896).
14 See the frontispiece to Eranos, 54 (1956).
with the edition, in parallel, of five versions of the *Epitome*. The edition includes a French translation of each version, as well as commentary on aspects of pathology and medical treatments.\(^{15}\)

The Latin text of Pelagonius has attracted more attention than the Greek compilation. Ihm’s edition\(^{16}\) was replaced with a new Teubner text by K.-D. Fischer of the Medizinhistorisches Institut of the University of Mainz.\(^{17}\) The appearance of this edition, and of a concordance to accompany it, was followed by the discovery, by P.-P. Corsetti, of a new manuscript of the text which provides new material and different readings.\(^{18}\) Both texts were used by J. N. Adams for a massive study of the language of Pelagonius, which also treats the role of the veterinarian in antique society, the use of magic, and other aspects of veterinary practice in antiquity.\(^{19}\)

Though the *Hippiatrica* is a source of evidence not only for the vocabulary, but also for the grammar of Late Antique technical prose, the complexity of its transmission obscures the sources and dates of words and phrases. For example, H. J. Cadbury, in a light-hearted article comparing the language of the veterinary writers to that of St Luke the Evangelist (and physician), cites the tenth-century B recension as evidence of Late Antique usages, while rejecting ‘the inferior Paris MS’.\(^{20}\) The scattered allusions to the *Hippiatrica* collected by Björck,\(^ {21}\) a few comments by Strömb erg on words and usages,\(^{22}\) and two short articles by K.-D. Fischer\(^ {23}\) can scarcely match the volume of literature devoted to the Latin veterinary texts, the *Mulomedicina Chironis* and Pelagonius.\(^{24}\)

Attempts to exploit the *Hippiatrica* for evidence of veterinary practice in antiquity have been similarly (though often unwittingly) impeded by

\(^{15}\) ‘Un manuel grec de médecine vétérinaire’ (typescript) (Louvain-la-Neuve, 1983).

\(^{16}\) *Pelag. Artis veterinarie quae extant* (Leipzig, 1892).

\(^{17}\) *Pelagonii, Ars Veterinaria* (Leipzig, 1980); K.-D. Fischer and D. Najock, *In Pelagonii Artem Veterinariam Concordantiae* (Hildesheim, 1983).


\(^{19}\) *Pelagonius and Latin Veterinary Terminology in the Roman Empire* (Leiden, 1995).


\(^{22}\) *Griechische Wortstudien: Untersuchungen zur Benennung von Tieren, Pflanzen, Körperteilen, und Krankheiten* (Göteborg, 1944) 12 n. 1; 95, 100–1.


imperfect understanding of the transmission of the texts. Mention should be made of the dissertation of H. J. Sévilla (Alfort, 1924), published as a series of articles in veterinary journals; and of the analysis by L. Moulé in his *Histoire de la médecine vétérinaire* and several articles. Veterinary students of the Institut für Palaeoanatomie, Domestikationsforschung und Geschichte der Tiermedizin in Munich have translated sections of the *Hippiatrica*, *Geoponica*, and *Mulomedicina Chironis* as theses. A recent veterinary thesis by D. A. J. Menard, supervised by A.-M. Doyen-Higuet, focuses on descriptions of the conformation of the horse.

---

25 Listed in Doyen-Higuet, 'L’accouplement et la réproduction des équidés dans les textes hippiatriques grecs', *Annales de Médecine Vétérinaire*, 25 (1981), 552–3 n. 2; I am grateful to Dr Doyen-Higuet for providing me with copies of the veterinary articles.

26 For a description of this project, and a list of titles, see Fischer, 'Ancient Veterinary Medicine', 203 and 206–7, to which may be added the dissertations of G. Unterholzer (1988) and T. Pfister (1990).

The Form of the *Hippiatrica*

The *Hippiatrica* belongs to a form of composite text whose origins lie in the scholarly activity of Late Antiquity, and whose purpose is to gather an array of authorities and present them, juxtaposed, for practical purposes of reference or comparison. The form is characterized by a distinctive method of compilation, which consists in the gathering of extracts from different treatises into a single book. Other defining features are the use of sources written by different authors, and the organization of the excerpts according to a consistent principle, for example, by subject, or in chronological or alphabetical order. These methods draw upon various techniques devised to aid in the analysis of literary or other traditional texts: the collecting of related texts into a corpus, the arranging of texts or excerpts into anthologies, and the *synkrisis* or comparison of texts.¹

The collecting of excerpts was used around the late third and early fourth centuries AD in the disciplines of medicine and the law, technical disciplines which required of their practitioners familiarity with a large volume of traditional literature. The same method of compilation, evidently considered a successful strategy for reducing the number of separate books to be consulted and making their content conveniently accessible, continued to be employed throughout the Byzantine period to create standard works of reference for agriculture, geography, military tactics, poetry, statecraft, zoology, and even history.

The distinction between these excerpt-collections and other types of compilation is not always clear. Although they are often referred to as encyclopaedias, that term also brings to mind works such as those of Varro or Celsus, which encompass many disciplines. Texts like the *Hippiatrica*, on the other hand, confine their focus to a single discipline, but combine the works of many authors. They are closer in character to the individual elements of the encyclopaedias, such as the *Libri medicinae* of Celsus’ larger work

(c. AD 14–37), and to systematic textbooks such as the *Institutes* of Gaius (c. AD 160),2 of which they are an expanded form, with texts of many authors presented in parallel.

Björck, in his analysis of the form of the *Hippiatrica*, defined the text as a 'collection', distinct, in his terms, from both a 'corpus', in which entire texts are simply appended to one another, and from a 'compilation', which he defined as a 'collection' to which the compiler adds material or changes of his own.3 These designations, though helpful, are not entirely precise, as Björck himself readily admitted. Moreover, the definitions do not have the advantage of corresponding to common usage in English. 'Compilation' is not an inaccurate way of describing the *Hippiatrica*—and the term *compilatio* has long been used to denote the activity of collecting excerpts.4 Of course, the term may be applied to florilegia or miscellanies equally well. Even in antiquity, similar images—the weaving of a garland,5 the honey-bee’s collection of nectar from many different flowers,6 the *éparrôs* or banquet assembled from contributions by each participant7—were used to describe the compilation of different types of texts, whether poems, medical manuals, or scholarly commentaries on literature or scripture. And similar titles, *ékloigai*, *sullouigai*, *synagogwai*, *pandêktau*, were given to compilations in diverse disciplines, whose purpose and structure might vary.8

Excerpt-collections like the *Hippiatrica* have much in common with miscellanies—the πέπλοι, λειμώνες, στρωματεῖς, κεισταί assembled by Clement of Alexandria, Aelian, Aulus Gellius, Julius Africanus, and others—in concept

---

3 'Apsyrtus, Julius Africanus', 26–35. Björck’s terminology has been adopted by Doyen-Higuet and Fischer, e.g. ‘Ancient Veterinary Medicine’, 195–7.
6 e.g. Agathias’ preface to his anthology, *AP* IV.3, 103–6; or the anonymous epigram on Oribasius, *AP* XVI.274.
7 Agathias, *AP* IV.3, 19: δὲ εἰς τὸν ἔρασιμόν, the verb ἔρασις is conventionally used, e.g. Procopius of Gaza, pre. of commentary on Genesis, *PG* 87.1, col. 21: τὰς καταβεβλημένας ἐκ τῶν Πατέρων καὶ τῶν ἄλλων εἰς τὴν ‘Οσσία τέτειχος εξερήσωσεν αὐλιέβάμεθα, ἐξ ὑπομηνύματος καὶ διαφόρων λόγων ταῦτα ἐφανερώθηνεν.
8 e.g. the medical collection or *Συναγωγαί* ἱατρικαί of Oribasius, the legal *Pandêktau* or *Digesta* of Justinian, or the agricultural *Συναγωγαί* of Anatolius of Berytus. Catena are called *ékloigai* in MSS, σειρά being a late usage: Devreesse, ‘Chaines exégétiques’, col. 1088.
and often in content as well. But there is a fundamental contrast between the rigid structure of the former, and in the latter, a studied lack of organization.\(^9\)

Moreover (to name but one example), Aelian’s miscellanies are endowed with some degree of stylistic unity, and his allusion to sources is vague at best.\(^10\) Compilations like the *Hippiatria*, on the other hand, are very much the sum of their component excerpts, which are identified as the work of different authors, and usually edited very little, or simply left in their original form. There is also a difference in purpose: excerpts of information in Aelian’s *De natura animalium* and Clement’s *Stromateis* are assembled to illustrate, respectively, general themes of the relation of animal morality to that of humans and the relation of Christian doctrine to pagan learning; but the information is presented more for diversion or instructive amusement than for practical reference.

Practical reference appears to have been an important guiding principle in the production of excerpt-collections;\(^11\) one may note that legal compilations, such as the *Codex Gregorianus* and *Codex Hermogenianus* (collections of imperial constitutions arranged under subject headings, published in AD 291 and c.295, respectively; the latter by a secretary of Diocletian and Maximian),\(^12\) were made in the form of the codex, more convenient to look things up in than the roll.\(^13\) Several other contributing factors may be identified. The problem of how to cope with a written tradition of enormous volume is often mentioned in the prefaces of these compilations, as in that of the Theodosian Code (AD 438).\(^14\) Although the allusion (contrasted with the convenience of the work in question) is probably a topos, there is no doubt an element of truth in it as well. In the field of medicine, texts were excerpted and rearranged for practical purposes by Oribasius of Pergamon. In the preface to his *Συγγενογένεια Ιατρικά* in seventy books, dedicated to the emperor Julian, and datable to AD 360–3, Oribasius explains that the emperor had


\(^11\) As M. B. Parkes observes about compilations of a later period, ‘the *compilatio* derives its value from the authenticity of the *auctoritates* employed, but derives its usefulness from the *ordo* in which the *auctoritates* were arranged’, ‘The Influence of the Concepts of *Ordinatio* and *Compilatio*’, 128.

\(^12\) L. Wenger, *Die Quellen des römischen Rechts* (Vienna, 1953), 534–6; P. Jörs, ‘*Codex*’, RE IV. 1 (Stuttgart, 1900), cols. 161–7.


commanded him to search through the works of the greatest medical authors and gather from them the most important and useful points to form a single book.\textsuperscript{15} The compilation will be useful because its user can readily find whatever is needed.\textsuperscript{16} Oribasius quotes verbatim from his sources, and identifies each passage with a precise system of bibliographic reference, giving not only the name of the author, but also the title of the treatise, and often even the number of the volume from which the passage was drawn, for example: \textit{ek tôn Athenaiou peri πυρων, ek tôn a lógon, 'from the work of Athenaeus on grains, from the first chapter.}\textsuperscript{17} The system of identification is economical: the author's name is not repeated at the head of subsequent excerpts if they are from the same work. These lemmata and the preface are Oribasius' only contribution: the work is simply a carefully organized dossier of excerpts.\textsuperscript{18}

Another factor, equally significant, is a certain taste for the multiplication of authorities, and for comparison between them.\textsuperscript{20} Synkrisis as a factor in compilation is well illustrated by the so-called \textit{Collatio legum Mosaicarum et Romanarum} (produced between AD 394 and 438), a compilation which, organized into chapters corresponding to the sixth–tenth Commandments, juxtaposes excerpts from the Pentateuch with Roman laws of similar content drawn from the \textit{Codex Gregorianus} and \textit{Codex Hermogenianus}.\textsuperscript{21}


17 \textit{Ibid.} II. 1, p. 7.

18 It is unlikely that Oribasius invented this method himself; he probably simply adapted a school technique. It may not be irrelevant that his training at Alexandria, described by Eunapius of Sardis (to whom Oribasius dedicated a treatise), appears to have combined rhetoric, i.e. a literary education, and medicine: \textit{Vitae sophistarum} 498–9; cf. B. Baldwin, 'The Career of Oribasius', \textit{Acta Classica}, 18 (1975), 85–97. Oribasius composed shorter treatises, the \textit{Synopsis ad Eustathium} and \textit{Ad Eunapium}, in which no authorities are cited: the prefaces of these simplified, portable texts explain that they were intended for purposes different from that of the great compilation.


20 This taste is also evident in the reports of ancient opinions known as doxography; however, excerpt-collections differ from doxography in that no narrator is interposed: the opinions of authorities are not reported in indirect discourse, but are presented verbatim in the form of excerpts. On doxography, see e.g. D. T. Runia, 'What is Doxography?' in P. J. van der Eijk, \textit{Histories of Medicine: Essays in Medical Doxography and Historiography in Classical Antiquity} (Leiden, Boston, Cologne, 1999), 33–55.

Reverence for authority, and a combination of scholarly and practical interest in older texts account for the reuse of older, and even obsolete, material in compilations as opposed to the writing of new manuals. It has been pointed out, for example, that Tribonian and his staff were ‘perfectly qualified’ to compose new commentaries on the law.\(^\text{22}\) Instead, they applied the technique of collecting excerpts on a spectacular scale to produce Justinian’s *Digesta* or *Πανδέκτα*, promulgated in 533. Quite apart from its importance as a literary and historical monument, the *Digest* is a valuable source of information about the process of compilation. Almost every stage of the process—the selection of a canon of authors, the reading and excerpting of treatises, the gathering of excerpts by subject into chapters, editing, and final publication—may be reconstructed from the guidelines set out in the first constitutions, *C. Deo auctore* and *C. Tanta*, and from the decipherment of patterns in the organization of the excerpts.\(^\text{23}\) Moreover, the principles of the compilation, outlined at the start, give an indication of the choices made by editors of composite texts: contradiction was to be eliminated rather than permitted by selecting the best authorities rather than comprehensively including all opinions; excerpts were cited more or less verbatim, but could be edited if they contained unacceptable opinions; their origins in separate texts were not, however, concealed. Justinian’s compilations were revised in the Middle Byzantine period; they also provided a model for imperially sponsored compilations in other disciplines.

The same desire to assemble authorities, and the same ‘scissors and paste’ technique of compilation lies behind the formation of composite scholia on classical and juridical texts, and of catenae on the Scriptures. Catenae (the invention of which is conventionally ascribed to Procopius of Gaza in the late fifth or early sixth century) in particular have certain peculiarities which link them with the free-standing excerpt-collections. The authors of the works used to make up a catena are generally identified at the start of each excerpt, which is not always the case with scholia, but is a feature of excerpt-collections. Catenae may be arranged in the margin of a text, but may also stand alone in the centre of the page—the so-called *Breitkatenen*.\(^\text{24}\) And certain catenae consist of complete collations of the work of two or more


authors; they provide an analogy, as we shall see, to the earliest recension of the *Hippiatrica*.\(^{25}\)

The process by which extracts from the texts of different authors are 'amalgamated',\(^{26}\) whether to form scholia, catenae, or free-standing compilations, is the same. It is interesting that evidence for how this amalgamation may have begun has been identified by N. G. Wilson in a manuscript of a medical text, the Vienna Dioscorides (Vind. med. gr. I, c.512), in which parallel passages from Galen’s *peri krásēs kai dynámeos tôn áploñ farμákwon* and from the herbal of Crateuas are added in several instances at the end of Dioscorides' chapters on plants, in the lower margin of the page, in smaller letters but in the same hand. Excerpts from Galen appear twenty times, and single excerpts from Crateuas six times, but in four instances parallels to Dioscorides are offered from both, so that the opinions of three authors about the plant in question are collected on the page (Pl. 22).\(^{27}\) It may be added that in the Morgan Library Dioscorides (M652, of the tenth century), the same parallel passages from Galen are present, not in the margin, but included in the central column of text, in the same hand and in the same size.\(^{28}\) The transition is marked simply by the lemma, *καὶ γαληνός εἰς τὸ αὐτὸ, καὶ γαληνός εἰς τὸ αὐτὸ εἶπεν ’And Galen on the same [subject]; and Galen, on the same subject, said’ (Pl. 23).\(^{29}\) This incorporation of parallel passages into the body of the text, although seen here in a manuscript of relatively late date, could be considered an analogous embryonic stage in the formation of an excerpt-collection like the *Hippiatrica*. The additions are made not from commentaries, but from independent treatises: the purpose is not elucidation of the main text, but comparison between the opinions of different authorities. Resemblance to an excerpt-collection is heightened because the titles which precede the passages from Dioscorides (a native of


\(^{26}\) The term used by N. G. Wilson, 'A Chapter in the History of Scholia', *CQ*, ns 17 (1967), 244; see also idem, 'The Relation of Text and Commentary in Greek Books', C. Questa and R. Raffaelli (eds), *Atti del Convegno internazionale ’Il Libro e il Testo’* (Urbino, 20–23 sett. 1982), 103–10.

\(^{27}\) e.g. fos. 27\(r\), 30\(r\), 40\(r\). See Wilson, 'Two Notes on Byzantine Scholarship: 1. The Vienna Dioscorides and the History of Scholia,' *GRBS* 12 (1971), 557–9. The additions are listed in A. von Premerstein, C. Wessely, J. Mantuani, *De Codicis Dioscuridei Aniciae Iulianae, nunc Vindobonensis Med. Gr. I, historia, forma, scriptura, picturis* (Leiden, 1906), 224–5.

\(^{28}\) The Crateuas passages in the Vienna Dioscorides all fall within the first 40 folia of the manuscript; the beginning of the Morgan Library manuscript (which also contains an alphabetical recension of the text) is mutilated, and the first 57 entries for the letter Alpha have been lost. It is therefore possible that the excerpts from Crateuas were incorporated in the same manner as those from Galen in M652. The Galen excerpts are also limited to the beginning of the text in the Morgan Library MS: none appears after the letter \(I\).

\(^{29}\) e.g. fo. 26\(r\) and fo. 21\(r\).
Anazarba in Cilicia) often contain not only the title of the plant, but an attribution τοῦ ἀναζαρβέως, or ἔκ τοῦ ἀναζαρβέως 'by the Anazarbian' or 'from the work of the Anazarbian'—redundant in an edition of a single author's work, but standard form for the lemmata of a compilation like the *Hippiatrica*.\(^{30}\) The motivation is evidently a desire to have a 'second opinion'.

The structure of the earliest recension of *Hippiatrica*, M, is identical to that of a catena. We shall return to the question of the date at which it was compiled, the compiler's purpose and his methods. These are nowhere explained in the compilation as we have it, but they may be inferred from the character of the sources and the way in which they are presented. We shall now turn to the character of these sources.

\(^{30}\) e.g. fo. 10', fo. 9'. According to M. Wellmann, 'Die Pflanzennamen bei Dioskurides', *Hermes*, 33 (1898), 373, the result is 'kein Dioskurides, sondern eine pharmakologische Compilation'.
The Sources of the *Hippiatrica*

The *Hippiatrica* is a chorus of many voices: apart from lemmata added by the editor, the compilation is made up entirely of the text of its sources, each of which retains a distinct identity. Some personalities emerge clearly, others are less distinct; but the form of the encyclopaedia, by juxtaposing parallel passages, helps to emphasize similarities and differences between them. The similarities are striking: the treatises belong within the same scientific tradition, a tradition of which the *Hippiatrica* represents a codification. At the same time, the diversity of their opinions is readily apparent, as is that of their language: some texts are coloured by rhetorical artifice, while others are plain-spoken. And the language is throughout a mixed idiom: the single Latin author, Pelagonius, is influenced both by Hellenized ‘medical Latin’ and by the use of Greek by the Roman élite (not least by his preferred model of style, Columella);¹ while the Greek authors use the Latinized Greek of Late Antiquity, characterized by loanwords both in the vocabulary of civic life and in that of everyday life.² The *Hippiatrica* thus provides us with a selection of examples from across the spectrum of veterinary Fachprosa.³ Technical terms for procedures, diseases, and anatomy vary from author to author, as, to a lesser extent, do calendars and systems of weights and measures. Some authors write from first-hand experience; all, to some extent, repeat earlier written sources. Nevertheless, when the *Hippiatrica* has been used for evidence of veterinary practice or vocabulary, its text has usually been treated as a single homogeneous entity both in terms of content and of language.⁴

⁴ In this respect the earlier lexicographers are more precise than the later ones: Meursius and Du Cange attribute words in the *Hippiatrica* to the individual authors of the excerpts in which they appear, while in LSJ and LBG the compilation is cited without any indication of source or recension.
And, with the exception of Pelagonius, the individual sources have received little attention.

Yet the *Hippiatrica* provides the best evidence, and in some cases the only evidence, for these seven little-known authors and their texts: the encyclopaedia appears to have enjoyed success (as did compilations in other disciplines) at the expense of earlier literature, including both the works used as its sources, and those which were left out. One may regret that no Greek veterinary manuals survive independently, for comparison. One may also regret that the *Hippiatrica*, as we have it, has no introduction offering information about the antecedents, development, or extent of the hippiatric genre; nor any description of its own component texts (along the lines, say, of the introduction to the sources used for the *Digest* in the so-called *Index Florentinus* and *C. Deo auctore*). It is, however, possible to glean a certain amount from the thousand-odd excerpts that make up the *Hippiatrica*, not only about the character of the source-treatises, but also about their literary context, and their relation to one another. Defining these relationships sheds some light not only on the initial selection of sources for the compilation, but also on the reasons for the inclusion or omission of excerpts in subsequent recensions of the text.

In the following chapters, we shall try to sketch portraits of the seven authors based upon the excerpts of each treatise that may be retrieved from the various recensions of the *Hippiatrica*. Since the authors do not name themselves in their texts (apart from Apsyrtus and occasionally Pelagonius, as the sender’s name is conventionally part of the greeting of a letter), we must rely upon the lemmata attached to the excerpts. In the M recension, the attributions of the excerpts are not in doubt. Lemmata are almost uniformly present; where they are not, the succession of authors in a consistent order aids in the identification of the fragments. The reliability of the lemmata in M is corroborated by the Latin text of Pelagonius, the Syriac translation of Anatolius, and the chapters on horses and cows in the *Geoponica*, the Latin translation of Apsyrtus in the *Mulomedicina Chironis*, the Arabic translation of Theomnestus, and to a lesser extent the medieval Latin and Italian translations of Hierocles. Comparison with these independently transmitted...
sources—as far as possible, given the state of their texts, most of which stand in need of first or new editions—confirms that the text of the excerpts seems, in M, to be presented without editorial modification, so that the idiosyncrasies of each author's writing have been preserved. The characters of the sources will become more clear, and my conclusions, which are of necessity provisional, will no doubt need to be revised when satisfactory editions of the Arabic texts of Anatolius and Theomnestus, the Latin version of Hierocles, the *Mulomedicina Chironis*, the Greek *Geoponica*, and the M recension itself, become available. (Hopefully, one will not have to wait too long.) One could, in theory, on the basis of M, assemble what is left of the contents of each author's treatise in a 'palingenesia'; indeed, excerpts from Hierocles were reconstituted, Osiris-like, in the medieval period, and excerpts attributed to Hippocrates were gathered in this way from Grynaeus' edition by van der Linden. But our intention here is simply to devote some attention to each author as an individual.

At the same time, considered together, the sources of the *Hippiatrica* give us insight into the functioning of a written scientific tradition in which authors appropriate, discard, or build upon the work of their predecessors, and cite their colleagues critically or with approval. Such citations provide useful evidence: they are, in the first place, an indication of the relative chronology of the principal authors, as well as of the otherwise unknown sources whom they name. Citations are also evidence of the esteem in which an author was held by later writers, and, similarly, of the influence exerted by each author's work. Certain authors also indulge in the literary convention of

than from the earlier Latin version) by Cassius Dionysius of Utica was used by our authors. A translation of Apsyrtus into Latin was made by the time the *Mulomedicina Chironis* was compiled (4th c.?); it was also used by Vegetius in the late 4th or early 5th. Apsyrtus was retranslated by Pelagionius in the 4th c. into elegant Latin with the influence of Columella's style. Pelagionius in turn, along with his quotations of Apsyrtus, was translated into Greek in Late Antiquity, before the compilation of the *Hippiatrica*. A learned translation was made of Theomnestos into Arabic by the late 9th c., when it was used by Ibn Akhı ¯H. iza¯m. In the 13th c. a learned, *ad verbum* translation of Hierocles into Latin was made by Bartholomew of Messina; from it was made a 'popular' version in Sicilian dialect. An Italian translation was made from RV before the 15th c., the date of the illustrated manuscripts in which it survives.

8 The term is derived from the alchemical procedure of regenerating plants or animals from their ashes or fragments; see C. F. Hommel, *Palingenesia librorum iuris veterum* (Leipzig, 1767). Hommel, p. vii, compares Tribonian and his team of excerptors to Medea, citing Ovid's description (*Tristia* 3.9) of the dismemberment of Apsyrtus: 'atque ita divellit divulsaque membra per agros | dissipat in multis inveniendis locis'.
name-dropping to signal their awareness of, and to connect their work with, the ‘classics’ of their genre. More numerous than quotations by name, and equally revealing, are the unacknowledged borrowings. These are not plagiarism: the rules of \( \kappa \lambda \omega \pi \eta \) applied in antiquity to literature were never extended to technical treatises, whose contents were considered fair game for reuse.\(^{11}\)

The sources of the *Hippiatrica* furnish us with several case-studies of different types of appropriation and reuse of scientific material. In addition to their relationships on the scientific level, there is what one might call a literary interaction between authors, which includes instances of stylistic metaphor and mimesis of form.\(^{12}\) The extent to which various treatises echo or overlap with one another allows us to identify relationships between pairs and groups of authors and to trace the development of a cross-section of the veterinary tradition before the texts were codified.

In the M recension, the complete series of seven authors is represented for cough, conditions of the eyes, digestive ailments, and wounds;\(^{13}\) but opinions of four or more authors are present for thirty subjects—a striking number of parallels. A certain amount of common subject matter is to be expected: each treatise would presumably have covered frequently occurring ailments. And it is not unusual that different authors should recommend the same remedies. But the high incidence of word-for-word correspondences between the texts betrays the very close relation of their authors. Certain relationships are simple: for example, Hierocles presents the opinions of Apsyrtus and other authorities, scrupulously giving them credit in a manner reminiscent of legal literature, and reworking their texts only superficially. He is a compiler; a practitioner, on the other hand, may adapt received material for his own purposes and in accordance with his own experience. Thus we find Apsyrtus selectively borrowing remedies from Eumelus, criticizing them, applying them in a different context or adding ingredients. Theomnestus, similarly, uses material from Apsyrtus but presents it in his own distinctive style. Other relationships are more complicated, involving several authors and several possible paths of transmission. Pelagonius uses Apsyrtus, who cites Eumelus, yet there seems also to be a more direct connection between Pelagonius and Eumelus through their use of a common source.

Worthy of note is the use, by the hippiatric authors, of veterinary material from the lost agricultural compilations of Cassius Dionysius and Diophanes,

---

\(^{11}\) On the conventions of literary borrowing, see E. Stemplinger, *Das Plagiat in der griechischen Literatur* (Leipzig and Berlin, 1912).


\(^{13}\) *CHG* II, preface p. xix and p. 358.
or other representatives of the family of texts said to be derived from that of Mago of Carthage. This family includes Varro, Columella, and Anatolius, who all name Diophanes or Cassius Dionysius as sources. The sections on selecting, breeding, and caring for livestock in these texts are very similar: all three compilers seem to have incorporated the same source-material into their work with little alteration. Apsyrtus quotes Mago by name. Pelagonius borrows extensively from both Apsyrtus and Columella; while Pelagonius, Eume-lus, and Columella contain parallels that may be explained by their use of a common source belonging to the agricultural tradition. Hierocles and Theomnestus both use Apsyrtus, and Theomnestus cites an author named Cassius who may be the same as Cassius Dionysius. Hippocrates shows affinities with passages in the other sources derived from the agricultural writers. We shall consider these relationships in greater detail in our discussions of the individual authors.

It thus appears that nearly all of the authors whose texts make up the *Hippiatrica* share a certain amount of common source-material.\(^\text{14}\) Each author, though, treats this material in a different way, so that, collected together, they echo and contrast with one another like variations on a musical theme. This ‘family resemblance’ of the source-texts makes them well suited to the form of the encyclopaedia. As we examine each of the principal sources of the *Hippiatrica*, we shall pay close attention to these resemblances: since the texts are not independent of one another, their relationships must be taken into account in any analysis of an individual author’s content or style.

\(^{14}\) A parallel is provided by the family of works on military science: on the concept of *retractatio*, and use of the same source-material by armchair tacticians as well as by professional soldiers, see A. Dain, *Histoire du texte d’Élien le tacticien des origines à la fin du moyen âge* (Paris, 1946), 26 ff.
Anatolius

Anatolius of Berytus was a compiler; the text that goes under his name is drawn from diverse sources, most of which were compilations as well. Broader in scope than the other sources of the *Hippiatrica*, Anatolius’ text was a sort of farmer’s almanac containing information on many different aspects of agriculture and rural life, including the care, breeding, and medical treatment of animals. The precise date of the text is unknown: a *terminus post quem* is provided by Anatolius’ use of the *Kestoi* of Julius Africanus (first half of the third century AD); a *terminus ante quem* by the use of Anatolius in Palladius’ agricultural manual (probably around the middle of the fifth century AD). Although Anatolius was not an uncommon name, our author has been tentatively identified with the jurist Anatolius of Berytus, who held various high offices in the mid-fourth century, and is mentioned in Eunapius’ *Lives of the Philosophers*, in the letters of Libanius, and in a number of decrees in the Theodosian Code.

It is unlikely that Anatolius is the earliest author in the canon of the *Hippiatrica*; nevertheless, we shall consider his work first, since its contents derive from earlier periods. Anatolius’ text is related, via the lost Hellenistic compilations of Diophanes and Cassius Dionysius, to the manuals of Varro and Columella, and belongs with them to a tradition of agricultural literature derived ultimately from Mago of Carthage. His other sources, collections of


information on natural history, on magical sympathy and antipathy, have equally deep roots in the scientific and pseudo-scientific literature of antiquity. It is interesting that the compiler of the *Hippiatrica* considered it worthwhile to extract the relatively small amount of material on horse care present in Anatolius’ compilation for inclusion in the veterinary canon. Despite their origins in works of a more general nature, the excerpts from Anatolius in the *Hippiatrica* are related in character and content to the specialized veterinary treatises of the other authors. This resemblance illustrates the close links of the veterinary manuals with agricultural literature.

**ANATOLIUS’ TEXT**

Anatolius is the only source of the *Hippiatrica* whose text is known from a papyrus: the upper script, datable to the late sixth or early seventh century, of the palimpsest P. Vindobonensis G 40302, has recently been identified as a fragment of the section on cattle, copied separately for practical reference. A passage on hail is preserved in Parisinus gr. 2313; apart from these two instances, Anatolius’ text does not survive in Greek in its original form. But the compilation appears to have enjoyed a wide diffusion. The text was used by Cassianus Bassus the scholastikos as a source for his Περὶ γεωργίας ἐκλογαί, conventionally attributed to the sixth century. Cassianus’ work was re-edited in the tenth century, with the addition of a dedication to Constantine VII. Among the fifty-odd manuscripts of the so-called *Geoponica* are representatives both of the tenth-century edition and of an earlier phase which may be closer to Cassianus’ work; the modern edition of the text does not distinguish adequately between them.

---

3. A. Papathomas, ‘Das erste antike Zeugnis für die veterinärmedizinische Exzerptensammlung des Anatolios von Berytos’, *Wiener Studien*, 113 (2000), 135–51. No name is attached to the fragment; that it is from Anatolius and not Cassianus is inferred by the editor from the date of the papyrus.


6. Ed. H. Beckh (Leipzig, 1890). Beckh considered the three principal manuscripts upon which his edition is based to be derived from the same archetype; this hypothesis was disproved by G. Pasquali, who demonstrated that one of the three, Venice, Marc. gr. 524 (13th c., Beckh’s M) contains a version of the text earlier than the 10th-c. recension represented in Florence, Laur. Plut. 59.32 (F), ‘Doxographica aus Basiliusscholien’, *Nachrichten von der k. Gesellschaft der*
Fifteen excerpts are attributed to Anatolius in the M recension of the *Hippiatrica*; of these, twelve also figure in *Geoponica* XVI, the chapter of the agricultural compilation devoted to horses, donkeys, mules, and camels. This chapter, in the Teubner edition of the *Geoponica*, bears misleading attributions to Apsyrtus, Hierocles, Theomnestus, Pelagonius, and Hippocrates; these appear only in the family of *Geoponica* manuscripts representing the tenth-century re-edition of the text.7 (*Geop.* XVI seems to have figured in a manuscript which perished in the fire at the Escorial Library.)8 Eleven of the excerpts in M are repeated in the B recension of the *Hippiatrica*; C contains another excerpt absent from M and B but present in *Geoponica* XVI.9 The series of anonymous excerpts on the points of the horse and on breeding at the beginning of the C recension have also been attributed to Anatolius by Oder.10 Since attributions in the M recension of the *Hippiatrica* are trustworthy, we may assume that the excerpts attributed to Anatolius in that compilation were made directly from Anatolius’ manual rather than via Cassianus Bassus (who is in any case not mentioned in M). Thus although the excerpts from Anatolius in the *Hippiatrica* are not numerous, they provide independent evidence for a text that has undergone much reworking; this evidence has so far been neglected.11

That the excerpts attributed to Anatolius in M all come from one work, and that this work was a more general manual of agriculture, is confirmed by the evidence of a Syriac translation of the compilation, known from a manuscript

---


7 See the apparatus to *Geop.* XVI. Beckh’s view that they were present in the archetype of Marc. gr. 524 (*De Geponicerum codicibus manuscriptis*, p. 85), is incorrect.

8 Δ.IV.22, fos. 111–17, described as containing material on horses ascribed to Apsyrtus, Hierocles, Pelagonius, Hippocrates; and on camels from Didymus and Florentinus; G. de Andrés, *Catálogo de los códices griegos desaparecidos de la real biblioteca de el Escorial* (El Escorial, 1968), 117.


10 ‘Excerpta Anatoliana’, *CHG* II pp. 115–21, see also *Anecdota Cantabrigiensia*. Anatolius may also have been a source for (or may have shared a source with) the veterinary manual of Tiberius, *CHG* II p. xi; the same goes for the so-called *Nabataean Agriculture*; cf. Rodgers, ‘Hail, Frost, and Pests’, 6–7.

11 Beckh’s edition of the *Geoponica* and the edition of the Syriac version of Anatolius by de Lagarde refer to the 1537 edition of the *Hippiatrica*, i.e. the B recension.
of the eighth or ninth century in the British Library, Additional 14662.\footnote{F. Madden, \textit{Catalogue of Additions to the Manuscripts in the British Museum in the years 1841–1845} (London, 1850), p. 86; acquired from the monastery of Deir al-Surian at Sketis in Egypt, ibid., p. 68. \textit{Geoponicon in sermonem syriacum versorum quae superent} (Leipzig 1860), and \textit{De geoponicon versione syriaca}, in his \textit{Gesammelte Abhandlungen} (Leipzig, 1866), 120–46. See also G. Sprenger, \textit{Darlegung der Grundsätze nach denen die syrische Übergang der griechischen Geoponika gearbeitet worden ist} (Leipzig, 1889). Two modern manuscripts containing the text are copies made from the printed edition: S. Brock, \textit{A Note on the Manuscripts of the Syriac Geoponicon}, \textit{Orients Christianus}, 50 (1967), 186–7. The Syriac was used to a certain extent by Beckh in the Teubner edition of the \textit{Geoponica}. I am grateful to Dr Brock for comparing the Syriac and Greek texts.} The manuscript is mutilated at the beginning and end, and lacks any reference to an author or translator;\footnote{The 13th-c. history of medicine by Ibn abi Usaybi‘a (‘\textit{Uyun an-anbā‘} fi tābuqat at-atībā‘), ed. A. Müller (Cairo and Königsberg, 1882–4), p. 200} however, comparison of the passages on horses reveals a near-exact correspondence both with the Anatolius excerpts in the \textit{Hippiatrica} and those that are only preserved in \textit{Geoponica} XVI. The translation, as Dr Sebastian Brock kindly informs me, could belong to the fifth or
sixth century, since it does not have any of the tell-tale features that characterize translations into Syriac from the late sixth century on.

Anatolius was a source for the veterinary appendix to the Latin agricultural compilation of Palladius in the fifth century.\(^{14}\) The evidence of these various translations has not been fully synthesized; where comparisons have been made, it is worthy of note that the text of Anatolius in M is closer, in many instances, to the Syriac and to the Latin version in Palladius than to the text in the \textit{Geoponica}.\(^{15}\) (The Latin translation of \textit{Geoponica} VIII–XV made by Burgundio of Pisa does not include the chapters on livestock which concern us here.)

An Arabic translation of Anatolius is preserved in two manuscripts in Iran: Meshed, Riḍa 5762, dated \textit{AH} 732 (AD 1330/31), and a modern copy of the former, Teheran, Millı 796.\(^{16}\) The relation of this version to the Syriac text published by de Lagarde has not yet been determined. The Arabic text is not damaged at the beginning, and the incipit gives a certain amount of information about Anatolius and his sources:

\begin{quote}
Kitāb Yūniyūs b. Ānāṭuyūliyūs alladhī kāna min maḏinat Bairūṭ fi l-fīlāḥa abwāban jamā‘ahā min Filūrīnṭīnūs, Danūfīnṭīnūs wa-Lawāntīnūs, Ṭarāntīnūs wa-Afriqīnūs alladhī ḏahara fīhi āṣīya‘ ājība wa-min Niqāwūs al-mukhtarṣar wa-min al kutub allātī tussammā Qantarliya wa-qassama Yūniyūs kitābahū ‘alā arba‘ āṣāra maqāla.\(^{17}\)
\end{quote}

The book of Yuniyus son of Anatolius, who was from the city of Beirut, on agriculture: chapters gathered from Filurintinus, Danunftinus and Lawuntinus, Taruntinus and Africanus in which are related strange things, and from the synopsis of Niqawus and the books which are named Qantarliya. Yuniyus divided his book into fourteen parts.

This passage has an echo in the ninth-century review of Anatolius’ work by Photius (\textit{Bibliotheca} cod. 163); both passages may well be based upon Anatolius’ own preface. It worth quoting Photius’ review in full, since it gives an idea of the sources and character of the compilation:

\begin{quote}
Ἀνεγνώθη Ὁσιώδαν Ανατολίου Βηρούτου [sic] συγγεγρυγ χειρωνικών ἐπιστημῶν. συνήθροισα τε αὐτῷ τὸ βιβλίον ἐκ τῶν Δημοκρήτου, Ἀφρικανοῦ τε καὶ Ταραντίνου καὶ Ἀπούλητον καὶ Φιλωρεντίου καὶ Οὐδάλεντος καὶ Λέωντος καὶ Παμφίλου, καὶ δὴ καὶ ἐκ τῶν Διοφάνους παραδόξων τόμων δὲ εἰσὶ τῷ βιβλίῳ ὑπ’ ἥχωσμον δὲ τὸ βιβλίον, ὡς καὶ διὰ πείρας αὐτῆς ἐπὶ πολλῶν εἰδομεν, πρὸς τὰς κατὰ γνὴν ἐργασίας καὶ τῶν χειρωνικῶν πάνως, καὶ σχέδια τὰ χρησιμωτέρου τῶν ἄλλων ὅσοι
\end{quote}

\(^{15}\) Svennung, ibid. 242 ff.
\(^{17}\) Sezgin, \textit{GAS} 5, p. 427, transcribed from Teheran, \textit{Millı} 796.
Read, the compilation of agricultural practices by Vindanius Anatolius of Berytos. The book was compiled by him from the works of Democritus, Africanus, Tarantinus, Apuleius, Florentius, Valens, Leo, and Pamphilus, and also from the *Paradoxa* of Diophanes. There are twelve volumes in the book.

The book is useful, as we learned many times from actual experience, in the tilling of the soil and the labours of farming, and is, I dare say, more useful than any of the others which treat the same subject. This book, however, contains certain things which are monstrous and impious, and full of pagan error, which the pious husbandman ought to avoid, while selecting the useful items from the rest.

Photius gives the name of the compiler as Vindanius Anatolius; Oder has suggested, on the basis of epigraphic evidence, that Vindonius was more likely.19

Comparison of the sources named in the Arabic version and by Photius with those listed in the preface of Cassianus Bassus, preserved in the *Geoponica*, confirms that Anatolius was a primary source for the compilation of Bassus:20

It is collected from the words of Florentinus and Vindanonius and Anatolius and Berytius and Diophanes and Leontius and Tarantinus and Democritus and the *Paradoxa* of Africanus and Pamphilus and Apuleius and Varro and Zoroaster and Fronto and Paxamus and Damegeron and Didymus and Sotion and the Quintilii.

In the *Geoponica* the three components of the name given by Photius appear separately, as Vindanonius (*sic*), Anatolius, and Berytius—evidently the compiler’s identity was no longer recognized.

Although Photius does not indicate that he is quoting the precise ἐπιγραφή, it is likely that his description of the work as a *συναγωγή γεωργικῶν ἑπιστημεμάτων* is not very different from the title of Anatolius’ book. *Συναγωγή* is a conventional term for this sort of compilation; the term was

---

used in the fourth century, for example by Oribasius for the title of his medical collection. The title of Cassianus Bassus’ adaptation of Anatolius, preserved in the chapter headings of Marcianus gr. 524 (and in those of the tenth-century Geoponica), is περὶ γεωργίας ἐκλογαί, essentially the same.

ANATOLIUS’ SOURCES

Those of Anatolius’ sources that may be identified appear to have been the sort of intriguing, and for the most part lost, compilations whose popularity may be nevertheless appreciated from frequent quotations and borrowings in later texts.\(^22\) We may note that the sources do not include texts specifically on veterinary medicine. Were no manuals of horse medicine known to him? By the mid-fourth century, the veterinary treatises of Eumelus, Apsyrtus, and Theomnrestus should have been available; their absence from Anatolius’ list of sources may indicate that they had a limited circulation; on the other hand, Anatolius may simply have used sources of a general nature to compile a work on agriculture in general. There is no evidence that Cassianus Bassus added material from hippiatric treatises to his reworking of Anatolius. This absence was evidently considered a flaw by the tenth-century editors who added the names of the veterinary authors to the titles of excerpts in the Geoponica.

Diophanes

The epitome by Diophanes of Cassius Dionysius’ adaptation of Mago of Carthage, was, as we have mentioned, produced in the mid-first century BC.\(^23\) It was an important source for Varro and Columella, who both mention Diophanes in the introductions to their compilations. Varro and Columella each enumerate Greek writers who have treated agricultural matters; this list, which includes Xenophon, Aristotle, and Theophrastus, has been interpreted as a list of the sources added to Mago by Cassius Dionysius.\(^24\) According to Varro,

Qui Graece scriperunt dispersim alius de alia re, sunt plus quinquaginta. Hi sunt, quos tu habere in consilio poteris, cum quid consulere voles: Hieron Siculus et Attalus

\(^{22}\) On the sources, see in general Oder, ‘Beiträge I’.

\(^{23}\) The Arabic version preserves the designation of the work as an epitome; Photius’ allusion to Diophanes’ work as παράδοξα appears to result from confusion with the work of Julius Africanus. The work is called γεωργικά in Geoponica X.29.4. Cf. Oder, ‘Beiträge I’, 81.

\(^{24}\) E. Weiss, De Columella et Varrone rerum rusticarum scriptoribus, diss. (Breslau, 1911), 10–13.
Anatolius

Philometer, de philosophis Democritus physicus, Xenophon Socraticus, Aristoteles et Theophrastus peripatetici... hos nobilitate Mago Carthaginensis praeteriit, Poenica lingua quod res dispersas comprehendit libris XXIX. Quos Cassius Dionysius Uticensis vertit libros XX ac Graeca lingua Sextilio praetori misit; in quae volumina de Graecis libris eorum, quos dixi, adiecit non pauca et de Magonis dempsit instar librorum VIII. Hosce ipsos utiliter ad VI libros redegit Diophanes in Bithynia et misit Deiotaro regi. Quo brevius de ea re conor tribus libris exponere...

Those who have written various separate treatises in Greek, one on one subject, another on another, are more than fifty in number: the following are those whom you can call to your aid when you wish to consider every point: Hiero of Sicily and Attalus Philometer; of the philosophers, Democritus of the Physika, Xenophon the Socratic, Aristotle and Theophrastus the Peripatetics... All these are surpassed in reputation by Mago of Carthage, who gathered into twenty-eight books, written in the Punic tongue, the subjects they had dealt with separately. These Cassius Dionysius of Utica translated into Greek and published in twenty books, dedicated to the praetor Sextilius. In these volumes he added not a little from the Greek writers I have named, taking from Mago’s writings an amount equivalent to eight books. Diophanes, in Bithynia, further abridged these in convenient form into six books, dedicated to king Deiotarus. I shall attempt to be even briefer and treat the subject in three books...

Columella, who repeats the same information, and the same list of Greek authors, appears to have copied it from the lost work on agriculture by Celsus, whose name he append to the list.

Democritus

Although a treatise on agriculture (Περὶ γεωργίας) is included in a list of Democritus’ works, it is likely that Anatolius’ source was not the philosopher of Abdera, but a work circulating under his name. ‘Democritus’ was also the pseudonym or nickname of Bolus of Mendes, who seems to have written in Alexandria in the third or second century BC; a reference in Columella makes this clear:

Aegyptiae gentis auctor memorabilis Bolus Mendesius, cuius commenta, quae appel-
lantur Graece Χειρόκυμητα, sub nomine Democriti falso produntur... 31

The celebrated writer of Egyptian race, Bolus of Mendes, whose commentaries, which in Greek are called Hand-wrought products and are published falsely under the name of Democritus...

Elsewhere Columella gives the title of Democritus’ work as Georgicon and in Greek as Περὶ ἀντιπαθῶν, ‘On antipathies’. 32 Stephanus of Byzantium calls him Βόλος ὁ Δημοκρίτειος, ‘Bolus the Democritean’, and attributes to him a quotation from Theophrastus’ Historia plantarum, which provides a terminus post quem of the early third century BC. 33 Bolus’ work is described in the Souda as

Φυσικά δυναμερά ἔχει δὲ περὶ συμπαθείων καὶ ἀντιπαθείων λίθων κατὰ στοιχεῖον

Magical prescriptions: it contains material on sympathies and antipathies of stones in alphabetical order. 34

This description is corroborated by passages attributed to Democritus in Pliny, Columella, and the Geoponica. Among them are veterinary remedies. For example, Columella attributes to Democritus a cure for erysipelas in sheep that involves burying alive an infected animal at the threshold of the sheepfold and having the flock walk over it. 35 The association of male and female respectively with right and left is also attributed to Democritus in Columella and in the Geoponica. 36 But other ‘Democritean’ remedies for cattle in Anatolius are not magical, but call simply for squill or amurca (olive-lees) administered in water. 37 Democritus is among the Greek writers on agriculture listed by Varro and Columella, and thus appears to have been one of the sources added by Cassius Dionysius to his adaptation of Mago. 38 Anatolius may, therefore, have used Democritean material via Diophanes; double citations of ‘Democritus and Apuleius’ and ‘Democritus and Africanus’ suggest that these authors were intermediaries as well. 39

Africanus

Julius Africanus (c. AD 160–c.240), possibly a native of Roman Palestine, of Jewish descent, is best known for his Chronographies, which synthesized dates of events in Old Testament and Roman history, and provided the

31 Col. VII.5.17; cf. Pliny, NH XXIV.160. 32 Col. XI.3.2; XI.3.64.
33 S.v. Ἀφωνθὰς. 34 S.v. Βόλος Δημοκρίτειος and Βόλος Μαινάτησις (Adler, B 481–2).
37 Geop. XVII.14.3–4; Col. VI.4.2–4. 38 Varro, RR 1.1.8, Col. I.1.7.
chronological framework used by subsequent Christian historians.\textsuperscript{40} The work used by Anatolius, however, has been deemed sufficiently different in character to have been attributed to another author by the same name:\textsuperscript{41} the compilation entitled \textit{Kestoi} or 'Talisman' attests to an encyclopaedic interest in natural history, medicine, and the sciences of agriculture and war, as well as in the occult; its literary style is influenced by the Second Sophistic.\textsuperscript{42} George Synkellos, who used Africanus' \textit{Chronographies} for his own chronicle in the early ninth century, informs us that the \textit{Kestoi} were dedicated to the emperor Severus Alexander (r. 222–35), and briefly describes its contents:

\begin{quote}
Αφρικανός τὴν ἑννεάβιβλον τῶν \textit{Kestôn} ἑπιγεγραμμένην πραγματείαν ἰατρικῶν καὶ φυσικῶν καὶ γεωργικῶν καὶ χυμενικῶν περιέχουσαν δυνάμεις Αλεξάνδρῳ τούτῳ προσφευκε.\textsuperscript{43}
\end{quote}

Africanus dedicated to this Alexander his nine-volume treatise entitled \textit{Kestoi}, which contains medical, magical, agricultural, and alchemical prescriptions.

According to Photius, the work was in fourteen books.\textsuperscript{44} The \textit{Souda} gives the correct figure of 24 books, and describes them as οἴονει φυσικά, ἔχοντα ἕκ λόγων τε καὶ ἑπαοιδῶν καὶ γραπτῶν τινῶν χαρακτήρων ἱάσεις τε καὶ ἄλλων ἐνεργειῶν 'like spells, containing cures and diverse powers from words and incantations and certain written symbols'.\textsuperscript{45} Psellos, in the eleventh century, was intrigued by Africanus' agricultural, magical, and medical advice.\textsuperscript{46} The excerpts from the \textit{Kestoi} that may be retrieved from later compilations, both the \textit{Hippiatrica} and the tenth-century military manuals, contain straightforward medical prescriptions as well as superstitious recommendations. Africanus names the work of the Quintilii as a source;\textsuperscript{47} according to Vieillefond, Democritus-Bolus was, without doubt, another.\textsuperscript{48}

\textsuperscript{40} H. Gelzer, \textit{Sextus Julius Africanus und die byzantinische Chronographie} (Leipzig, 1880–98).
\textsuperscript{41} Björck considered the \textit{Kestoi} different enough in character from the \textit{Chronographies} to be a forgery or pastiche, 'Apsyrtus, Julius Africanus', 18–25: 'à moins qu’Africanus ne fût atteint de démence séñile' (p. 23).
\textsuperscript{42} See Vieillefond, \textit{Les ‘Cestes’ de Julius Africanus}, 13–70.
\textsuperscript{43} AM 5715 = Λδ 215, ed. Mosshammer, p. 439.
\textsuperscript{44} Bibliotheca, cod. 34.
\textsuperscript{45} S.v. 'Αφρικανός (Adler, A 4647). Although it is likely that elements of the \textit{Kestoi} from Anatolius are preserved in the \textit{Geoponica}, the presence of false attributions in that compilation leads Vieillefond to reject the text as a source: \textit{Les ‘Cestes’}, 69–70. Γεωργίας παράδοσα from the \textit{Tactica}, ibid. I.19; μακάριον μὲν γῆν πάμφορον ἐπ’ εἰρήνης γεωργεῖν 'it is a blessed thing to till the fertile earth in peace'.
\textsuperscript{46} Ed. Vieillefond, II.3.5.
\textsuperscript{47} Les ‘Cestes’, 58.
**Pamphilus**

Pamphilus’ work is called Περὶ φυσικῶν in the *Geoponica*: the title may be translated ‘On natural phenomena’, but has, as we have seen, overtones of magic as well.\(^{49}\) A Pamphilus is credited in the *Souda* with a work on agriculture in three books (γεωργικὰ βιβλία γ’).\(^{50}\) The Alexandrian lexicographer (c. AD 50) of the same name is criticized by Galen for compiling a Περὶ βοτανῶν from other written sources without first-hand knowledge of plants.\(^{51}\)

In this manner too [i.e. in alphabetical order] Pamphilus composed his work on plants. But he not only is diverted by old wives’ tales and certain silly Egyptian charms together with certain incantations, which they recite while collecting plants, but also uses amulets and other magical practices…

All these references may allude to a larger compilation on natural history which has been reconstructed by Wellmann as ‘ein Thesaurus der älteren mythologischen, naturwissenschaftlichen und geschichtlich-anekdotenhaften Literatur der Griechen’.\(^{52}\)

**The Quintilii**

The brothers Sextus Quintilius Condianus and Sextus Quintilius Valerius Maximus, natives of Alexandria Troas, shared the consulship in AD 151; Philostratus says that they were acquainted with Aelius Aristeides and Marcus Aurelius, and that they quarrelled with Herod Atticus while they were governors of Achaea.\(^{53}\) Athenaeus quotes them on the subject of the pistachio, calling them οἱ τὰ Χειμωνίκα συγγράφαντες ἀδελφοί.\(^{54}\) Their work on agriculture was used, as we have mentioned, by Julius Africanus, and also by the lawyer Hierocles for his veterinary treatise; he too calls their work

---

\(^{49}\) *Geop.* XV.1.6. The term is used in this sense in Alexander of Tralles I. 15 and the *Geoponica* II.18.8 and II.42.3.

\(^{50}\) S.v. Πάμφυλος (Adler, II 141); see Oder, ‘Beiträge I’, 78 ff.


\(^{52}\) Wellmann, ‘Pamphilos’, *Hermes*, 51 (1916), 57. Ibid., the opinion that Galen’s criticism is directed at another Pamphilus.


Though named in the Arabic version and by Cassianus Bassus, the Quintilii are omitted from Photius’ list of Anatolius’ sources; however, it is tempting to see in the name ‘Valens’ a misreading of \( \text{ΟΥΑΛΕΝΤΟΣ} \) for \( \text{ΚΟΥΙΝΤΙΑΙΩΝ} \).

Tarantinus, Florentinus, Apuleius

Tarantinus is quoted by Hierocles as the source for a superstitious remedy for shrew-mouse bites, and also for the famous anecdote of the mule of the Parthenon (to which we shall return).\(^\text{57}\) Florentinus’ work is referred to in the Geoponica as \( \text{ΓΕΟΡΓΙΚΑ} \); his allusions to a certain Marius Maximus and to a giraffe seen at Rome lead Oder to assign him a date in the first half of the third century.\(^\text{58}\) The Apuleius in Photius’ list may be related to the work on astrology and prophecy known to John Lydus, or to the pseudo-Apuleian herbal.\(^\text{59}\) Leo, Leontius or Leontinus is elusive.\(^\text{60}\)

Oder’s study of Anatolius’ sources makes it clear that their transmissions are intricately entwined not only with one another but with literature on natural history and agriculture ranging from Pliny and Columella to the obscure Neptunianus. The parallel passages assembled by Wellmann in his attempts to reconstruct the compilations of Democritus and Pamphilus show that elements of the same traditional lore, remedies based on sympathy and antipathy, anecdotes about animals, etc. appear in Aelian, Athenaeus, Plutarch, Pliny, Clement of Alexandria, Timothy of Gaza, in lexica and in scholia on various classical texts as well.\(^\text{61}\) The direct source from which any author acquired this material—whether from reference-books or via long chains of borrowing—is obviously difficult to determine. These sources are not purely technical manuals: many of them seem to have had a literary flavour and an antiquarian character. The Quintilii and Africanus were men of high standing; Anatolius, too, was evidently well-educated with an interest in farming, and no aversion to the irrational.

\(^{55}\) Hierocles B1.13, \textit{CHG} I p. 5.

\(^{56}\) \textit{ΑΕΟΝΤΟΣ} is suggested by Oder, ‘Beiträge I’, 87.


\(^{58}\) \textit{Geop.} IX.14, XVI.22; Oder, ‘Beiträge I’, 83 ff.


\(^{60}\) Oder, ‘Beiträge I’, 80.

\(^{61}\) ‘Die \textit{Georgika} des Demokritos’ and ‘Pamphilos’, as above.
The character of Anatolius’ work may be inferred from that of his sources: a combination of practical advice, observations of nature, traditional lore, medicine, and magic—not unlike the *Geoponica* or a modern farmer’s almanac. Photius conveys a sense of this variegated nature in his review. The emphasis he places on the usefulness of the book (χρήσιμον… χρησιμώτερον… συλλέγειν τα χρήσιμα) is echoed in the wording of both prefaces of the *Geoponica*, that is assumed to be by Cassianus Bassus and the one dedicated to Constantine Porphyrogenitus. The *τερατώδη και ἄπιστα, ‘monstrous and impious things’, criticized by Photius may have come from Democritus, Pamphilus, or Julius Africanus. Irrational practices are certainly in evidence in the *Geoponica*; and the passage from Anatolius on averting the damages of hail, frost, and pests from vines, preserved independently in Greek, contains several recommendations of sympathetic magic. There are also references to such practices in the excerpts from Anatolius in the *Hippiastrica*. Photius goes on to comment that the writers on agriculture say τὰ αὐτὰ περὶ τῶν αὐτῶν, ‘the same things about the same things’. The only Greek agricultural manual to survive is the *Geoponica* (Cassianus Bassus); but comparison of its text with Varro and Columella leads one to concur with Photius’ opinion.

**CONTENTS AND STRUCTURE OF THE TEXT**

The Syriac translation (assuming that is has not been reworked) provides evidence of the way in which the Anatolius excerpts in the *Hippiastrica* were originally organized, and of the context in which they once appeared. In the Syriac text, advice about bees, cows, horses, sheep, dogs, and domestic fowl is gathered into one book, XIII. In the case of the large animals, a description of the ideal conformation of the animal is followed by advice about breeding, and then by treatments for various ills. The same arrangement (which may be

---

62 *Geop*. I pref., p. 3; *Geop*. Prooimion 7, p. 2.

63 This sort of magic was permitted by *Cod. Theod*. IX.16.3: ‘nullis vero criminationibus implicanda sunt … in agrestibus locis, ne maturis vindemiiis metuenterunt imbres aut ruentis grandinis lapidatione quaterentur’. Middle Byzantine legislation was less tolerant: see P. Noailles and A. Dain, *Les Novelles de Léon VI le Sage*, Nov. 65. For archaeological evidence of the superstitious practices recommended in the *Geoponica*, see D. R. Jordan, ‘On an Emendation of the Text of the Geoponica’, *L’antiquité classique*, 52 (1983), 277–8. Francesco Barozzi ran afoul of the Inquisition in 1587 for conjuring up a hailstorm in an attempt to end a drought.

64 See Rodgers, ‘Hail, Frost, and Pests’, for discussion of the relation of the so-called Nabataean Agriculture and the Graeco-Roman agricultural writers.

derived from Aristophanes of Byzantium’s epitome of Aristotle’s works on animals)\textsuperscript{66} is present in Varro book II (sheep, goats, pigs, cows, horses, mules, dogs), and Columella books VI (cows, horses, donkeys, mules), VII (sheep, goats, pigs, dogs), and VIII (chickens). In the Geoponica, a compilation of great diversity, the books on animal husbandry, XIV (chickens), XVI (horses, mules, donkeys, camels), XVII (cows), XVIII (sheep and goats), and XIX (dogs and pigs) form a unit coherent in content and style.\textsuperscript{67} Although, in the Geoponica, Anatolius’ text has to some extent been combined with that of Didymus,\textsuperscript{68} this arrangement is evidently derived from Anatolius.

The excerpts from Anatolius in the Hippiatrica include five long narrative passages relating to the breeding of horses and mules, and the care of the foal;\textsuperscript{69} the ten excerpts of medical nature are short, consisting for the most part of treatments, with little or no indication of symptoms, and no discussion of aetiology or reference to medical theory. Surgery is not mentioned. This emphasis on breeding and general care, in addition to treatment of ailments and accidents, is shared by Anatolius with Varro and Columella, but not with the other treatises in the Hippiatrica, which focus almost entirely on medical treatment. The small number of excerpts attributed to Anatolius, and the concision of their text, is explained by the fact that the care of horses, donkeys, and mules formed only a part of a compilation that included information on many subjects. And the Anatolius excerpts in the Hippiatrica preserve allusions to the fact that material on horses was originally presented together with information on other animals, for example: μὴ ὀσέρα ἐπὶ τῆς τῶν ἄλλων ἀνατροφῆς, ὅν τὰ γεννηθέντα ἀφαιροῦμεν, οὕτως καὶ ἐπὶ τῶν ἑπτῶν φιλοστοργότατον γάρ τούτῳ τῷ ἱπποτῇ τῳ ἀπάντων. ‘It is not the same as in the rearing of others, whose young we take away, in the case of horses: for this animal is the most affectionate of all.’\textsuperscript{70} (The adjective φιλοστοργός is applied to the horse by Aristotle, who is named as one of Cassius Dionysius’ sources.)\textsuperscript{71} Similar allusions are present in Geoponica XVI: ‘use this for cattle too, and for other animals’ (τούτῳ δὲ χρήσῃ καὶ πρὸς βοῦς, καὶ τὰ ἄλλα ζώα).

---

\textsuperscript{66} See Aristophanes’ explanation of his principles of organization, ed. Lambros, Excerptorum Constantini de natura animalium libri duo, II. 1.

\textsuperscript{67} According to Varro (II.1.11–27), the scientia pastoralis is comprised of aetas, forma, seminimum, ius in parando, pastio, fetus, nutricatus, sanitas, and numerus, i.e. the age at which an animal becomes and ceases to be useful or productive, ideal conformation, breeds or varieties, law of purchase, pasturage, breeding, feeding, health, and the number suitable for a herd. With the exception of ius, these are the same as the subjects treated in Columella and Anatolius.

\textsuperscript{68} Oder, ‘Beiträge II’, 212–22.

\textsuperscript{69} M82 = B14.7; M83 = B14.8; M84 = B14.9; M1035 = B15.3–4; M1065, CHG II p. 103.

\textsuperscript{70} M1065, CHG II p. 103.

\textsuperscript{71} Aristotle, HA VIII (IX), 611a. καὶ ἄλος γε δοκεῖ τῷ τῶν ἑπτῶν γένος εἶναι φόσον φιλοστοργός; the phrase is repeated by Aristophanes of Byzantium, ed. Lambros, II.579.
Comparison of the excerpts attributed to Anatolius in the *Hippiatrica* with *Geoponica* XVI shows that although there is substantial correspondence, both compilations seem to contain selections or abbreviations from a text of Anatolius that was slightly more extensive. The *Hippiatrica* contains excerpts from Anatolius with no equivalent in the *Geoponica*, namely those on the age at which horses are suitable for breeding (περὶ ἰλικίας ἵππων τῶν πρὸς ὀχέλας ἐπιτηδείων) and on the rearing of foals (περὶ τῆς τῶν πόλων ἀνατροφῆς).\(^\text{72}\) Corresponding passages are, however, present in the Syriac version as well as in Columella and Varro, so there is no reason to doubt that these formed part of Anatolius’ original text.\(^\text{73}\) A long passage in the *Hippiatrica* on the care of mares in foal (περὶ ἐπιμελείας τῶν κυνοσῶν ἵππων), present also in the Syriac, is alluded to with a single sentence in *Geoponica* XVI.\(^\text{74}\)

Chapters in *Geoponica* XVI with no equivalent in the *Hippiatrica* are those on the points of the horse (περὶ ἱππων), on pneumonia (περὶ πνευμονίας), on dysury (περὶ δυσομνίας), on mange (περὶ ψώρας), a recipe for ointment for the joints (μάλαγμα πρὸς ἀρθρα), and on leeches (περὶ βδέλλης); these, too, are present in the Syriac.\(^\text{75}\) The similarity of *Geoponica* XVI.8 on the stomach (περὶ κοιλίας), to *Hippiatrica* M621 on flux of the stomach (περὶ κοιλίας ἰμπεσως), an excerpt attributed to Eumelus, may have contributed to the omission of the Anatolius excerpt from the M and B recensions of the *Hippiatrica*.\(^\text{76}\) Other chapters, such as those on leeches and pneumonia, may have been omitted from the *Hippiatrica* because of similarity to the advice of other authors.\(^\text{77}\)

**ANATOLIUS, VARRO, COLUMELLA, AND MAGO**

That the principal ancient works on agriculture draw their information about livestock from a common source was first pointed out by Franz Bücheler, in a note on the correspondence between descriptions of the ideal conformation

\(^{72}\) M82 = B14.7, CHG I pp. 80–1; M1035 = B15.3–4, CHG I pp. 86–7; M1065, CHG II p. 103.

\(^{73}\) Cf. de Lagarde, ‘De geoponicon’, 134–5; parallels in the apparatus to CHG I p. 81 and II pp. 118–19.

\(^{74}\) M1035 = B15.3–4, CHG I pp. 86–7; Geop. XVI.1.6.

\(^{75}\) XVI.1.1–2 and 7–17.

\(^{76}\) According to Oder and Hoppe, Anatolius must have excerpted this passage from Eumelus (CHG II p. x). The attribution to Eumelus is not beyond doubt in M, since there is some confusion in the numbering of M621, which is preceded by an anonymous and unnumbered excerpt (ἀρθριας οἰρων), similar to Palladius XI.14.13. This excerpt is, however, present in C with an attribution to Eumelus, C22.2, CHG II p. 159. The similarity may also be explained by use of the same source by both Anatolius and Eumelus.

\(^{77}\) Geop. XVI.19 is similar to M527 = B88.4 (Apsyrtus) and M529 (Hippocrates); Geop. XVI.1.10 to M533 = B6.3 (Apsyrtus).
of horses, cows, and goats in Varro, Columella, and the *Geoponica* (i.e. Anatolius).  

Following Bücheler’s lead, Richard Heinze demonstrated that none of the three texts is recognizably the source of any of the others, and that the earliest text, that of Varro, presents in several places an abbreviated version of information in the *Geoponica*. Heinze identified the common source as the lost agricultural manual of Mago the Carthaginian, versions of which—Cassius Dionysius or Diophanes—are explicitly cited as sources by the compilers of all three texts. Both Latin authors prefer to cite the illustrious Carthaginian rather than the later compilers; but Varro’s references to ‘Mago and Dionysius’, and Columella’s to ‘Mago and Celsus’ reveal their more immediate sources. For example, Columella quotes Mago by name when discussing the *forma* or ideal physical characteristics to be kept in mind when buying cattle:

Aliae formae sunt Asiaticis, aliae Gallicis, Epiroticis aliae . . . Quae cum tam varia et diversa sint, tamen quaedam quasi communia et certa praecepta in emendis iuvencis arator sequi debet; eaque Mago Carthaginiensis ita prodidit, ut nos deinceps memorabimus.

Those of Asia and of Gaul and of Epirus are different in form . . . Though there is so much variety and diversity, yet there are certain as it were universal and fixed principles which the farmer ought to follow in buying bullocks. Mago the Carthaginian has laid down these principles in the form which we will now relate.

Columella’s description of the points of the cow is very similar to that of Anatolius in *Geoponica* XVII. The catalogues of the points of the sheep, cow, dog, and chicken in Varro, Columella, and the *Geoponica* have been compared by O. Hempel; Oder has demonstrated that the same is true in the case of descriptions of the points of the horse in Greek and Latin writers, and that in this case the description is ultimately derived—almost word-for-word—from those of Xenophon and Simon, via the compilation of Cassius Dionysius. Oder showed that the same is true for information about breeding and the

---

80 It is likely that Columella used Diophanes via Celsus: Weiss, *De Columella et Varrone*, 9–17; see also O. Hempel, *De Varronis rerum rusticarum auctoribus quæstiones selectœ*; P.-P. Corsetti, ‘Columelle et les dents du cheval’, *Centre Jean Palerne, Mémoires*, 3: * Médecins et Médecine dans l’Antiquité* 11–12.
81 Col. VI.1.2–2, Speranza, fr. 44
82 *De Varronis rerum rusticarum auctoribus*, 77–82.
83 *Anecdota Cantabrigiensiæ*, 14 ff., where descriptions by Simon, Xenophon, Varro, Columella, the *Geoponica*, Palladius, Vergil, Nemesian, and ps.-Oppian are presented in tabular form. The agreement of ancient writers on characteristics desirable in the horse was noted by Pliny: *forma equorum quales maxime legi oporteat pulcherrime quidem Vergilio vate absoluta est, sed et nos diximus . . . et fere inter omnes constare video*, *NH* VIII.162.
career of the foal, where Aristotelian references confirm Varro’s implication that Cassius Dionysius added material from Greek authors to Mago’s text.\(^{84}\) Varro names ‘Mago and Dionysius’ as his source for the length of gestation in horses and mules:

Subicio Magonem et Dionysium scribere, mula et equa cum conceperint, duodecimo mense parere.

I add that Mago and Dionysius remark that the mule and the mare give birth in the twelfth month after conception.\(^{85}\)

And Columella and Anatolius give near-identical instructions for breeding cows, horses, and mules.\(^{86}\) For example, Anatolius gives the same advice as Varro and Columella on how to bring up a donkey colt for the purpose of mule-breeding:\(^{87}\)

---

**Anatolius in M**

Φιλοκαλώτερον δὲ τινες ποιοῦντες ταῖς θηλείαις ἵππας ὑποβάλλουσιν τῶν τῶν ὅνων πῶλων. οἷς γὰρ κρείττον τραφῆσον γάλακτι καὶ συντραφεῖτες φιλοστοργότερον ἔξουσι πρὸς τὰς ἵππας ἐκ τῆς ἀντροφής, ὃστε καὶ ἐφορμαῖ προθύμως.

Some people do it more meticulously, and put the foals of donkeys under female horses. They are better nourished on this milk, and being nourished together will from their upbringing be more affectionate toward mares, so that they approach them eagerly.

**Varro**

Pullum asininum a partu recentem subiciunt equae, cuius lacte ampliores sunt, quod id lacte quam asini-num ad alimonia dicunt esse melius . . . Hic ita educatus a trimo potest admitter; neque enim aspennatur propter consuetudinem equinam.

They put a newly-born donkey-foal under a mare, so that on her milk they make it fatter, as they claim that such milk is better for nourishment than the donkey’s milk . . . A jack so reared may be used for breeding after three years, nor will it refuse, on account of its being accustomed to horses.

**Columella**

Igitur qualem descripsi assellum, cum est protinus assellum, cum est protinus genitus, oportet matri statim subtrahi et ignaronti equae subici. Ea optime tenebris fallitur . . . Sic nutritus admissarius equas diligere condiscit.

As soon as the foal of a donkey, such as I have described, is born, it should be taken away from its mother and put under a mare who has no knowledge of it. She is best deceived in dark conditions . . . A stallion brought up in this way learns to be affectionate toward mares.

---

\(^{84}\) ‘De hippiatricorum codice Cantabrigiensii’, 56–7; *Anecdota Cantabrigiensia*, 12 ff. Aristotelian material in Varro is analysed by Hempel, who shows that Varro must have used an intermediate source, i.e. Cassius Dionysius: *De Varromis rerum rusticarum auctoribus quœstiones selectae*, 24–36.

\(^{85}\) Varro II.1.27, Speranza, fr. 44.

\(^{86}\) A.-M. Doyen-Higuet’s survey of descriptions of horse- and mule-breeding in ancient authors does not discuss the relation of the texts to one another: ‘L’accouplement et la reproduction des équidés’, 533–56.

\(^{87}\) Anat. M84 = B14.9, CHG I p. 82 (= Geop. XVI.6); Varro II.8.2; Col. VI.37.8; cf. Pliny VIII.171.
This passage elaborates upon an observation in Aristotle’s discussion of mules:

οὐ προσδέχεται δ’ οὖτε ἡ ἦππος τὸν ὄνον οὖτε ἡ ὄνος τὸν ἦππον, ἐὰν μὴ τίχη τεθηλακὼς ὁ ὄνος ἦππον.\(^{88}\)

The mare does not accept a donkey, nor the donkey-mare a stallion, unless the donkey has been suckled by a horse.

Material concerning how to determine the age of an animal by inspecting its teeth in Columella, Varro, Anatolius, and Apsyrtus has been attributed to Mago–Cassius Dionysius by P.-P. Corsetti; the treatment of the subject is similarly related to that in Aristotle.\(^{89}\)

Mago is named as a source of veterinary treatments by Varro, though Varro does not include this technical material in his treatise, which, set in the form of dialogues, rich with antiquarian allusions, etymologies, and phrases in Greek, is obviously intended for the entertainment of the landowner rather than for day-to-day use in the barn. Varro briefly mentions the common causes of disease, but says that more detailed instructions for diagnosis and treatment are the province of the chief herdsman, and should be kept by the latter in written form. This statement, made in the introduction to the chapter on animals, is repeated almost word-for-word by Varro four other times in that chapter, apropos of sheep, goats, horses, and cows.\(^{90}\) In the last instance, the source of the veterinary treatments is named:

De sanitate sunt conplura, quae exscripta de Magonis libris armentarium meum crebro ut aliquid legat curo.\(^{91}\)

On the subject of health there are many rules; these have been copied down from Mago’s treatise, and I see to it that my head herdsman is reading some of them repeatedly.

One of the few instances in which Varro describes a medical treatment is in the case of fever in cattle as a result of overwork. The similarity of the cures prescribed by Anatolius and Varro may be accounted for by the fact that both are known to have used Diophanes–Cassius Dionysius:\(^{92}\)

\(^{88}\) \(^{89}\) \(^{90}\) \(^{91}\) \(^{92}\)
You will treat the feverish horse with a warm bath, and in winter it ought to be warmed so that it does not shiver. And a little feed of vetch-seeds or wheat flour ought to be given, and warm water offered to drink (…) the entire body, and the belly purged. And blood ought to be let from the neck or the veins around the throat or the chest, or from those of the foot.

The feverish horse ought to be treated with a warm bath, and in winter it ought to be warmed so that it does not shiver, and a little feed of vetch-seeds or wheat flour should be given, and warm water should be offered to drink, and the entire body ought to be anointed with wine and warm oil, and the belly ought to be purged, and blood ought to be let from the neck or from the veins around the throat or the chest, or from those of the foot.

Those which have fever from overwork keep the mouth open, pant fast with moist breath, and have hot bodies…

The following is the treatment in such cases: the animal is bathed with water, rubbed down with oil and warm wine, and, further, sustained with food, and a covering is thrown over it to prevent a chill; in case of thirst tepid water is given. If improvement is not obtained by such treatment, blood is let, usually from the head. Other diseases have other causes and symptoms, and the man in charge of the herd should keep them all in written form.
Anatolius and Columella give more detailed information than Varro about veterinary medicine. Although certain remedies or practices are attributed to των μάρτυρων, έναρχοι, έναρχοι or ὀδ α, Anatolius does not mention the names of any sources in the passages excerpted in the *Hippiatrica*. But Columella’s instructions for castrating calves, which are clearly attributed to Mago, are present in the *Geoponica* in an abbreviated form:93

**Anatolius (Geoponica XVII)**

Διετείς δὲ γενομένους τοὺς μύαχους εύνοχοις, μετὰ γὰρ τούτα οὐ χρήσιμον τὸ εύνοχεον σποδάκι καὶ λιθαργύριον καταπλαστέων, μετὰ τρεῖς δὲ ἡμέρας πίσων ἄγρια καὶ τέφρας δλίγου μικρότατος ἡλικίας . . .

Calves ought to be castrated when they are two years old. After that to castrate is of no use. The wounds ought to be plastered with ash and litharge. And after three days with liquid pitch and ash mixed with a little oil . . .

**Columella**

Castrare vitulos Mago censet, dum adhuc teneri sunt . . . Nam ubi iam inducitur, melius bimus quam anniculus castratur, idque facere vere vel autumno luna decrescente præceptit vitulumque ad machinam deligare, deinde prius quam ferrum admoventes, duabus angustis ligneis regulis veluti forcipibus adprehendere et ipsos nervos, quos Graeci κρεμαστήρια ab eo appellant, quod ex illis genitales partes dependent, comprensos deinde testis ferro ressecare et expressos ita recidere, ut extrema pars eorum adhaerens praedictis nervis relinquitur . . . Verum vulnera eius sarmenticio cinere cum argenti spuma linenda sunt . . . Placet etiam pice liquida et cinere cum exiguolo oleo ulcera ipsa post triduum linire . . .

Mago is in favour of castrating calves while they are still young and tender . . . When the animal has grown tougher, it is better that it should be castrated as a two-year-old than as a one-year-old. He recommends that the operation take place in the spring or the autumn when the moon is waning, and that the calf should be bound in the machine; then, before applying the knife, you should seize between two narrow laths of wood, as in forceps, the sinews of the testicles, which the Greeks call ‘hangers’ because the genital parts hang from them, and then take hold of the testicles and lay them open with a knife and after pressing them out cut them off in such a way that their extremities are left adhering to the said sinews . . . The wounds should be anointed with ash of brushwood and litharge of silver . . . It is thought right also to anoint the actual sores after three days with liquid pitch and ashes mixed with a little oil . . .

---

93 As noted by Heinze, ‘Animadversiones in Varronis rerum rusticarum libris’, 438. Col. VI.26.1–4 (the use of the Greek word κρεμαστήρια ‘cremasters’ may indicate that the ultimate source of the passage was in Greek) = Speranza frg. 43; Geop. XVII.8.2–3.
That this passage of Anatolius is found independently in a rough copy in P. Vindob. G 40302 recalls Varro’s recommendation that the herdsman have at hand copies of Mago’s veterinary remedies.

The same remedies are recommended in several instances by Anatolius and Columella: juice of fresh coriander for nosebleed, toasted grain for thinness, garlic for nausea. In both the *Hippiatrica* and the *Geoponica* the second two remedies appear together, under the heading *peri λάσεως διαφόρων νοσημάτων*, ‘On the treatment of diverse ailments’.

---

**Anatolius in M**

Εάν ἄπισχονται ἵππος, αἴτου φυργέντος καὶ κριθῶν ὀπτιμένων διπλάσιον παραβραζόντον αὐτῷ, τρίς δὲ τῆς ἡμέρας ποιιστέτον ... 

ναιτιώστατα δὲ θεραπεύσεις ακόρδων κοτόλης ἀ’ οίνου μίζας καὶ δόοδες.

If the horse becomes very thin, roasted wheat and a double quantity of toasted barley ought to be given to it, and it ought to be watered three times a day...

You will cure those with nausea by mixing garlic with one cotyle of wine and administering it.

---

**Geoponica XVI**

Έαν ἴσχαίνηται ὅ ἵππος, αἴτου φυργέντος ἡ κριθῶν ἐπιτιμένων διπλάσιον παραβραζόντον αὐτῷ, καὶ τρίς τῆς ἡμέρας ποιιστέτον ... 


ναιτιώστα δὲ θεραπεύσεις ακόρδα κοτόλης ὀίνον μίζας, καὶ δόοδις.

If the horse becomes thin, roasted wheat and a double quantity of hulled barley ought to be given to it, and it ought to be watered three times a day...

You will cure one with nausea by mixing garlic with a cotyle of wine and administering it.

---

**Columella**

Si sanis est macies, celerius torrefacto tritico quam hordeo et furfuribus reicitur, sed et vini potio danda est ... 

Sed nausea discutetur si caput alii tritum cum vini hemina saepius potandum praebeas.

If a horse is healthy but thin, it can be restored more quickly with roasted wheat than with barley and bran; but it must also be given wine to drink...

Nausea can also be stopped by frequently giving a bruised head of garlic in a hemina of wine to drink.

The similarity in character and ingredients between the remedies in *Geop.* XII (on the medicinal uses of plants) and those in the veterinary chapters is worthy of note: they are, for the most part, simple remedies calling for garden plants rather than complicated preparations calling for exotic *materia medica*.

---

94 Nosebleed along with fever in M3 = B1.23, CHG I p. 10 = *Geop.* XVI.4.5; Col. VI.33.2; thinness and nausea together in Anat. M1066, CHG II pp. 103–4 = *Geop.* XVI.3.1; separate in Col. VI.30.1 and VI.34.1. The resemblance noted in his lexicon by Morelius, who considered the *Geoponica* a translation of the Latin agricultural writers; see *Verborum latinorum ... fo. ii‘* and s.v. *macies*, in which these passages are quoted.
Cautery, bloodletting, and enemas are employed; the medical instruments are not described, nor is surgery recommended.

The remedy for cough in horses given by Anatolius resembles one in Columella, but is closer to Columella’s prescription for cows.95 (In Columella, as in Geop. XVI–XVIII, certain remedies are ‘recycled’ for use in different animals.96) Africanus gives the same remedy: is he Anatolius’ source in this instance, or did both use the Quintilii? In this passage, Africanus is closer to Columella than to Anatolius.

95 M469 (= B22.19), CHG I p. 109; Geop. XVI.11; Col. VI.10.1 (cf. the remedy for horses in VI.31.1). Numerous remedies for cows in Geop. XVII have parallels in Col., e.g. Geop. XVII.10.1; Col. VI.6.1. Vieillefond, Les ‘Cestes’, I.12, pp. 147–9.

96 Cf. Col. VI.38.4. ‘Cetera exequemur in mulis sicut prioribus huius voluminis partibus tradidimus, quae curam bovem equarumque continent’. There is a certain amount of repetition in Geoponica XVI, XVII, and XVIII: for example, treatments for cough and mange appear in all three books (cough: Geop. XVI.11, XVII.21, XVIII.17.3; mange: XVI.18, XVII.24, XVIII.15). A number of cross-references show that some effort was made to avoid repetition: the procedure for removing leeches from the mouths of horses is recommended for use in other animals, τοῦτο δὲ χρῆσθαι καὶ πρὸς βοῦς, καὶ τὰ ἄλλα ζώα, you may use this for cows, and for other animals’ (Geop. XVI.19). A treatment for indigestion in cows is followed by a note that τοῦτο δὲ οὐ τῶν βοῶν μᾶνον, ἀλλὰ καὶ πάν ωφελεῖ βόσκομα, ‘this is not only for cows, but for all livestock’ (Geop. XVII.3). And in the chapter on sheep, a remedy is given for bites and stings, with the advice that καὶ ώσιν ἐπὶ τῶν βοῶν καὶ τῶν λαοτῶν προεἴσεσθαι ποιητέον, ‘also, whatever we have already said in the case of cows and the rest may be done’ (Geop. XVIII.7.7). Similarly, advice on breeding sheep is followed by δοκεῖ δὲ καὶ ἐπὶ τοῦτον, καὶ ἐπὶ πάντων τῶν ἄγριων τὸ αὐτῷ ἀρμόζειν, ‘the same is suitable both for these and for all animals’ (Geop. XVIII.3.6).
To one who has begun to cough, give to drink barley flour and vetch-seeds mixed with beans.

To one who has begun to cough, it is necessary to give to drink barley flour mixed with vetch-seeds or beans...

A cough that has just begun is best treated with a drench of barley flour. Sometimes grass cut up and mixed with crushed beans is more beneficial; lentils removed from their husks and ground fine are mixed with two sextarii of hot water.

If it does not stop in this way, some [give] leek-juice and oil, and the root of wild rue.

And leek-juice with oil is also a cure for a long-standing cough.

Two passages which bring to mind Photius’ criticism of superstitious elements in Anatolius may be drawn from Africanus (although they may equally well have come from Democritus). The first, an amulet of stag’s horn is recommended in Geoponica XVI, but is absent from the text in M:

\[\text{ἐπὶς δὲ καθόλου οὐ νοσεῖ, εἰν ἑλάφου κέρας τούτῳ περιάψει.}\]

A horse will not fall ill at all, if you affix to it as an amulet a stag’s horn.

The same advice appears in the Kestoi.

\[\Pi τοῦ ἄρτου ἐπεις μὴ νοσεῖν.\]

\[οὐ μὴ νοσήσουσιν (οἱ ἐπεις, εἰ τις ἑλάφου κέρας λαβὼν ὅλιγον καὶ ποιήσας αὐτὸ ὄς κόσμον τῷ τραχήλῳ, περιάψει.\]

So that horses will not fall ill:

Horses will not fall ill, if someone takes a bit of stag’s horn, makes it into an ornament, and affixes it as an amulet to the neck.

The verb περιάψειω is a technical term used in connection with magical practices.

The concision of Anatolius’ text in this instance makes it difficult to be certain about his source; the line of advice about the stag’s horn amulet does not preserve Africanus’ florid prose style.

97 The amulet is mentioned twice, at Geop. XVI.1.17 and XVI.3.6; it also appears anonymously in C108.4, CHG II p. 249.

98 Vieillefond, Les ‘Cestes’, II.10, p. 211; for other amulets for horses in the Kestoi, see ibid. 1.9–10, p. 139; for parallels in Aelian, Pliny, and Timothy of Gaza, cf. Vieillefond’s notes 62 and 66, p. 340. Cf. Aristotle, HAVIII (IX), 611a for the idea that stag’s horn has magical properties.
A description of how to determine the colour of a foal, present both in M and in *Geoponica* XVI, also represents an interest in the irrational, and especially in changing the colour of an animal’s coat, typical of the *Kestoi*:

Some are more meticulous: they cover up the stud donkey or horse or other animal in a cloak of whatever colour they wish the offspring to be. Whatever the colour of the cloak with which the stud is covered up, the offspring will be the same.

THE ‘EXCERPTA ANATOLIANA’ IN C

The C recension begins with a series of twelve excerpts on the selection and breeding of the horse. Anonymous in the Cambridge manuscript, and falsely attributed to Hierocles in L, these excerpts were identified by Oder as the work of Anatolius on the basis of their correspondence to *Geop.* XVI, and to the excerpts attributed to Anatolius in the *Hippiatrica*. They fall into eight parts:

1. Discerning a horse’s virtue while it is a foal (ἁρετῆς ἵππου πρόγνωσις ἐκ πῶλου);
2. Choosing a horse for stud, and timing of breeding (ἵππου ὀχευτοῦ ἐκλεξίς καὶ χρόνος τῆς ὀχεῖας);
3. Care of mares in foal (κυνουσῶν ἱππῶν ἐπιμέλεια);
4. Care of the foal from birth (πῶλων ἀπὸ γέννας ἐπιμέλεια);
5. How and when one ought to break horses (πότε δαμασθῆναι δεῖ τοῦ ἵππου καὶ πῶς);
6. Points of a good horse (ἵππου ακαθόριστο δοκιμασία);
7. Points of a bad horse (ἵππου σκολιοῦ δοκιμασία);
8. Qualities of horses according to their breed (ἵππων φύσεως κατὰ έθνος).

These correspond to the first part of *Geop.* XVI. Passages in C correspond to excerpts in *Geop.* XVI with no equivalent in the *Hippiatrica*, and also to

---


100 *Excerpta Anatoliana* 1–12, CHG II pp. 115–21.

101 In his preface, Hierocles states expressly that he will not speak of breeding and training, B1.10, CHG I p. 4.

102 ‘De hippiatricorum codice Cantabrigiensis’, 52–69; *Anecdota Cantabrigiensia; Excerpta Anatoliana*, CHG II pp. 115–21.

103 *Geop.* XVI.1.8–10, *Excerpta Anatoliana* 1, CHG II p. 115.
Anatolius excerpts in the *Hippiatrica* not present in *Geoponica* XVI. The description of the traits of body and character desirable in a horse is very close to Simon, Xenophon, Vergil, Varro, and Columella: the excerpts in C clearly belong to the same tradition.\(^{104}\)

A description of the adornment of mares, absent from the *Geoponica*, is present in M:\(^{105}\)

---


Some people use artifice to make horses desirable of the females, and adorn the latter with ornaments of their own hair and the other finery with which people are accustomed to adorn equines

The three texts are obviously closely related in content and in language; yet the excerpts in C, if derived from Anatolius, represent a thorough reworking of his text. In some passages the text of C is an abbreviated version of that in the *Hippiatrica* or the *Geoponica*, while in others the version in C is more elaborate, for example in the list of points of the horse.106

---

106 Geop. XVI.1.9; *Excerpta Anatoliana* 10–11, *CHG* II pp. 120–21.
107 e.g. τὸ δὲ εἶδος ὡς προειρήκαμεν and οἷς ἐπὶ τῶν βοῶν προείρηται χρηστῶν, *CHG* II pp. 115 and 117.
109 *Phaedrus* 253d.
Cassius Dionysius, and since a common feature of these texts is the presence of information on choosing and breeding livestock, it is possible that the anonymous excerpts come not from Anatolius, but from another author in the tradition. That texts derived from *retractatio* of the same source may be extremely close in wording is illustrated by Dain’s analysis of the tacticians Aelian and Arrian; we shall see that there are numerous examples among the hippiatric authors of such resemblance. It is unlikely that the compiler of C had access to a complete text of Diophanes—one cannot, however, rule out this possibility, since the more ancient text of Simon was evidently available. But one may also think of the Quintilii, Tarantinus, or other related works on agriculture. The work of Tiberius, which belongs in this family, contained material on both horses and cows, and was excerpted by the compiler of C, is another possibility.

The excerpts on breeding at the beginning of C are followed by a list of breeds of the horse in alphabetical order from Αρμενιων to Υρκανιων, ‘Armenians’ to ‘Hyrcanians’.

This list is conventionally attributed to Timothy of Gaza, grammarian and orator during the reign of Anastasius I (491–518), since an epitome of Timothy’s text on animals contains the lemma of a (lost) chapter on the qualities of horses in relation to their place of origin. Longer excerpts of Timothy’s work are preserved in the Bestiary of Constantine VII: these contain numerous other parallels to the *Hippiatrica*, mostly in the category of paradoxes, and probably derived from Aristophanes of Byzantium. But Timothy, also a compiler, no doubt appropriated the list of breeds from another author. It is possible that the list of breeds in C is derived from the same source as the first few excerpts. Indeed, the association, as in the *Excerpta Anatoliana*, of a description of the points of the horse with a list of breeds, descriptions of breeding practices, and branding with leopard-spots is found in the *Cynegética* of ps.-Oppian, which, dedicated to Caracalla in the late second or early third century, is three centuries earlier than the work of Timothy.

---

110 *Histoire du texte d’Élien le tacticien*, 26 ff.
111 CHG II pp. 121–4.
115 *Cyn.* I. 168–204, also containing the story of the suicide of a stallion deceived into covering his dam, to which there is an abbreviated reference in *Excerpta Anatoliana* 3, p. 117: εἴδεται δὲ χρῆ, ὡς εὐνεκής ἔπος οὕτε μητρὶ μέγνυται οὕτε ἀδελφή (regarded as an interpolation by Oder, *Anecdota Cantabrigiensia*, 7).
Eumelus

Eumelus is probably the earliest of the hippiatric authors in the compilation, but can only be dated in relation to Apsyrtus, who made use of his work.¹ Eumelus’ treatise appears to be the earliest text in Greek to have been devoted solely to the veterinary treatment of horses and cows; however, it does not represent an innovation, but rather an offshoot from the tradition of agricultural manuals in Greek and Latin. Striking instances of word-for-word correspondence with Columella, Pelagonius, and Anatolius illustrate Eumelus’ dependence upon the agricultural tradition, and imply that he copied his source or sources without much alteration. Through Apsyrtus, Eumelus’ advice reappears in the treatises of Theomnестus and Hierocles, as well as in the Latin Mulomedicina Chironis. Hierocles, following Apsyrtus, mentions Eumelus by name; but no other authors do so.

Eumelus’ text is unknown outside of the Hippiatrica. The M recension of the compilation contains seventy-seven excerpts attributed to him; of these, fifty-nine appear (some only in part) in the B recension; twenty-five of these anonymously.² Two excerpts in the B recension do not appear in M.³ The excerpts attributed to Eumelus in the Hippiatrica contain no trace of a preface or conclusion, and little evidence of how the treatise was organized; it is possible that they represent only a selection from Eumelus’ treatise, or that the treatise was loosely structured. The excerpts are not consistent in format: some describe the symptoms and (more rarely) the causes of the malady before prescribing a treatment, while others consist simply of a rubric and a

² Anonymous excerpts are listed in CHG II p. ix.
³ B69,25–6 (φόρητα), CHG I p. 276 (anonymous in B but attributed to Eum. by Oder and Hoppe on the basis of similarity to Columella; cf. CHG II p. ix).
recipe. Several groups of excerpts consecutively numbered in M appear to have been continuous in the original, e.g. series of passages on wounds, eye conditions, cough, ailments of the digestive system, and parasites. There are a few references to frequently recommended procedures or drugs, such as bloodletting or treatments for wounds:

\[
\text{αἷμα τοῦ σφονδύλου λαμβανέσθω τρόπῳ τῷ εἰρημένῳ}
\]
Let blood be taken from the neck in the way that has been mentioned.

\[
\text{τὰ τραύματα θεραπεύσαις ὡς εἴρηται}
\]
Treat the wounds as it has been said.

\[
\text{τὸ δὲ ἔλκος τοῖς τραυματικοῖς βοηθήμασι θεράπευε}
\]
Treat the wound with the wound remedies.

Most of these references are too unspecific to be of much use in reconstructing the original order of the chapters; for example, the phrase τὰ δὲ κεκαυμένα τῷ προειρημένῳ τρόπῳ θεράπευεν, 'treat the cauterizations in the aforesaid manner', appears in several places; it may refer to a lost chapter on cautery, or to the chapter on treatment of different types of wounds (M248). Some allusions are more helpful, e.g.

\[
\text{ἐὰν ἀπὸ τῶν ἀρτηρίων κάρυη τὸ ἄνω, ἔξει τὰ αὐτὰ τοῖς ὀρθοπνοϊκοῖς σημεῖα... τροφῇ}
\]
If the animal is suffering from its windpipe, it will have the same symptoms as those with orthopnoia... the feed described apropos of those with orthopnoia from which we may deduce that the chapter about ὀρθόπνοια (M30) was before the one on ἀρτηρίαι (M1094). Another cross-reference, in the chapter on worms, is informative not only about the organization of Eumelus’ text, but about his use of sources:

\[
\text{βαλεῖν τοῖς χρῆ τὴν χείρα κατὰ τῆς γαστρός, ὡς ἐπισμεν, καὶ τὰ περιπτώματα μετὰ}
\]
It is necessary to insert the hand toward the stomach, as we said, and to remove the faeces along with the worms.

The discussion of worms, ἐλμείς (M724) seems to have come after that of bile, χολή (M638 = B75.9), where the procedure for removing faeces is described

---

5 M641, CHG I p. 291 apparatus.  
6 M127 = B52.8, CHG I p. 323 apparatus, also M427 = B29.8, CHG I p. 149.  
7 M580 = B66.7, CHG I p. 261; also cf. M581 = B66.8, ibid.  
8 M107 = B16.4, CHG I p. 90.  
10 Eum. M638 = B75.9, CHG I pp. 289–90; M724, CHG II pp. 85–6; Col. VI.30.8–9.
without a cross-reference. The chapters on bile and worms are consecutive in 
Columella too, and the same cross-reference appears in Columella’s text. It is 
clear that not only the content but also the structure and style of Eumelus’ 
treatise are to a large extent taken over from his source or sources.

**EUMELUS’ IDENTITY**

Eumelus does not, in what remains of his text, divulge much information 
about himself—he does not even use the first person. But Apsyrtus, who 
ought to be a good authority in these matters, calls him Εὔμηλος ἵππατρός 
μεγάλος, ‘Eumelus the great horse-doctor’,¹¹ which would seem to suggest 
that Eumelus was not simply a compiler but a practitioner as well. And 
indeed, the content of the treatise appears to have been restricted to the 
treatment of horses and cows—unlike the agricultural manuals, which cover 
a greater array of subjects. Apsyrtus also refers to him as Εὔμηλος ὁ Ῥηβαίος, 
‘Eumelus the Theban’,¹² but without specifying from which of the cities (nine, 
according to Stephanus) of that name. The name seems to have been used in 
and near Boeotia in Late Antiquity,¹³ and the association of that region with 
horse-breeding, racing, and the hunt¹⁴ lends some support to the argument 
that Eumelus came from there. (Theomnesteus also cites a Theban veterinary 
author, one Hippaios, making it clear that he is Θηβαίος ἀπὸ τῆς ’Ἐλλάδος 
Θηβῶν τῶν ἐπιταύλων, ‘a Theban from Seven-Gated Thebes in Greece’.)¹⁵ On 
the other hand, Thebes-Luxor might also be a possibility, since at least one 
horse-doctor was attached to the Roman cavalry corps stationed there: graffitis 
on the lintel of the temple of Isis and Serapis at Hiera Sykamina (Maharrakeh) 
commemorate the proskynesis of a member of the cohors I Thebaeorum 
equitata together with one Gaius Aufidius, who identifies himself as an ἵππατρός (sic).¹⁶

In the absence of specific information about Eumelus’ date, we may try to 
derive a sense of his chronological relation to Apsyrtus from the latter’s 
quotations. Apsyrtus mentions Eumelus by name three times, each time

¹¹ M170 = B10.1, CHG I p. 56 (see apparatus for text of M).
¹³ See LGPN IIIIB. Our Eumelus is no. 7. The first appearance of the name, in Iliad 2.763 ff., is, interestingly enough, associated with horses: ἵπποι μὲν μέγ’ ἀρισταὶ ἐσσαν Φηγητάδοι τὰς 
Εὔμηλους ἑλαυνε ποδάκες ἀριθμὸς ὀσ.
¹⁶ CIG 5117. Aelian tells the story of a cavalry officer named Lenaios whose horse was cured of an eye injury by treatments at a temple of Serapis (NA XI.31).
using the perfect tense, which may imply more distance in time than the imperfect\textsuperscript{17}—and each time, we may note, in a critical manner:

It has been said by Eumelus the great horse-doctor that one should above all not accustom horses to having blood let; however he did not add the reason.

If the horse is stressed from exertion, do not give it barley for its dinner. The same has been made clear by Eumelus. But this escaped him…

It is difficult to identify the passages in Eumelus to which Apsyrtus refers. In his discussion of glanders, Apsyrtus refers to Eumelus in a way that suggests he is quoting directly:\textsuperscript{20}

\begin{quote}
\textit{(Peri málleos ἃρας)}
\end{quote}

There is no treatment for such a one, but it dies, as is said also by Eumelus the Theban: Of dry glanders neither am I a healer nor is any other. I will make clear the reason, namely that the lung ruptures on the right-hand side, and it becomes afflicted with pleurisy.

The allusion is identified by Oder as a reference to Eumelus’ chapter on dyspnoea (cf. Eumelus’ definition: \textit{δύσπνων ζώως πάθος ἐπικυδωνότατον, τοῦτο πολλοὶ μάλιν ὅνομάζουσιν, ‘dyspnoea is a disease very dangerous to animals; many call it \textit{malis}’}).\textsuperscript{21} Procedures and remedies recommended by Eumelus often appear in Apsyrtus attributed to \textit{τινές} or to \textit{οἱ πρὸ ἡμῶν, ‘some people’, or ‘our predecessors’, and criticized or rejected. A number of these passages reappear in Hierocles and Theomnestus, but these authors simply reproduce Apsyrtus’ references, whether to Eumelus or to unspecified predecessors, without providing additional information. If \textit{οἱ πρὸ ἡμῶν} refers to Eumelus, it still does not provide a precise indication of his date, so we may

\begin{itemize}
\item \textsuperscript{17} Whereas use of the imperfect might imply that Apsyrtus was a contemporary of Eumelus and had heard his opinions habitually expressed; cf. Honore’s discussion of the use of tense in quotations by legal writers, \textit{Gaius}, pp. xiv ff.
\item \textsuperscript{18} M170 = B10.1 (variants of M in apparatus), \textit{CHG} I p. 56.
\item \textsuperscript{19} M74 = B10.3, \textit{CHG} I p. 57.
\item \textsuperscript{20} Aps. M13 = B2.8, \textit{CHG} I p. 17; Eum. M1096 = B27.5, \textit{CHG} I p. 141.
\end{itemize}
only conclude that Apsyrtus provides a terminus ante quem for Eumelus of the late third or early fourth century.

SOURCES

Although it is obvious that Eumelus made extensive use of at least one other text in composing his own, he does not cite any sources by name. The only instance of another name associated with Eumelus’ text is in the lemma of the excerpt on fever, which in M reads Εὐμήλου ἦτοι Ἡρωνος, ‘Eumelus or Hero’, and in B Εὐμήλου ἦτοι Χείρωνος, ‘Eumelus or Cheiron’.22 The latter is probably a correction by the editor of the B recension; the text does not appear in the Mulomedicina Chironis. The fever treatment appears in part in Columella. Oder and Hoppe tentatively suggested (later retracting the suggestion) that the name might originally have been Hieron, by analogy with an excerpt on ἔλεφαντιασις labelled ‘Ἰέρωνος’.23 This Hieron excerpt, which displays traits of style similar to those present in the rest of Eumelus’ text, appears with no attribution in the recently discovered Einsiedeln manuscript of Pelagonius.24 Where he refers to τινές δὲ..., ἐτέροι δὲ..., ἄλλοι δὲ, comparison with Columella reveals that Eumelus has taken over these citations at second hand:25

Eumelus

(Πρὸς χολῆν ἐπαχθῆ)
τινὲς δὲ όμώρινης λειασμένης γὰρ γὰρ µετὰ ἣµινας οὔνοµα εἰς τὸν λαιµὸν ἐµβάλλουσαν, καὶ τὸν δικτύλιον πίσσῃ ὑγρὰ ἀλέφονσαν. ἐτέροι δὲ θαλασσίων ὁδιὶ τὴν γαστρὰ κλύζουσιν. ἄλλοι δὲ νεαρὰ ἄληθ ὑπὸ αὐτὸ διασφάττονται.

Columella

(Si bilis molesta iumento est) quidam murrae tritae quadrantem cum hemina vini faucibus infundunt, et anum liquida pice oblinunt. Alii marina aqua lavant alvum, alii recente muria.

For troublesome bile: Some people inject into the throat three ounces of ground myrrh with a hemina of wine, and anoint the anus with liquid pitch. Others cleanse the stomach with an enema of seawater. Others do the same with fresh brine.

22 M4 = B1.24, CHG I p. 10.
25 M638 = B75.9, CHG I pp. 289–90, Col. VI.30.9.
There are some twenty instances, among the seventy-nine fragments of Eumelus' text, in which all or part of the chapter has a word-for-word parallel in Columella. These similarities were first noted by Ihm, who in the preface to his edition of Pelagonius expressed the opinion that Eumelus was translating Columella. This idea was accepted, after some hesitation, by Oder and Hoppe, who account for the differences between the two texts by reasoning that 'certainly a horse-doctor skilled in his art could amend his source' (nimimur veterinarius artis peritus auctorem suum etiam corrigere poterit).

There are also about twenty passages in Eumelus that are very close to Pelagonius. Their similarity cannot be accounted for by the fact that Apsyrtus uses Eumelus and is in turn used by Pelagonius: as we shall see, Apsyrtus usually alters Eumelus’ advice, if not rejecting it outright. Now, Pelagonius uses Columella, often quoting him by name; and indeed some of the parallels between Eumelus and Pelagonius might be ascribed to use by both of Columella. For example, Eumelus and Pelagonius echo Columella’s—and Varro’s—description of the common causes of disease.

---

**Eumelus**

Νόσον ὡς ἐπὶ τὸ πλεῖστον λαμβάνειν τὰ καὶ ἀτομίᾳ καὶ καύματι, καὶ κρύον ἀνήκοντος, ὡς ἐπὶ τὸ αὐτὸ ὑφίσταται, ὡς ἐπὶ ἑπεξεχθὲν μὴ ἀπευρησθήσῃ, ἡ μετὰ ἱδράται πη καὶ ἀπὸ πολλῆς ἀργίας εἰς πολὺν ἐλθῇ δρόμῳ καὶ ἐξατομοῦν ὡς ἐπὶ τὸ λαμβάνειν ἑκατον ὡς ἐπὶ τὸ στεάρ σὺν ὡς ἐπὶ τὸ διδοῦν.

**Varro**

Fere morborum causae erunt quod laborant propter aestus aut propter frigora, nec non etiam propter nimium laborem aut contrarium nul-lam exercitationem, aut si, cum exer-cueris, statim sine intervallo cibum aut potionem dederis … Curatio autem, cum hie est morbus, haec: per-funditur aqua et perunguitur oleo et vino tepfacto …

**Columella**

Plerumque iumenta morbos concipiunt lassitudine et aestu, non numquam et frigore et cum suo tempore urinam non fecerint; vel si sudant et a concitatione confestim biberint vel si, cum diu steterint, subito ad cursum extimulata sunt. Lassitudini quies remedio est, ita ut in fauces oleum vel adeps vino mixta infundatur.

**Pelagonius**

Morbos plerumque equi concipiunt aut lassitudine aut aestu aut frigore aut fame aut, cum diu steterint, subito ad cursum fuerint stimulati, aut si suo tempore urinam non fecerint, aut sudantes et a concitatione statim biberint, quibus remedia haec a maiobus profuisse accepimus et facientes nosmetipsum experti sumus.

---

26 M. Ihm, Pelagonii Artis Veterinariae quae extant (Leipzig, 1892), 7 ff.
29 Varro II.1.23; Col. VI.30.3; Pel. Lat. 4; Eum. M681 = B107.3, CHG I p. 368.
Animals most often catch sickness from weakness and heat, and cold causes the same, and when, being urged along, it does not urinate, or if after sweating it drinks, and after much rest it enters into much running and becomes exhausted. Treat it in this way, pouring oil into the throat or similarly giving fat with wine.

In general, sickness is caused by the fact that the animals are suffering from heat or from cold, or else from excessive work, or, on the other hand, from lack of exercise; or else food and drink has been given to them immediately after working, without a period of rest... The following is the treatment in such cases: the animal is washed down with water, and rubbed down with oil and warm wine.

Beasts of burden generally catch sicknesses from fatigue or from the heat, and sometimes also from the cold and when they have not passed urine at the proper time, or if they sweat and then drink immediately after having been in violent motion, or when, after they have stood for a long time, they are suddenly spurred into running. Rest is the cure for fatigue, provided that oil or fat mixed with wine is poured down the throat.

Beasts of burden generally catch sicknesses from fatigue or from the heat, or from cold or hunger, or when, after they have stood for a long time, they are suddenly spurred into running, or when they have not passed urine at the proper time, or sweating and having been in violent motion they drink immediately. We have received these remedies for such things from our elders and have proved them by making them ourselves.

But there are other places in which Pelagonius and Eumelus share material not present in Columella. Hoppe assembled the passages common to both, indicating where Pelagonius contained more or less information than Eumelus,\(^{30}\) and concluded that the resemblance was the result of Pelagonius' use of Eumelus.\(^{31}\) More recently, J. N. Adams has reconsidered these passages, and has argued that Eumelus, in addition to using Columella, also used a lost Latin veterinary writer who 'quoted Columella, took information from him, and was influenced by his style'.\(^{32}\) Adams also observes that the lost source was related to Celsus.\(^{33}\) A key passage is that on glanders, which has no exact equivalent in Columella:\(^{34}\)

---

\(^{30}\) 'Pelagoniusstudien', 28–31.

\(^{31}\) Cf. \textit{CHG} II p. xiii.

\(^{32}\) 'Pelagonius, Eumelus, and a Lost Latin Veterinary Writer', \textit{Mémoires du Centre Jean Palerne}, V (1984), 1 and 29.

\(^{33}\) \textit{Pelagonius}, 4–6 with stemma p. 10.

Pelagonius appears here to be quoting from a Latin writer who used a Greek source. The Latin names given by Pelagonius are not repeated in Eumelus; that words in a different script are vulnerable in transmission is shown by the fact that the Greek words are omitted from this passage in the Einsiedeln MS of Pelagonius.

Eumelus' reference to 'the Greek term for dyspnoia' is an indication that here he is using a source with, so to speak, a Roman point of view. In the first passage, it would seem that δύσπνοια has replaced the Latin word

---

35 The relevant page of the MS is illustrated in Corsetti, 'Un nouveau témoin', 41.

36 As we shall see below, Hierocles uses the similar phrase άε καλούν Ἐλληνες βλεφαρίδαις B59.6, CHG I p. 249.
suspirium in Eumelus’ text, and that the title of Pelagonius’ chapter originally formed part of the text.\footnote{37} One may note that the missing word is supplied by Apsyrtus’ chapter on glanders, which is apparently derived from Eumelus (who is quoted by name), and begins ἔστι δὲ τὸ πάθος, ὁ καλοῦσαν αἱ πολλοὶ μᾶλν, τινὲς δὲ κατάρρευσι, ῥομαίαστὶ δὲ συμπέριον.\footnote{38} Apsyrtus may have had a text of Eumelus with the Latin word in it, or he may have been using the same source as Eumelus and Pelagonius in addition.\footnote{39} This passage appears in Hierocles, as we shall see, attributed to a certain ‘Hieronymus the Libyan’, who may be related to Cassius Dionysius of Utica.\footnote{40} The treatments prescribed in this instance by Eumelus, Pelagonius, and Apsyrtus are superstitious in nature, based on sympathy and antipathy: they include application of the animal’s own blood and of hellebore-root. Eumelus’ instructions for applying the hellebore, which include the phrase (ἐλλεβόρων ὰζαν) λίθῳ περιορογείσαν, ‘dug around with a stone’, where Pelagonius gives cute forata, ‘the skin being pierced’, are interpreted by Adams as a misunderstanding of the Latin phrase as caute forata, ‘pierced with a stone’.\footnote{41} Once again, though, the information missing from Eumelus, namely the instructions for cutting the skin to insert the hellebore root, is found in Apsyrtus, whether via a more complete text of Eumelus or direct use of the common source.\footnote{42} The same hellebore-cure is prescribed by Columella, but for ulceration of the lung in cows.\footnote{43} It is also found in book XXIV of Pliny’s Naturalis historia, in the discussion of hellebore; Celsus and Mago are among the sources Pliny names for that chapter.\footnote{44} The resemblance between Eumelus and Pelagonius continues;\footnote{45}

\footnote{37} The reading of the Florence MS, pecori, would furnish an equivalent to ξόνος. See Fischer’s commentary ad loc.
\footnote{39} Björck has suggested that Apsyrtus used a compilation belonging to the agricultural tradition; ‘Zum CHG’, 69.
\footnote{40} M40 = B2.12, \textit{CHG} I p. 19.
\footnote{41} Adams, ‘Pelagonius, Eumelus’, 20–1. But Eumelus’ advice is not implausible: Björck, ‘Apsyrtus, Julius Africanus’, 58–9, commenting on the same passage, refers to the prescription \textit{sine ferro} for the collection of medicinal plants. Moreover, Theophrastus, one of the Greek authors used in Cassius Dionysius’ compilation, describes the practice of drawing a circle around the hellebore-plant: περιγράφειν δὲ καὶ τὸν ἔλλεβορὸν τὸν μέλανα (IX.8).
\footnote{42} M52 = B2.5, \textit{CHG} I p. 15.
\footnote{43} Col. VI. 5.3–4 and VI. 14 See also Fischer, ‘The First Latin Treatise on Horse Medicine and its Author, Pelagonius Saloninus’, \textit{Medizinhistorisches Journal}, 16 (1981), 222 ff. for references to the use of hellebore in this fashion in the 19th c.
\footnote{44} \textit{HN} XXIV.41; XXIV.98; sources listed in bk. I.
The lemma to this passage of Pelagonius in B is 

\[
\text{ Máγωνος, which led Björck to suggest that Pelagonius and Eumelus are here using a text derived from Mago–Cassius Dionysius–Diophanes.} \]

The resemblance of the lost source, in style and content, to Columella would be explained in this way, since Columella, as we have seen, repeatedly refers to Cassius Dionysius and Mago as his sources. The similarity of Columella's description of the points of the horse to those of other authors in the Mago tradition shows that he followed the words of his source very closely. What was his source? Columella's double quotations seem to indicate that he used Mago via Celsus; Celsus is cited by name three times in the chapter on horses and cows. Pelagonius, too, quotes Celsus by name, once via Columella, and twice independently. Celsus' work on agriculture formed books I–V of the Artes. Assuming that the lost source belongs to the well-known family of Graeco-Roman agricultural manuals descended from Mago may account for its author not being mentioned by Vegetius, who wrote soon after Pelagonius, and states that only Columella and Pelagonius had so far written on horse-medicine in acceptable style. The mixed 'Graeco-Latin'

---

Eumelus  

The signs of dyspnoia are the following: it has a greenish right eye, it emits a foul odour from each nostril, it draws in its flanks, under the jaws it produces swellings. Observe its walking: if it inclines more to the right side, it will not be treated easily.

Pelagonius  

Ad suspirium validissimum, de quo etiam et suspendit ilia et oculos vel oculum dextrum coloratum habuerit, nonnunquam etiam maxillam tumidiorem, incessus etiam non rectos... considera diligentius: si dextra pars fuerit curvata, sanabitur, si sinistra, difficile obtinebitur.

For suspirium, very efficacious, from which it draws in its flanks and its eyes or its right eye is coloured, and often its jaw is swollen, and its movement is not straight... observe carefully: if the right side is curved, it can be cured; if the left, it will be overcome with difficulty.
language of the source would also be explained in this way: we have already noted the role of translations in the tradition of Mago’s text. (Cassius Dionysius’ very name reflects a mixed Graeco-Latin cultural background. One wonders whether his translation of Mago might have been made from the Latin rather than the Punic text.) It would also account for the material in common with Anatolius, who used Cassius Dionysius via Diophanes; and for the similarity of Eumelus’ text to a passage on heart-disease which appears in Theomnестus attributed to a certain Cassius. Both authors prescribe bloodletting from the legs and silphium administered as a drench with honey and warm water; one may note that whereas Eumelus uses ἱάσαρον (laser), the Latin name for the plant, and Cassius/Theomnêstus the Greek σίλφιον, the amount in each case is described as the size of a bean (κύάμος).52

Eumelus

Καρδίας πώς διαγιώσκεται, ἡνίκα ὃ δεξιός ὀφθαλμὸς διακρίει καὶ βαρύτερον ἀναπνεῖ, καὶ ἐπὶ τὰ γόνατα πίπτει. τοῦ αὐτοῦ, καθὼς προειρήκαμεν, αἶμα λαμβάνειθαι, κρῆθων ἀπεχέσθαι, ἐγχυματιζέσθαι δὲ διὰ τοῦ ἄρσενου μυκτῆρος οὖσα . . . ἐὰν δὲ ἐπιμεινῇ, αἶμα ἀπὸ τῶν σκελῶν λάμβανε, καὶ μετὰ ταῦτα λασάρον ἰώτης ὡς κύάμον μέγεθος, καὶ νίτρων ἰσον, μετὰ μελίτος δεξιάθόω β, καὶ ὕδατος θερμοῦ κοτύλων δ’ καὶ δεξίως κοτύλην α’ μέξας δίδον αὐτῷ . . .

Disease of the heart is diagnosed when the right eye tears and it breathes more heavily, and falls onto its knees. From it, as we have said before, let blood be taken, let it be kept away from grain, and let it be drenched through the left nostril in this way . . . If it continues, take blood from the legs, and also mix silphium-root, as much as the size of a bean, and the same amount of natron with 2 oxybapha of honey and 4 cotylae of warm water, and 1 cotyle of vinegar, and give to it.

Cassius

Ἐὰν ἐπιπο ἐπὶ τὴν καρδίαν ὢνίμα ἐπιγενήται ἢ ἐτέρῳ τῷ πόνῳ, παρακολουθεῖ σταμάς, καὶ πίπτει ἐπὶ γόνατα, πάσχει δὲ τὸ σώμα καὶ μάλιστα τὴν κεφαλήν. ἦν οὖν ταῦτα πούρη, ἐγχυματίζετε αὐλφίῳ ὅσον κύάμον, καὶ μέλιτος γο β’, καὶ νίτρων γο γ’, πέμπει εἰς τὸ μέλι ὦδατος ξε. β καὶ τεθέρμαιμον ὦδους ἐπίβαλε καὶ ἐγχυματίσον καὶ περιβάλλων αὐτὸν διακίνει, ἐγχυματιζέσθω δὲ ημέρων τριῶν, χάρτῳ δὲ κεχρήσθων χιλιάρῳ τῇ ἀγρώστει, καλόν δὲ μηδίκη. ἦν δὲ μὴ ἵγιάς, αἶμα ἀφελε αὐτοῦ ἀπὸ τῶν ἐμπροσθών ποδῶν ἐσωθεὶ τῶν γοιάτων [καὶ β] τῶν ὀψιθῶν καὶ ἱγιάσεις. δεδοκίμασται.

If flux, or any other disease, attacks a horse in the heart, a spasm follows, and it falls onto its knees, and the body suffers, especially the head. If it does these things, drench with silphium (as much as a bean), and 4 oz honey, and 3 oz natron, and put into the honey 2 xe. water, and put in warmed vinegar and drench and covering it make it move. And let it be drenched for three days, and let green dog’s-tooth grass be used, and lucerne is good. If it does not become healthy, draw blood from it from the forelegs inside the knees, and the hind, and you will make it healthy. It is tested.

The only other name associated with Eumelus, that of Hieron, also appears in Varro’s list of Greek writers on agriculture.\textsuperscript{53} Another indication that the common source belonged to an agricultural context is a treatment for hooves that are worn, recommended by Columella for oxen injured in ploughing; Eumelus and Pelagonius, who prescribe the cure for horses, both note that the treatment is appropriate for use in cattle as well:\textsuperscript{54}

\textbf{Eumelus}  
\'Εὰν ύποτρίψῃ ζώον, θερμώ προσήκει ὑδάτι πυραίξεοσθαι, ὄξυνε γίγα τε ἀπαλείψεοσθαι, καὶ ἐπὶ δόστρικον ζέωντος ἀποτίθεοσθαι, μέχρις ὃ ἐπὶ πράσων ἐνέγκη. λοιπὸν δὲ μετὰ τύτα ακόρδῳ καὶ θέασθαι λελειμένων χρῆσθαι, ἐπικαίειν αὐτὶ ἕως ἡμέρας τριαί. τούτῳ καὶ βούσι βοηθεῖ καὶ ἀρμόζει γίνεσθαι.

If an animal suffers from wear (of the hoof), it is correct for it to be fomented with water, and to be anointed with axle-grease, and to be placed on a red-hot potsherd, as long as it bears it calmly, And then after that use crushed garlic and sulphur, firing it with a red-hot iron for three days. And this also cures cows and is suitable to use.

\textbf{Columella}  
Si talum aut ungulam vomere laeserit, picem duram et axungiam cum sulphure lana sucida involvito et candente ferro supra vulnus inurito.

If the hoof or the pastern is injured by the ploughshare, let hard pitch and axle-grease be wrapped around it with sulphur and greasy wool, and let it be burnt with a red-hot iron above the wound.

\textbf{Pelagonius}  
Pedes subtritos foveri aqua calida oportet axungiaque ungi, dehinc testam candentem ungulis adnoveri, donec impatienter ferat; allio post et sulphure simul contrito <...> lamina candente inuris bis in die per triduum. id etiam bubus fieri convenit.

It is right for worn feet to be fomented with hot water and to be anointed with axle-grease, and then for a red-hot potsherd to be applied until it becomes impatient; and then after that garlic crushed together with sulphur <...> fire it with a red-hot iron plate twice a day for three days. This also may be used for cows.

Although Apsyrtus appears to refer to Eumelus’ words in his treatment of the same subject (περὶ δὲ τῶν ἐπικαίεων πολλοῖς εἰρήναι πολλά, ‘many things are said by many people on the subject of firing’), he offers substantially different advice, and therefore cannot be Pelagonius’ immediate source.\textsuperscript{55} Indeed, the chapter on lameness in cows in \textit{Geoponica} VII, though not identical, contains recommendations for fomenting the foot and anointing it with fat, as well as references to the use of a potsherd and a red iron.\textsuperscript{56}

\textsuperscript{53} Varro I.1.8. \hfill \textsuperscript{54} Eum. M666 = B104.6, \textit{CHG} I p. 363; Col. VI.15.1; Pel. Lat. 254.  
\textsuperscript{55} Aps. M663 = B104.5, \textit{CHG} I p. 363. \hfill \textsuperscript{56} Geop. XVII.1–2.
Given Eumelus’ links to the agricultural tradition, it is not surprising there are similarities between his text and that of Anatolius, both in the Hippiatrica and in Geoponica XVI. There are instances in which the four authors coincide, such as the remedy for nosebleed:57

Eumelus

รามον αἷματος τὴν
dia ῥυμὸν ἱστησιν
colleáðron χλωροῦ
χυλὸς.

The juice of green

coriander stops the

flow of blood from

the nostrils.

Anatolius

Εἶπον δὲ διὰ ῥυμὸν
ἀλμα φέρον, ἡγεῖν
χρή κοράνων
ἀπὸν διωλήσατες.

If it is bleeding

from the nostrils,

one ought to pour

in strained corian-
der juice.

Columella

Non nunquam etiam
per nares profluvium
sanguinis periculum
adultit, idque repres-
sum est infuso nar-
ibus viridis coriandri
sucō.

Sometimes bleeding

from the nostrils is
dangerous, and it is
stopped by the juice
of green coriander
poured into the nos-

trils.

Pelagonius

Item aliud Columel-

lae. si sanguis per

nares fluxerit, per-
culum adfert; quod
reprimitur infuso
naribus viridis
coliandri sucō.

If blood flows from

the nostrils, it is
dangerous; it is
stopped by the juice
of green coriander
poured into the

nostrils.

In the case of nausea, there is no equivalent text in Pelagonius.58

Eumelus

Ναυτιασμὸν καὶ τὸν περὶ τὰ
αταί πλάδου παῖνε . . .

Nausea and wateriness

about the food is stop-

ped . . . by crushing one

head of garlic with a

hemina of

wine and administering it

through a horn, you will

make it ready to eat.

Columella

Sed et nausea discutitur, si
caput ali tritum cum vini
hemina saepius potandum
praebet.

Nausea can also be stopped

by frequently giving a

bruised head of garlic in a

hemina of wine to drink.

Anatolius

Ναυτιών τις ἑθέραπεσεις
ακορόδου κατύχη τὸ ὅλον
μίξης καὶ δίδοίς.

You will cure those with

nausea by mixing garlic with

one cotyle of wine and

administering it.

Even in these short passages, small details—the word green, the measure of wine to be administered—link Eumelus with the Latin writers. The resemblance is seen in longer passages too, as is the case in treatments for thinness.59

57 Eum. M443, CHG II p. 63; Anat. M3 = B1.23, CHG I p. 10 = Geop. XVI.4.5; Col. VI.33.2; Pel. Lat. 307.
59 Eum. M88 = B68.4, CHG I p. 265; Col. VI.30.1; Anat. M1066, CHG II p. 103 = Geop. XVI.3.
In one instance, though, a passage on diarrhoea in *Geoponica* XVI provides a closer parallel to Eumelus than do Columella or Pelagonius.\(^{60}\) This led Oder and Hoppe to suggest that Eumelus was used by Anatolius.\(^{61}\)

---

60 Eum. M621, *CHG* II p. 77, also attributed to Eum. in C22.2, *CHG* II p. 159; Anat. in *Geop.* XVI.8; present in the Syriac, XIII.37.

61 *CHG* II p. ix.
Eumelus

If the stomach is flowing, let blood be taken from the veins of the head. Let it drink warm water with barley flour. And pomegranate fruits, cut up and injected through the mouth, also stay the stomach when it is flowing.

It is perhaps more likely that Eumelus and Anatolius used similar sources. Indeed, a remedy for cough in the third-century Kestoi of Julius Africanus—one of Anatolius’ sources—appears to be related to Columella and Eumelus:62

<table>
<thead>
<tr>
<th>Eumelus</th>
<th>Columella (horses)</th>
<th>Julius Africanus</th>
<th>Anatolius</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tēn neamōn bêcha idai faikes</td>
<td>Recens tussis celeriter sanatur pinsita lente et a valvulis separata minuteque molitae.</td>
<td>Ἰππον βήσασθι θεραπεία φακός ἐπτιθεμένος, ἤν δίχα τῶν ἐλάτων ἄκρος ἀλέας ἡ λειώσας ἁμα ἱδατι ποτίσεις.</td>
<td>Ἀρχόμενων βήστεων ἀλευρα κρίθια, ὁ ὀρέβουν ἡ κυάμοι μιχθέτων, διδάναι χρή πειν...</td>
</tr>
<tr>
<td>ἀλήλεσμενής καὶ ἀπολεπσαμένης</td>
<td>Quae cum ita facta sunt, sextarius aquae calidae in eandem mensuram lentis miscetur, et faucibus infunditur...ac viridibus herbis cacuminibusque arborum recreatur aegrotum pecus.</td>
<td>μέτρον δὲ τὸ ὀστρεῖον ξῦφω παντὶ καθ’ αὐτὸ ἐξέστον τέταρτον ἀν εἰς σύμμετρον.</td>
<td></td>
</tr>
<tr>
<td>ἀλευροῦ, ἢ πίσσου [πίσου] ὁμίων ἡλεμένου καὶ κεκαθαρμένου</td>
<td>ἀλευροῦ μετὰ ὑδάτος έξεστον α’ διὰ κέρατος διδόμενον.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>τὰ μέντοι νοσοῖντα ξύα ἢ χλόη ἢ δένδρων ἀπαλῶν</td>
<td>ἀκρεμιάσα τρεφέθησθω</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ἀκριβεῖα τῆς κατὰ φύσιν ὑγείας.</td>
<td>μέχρι τῆς κατὰ φύσιν ὑγείας.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Flour of lentils, ground without their husks, heals a new cough, or flour of pea, similarly ground and cleaned, administered though a horn with 1 xestes of water. Let the ailing animals be fed either green grass or the tender tips of trees until a natural state of health [is restored].

A cough which has just begun is quickly cured with crushed lentils separated from the husks and pounded into minute fragments. When this has been done, a sextarius of hot water is mixed with the same quantity of lentils and poured down the animal’s throat; ... and the sick animal is strengthened by a diet of green grass and tree-tops. A cough of long standing can be dispelled by pouring down the throat on several days three cyathi of leek-juice in a hemina of oil ... if the cough continues ... some [give] leek-juice and oil, and the root of wild rue.

The treatment for a horse with cough is pounded lentil, which you grind or pound fine without the husk, and administer as a drink with water. Let the amount of the pulse for every animal be the same in measure as a fourth of a xestes.

To one who has begun to cough, it is necessary to give to drink barley flour mixed with vetch-seeds or beans ...

We see that Eumelus, Columella, and Anatolius both begin by describing the cough as ‘new’, Africanus and Columella agree in describing the pulses as finely ground, and leek and oil is recommended by Columella and Anatolius. Africanus used at least one agricultural manual, that of the Quintilii—could it have been his source in this case?

A number of peculiarities of language assembled by Oder, Hoppe, and Adams indicate that Eumelus is following a Latin text. The matter is complicated by the fact that both the texts of Eumelus and Pelagonius are written in a mixed language, and that both survive in a mangled state; that the Teubner edition of the Hippiatrica presents the rewritten text of the B recension can also be misleading.\(^{63}\) We have seen that both ‘the Greeks’ and ‘the Romans’ are quoted in the glanders passage, and that Pelagonius cites the Greek medical terms in Greek script. The use of Greek words is conventional in

\(^{63}\) Some phrases identified by Adams as differences between Eumelus and Pelagonius are in fact the result of rewriting in B: the text of M preserves a reading equivalent to Pelagonius’ Latin. M127, apparatus to B52.8, *CHG* I p. 232; M128, apparatus to B52.9, *CHG* I p. 233 = Pel.194; cf. ‘Pelagonius, Eumelus’, 13 and 17.
Latin medical texts; the use of Latin words conventional in Late Antique Greek, especially in low-style and technical texts. Latin words present in the glands passage, φάβα and φούρνος, are everyday loanwords commonly used in Late Antique Greek; παστίλλος, a medical term, falls into the same category: they do not offer conclusive proof that the source of the passage was in Latin.64 Elsewhere, Eumelus uses other loanwords such as στάβλον (stabulum, stable),65 and στείκλον (speculum, mica or talc).66 Another sort of borrowing is seen in the excerpt on strangles, where Eumelus uses the Latin term for the disease, glandula ‘little acorns’ transliterated into Greek (γλάνδουλα), with an explanation that it is a vulgar or laymen’s term:

\[\text{παρωτίδας ἢ χοιράδας, ἀπερ τινὲς ἰδιώτερον γλάνδουρα (sic) προσαγορεύουσαν... tà λεγόμενα γλάνδουλα}.67\]

strangles or scrofulous swellings in the glands of the neck, which some call by the common name glandoura... the so-called glandoula.

Greek might have been, as Pliny says, the language of medicine par excellence,68 but pragmatism dictated that Late Antique medical writers use, or at least be familiar with, Latin terminology: thus Dioscorides gives Latin synonyms for plant names transliterated into Greek;69 and tables showing the equivalence of Greek and Latin weights and measures were compiled.70 Where Eumelus prescribes a plant called σατύριον for a wound, Oder, noting that in a parallel passage of Pelagonius satureia—which in Greek is θύμβρα, thyme—is prescribed, suggested that Eumelus’ text originally had the Latin plant-name in transliteration, σατουρεία, as it appears in the lists of synonyms attached to Dioscorides.71 However, Adams identifies in Eumelus’ use of σατύριον simply a careless rendering of satureia using a similar word, one which in Greek denotes, however, a different type of plant, one used as an aphrodisiac.72 An instance, identified by Oder, in which Eumelus’ phrasing may be explained by

64 Φάβα, φούρνος M29, CHG II p. 32; παστίλλος M30, CHG II p. 33, M1081 = B130.143, CHG I p. 427; cf. Viscidi, I prestiti latini nel greco antico e bizantino. The same loanwords are used in the Latin translation of Pelagonius.
65 στάβλον M427 = B29.8, CHG I p. 149; M968, CHG I p. 418, apparatus; σταβλίζω M88, CHG I p. 265 apparatus.
66 στείκλον M1089 = B130.150, CHG I p. 429.
67 M107, altered to γλάνδουλας in B16.4, CHG I p. 90. 68 NH XXIX.17.
69 Long lists of synonyms in other languages were added to his text later. See Wellmann, ‘Die Pflanzennamen bei Dioskurides’, 360–422.
70 See the various examples of these appended to the Hippiatrica, CHG I pp. 440–6.
71 M250, CHG II p. 50 and apparatus; Pel. Lat. 313; cf. Diosc. ed. Wellmann III.37 θύμβρα... 'Ρωμαϊκά σατουρείματα.
72 'Pelagonius, Eumelus', 21. On words which sound the same, but have different meanings in different languages, see Biville, 'The Graeco-Romans and Graeco-Latin', 99–100.
use of a Latin source is the phrase τά δώτα συνεχώς ὁσπερ λαγχάνων κυεί, ‘it constantly moves its ears as though drawing lots’, where Pelagonius has auriculis micat, ‘it flicks its ears’. In the Graeco-Latin glossaries, λαγχάνω is defined as mico, and micat as λαγχάνει, λάμπει. Adams describes Eumelus’ words as ‘blatant translationese’.

In a passage on fistula, Adams identifies Eumelus’ phrasing ἐκ βάθους as a failure to translate decusatim, a rare word in Latin. Decusatim itself is of course the equivalent of χιωστῶς, ‘X-shaped’, a term conventionally used in Greek in medical and technical texts.

Eumelus’ apparent use of a source in Latin is worthy of note, since it implies that in veterinary medicine, unlike in human medicine, the influence of Latin texts on Greek writers was as important as the reverse. If we were better informed about Eumelus’ birthplace, and the circumstances in which his treatise was composed, we could perhaps explain his possible bilingualism, his access to copies of Latin texts, and his reasons for translating them, if indeed he was the one who did so. It is also interesting that a Latin technical treatise whose author refers clearly to Greek sources should have been translated into Greek; the same, of course, occurred somewhat later in the case of Pelagonius. If Eumelus’ source was indeed the agricultural section of Celsus’ encyclopaedia, it is noteworthy too that Celsus’ Greek sources were also in circulation: Diophanes was used by Anatolius around the fourth century AD, and Cassius Dionysius seems have been used by Theomnestus at the same time. Apsyrtus, too, seems to have used, in addition to Eumelus’ own work, a related and fuller agricultural text: its identification is made easier by the fact that he quotes Mago by name.

It is evident that Eumelus did not alter his source very much, or have much concern for stylistic change or scientific improvement. He seems to have transcribed this source uncritically. One might see a shade of criticism in the phrase ‘some people think such animals [coughing because of a ruptured lung] have swallowed bones’ (τά τοιαύτα οὖν ζωό τινες ὁστέα καταπεσωκέναι νομίζονται), but what we have seen of Eumelus’ modus operandi would suggest that the criticism was already present in his source. And indeed, his text also contains a prescription for a drench of cress-seed in wine and oil for the swallowing of a bone (πρὸς ὁστέου κατάποσιν). The Geoponica advises that

---

73 M309, altered in B101.6, CHG I p. 349. CHG II p. ix; see Goetz and Gunderman (eds.), Glossae latinograecae et graecolatinae, pp. 129 and 357.
75 Ibid. 17; Eum. M1088 = B130.149, CHG I p. 429.
76 See Politian’s essay on the two words, Miscellaneorum Centuria Secunda, ed. V. Branca and M. Pastore Stocci (Florence, 1972), ch. 42, pp. 65–7.
77 As noted by Fischer, ‘Probleme der Textgestaltung’, 256–7.
78 Eum. M536, CHG I p. 44.
‘a cow will not swallow a bone, if you hang the tail of a wolf on the manger’ (οὐκ ἄν καταπίῃ βοῦς ὑστόν, εἰ λύκον οὐράν ἐπί τὴν φάτνην κρεμάσεις).

Even the syntax of the source appears to be unchanged: Adams has remarked that passages in Pelagonius which correspond to Eumelus are characterized by use of the passive imperative and the verb levigo, the passive imperative and the verb λειώω are also frequently used by Eumelus himself. The structure of Eumelus’ text is simple: symptoms, σημεία, are listed, followed by remedies, usually called βοηθήματα. The sick animal is often described using κάμνον: αὐξεῖς οὖτως τὸ κάμνον. Occasionally the aetiology is given: τούτο τοῖνυν αὐξιάνει, ὑπηρίκα. But symptoms and aetiology are often omitted, and only the treatment presented.

Instructions for treatment are usually introduced by the phrase θεράπευε οὖν οὖτως, or δεί or χρῆ + infinitive, but also using the third-person passive imperative. Remedies are often described as being helpful: τὸ δὲ αὐτὸ βοηθήμα ταῖς φρεγμοι αἰσθανόμενοι ὀψελεῖ. Elements of low style in Eumelus’ writing include use of the word κοινός, ὑπάρχω for ‘to be’: ἀλλιράπ εὑρον ὑπάρξῃ τὸ νόσημα, and βασανίζω in the sense of ‘to vex’. The verb προσάγω is usually used for ‘administer’.

Eumelus rarely uses two technical medical terms which occur frequently in the other veterinary writers, namely the verb for bloodletting, φλεβοτομεῖν, and that for administering a drench or potion, ἔγχυματίζειν; but prefers instead the phrases αἷμα λάμβανε or αἷμα ἀφαίρει, for the former and διὰ τῶν μυκτήρων ἔγχυε or


80 'Pelagonius, Eumelus', 7–15.

81 τῶν πνευμονικῶν σημεία τάδε M535 = B5.3, CHG I p. 41; τῆς ὑγρᾶς χολῆς σημεία ταῦτα, τῶν χολερικῶν σημεία ταῦτα M640–1 = B75.11 and 12, CHG I p. 291.


83 M318, CHG II p. 55; M1079 = B130.141, CHG I p. 427.

84 M29, CHG II pp. 31–2; M536 = B6.4, CHG I p. 44; M578 = B31.7, CHG I p. 159; M639 = B75.10, CHG I pp. 290–1; M1081, CHG I p. 427 apparatus.

85 M988 = B80.3, CHG I pp. 151–2; M681 = B107.3, CHG I p. 368.

86 M550 = B40.3, CHG I p. 207; M581 = B66.8, CHG I p. 261; M631, CHG II p. 79; M427 = B29.8, CHG I p. 214; M640–1 = B75.12, CHG I p. 291; M1094, CHG II pp. 107–8.


88 M117 = B18.3, CHG I p. 93.

89 κοινότερος M988, CHG I p. 151.

90 M30, CHG II p. 33.

91 M578 = B31.7, CHG I p. 159.

92 M364 = B11.8, CHG I p. 64; M535 = B5.3, CHG I p. 41.

93 M30, CHG II p. 33, M641 = B75.12, CHG I p. 291.
Worthy of note is a use of προστιτίζω for ‘to drench’; the word only occurs elsewhere in the *Hippiatrica* in the Greek translation of Pelagonius. 'Εγχυματιζειν occurs in the treatment for heart trouble similar to the one Theomnestus quotes from Cassius.

Conspicuous is the absence from Eumelus' text of the hippological material which is a characteristic feature of the other texts which belong to the agricultural tradition. Likewise absent are instructions for breeding or for care of the foal, although there are two treatments relating to parturition. Of course, such material may simply have been lost along with (possibly) the introduction of the treatise. In certain cases where recipes are given alone, we may suspect that a description of symptoms has been lost: for example, the excerpt from Eumelus on horses poisoned by consuming bird droppings consists only of a remedy, with no introductory description of the condition. Once again, in this instance, Apsyrtus’ wording is close to Columella’s, and seems to indicate either that Eumelus’ text was originally fuller, or that Apsyrtus is using Eumelus’ source.

---

**Anatolius in Geop. XVII**

<table>
<thead>
<tr>
<th>Columella</th>
<th>Apsyrtus</th>
<th>Eumelus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cavendum quoque est, ne ad praesepia sus aut gallina perrepat. Nam haec quod desidit immixtum pabulo, bubus afferit necem.</td>
<td>Τὰς φάτναις μὴτε ὅρεις μὴτε υὲς προσιέτωσαν ἐκατέρων γάρ ὡς κόπρος εἰ βραυθείς, ἀδικεῖ τὸ ἱεὺρον.</td>
<td>Συμβαίνει τὰς ὀρνίθας ἐν ταῖς φάτναις ἐντίκτειν καὶ ἀφοδεύειν ἔγρον. τοῦτο ἐὰν προσλάβῃ ὁ ἐπίπος τράγον τὸ ἀφόδευμα καὶ κατασφάγχ, ὀχλεῖται καὶ κυνικοῦσα... κόπρον τὴν ὀρνίθαιν λευκῆ καὶ στάτας ὁλχήν μίαν κόπρον ὄρνιθος τρίθαντα, μέξαν λαβὼν ὡς γα. α’, ἀλλότιος χοῖνιξ Ἐ, μετὰ τηλίνου</td>
</tr>
</tbody>
</table>

---


95 M536 = B6.4, *CHG* I p. 44.


97 πρὸς εὐτοκεῖαν, πρὸς τὸ ἐκβαλεῖν τὰ δευτερεῖα τῆς φοράδος, M1036 and 1037 = B15.5–6, *CHG* I p. 87.


Comparison with Pelagonius shows that Eumelus consistently adapted his source in one way: whenever a chicken or a puppy is called for in Pelagonius’ recipe for broth, Eumelus’ version only calls for a chicken.\(^{100}\) (Apsyrtus, too, calls for both chickens and puppies.) Perhaps Eumelus was fond of dogs, or considered their consumption taboo.

Although, as we have said, aetiology does not feature prominently in what is preserved of Eumelus’ text, particular attention devoted to bile reflects a theory of humours.\(^{101}\) Dry bile is caused when bile fills up the area around the heart (ἡμίκα τὰ περὶ τὴν καρδίαν χολῆς εἰς την πεπληρωμέναν). Cholera (χολέρα, ‘biliousness’) is to be treated with bloodletting from the neck: the vein should be opened with a lancet, and if the blood is livid and in a bad state it should be allowed to run out until it flows clean (σμιλέως ἣ φλέβῃ ἐπανοιγόμεθα, καὶ εἰ μοχρόν καὶ πελευδὸν εἰς τὸ αἷμα, μέχρι καθαροῦ αἵματος ῥέωσις ἀπορρεῖν συγχώρει). Similarly, he explains that ailments of the windpipe are caused by bile obstructing the passage of the blood (τῶν τοιούτων νοσημάτων χολῆς αἵματις ἐμποδιζούσης τὴν αἵματικὴν πάροδου; this passage is not present in

\(^{100}\) As noted by Adams, ‘Pelagonius, Eumelus’, 16, 19.

\(^{101}\) M638 = B75.9, CHG I p. 289; cf. Col. VI.30.8; M639 = B75.10; M640 = B75.11; M641 = B75.12, CHG I pp. 290–1.
Columella or Pelagonius. Eumelus’ remedies, for the most part, call for *materia medica* native to the Mediterranean; however, a drench for pneumo-nia includes nard, saffron, myrrh, sweet rush, cassia, and white pepper: a more sophisticated dispensary than that of Columella.

‘TRADITIONAL’ AND SUPERSTITIOUS TREATMENTS

There are a number of superstitious or symbolic elements in Eumelus’ text; these reappear in other authors, whether via Eumelus or Apsyrtus or Eumelus’ source. One of these is the use of sympathetic treatments: application of the animal’s own blood or faeces. Blood let from the legs and mixed with frankincense is to be rubbed into bruised shoulders against the direction of growth of the hair (ἀνὰ τρίχα); the bleeding of the wounds is to be stopped with dung. For those with breathing trouble (ἀπόθοπνοια), blood is to be let from the back, chest, or shoulders, and applied in the same way.

Recurring throughout Eumelus’ text is the recommendation that medicines be administered through the left nostril, διὰ τοῦ ἀριστεροῦ μυκτῆρος (eleven occurrences in the *Hippiatrica*), or, less frequently, the right one. Less precision is found in Pelagonius, who mentions the left nostril six times and the right four times. The left side was conventionally held to be weaker than the right, and (according to Aristotle) colder. Columella’s prescriptions are not specific in this respect apart from a single instance. Julius Africanus, too, recommends administering a drug through the left nostril, κατὰ τὴς εὐωνύμου ῥινῶς.

102 M1094, *CHG* II p. 108.
103 M535 = B5.3, *CHG* I p. 41; cf. also M536 = B6.4, *CHG* I p. 44.
106 Pel. Lat. 204.4 = Eum. M29, *CHG* II p. 32.
108 The left nostril is mentioned only at VI.38.2, a passage we shall return to in our discussion of Apsyrtus. Col. does, in the section on breeding, mention the conventional association of left with female and right with male: VI.24.3 and (quoting Democritus) VI.28; cf. Varro II.5.13, where Aristotle is cited. On this association in Aristotle and Soranos, see G. E. R. Lloyd, *Science, Folklore, and Ideology: Studies in the Life Sciences in Ancient Greece* (Cambridge, 1983; repr. London, 1999), 34 ff. and 175 ff.
Fasting and spitting, often called for as part of a magical ritual, are specified in a cure for scars in the eyes:\textsuperscript{110}

\textbf{Eumelus}

\begin{tabular}{p{0.3\textwidth}p{0.3\textwidth}p{0.3\textwidth}}
\begin{itemize}
\item Cicatrices oculorum ieiuna saliva et sale defricatae extenuantur vel cum fossili sale trita sepiae testa vel semine agrestis pastinacae pinsito . . .
\item By fasting, chewing salt, and spitting it at them you will diminish them. Or grinding a cuttlebone, use it. Or the seed of wild grapes, cut up . . .
\end{itemize}
\end{tabular}

\textbf{Columella}

By fasting, chewing salt, and spitting it at them you will diminish them. Or grinding a cuttlebone, use it. Or the seed of wild grapes, cut up . . .

\textbf{Pelagonius}

Cicatrices oculorum ieiuna saliva et sale defricatae extenuantur vel cum sale trita sepiae testa vel semine agrestis sinapis pinsito . . .

\begin{itemize}
\item Scars of the eyes are diminished by being rubbed with fasting saliva and salt or rock salt pounded with cuttlebone or with the crushed seed of wild parsnip . . .
\item Scars in the eyes are diminished by being rubbed with fasting saliva and salt or with ground salt and cuttlebone or the ground seed of wild mustard . . .
\end{itemize}

Two superstitious remedies included by Eumelus are not found in Pelagonius, Columella, or Anatolius:\textsuperscript{111}

\begin{itemize}
\item For boils. If the horse should have boils, before they fill with pus, seizing them with three fingers, say, 'I defeat you!'
\end{itemize}

The other magical cure, specifically identified as a \textit{φυσικόν}, is an amulet against cough added to the list of remedies shared with Columella:

\begin{itemize}
\item \textit{έστι δὲ καὶ φυσικόν δόκιμον, ἐὰν λάπαθον ἄγριον ἐν ἀείραιοι μετὰ τῶν φύλλων καὶ τῶν βάλεόν εἰς βάκος ἐνδήσας τῷ τραχύῳ περιάφις. τούτῳ χρώ ὡς δοκίμῳ.} \textsuperscript{113}
\end{itemize}

And it is a tried-and-true amulet, if you affix to the neck one complete wild dock plant with its leaves and its roots, having tied it up in a rag. Use this, for it is tried-and-true.

\textsuperscript{110} Eum. M363 = B11.35, \textit{CHG} I pp. 68–9; Pel. Lat. 437 = M422, \textit{CHG} II p. 62, Col. VI.33.1 see the discussion of fasting in magic by Adams, \textit{Pelagonius}, 20–2, 29–30, where this passage is mentioned.

\textsuperscript{111} Pelagonius’ text contains many more spells. Columella, though he recommends the use of hellebore, as we have seen, and a shrew-mouse amulet (VI.17.6), had an aversion to some types of magic, and warned that soothsayers ought not to be allowed on the farm. (I.8.6).


\textsuperscript{113} M470, \textit{CHG} II p. 67.
The amuletic use of dock against scrofulous swellings in the glands of the neck is described by Dioscorides:

καὶ ἐνδέρματι δέ τινες χρώνται ταῖς βίζαις πρὸς χοιράδας, περιμέτροτες τῷ τραχήλῳ.\textsuperscript{114}

And some use the roots as an amulet for scrofulous swellings, affixing them as an amulet to the neck.

It is also prescribed in the \textit{Geoponica}, though for a different ailment:

τοῦ ἀγρίου λαπάθου ὁ καρπὸς καρδίαν καὶ δυσεντερίαν ἱάται, μετὰ οἶνον πυμόλενος. περιμέτρομενος δὲ τῷ ἀριστερῷ βραχίονι, γυναικὸς ἀτοκίας ἱάται.\textsuperscript{115}

The fruit of wild dock, drunk with wine, heals the heart and dysentery. It heals a woman’s barrenness when affixed as an amulet to the left wrist.

Eumelus’ magic is very simple, belonging in the category of ‘old wives’ tales’. We shall see that other authors use a more sophisticated magic.

\textsuperscript{114} Diosc. II.114. \textsuperscript{115} Geop. XII.38.
Apsyrtus

It is no accident that Apsyrtus’ treatise was chosen to be the foundation of the *Hippiatrica*. Not only is it the most extensive work on horse-medicine in Greek, but its relation both to earlier and to later writers makes his treatise the axis, so to speak, through which nearly all surviving Greek and Latin veterinary texts are linked. Although its content is based upon written agricultural and medical tradition, Apsyrtus interacts with those traditions, citing his predecessors with criticism or with praise, and adding discoveries of his own. His treatise, probably composed in the late third or early fourth century, was adopted without delay as the new classic, as we may see from the evidence of other veterinary manuals in the *Hippiatrica*, which not only make use of its content, but also imitate its literary form.

**APSYRTUS’ TEXT**

Apsyrtus contributes the lion’s share of text to the *Hippiatrica*, some 372 excerpts of 1223 in M. Seven excerpts in B are not present in M; nine are added by C. Theomnæstus cites Apsyrtus by name repeatedly; while Hierocles paraphrases nearly every chapter of the text. A number of passages from Apsyrtus appear in word-for-word translation in the *Mulomedicina Chironis*, which contains, moreover, two chapters attributed to Apsyrtus which are not extant in Greek; the date of the compilation, however, is not certain. The Latin author Vegetius appears to have known this translation, providing a *terminus post quem* of the late fourth or early fifth century. Pelagonius, who

---


2 Excerpts attributed to Apsyrtus in M but anonymous in B listed CHG II pp. vii–viii; additions from C in Oder, ‘De hippiatricorum codice Cantabriensi’, 58.


used Apsyrtus both as a source of content and as a model of literary style, worked from the Greek text rather than the Latin translation. Apsyrtus is mentioned in the false attributions in *Geoponica* XVI, and also (along with Simon and Xenophon) in the title of the collections of hippiatric texts in three manuscripts. A note in cod. Vindobonensis philol. gr. 284 (late fifteenth century) describes him as a *philosophus summus*.

**APSYRTUS’ IDENTITY**

In contrast to the text of Eumelus, which is frustratingly uninformative about its author, Apsyrtus’ treatise is a highly individualistic document written almost entirely in the first person; moreover, it evokes the atmosphere of his society and his times through an abundance of concrete detail. Apsyrtus tells the reader a certain amount about himself in the dedication of the treatise which, prefacing the letter on fever, opens both the M and B recensions of the *Hippiatrica*.

*Στρατευόμενος ἐν τοῖς τάγμασι τοῖς ἐπὶ τοῦ Ἰστρον ποταμοῦ ἔγων τὰ αὐθαίρετα τοῖς ἵπποις, ἐν ὄλι καὶ διαφωνοῦσαν, ἀναλεξόμενος οὖν ταύτα (αὐτὰ *M*) καὶ τά πρὸς αὐτὰ βοηθήματα προσφωνήσω σοι, φιλήτατο Ἀσκληπιάδη, τούτο τὸ βιβλίον, ὅτι μοι ποιήτη καὶ ἱστρῷ μεγάστρῳ.*

While campaigning in the legions that are on the Danube river, I learned about the accidents that befall horses, and those in which they die. Having gathered these, and the remedies for them, I dedicate this book to you, dearest Asclepiades, since you are my fellow-citizen and a very great doctor.

This passage is echoed by an entry in the *Souda*:

*Ἀφυρτός Προυσαίες (ἡ) Νικομηδείας στρατιώτης στρατευόμενος ἐπὶ Κωνσταντίνου τοῦ βασιλέως ἐν Σκυθίᾳ παρά τὸν Ἰστρόν ἱππιατρικῶν βιβλίων οὕτως ἐγραφεὶ καὶ φυσικῶν περὶ τῶν αὐτῶν ἀλόγων, καὶ ἄλλων.*

5 Vat. gr. 114, fo. 118r; Vat. gr. 1066, fo. 1r; and Vat. Ott. 388, fo. 41r.

6 A. Ludwich, *Die Homerische Batrachomachie des Karers Pigres* (Leipzig, 1896), 480, identifies the MS as the notebook of an Italian humanist. A list of names contains on fo. 72r the entry: ‘Ἀφυρτός, ὦν non dico fratrem medeae: sed de quo nunc loquor philosophus summus fuit: et plurimos libros de medicina animalium fere omnium conscripsit poitus divinitus quam humane’ (Apsyrtus, -ou: I don’t mean the brother of Medea, but the one of whom I speak was a great philosopher, and he wrote many books on the medicine of nearly all animals, more divinely than humanly).

7 M1 = B1.1, CHG I p. 1.

8 Apsyrtus’ use of the word with this meaning noted by Casaubon in his copy of the Basel edition of the *Hippiatrica*, BL 779 e. 4, pp. 1 and 124; also by C. B. Hase, with criticism of Ruel’s translation of the term as despondet: Leonis Diaconii Historiae libri X (Bonn, 1828), p. 406.

9 S.v. Ἀφυρτός (Adler, A 4739). Adler attributes the notice to Hesychius. The information is presented in the order of biographies in the *Onomatologos*, which had a section on authors of
Apsyrtus: native of Prousa or Nicomedia, a soldier. He campaigned under the emperor Constantine in Scythia along the Danube. He wrote a book on horse-medicine and a magical work about horses too, and other things.

What are we to make of this information? Apsyrtus himself tells us that he was a soldier, and his statement is corroborated by references throughout the text to elements of military life, and to the Thracian and Sarmatian horses and horsemen whom he encountered on the Danube frontier. The term /C"˛6ı/C"˛3ØŒ/C"5/ is the equivalent of legio; unfortunately Apsyrtus does not give more specific information about the legions or camps to which he was attached.11

The statement in the Souda that Apsyrtus wrote a book on horse-medicine is obviously true. The term /C"˛6ı/C"˛3ØŒ/C"5/ implies some sort of magic: that Apsyrtus was conversant in this genre is confirmed by the presence, in the M recension of the Hippiatrica, of twenty-one spells under his name; it is unclear, however, whether these belonged to a separate book. It is likewise possible that the treatments prescribed for cows were collected in a separate volume, to which ἔτερα in the Souda refers: the preface to this work on cows is preserved in the Hippiatrica, as we shall see. That Hierocles and Theomnestus do not cite Apsyrtus’ magical prescriptions or cures for cows may be evidence that that material was presented separately, or may simply be a reflection of the interests of the later authors.

Apsyrtus’ name is an unusual one. The mythical Apsyrtus was, of course, the younger brother dismembered and cast into the sea by Medea.12 The name was not used in the Classical period, but appears, along with other mythological names, in the Imperial period, when such names were often given to slaves.13 The name is certainly not a Christian one, and there is little in the text to suggest that Apsyrtus was Christian. As we shall see below, the deities technical treatises, such as γεωργικά, οἰνομακοτικά, etc.: G. Wentzel, 'Die griechische Übersetzung der Viri inlustres des Hieronymus', Texte und Untersuchungen der altchristlichen Literatur, 13.3 (Leipzig, 1895), 1–2; idem, 'Hesychiana', Hermes, 33 (1898), 275 ff. But a number of Souda entries, as we shall see, appear to have been drawn from the Hippiatrica; this too may be one of them. The notice reappears in the prosopographical and mythological encyclopaedia compiled in the 11th c. by Eudokia Makrembolitissa, with the addition of the word /C˘˛0/ before στρατιωτης, and, in place of καὶ ἔτερα, the information that his work was in four books. J. B. d’Ansse de Villoison, Anecdota Graeca, 65.

10 H. J. Mason, Greek Terms for Roman Institutions (Toronto, 1974), 163.
11 For the legions stationed along the Danube, according to the Notitia dignitatum, see A. H. M. Jones, The Later Roman Empire (Oxford, 1964), vol. III, tables ix, p. 370, and xii, p. 378.
12 Apollodorus, ed. R. Wagner (Leipzig, 1926), I. 133–4. A number of place-names on the coast of the Black Sea were interpreted in antiquity as allusions to this episode: Ovid, Tristia III.2 on Tomis; Stephanus, s.v. Ἀψυρτίσκες, Τομεῖς.
13 Xenophon of Ephesus, writing in the 2nd or 3rd c. AD, uses the name for a character in his Ephesiaka (I.14.7, II.3.1, etc., along with e.g. Ἐξυπνος). ‘Apsyrtus’ appears in a number of Latin inscriptions from south Italy, around the 1st c. AD; LGPN IIIA, Ἀψυρτος 1–4. An appearance of
invoked in the spells that he prescribes illustrate only the syncretistic nature of Late Antique magic: Christ is present, but side by side with Jahweh and Abrasax.\textsuperscript{14}

There are two important points in the \textit{Souda} notice that are not confirmed by evidence in Apsyrtus' preface. The first is the mention of the emperor Constantine, which would place Apsyrtus in the early fourth century.\textsuperscript{15} Constantine campaigned against the Sarmatians in 323.\textsuperscript{16} Björck has pointed out, however, that the use of Apsyrtus' treatise by Theomnesterus creates a chronological puzzle. Theomnesterus describes how he accompanied an emperor \textit{\delta\iota\varsigma \phi\iota\lambda\omicron\omicron\nu\varsigma}, 'as a friend', from Carnuntum over the Alps for the latter's wedding. This emperor would appear to be Licinius, who travelled from Carnuntum to marry Constantine's sister at Milan in 313.\textsuperscript{17} Doubting that Theomnesterus would advertise his friendship with Licinius after that emperor's downfall in 324,\textsuperscript{18} Björck proposes that Theomnesterus composed his treatise between 312 and 324. This dating would not contradict a Constantinian date for Apsyrtus; the two authors would thus appear to be contemporaries. But Björck further argues that the phrase \textit{\delta\iota\varsigma \phi\iota\lambda\omicron\omicron\nu\varsigma} implies that Theomnesterus and Licinius were the same age. Since Licinius is said to have married at an advanced age, Theomnesterus would have been a similar age when he was writing, and according to Björck's reasoning, would in this case hardly have been likely to quote from a much younger colleague.\textsuperscript{19} Citing the frequency of the name Fronto among Apsyrtus' addressees, Björck assigns to Apsyrtus a date between AD 150 and 250, and dismisses the testimony of the \textit{Souda}, arguing that since most of the information in the notice may be drawn from internal evidence in Apsyrtus' text, the mention of Constantine must be a conjecture.\textsuperscript{20}

Björck's redating is not beyond doubt. Doyen-Higuet has pointed out that references to Licinius' age may be exaggerations for rhetorical effect.\textsuperscript{21} Moreover, it should be noted that Theomnesterus does not name the emperor

---

\textsuperscript{14} According to Oder, Apsyrtus was Christian; ‘Apsyrtus: Lebensbild’, p. 122.

\textsuperscript{15} This date accepted by Oder, ‘Apsyrtus: Lebensbild’, 121.


\textsuperscript{17} References to this event in Lactantius, \textit{De morte persec.} 45, Zosimus II.17, \textit{et al.} collected in M. Haupt, ‘Varia LIV’, \textit{Hermes}, 5 (1871), 23–5.

\textsuperscript{18} \textit{Damnatio memoriae} of Licinius, 16 May 324: \textit{Cod. Theod.} XV.14.1.

\textsuperscript{19} As we shall see below, the Arabic translation of Theomnesterus preserves many more quotations from Apsyrtus.

\textsuperscript{20} ‘Apsyrtus’, 9–12.

\textsuperscript{21} ‘The \textit{Hippiatrica} and Byzantine Veterinary Medicine’, 111–14.
with whom he travelled, which may well suggest that he was writing after Licinius’ disgrace. There is also the possibility that Apsyrtus served under more than one emperor, or that the name of an emperor—for example, Diocletian or Constantine Chlorus—was misread by a compiler or scribe. In fact not all manuscripts of the Souda have ‘Constantine’: ‘Constantius’ also appears as a variant. Apsyrtus does not say whether the Sarmatians with whom he came into contact were enemies or allies, which might have provided an indication of the date at which he encountered them. It seems likely that Apsyrtus wrote in the third or early fourth century.

Another difficulty is presented by the statement in the Souda that Apsyrtus was from Prousa or Nicomedia, whereas evidence in the text suggests that he was in fact a native of Clazomenae. In a mutilated lemma in M, and in the first lemma of L, Apsyrtus is given the epithet Ἐπχειλητης. Certainly an editor or scribe (especially the editor of L, who was not above adding information to lemmata) may have inferred Apsyrtus’ citizenship from the fact that Asclepiades, whom Apsyrtus addresses as his fellow-citizen, is called Ἐπχειλητης in another letter. Yet the only passage in which Apsyrtus gives precise topographical information implies that he was familiar with the region of Clazomenae. In a discussion of the healing properties of the marsh-mallow (ἀλθαία or μολόχη), he mentions that the plant is difficult to find, but grows near the river Meles, which flows near Smyrna. Given the proximity of Clazomenae to Smyrna, Apsyrtus’ reference might lead us to suppose that he received his early medical education in the latter place. The island city of Clazomenae might not appear to have been an ideal place to learn about horses, though it does lie opposite a fertile plain.

22 Diocletian campaigned against the Sarmatians in the late 280s and 290s, defeating them in 294: Barnes, The New Empire of Diocletian and Constantine, 50; On references to Constantine Chlorus’ campaigns against the Sarmatians, see C. Mango, ‘The Empress Helena, Hellenopolis, Pylae’, TM 12 (1994), 149 ff.

23 See Adler’s apparatus, ad loc.

24 On the empire’s Sarmatian allies, see Jones, Later Roman Empire, II. 619 ff.

25 M1011, CHG II p. 96; noted by Oder and Hoppe, CHG I p. 1 n. 1, also CHG II p. vi.

26 M736 = B37, CHG I p. 197.


Apsyrtus says that he acquired his expertise elsewhere. We may note, finally, that in his chapter on seasonal purging, Apsyrtus uses *Hyperberetaios* and *Dios*, the names of months in the Macedonian calendar—used in the province of Asia, but not in Bithynia—also compatible with a Clazomenian origin.30

But perhaps the reference in the *Souda* to Prousa and Nicomedia is not to be dismissed completely. Apsyrtus may have been stationed near Nicomedia, capital of the East, after his Danube campaigns; he may well have composed his treatise there. Roughly between the two cities is the well-watered pastureland of Malagina, in later centuries the base of the imperial cavalry, but perhaps already in use for that purpose at the time when Nicomedia was made an imperial capital.31 The only connection, in the text, to Bithynia appears to be a single letter addressed to a man called Achaikos of Nicaea (Ἀχαῖκος Νικαιεύς).32 Certainly the manner in which Apsyrtus refers to the Danube region, its inhabitants, and their horses, implies that he is not there at the time of writing.

Apsyrtus dedicates his treatise to a certain Asclepiades, whom he calls ἰατρὸς μέγιστος, ‘a very great doctor’, an epithet that might appear incompatible with Apsyrtus’ implication in the next paragraph of the dedication that the treatise is intended for a reader not yet expert in the veterinary art:

I will speak first about the feverish horse, and how it may be recognized by these symptoms. I have set these symptoms in order for you, so that from such things you may easily and with greater certainty know the diseases that attack horses, and so that you will not, speaking heedlessly and ignorantly, be ridiculed by those who have precise understanding. On this account these things ought surely to be known by any horse-doctor…

Perhaps Asclepiades was a physician rather than a horse-doctor—he may have been associated with the sanctuary of Asclepius in Smyrna. In another letter he is described as ἵπποιτρόφος,34 which may mean that he kept horses.

32 M170 = B10.1, CHG I p. 56.
33 M1, CHG I p. 1.
34 M736 = B37, CHG I p. 197.
THE FORM OF THE TREATISE

Apsyrtus warns the reader not to demand literary cleverness in his treatise: ἐν εἴρητήσει λογικότητα, ἀλλ’ ἐκ τῆς πείρας φυσικήν ἐμπειρίαν ἐπίγνωσθ᾽.

I dedicate this book to you, dearest Asclepiades...in it, do not seek eloquence, but recognize scientific experience from practice.

Yet his writing is not without art: the form, style, and content of Apsyrtus’ treatise show that he was well acquainted with literary conventions of his age, and in particular those of medical writing. The modest protestation is not only a topos appropriate for the beginning of a book, but contains an allusion to two words significant in ancient medical writing, λόγος and πείρα. The dynamic relationship between tradition and experience is a recurring theme in the work of Galen, most famously expressed in the image of medicine progressing by the interaction of λόγος and ἐμπειρία in the way that a man walks forward by using his two legs. Despite his emphasis on what he has learned, so to speak, on the job, it is clear that Apsyrtus referred to written sources when composing his text. Moreover, by couching his veterinary manual in the form of letters purporting to answer questions posed by friends and colleagues, Apsyrtus portrays himself as an authority on the subject. Even if they are not real, Apsyrtus’ letters evoke the image of a circle of horsemen and horse-doctors appealing to him for help from all across the Eastern empire.

Collections of questions and answers, or erotapokriseis, are a form related to dialogue, and similarly used for the purpose of instruction. Apsyrtus gives the form more flesh and more literary pretension by putting his answers in the form of letters. The epistolary genre was favoured by writers of the Second

35 M1 = B1.1, CHG I p. 1.
37 Cf. for example Dioscorides, ed. Wellmann, praef. 4: παρακαλοῦμεν δὲ σε καὶ τοῖς ἐνεπεξεργασμένοις τοῖς ὑπομηματικοῖς μὴ τὴν ἐν λόγοις δύναμιν ἥμων ακοπεῖν, ἀλλὰ τὴν ἐν τοῖς πράγμασι μετ’ ἐμπειρίασ ἐπιμέλειαν. We entreat you and those who will encounter this treatise to consider not our literary prowess, but our attention to practice and experience.’
38 Galen’s treatise on the subject, ed. R. Walzer, Galen on Medical Experience (Oxford, 1944).
40 Björck viewed the letters as fictional, ‘Apsyrtus’, 29.
Sophistic: Aelian and Alciphron (second/third century AD) composed collections of fictional letters, ethopoiai in the voices of farmers and others.\textsuperscript{42} Collections of real letters seem to have enjoyed a vogue around the fourth century: one may think of the collections of the correspondence of Libanius, Synesius, or Gregory of Nazianzus. Apsyrtus may also have been aware of the practice of writing technical essays in the form of letters; there are several well-known ones on medicine.\textsuperscript{43} The use of letters to convey technical material, though, usually involves a single, long letter rather than a collection.\textsuperscript{44} There are, however, examples of collections of technical letters: in the field of medicine, that of Archigenes of Apamea (from the time of Hadrian), or in the domain of law, the imperial rescripts (most of them from the third century), composed in the form of letters responding to a petition.\textsuperscript{45} Any of these might have served as a model to Apsyrtus, but rescripts in particular have certain characteristics which seem to be echoed in Apsyrtus’ writing. They include both replies to private petitioners (many of whom were soldiers) and longer letters to officials. The former contain instructions in the form ‘you can…’, ‘you should…’, ‘you may…’ (potes, debes, non prohiberis); while the latter, which are on average longer, do not. Rescripts do not end with a greeting. They were posted up in batches that had been glued together into a liber libellorum rescriptorum.\textsuperscript{46} It is also possible that Apsyrtus was influenced by the administrative practices of the army. Another interesting parallel to his text is provided by the records of a third-century cavalry regiment, the cohors XX Palmyrenorum, which are composed in the form of letters describing the horses assigned to soldiers. The letters were filed by being pasted together into a roll or liber epistularum.\textsuperscript{47} Of course, these parallels do not offer proof that Apsyrtus’ book was published in the form of rolls rather than a codex.

\textsuperscript{42} P. Rosenmeyer, Ancient Epistolary Fictions (Cambridge, 2001), 255 ff.
\textsuperscript{44} Demetrius seems to be referring to this practice when he warns that a letter stuffed with σοφιάματα καὶ φυσιολογία is not a letter at all; L. Radermacher (ed.), Demetrii Phalerei qui dicitur De elocutione libellus (Leipzig, 1901), 231. Apsyrtus’ exposition of an entire discipline in a collection of letters is noted as unusual by J. Sykutris, ‘Epistolographie’, RE Suppl. V (Stuttgart, 1931), col. 205.
\textsuperscript{46} According to Honoré, the proportion of rescripts to longer letters is thirty-one to one; Emperors and Lawyers, 49.
The type of letter-writing we see in Apsyrtus’ treatise was probably learned as a practical skill rather than as part of a literary education; we might imagine that he acquired a familiarity with its rules while studying away from home or travelling with the army: there are many examples among the papyri of letters from students and soldiers. But the fact remains that his device of erotapokrisis combined with the epistolary form, in addition to being an effective and informal way to organize short passages of advice on different subjects, may be understood as a clever literary conceit—which may have been a reason that Apsyrtus was deemed worthy of a notice in the Souda.

CONTENTS AND ORGANIZATION OF THE TEXT

The excerpts from Apsyrtus’ text preserved in the Hippiatrica fall into four categories: letters, essays on classification, recipes for drugs, and magical remedies. The letters make up the largest proportion of the text. Each one begins with a brief, formulaic greeting, and a conventional phrase introducing the subject of the letter, but is afterward entirely technical in content. Each covers a single subject, and is generally in a tripartite form: diagnosis—aetiology—therapy. Seventy-one epistolary greetings may be retrieved from the M, B, and C recensions. Six long essays, those addressed to δεσπότα, treat classification (ἀφορίσμος) of the grave diseases, glanders and colic, and other important topics such as hoof-care and symptoms used in diagnosis. Another, dedicated to an anonymous ‘you’ (σοί), describes the characteristics of horses from different regions. The last letter, addressed to Celer, introduces a collection of recipes for drugs, which may have been at the end of the treatise; this collection was divided into sections on drenches (ἐχυματισμοί) and ointments (μαλάγματα). Many recipes are appended to the letters describing specific conditions; others are loose or in the long appendix of drugs. The spells are brief and identified as cures for specific diseases; they are not in the form of letters either.

What was the original organization of the treatise? The fact that each letter is a separate entity allows for a flexible or amorphous structure. The

---

48 On the practical skill of letter-writing, and its place in education, see R. Cribiore, Gymnastics of the Mind: Greek Education in Hellenistic and Roman Egypt (Princeton, 2001), 215 ff.

49 M759 = B129.1, CHG I p. 385–6; M662 = B104.1–4, CHG I pp. 360–2; M59 = B33.1–10, CHG I pp. 163–70; B2.1–6, CHG I pp. 13–16; C49.1–6, CHG II pp. 180–2; C80 = CHG II pp. 216–17.


51 M759 = B129, CHG I pp. 385 ff.
dedication prefaces the letter on fever, which must have come first. The pharmacological collection was probably at the end of the treatise, as is often the case in manuals of human medicine. But the organization of the body of the treatise is difficult to reconstruct. It is possible that the order of the letters is preserved in the M recension, which is amorphous enough. There is one example of a pair of letters presented in sequence:

\[\begin{align*}
\text{Apsyrtus to Ammonius the Alexandrian, greetings. You wrote to me asking why laminitis occurs in horses, and what is the treatment for it...} \\
\text{Apsyrtus to Ammonius the Alexandrian, greetings. You wrote to me earlier about laminitis occurs in horses, and what is the treatment for it...} \\
\text{Other series of excerpts seem to have been part of a single letter, separated by the compiler: the passage on snakes, scorpions, and spiders is an example. The magical texts, which are not incorporated into letters, may have formed a separate volume (perhaps the physikon mentioned in the Souda), or may have been appended to the letters, along with other prescriptions, as they appear in M.} \\
\text{Was the treatise composed all at once? A number of cross-references preserved in the excerpts betray their sequence, as though they were part of a single, unified composition. For example, in his letter on whether bloodletting is good for horses, Apsyrtus refers to something he has mentioned in another letter: ωσ ειρήκαμεν ἐν τῇ πρὸς Πούπλιον Ὀὐάρωνα ἐπιστολὴ 'as we have said in the letter to Publius Varro'. There are also references to various ointments for which recipes are given elsewhere or in the long collection of instructions for the preparation of drugs. Let us turn now to the letters themselves. In form they follow the conventions of genuine letters that have been preserved in the papyri. Each letter begins with a simple greeting: Αpsyrtus to so-and-so, greetings. The order of the names, with that of the sender first, is still...}
\end{align*}\]

52 M102 = B8.1, CHG I p. 48–9; M103 = B35.1, CHG I p. 192 (B has ἐγραφάς σου); possibly also the two, on orthopnoia and cough, addressed to Secundus: M456 = B27.1, CHG I p. 140, and M458 = B22.1, CHG I p. 103.
53 B86 = CHG I pp. 308–11.
54 M170 = B10.1, CHG I p. 56. The reference may be to M73 = B9, CHG I pp. 53–5, though the addressee is called in this case Τοράκτου Βάρων.
55 e.g. M437 = B53.1, CHG I p. 238; M677 = B106, CHG I pp. 366–7.
56 As recommended by ps.-Libanious, in V. Weichert, Demetrii et Libanii qui feruntur τύποι ἐπιστολικοὶ et ἐπιστολιμαίοι χαρακτήρες (Leipzig, 1910), 21.
the antique one.\textsuperscript{57} The names of Apsyrtus’ addressees are of particular interest.\textsuperscript{58} Though we may be unable to pinpoint the place where Apsyrtus wrote his letters, we are given the names of the recipients for whom they were intended: the names of sixty-five men are preserved in the text, often with an indication of military rank, occupation, or place of origin.\textsuperscript{59} These define the horizons of Apsyrtus’ world, in terms both of geography and of social milieu.

There is of course a strong possibility that the names are no more than a literary fiction. But they may, on the other hand, represent real people whom Apsyrtus had met on his travels or during his studies. Apsyrtus might have considered it a compliment to friends and colleagues to dedicate sections of his treatise to each one.

The names of Apsyrtus’ addressees are a mixture of Greek and Latin (the latter in transliteration). The ethnicity of the men, or at least the language of their names, is not unrelated to their professions. All the soldiers have Latin names, save for Ἡρακλείων χιλαρχός. Twenty-three of the men are addressed as ἰπποτρόφοι; three others simply as ἰατροί.\textsuperscript{60} They, on the other hand, have predominantly Greek names, with Μάρκος, Σεκούνδος, Γάιος, Φρόντων, and Ῥοῦφος Ὀκτάονος (if the elaborate formulation ἐσπουδακότι σοι ἐν τῇ ἰατρικῇ τῶν ἰππῶν ἐν παντὶ μέρει\textsuperscript{61} means that he was a horse-doctor) being the exceptions. Several have Egyptian names: Ὀρίων, Ἀτίων, Ἀμμώνος, Μέμυνος.\textsuperscript{62} Among the Greek names are Ἡγησαγώρας, Πασικράτης, Ἀντίπταρος, and Ἀγαθοκλῆς as well as the possibly Christian Ἐπιφάνιος and Δημήτριος.

In ten letters the addressee is qualified as ἰπποτρόφος ‘horse-keeping’ or ‘horse-rearing’, all but one in the form ἰπποτροφοῦντα σε. The term ἰπποτροφία was used to denote the civic duty of providing horses for the hippodrome, but also simply caring for horses.\textsuperscript{63} As the men thus addressed are civilians and also soldiers of different ranks, one can only conclude that Apsyrtus merely meant that they were concerned with keeping horses. One

\textsuperscript{57} F. Ziemann, De epistularum graecarum formulis sollemnibus quaestiones selectae (Halle, 1910), 253 ff.
\textsuperscript{58} The names and titles are listed in \textit{CHG} pp. 451–2 and included in the index \textit{CHG} II pp. 340–2.
\textsuperscript{59} They are copied more correctly in B than in M.
\textsuperscript{60} Which probably means ‘horse-doctor’, among colleagues; Adams, Pelagonius, 58.
\textsuperscript{61} M71 = B96, \textit{CHG} I p. 326.
\textsuperscript{62} On Egyptian names of horse-doctors in the papyri, see Nanetti, ‘ἹΠΠΙΑΤΡΟΙ’, 53.
man, a decurion, is described as κτηνοτρόφος ‘beast-keeping’; the letter addressed to him is about an ailment of mules. Another is an expert on mules: Apsyrtus begins a letter to Apollophanes by saying, ‘since you care for horses and are well versed in the care of hybrids’ (ἵπποτροφοίντά σε καὶ σπουδάιος ἑχοντα ἐν τῇ αυστάσει τῶν ἐπερογόνων).

In describing military ranks, Apsyrtus uses the translations ἐκατοντάρχης and χιλιάρχης for centurio and tribunus militum, but the transliteration δεκουρίων for decurio. This inconsistency may indicate that he was not troubled enough by considerations of stylistic purism to use exclusively the more literary or elegant Greek forms. Apsyrtus addresses six men as δέσποτα, the equivalent of dominus; their names, Sabinus, Gallus, Aelian, Romulus, Celer, and Ursus, all figure among the names of consuls in the late third to mid-fourth centuries. One of them is described as ἐκατοντάρχης and another as στρατηλάτης or ‘general’; Apsyrtus’ use of the respectful title and a more formal tone implies that he himself was of a lower rank. There is no indication of the place of origin of men who are given military ranks (apart from one instance, Ποστουμιος Δακις ἰππότης, Postumius the Dacian, eques), which might indicate that they belonged to the same company, or were all stationed in one place. There is no reference to specific cohorts, but one soldier is described as belonging to the τάγμα ἐβδομον or seventh legion.

Even if the names could be invented, the cities are real; and if we assume that rather than being chosen at random, they represent places with which Apsyrtus was familiar, we may detect some patterns in their distribution. Five letters, one of which is the dedication of the treatise, are addressed to natives of Clazomenae. One letter is addressed to an Ephesian. Those addressed to Laodiceans and an Antiochene do not specify whether the Syrian cities or

64 M437 = B53.1, CHG I p. 237. 65 M626 = B102, CHG I p. 352.
66 Mason, Greek Terms for Roman Institutions, 163.
67 Mason, p. 120; D. Magie, De romanorum iuris publici sacrique vocabulis sollemnibus in graecum sermonem conversis (Leipzig, 1905), 66.
68 Sabinus B2.1, CHG I p. 13; Gallus M662 = B104, CHG I pp. 360–2; Aelian M59 = B33.1, CHG I p. 163; Celer M759 = B129.1, CHG I p. 385; Romulus hexatontarches (centurion); C 49.1–6, CHG II pp. 180–2; Ursus stratelates (magister militum): C80 = CHG II pp. 216–17. See R. Bagnall, A. Cameron, et al., Consuls of the Later Roman Empire (Atlanta, 1987), who tentatively identify one man, Fl. Ursus 4 (cos. 338), as Apsyrtus’ addressee.
69 On the uses of despota, see E. Dickey, Greek Forms of Address (Oxford, 1996), 95 ff., and ‘Kyrie, Despota, Domine: Greek Politeness in the Roman Empire’, JHS 121 (2001), 1–11.
70 M896 = B116.1, CHG I p. 375.
71 M736 = B37, CHG I p. 197, also M1 = B1.1; M627 = B95, CHG I p. 323; M685 = B108, CHG I p. 368; B50, CHG I p. 226 (called simply πολίτης).
72 M104 = B74.1, CHG I p. 283.
those in Asia Minor are implied.\textsuperscript{73} (Apsyrtus describes Cappadocian horses and a Cappadocian remedy, and also a Syrian practice, but he may have come in contact with these without actually visiting the area.\textsuperscript{74}) Other destinations reflect Apsyrtus’ acquaintance with the Danube region: there is one letter to a Dacian and five to natives of Tomis, south of the Danube delta on the western shore of the Black Sea.\textsuperscript{75} Single letters are addressed to natives of Carthage, Kallipolis, and Corinth.\textsuperscript{76} There is no reference, in what remains of the text, to Constantinople; negative evidence in support of a date of composition before the foundation of that city in \textit{AD} 324.

The number of Alexandrians among Apsyrtus’ acquaintances is worthy of note: there are nine, five of whom are called ‘\textit{hippiatroi}.\textsuperscript{77} Apsyrtus’ reference to a surgical procedure practised by Alexandrians\textsuperscript{78} may suggest that part of his medical training took place in Alexandria;\textsuperscript{79} or may simply reflect that city’s renown as a centre for medical study. There is copious evidence from ostraca and papyri for the practice of veterinary medicine in Egypt, but none that obviously refers to the teaching of the discipline.\textsuperscript{80} A fragmentary letter is headed \textit{Αψυρτος Κλαζομένιος ἱπποιατρὸς τῷ ἐαυτῷ ἰατρῷ Κίοςτίῳ Μοσχίων}, ‘Apsyrtus of Clazomenae, the horse-doctor, to his own doctor Justinus Moschion’;\textsuperscript{81} if ἐαυτῶ is analogous to \textit{noster} as used by the Latin jurists, it may designate a teacher, or the head of a school.\textsuperscript{82}

Apsyrtus’ address-book introduces the reader to a specialized section of Late Antique society, and invites the speculation that there might exist other records of some of these men. A cursory perusal of a few inscription collections yields a few matches—a Damas in Laodiceia, a freedman and centurion Fronto in Ephesus—\textsuperscript{83}—but nothing more specific.

After the greeting, without any further polite expressions, the subject of the letter is introduced, often by describing or implying the existence of a letter of

\textsuperscript{73} Laodicea ad Lycum would represent a stopping-point along the Roman road from Ephesus to Cappadocia, whereas Antioch on the Orontes and Syrian Laodicea would shift Apsyrtus’ focus of attention to the south-east.

\textsuperscript{74} M1062 = B130.134, \textit{CHG} I pp. 425–6.

\textsuperscript{75} M533 = B6.1, \textit{CHG} I p. 43; B18.4, \textit{CHG} I p. 93; M192 = B38.1, \textit{CHG} I p. 198; M152 = B99.1, \textit{CHG} I p. 341; M438 = B54.1, \textit{CHG} I p. 239.

\textsuperscript{76} On a Late Antique gravestone of a horse-doctor from Corinth, cf. P. Clément, ‘


\textsuperscript{78} M105 = B20, \textit{CHG} I p. 96.\textsuperscript{79} As suggested by Oder, ‘Apsyrtus’, 121.

\textsuperscript{80} Nanetti, ‘\textit{ΠΙΠΙΑΤΡΩΠ}', 51–4.\textsuperscript{81} M1011, \textit{CHG} II p. 96.

\textsuperscript{82} Honoré, \textit{Gaius}, 4.\textsuperscript{83} IK 49.105; IK 16.2202.
inquiry (ἐρωτηματική ἐπιστολή), by which device Apsyrtus justifies his letter of response (ἀποφαντική or ἀντεπισταλτική) or instruction (διδακτική, διδασκαλική). For example:

έγραφας μοι ἑπερωτών, τίνα βοηθήματα πρὸς τὴν ἐπιστροφήν τοῦ ἔντερου. You wrote to me asking, what are the remedies for twisting of the intestine.

Sometimes the letter is described in more detail:

έγραφας μοι συμβεβηκέναι σου τῷ ἰππῷ ἐν τῷ ποδὶ τῷ ἐμπροσθίῳ εἰς τὸ ἐντὸς μέρος τῆς ὁλὴς ἐν τῇ ἐκφύσει τῆς στεφάνης οἶδημα μέγα σκληροῦν, καὶ λίαν χωλαίνειν εξ αὐτοῦ. You wrote to me that a large, hard, swelling occurred on your horse’s foreleg on the inner part of the hoof at the beginning of the coronet, and that it is very lame from it.

In one instance, Apsyrtus implies that he is responding out of sympathy rather than to a specific request:

ἀκούσας σε πάνιν καταποιούμενον τῇ λύσῃ περὶ τοῦ συμβεβηκότος πάθους τῷ ἰππῷ σου, οὐκ ἀποκρύψατο σε τάλαθή τοῦ ἐλέγχου κειμένου ἐν τῇ ἱστορίᾳ, ὡσπερ οὐδέν έστιν ἀπόκρυφον τῶν ἐγκειμένων. Having heard that you were very oppressed with grief on account of the disease that has afflicted your horse, I will not conceal from you the truth of the evidence that lies in the body of case-histories, since nothing of these matters is hidden. It is with difficulty that we shall attempt to succeed in treatment, for urinating blood is very disheartening.

Apsyrtus begins his response with the conventional ‘disclosure formula’, ὁδὸν, δοκεῖ μοι, χρὴ σε εἰδέναι, ἀναγκαῖον σε γινώσκειν, ‘I know’, ‘it seems to me’, ‘you ought to know’, ‘it is necessary for you to know’ after which the letters are technical in content, without any further literary embellishment. All have a similar internal structure: the disease is named, its symptoms are listed, its aetiology is explained, and finally, treatments are recommended.

84 According to the definitions of Demetrius and ps.-Libanius, respectively, ed. Weichert, pp. 13 ff. and 21.
85 M571 = B36.1, CHG I p. 194; M98 = B 44.1, CHG I p. 215; M99 = B97, CHG I p. 335; M663 = B104.5, CHG I p. 362.
86 M881 = B113.1, CHG I p. 370.
87 C33.4, CHG II p. 168. We may compare the concerns expressed in these letters, and their informal tone, to Late Antique letters sent by or to cavalrymen, e.g. R. S. Bagnall, The Florida Ostraka (O. Florida): Documents from the Roman Army in Upper Egypt (Durham, NC, 1976), nos. 15 and 18, pp. 54 and 58.
These sections are introduced always in the same order, and always simply, with a connective δέ. For example, here are the ‘signpost’ phrases from the long letter on glanders (μάλις)

The disease is
Its symptoms are
It occurs because
One might succeed in treating it by
Our discoveries are
Know this too
And this also helps…

In only one instance is a phrase marking the end of a letter preserved; such absence of a closing salutation is typical of letters with a ‘literary’ transmission, or collections of copies.

Rather than simply listing different treatments, as do Eumelus and Anatolius, Apsyrtus presents a critical review of the options. His usual approach is to begin with a summary of the recommendations of others, then to add his own discoveries. Apsyrtus’ treatment of these sources reveals his familiarity not only with traditional agricultural manuals, but with the literature and methods of human medicine. His inclusion of another genre, that of magical texts, is additionally informative about the diversity of approaches to healing available to a horse-doctor in Late Antiquity.

WRITTEN SOURCES

Although Apsyrtus emphasizes that he has learned from experience, it is clear that he has consulted a number of written sources as well. He cites some of them by name, for which we may thank him; in fact he is the earliest of the authors in the Hippiatrica to do so. These citations are of different types. In several instances, Apsyrtus invokes the names of authorities from the distant past—Simon, Xenophon, and Mago the Carthaginian—the ‘classics’ of horsemanship and agriculture. His discussion of the qualities of different breeds begins

89 B2.1–6, CHG I pp. 13–16.
90 ὡς ἐν κεφαλαίῳ δὲ εἰπεῖν, αὕτη οὐ ἐπίδειξιν τούτων τῶν παθῶν καὶ θεραπεία, ‘to sum up, this has been the presentation for you of these diseases and the treatment’, M59 = B33.10, CHG I p. 170.
91 Ziemann, De epistularum graecarum formulis, pp. 356 ff.
Many have written well about the points of the horse, Simon and Xenophon the Athenians best of all.

The enumeration of traits of various breeds of horses that follows these introductory remarks is not based upon Xenophon, who does not discuss breeds. (Apsyrtus’ list of breeds is different from the list in the ‘Excerpta Anatoliana’ in C and in the Bestiary of Constantine VII.) Apsyrtus mentions Mago’s treatments in a passage (mutilated, and only preserved in M) that may have introduced a work or chapter on cows:

tὰ δὲ περὶ τοὺς βῶς συμβαίνοντα πάθη καὶ τὰ πρὸς ταύτα βοηθήματα ἄριστα γέγραπται Μάγωνος τῷ Καρχηδόνιῳ τῇ Φοινίκῃ <δι> διαλέκτῳ καὶ ἄλλους δὲ γέγραπται...93

Concerning diseases of cattle and the remedies for them, the best has been written by Mago the Carthaginian in the Phoenician dialect. Others have written on the subject too...

(The phrase τὰ ... συμβαίνοντα πάθη καὶ τὰ πρὸς ταύτα βοηθήματα echoes Apsyrtus’ dedicatory letter, addressed to Asclepiades, which appears to have been prefaced to the treatise on horses.) Apsyrtus also cites Mago on the subject of dysury in horses:

καὶ τούτο δὲ ἐκ τῶν Γεωργικῶν Μάγωνος τοῦ Καρχηδόνιον. λέγει γὰρ τοῦ δυσουριώτου ἵππου τοὺς ἐμπροσθίους πόδας κάτωθεν ὑποξύσαντα ἐκ τοῦ κατʻ ἀνυχα μέρους, τὰ ὑποξύσαντα αὐτῆς τῆς ὀψῆς τρίβειν ἐν οίνῳ ὃσον κοτόλη καὶ ἐγχυματίζειν διὰ τῆς μινός, καὶ οὔρησε.94

This too is from the Georgica of Mago the Carthaginian. He says to file the underside of the hooves of the forelegs of a horse with dysury, to pound the hoof-filings with a cotyle of wine, and to administer as a drench through the nose, and it will urinate.

He does not, however, appear to have used any of those three books directly. Apsyrtus’ work does not present any substantial parallels with Xenophon or with what we have of Simon. And it seems unlikely that he read Mago’s work in the original Punic. It is more likely that Apsyrtus used one of the compilations that drew on Mago. Certainly the treatment for dysury, which belongs in the category of sympathetic magic, might be attributed to Democritus–Bolus, one of the Greek sources added to Mago by Cassius Dionysius.95

---

92 B115, CHG I p. 372.
93 M916 = CHG II p. 90, Speranza, Scriptorum romanorum de re rustica, 110.
94 M59 = B33.8, CHG I p. 168, Speranza, fr. 57.
also implies that Cassius Dionysius used material from Xenophon;\textsuperscript{96} perhaps Apsyrtus encountered all these ancient sources in the same compilation. An echo of Aristotle’s discussion of the diseases of the horse (without an attribution) may also come from Cassius Dionysius, since Aristotle, too, is included in Varro’s list of Greek writers used by Cassius Dionysius.\textsuperscript{97}

That Apsyrtus used Cassius Dionysius, Diophanes, or a related text is corroborated by the numerous parallels between Apsyrtus’ text and those of Anatolius and Columella—neither of which, however, may be identified as his direct source.

In the letters, as we have seen, Apsyrtus names Eumelus three times.\textsuperscript{98} And there are other passages in which he appears to follow Eumelus’ words closely, as in the treatment for a heart ailment:\textsuperscript{99}

\textbf{Apsyrtus}

\begin{quote}
Τρία γὰρ εἶναι πάθη δεξίντα ἐν τε ἑπιπειροῖ καὶ τοῖς ἄλλοις ὅποιοις ὄπλοις ἔχει κύστες καὶ ἐπίστρεψις εἰνέτεροι, ὃ καλεῖται εἰλέος, καὶ καρδιακός. τὰ δὲ ἄλλα πάθη ὑπομένει ἡμέρας ἰκανίας. καὶ ταύτα δὲ συντόμως ἀναμεί τοὺς ἑπιπειρούς, ἐὰν μὴ τάχυστα βοηθήσαι κρίσιος . . .
\end{quote}

There are three very grave diseases in the horse and other beasts of burden, all those that have unclenched hooves: the bladder, and twisted intestine, which is called \textit{eileos}, and heart-disease. Other diseases they can survive for a long time. And these also carry off horses in a short time, if not remedied quickly: laminitis . . .

\textbf{Aristotle}

\begin{quote}
Οἱ δὲ προφάλαι ἐποιεῖσθαι ἀρρωστήμασι κάμνουσιν. λαμβάνει γὰρ καὶ εἰλέος . . . λαμβάνει δὲ καὶ ἄλλοις αὐτοῖς πόνοι, καλεῖται δὲ τούτο κρηθαν . . . ἀνίστα δὲ καὶ τάδε, ἐὰν καρδίαν ἀλγήσῃ . . . καὶ ἐὰν ἡ κύστες μεταστῇ
\end{quote}

Stabled horses suffer from many sicknesses. \textit{eileos} afflicts them . . . and another malady afflicts them, this is called laminitis . . . and these are incurable, if it is troubled by its heart . . . and if the bladder is displaced.

\textbf{Apsyrtus}

\begin{quote}
δεὶ τούτους τὰ θερμαίνοντα διὰ τῶν μυκτερίων ἐγχεῖν, καὶ τὴν γλώσσαν καταλαμβάνοντον διὰ τοῦ στόματος, πέπερι καὶ οἶνον καὶ εἶλοι καὶ σκίλλαν ὁποὶ καὶ ἀσάιντος, δαφίδας ἡ λιβανωτὸν ἡ ἀριστολοχεῖα ἡ σμύρνην ἡ θῆμον . . .
\end{quote}

\textbf{Eumelus}

\begin{quote}
ἡ σκίλλαν, καὶ ἀριστολοχεῖαν ὀλίγην καὶ λίβανον καὶ σμύρνην καὶ θῆμον ἐν οἴνῳ μινήται καὶ διὰ μυκτερίων ἐγχεῖ. τὸ δὲ
\end{quote}

\textsuperscript{96} RR I.1.8. \textsuperscript{97} M59 = B33.4, \textit{CHG} I p. 165; Aristotle, \textit{HA VII} (VIII) 604a–b.


For the most part, though, Apsyrtus refers to his sources anonymously as ‘those before us’, ‘some people’, or ‘many’. Who are these authorities? Are they all the same? And why does Apsyrtus not give their names? It is possible that where Apsyrtus does not approve of a treatment, the identity of his source is tactfully concealed: for example, ‘some say . . . but it does not please us’.

On the other hand, he may be criticizing an anonymously transmitted text. Björck has suggested that by these designations Apsyrtus is referring not to Eumelus, but to a compilation of earlier writers. Certainly the designation ‘those before us’ implies that Apsyrtus is not referring to his contemporaries; moreover, he implies that he has consulted them in written form:

Remedies for surfeit and indigestion have been written by many. Similar phrasing is used to describe colic by Columella: *cruditatis signa . . . cruditas et inflatio*. The form of the *Hippiatrica*, which presents in succession many opinions on the same subject, allows us to speculate about the identity of the anonymous source or sources criticized by Apsyrtus. For

---

example, in the passage on madness (μανία), Apsyrtus writes that, although some people recommend confining the horse in a darkened place, he has had no success with this treatment, and does not recommend it:

λέγεται δὲ καὶ ἐν ἡσυχίᾳ δεῖν ἐστάναι αὐτοῖς καὶ ἐν τόπῳ σκοτεινῷ ὁ ἡμεῖς ποιήσαντες ἐπιτευμονένους ἐξομείωνυ μᾶλλον καὶ διαφωνοῦντας.106 It is said that they ought to be made to stand in quiet and in a dark place—having done this, we had them suffer more, and die.

The excerpt from Eumelus which follows in the B recension recommends precisely that treatment: ‘Keep it shut up in a very dark place’ (ἐν τόπῳ σκοτεινοτέρῳ κατάκλειστον ἔχε).107 Pelagonius, too, recommends isolation, evidently following upon the same source as Eumelus; the passage is not present in Columella.108 Hippocrates prescribes the same treatment:109 Apsyrtus’ λέγεται may therefore refer to received wisdom, conventional practice, or the general consensus rather than to a single specific text. He also uses λέγεται to introduce recommendations of irrational cures which belong in the tradition of Bolus–Democritus, such as the use of sea-turtle blood against epilepsy, or the use of earth from a wheel-track against the bite of a shrew-mouse.110 Similarly, in discussing ‘thinness from an unknown cause’ (ἰσχυρότης ες ἄδηλου αἰτίας), Apsyrtus does not name the predecessors whom he criticizes.

ἔστι δὲ οὐκ ἄδηλον τὸ πάθος, ἀλλὰ κατὰ ψύξιν. οἱ πρὸ ἡμῶν δὲ εἶπον ἄδηλον.111 The disease is not unclear [in cause], but is due to chill. Those before us said that it was ‘unclear’.

Eumelus uses a similar phrase: εἰν δίχα τινὸς ἀνωμαλίας ἰσχυρωσὶς γένηται ζῷος,112 but closer parallels appear in a lemma to Geoponica XVI περὶ ἄδηλου νόσου113 and in Geoponica XVII: σχεδὸν πάντων τῶν ζώων τὰ πάθη ἄδηλα.114 It is, of course, simplest to suppose that the anonymous passages in Apsyrtus are taken over from Eumelus along with those that are more precisely attributed. But, as Björck has observed, there are not enough similarities between Eumelus and Apsyrtus to indicate that Eumelus was Apsyrtus’ principal source.115

There are other passages in which Apsyrtus’ text coincides with that of the agricultural compilations, and where no surviving text of Eumelus can be

---

107 M309 = B101.6, CHG I p. 349.  
108 M313 = B101.9, CHG I p. 350.  
109 M311, CHG II p. 54.  
111 M87 = B68, CHG I p. 264.  
112 Eum. M88 = B68.4, CHG I p. 265 (on thinness, cf. Col. VI.30 si sanis est macies; Pel. Lat. 30; Anat. M1066, CHG II p. 103 = Geop. XVI.3.1).  
identified as the intermediary. This resemblance is particularly noticeable in passages concerned with breeding, which has led A. Baumstark to conclude that Anatolius used Apsyrtus (along with Julius Africanus), and E. A. Fisher to conclude that Apsyrtus used Columella. Apsyrtus’ description of the ideal characteristics of the donkey should, however, be viewed in the context of other descriptions of ideal form derived from Mago–Cassius Dionysius–Diophanes. An excerpt on dentition is very close to Varro and Columella, as has been pointed out by P.-P. Corsetti, who concludes that all three writers depend on the Mago tradition.

There are also veterinary remedies in Apsyrtus that coincide with the agricultural writers, but not with what is preserved of Eumelus’ text. Apsyrtus’ two recommendations for removing leeches by using oil and by fumigating with bugs are present in Anatolius in Geoponica XVI and in Geoponica XIII.17 in the chapter on pests; they are also, as Björck observed, in Columella and Gargilius Martialis.

Then, there are instances in which Apsyrtus’ text is fuller than that of Eumelus, and coincides with Pelagonius; we have seen this already in the magical treatment for dyspnioa/suspirium using hellebore. Another example is the first recipe in the drug appendix, the broth of puppy or chicken repeatedly prescribed by Pelagonius, but only prescribed by Eumelus as chicken broth. Apsyrtus clearly attributes the recipe to his predecessors; unless Eumelus’ text as we have it in the Hippiatrica has been altered, with all references to puppies consistently removed, it would appear not to be Apsyrtus’ source in this case.

In other instances it is difficult to tell whether Apsyrtus is referring to a written or an oral source, since verbs of speaking are used of quotations from written works. His use of tense, which varies, may provide some clues: the perfect, more distant, may indicate that the source is a text.

\[\text{Αἰδέανων δὲ ὁ ἵππατρός εἶπεν δεῖν βάλλειν ῥοῦν Ἠρακλήν καὶ τὰς κριθὰς φρύγωντα καταρραίνειν ὑπὸ ᾧς, κατὰ βραχὺ ὡς φρύγωνται, ἐὰν γὰρ, φησί, μετὰ τὸ φρύγωντα αὐτὰς καταρραίνῃς, οὐκ ἐσθείει ὁ ἵππος διὰ τὴν ὑδαμήν.}\]

121 On the implications of different tenses as used in jurists’ quotations from legal literature, see Honore, *Gaius*, pp. xiv ff.
Auxanon the horse-doctor said that one ought to administer sumac, and to toast barley and sprinkle it a bit with vinegar at a time while it is being toasted, because if (he says) you sprinkle the grain after you have toasted it, the horse will not eat on account of the smell.

Apsyrtus’ use of the imperfect tense in another instance may imply that he is passing on the opinion of a contemporary: τὸ Παρθενίου φάρμακον, ὃ Δομέτιλλος κεχρύσαθαι συνεχῶς διεβεβαιώτο, ‘the medicine of Parthenius, which Dometillus always used to affirm that he used’—unless the reference to Dometillus has been taken, as part of the title of the drug, from some other text.

What is the source of the Latin medical terms in Apsyrtus’ text? Many of Apsyrtus’ colleagues, to judge by the names of the men to whom his letters are addressed, must have been speakers of Latin; he is likely to have learned some words in the context of army practice, while many were commonly used in spoken Greek. Many words of Latin origin figure in Apsyrtus’ text: he uses the ‘naturalized’ loanwords for titles, as we have seen, as well as for measurements (ξέστης, sextarius, ἥμιμωδον καστρίσιον, semimodius castrensis) and other common terms relating to everyday life: στάβλον (stabulum, ‘stable’), κάπιστρον (capistrum, ‘halter’), φαῦρος (furnus, ‘oven’), βοῦλα (bulla, ‘seal’), λάμνα (lamina, ‘metal leaf’), λείντιον (linteum, ‘linen cloth’), φόσσα (fossa, ‘ditch’). These are given without explanation; presumably a reader would have been familiar with them (the first three are still used in Modern Greek), and they do not prove that Apsyrtus spoke Latin.

Some Latin medical terms, such as βουλασοῦ (vulsus, suffering convulsions) and λοῖμοβοι (lumbi, loins) appear with no mention of a Greek equivalent: they may have been familiar loanwords as well—the first, indeed, was used by the translator of Pelagonius’ treatise into Greek. One wonders whether the recipe for a μάλαγμα τὸ καλοίμενον ἄμβλα μοῦλα, an ointment called ambula mula, ‘walk on, mule!’ was copied from a drug-collection, or whether Apsyrtus learned how to concoct it in the veterinae of the camps.

---

123 M839, CHG II p. 89.
125 M21, CHG I p. 30; M968, CHG II p. 93.
126 M1026, CHG II p. 98.
127 M1042, CHG II p. 100.
128 M1044, CHG II p. 100.
129 See Viscidi, I prestiti latini nel greco antico e bizantino, 10 ff. on Latin loanwords for military terminology, measurements, the circus, plants, etc.
131 M1046, CHG II p. 101.
132 M540 = B7.2, CHG I p. 45.
133 M835 = B130.13, CHG I p. 403.
In other cases, Apsyrtus gives Latin equivalents for Greek medical terms, for example:

\[\text{περιττόματα δὲ λέγεται, ὡς ρωμαίστι καλοῦσα φαλκίνα},\]

they are called excrecences, which in Latin they call *falcinina* [i.e. *farcimina*].

Adams suggests that Apsyrtus may have learned the term *farcimina* for farcy-buds from Latin-speaking *veterinarii*.\(^{135}\) That three other Latin terms used by Apsyrtus are also found, in quick succession, in Columella's brief chapter on diseases of mules\(^{136}\) may suggest Apsyrtus found the Latin words in a written source used also by Columella: this source may have been in Latin, or in Greek with the Latin terms already transliterated.

\[\text{ἔστι δὲ τὸ πόδι, ὡς καλοῦσα οἱ πολλοὶ μάλιν, τυνὲς δὲ κατάρρον, ρωμαίστι δὲ σουμπέριον.}\]

It is the disease which most people call glanders, some catarrh, and in Latin *soumpersion* [i.e. *suspirium*].

\[\text{ρέματα εἰς τὰ γόνατα ἐμπίπτοντα, ἄτινα ρωμαίστι λέγεται φλέμινα...}\]

flux attacking the knees, which in Latin is called *femina*...

\[\text{ρέματα ἐμπίπτει εἰς τοὺς πόδας, ὡς τυνὲς εἰπαν χίνδρας, ἄτεροι δὲ χέρματα. ἕξ οὗ λέγεται λεπτρώσιν οἱ πόδες (λέγεται δὲ ρωμαίστι σουφράγινα)...}\]

flux attacks the feet, which some call *chindras*, others *chirmata*, from which it is said that the feet are leprous (in Latin it is called *soufragina*)...\(^{137}\)

If Apsyrtus used a Latin source directly, or if he knew the language, one would expect accurate renderings of the Latin technical terms; on the whole, the transliterations are fairly close, however, it is difficult to evaluate them, since they may be corrupted through scribal error. *Suffragina* is correctly transliterated as *souphragina* in M, while in B it is slightly altered as *souphraginae*; the term is used here to denote a disease, as does Columella’s adjectival form *soufraginosae*.\(^{138}\) Elsewhere, Apsyrtus uses the term in its conventional sense (in Latin) of ‘back of the pastern’;\(^{139}\) The passage on *suspirium* is not present in M; in B, the word appears in a simplified form. *Flemina* appears in M and B as *phi lemma* and in other MSS (of Renaissance date) as *phi lemma*.\(^{140}\) Apsyrtus’
account of these diseases is much more detailed than Columella’s: this may simply indicate that he adapted his source; however, we have seen in the case of the *suspirium*-passage that Pelagonius and Eumelus too appear to have used a veterinary text independent of Columella containing the Greek and Latin names for the disease.

**HUMAN MEDICINE**

Borrowings from human medicine are evident in procedures such as splinting and surgery;¹⁴¹ now and then the borrowings are acknowledged. In a letter to a centurion about how to treat wounds in the belly, Apsyrtus introduces his description of the procedure by saying ‘it is necessary to suture the peritoneum, in the same manner as that used by doctors on humans’ (δεί γαστρορραφεῖν τὸ περιτόμον, ὀνεπερ τρόπων οἱ ἰατροί ἐν ἀνθρώπῳ).¹⁴² Apsyrtus’ instructions for performing these procedures contain technical vocabulary absent from the texts of the agricultural writers, but the same as those used in manuals of human medicine: διαστόλων ‘dilator’ used in treating an ear infection;¹⁴³ πόρπαξ ‘fibula’ used in the treatment for a dislocated shoulder;¹⁴⁴ ἀρκολαβίς ’forceps’, in the ‘Alexandrian’ surgery for strangles;¹⁴⁵ ἀγκτήρ ‘surgical retractor’, in the surgery ‘as performed on humans’ for belly wounds.¹⁴⁶ The names of these are mentioned, but their form is in general not defined, save when Apsyrtus specifies a woollen suture that is not fine-spun (ῥάμματι ἑρέῳ κεκλωσμένῳ μὴ λεπτῷ);¹⁴⁷ or, in another case, describes the instrument used for administering an enema: ‘let the clyster be a hide made into a bag, having a reed bound into it and waxed, that is put into the sphincter’ (ἐστὸ ὁ κλουστήρ ἄσκίων, κάλαμον ἑχὼν ἐνθεδεμένων καὶ κεκτηρωμένων, τῷ προσθηθέμενον τῷ ἀφιγκτήρι).¹⁴⁸ Certain remedies are recommended by Apsyrtus for people too, such as a remedy for loss of hair:

100. Apsyrtus’ Latin medical terms were also identified by Meursius in his *Glossarium graeco-barbarum*.


¹⁴⁴ B24, CHG I p. 121. ¹⁴⁵ M105 = B20.2, CHG I p. 96.


¹⁴⁷ M150 = B71, CHG I p. 279. ¹⁴⁸ M633 = B75.1, CHG I p. 287; cf. AP XIV.55.
This works on humans too, on men and women.

**DRUG COLLECTIONS**

The pharmacological appendix is divided into sections on drenches (ἐγχυματισμοῖ) to be administered internally, and ointments or poultices (μαλάγματα, ἐμπλαστροῖ) for external application; within these categories, medicines are identified by their action as purging, desiccative, emollient, etc. Apsyrtus used written sources for this part of his treatise too: he explains his *modus operandi* in the letter which introduces the recipes.

Δέσποτα Κέλερ, τῆς συναφείας ἀπαιτούσης τήν τῶν φαρμάκων βοήθειαν, ἐπιδειξομένος σοι, διὰ ταύτα καὶ παρὰ τῶν ἄλλων ἐπεωράθημεν βοηθήματα τοῖς ἵπποις. ἄτινα γράφοντες, ἀναφέρομεν ἑκείνους τὴν χάρων, καθάτι παρ’ αὐτῶν ἐλάβομεν τὴν ἀρχήν, καὶ ὅτι κατὰ ταύτα ἐγγινομεν. (εἰ δὲ τι ἑκείνοι παρέλιπον, ἡμεῖς ἀξιοπιστότερον παραδώσουμεν Β."

Lord Celer, since the circumstances call for the aid of drugs, we shall display for you whatever remedies for horses we have learned ourselves or from others. In writing these things we offer gratitude unto them, since it is from them that we received the first principles, and whatever we learned in accordance with these. <If there is anything that they omitted, we shall transmit it in a more trustworthy way B>.

Apsyrtus’ method may be compared to Galen’s critical presentation of remedies from earlier pharmacological collections. Such collections (for humans) have been preserved in papyri; indeed Apsyrtus probably borrowed recipes from human medicine, since his text includes references to recipes that also appear in other authors or collections, such as ὁ Άζανίτης ‘the one from Azania’, ἡ χλωρά ‘the green one’, ἡ ἐρωμένη ‘the beloved one’. Other sources, such as the διεθέρα ἱατρική or ‘medical notebook’ of Antoninus, or the collections of Aspidius and Amasis, are more obscure. Apsyrtus, like Galen, emphasizes that he has tested the recipes, and not simply copied them.
and also that he has added new material: \( \tau \alpha \nu \tau \alpha \; \mu \varepsilon \nu \; \tau \omega \zeta \; \pi \rho \; \dot{\eta} \mu \zeta \omicron \; \dot{\epsilon} \gamma \rho \alpha \phi \eta . \)  
\( \dot{\eta} \mu \mu \epsilon \iota \varsigma \; \delta \epsilon \; \dot{\epsilon} \chi \rho \pi \sigma \acute{\alpha} \mu \epsilon \beta \alpha \; \kappa \alpha \iota \tau \omicron \omicron \varsigma, \) ‘those things were written by our predecessors. We have also used these…’\(^{154}\)

**MAGICAL COLLECTIONS**

One spell or \( \phi \nu \sigma \iota \kappa \iota \omega, \) a shrew-mouse (\( \mu \nu \gamma \alpha \lambda \acute{\iota} \)) applied as an amulet against the bites of others, is present in the B recension;\(^{155}\) the twenty-one other spells attributed to Apsyrtus exist only in the M recension.\(^{156}\) The spells, unlike the letters and the pharmacological collection, have no introduction or explanation; it is difficult to tell whether they were gathered into a separate volume or simply included along with ‘rational’ remedies in the same treatise. Some are prescribed with great specificity: the longest series, nine spells, comes under the heading of glanders;\(^{157}\) there is one against dysury, a few for the hoof, one against \( \beta \alpha \alpha \kappa \alpha \sigma \alpha \iota \nu \gamma, \) affliction by the evil eye. There is nothing original about them: they are examples of a genre as well-developed as medicine. Elements of simple sympathetic magic and exorcism are present in Eumelus’ text and those of the agricultural writers, but the spells given by Apsyrtus are of a complexity that points to a specialized written tradition as their source, ‘sentant le grimoire professionnel’, as Björck observes.\(^{158}\) Apsyrtus must have had access to a collection along the lines of those in the so-called magical papyri; which present many parallels of content and form with his spells.\(^{159}\) The diversity of the spells preserved in M leads one to suppose that there might originally have been more magic in Apsyrtus’ treatise.

The use of magic was especially common in the context of healing, of agriculture, and around horses.\(^{160}\) Apsyrtus’ recommendation of magical treatments for healing is hardly surprising, and reflects the beliefs and practices of his day as vividly as does the medical material in his treatise. The same

---

\(^{154}\) M759 = B129.2, CHG I p. 385.  
\(^{155}\) M694 = B87.1, CHG I p. 314.  
\(^{157}\) M17–26, CHG II pp. 30–1.  
\(^{158}\) ‘Apsyrtus’, 60.  
association of rational and irrational treatments is present in the Kæstoi of Julius Africanus. Apsyrtus’ spells are a combination of apotropaic formulas, to be inscribed on a scrap of material and fastened to the animal as amulets (περιάσπτα); and incantations to be recited over the animal (ἐπαοδαί).\(^{161}\) The spells, as we see from R. Heim’s catalogue, provide examples of most of the conventional categories; evocationes morborum, threats, sympathetic magic, historiolae, binding spells.\(^{162}\) Apsyrtus gives instructions for making amulets to be written on scraps of paper, parchment, or metal; these are affixed (the verb used, περιάσπτω, is, as we have seen, a technical term) to the halter of the horse, or to the affected part. ‘Sacred names’ invoked in the spells, and the nonsensical syllables (ἔφεσια γράμματα) which also feature in them, are what C. Bonner calls an ‘international magic’, one whose vocabulary echoes Egyptian, Hebrew, or Aramaic forms;\(^{163}\) they have parallels in incantations and amulets from a variety of sources.

Πρὸς ποδάγραν
ταῦτα δ’ ὀνόματα εἰς πέταλον κασσατέρον γράφεις ἐν γραφίῳ μὴ ἔχοντι τὸ λείον, καὶ ἡμέρα ἡλιοῦ τὸν πόδα δῆσον ὅν πονεῖ, καὶ πάλιν μετὰ ἡμέρας ὅ, τέτις γίνεται λέ· ἡμέρα ἡμέρα ἡλιοῦ (λόε). τὰ δὲ γραμμένα ταῦτα χεντίμα τεφήκεν τέφρα, γλόκαινε.\(^{164}\)

For podagra:
Inscribe these names on a plate of tin with a stylus that has no eraser, and on a Sunday attach it to the foot that is hurting, and again after 36 days, on the 36th day which is a Sunday (untie it). These are the things to be written: chentima tephken tephra [or, ‘ash’], sweeten.

The Egyptian name for the day of the week may indicate an Egyptian origin for the spell, or simply a pagan one.\(^{165}\) That this particular formula was in fact used is confirmed by the existence of a gold lamella found in Brindisi, inscribed with the same formula:

\[
\begin{align*}
XENTEMMA \\
TEΦPEIXEN \\
ΤΕΦΡΑΙΣ] \\
BAY[. . . . .166
\end{align*}
\]


\(^{162}\) Heim, Incantamenta.

\(^{163}\) C. Bonner, Studies in Magical Amulets Chiefly Graeco-Egyptian (Ann Arbor, 1950), 7.

\(^{164}\) M440, CHG II p. 63; Heim, Incantamenta, 213.

\(^{165}\) Grumel, La chronologie, 165.

\(^{166}\) Kotansky, ‘Incantations and Prayers’, in Faraone and Obbink, 118.
The words have been interpreted as Egyptian.\textsuperscript{167} That this amulet was made of a precious material may suggest that it was intended for a person rather than a horse; amulets and spells against podagra (gout in humans) are common.\textsuperscript{168} Apsyrtus gives instructions for amulets of less precious materials, papyrus or tin.\textsuperscript{169} Another amulet is an example of the syncretism of this magic:\textsuperscript{170}

\begin{quote}
'Αφόρτου δόρον ἄγαθον, σωτήριον, θαυμαστόν καὶ πρὸς κτίριαν ἑνεργών.

'Iao Iao, ἐν' ὄνοματος πατρός καὶ κυρίου ἡμῶν Ἰησοῦ Χριστοῦ καὶ πνεύματος ἁγίου, ἱρτερλεσθὲν, νοτῆσαι βρασάζει, σαλωάμι ναρκαζέω μέξα άρεος δαρουκαραήλ ἀβλαναθάλ βαθικεθ'dρω' τουμάλαθ' ποιμαδού χθον χθον, λιτιοταν μαξαβαθὲς μανὲρ ὄφαχον ἀβλαναθάληβα 'Iao Iao ἐν' ὄνοματος πατρός καὶ τοῦ κυρίου ἡμῶν Ἰησοῦ Χριστοῦ καὶ τοῦ ἁγίου πνεύματος.

καὶ γράψεις αὐτά ἐν χαλκῷ γραφείῳ ἐν λάμνῃ καθαρᾷ κασσιτερίνη ἀπὸ βούλλας, καὶ ἐνθίσαις ἐν δέρματι στυπτῷ, ὅποι ἀνθέλησι περιάφεις. τὴν δὲ λάμναν γράψεις θυμία στύρακε.

Apsyrtus’ beneficial, preserving, and wondrous gift, effective for beasts

Iao, Iae, in the name of the Father and of our Lord Jesus Christ and of the Holy Spirit, iriterliestather, nochthai brasax, salolam narkazeo mazai areous darou-charaël ablanatalath bathiketh dryth toumalath poumaidoin cithhou cithhou liotian mazabates maner opsachhou ablanathedeba iao iae in the name of the Father and of our Lord Jesus Christ and of the Holy Spirit.

Inscribe this with a bronze stylus on a clean tin strip from a seal, and wrapping it in waterproof leather, a Yx it wherever you wish. Having inscribed the strip, cense it with storax.

Here ‘Iao or Jahweh appears as a ‘sacred name’ side by side with Christ and other sacred names of various origins:\textsuperscript{171} Βρασάζε is evidently related to abrasax, another, more obscure ‘name of power’ whose power lies in the fact that the sum of its seven letters is 365, the number of days in a solar year,\textsuperscript{172} while ἀβλαναθάλ and ἀβλαναθάληβα are corruptions of the palindrome ablanathalabha.\textsuperscript{173}


\textsuperscript{168} e.g. Alexander of Tralles, ed. Puschmann, II p. 583 (Heim, Incantamenta, no. 204); other examples in Kotansky, ‘Incantations and Prayers’, in Faraone and Obbink, n. 84, p. 134.

\textsuperscript{169} Spells to be written on papyrus, ἐν χόρτῃ: M17 and M21, CHG II p. 30.

\textsuperscript{170} M1026, CHG II p. 98; Heim 214.


\textsuperscript{172} Bonner, Studies in Magical Amulets, 12, 30; Betz, The Greek Magical Papyri in Translation, 331; Dornseiff, Das Alphabet, 42–3.

Even apparently nonsensical words are conventional, such as the so-called ‘borphor’ syllables in another prescription:

\[
\begin{align*}
\Pi\rho\delta\varepsilon\ &\mu\alpha\lambda\nu\ si\sigma\nu\delta\alpha\iot\nu\varepsilon
\end{align*}
\]

\[
\begin{align*}
\text{Βάρβαρος, } &\text{βαρβαρίζουσα, }\xi\alpha\betaα\chiω\gammaα, \text{βαρβαρων }\pi\upsilon\iota, \text{πυρητουμόλε, }\sigma\acute{\varepsilon} \text{ τον }\phiορούντα.174
\end{align*}
\]

For glanders, a good one.

\[
\begin{align*}
\text{βαρβαρος, } &\text{βαρβαριζουσα, }\text{ζαβαχωρα, }\text{βαρβαρων }\pi\upsilon\iota, \text{πυρητουμόλε, }\sigma\acute{\varepsilon} \text{ τον }\phiορούντα.
\end{align*}
\]

Barbaros, barbarizousa, zabachora, barbaron pyri, pyritoumole, preserve the wearer.

The ‘borphor’ sounds seem to be associated with the Egyptian god Typho-Seth, who in turn is associated with donkeys; it is thus appropriate that they are used on an amulet for equids.175 \(\Pi\nu\iota\) may be an approximation of P’re, the name of the Egyptian god of the sun.176

An exorcism refers to the horse’s mythical origins in the sea; the odd numbers three and seven are also significant. Blowing or spitting is a common element of magical ritual; we have seen it in Eumelus.

\[
\begin{align*}
\pi\rho\alpha\sigma\phi\upsilon\varsigma\omicron\omicron\nu\omicron\omicron\nu\omicron \ &\lambda \epsilon \gamma \varepsilon
\end{align*}
\]

\[
\begin{align*}
\text{φε\in\nu\gammaε } &\text{ον, }\kappaακή μάλι, \text{δι\acute{\o}κει }\sigma\text{ Ποσειδών, καί }\tauαύτα:
\end{align*}
\]

\[
\begin{align*}
\tau\acute{\iota}\nu \ &\text{επ\acute{\iota} θαλάσσα ζώα, }\zeta \text{ ἄρκοι, }\epsilon\pi\tau\alpha \lambdaε\omicron\omicron\omicron\tau\omicron\omicron\omicron\tau\omicron\omicron\omicron\omicron, \epsilon\pi\tau\alpha \deltaε\lambda\varphi\nu\omicron\omicron\omicron\omicron \ \text{εδί\acute{\iota}κον }\tau\nu \nu \text{ ἀγρίαν }\mu\alpha\lambda\nu.
\end{align*}
\]

Blowing on it, recite:

Flee, then, evil glanders, Poseidon pursues you!

And this:

Three times seven sea-creatures, 7 bears, seven lions, seven dolphins pursued the savage glanders.

The \text{φε\in\nu\gammaε} formula used against disease, as well as sets of seven lions and bears, are found in consecutive spells in the so-called Philinna papyrus (first century BC).178

---

174 M23, CHG II p. 31; Heim 208.
175 See D. R. Jordan, ‘\textit{Defixiones from a Well near the Southwest Corner of the Athenian Agora’}, Hesperia, 64 (1985), 240–1, where this passage is cited.
176 Betz, The Greek Magical Papyri, 338.
177 M22 = CHG II p. 31; Heim, Incantamenta, 65. For other examples of evocationes morborum with this phrasing, see Heim, pp. 479–82 Compare e.g. no. 47, p. 480, from Alexander of Tralles, ed. Puschmann, II p. 377: it is a charm against colic, to be inscribed on a ring: \text{φε\in\nu\gammaε φε\in\nu\gammaε} \text{ιου }\chiολη, \text{δκοροδαλος }\sigma\text{ ζητει,} ‘Flee, flee, bile; the skylark is seeking you.’
Of the Syrian woman of Gadara, for any inflammation
seven springs of wolves, seven of bears, seven of lions, but seven dark-eyed maidens
with dark urns drew water and becalmed the restless fire

The charm of the Thessalian Philinna, for headache:
Flee, headache, [lion] flies beneath a rock,
Wolves flee; horses flee on uncloven hoof... 

Other irrational treatments involve symbolic procedures, for example, numerology is combined with sympathetic magic in a binding spell which involves knotting a rope three times, binding it around the affected part, and then cutting it with a knife.

The diverse cultural influences in Apsyrtus’ world are reflected by the fact that in one spell the Greek god Poseidon is invoked against glanders, while elsewhere the disease is denounced as Hellenic, that is, pagan:

μάλις ἄρθροτ’, ἄρθροτική, κωφή, Ἐλληνική
arthrit-arthritic, senseless, godless glanders

Similar ambiguity appears in a remedy for abrasion of the foot (θλάζμα): Apsyrtus recommends two spells to be inscribed, in this case, on the horn of the hoof. These give a choice between the name of the horse’s master or a formula which, appearing in the manuscript as ἰλόῳ ἱχθῦς νήσος, is resolved by the editors to ΙΑΩ ἸΧΘΥΣ ΙΗΣΟΥС, that is, ΙΑΟ, a christogram, the Christian acronym ἸΣΗΣΘΥΣ, and the name Jesus. The amuletic use of the christogram by a soldier in the late third or early fourth century is worthy of note. In another amulet (for use against dysury), Semitic names disintegrate into their component letters; these ἐφέσια γράμματα are combined with sympathetic magic in the image of flowing water:


181 M202, CHG II p. 41; Heim 75.

182 M19, CHG II p. 30; Heim, no. 43, p. 477.

183 M201–2, CHG II p. 41; Heim 241.

184 See Dornseiff, Das Alphabet, 60–1.
Inscribe and affix the invocation of the god, conjuring BARNABATH TH TH and SECHTHABANGGGGA. I also invoke the god ABRAHAM MMM. Loose the veins with the dysury and flow like the river Nile, by no one constrained.

Apsyrtus’ spells, used for healing, represent a benign magic. But in their vocabulary and in format they are related to curse tablets, especially those associated with the milieu of the hippodrome. These inscribed shells or strips of metal bear vivid and vicious invocations—cadat vertat frangat, ‘may it fall! may it twist! may it break!’ or ἐκκόφον ἐκνεύρωσον ἐξάρθρωσον ‘cut to pieces! cut sinews! cut joints!’—directed against horses (identified by name and by faction) and against their charioteers. The lists are punctuated by the same cacophonous nonsense-words, the same cryptic alphabets or numerology and deformed sacred names—καβρακκρακκρου, καρουραχθαῖ, βραχχθαῦ, KKK AAA ΛΛΛ— but with an unnerving vehemence of sentiment.

The threat of malediction was not limited to the racing-stables: concern about the evil eye was universal. In a letter written to a Roman cavalryman in upper Egypt around the middle of the second century, the wish that his horse be ἀβασκάντος, safe from curse, is expressed twice, both in the greeting and in the closing salutation:

Πούπλις Α[...ω]τῶι υἱῷ πλείστα χαίρειν καὶ διὰ παντὸς υγιαίνειν μετὰ τοῦ ἀβασκάντου σου ἵππου.

[…] ἐρώσαι σε εὐχόμαι μετὰ τοῦ ἀβασκάντου σου ἵππου.

Publius to his son A[...], many greetings and [hope] that you and your horse (safe from the evil eye), are thoroughly well

[…] I pray that you be well, along with your horse (safe from the evil eye).

185 M62, CHG II p. 36; Heim 90 and 212.
186 Tablets from Carthage and Hadrumetum, Audollent, Defixionum Tabellae, pp. xciv, 304–34, 385 ff. Charioteers who engaged in this sort of practice were to suffer the most severe penalties: Cod. Theod. IX.16.11.
187 See Audollent’s index III, Nomina defixorum equorum, pp. 454–60.
188 Defixionum Tabellae, 307 and 382.
190 Bagnall, The Florida Ostraka, no. 15, p. 54; the same wish appears in no. 18, p. 58. For the date, see pp. 3–4.
Since the evil eye was obviously a real concern, and since horses were precious, it is hardly surprising to find Apsyrtus prescribing the following exorcism:

'Αφόρτου πρὸς βασκοσύνην.

Βαίνε, νεμεσώθ' ἔξελθε, ἀπόστηθι ἀπὸ τοῦ περιπτομένου ἵππου, οὗ ἐτεκνεν ἡ ἱδία μύτρα, βασκοσύνην, δοσον γῇ ἀπέχει οὐρανοῦ.  

Of Apsyrtus against the evil eye

Leave, nemesis. Depart, evil eye, stay away from the horse to which [an amulet] is affixed, which its own womb bore—as far as the earth is distant from the sky.

**EXPERIENCE**

Apsyrtus refers to the writings of his predecessors with reverence:

ταύτα μὲν οὖν ἐκεῖνος εἰρήτα μεγάλοις ἀνδράσιν...

These things have been said by those great men...

ἐνα δὲ μὴ δύσωμεν τῶν πρὸ ἡμῶν μεγάλων ἀνδρῶν ἐκβάλλει τοὺς ἀφορισμοὺς.  

So that we do not seem to discard the definitions/aphorisms of the great men who went before us

At the same time, he constantly contrasts them with his own experience: ‘an ointment, which we have used’, ‘but we use these remedies’ (μάλαγμα, ὃ ἐχρησάμεθα ἡμεῖς, ἡμεῖς δὲ ἐχρησάμεθα βοηθήμασι). And he is not reluctant to take credit for a new discovery:

μηδεὶς λέγετο, ὅτι οἱ πρὸ ἡμῶν ἐχρήσαντο. παρῆλθεν γὰρ αὐτοῖς τοῦτο.  

Let no one say that those before us used this, for this escaped them

τὰ πάθη τῆς δυσούριας, ἀ νῦνει γέγρασται  

The diseases of dysury, which are not written about by anyone.

---


192 M979, CHG II p. 94; Heim 45.

193 M316 = B34.5, CHG I pp. 180–1.

194 M824 = B130.3, CHG I p. 401.

195 M569 = B46, CHG I p. 220.

196 M316 = B34.4, CHG I p. 180.

197 M59 = B33, CHG I p. 166.
This interaction of ‘book-learning’ and experience is clearly illustrated in the letter on χοιράδες or strangles. Apsyrtus begins with a survey of the literature: πολλοί συνετάζαντο βοιημάτα πολλά ἀδύνατα καὶ ἀνωφελή. λέγουσι γάρ…

Many people have prescribed many cures that are weak and worthless. They say…

He enumerates a number of treatments attributed to anonymous authorities (οἱ μὲν, των, ἔτερον, and ἄλλοι), then recommends the ‘best treatment’ (ἀρίστη θεραπεία), one that is practised by the Alexandrians. His account of this surgery appears to be drawn from experience: in addition to a description of the procedure, it includes telling asides such as ‘If there is haemorrhaging while surgery is being performed, do not fear, for there is no danger’ (αἰμορραγία δὲ ἐὰν γένηται χειριζομένου, μὴ εὑλαβεῖσθαι, οὔκ ἔχει γὰρ κίνδυνον). Finally, he adds from his own experience the Sarmatian practice of gelding colts early to avoid strangles.

Many elements in the text reflect Apsyrtus’ experience in the army: he describes chest-wounds from metal blades, falls into deep ditches such as might occur in the camps (ἐν ταῖς παρεμβολαῖς; camps were usually surrounded by a rampart and ditch, and earthworks were also part of larger-scale defences such as those on the Danube frontier), and how to prevent injury during the schooling of a cavalry-horse. These excerpts are without parallel in the texts belonging to the agricultural tradition, Columella, Anatolius, and Eumelus.

APSYRTUS AND THE SARMATIANS

Perhaps the most intriguing source of information mentioned by Apsyrtus is his contact with the Sarmatians (Roxolani?), nomadic tribesmen who inhabited the regions north and west of the Black Sea. The Sarmatians, including women, were renowned for their horsemanship: Ammianus Marcellinus, for example, mentions that they usually rode geldings, and that these were swift and obedient. This information is confirmed by Apsyrtus, who observes that τὸ Σαρματικόν γένος . . . δρομικῶν, ‘the Sarmatian breed is swift’, and

199 Similar to Eum. M107 = B16.4, p. 90.  
202 M751 = B72, CHG I pp. 280–1.  
203 B116 (with additions from M), CHG I pp. 375–6.  
furthermore describes the Sarmatian practice of castrating newborn colts; it is a precaution, he says, against strangles.\textsuperscript{206} Apsyrtus provides a few more details, observed with a professional’s eye, about the practices of these enigmatic horsemen: an account of a treatment for dysury that he learned from the Sarmatians (ἐγινον δὲ ἐγὼ καὶ τούτο παρὰ Σαρμάταις) which involves covering the horse with a blanket and fumigating under its belly with castor; the means by which a young mare who rejects her foal out of fear is persuaded to nurse it; the fact that nasal polyps are endemic in Sarmatian regions, ἐν τοῖς κατὰ Σαρματίαν τόποις.\textsuperscript{207} Perhaps the interaction of Romans and barbarians at the frontier was not all hostile, but involved a certain amount of exchange of information.\textsuperscript{208} Apsyrtus may also have encountered Sarmatians who served in the army; but since he refers to the tribesmen collectively rather than as individuals, it is difficult to tell what sort of relationship he had with them, and how communication took place. A shared interest in horses may have provided common ground. But he seems to have learned at least one useful medical word in their language, the name for the healing plant marshmallow:

λέγεται μὲν ἀλθαία, ὑπὸ τινῶν δὲ μολόχη, Ἡρωμαιώτη δέ ἐβισκός, παρὰ Σαρμάταις δὲ καὶ Γέταις καὶ Θρησίν ἄρισπις . . . ή μὲν οὖν ἀλθαία οὐ βαδίως εὑρίσκεται, φοιμένη ἐν τοῖς τῆς Λαίας τόποις ἡ Σικελίας πανταχοῦ. εὑρίσκεται δὲ ἐν τῇ Σμύρνῃ ἐν τῷ Μέλητι ποταμῷ.\textsuperscript{209}

It is called althaia, by some moloche, in Latin ebiskos [hibiscus], and by the Sarmatians and Getae and Thracians arispis . . . marshmallow is not easily found; it grows in the region of Asia and everywhere in Sicily. It is found in Smyrna, too, by the river Meles.

It is worth dwelling for a moment on this excerpt. It reveals Apsyrtus’ familiarity with the format of herbals, which provide not only a description of the plant’s habitat and its therapeutic value, but often also lists of the names by which it is known. The first three synonyms, two Greek and one Latin, are present already in the earliest text of Dioscorides;\textsuperscript{210} the Sarmatian word is not

\textsuperscript{206} M105 = B20.5, CHG I p. 97. Strangles affects primarily young animals: _Merck Veterinary Manual_, pp. 721–2. According to Strabo, the Sarmatians gilded their horses to make them docile, the Sarmatian breed being very fast but unruly; ed. Meineke, 312, p. 429.

\textsuperscript{207} M59 = B33.8, CHG I pp. 168–9; M532, CHG II p. 70; M552 = B21.2, CHG I p. 102.

\textsuperscript{208} It is not too hard to imagine that the adoption of the stirrup took place in this sort of context.

\textsuperscript{209} M225, CHG II p. 45. Apsyrtus’ description of the word as Sarmatian and Getic recalls Ovid’s statement ( _Tristia_ 5.12.50) that he learned ‘the language of the Sarmatians and Getae’, discussed by J. Harmatta, _Studies on the History of the Sarmatians_ (Budapest, 1950), 19. The morphology of the word rings true: for examples of Sarmatian names containing ar- and –sp- in other literary sources and in Greek inscriptions from South Russia, see Harmatta, _Studies in the History and Language of the Sarmatians_ (Sze`ged, 1970), 66 ff. (no mention of Apsyrtus’ evidence).

\textsuperscript{210} Diosc., ed. Wellmann, III. 146.
in any recension of the *De materia medica*. By adding it, however, Apsyrtus is following the standard practice of giving regional names for plants.\(^{211}\) Even though it is in strictly conventional form, this passage of technical prose evokes what seems to be Apsyrtus’ personal memory of collecting the healing plant on the banks of the Meles, and later searching for the same plant, perhaps with the help of a barbarian acquaintance, on the marshy banks of the Danube.

\(^{211}\) On the synonyms, their sources, and their incorporation into different recensions of Dioscorides’ text, see M. Wellman, ‘Die Pflanzennamen bei Dioskurides’, 360–422. Sarmatians do not figure among the usual sources of the synonyms in Dioscorides.
Pelagonius

Pelagonius’ treatise, composed in Latin, nevertheless belongs to the same tradition as the Greek sources of the Hippiatrica. It has been observed that Pelagonius’ work is ‘the first Latin treatise on horse medicine’, that is, the first specialized treatise devoted to the subject outside of the context of a more general work on agriculture.¹ To refer to him as the first, however, implies a certain amount of originality, a quality which one is hard-pressed to recognize in the text. Pelagonius is dependent upon other writers not only for the content of his treatise, which is a patchwork of quotations, but even for its epistolary form, which is imitated from Apsyrtus. Originality, however, was not a consideration in the transmission of antique scientific texts, and Pelagonius’ work was considered useful or interesting enough to be translated into Greek. Moreover, despite its obvious dependence upon Apsyrtus’ treatise, the translation was incorporated, alongside Apsyrtus and other very similar texts such as those of Eumelus and Hierocles, into the Greek veterinary compilation. The Greek version of Pelagonius, inaccurate in many places, is considered of secondary value for establishing the Latin text; nevertheless it is interesting in itself as a specimen of Late Antique translation.

PELAGONIUS’ TEXT

The Latin text of Pelagonius is preserved in three manuscripts. The best-known witness to the text is Florence, Riccardianus 1179 (R), the copy made ‘de codice sanequam vetusto’ by Politian in December 1485.² In his subscription to the text, the humanist is characteristically careful to explain that he has checked that none of the readings in the damaged manuscript have been

altered. This copy provided the basis for the earliest editions of the text, those of Sarchiani, von Eichenfeld, and Ihm.\(^3\) Four folia from Bobbio, now in Naples, and dated to the sixth century, were used as additional evidence by K.-D. Fischer in his Teubner edition of 1980.\(^4\) The form of the Latin text in R, in which there are duplications, missing headings, and a number of apparently interpolated lemmata attributing material to Pelagonius, has led Fischer to propose that it is a reconstitution (along the lines of the text of Hierocles in RV) of Pelagonius from excerpts that were made for one or more otherwise unknown compilations.\(^5\) Recently a neglected manuscript of Pelagonius, Einsiedeln, Stiftsbibl. 305 (504), of the eighth or ninth century (E), was brought to light by P.-P. Corsetti. In it is a text of Pelagonius substantially different from that in the two other copies.\(^6\) J. N. Adams has demonstrated that the text of the E is closer to Vegetius than to R; the Greek translation, on the other hand, appears to be related to R.\(^7\) In spite of such evidence of repeated reworking, distinctively ‘Pelagonian’ features of style may be readily distinguished in the text;\(^8\) the Greek text provides some corroboration of these features.

The Greek version of the treatise figures prominently in the *Hippiatrica*. The *pinax* of M indicates that 385 excerpts from Pelagonius were originally present in the manuscript, out of a total of 1223; Apsyrtus, by way of comparison, contributed 372 excerpts. (Most of the excerpts from Pelagonius, however, are short recipes; Apsyrtus in fact provides a greater proportion of the text.) The end of M is mutilated, and only 369 Pelagonius excerpts are now present in the manuscript. Of these some 290 are present in B; in B are also 40 excerpts that do not appear in M. Anonymous passages throughout B are indicated in the Teubner edition. Fifteen excerpts from Pelagonius appear only in C; there are none in RV.\(^9\) From the *Hippiatrica* may be recovered some 70 per cent of the Latin text, as well as fragments not preserved in Latin.\(^10\)

Not long after it was composed, Pelagonius’ treatise was used as a source for the *Mulomedicina* of Vegetius. Vegetius, conventionally identified with the Publius Vegetius Renatus who compiled *De re militari* (late fourth or early

---


\(^4\) *Pelagonius, Ars Veterinaria*, pp. x–xi.

\(^5\) Ibid., pp. xii ff. and diagram p. xxv.

\(^6\) ‘Un nouveau témoin de l’*Ars veterinaria* de Pelagonius’, 31–56.


\(^9\) Excerpts from Pel. in the *Hippiatrica* are listed in Fischer’s edn., pp. 145 ff.

fifth century), draws extensively from Pelagonius, yet gives the text, as we have seen, a mixed review:

proxima aetate et Pelagonio non defuerit et Columellae abundaverit dicendi facultas . . .

In recent times the ability to write was not entirely lacking in Pelagonius and was abundant in Columella.

Verum . . . [Pelagonius] omissis signis causisque morborum, quasi ad doctissimos scriberet, tam magne rei fundamenta neglexerit.11

[Pelagonius], omitting the symptoms and causes of diseases, as though he were writing for very learned men, neglected the basic principles of the science,

As this comment suggests, Vegetius was an amateur, not a horse-doctor; his superficial criticism of Pelagonius (and other sources) is probably a conventional excuse for the composition of a new treatise.

PELAGONIUS’ DATE AND IDENTITY

Pelagonius wrote after Apsyrtus and not long before Vegetius; the treatise is impossible to date with more precision, but is conventionally assumed to have been composed in the late fourth century.12 Two of the addressees of Pelagonius’ letters, Arzygius and Astyrius, have been associated tentatively with holders of high office in that period; other names that appear in the text are indicative in general of a similar date.13 Adams has observed that elements of Pelagonius’ vocabulary corroborate a date close to that of Vegetius.14

The cognomen Saloninus, attached to Pelagonius’ name in the subscription of the Florence manuscript,15 may indicate a connection with Dalmatia, although as Fischer has noted, the name is not restricted to natives of that region.16 But an origin in this region, the frontier between Latin- and

11 Veg. prol. 2–3.
14 Adams, Pelagonius, 3–4.
15 It appears in fact in the plural as commentum . . . Pelagoniorum Saloniniorum (Pel. Lat. 470); corrected by Hoppe, ‘Die Commenta artis mulomedicinae des Pelagonius’, 190–2, who demonstrates how the corruption may have taken place.
Greek-speaking areas of the empire,17 would account for Pelagonius’ bilingualism. The inclusion of magical remedies in Pelagonius’ treatise provides no more indication of his religion than in the case of Apsyrtus.18 An allusion to Sol ipse dominus orbis, decus mundi is similarly inconclusive: as Hoppe pointed out, the association of the horse with the sun-god is a rhetorical topos, used (for example) by Hierocles as well.19

Since the content of the text is largely taken at second hand from other works of disparate origin, language, and date, it does not provide certain evidence for Pelagonius’ identity or location. Materia medica and systems of measurement appear to be copied from the sources with little or no alteration: a reference to the modius castrensis, a military grain-measure, for example, simply echoes Apsyrtus.20 A number of references seem to reflect an urban setting, whether of Pelagonius or his sources. A prescription for treatment in a balneum, or bathhouse, comes from Eubulus.21 Another treatment (source unknown) involves taking the horse for a stroll past the stalls of spice-merchants:

prodesse etiam ferunt, si deambulent inter pigmentarios, quia odores diversi latenter pulmonibus prosunt.22

And they also say that it helps if they go for a stroll among the spice-merchants, where the different scents subtly help the lungs.

There are also references to the hippodrome in Pelagonius’ text, notably in a series of remedies attributed to quadrigarii or charioteers.23 The addressees of Pelagonius’ letters are described as owners of racehorses; they seem to have been men of high standing.24 Pelagonius adopts a somewhat deferential tone in these letters, speaking of claritas tua.25

Whether or not Pelagonius was a practitioner is not made clear in the treatise. In his dedication, Pelagonius writes mihi suicit sanare quod amo, ‘it is enough for me to heal what I love’,26 but his claim of a love for horses is more credible than that of medical competence. He refers to having examined sick horses, and also their owner, himself.27 But in other instances where a treatment is recommended from experience, Pelagonius may be shown to be paraphrasing Apsyrtus without compunction. Fischer and Adams favour the

---

17 G. Dagron, ‘Aux origines de la civilization byzantine: Langue de culture et langue d’état’, 34.
18 One of these spells is regarded as an interpolation by Fischer. On Pelagonius’ magic, see Adams, Pelagonius, 28 ff.
21 Pel. Lat. 271.
22 Pel. Lat. 211 = M196 = B38.10, CHG I pp. 202–3; in Fischer’s commentary ad loc. it is noted that the treatment is not obviously related to the disease (dropsy).
23 Pel. Lat. 17, 190, 369, 464, 465.
24 Adams, Pelagonius, 113 ff.
25 Pel. Lat. ep. ded. 1; 216.
26 Pel. Lat. ep. ded. 1.
27 Pel. Lat. 216.
view that Pelagonius was an amateur, and note that the distinction between amateur and professional was not as strict as it is today.\textsuperscript{28} Certainly it is not unusual for a horseman to be familiar with veterinary treatments, both in theory and to some extent in practice. And there are at least two other instances, in antiquity, of veterinary treatises compiled by amateurs, namely those of Hierocles and Vegetius. Fischer also points out that Pelagonius seems to have been better educated than one might expect a \textit{mulomedicus} to be (though in general the Greek veterinary writers represented in the \textit{Hippiatrica} seem to have been well educated), and that the men to whom Pelagonius addresses his letters are not \textit{mulomedici} but racehorse-owners.\textsuperscript{29} Pelagonius refers on occasion to \textit{mulomedici} as though he were not one of them: \textit{Sane cui pellis aruerit et cibum non sentit (quod genus passionis mulomedici coriaginosum appel·nant)}, ‘indeed the one whose skin is dry and who does not pay attention to its feed (which type of affliction the horse-doctors call \textit{coriaginosus})’.\textsuperscript{30} Elsewhere, he instructs that a servant or another person be delegated to carry out a procedure: \textit{nomen domini in dextra ungula dolentis equi aut servus aut quilibet alius scribat}, ‘let a slave or anyone else inscribe on the right hoof of the suffering horse the name of its master’.\textsuperscript{31} though the involvement of a third party might in this instance be a requirement of the magical protocol.

\section*{THE FORM OF THE TREATISE}

The mimesis of Apsyrtus’ epistolary form also seems to support the view that Pelagonius does not write as a professional horse-doctor.\textsuperscript{32} For Pelagonius, Apsyrtus was not just a source of information, but also a model of literary style. Columella’s text was treated by Pelagonius in the same manner.\textsuperscript{33} Unlike Apsyrtus, Pelagonius does not include in his letters the element of \textit{erotapokrisis} (apart from one instance),\textsuperscript{34} and indeed without the help of that device,

\begin{itemize}
\item \textsuperscript{28} See Adams’s discussion of this question, \textit{Pelagonius}, 662 ff., with reference to conflicting opinions.
\item \textsuperscript{29} ‘Pelagonius on Horse Medicine’, 288.
\item \textsuperscript{30} Pel. Lat. 26. Similar attributions of technical terms to \textit{medici} are, however, found in Theodorus Priscianus, whose medical qualifications are beyond doubt. See Langslow, \textit{Medical Latin}, 126, where it is observed that such expressions are not uniformly present in manuscripts of Theodorus’ text.
\item \textsuperscript{31} Pel. Lat. 126; Heim 12.
\item \textsuperscript{32} Cf. Stempinger, \textit{Das Plagiat}, 121 ff.
\item \textsuperscript{33} Adams, ‘Pelagonius and Columella’, 72–95.
\item \textsuperscript{34} The letter to Festianus begins \textit{scripsisti mihi}, Pel. Lat. 363.
\end{itemize}
handles the introduction of subjects clumsily. For example, Astyrius, the addressee of the letter introducing chapter IX, *De laeso dorso* ‘On an injured back’, is described as an *auriga privatus* or amateur charioteer. Pelagonius explains that the subject of the letter, important for pack-animals, is in fact irrelevant to Astyrius’ needs:

igitur de dorso aput te pauca dicamus, licet cura istius corporis tibi aurigae privato non adeo sit necessaria, quia curuli equo a labore pars ista corporis aliena est. tamen ut ex omni parte integra inlibataque corpora equorum perseverent, etiam hanc curam scire te convenit. Therefore we will say a few things about the back in your presence, although for you, as an amateur charioteer, a cure for that area should not really be necessary, since in the racehorse that part of the body is unacquainted with distress. Nevertheless, so that the bodies of horses remain sound and unimpaired from all parts, it is proper that you know this cure as well.

Pelagonius takes over the ‘disclosure formula’ used by Apsyrtus: *scire te convenit* = *χρη σε ειδίειν*, ‘you ought to know’. He uses *congruum est addiscere* ‘it is fitting to learn in addition’, in a similar fashion, and also the variation *congruum est ut . . . pauca dicamus* ‘it is fitting that we say a few things’, more reminiscent perhaps of oratory than of letter-writing.

The treatise begins with the dedicatory epistle addressed by Pelagonius to Arzygius, in which Pelagonius displays his familiarity with the literary conventions of prefaces. This first letter is different in form and style from those which figure in the body of the treatise. Both the greeting, *Pelagonius Arzygio suo salutem*, ‘Pelagonius to his dear Arzygius, greetings’, and the closing wish *vale*, are preserved in the Latin (the dedication does not exist in Greek). In the dedication, Pelagonius draws a comparison between himself and Arzygius. The two men are united by a fondness for horses; but Pelagonius conveys the usual protestation of inadequacy and humble style by contrasting his own unpolished manner of expression with Arzygius’ oratorical prowess:

Cum frequentissime te equos laudare, amare semper vehementer admirarer . . . imitarer quidem te et ipse, ut de ipsorum laudibus aliquid scriberem, si digna proferrem: nunc pauperem linguam nullus aut modicus sermo protelat. Since I have always greatly admired your love and frequent praise of horses, I should like to imitate you myself in some way, and write a little something in their praise, if I could produce something worthwhile: yet my impoverished tongue produces little or no speech.
Pelagonius nevertheless, in a parenthetical phrase, shows that he knows about encomia and their topoi:

nec inmerito rem tam nobilem, rem omnibus gratam amare non desinis, siquid Sol ipse dominus orbis, decus mundi, solo equorum ministerio contentus cotidie nobis aut cum ipsis aut per ipsis reddit optabilem lucem.

Nor is it unworthily that you do not cease to love a thing that is so noble, a thing pleasing to all: indeed the Sun himself, lord of the universe, glory of the world, is content by the service of horses to give forth his longed-for light to us every day, either with them or from them.

He concludes with some flattery and the conclusion of the comparison:

mihi sufficit sanare quod amo contentusque sum me ex tua claritate florere. tibi enim quaeritur quicumq

It is enough for me to heal what I love, and I am content to flourish from your brilliance. For whatever is in us is to be sought in you, and whatever is in you shines forth in us

and a wish that the book be read with pleasure:

ut libenter suscipias, libentius legas deprecor.\footnote{Pel. Lat. ep. ded. 1–2.}

I pray that you might take it up with pleasure, and read it with even more pleasure.

This expression of polite sentiments is quite different in tone from Apsyrtus’ injunction, in his preface, to Asclepius to study the treatise lest he be ridiculed by other horse-doctors.

After Pelagonius’ dedication there follows a table of contents listing the titles of thirty-five chapters; the subjects begin with general conditions, \textit{curae ad morbum omnem, macies}, and \textit{febris}, ‘cures for any disease, thinness, and fever’, and proceed thereafter with no discernible pattern. The Latin text breaks off after chapter 31; some of the passages preserved in Greek enable one to fill in the lost chapters.\footnote{These passages are included in Fischer’s edn. as fragments 471–533.} The new manuscript E has provided the Latin text of some of these fragments, as well as additional material.\footnote{Corsetti, ‘Un nouveau témoin’, Adams, ‘Notes on the Text, Language, and Content of some New Fragments of Pelagonius’, 489–509.}

After the table of contents, the treatise begins with an introductory discussion of the age at which horses are useful for racing and for domestic use (presumably riding), and the manner in which age may be determined from inspection of the teeth. This passage is lifted from Columella, as is the description of the points of the horse that follows.\footnote{Pel. Lat. 1.2–3 = Col. VI.29.5 (from Varro, \textit{RR} II.7.2–3); Pel. Lat. 2 = Col. VI.29.2 (Varro, \textit{RR} II.7.5).} (None of the other
elements of Columella’s discussions of horse-breeding seem to have been used by Pelagonius). Eighteen of the surviving chapters begin with a letter, after which are listed recipes introduced simply with *item* or *aliud*, or with a lemma describing the type of treatment, the ailment for which it is appropriate (ad ventris dolorem sive ad strofum), or its source (*Litori Beneventani c.v.*). The last few chapters of the treatise consist of lists of recipes for drugs, organized by category into *emplastri, collyria*, etc. This loosely bound structure, in which the greater part of the treatise is made up of lists of short recipes, appears to have contributed to the disintegration of the text, both in its Latin transmission and in the various recensions of the *Hippiatrica*.

**PELAGONIUS’ SOURCES**

It is revealing of Pelagonius’ method of compilation that even a statement about the use of sources has been culled from another writer. The first chapter of the text begins with Columella’s description of the common causes of disease, and a statement that echoes Apsyrtus’ introduction to his collection of recipes for drugs:

---

*Columella*

Pelag. Festiano. Congruum est etiam medicinas aut potiones quibus morbi expellantur addiscere. morbos plerumque equi concipiunt aut lassitudine aut aestu aut frigore aut fame aut <si> cum diu steterint, subito ad currsum fuerint stimulati, aut si suo tempore urinam non fecerint, aut sudantes et a concitatione

*Pelagonius*

Πλερούμεναι ιστολογίας morbos concipiunt lassitudine et aestu, nonnunquam et frigore, et cum suo tempore urinam non fecerint; vel si sudant, et a concitatione

*Apsyrtus*

Δέσποτα Κέλερ, τῆς συναφείας ἀπαιτούσης τὴν τῶν φαρμάκων βοήθειαν, ἐπιδειξόμενοι σοι, ὡσ τα αὐτοί καὶ παρὰ τῶν ἀλλων ἐπειράθημεν βοηθήματα τοῖς ἑπταῖς, ἀπειράθημεν βοηθήματα τοῖς ἑπταῖς ἑπταῖς γράφοντες ἀναφέρομεν ἐκεῖνος τὴν χάριν, καθότι παρ’ αὐτῶν ἐλάβομεν τὴν ἀρχὴν... λέγον δὴ πρῶτον ἔχομενι τιμήσεων περισσότερον καθαρτικάς.

---

43 I–X, XIII–XV, XVII, XX, XXI, XXIV, XXVII.
44 On use of ἀλλοτρίως as a heading, see Wilson, ‘A Chapter in the History of Scholia’.
45 Pel. Lat. 116.
46 Pel. Lat. 6.1.
47 Pel. Lat. 4 = M41 = B4.1, CHG I p. 34; Col. VI.30.3 Aps. M759 = B129.1, CHG I p. 385; see Adams, ‘Pelagonius and Columella’, 79.
The use of many sources is presented elsewhere as a desirable characteristic:

Sollicito tibi de singulis curis pecorum etiam ad dolorem ventris vel ad strofum remedia exquisita de multis auctoribus mittenda curavi.\textsuperscript{48}

I have taken care to present to you remedies selected from many authors about the specific treatments for beasts with colic or twisted intestine.

Another example of the way in which Pelagonius weaves together ideas and phrases from his sources is provided by the introduction to ch. VII. In this letter, a quotation from Columella (indicated here in italics) is substituted for the technical term \textit{mulomedicil} /\textit{ipopa\tau\rho\i}/ in a passage which echoes Apsyrtus’ criticism of his colleagues:\textsuperscript{49}

\textbf{Pelagonius}

Beasts of burden generally catch sicknesses from fatigue or from the heat, and sometimes also from the cold and when they have not passed urine at the proper time, or if they sweat and then drink immediately after having been in violent motion, or when, after they have stood for a long time, they are suddenly spurred into running.

Pelagonius to Festianus. It is proper to learn in addition about the drugs and drenches by which diseases are dispelled. Beasts of burden generally catch sicknesses from fatigue or from the heat, or from cold or hunger, or when, after they have stood for a long time, they are suddenly spurred into running, or when they have not passed urine at the proper time, or sweating and having been in violent motion they drink immediately. We have received these remedies for such things from our elders and have proved them by making them ourselves.

Lord Celer, since the circumstances call for the aid of drugs, we shall display for you as many remedies for horses as we have learned ourselves or from others. In writing these things we offer gratitude unto them, since it is from them that we received the first principles.\ldots I will speak first of the composition of purging drenches.

\textsuperscript{48} Pel. Lat. 115. \quad \textsuperscript{49} Pel. Lat. 139; Col. VI.27.1; Aps. M59 = B33.1.
Pelagonius levels similar criticism, probably also in imitation of Apsyrtus, at unnamed persons in the letters which open chapters X and XIII; nevertheless, after these polemical introductions, he presents quotations from his sources uncritically, and (as far as one can tell from the cases in which sources survive independently) without much alteration of their text. This is particularly noticeable in the case of the twenty passages from Columella, who is used as a source more frequently than the

50 Parallels listed in Fischer’s edition, p. 145.

51 On Columella’s use of Celsus, see Weiss, De Columella et Varrone, 9–17.


Pelagonius to Festianus [said] Many, whose pleasure is the rearing or curing of the equine race, very frequently encounter the fault of error. For when the horse or other type of animal is troubled by dysury and needs very much to be helped for this, they, hoping that it is strophus or twisted stomach or intestine, treat the stomach, so that when one thing is the cause, the cure for another is employed, and it encounters danger, and, what is more to be said, it ruptures.

Lord Aelian, it has been made known to me that you inquired why most horse-doctors, not distinguishing the diseases that happen among horses, offer the wrong remedies. For they aid the horse that is ailing in its stomach as though it were suffering from dysury, and the horse suffers rupture.
than the passages from Apsyrtus in Pelagonius.\(^5\) The difference may be explained as the result of a stylistic reworking of the existing translation carried out by Pelagonius; on the other hand, Adams has advanced a strong argument that Pelagonius translated Apsyrtus from the Greek himself, inserting phrases from Columella into the text.\(^4\) This view is supported by the fact that Pelagonius retains words in Greek letters in several passages of the Latin text that are derived from Apsyrtus. It is interesting that Pelagonius uses Columella to help translate Apsyrtus just as did Jean Ruel, a little over a thousand years later in his translation of the *Hippiatrica*.

Hoppe pointed out that several passages related to Pelagonius (unfortunately with no attribution) are also present in the *Mulomedicina Chironis*, and must be derived from a common source.\(^5\) As has been shown by Adams, the numerous parallels between Eumelus, Pelagonius, and Columella, initially thought to result from Pelagonius’ use of Eumelus, may be explained by assuming that both Eumelus and Pelagonius quote from a lost Latin veterinary writer who in turn is related to Columella.\(^6\) The relation, if any, of the two unnamed sources is not clear. The matter is complicated by the fact that those of Pelagonius’ sources that may be identified are not independent of one another: Apsyrtus used Eumelus, and Eumelus in turn is also related to Columella.

Although he may have thus had before him several different versions of the same material, Pelagonius’ method of compilation means that it is usually possible to tell which source he is following, even when no name is indicated, if that source or a related text exists for comparison. In the following instance, while the amuletic use of a shrew-mouse is recommended both by Columella and by Apsyrtus, Pelagonius betrays his choice of source by using Columella’s words—a logical choice, since the passage was conveniently already in Latin, and also in a style that Pelagonius evidently admired:\(^7\)

<table>
<thead>
<tr>
<th><strong>Columella</strong></th>
<th><strong>Pelagonius</strong></th>
<th><strong>Apsyrtus</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Solet etiam ipsum animal vivum creta figulari circumdari; quae cum siccat a est, collo bom suspenditur. ea res innoxium pecus a morsu muris aranei praebet.</td>
<td>est etiam praesens remedium, ne equus morsu muris aranei contigatur. animal &lt;ipsum E&gt;(^8) vivum creta figulari circumdatur, quae cum indur-uerit, collo pecoris suspenditur. ea res innoxium pecus a morsu muris aranei praebet.</td>
<td>kai aúthn de ÷ tihn mughalihn periástwait.</td>
</tr>
</tbody>
</table>

\(^4\) *Pelagonius*, 211 ff.
\(^6\) ‘Die Commenta’, 203 ff.
\(^5\) ‘Pelagonius, Eumelus, and a Lost Latin Veterinary Writer’.
\(^7\) Col. VI.17.6; Pel. Lat. 280; Aps. M694 = B87.1, *CHG* I p. 314.
\(^8\) See Corsetti, ‘Un nouveau témoin’, 45.
There is also a practice of encasing the animal itself while still alive in potter’s clay and, when the clay is dry, affixing it as an amulet round the ox’s neck. The thing itself keeps the animal unharmed from the bite of a shrew-mouse.

There is also an efficacious remedy, lest the horse be affected by a shrew-mouse bite. The animal is encased, still alive, in potter’s clay, and when this hardens, is affixed as an amulet on the neck of the animal. The thing itself keeps the animal unharmed from the bite of a shrew-mouse.

And affix the shrew-mouse itself as an amulet.

Adams has shown that passages drawn from the source shared with Eumelus may also be readily distinguished, since they are similarly cut and pasted, remaining in a ‘radically different style from the rest of the work’. In addition to not imposing uniformity of style, Pelagonius did not standardize weights and measures or even terms for disease: Fischer has also drawn attention to Pelagonius’ inconsistency in names for tetanos, which appears both as robur and the loanword opisthotonos. This inconsistency results from the use of different sources: the Greek word appears in a passage quoted from Apsyrtus, who is named in the lemma, while the Latin word is in a passage related to the Mulomedicina Chironis, evidently from a Latin source.

In several places Pelagonius elaborates on Apsyrtus’ plain-spoken text; for example, instead of τῶ βουλημένων χρῆ βοηθεῖν ὁδός, ‘treat the horse with ravenous hunger in this way’, Pelagonius paints a dramatic picture: utilissimum et necessarium est domino bulimioso succurrere. nam equi interdum famem sic non ferunt, ut concidant, ‘it is most useful and necessary for a diligent master to aid a horse with ravenous hunger, for sometimes horses cannot endure hunger, and they die’. In a description of the causes of tetanus based on Apsyrtus, Pelagonius renders ἐν λαθοστρώτῳ ‘on a pavement’ as aut in marmorato aut tessellato, ‘on a marble or mosaic pavement.’ These additions are for the most part confined to remarks of an introductory nature rather than to the technicalities of the text.

Pelagonius thus appears to have had access to at least three agricultural and veterinary texts. Other names associated with remedies may represent oral sources or simply inventions: Gallicanus, Litorius Beneventanus, Optatus, Caystrius Siculus, Aemilius Hispanus, Florus. Some are identified as viri clarissimi, others as mulomedici or mangones ‘horse-doctors’ or ‘horse-dealers’.

61 Aps. M558 = B67.1, CHG I p. 262; Pel. Lat. 188.
62 Pel. Lat. 270, omitted from the translation.
A lemma preserved only in the Greek text of B (a recension in which false attributions do not appear) ascribes a treatment to Mago; as we have seen, it is indeed likely that Pelagonius used a text derived from the Mago tradition. Other names that appear in Pelagonius’ text, Hieron and Eubulus, are included in Varro’s list of Greek writers on agriculture added to Mago’s treatise by Cassius Dionysius. Celsus, also quoted by Pelagonius, is added to Columella’s version of this list of writers, and appears to have been the intermediary through whom Columella used Cassius Dionysius–Diophanes.

Another incidence of Mago’s name, however, comes from Apsyrtus; the remedy is not present in Columella:⁶³

### Apsyrtus

καὶ τοῦτο δὲ ἐκ τῶν Γεωργικῶν Μάγωνος τοῦ Καρχηδονίου. λέγει γὰρ τοῦ δυσουριῶτος ἵππου τοῦ ἑπταῆθεν πόδας κάτωθι ὑποζύσαντα ἐκ τοῦ κατ’ ὅνυχα μέρος, τὰ ὑποζύσαντα αὐτῆς τῆς ὅπλης τρίβειν ἐν οἷόν δοὺς κοτύλην ἀ’ καὶ ἔγχυματίζειν διὰ τῆς μυών, καὶ οὕρησει.

ἔγενων δὲ ἐγώ τούτῳ παρὰ Σαρμάτων δεῖ στήσαντα τὸν ἵππον καταστέσας ἀπὸ τοῦ τραχήλιου μέχρι τῶν ἱσχίων ἰματίων, καὶ καλότως ὑποθηματία τὴν κούλιαν καὶ τοῦ διδύμου καστόριον ἐπ’ ἀνθράκων ἐμβαλλόν, εἶτα ἀφέλωντα (ὑφελώντα τὸ ἀγγείον, ἐν ὃς ὑποθηματάται, διακενήσας τοῦτο ποῆσον, καὶ τάχιστα οὕρησει.

And this is from the *Georgica* of Mago the Carthaginian. He says to file under the hooves of the forelegs of the horse with dysury, and grind the hoof-filings in 1 cotyle of wine and drench through the nose, and it will urinate.

And I learned this from the Sarmatians: one ought to cover the standing horse with a cloth from the neck to the hip, and fumigate it while covered under its belly and testicles by placing castor on hot coals. Then removing the vessel used for fumigation, make it move, and it will urinate speedily.

### Pelagonius

Aliud ad eos qui non meiant, <Magonis>

Carchedoni, quod solus adseveravit. dicit enim debere de prioribus pedibus ungulas subter ipsius equi radi et teri cum vini sext. et naribus infundi. adseverat certissimum remedium.

Item aliud Absyrti, quod se apud Sarmatas vidisse adseveravit. nam dicit cooperiri debere equum diligenter, ita ut usque ad terram coopertoria demittantur, ne fumus thymiamatis exeat, et sic castorio carbonibus imposito omnem ventrem et testes ipsius equi fumigari: statim meiat.

And this is from the *Georgica* of Mago the Carthaginian. He says to file under the hooves of the forelegs of the horse with dysury, and grind the hoof-filings in 1 cotyle of wine and drench through the nose, and it will urinate.

Yet another, of Apsyrtus, which he recommends, having seen it among the Sarmatians. He says to cover the horse carefully, so that the covers reach down to the ground, lest the smoke of fumigation escape, and thus placing castor on hot coals fumigate the entire belly and testicles of the horse: it will urinate immediately.

⁶³ Aps. M59 = B33.8, CHG I pp. 168–9; Pel. Lat. 150–1, Speranza fr. 57.
Superstitious and magical remedies in Pelagonius’ text seem to have come from different sources. Certain elements in prescriptions seem to be traditional, such as the hellebore cure, the sympathetic application of the animal’s own blood (from the source shared with Eumelus), the specification of odd numbers of days, or that medicines should be administered through the left or right nostril (from Eumelus via Apsyrtus). But there are a number of prescriptions in Pelagonius’ treatise which represent a more developed or ‘professional’ type of magic. Some of these may have been taken over from Apsyrtus, others are from a Latin text, but whether this source was different from the Eumelus source or the source shared with the *Mulomedicina Chironis* is unclear.\(^{64}\)

**THE TRANSLATION**

There is no indication, in the Greek text of Pelagonius, of the circumstances in which the translation was made, or of the identity of the translator. Indeed, despite the attention of Politian, the treatise, better known from Grynaeus’ *Hippiatrica*, was long thought to have been composed in Greek.\(^{65}\) This view, maintained by some even after the rediscovery of Politian’s manuscript, was disproved conclusively by Hoppe, who showed that passages quoted from Columella are too close to Columella’s text to represent retranslations, and furthermore that several passages in the Greek version of Pelagonius may be explained as misunderstandings or mistranslations of Latin words or phrases.\(^{66}\) K.-D. Fischer agrees that ‘the nature of the mistakes and blunders in the translation make it likely that the translator knew neither Latin nor veterinary medicine well’.\(^{67}\) It is unlikely, therefore, that the translation was made by the author himself, and similarly unlikely that it was made by a bilingual practitioner for his own use.

Was the translation made for compilation into the *Hippiatrica*? There is no evidence that the text circulated outside of the compilation: no Greek manuscripts of Pelagonius have surfaced, and the other authors in the *Hippiatrica* do not mention his name or show signs of familiarity with his text. The only reference to Pelagonius in Greek outside of the compilation seems to be in the

---

\(^{64}\) Five of the spells are published by Heim, *Incantamenta* (nos. 12, 13, 100, 112, 113); see also Björck, *Apsyrtus, Julius Africanus*, 55–70. Pelagonius’ use of magic and its cultural context is discussed in Adams, *Pelagonius*, 20–34.

\(^{65}\) See Fischer’s introduction, p. xxi.


\(^{67}\) ‘Pelagonius on Horse Medicine’, 295.
tenth-century recension of the Geoponica, where two chapters are falsely ascribed to him.68 (The attributions in the lemmata of Geoponica XVI are drawn from the Hippiatrica, so they do not indicate that Pelagonius was known in his own right.) If the translation had been made specifically for inclusion in a compilation of Greek veterinary manuals, one would expect Pelagonius’ treatise to have been translated in full, and fully incorporated into the Hippiatrica. The dedicatory epistle and many other epistolary headings are not present in any recension of the Greek compilation; however, they may have been lost in the process of transmission. Certainly passages by other authors which are of a rhetorical rather than a technical nature were included in the Hippiatrica. On the basis of the text surviving in the M, B, and CL recensions of the compilation, it would indeed appear that the entire treatise of Pelagonius figured in the first hippiatric compilation A.69 If the translation belonged to the context of compilation of the Hippiatrica, one might also expect the translator to employ the technical language used in the other Greek veterinary works; this, however, does not seem to be the case, as we shall see below.

Hoppe suggested that the translation was made about two centuries after the treatise was written, in Ravenna.70 But one wonders whether, in Ravenna, the original text might not have been more useful.71 The translation was presumably made for an audience of Greek speakers, and also probably for practical use rather than out of literary curiosity. Was it intended to supplement the existing hippiatric treatises in Greek? Or were these not readily available to the translator (or his patron)? The translation seems to have been made by a speaker of Greek with less than perfect knowledge of Latin, and an incomplete grasp of veterinary technicalities in both languages72—but these characteristics, no doubt shared by many, do not help to pinpoint the translator’s location or his date. Certainly knowledge of Latin was not uncommon in the East in the two centuries after Pelagonius wrote, and Latin was still the official language of the government, including the army and the law.73 Translations of Latin technical texts into Greek were undertaken especially in the context of legal studies and practice: Dorotheus, professor of law at Berytos and part of the commission responsible for compiling Justinian’s Digest, made a translation of the entire Digest shortly after it was completed,

70 ‘Pelagoniusstudien’, 3.
71 V. Ortoleva also points out that it is more logical for a Latin text to have been translated to Greek in the East: La tradizione manoscritta della ‘Mulomedicina’ di Publio Vegezio Renato, 70–4.
probably between 536 and 539. The so-called κατὰ πόδας commentaries are another example. Priscian’s Institutiones were intended for the purpose of teaching Latin to speakers of Greek, and there is some evidence of a circle of Priscian’s students with an interest in Latin literature in early sixth-century Constantinople. In that golden age of chariot racing, Pelagonius’ allusions to the circus and recipes for κοινδριγάμων πούλβερ may have made his treatise attractive to a racehorse-owner or hippodrome fan.

It has been shown by Adams that the Greek text of Pelagonius is closer to the text of R than to E. The translation is not, however, dependent upon R, since interpolations in R (namely the passages introduced by in alio sic ‘in another [copy] thus’ that have become embedded in certain chapters) are not present in the Greek. Some of the Greek lemmata, on the other hand, seem to be faithful translations of Pelagonius’ item aliud. Traces of the structure of Pelagonius’ treatise may be also be discerned in the Greek, especially in M, where a number of lists of recipes are also consecutive in the Latin.

Certain peculiarities of Pelagonius’ Latin text contribute to the interest of the translation. The translation of any technical language presents a challenge; and the language of veterinary medicine, which combines elements of medical vocabulary with words specifically associated with the horse, is particularly complicated. The fact that the Greek version of Pelagonius figures among a collection of Greek texts of similar nature allows us to compare the technical vocabulary of the translation against standard usages in the other sources of the Hippiastrica. The Apsyrtus passages in Pelagonius afford an interesting example of retranslation. A comparison with the text of Apsyrtus in the Hippiastrica shows that the translator does not appear to be familiar with Apsyrtus’ work, nor with some of the technical terms commonly used in other Greek hippiatric texts. Other traits reflect the coexistence of Latin and Greek in the Roman empire. Interaction between the two languages took place routinely in many different contexts, such as the army, the law, the calendar, etc.

Pelagonius and his translation, a complementary pair of texts,

---

74 F. Brandsma, Dorotheus and his Digest Translation (Groningen, 1996).
77 Adams, Pelagonius, 7.
79 On the composition of Latin veterinary vocabulary see Adams, Pelagonius, 640 ff.
80 The categories enumerated in Viscidi, I prestiti latini nel greco antico e bizantino; cf. also H. Zilliacus, Zum Kampf der Weltsprachen im oströmischen Reich (Helsingfors, 1935).
each in a mixed language, provide examples of a number of different categories of interaction. The first of these is the use of Greek technical terms, which is conventional in Latin medical texts, and indeed constitutes a defining feature of what may be called ‘medical Latin’.\textsuperscript{81} ‘Agricultural Latin’, likewise, has a high proportion of Greek words—the result as much of the elegant, Hellenizing style employed by Varro and Columella as of use of the Greek texts of Cassius Dionysius and Diophanes. Pelagonius is no exception to these conventions; indeed, Ihm described him as \textit{philograecus}.\textsuperscript{82} Whether or not he translated Apsyrtus himself, Pelagonius appears to have known some Greek. A number of words and phrases appear in Greek letters in the text, while certain non-technical words in transliteration may simply be stylistic affectations. Use of Greek synonyms in medical Latin is paralleled by the practice in Greek of including foreign synonyms for plant names in medical treatises.\textsuperscript{83} This practice is reflected in the translation of Pelagonius by the retention of Latin plant names, to which the Greek equivalents are added. A bilingual state bureaucracy had developed standard translations for formulaic phrases such as ranks and titles;\textsuperscript{84} though Pelagonius’ text is a private document without military or administrative terminology, a few of his uses of titulature have been conveyed in the Greek. On a more informal level, a number of everyday Latin words had been incorporated into Greek and naturalized, in many cases displacing older Greek terms.\textsuperscript{85} A number of such loanwords were available to the translator. Finally, the rich composite language of magic was to some extent shared by both Latin and Greek.

\textbf{THE CHARACTER OF THE TRANSLATION}

The errors of translation assembled by Hoppe derive both from misreading and from misunderstanding. Some are amusing (e.g. \textit{caudam rigidam} ‘rigid tail’ misread as \textit{frigidam} and translated as \textit{ο\v{r}παν ψυχράν}, ‘chilly tail’), some potentially confusing to a reader (\textit{pastilli compositi}, understood as \textit{combusti}, as a result of Greek pronunciation? or \textit{Item aliud Flori. herbam Artemisiam tunsam…} translated as \textit{ἀρτεμίσιασ βοτάνης ἄνθος κόψας});\textsuperscript{86} while others

\textsuperscript{81} See D. R. Langslow, \textit{Medical Latin in the Roman Empire}, 76 ff.
\textsuperscript{82} \textit{Pelagonii artis veterinariae}, 16.
\textsuperscript{83} Wellmann, ‘Die Pflanzennamen bei Dioskurides’.
\textsuperscript{84} Magie, \textit{De romanorum iuris publici sacrique vocabulis sollemnibus in graecum sermonem conversis}.
\textsuperscript{85} Viscidi, \textit{I prestiti latini nel greco antico e bizantino}.
\textsuperscript{86} Pel. Lat. 294, M330 = B34.26, \textit{CHG} I p. 191; Pel. Lat. 383, M523 = B22.54, \textit{CHG} I p. 119; Pel. Lat. 364, M802 = B129.40, \textit{CHG} I p. 394.
might prove downright dangerous (as when, in the phrase *sanguis de matrice detrahendus est*, the word *matrix*, here denoting a vein, is misunderstood as *matrix* ‘womb’ and translated as *aīma ēk τῆς γαστρός λάμβανε*, ‘let blood from the womb’).\(^8\) In other instances there is simply a loss of detail in the translation: *in piscinam mitti convenit ita ut natet* ‘it is good to put it in a fish-pond/swimming-pool so that it swims’ is translated simply as *κολυμβησάτω*, ‘let it swim’.

Can we identify any hallmarks (besides inaccuracy) of the translator’s style? *Αὐτέων* is used adverbially, occasionally to convey the sense of *sane*: *ostendam sane* becomes *ἐπιδείξω δὲ λοιπῶν...*,\(^9\) but often simply indicating a transition. The combination of particles *οὖ μὴν ἄλλα*,\(^9\) used simply as a connective, with no obvious relation to the Latin, is very frequent.\(^9\) In some cases the translator gives double translations: *χάρτην ἠτοι πάπυρον* ‘paper or paper’,\(^9\) *κάλπη ἦτοι τριπήδω* ‘canter or three-foot’\(^9\) where *tripodare* (obviously meaning ‘canter’, the only gait with three footfalls), is translated by the Greek term *κάλπη* (which though translated ‘troit’ in LSJ, in modern Greek means ‘canter’ or ‘gallop’)\(^9\) and also what appears to be the Latin word transliterated or borrowed into Greek.\(^9\) A number of rare words are also used by the translator, for example *σύλλιθος*, translating *inter lapides*.\(^9\)

Other medical terms are translated accurately, but without reference to the vocabulary of the other hippiatric treatises. *Morbos*, taken by Pelagonius from Columella (and ultimately Varro) is translated as *λοιμός*,\(^9\) which confused the various editors of the *Hippiatrica*: in the M recension, excerpts from Pelagonius on *loimos* are in his chapter on *malis*, whereas in the B recension they make up a separate chapter *Περὶ λοιμῶν*.

Pelagonius’ *potionare* for administering a drench (Columella’s *salivare*) is translated as *προσποτίζω*, while *potio*, the drench itself, is translated *προσπότισμα*.\(^9\) This term, however, is not found in any of the other treatises

89 Three times in B34.24, *CHG* I p. 190.
90 M496 (B22.34), *CHG* I p. 113 apparatus.
94 On these terms, see Adams, *Pelagonius*, 60.
95 A thorough discussion of the terms in Adams, *Pelagonius*, 598–602; one may add that in the *Tactics* of Leo VI the terms are presented as equivalent, the Latin loanword now appearing in first place: τῶν σκοντηρίων ἐπεδαιμένων εὐτάκτως τριπόδῳ μόνῳ, ἣς αὐτὸς κυνέματι συμμετέχει τῷ λεγομένῳ κάλπα καὶ μὴ βαίνωσι τρέχειν*; R. Vári, *Leonis imperatoris Tactica I* (Budapest, 1917), p. 154.
96 M131 = B52.12, *CHG* I p. 234; Pel. Lat. 196.
97 Pel. Lat. 4 (cf. Col. VI.30.3); M41 = B4.1, *CHG* I p. 34.
98 Pel. Lat. 302–3; M433–4 = B42.4–5, *CHG* I p. 212.
in the *Hippiatrica* apart from that of Eumelus (where προποτίζω appears once:⁹⁹ the veterinary writers evidently preferred to use the terms ἔμβαλλο or ἐγχυματίζω. Similarly, ἀφαίμαζεις, translating sanguinem detrahere, does not appear elsewhere in the *Hippiatrica*; φλεβοσομία is used instead.¹⁰⁰

### GREEK WORDS IN PELAGONIUS, AND RETRANSLATION OF APSYRTUS

The prevalence, in Pelagonius’ text, of Greek terminology will have facilitated the translator’s task. Adams has estimated that approximately 25 per cent of Pelagonius’ pathological terms are Greek in origin;¹⁰¹ to this figure we may also add names for procedures, *materia medica*, and measurements. This proportion is comparable to Langslow’s estimates for the writing of Celsus or Scribonius Largus.¹⁰² Pelagonius’ text contains many Greek words in transliteration. Most of these are medical terms of Greek derivation, for example, *synchrisma*; this term may not have been common or in active use in Greek, since it is rendered as μάλαγμα. *Brecta* is taken over from Apsyrtus in a slightly artificial use of the ‘medical Latin’ device of the synonym.¹⁰³

Pelagonius’ text also contains Greek words in Greek letters. In one case, his phrasing seems to reflect the use of a Latin medical writer who, in turn, was referring to a Greek source:

Graeci ita dividunt ἀρθρίτες, υγρὰς, ξηρὰς, λευκὰς, μέλανας, quae Latini articularem, umidam, siccam, albam, nigram appellant.¹⁰⁴

The Greeks divide it thus, into *arthritike*, *hygra*, *xera*, *leuke*, *melaina*, which the Latins call arthritic, humid, dry, white, black.

But in many cases Pelagonius’ use of the Greek text of Apsyrtus seems to have influenced his decision to retain Greek phrases. For example, Pelagonius uses several Greek terms from Apsyrtus’ cures for *tetanos*: comparison of the texts makes it clear that any of Pelagonius’ claims of personal experience should be taken with a pinch of salt.¹⁰⁵

---

⁹⁹ Eum. M536 = B6.4, *CHG* I p. 44; προποτίζω also occurs in *Geop*. XIII.8.9.
¹⁰⁰ E.g. M433 = B62.4, *CHG* II p. 212; M56 = *CHG* II p. 36.
¹⁰³ Pel. Lat. 24.2; not translated in Greek: M91 = B68.6, *CHG* I p. 266, though the word βρέξων is used.
¹⁰⁴ Pel. Lat. 204.
Where Pelagonius’ text contains Greek words, the translator, logically, leaves them unchanged. Here the Greek words are not presented as synonyms, but are incorporated into sentences in a slightly awkward way, written in Greek letters. D. R. Langslow has observed that this appears to be the only instance of ‘code-switching’ in Latin medical literature.\footnote{Approaching Bilingualism in Corpus Languages, in J. N. Adams, M. Janse, and S. Swain (eds.), Bilingualism in Ancient Society (Oxford, 2002), 38–9.} It is not entirely clear why Pelagonius in these instances chose to retain the Greek words. Perhaps he was trying to convey something of the character of his source; alternatively, he may simply have been unsure of the Latin equivalents for...
some unusual terms. They are not only medical terms, but also measurements. *Oλκη* appears only in this instance in the Latin text, as does the reference to the size of a bean. In the case of silphium-juice, he could have used *laser* or *silpium*, as he does elsewhere.\(^{107}\) The ingredient may have seemed exotic; Pliny indicates that silphium was already rare or extinct in his time, and Columella, too, uses the word *αιλθεον* in Greek.\(^{108}\) In the same list of remedies, Apsyrtus recommends a *μαλαγμα το δια βδελλου*; Pelagonius again repeats the Greek phrase.\(^{109}\) Bdhellium (an aromatic gum) appears in only one other place in Pelagonius’ text, as *della*.\(^{110}\) The other term that appears in Greek letters is *γλοιον παιδικον*, similarly taken over from Apsyrtus (the only use listed in LSJ). It is initially explained as *quod Graeci dicunt γλοιον παιδικον*, and subsequently incorporated into a Latin sentence, oddly, with a Greek conjunction:

> acetum acre και γλοιον παιδικον et picis liquidae modicum.\(^{111}\)

sharp vinegar και γλοιον παιδικον και a little bit of liquid pitch.

Then there are other transliterated words peculiar to Pelagonius’ text. In the Latin text, a number of items are labelled ‘apopiras Pelagoni’, a formulation evidently derived from *ἀπω πειρας*. According to Fischer, this phrase represents an interpolation by a later editor; Adams has pointed out that the phrase occurs in the Einsiedeln MS as well.\(^{112}\) It does not appear in the Greek version of Pelagonius; but since many of the lemmata and introductory phrases are not present in the *Hippiatrica*, this absence is not conclusive proof that the phrase is an interpolation. Adams has identified *filocalus* as a ‘vogue term’ used by horse-doctors;\(^{113}\) it seems in Pelagonius’ text to be an affectation of a writer who, while both translating and imitating a Greek model, wants to emphasize the flavour of Greek in his text. Interestingly, *filocalus* is not present in the Greek version of Pelagonius,\(^{114}\) although forms of the word do occur in Anatolius and Theomnestus.\(^{115}\) *Diligens*, another Pelagonian mannerism (is it Pelagonius’ translation of *φιλοκαλος*?), is consistently rendered as *επιμελης*,

\(^{107}\) Pel. Lat. 200; Pel. Lat. 338.  
\(^{108}\) See Fischer’s commentary ad loc.  
\(^{110}\) Pel. Lat. 329.  
\(^{113}\) ‘Filocalus as an Epithet of Horse Owners in Pelagonius: Its Origin and Meaning’, *Classical Philology*, 85 (1990), 305–10; *Pelagonius*, 572. Pel. Lat. 188 = M566 = B67.3; Pel. Lat. 183 = M556 = B62.5.  
\(^{114}\) Pel. Lat. 188; M566 = B67.3, *CHG* I p. 263.  
diligenter, as ἐπιμελῶς,116 diligentior, as ἐπιμελέστερον117 and diligentissimum nutritorem equorum... convenit as χρῆ τὸν ἐπιμελέστατον ἰππότροφον.118

LATIN SYNONYMS IN GREEK

Where Latin plant-names are repeated in the Greek translation, they are given, as in Latin, in a relative clause.119 Some are relics of synonym-pairs in Pelagonius, where the Greek word comes from Apsyrtus:

Aps. ἡ πράσιον τρίφαντας μετὰ ἐλαιοῦ καὶ ἄλος οἶνῳ διέντας ὀμοίως ἐγχυμάτιζεν (or, grinding horehound with oil and salt, and diluting with wine, administer as a drench in the same manner).

Pel. Lat. Item aliter. πράσιον quod Graeci appellant, Latini herbam marrubium, deters et cum oleo, modico sale et vino sucido commisces et potionas. (Also, otherwise: grind what the Greeks call prasion, and the Latins horehound, and mix it together with oil, a little salt, and fresh wine and administer as a drench.)

Pel. Gr. ὀμοῖα θεραπεία. πράσιον βοτάνη, ἣν Ῥωμαῖοι καλοῦσι μαρροβίαν, λείωσον καὶ μετὰ ἐλαιοῦ ἁλίγου καὶ ἄλατος, οὐ μὴν ἄλλῳ καὶ οἶνῳ γλυκές μίξων καὶ οὕτως ἐγχυμάτισον.120 (Similar treatment. Crush the herb horehound, which the Romans call marrubia, and mix with a little oil and salt, nay even also with some sweet wine too, and administer thus as a drench.)

Other synonyms in the Greek have no antecedent in the existing Latin text of Pelagonius, and may be an interjection of the translator.

Pel. Lat. herbam urciolariam (pitcher-plant)

Pel. Gr. βοτάνη, ἢν Ἑλληνες μὲν περδίκιον, Ῥωμαῖοι δὲ ὀρκιολαρέμι ὀὐρομάζουσιν121 (the herb which the Greeks call partridge-plant, and the Romans orkiolarem)

Pel. Lat. et folia tenera herbae parietariae (and tender leaves of the herb parietaria)

Pel. Gr. φύλλα βοτάνης σιδηρείτας, ἢν Ῥωμαίοι παρεγεράτωσι καλοῦσι οὐ μὴν ἄλλῳ καὶ ἐφήμα...122 (leaves of the herb ironwort, which the Romans call parietaria, nay even also reduction of must).

---

116 e.g. Pel. Lat. 308.1 = M436 = B42.7, CHG I p. 213.
118 Pel. Lat. 267 = B34.21, CHG I p. 188.
119 On such constructions, see Langslow, Medical Latin, 80 ff.
120 Aps. M458 = B22.1, CHG I p. 103; Pel. Lat. 93 = M499, CHG II p. 68.
121 Pel. Lat. 112 = M520, CHG II p. 69.
122 Pel. Lat. 89 = M496 (altered in B22.34), CHG I p. 113.
The translator uses the same formula in some other cases in which an obviously foreign word is retained. For example, *potio quadrigaria*, ‘the charioteer’s drench’, is explained as προπόσισμα τὸ παρὰ Ῥωμαίων κονδρυγάριον καλούμενον, ‘the potion which is called by the Romans *koudrigarion*’, and *synchrisma quadrigarum* as σύγχρησμα ἅματος ὅπερ κονδρυγάριον καλεῖται, ‘ointment of the chariot, which is called *koudrigarion*’. 123 The phrasing in these translated and retranslated passages is reminiscent of the allusion to ‘Greek and Roman’ names for glanders that we have seen in Eumelus’ text.

**FORMULAIC PHRASES**

There is little of what may be called ‘official’ language in Pelagonius; and most of the few examples of titles, such as *vir clarissimus*, are omitted even when the names they accompanied appear in the lemmata of the Greek translations. But in the most completely preserved of Pelagonius’ letters in the *Hippiatrica*, the phrase *apud claritatem tuam* is rendered by παρὰ τῇ σῇ κοσμόποτης. 124 *Δεσπότης*, in another passage, is a standard translation of *dominus*. 125 A number of other formulaic phrases appear in Pelagonius’ letters, for example the openings of the letters: a greeting preserved in the *Hippiatrica* renders *Pelagonius Arzygio suo* in standard Greek style as —Πελαγώνος Ἄργυγν ό ὀδόν καίρειν. 126 (*Suo* is not preserved in the Latin.) However, the disclosure formula *congruum est addiscere*—referring to Apsyrtus’ Greek—is translated back as χρὴ μαθεῖν, rather than using the conventional γιγνώσκω. 127

**LATIN LOANWORDS IN THE GREEK VERSION**

The adoption of common Latin words into Late Antique Greek also aided the translator, who seems not to have been concerned by the injunctions of the purists against using such words. The most common loanword in the Greek version of Pelagonius is probably *στάβλον*, ‘stable’; 128 Pelagonius also uses the

---

124 Pel. Lat. 216 = M995, *CHG* II p. 95.
126 Pel. Lat. 302 = M433 = B42.4, *CHG* I p. 212.
127 Pel. Lat. 4 = M41 = B4.1, *CHG* I p. 34.
128 e.g. M91 (altered in B68.6), *CHG* I p. 266; M330 (altered in B34.26), *CHG* I p. 191.
verb *stabulare*, which is rendered as σταβλίζω (consistently deleted in the B recension).\textsuperscript{129} *Furnus*, ‘oven’, appears in Greek as φούρνος,\textsuperscript{130} and the medical term *pastillus* ‘pastille’ as πάστιλλος.\textsuperscript{131}

**MAGIC**

We may wish, with Ihm, that the various editors of the *Hippiatria* had been more superstitious: it is evident that Pelagonius’ treatise, just as that of Apsyrtus, contained many magical remedies, not all of which have been preserved. Some of these exist only in the Latin text, others only in the Greek, so it is impossible to determine whether all were included in the translation. Some types of magic translated more easily than others, but the forms of incantations—*evocationes morborum, adynata*—and the ἐφέσια γράμματα and iconography of amulets belonged to a common culture. Thus we see that it was possible to translate the following incantation against the bites of noxious creatures:\textsuperscript{132}

**Pelagonius**

sed et verba religiosa non desint, nam Sol peculiariter dominus equorum ad medellam adest. quem hoc modo, cum terram talparum coeperis tollere, invocabis: ictu, Sol divine calide et frigide, tantum mihi abalienisti.

Let not the pious words be lacking, for the Sun is the special lord of horses, and he will come when invoked to cure. You will invoke him in this manner, when you begin to pick up the earth of the moles: Divine Sun, hot and cold, this much you took from me.

**Pelagonius in M**

μὴ δὲ θεοφαλή (ἠλλότη corr. Oder–Hoppe) λαπαρή ρίματα. ἀ γάρ Ἡλιος τῶν ἵππων ιδικός ἐστι θεσπότης καὶ χαίρων πρὸς τὴν τούτων ἔρχεται θεραπεῖαν, ἐπικαλώμενος οὕτως. ὅτε τὴν γῆν λαμβάνεις, λέγε Δέσποτα Ἡλιος θερμό καὶ φοιχρέ, τοσοῦτον με ἀπηλλοτρίωσας

Let not the pious words be lacking, for the Sun is the special lord of horses and will gladly come for their cure, invoked in this way. When you take up the earth, say, Lord Sun, hot and cold, this much you took from me.

The description of an amuletic ring, preserved only in the Greek translation, has a parallel in Alexander of Tralles.\textsuperscript{133}

\textsuperscript{129} e.g. Pel. Lat. 442 = M412 (altered in B11.44), CHG I p. 71.
\textsuperscript{130} Pel. Lat. 18 = M46 = B4.6, CHG I p. 35; Pel. Lat. 52 = M656 = B103.17, CHG I p. 359.
\textsuperscript{131} Pel. Lat. 71 = B7.4, CHG I p. 45.
\textsuperscript{132} Pel. Lat. 283; M692 printed as an addition to B86.3, CHG I p. 309; Heim 113.
\textsuperscript{133} Ed. Puschmann II p. 377; Heim, *Incantamenta*, no. 57: Λαβῶν δακτύλων σιδηρῶν.
(Πρὸς ὀξαῖνας) δακτυλίδιον σιδηροῦ ἔχων γλύμμα λέωντος καὶ ἐπάνω ἀστέρα ὑποκάτω τῆς γούλας κρέμασον καὶ θαυμάσεις.  

(For fetid nasal polyps) Hang under its throat an iron ring having on it a carving of a lion with a star above, and you’ll be amazed.

Instructions for inscribing another amulet did not fare well in the transmission of the Latin text. The mention of a cassiterine lamella, similar to a passage in Apsyrtus, may imply that this spell was taken over from Apsyrtus. If so, the inscription may have been in Greek, perhaps the reason that it was not copied.

134 M206, CHG II p. 42.  
135 Pel. Lat. 135.2; cf. Aps. M1026.
Theomnestus

Theomnestus appears to have been a keen horseman, with a solid grounding in medical theory as well as experience of veterinary practice. He is the only author in the Hippiatrica to include in his treatise instructions for grooming and breaking in addition to veterinary treatments. He is also the only author who speaks of his own horses; he does so with affection. Theomnestus’ work belongs to the tradition of the texts that we have already examined: his description of the points of the horse, of grooming, and breaking alludes to the words of Xenophon and Simon; it also presents close parallels to the agricultural writers, which suggests that one of these, probably Cassius Dionysius, was an intermediary. For veterinary material, Apsyrtus is his principal source; but Theomnestus also writes from his own experience. His is the only treatise that includes case-studies, and the only one that does not include any magic or superstition at all.

THEOMNESTUS’ TEXT

Fourth in the sequence of authors in M, Theomnestus is responsible for 72 excerpts in that recension. A number of these excerpts are attributed to other authors in the lemmata; these are, however, quotations, ‘embedded’ by Theomnestus in his text. The πίναξ of Parisinus gr. 2322 signals the existence of an additional excerpt on vomiting through the nose which does not appear in the manuscript. In the B recension, all the excerpts from Theomnestus in M are present, grouped with those of Apsyrtus and Hierocles as though to emphasize their similarity. Whereas the prooimia of both Apsyrtus and Hierocles are displayed, so to speak, at the beginning of B, there is no trace in the Greek of a corresponding introduction by Theomnestus. In B, his name has been omitted from the lemmata of 29 excerpts; moreover, the text of

2 Table of contents, 737, CHG II p. 16.
3 A list of these is given in CHG II p. x.
the excerpts has been subjected to some stylistic reworking, and a number of
details have been omitted, especially from the autobiographical passages.
The CL recension adds an important passage on the choice, care, and early
education of a young horse, as well as an additional chapter on dysury which
is not present in M or B.4

THE ARABIC TRANSLATION OF THEOMNESTUS

A Kitāb al-Bayṭara (‘Book on Horse-Medicine’) attributed to Theomnestus
provides additional evidence against which we may compare what survives of
the Greek. The Arabic text is preserved in two manuscripts: Istanbul, Köprülü
959, dated AH 674 (1276),5 and Parisinus ar. 2810, dated AH 750 (1349).6
Bodley 540 (formerly Pococke 360), identified by Björck and Sezgin as con-
taining the treatise of Theomnestus, in fact contains the treatise on horse-
manship by Ibn Akhī Ḥizām.7 US National Library of Medicine MS. A90
(undated), described in an old catalogue as a Kitāb al-Bayṭara attributed to
Ḥunayn, is also a different text.8

The existence of the translation of Theomnestus has been known for some
time, and its potential as a source of evidence for the history of the Greek text
has been repeatedly mentioned.9 There is, however, no edition of the Arabic
text; nor is there any mention of it, for example, in a recent Encyclopedia of the
History of Arabic Science.10 A single short passage from the introduction has
been published in German translation, on the basis of the Istanbul manuscript
only, by F. Rosenthal.11 And several fundamental questions about the Arabic
text remain unanswered. Is the text indeed a translation of Theomnestus, or is
it based on a compilation which included excerpts from his work? It has been
shown that a number of Arabic texts of Hippocratic works are in fact patched
together out of passages quoted by Galen in his commentaries on the various

4 C93.12–17 and 18–22, CHG II pp. 231 ff.
6 W.M. de Slane, Catalogue des manuscrits arabes de la Bibliothèque nationale (Paris, 1883),
506.
7 J. Uri, Bibliothecae Bodleianae codicum manuscriptorum orientalium . . . catalogus (Oxford,
1787), 130.
8 Dr E. Savage-Smith kindly allowed me to see her description of this MS for the new
catalogue of the US National Library of Medicine.
9 G. Björck, ‘Griechische Pferdeheilkunde in arabischer Überlieferung’, 11–12; M. Ullmann,
Die Medizin in Islam (Leiden and Cologne, 1970), 218–19; F. Sezgin, Geschichte des arabischen
texts. In his Risâla or Letter on the translations of Galen, Ḥunayn describes how he translated the Hippocratic passages embedded in Galen’s commentary on the treatise *On Airs, waters, places*. In this case, both the existing Arabic text of the *Airs, waters, places* and the Latin translation from it have been shown to contain vestiges of Galen’s commentary in addition to the Hippocratic passages; the translations are therefore useful only as witnesses to the secondary, Galenic tradition of that text. Of course, it is easier to divine the motivation behind collecting fragments written by the ‘father of medicine’ than to suppose that such an effort would have been made to put together the pieces of a Theomnæstus. And yet, the effort appears to have been made for Hierocles’ text, as we shall see; and in that instance Latin translations were made from the reconstituted Greek. One must also ask whether the contents of the translation represent a complete text of Theomnæstus, or whether there are additions or subtractions: since the Greek text is preserved in a dismembered state, this is obviously difficult to ascertain. Thirdly, are the chapters presented in their original order? Cross-references in the Greek give some idea of the original structure of the treatise. And there is a fourth question: in both the Paris and Istanbul manuscripts, the translation is attributed to Ḥunayn ibn Ishāq, perhaps the most illustrious translator of Greek texts into Arabic, whose versions of the works of Plato, Aristotle, Galen, and Hippocrates helped create the foundation for medieval Arabic philosophy and medicine.

A *Kitâb al-Baytâra* is included at the end of the list of Greek works translated by Ḥunayn in the history of medicine of Ibn Abī Usaybâ’ (d. 1270); Ḥunayn’s translation of a veterinary work is also mentioned by the sixteenth-century bibliographer Taṣkoprûzade. G. Gabrieli and M. Meyerhof identify Ḥunayn’s translation with the Arabic version of Theomnæstus’ treatise. Dr. F. Zimmerman, who kindly examined

---


the translation of Theomnestus, concludes (in a letter of 19 Aug. 1998) that 'there seems to be nothing against, and something to be said for, accepting the attribution to (the school of) Ḥunayn.'

Björck’s identification of parallels between the excerpts attributed to Theomnestus in the *Hippiatrica* and passages of the twelfth-century agricultural compilation of the Sevillian Ibn al-‘Awwām provides an indication of the influence of Greek texts on Arabic veterinary science. The literary tradition of medieval Arabic veterinary medicine appears—as is the case with human medicine—to have been based upon an ‘appropriation and naturalization’, to use A. I. Sabra’s terms, of Greek texts on the subject. Indeed, the very word for horse-doctor used in Arabic from the eighth century, *bayṭ.ar*, comes from the Greek ἱππότατος. The *Fihrist* of the bookseller and copyist Al-Nadīm lists a number of treatises on horses and veterinary medicine attributed to Greek authors, and available in Arabic in tenth-century Baghdad. Ibn al-‘Awwām appears to have used material from Greek sources via the *Kitāb al-Fursiyya wa-l Baytara* of Ibn Akhi Ḥizām. Muḥammad ibn Ya’qūb ibn Ghalib ibn ‘Ali al-Khuttalī, known as Ibn Akhi Ḥizām after his uncle Ḥizām ibn Ghalib, stablemaster to the caliph al-Mu’taṣim, composed his treatise on horsemanship and veterinary medicine in the second half of the ninth century; according to al-Nadīm, it was written for the caliph al-Mutawakkil (847–61). The translation of Theomnestus would appear to have been produced by this date. Ibn Akhi Ḥizām was also a source for a thirteenth-century Armenian manual of horse medicine.

The relation of the Arabic text to the Greek will be discussed elsewhere, at greater length, by Robert Hoyland and myself; however it will be useful to summarize our conclusions here. The Arabic text appears to reflect a stage closer to the original treatise of Theomnestus than do the fragments of the

18 ‘Zum CHG’, 45–53.
22 Ibid.
Greek. It contains a preface in which Theomnestus, described as a native of Nicopolis (Meyerhof’s reading of Magnesia is incorrect), dedicates his work to a certain ‘knēwos’, ‘Quintus’ or ‘Ignatius’. The Arabic text is more extensive than the Greek, consisting of 96 chapters. Since the lemmata of the chapters of the Arabic treatise contain names in addition to that of Theomnestus, Bjo¨rck raised the question of whether the translation was made from an edition augmented with passages from other authors. His conclusion was that since, in the Greek text, Theomnestus quotes from other works, the lemmata of the Arabic may reflect this use of sources;26 this conclusion appears to be correct.

Chapters not present in the Greek consist for the most part of quotations from Apsyrtus, a feature which sheds light not only on Theomnestus’ method of composing his treatise, but also on the elimination of repetitive material by editors of the Hippiatrica. The final excerpts consist of lists of recipes.27 The translation, attributed in the colophons of both manuscripts to Ḥunayn ibn Ishāq, is ad verbum and skilfully executed, with few misunderstandings. It conveys a sense of Theomnestus’ style, especially his use of certain formulaic phrases. Some passages are abbreviated, and there are a few omissions, for example, of etymologies, and of the material on caring for and training a young horse.

Theomnestus is best known for providing what has been called ‘the only firm and undisputed date in ancient veterinary medicine’;28 and a single passage of his text, from the excerpt on ‘tetanos’, has been cited repeatedly in this context.29 As we have seen in our discussion of Apsyrtus, it seems certain that Theomnestus travelled with Licinius, though his exact chronological relationship to Apsyrtus remains unclear. The terminus post quem for the composition of the treatise is 313; however, Bjo¨rck’s proposal of a terminus ante quem of 324, when Licinius was defeated, is not beyond doubt. If Licinius were still co-emperor at the time Theomnestus was writing, one might expect him to be mentioned by name, rather than alluded to obscurely as βασιλέως. Licinius’ disgrace might indeed be taken as a terminus post quem. The striking absence of magic from Theomnestus’ treatise may be another indication of date: while it may simply be a reflection of the author’s personal distaste for irrational remedies, it might equally be a response to political climate, if Theomnestus were writing somewhat later in the fourth century, during the

---

reign of Constantius II, when the practice of magic by charioteers and even for healing was prosecuted, and books suspected of containing magic burnt.  

But there is more to Theomnestus’ work than just a date. Even in its present fragmentary condition, the text is suffused with its author’s personality. Theomnestus was evidently a practising veterinarian; and his references to humoral theory, his taste for definitions, interest in aetiology, and organized approach to writing suggest that he had a formal medical education. Theomnestus makes frequent reference to written sources, citing Apsyrtus and a number of other authors. One of these, a certain Cassius, has been identified as Cassius Dionysius of Utica.

Theomnestus conveys a sense of immediacy through continual use of the first and second person; he also places considerable emphasis on his own experience. In two passages he illustrates his accounts of medical conditions with reminiscences: these are the only case-histories included in the Hippiastrica. The first is the description of ‘tetanos’ which we have considered in the context of Apsyrtus’ date. It is worth returning to this passage, as it conveys some sense of Theomnestus’ character, as well as of the logistics and perils of travel on horseback.


30 Ammianus Marcellinus 19.12, 29.2 (events of 357–9); see Dickie, Magic and Magicians in the Graeco-Roman World, 253–7. Charioteers were severely punished for dabbling in magic in the 360s and 370s; A. Cameron, Porphyrius the Charioteer (Oxford, 1973), 245.

31 Excerpts on ailments of the lung, heart, and liver are attributed to him; included among the Mago fragments in Speranza, Scriptorum romanorum de re rustica reliquiae, nos. 54–6, pp. 112–13.


33 M319 = B34.12–14, CHG 1 pp. 183–5.
When we had traversed all of Noricum and had begun the ascent into the so-called Julian Alps, there was a sudden and heavy snowstorm around the first hour of the day. And the soldiers were freezing to death on their horses, and they simply remained on the horses, all stiff. The sign that the men were dead was that their lips were drawn back and their teeth were showing. And when the horse happened still to be alive, it would just follow along, bearing the soldier’s corpse, the corpse still clutching its weapon and the reins, remaining rigid and still somehow united to the horse, so that it was quite a task for the living to take the corpse down. If the horse died too, it would freeze stiff and remain standing. And this befell many men and horses and mules.
Only those couriers who were sent ahead to the cities before the emperor did not die, nor did their horses. And the reason for this is clear: their constant motion warmed the cold, and revived them.

Then a horse of my own, one of the best, who was being ridden by a young servant, was seized by the ‘tetanos’. This upset me very much, for nothing is better than a fine swift horse. This horse was Gaulish, eight years old, and unbeatable in galloping after stags. I really wanted to save that horse.

So when we arrived at our first city, I obtained plenty of wood (my host was most excellent and provided me with smokeless wood), and I stood the horse in a small stable alone and burned the smokeless wood in a circle around him—he was very nearly dead. But around the time of the cock-crow, he began to stir. I had in my canteen the dregs of some spiced wine: because the horse could not eat or even move his jaws, I dipped clean bread into it, and force-fed it to him three times as he lay there. And there was also a remedy that I had prepared those winters from the properties of simples which I diluted in henna-oil which I had at hand and used to anoint the horse. Immediately he began to perspire and to move and to eat.

I will set forth the blend and proportions of this remedy, for with it you may treat any ‘tetanos’ of a horse or other beast of burden, and chase away any chill, and heal those that are frozen—even if they are half-dead you may restore them to their natural state. No medicine more warming than this has ever been written down by a doctor or a horse-doctor, nor will one ever be written.

Theomnestus refers here to the conventions of official travel: the stopping-places, the couriers sent ahead, the ‘hospitality’ or ξενία provided (or requisitioned) along the way.34 We may note that unlike Apsyrtus, who uses the Macedonian month-names, Theomnestus uses the Roman calendar, ‘at the beginning of the month of February’ (κατ’ ἁρχὰς τοῦ Φεβρουαρίου μηνός), in the section on tetanus; ‘around the Ides of the month of April’ (περὶ τὰς Ἀπριλίων μηνός εἴδους), in the chapter on feeding at grass.35 This difference may reflect geographical distance rather than distance in time. According to the Arabic translation, Theomnestus was from Nicopolis; there were, of course, numerous cities with this name—Stephanus lists three, in Epirus, Bithynia, and Lesser Armenia—but the fact that Theomnestus spent time at Carnuntum might suggest Nicopolis ad Istrum. At least one funerary inscription testifies to the activity of a horse-doctor in that city, probably in the late third century.36 One may note also Theomnestus’ use of the Latin loanwords στάμπλον, βούττιον, and κονδίτον, and his echo of a Galenic title.37

---

34 See the comments of S. Mitchell, ‘Requisitioned Transport in the Roman Empire: A New Inscription from Pisidia’, JRS 66 (1976), 127.
35 M319, CHG I p. 183; M100 = B97.8, CHG I p. 338.
The other passage of an anecdotal nature describes the pernicious effects of an over-zealous administration of salt. Here we see Theomnestus gently poking fun at a blundering soldier’s distress:

A soldier, who thought he was being meticulous, made his horse over-glutted by giving him salt once a week in this manner: taking a hollow horn, he filled it with salt, and stretching out the horse’s neck and opening up its mouth, he poured the salt into its throat all at once, and then he tied it again with its head up, so that the salt would fall in. That is what he replied to me upon being questioned. And by doing that, he made the horse (which was very well bred and experienced) consumptive. For the salt, being thinning, when poured all at once through the horn, because of the position in which the horse was tied up, flowed down into the lung, and acrid humours, dripping down, ate deep down into the membrane of the lung, and creating a sore they inflicted consumption upon the beast, and day by day it grew thinner. Observing and recognizing what it was suffering, and that it was from nothing other than the salt, I gave to the weeping and wailing one a horse that, although not at all well bred, was healthy. And I took his horse, and treating it, I had once again a champion, fit to please an emperor and to be possessed by him.

Once again, Theomnestus refers to an emperor, but again with no mention of a name. This vagueness might be interpreted as a desire to avoid association with a defeated and disgraced political figure; on the other hand, the name might have been lost in the process of copying. (The Arabic text does not appear to preserve an emperor’s name either.)

There is a certain element of self-congratulation in these stories, but in each case Theomnestus emphasizes his pride in the horse as much as his pride in the cure. Elsewhere he writes that ‘one who acts correctly to preserve the health of horses and mules does not take care of them in just any old

38 M537 = B7.7, CHG I p. 47.
Theomnestus, like Apsyrtus, refers to the clichés of λόγος and πείρα. But his references to experience, unlike those of Pelagonius, have a ring of authenticity; there seems no reason to doubt that he was a competent practitioner:

ἐκθεσάμεθα οὖν ἀμφοτέρων καὶ γνωρίσματα καὶ θεραπείας, ἐπεὶ τρόπον ἑν τοῦ χειροποιητοῦ σοι πνευμονικοῦ μηνύσαντες καὶ αὐτοῖ καὶ θεασάμενοι καὶ θεραπεύσαντες ἐφυλαξάμεθα.

We shall set forth the symptoms and treatments of both [types of cough], since we have informed you about artificially induced lung-disorders that we ourselves observed and treated and cured.

Theomnestus’ experience with horses seems to have been varied. He evidently travelled with the army, even if he was not a soldier himself. He refers twice to hunting: the Gaulish horse saved from ‘tetanos’ was unbeatable in pursuit of stags, and rupture of the lung often occurs in the course of the chase (πολλάκις δὲ ταύτα συμβαίνει κατὰ τοὺς ἐν τῇ θήρᾳ δισφυμοῖς). He also mentions that one type of cough often afflicts horses who compete (τοῖς ἀγωνισταῖς ἔπποις), and continues with an apparent reference to a specific horse: ‘being very concerned about a racehorse, I was sympathetically affected along with it’ (καὶ σφόδρα φροντίσας ἐπὶ δρομέως ἔπποιν συνδιασθημένος αὐτῷ).

A reference to a threshing-floor, in the discussion of colic from gorging, implies a rural setting, but may be an addition from another source:

ἡ ἀγνωσία ἄνευ τῆς τοῦ ἰσποφόρου γνώμης τὸ ζων, οἷα γίνεται ἀπὸ τῶν θημωνιῶν ἡ τῆς ἀλών αὐτῆς, πάγη πλέον . . .

or if, in ignorance, without the knowledge of the herdsman, the animal overfeeds, as it happens from the haystacks or from the threshing-floor itself . . .

For whom was the treatise written? In the text preserved in M, Theomnestus twice apostrophizes an anonymous person: ‘informing you’, ‘I write down for you’ (σοὶ . . . μηνύσαντες; γράφω σοι). In each of these cases Theomnestus is describing a cure that he has tried himself; the vocative creates the sense that he is sharing something of value with the addressee. (The pronoun is absent from the text of B in both instances.) In a third instance, preserved in

---

39 M100 = B97.8, CHG I p. 338.  
40 M33, CHG I p. 25.  
41 M537 = B7.7, CHG I p. 47.  
42 M537 = B7.6, CHG I p. 46.  
43 M473 = B22.9–10, CHG I p. 106.  
45 M537, printed as an addition to B7.7, CHG I p. 47; M89, omitted from B68.5, CHG I p. 265 app.; presumably this is the Quintus or Ignatius to whom the treatise is dedicated in the Arabic version.
CL, Theomnestus adopts a didactic tone: ‘it is appropriate to teach you’ (ἀδιδαμένοις ἔκαρον).

Was the treatise written for the professional or the layman? Theomnestus makes the distinction between a technites, one versed in the art of healing, and the opposite:

"Ἡ ψωφίας ... ἔστι μὲν εὐίατος τῷ τεχνίτη καὶ ἀκίνδυνος ... τῷ δὲ ἀτέχνως θεραπεύοντι πολλάκις βάνατον ἐμποιεῖ τὰ προσφερόμενα." Was the treatise written for the professional or the layman? Theomnestus makes the distinction between a technites, one versed in the art of healing, and the opposite:

Mange ... is easy for the specialist to cure and is not dangerous ... but the [treatments] applied by one who is without skill often lead to death.

because it is unclear to the non-professional ... to one who is ignorant.

He also displays a concern for reputation:

Nothing prevents doctors from also being orderly about the scars of wounds. For a scar, if it becomes hollow, brings not a little ugliness to the place which is not suffering.

The passages on choosing a horse and on grooming seem to be directed toward a beginner; yet the medical material is technical in nature, and presupposes a certain degree of familiarity with the drugs and procedures prescribed.

CONTENTS AND STRUCTURE

A number of cross-references provide clues about the organization and the contents of the treatise: the section on choosing and caring for the horse begins ὄλγα πρώτον εἰσειμόειν περὶ ἱππον, οίον εἶναι τὸν τοιοῦτον χρή τὸν ἐπιμελείας ἀξιοράθη μέλλωντα, which seems to imply that it was situated toward the beginning of the text. Theomnestus conducts the discussion in an organized fashion:

I. We will first say a few things about the horse, what one who is to be deemed worthy of attention ought to be like.

---

46 C93. 18, CHG II p. 234.  47 M298 = B69.16, CHG I p. 273.
50 C93.12–17, CHG II pp. 231–4.
A. It ought to be strong and beautiful
   1. We select a strong one . . .
      a. predictable from place of origin and breed
      b. discernible from foot and gait
   2. beauty . . . These are the things by which strength and beauty may be recognized

B. These are the signs of quickness of spirit . . . These, then, are the kind and trustworthy signs

II. How and when such a horse ought to be looked after, . . . Let this much suffice as to the evaluation and care of the foal
   I. Ὄλιγα πρῶτον εἴπωμεν περὶ ἵππου, οἷον εἶναι τὸν τοιοῦτον χρῆ τὸν ἐπιμελείας ἀξίούσθαι μέλλοντα.
      A. δεῖ οὖν ἰαχυρόν καὶ καλλόν . . .
         1. ἐπιλεξόμεθα δὲ τὸν ἰαχυρόν . . .
            a. ἀπὸ μὲν τοῦ τόπου . . . καὶ κατὰ γένος
            b. τὸ δὲ ὅλον, ἐκ τοῦ περιπάτου καὶ τῆς θέσεως τῆς ὀψίν
         2. κάλλος δὲ . . .
            aἰ μὲν οὖν ἰαχύος καὶ κάλλος αὐται τυγχάνουσι εἰπιγνώσεις.
      B. ψυχής δὲ γοργότητος γνωρίσματα ταύτα . . .
         φιλάνθρωπα γάρ καὶ πιστὰ ταύτα τὰ γνωρίσματα
      II. τοῦτον τοῖνυν πώς ἐπιμελητέον καὶ πότε . . .
         τοσαῦτα ἁρκεῖτο περὶ ἐπιγνώσεως καὶ ἐπιμελείας πώλον.

This section is related in content and structure to Anatolius and other authors in the Mago–Cassius Dionysius tradition, and, as we shall see, appears to be derived from the same source. But Theomnestus’ version is more extensive: the horse is the focus of his treatise, rather than simply one of many domestic animals described in the agricultural manuals. And whereas in Anatolius and Columella, descriptions of the points and temperament of the horse appear in the context of breeding, in Theomnestus they introduce a detailed discussion of the early handling and training of the young horse.51 Theomnestus begins this second section with the season in which training ought to commence and the age at which the halter ought to be introduced and grooming begun. Next, he treats hoof care, including practical tips for how to avoid being kicked, and for tying the horse safely. Finally, the gradual increase of feed during early training is described, along with the age at which backing (the introduction of a rider) should take place.

51 C93.18–22, CHG II pp. 235–7.
The medical material in the treatise appears to have begun with a discussion of glanders: in the excerpt on that subject Theomnestus explains his use of ancient sources as though introducing such quotations for the first time. In every recension of the *Hippiatrica*, glanders is preceded by fever, but an isolated prescription of Agathotychus for fever represents the only contribution of Theomnestus to the first chapter. Six sequences of related subjects may be discerned among the excerpts in M; these appear to have been incorporated into the *Hippiatrica* with no alteration to their original order. They include the same common ailments that appear in all of the treatises in the compilation: treatment of wounds, of the eye, cough, and colic; other series include those on glanders and infections of the mouth. In M, a chapter on leeches intrudes between cough and pneumonia; however, a transitional phrase, ‘following cough, I wrote about pneumonia too’ (ἀκολούθως μετὰ τὴν βήχα καὶ περὶ πνευμονίας ἔγραψα), implies that the respiratory ailments were grouped together in Theomnestus’ treatise. Theomnestus writes that a horse suffering from colic ‘produces these symptoms, the others being the same as those of one with dysury’ (ποιεῖ δὲ σημεία οὕτως, τὰ μὲν ἄλλα ὁμοία τῷ δυσουριῶντι). This might seem to refer to a subject already described; however, comparison with the texts of Apsyrtus and Hierocles suggests that dysury was discussed after colic: Apsyrtus, on whom both Theomnestus and Hierocles depend, treats the two disorders in a single letter on account of the similarity of their symptoms. A list of remedies appears to have stood at the end of the book: Theomnestus writes χρῆσθαι ἀνακολλήματι, ὀπέρ ἐπὶ τέλους τῇ συγγραφῇ ἐκτεθήσεται. In such an arrangement, his treatise would have resembled those of Apsyrtus and Hierocles. He also refers to drugs by category:

χρή οὖν αὐτὸ μὴ ἄλλος θεραπεύειν ή συνεργοῦντα τῇ φύσει τοῖς διαφορούσι, τοῖς χαλόσι, τοῖς ἀμύσασι πρῶτον, καὶ οὐ τοῖς ἀπονυλόσιν.

One ought to treat it [mange] in no other way than by working with nature using dispersing, relaxing, and irritating [drugs] first, and not with cicatrizing ones, οὔταν οὖν ἀπὸ ψύχους, τοῖς χαλόσι καὶ θερμαίνοντας δεὶ χρῆσαι. οὔταν δὲ ἀπὸ κόνεως τοῖς ἐκφράτασον καὶ καταλειάνουσιν.

When it [the cough] is from chill, one ought to use relaxing and warming [drugs]. When from dust, unblocking and softening ones.

---

52 M33, CHG I pp. 25–6.
54 M537 = B7.6, CHG I p. 46.
56 M59 = B33.1, CHG I p. 163.
57 M183, CHG I p. 127.
58 M298 = B69.16, CHG I p. 273.
59 M473 = B22.10, CHG I p. 106.
Recipes for drugs listed in the appendix may have been classified according to the action of the drugs. The long series of prescriptions for healing wounds may also have been part of this appendix. Although in the *Hippiatrica* there is no appendix of recipes attributed to Theomnestus, there is, as we have mentioned, a long list at the end of the Arabic text.

The Greek text in M preserves the traits of Theomnestus’ style to an extent that, for example, the hippological passages in CL are recognizably related to the medical part of the text. Moreover, a number of cross-references confirm that the excerpts belong to the same treatise. For example, Theomnestus’ recommendation that salt ought not be administered through a horn μετὰ δὲ κέρατος ἀλας κωλύομεν δίδοομαι, 60 echoes the salt treatment cited above; while his explanation that cough afflicts young horses when they are first fitted with the bit, and, playing with it, open their mouths wide more than usual and catch cold (αἱ βῆχες μάλιστα τοῖς πάλοις γίνονται ὅταν πρῶτον λάβωσι τὸν χαλινόν. χάσκοντες γὰρ ἐξ ἀνάγκης παρὰ συνήθειαν τὰ στήθη κατασχύονται), 61 echoes the mention of the same problem in the passage on training a young horse in C: ‘cold . . . activates cough from chill. For when the mouth is opened up by the bit, and it inhales the airs of the winds down into the throat, the deep parts are chilled and dried up, which disease has cough as its consequence’ (κρυμός . . . τὴν ἐκ κατασχύεις βῆχα κινεῖ. διηρημένου γὰρ ἀπὸ τοῦ χαλινοῦ τοῦ στόματος καταπνέομενος ταῖς τῶν ἀνέμων αὐραίς τὴν φάρυγγα, ψύχεται τὰ βάθη καὶ ξηραίνεται, δὴ πάθος ἐπισύμπωμα δέχεται τὴν βῆχα). 62

**SOURCES**

The two sections of Theomnestus’ text are based on different sources: information on the choice and care of the horse is drawn from Xenophon, probably through the intermediary of Cassius Dionysius, while veterinary material is primarily from Apsyrtus with additions from other authors, including, apparently, Cassius Dionysius. The longest continuous passage of Theomnestus’ writing is the discussion of the choice and early training of the horse preserved in C. 63 Theomnestus’ essay on the points of the horse is perhaps the most thorough description of its kind to exist in Greek. The genre

---

62 C93.18, CHG II, p. 235.
63 περὶ ἑπιλογῆς ἐπὶ ποιόν C93.12–17, CHG II pp. 231–4, περὶ πολοδαμνίας C93.18–22, CHG II pp. 234–7.
is an ancient one: the earliest known systematic description is that composed by Simon of Athens in the fifth century BC. (This passage, the principal preserved fragment of Simon’s text, is placed, in C, immediately before the passage of Theomnestus under consideration.) Xenophon repeats Simon—consciously—to a certain extent, at the beginning of his treatise, in the section on how not to be cheated when buying a horse. As E. Oder has shown, similar lists of desirable traits of conformation and temperament exist in Varro, Columella, Anatolius (from both the *Geoponica* and the C recension of the *Hippiaitraca*), Palladius, Vergil, Calpurnius, Nemesian, and Oppian. When the relevant passages are placed side-by-side, it is clear that all adhere to the ideal described by Simon. Xenophon’s text is closest to that of Simon; while the striking verbal correspondence between the other eight makes it obvious that all the Roman writers, at least for this special subject, draw from the same source. This source, as Heinze demonstrated, is Cassius Dionysius—Diophanes. Oder omits Theomnestus (along with the compiler Pollux and Pelagonius, who repeats Columella) from his discussion of the subject apropos of the ‘Excerpta Anatoliana’ which preface the C recension. Theomnestus is not a slavish compiler, yet his text fits unquestionably into the tradition. Interestingly, when compared against Oder’s array of authorities, Theomnestus shows a closer affinity to the texts of Simon and of Xenophon, which were already very ancient by his day, than to any author closer in date. He quotes a certain Cassius elsewhere in the text; it may well be that Theomnestus used Cassius Dionysius rather than the abridgement by Diophanes which was Anatolius’ and Varro’s source. Xenophon’s name, as we have mentioned, features in the list of Greek writers on agriculture—probably representing Cassius Dionysius’ sources—given by Varro and Columella.

At the beginning of his treatise *On the Art of Horsemanship*, Xenophon discusses the points of the horse, what an amateur ought to know about breaking, on recognizing virtues and vices, stable management, and grooming. Theomnestus (via his source) refers to this part of the treatise, chapters 1–5, rather than the other seven chapters, which are about riding. The first similarity is that Theomnestus commences his discussion with the foot. Simon and Xenophon both do: ‘a good hoof is a good thing for a horse’ (ὅπως ἐκεῖν ἀγαθός ἢ πᾶς ἀγαθὸς), begins Simon; while Xenophon writes, ‘we say that one ought to examine the feet before the body. For just as there is no good in a house if it has an attractive superstructure but the underlying

---

64 C93.1–11, CHG II p. 228–31. 65 De re equ. I.1.
foundations are not what they should be, so too there is no good in a warhorse, even if it has all other good qualities, if it is not sound of foot’—as the saying goes ‘no foot, no horse’.69 All the later writers, however, begin with the head.


Theomnestus

The thick ones surpass the thin ones in goodness of foot … And Simon has said that that those with good feet are evident by the sound [they make], and he is right, for the hollow hoof sounds like a cymbal against the ground.

Simon

It has a slightly thick hoof. A sign of this is the sound of the good hoof: for a hollow one clashes like a cymbal more than a full and fleshy one.

When [the hoof] is thick, upright, rather narrow, and concave underneath, … For a horse that is concave of foot makes a sound against the ground that is rather like a cymbal to the senses of those listening—and it is this sound that proclaims the horse to be a strong one.

None of the other Greek or Latin writers use the vivid image of the cymbal to describe the sound of hoof striking the ground. Whereas Simon and Xenophon then proceed from foot upward to the rest of the body, Theomnestus skips from foot to head, and moves from the head down. In so doing he follows the convention not only of medical texts, but that followed by the agricultural writers: an indication of the immediate source for the Xenophon material.

In spite of this difference in their organization, the resemblance between the texts continues.70 A glance at the array of descriptions of the points of the horse from agricultural writers assembled by Oder reveals that Theomnestus’ words are much closer to those of Xenophon and Simon. The likening of the horse’s neck to that of a cock, for example, is not present in Anatolius, Columella, or related texts.


That Theomnestus does not mention either of the great equestrian authorities by name in the Greek text as we have it suggests that he was using their texts indirectly; we have seen Apsyrtus and Hierocles drop the names of Simon and Xenophon even without using their texts. Moreover, their texts seem to some extent combined: Theomnestus paraphrases Xenophon, while from Simon he draws words or phrases, often adapting them to a slightly different context. For example, Theomnestus’ statement that beauty lies in the proportions of the body, ἀλλά τὸ σῶμα ἑταίρον, ἵνα τὴν κορυφήν ζύον, λαγαρός δὲ εἴῃ κατὰ τὴν συγκαμάτην.

Let it have a neck corresponding to the head, beginning narrow, and continuing smoothly in accordance with its proportions, like that of a cock. The neck should not be thrown out from the chest like that of a boar, but, like that of a cock, should rise straight up to the poll and be slim at the bend.

That Theomnestus does not mention either of the great equestrian authorities by name in the Greek text as we have it suggests that he was using their texts indirectly; we have seen Apsyrtus and Hierocles drop the names of Simon and Xenophon even without using their texts. Moreover, their texts seem to some extent combined: Theomnestus paraphrases Xenophon, while from Simon he draws words or phrases, often adapting them to a slightly different context. For example, Theomnestus’ statement that beauty lies in the proportions of the body, κάλλος δέ, ὡς ἐν συντόμῳ εἰσεῖν, ἐν τῷ μεγάλῳ καὶ μικρῷ σώματι ἐπτευ, echoes the substance of Simon’s statement on proportion, but Theomnestus omits the key word συμμετρία used by Simon: τὸ δὲ μέγεθος τρία τῶν ὄρων ἐπίδεχέται μέγα, μικρόν, εὐμέγεθες, ἢ ἐξ θεατῶν σύμμετρον…κράτιστον δὲ ἐν παντὶ ώσιν ἡ συμμετρία, ‘There are three terms that apply to the size of the horse: large, small, and of good size, or, if you like, well proportioned (σύμμετρον). Good proportion (συμμετρία) is best in every animal.’ Similarly, the phrase νευρόδη καὶ ἀσάρκα which appears in Simon’s description of the foreleg above and below the knee is applied by Theomnestus specifically to the hock.

Theomnestus does not, however, depend upon the amalgam of Simon and Xenophon in Pollux, I.188 ff.

Theomn. C93.15, CHG II p. 233; Simon 2, in Xen. De re equ. ed. Widdra 2 = C93.2, CHG II p. 228: The word συμμετρία figures in a fragment of the treatise (entitled ‘Canon’) on the proportions of the human form by the 5th-c. sculptor Polycleitus, quoted by Galen, De placitis Hippocratis et Platonis 5. A bronze statue by Polycleitus, also known as the Canon, is said to have embodied perfect mathematical proportion; see e.g. A. Stewart, ‘The Canon of Polycleitus: A Question of Evidence’, JHS 98 (1975), 122–31. It has been suggested that the bronze statue of a horse commissioned by Simon, and set up near the City Eleusinion in Athens, was similarly an embodiment of perfect proportions: E. Curtius, Die Stadtgeschichte von Athen (Berlin, 1891), 188. Euphranor, another 5th-c. sculptor and painter, also wrote on συμμετρία: see J. J. Pollitt, The Ancient View of Greek Art (New Haven and London, 1974), 24–32 and 160–2. Σύμμετρον and σύμμετρος are, however, used by Theomnestus simply to mean ‘moderate’ or ‘moderately’ in his descriptions of the mouth and the tail.

C93.15–16, CHG II pp. 233–4.
After describing conformation, Theomnestus turns to temperament. Xenophon had already drawn the distinction between physical qualities and qualities of spirit, but had declined to identify the latter in the foal: ‘obviously it is the body of the unbroken foal that ought to be evaluated, for one that has never been ridden does not provide clear indications of spirit’ (τοῦ μὲν τοίνυν ἀδαμάστου πῶλου δήλον ὅτι τὸ σῶμα δεὶ δοκιμάζειν τῆς γὰρ ψυχῆς οὐ πάνω σαφῆ τεκμήρια παρέχεται ὁ μήπω ἀναβαίνομενος).74 Theomnestus’ relation to the agricultural writers is evident in this passage: as Oder has shown, and as we have seen above, similar descriptions exist in Columella and Anatolius.75

The second part of this section is on the early handling of the young horse, a subject to which the agricultural writers allude only in passing. Theomnestus’ instructions for grooming a horse are the only ones to survive in the *Hippiatrica*.76 Theomnestus echoes Xenophon’s observation that grooming is pleasant for the horse, because the groom attends to areas the horse cannot reach himself; however, he does not follow Xenophon word for word.77

---

74 De re equ. I.1.
76 C93.19, CHG II pp. 235. There are anecdotal descriptions of grooming elsewhere, e.g. Ael. NA III.2.
77 De re equ. II.3.
Theomnestus next gives some practical advice: start grooming from the upper part of the body, and progress downward, in order to avoid soiling the areas already cleaned. The same advice is given by Xenophon:78

One may note Theomnestus’ use of φιλοκαλέω to mean ‘to groom’. Both authors express concern for the safety of both horse and handler. Xenophon recommends that the groom stand by the horse’s shoulder in order to avoid being kicked while picking out the feet, while Theomnestus explains how one can prevent kicking and make the horse lift its foot more readily by drawing the tail between the hind legs and twisting it up against the flank.79

Let the one who grooms the colt begin from the head. And the rubbing down should be continued from the top down, and the hairs which are shed should be cleaned in this way. For in this way the parts that have been groomed stay clean, while those which have not yet [been groomed] can be cleaned without soiling what has already been cleaned.

When you groom it, begin from the head and the mane: if the upper parts are not clean, to clean the lower parts is in vain.

79 C93.20, CHG II p. 236; De re equ. VI.1–2.
Whereas Xenophon had declined to speak of breaking, in his opinion a matter best left to professionals, Theomnestus gives detailed advice on the subject. Nevertheless, he echoes Xenophon’s words, and the classical author’s humane approach, recommending that the colt be accustomed gradually to human touch, rather than broken by force.

Theomnestus’ advice about breaking reflects its context in a medical manual: he mentions that care should be taken, when exercising the colt, to avoid chills which bring on cough and ‘tetanos’. The colt should not be ridden before the age of two, lest his back be hurt. The browband of the bridle should be fastened tightly so that it does not become twisted and damage the eye. Theomnestus does not depend on Apsyrtus’ treatment of schooling, which is focused on the cavalry-horse.

SOURCES OF THE VETERINARY MATERIAL

In the passage from CL discussed above, Theomnestus’ text has been shown to correspond closely to that of Xenophon, presumably through Cassius Dionysius. For medical information, Theomnestus draws from Cassius Dionysius, other veterinary manuals, and his own experience.

A passage preserved only in M demonstrates how Theomnestus integrates quotations into his work. At the end of his discussion of glanders Theomnestus pays homage to the ancients as an introduction to a series of passages from older texts:

εἰρηκότες περὶ μάλεως καὶ τῶν ταύτης διαφορών καὶ ἐπιγνώσεως θεραπείων τε καὶ ἀποθεραπείων, ὡς γεγυνώσκομεν αὐτοῖς θεραπεύσαντες ἐκ λόγου καὶ πείρας, εἴπομεν καὶ

80 De re equ. II.1. 81 C93.18, CHG II p. 235.
Having spoken about glanders and its varieties and diagnosis and treatments and cures which we ourselves know, having made treatments from book-learning and experience, we shall also speak of the things that we have from the ancients, not scorning these at all, since 'too much is never enough'. There is an easily prepared remedy among the treatments of Hippaios, who was a Theban from Seven-Gated Thebes in Greece; he writes about glanders of the joints, so we shall present a notice on glanders of the joints from that source...

We have seen that in the section on hippology, Theomnestus paraphrases Simon and Xenophon without mentioning them or an intermediary source by name—unless an attribution was cut out by the excerpter. But in the case of veterinary authors, he is careful to name them when citing their recommendations.

Nέφοντος θεραπεία μάλεως ἀρθρίτιδος
Nephon's treatment for arthritic glanders

Ἀγαθοτύχου εἰς τὸ αὐτό
From Agathotychus, on the same

Κασσίου περὶ πνεύμωνος
From Cassius, on the lung.

Hippaios and Nephon are cited once each by Theomnestus, while Agathotychus and Cassius each appear three times. An excerpt on the heart attributed to Cassius is close to a passage from Eumelus, as we have seen.

Theomnestus may also have consulted a work on medicinal plants: his description of comfrey includes not only the etymology of the plant’s name, but also a list of synonyms, which includes the name used by the ‘prophets’ and is thus related to the lists (drawn probably from Pamphilus) which figure in the so-called alphabetical recension of Dioscorides:

---

84 In the Souda, s.v. ἐκ περιουσίας (Adler, E 563), Aristotle’s definition (Top. 118a6) is cited. Elsewhere Theomnestus refers to a recipe as ἐκ περιουσίας, M256 = B26.39, CHG I p. 138.
85 M33, CHG I pp. 25–6.
86 M34–5 = B2.23–4, CHG I pp. 26–7; M538 = B5.4, CHG I p. 4.
87 Cassius M428 = B29.6, CHG I p. 148; M538 = B5.4, CHG I p. 41; M545 = B32.3, CHG I p. 161.
There is a certain herb which grows on walls and stones, which the children of doctors call *sown polygonum*, laymen call *symphyton*, Macedonians *osteokollon*, the prophets *pallantion*. They say that when it is boiled it unites *Xesh* which has been divided, on account of which it is rightly called ‘grow-together’ and ‘knit-bone’, having its appellation from what it does.

Theomnestus’ principal source for medical material is the treatise of Apsyrtus. In the Greek text preserved in the *Hippiatrica*, Theomnestus mentions Apsyrtus by name only once, in his discussion of mange (*ψώρα*), alluding to Apsyrtus’ description of that disease as a variety of subcutaneous glanders:

Αψύρτος γὰρ τούτο τὸ πάθος ἐκ τοῦ τόπου ὑποδερματίνης μάλλω καλεῖ. οὐ διαφέρομαι δὲ ἀνόματι τὸ γένος εἰπὼν τοῦ πάθους.\(^{90}\)

Apsyrtus calls this disease subcutaneous glanders from its localization. I do not differ in calling this type of the disease by that name.

But the fact that both treatises appear together in the *Hippiatrica* makes evident their numerous parallels. The amount of material that excerpts from the two authors have in common strongly suggests that Theomnestus had Apsyrtus’ text before him, or at any rate knew it well. In some cases, entire recipes are paraphrased: the purging medicine consisting of broth of puppy is an example. Moreover, in Apsyrtus’ text, the recipe comes first in the chapter on drenches, immediately after the phrase λέγω δὲ πρῶτον ἐγχυματισμῶν σκευασίας καθαρτικάς;\(^{91}\) while the lemma of Μ for Theomnestus’ version, θεομνήστου καθαρτικῶν φαρμάκων ἐκθέσεις, suggests that the recipe was similarly situated in his treatise.\(^{92}\) Another recipe, the mixture of pine nuts and raisins recommended by Theomnestus for horses who are in poor condition for no apparent reason, is identical to one given by Apsyrtus—though Theomnestus adds that it is an Armenian discovery (’Ἀρμενίων εὑρήμα), and moreover that it is known to him through much experience (ἐμοὶ διὰ πεῖρας πολλῆς ἐγνωσταῖ).\(^{94}\)

---

\(^{89}\) M586 (altered in B66.5), *CHG* I p. 260; the text is different from Dioscorides’ treatment of comfrey, as pointed out by Oder and Hoppe, ad loc. On the synonym lists, cf. Wellmann, ’Die Pflanzennamen bei Dioskurides’.


\(^{91}\) M759 = B129.1–2, *CHG* I p. 385.

\(^{92}\) M1086 = B130.147, *CHG* I p. 428.


Theomn. C24.7, 96

In one case, Theomn. C24.7, 96

In one case, Theomn. C24.7, 96

In one case, Theomn. C24.7, 96

In one case, Theomn. C24.7, 96
Many artful remedies have been written by the ancients for ischury: the one with garlic and onions, the twisting around of the bladder through the rectum—which remedies are in fact more dangerous than the disease.

What was Apsyrtus' source in this case? The onion remedy is recommended for indigestion in cows in Columella,\(^97\) by Anatolius for dysury in Geoponica XVI and for twisted intestine in cows in Geop. XVII.\(^98\) It is likely that the remedy is from Cassius Dionysius–Diophanes.

Theomnesterus' use of Apsyrtus is especially interesting as a foil to Pelaqonius' use of the same source. Whereas the latter is content, as we have seen, merely to rephrase Apsyrtus, Theomnesterus adapts his source, as we see in his instructions for setting right a sprained neck:\(^99\)

---

\(^97\) Col. VI.6.5, salis sextans cum cepis decem conteritur, et admixto melle... immittuntur alvo, atque ita citatus bos agitur.

\(^98\) Geop. XVI.13 twes kρμων, τωι λεπτωι ἀπαιρηθέντος, περὶ τὴν κατάν τιθέασιν; XVII.19.4 ἄλλες κρόμων καὶ ἄλλως ἁνώσαιτε καὶ σφυρώσαιτε εἰς τὴν ἐδραν ἑαυτήτων προσωποῦ, καὶ τρέχειν ἀναγκαίως.

Here we see Theomnestus adapting information taken from Apsyrtus almost verbatim by adding to it what we shall see are the hallmarks of his style: the phrase ἐποίης καὶ ἄλλοις ὑποζυγίοις, the discussion of the cause of the condition with attention to anatomy; the first-person transitional phrase τούτων θεραπεύσαμεν, and finally the guarantee at the end of the passage.

Theomnestus concerns himself to a greater extent than other authors in the Hippiatrica with definitions of diseases and with their aetiology, his detailed discussions of which show familiarity with anatomy, physiology, and humoral
theory. His description of an eye disease includes a striking analogy; his source here is unknown:

Pterygia are growths that accumulate above the eyes, when thick humours of blood and phlegm are impacted in the head; they are membranous bodies, whose roots are visible when bloodshot. The pupil itself is not afflicted at all, but they inflict sightlessness on it, like a cloud ever covering over a star.

The definition of glanders includes the rare term δυσδιαφόρητος:

Glanders is an impaction of putrid humours, difficult to dissipate. It takes its specific appellation from whatever part of the body it impacts. There are two varieties of the disease: the first of these is the dry, and the other the wet. The dry is invisible, and the wet visible. For a phlegm-like fluid is produced through the nostrils, tending to be pale in colour, from which they call the disease malis, assigning it an appellation from its colour.

Theomncestus’ division of glanders into two types represents a departure from the fourfold division of the disease repeated by Eumelus, Pelagonius, and Apsyrtus. His definition of mange includes a reference to Apsyrtus’ definition of glanders, as we have seen:

Mange in horses and other beasts of burden is nothing but the humour of putrefied biles and blood, boiling over through heat from the depths and making its way out to the surface. Apsyrtus calls this disease subcutaneous glanders, from its location.

We see the same use of litotes in the introductory sentence and also the phrase ‘horses and other beasts of burden’ in the opening of his chapter on ‘tetanos’:

---

100 See Björck, ‘Zum CHG’, 55–6.
102 See R. J. Durling, ‘Lexicographical Notes on Galen’s Writings II’, Glotta, 58 (1982), 264 on δυσδιαφόρητος ‘difficulty of dissipation … almost certainly rare’.
104 M298 = B69.16, CHG I p. 273.
Tetanos' occurs in horses and other beasts of burden from nothing other than cold, when the solid [tissues] are afflicted and it undergoes a sympathetic affection of the sinews. It is called tetanos because the whole body is tensed...

Theomnestus’ style, as we have seen, is varied. In medical definitions his language is formal: a description of the relation of lung and heart was identified by Oder and Hoppe as reminiscent of Plato. In his instructions he uses formulaic phrases. The verb ἐκθήσομαι is Theomnestus’ standard introduction for both descriptions of diseases and for recipes, e.g. φάρμακον ἐκθησόμεθα θαυμαστόν ‘I will set forth an amazing drug.' Enthusiasm is also a trait of Theomnestus’ style: his recommendations of medicines almost always come with a guarantee, given as a coda at the end of the prescription, and almost colloquial in tone:

καὶ θαυμάσεις αὐτόν (and you will be amazed by it);
καὶ θαυμάσεις τὴν δύναμιν (and you will be amazed at its power);
ἐκθήσομαι ταύτα εὐδοκήμοις οὖσι καὶ ταύτα θεραπεύουσαι θαυμασίως (I will set forth these things which are tried-and-true and heal amazingly);
ἡ γὰρ παντελῶς θυγάσεις τὰ πεποιθήτα, ἢ ἐκ παντὸς παρηγορήσεις (either you will heal the afflicted parts entirely, or you will on the whole assuage them).

105 M319 = B34.11, CHG I p. 183.
106 M537 = B7.6, CHG I p. 46. Oder and Hoppe, ad loc., cite Timaeus 31.
107 M33 = B2.21, CHG I p. 25.
108 M473 (omitted from B22.11), CHG I pp. 106–7 app.
109 M475 (omitted from B22.20), CHG I p. 109 app.
110 M35, CHG I p. 27 app.
111 M1111, CHG II p. 109.
Hierocles

Hierocles has, on the whole, received a harsh verdict from modern scholars. In Oder’s view, ‘impudentissimé posteriorum omnium Hierocles…Apsyrtum compilavit’. To Björck, he is ‘l’ennuyeux plagiaire Hiérocèles’; according to Doyen-Higuet, he ‘literally pirated his predecessor’s work’. Hierocles has elicited this criticism because his treatise consists for the most part of a paraphrase of Apsyrtus’ text into a more elegant style, with the addition of material from a few other sources and of two rhetorical prooimia. He is certainly not an original writer, and not once in what has survived of the text does Hierocles refer to his own experience with horses. But the charge of plagiarism is an anachronistic one: in antiquity, technical material was freely reused and adapted. All of the authors in the Hippiatrica draw upon the work of their predecessors; Hierocles does so uncritically, but he cites his sources consistently.

Moreover, there was a long tradition in Greek literature of amateurs writing practical handbooks with other amateurs in mind, usually by putting someone else’s material into more attractive literary form. The best-known examples are the Phaenomena of Aratus and the Theriaca and Alexipharmaca of Nicander, paraphrases of the manuals of Eudoxus and Apollodorus of Alexandria, respectively, into hexameter verse. Varro, too, put his compilation on agriculture into the form of a dialogue, and Columella’s De re rustica is not without rhetorical flourishes. The Latin veterinary treatise of Vegetius, which consists of a reworking of Columella, the Mulomedicina Chironis, and


2 In more general literature, ironically, he has received the highest praise: in Pauly-Wissowa he is ‘einer der bedeutendsten Tierärzte des Altertums’ (Gossens, ‘Hierocles’); in the Cambridge Medieval History, ‘one of the best of the veterinary doctors of Late Antiquity’ (K. Vogel, Byzantine Science, p. 292); G. Sarton, in his Introduction to the History of Science, calls Hierocles ‘a Greek veterinary surgeon, one of the greatest of antiquity’ (I. 356).

3 On retractatio, see the comments of Dain, Histoire du texte d’Élien le tacticien, 26 ff.
Pelagonius, provides an analogy to Hierocles’ work. What was the point of this sort of exercise? One of the Vitae of Aratus describes the commission from Antigonus Gonatas, king of Macedonia, to rework Eudoxus’ description of the constellations into verse: ἐνδοξότερον ποιεῖς τὸν Εὐδοξον ἐντείνας τὰ παρ’ αὐτῷ κείμενα μετρῳ ‘you make Eudoxus more glorious (ενδοξότερον) by putting his text into meter’. Whether or not it is historical, this passage reflects (in addition to the irresistible temptation to pun on names) the generally favourable view of such stylistic reworkings. The criticism that the works of non-specialists occasionally received was outweighed by the popularity of the texts, which often exceeded that of their sources.

Unlike Vegetius, Hierocles does not criticize the language of his sources. But certainly the nature of the readership for which his treatise was destined must have influenced his mode of expression. Galen makes it clear that he is writing for doctors, who do not care (or ought not to) for fine phrasing in a medical text: ‘these things are written not for those who are inclined to Atticize in speech, but for doctors, who do not care for Atticism’ (οὐ τοῖς Ἀττικίζειν ἐν τῇ φωνῇ προφημενίους γράφεται ταῦτα… ἀλλ’ ἰατροῖς μὲν μάλιστα, μη πάνυ τι φροντίζοισιν Ἀττικισμοῖς). Apsyrtus begins his treatise in a tone of professional gravity by stating his credentials, referring to the danger of losing horses to disease, and appealing to the doctor’s concern for reputation. Hierocles, on the other hand, makes it clear that he is taking time off from his normal occupation as a lawyer to compose a treatise which he describes light-heartedly as παιδίας τρόπως, ‘a manner of playing’. Whereas Apsyrtus refers, in his preface, to λόγος and πείρα, ‘book-learning and experience’, bywords of medical literature, Hierocles plays on the notions of σπουδή and παιδία, ‘work and play’. He was evidently not writing for professional horse-doctors, and could assume that his readers would savour the style of his prose. One imagines that these readers were the sort of educated laymen who would also have been interested in Aratus, Nicander, or Oppian. Hierocles’ treatise does not provide any sort of first-hand

4 D. Kidd (ed. and tr.), Aratos: Phaenomena (Cambridge, 1997), 4. See also Stemplinger, Das Plagiat, 118 ff., on paraphrases.
5 e.g. Cicero De oratore I.69 si constat inter doctos hominem ignarum astrologiae ornatissimis atque optimis versibus Aratum de caelo stellisque dixisse; Galen De simpl. med, ed. Kühn XI.793: ὃ δὲ ό Πάμφιλος ἃ τὰ περὶ τῶν βοσκον τοῖς ανεθεῖς εἰδολός ἐστί καὶ αὐτῶν ἃς γράφει γραμματικώς ἃν καὶ μηθ’ ἐν τἱς ἐρωτικαῖς τὰς βοτάνας ὑπὲρ ὧν δινεῖται μήτε τίς δινάμεις αὐτῶν πεπερασμένας, ἀλλὰ τοῖς πρὸ αὐτῶν γεγραφῶν ἰσαίαν ἰσαίαν παπαστευκών; cited by Stemplinger, ibid., 105.
7 M1, printed as B1.1 with additions, CHG I p. 1.
8 Cf. Xenophon, Symposium I.1.
scientific information, but it is good evidence of a certain kind of Late Antique literary taste and education. This taste remained in vogue for a very long time, and medieval opinion of Hierocles’ treatise, unlike that of modern scholars, was overwhelmingly favourable.

HIEROCLES’ TEXT

Included together with its sources, Eumelus, Apsyrtus, and Theomnesticus, in the veterinary canon of the *Hippiatrica*, Hierocles’ treatise was favoured over the others in successive recensions of the compilation. Each of these recensions contains a very different selection of excerpts from Hierocles. The M recension contains 114 excerpts attributed to him; these consist for the most part of short passages which do not duplicate Apsyrtus’ text. Hierocles’ work received kinder treatment at the hands of the editor of the B recension, who not only retained passages that repeat Apsyrtus, but included the two prooimia—rhetorical ornaments with no practical value. It is in B that the greatest quantity of Hierocles’ text survives: 120 long excerpts, as well as several series of recipes for drugs. In B, his name has been omitted from the lemmata of 52 excerpts, most of them recipes at the end of the compilation.¹⁰ C does not contain the prooimia, but does contain seven passages of Hierocles’s work which are neither in B nor in M.¹¹ In the L recension, Hierocles’ text is given priority over that of Apsyrtus: in the event of duplication, the latter’s work is left out. But L does not provide any additions to the text of Hierocles in M, B, and C: about 110 of the same passages are repeated, some consisting of agglomerations of two or three excerpts from B; the prooimia are included, and a number of passages are also falsely ascribed to Hierocles.¹² Hierocles’ treatise is, along with those of Apsyrtus and Pelagonius, one of the most extensively used sources of the *Hippiatrica*; it seems to have been one of the longer sources. It seems likely that the first hippiatric compilation (‘A’) contained all of Hierocles’ text, despite the substantial overlap with those of Apsyrtus and Theomnesticus.

Hierocles is, apart from Anatolius, the only hippiatric author whose treatise is transmitted outside of the compilation in Greek: the so-called RV recension consists of an artificial reconstitution of Hierocles’ two books out of excerpts

¹⁰ Listed *CHG* II p. xiii.
¹¹ Oder, ‘De hippiatricorum codice Cantabrigiensii’, 60.
appearing under his name in the B recension of the *Hippiatrica*. The RV recension does not contribute any additions to the text of Hierocles transmitted in the M, B, and CL recensions of the *Hippiatrica*, but the fact that a reconstitution of the text was made from excerpts would appear to be evidence of the esteem in which the treatise was held in the Middle Ages (Pls. 16, 18). Indirect testimony to Hierocles’ reputation as a veterinary authority is provided by the tenth-century recension of the *Geoponica*, in which chapters are falsely attributed to him.13

Three translations of Hierocles’ text were made into the languages of the medieval West. It may have been by chance that a copy of his text, rather than that of another author, travelled to Sicily; but it is not unlikely that Hierocles’ allusions to Aristotle attracted the interest of the translator Bartholomew of Messina, or of the latter’s patron, King Manfred. Bartholomew’s translation is preserved in at least nine manuscripts. There also exists a version in Sicilian dialect. An Italian translation of the reconstitution of Hierocles and the *Epitome* exists in three manuscripts.14 Hierocles is quoted in the *Clavis Sanationis* of Simon of Genoa (d. 1303), no doubt via Bartholomew’s translation.15

**CONTENTS AND STRUCTURE**

The structure of Hierocles’ treatise may be reconstructed with the aid of cross-references preserved in the excerpts. Allusions to a second volume—presumably the treatise was published in the form of two rolls—are confirmed by the presence of the two prooimia, and of brief conclusions to each of the two books. There is no indication that the books represented a division by subject. At the end of the second volume was an appendix consisting of recipes for the preparation of drugs, a feature present in the treatises of Apsyrtus and Theomnestus.

The M recension omits the greater part of the first prooimion, preserving only its last few lines, which discuss the age at which a mare may be bred, in the context of a series of excerpts on breeding.16 But whereas in B the

---

13 *Geoponica*, XVI.9–11.
14 Manuscripts of the translations are listed in S. Lazaris, ‘Contribution à l’étude de l’hippia
16 Near the end of the compilation: M1039 = last part of B1.13 with 1.14, *CHG* I p. 6 (readings of M).
prooimion ends by introducing a chapter on fever, the text in M implies that the work began with a different subject: ‘so that we may begin from the greatest things, we shall speak first of glanders’ (ἐν’ οὖν ἀπὸ τῶν μεγίστων ἀρξώμεθα, περὶ μάλεως πρῶτον ἐρούμεν), a reading accepted as genuine by the editors of the text, and corroborated by the beginning of the chapter on glanders: ‘There are four types of the so-called malis, which might be considered the greatest and most dangerous of diseases’ (τῆς καλουμένης μάλεως, ὁ μέγιστον ἀν νομίζοιτο τῶν ἀρρωστημάτων καὶ σφαλερώτατον, ἔστι γένη τέσσαρα)—here Hierocles appears to be echoing Apsyrtus, whose chapter on glanders, second in M and B after the chapter on fever, begins ‘I shall make known to you the greatest sickness of those that befall them . . . which many call malis’ (ἐπιδείξω σοι τὸ μέγιστον ἀρρώστημα τῶν ἐμπιπτόντων εἰς αὐτούς . . . ὁ καλοῦσιν οἱ πολλοὶ μάλων). There are few other references to the order of subjects:

όταν κολιάν ἵππος ἀλγῇ . . . τά δὲ λοιπὰ οὐ ποιεῖ, ἄφι ὃν ὁ δυσουμνός γνωρίζεται, περὶ οὗ ἐφεξῆς ἐρούμεν.

When a horse is ailing in its stomach . . . it does not do the rest of the things by which one with dysuria (about which we shall shortly speak) is recognized.

In this instance the nature of the Hippiatrica, that is, its juxtaposition of different authors, allows us to observe that Hierocles is following the order of subjects in Apsyrtus’ treatise. The chapter on inflammation of the tonsils (παρόθθημα), which contains the recommendation ‘the cure is the same as the one for tumour of the parotid gland’ (ἰασίς δὲ ἡ αὐτὴ καὶ ἐπὶ τῆς παρωτίδος), would appear to have followed the discussion of παρωτίδες. At the end of a short passage on bristly hairs that cause itching in the tail, περὶ υπερχιώδων, the end of book I is signalled with an appropriate cliché:

μέτρων ἁρπαξιαν ἐπὶ τῶν σωφῶν τις ἐν ἀποβηγμασίν ὃ χρῆ πειθομένους, τούτῳ πέρας ἐπιθείναι τῇ πρώτῃ βιβλίῳ.

‘Moderation is best,’ as some wise man said among his maxims; obeying this, we must put an end to the first book.

The preface to Hierocles’ second volume is entirely omitted from M. In B, it appears, logically, after the chapter on υπερχιώδες. The next chapter is on

---

17 M1039, CHG I p. 6 apparatus and CHG II p. xii.
18 B2.10, CHG I p. 18 (this section not in M).
20 MS92 = B31.1, CHG I p. 156.
22 B18, CHG I p. 92.
infection of the mouth and throat, \( \text{peri } \alpha βθήσεως \), but there is no indication of whether the chapter occupied that position in Hierocles’ original arrangement.24

The phrase which closes book II, after the chapter on putting horses out to grass in springtime, echoes the end of book I, and introduces a collection of recipes for drugs:

\[ \text{πέρας μὲν οὖν ἔχει τὸ σύγγραμα. συντάγματα δὲ καὶ βοηθήματα τούτων ὑπετάξαμεν, ἵν' ὑπάρχῃ πάσαν γυνώσκειν, πῶς ἔκαστα τούτων κατασκευάζεται.} \] 25

The treatise has come to an end. But we have appended recipes and remedies to it, in order that it be possible for all to know how each of them is prepared.

There are also a number of internal references to the drug recipes. These two, from the chapters on eye conditions (\( \text{peri } \alpha βθαλμών \)) and on sores (\( \text{σηπεδώνες} \)), probably belonged to book I, since they refer to a second book, presumably distinct from the one in which they are located:

\[ \text{κολλυρίων δὲ διαφόρως συνθέσεις εὐρήσεις γεγραμμένας ἐν τῷ δευτέρῳ μου βιβλίῳ.} \] 26

You will find various compositions of eye-salves written out in my second book.

\[ \text{ἔχεις δὲ πρὸς σηπεδώνας ἐν τῷ δευτέρῳ μου βιβλίῳ ἐν ταῖς σκευασίαις τῶν φαρμάκων συντάγματα.} \] 27

You have recipes for sores in my second book, among the preparations for drugs.

Two more-cross references, at the end of the excerpts on cysts (\( \text{peri } \mu ελυκηρίδων \)) and warts (\( \text{peri } \mu 

You have other remedies for warts written out below in the preparations for drugs.

The recipe collection is preserved in long series of excerpts in both M and B; it may have been classified into ointments and drenches.30

28 M909 = B77.1, CHG I p. 293. 29 M343 = B82.8, CHG I p. 304.
30 Cf. M924 = B130.68, CHG I p. 413: \( \text{'Ιεροκλέους ἐμπλάστρων σκευασία.} \)
HIEROCLES’ PROOIMIA

In contrast to the other hippiatric writers, whoprefaced their treatises (as far as one can tell) with the briefest of introductory remarks, Hierocles provided his treatise with two formal prooimia.31 These passages of Kunstprosa, composed in too-faithful accordance with the archaizing rules and tastes of the Second Sophistic, give virtually no information about his life and times, his place of origin, or the reason for his interest in veterinary medicine. Hierocles simply assembles a collection of clichés and rhetorical set-pieces, well-worn fragments of classical verse, proverbs, odd facts, and venerable tales. His profession, to which he refers in a roundabout way, provides some explanation for his modus operandi and style of writing:

Well, although we ought now to be paying heed to others and rendering services to those in need in the lawcourts, and taking care of that sort of business, still, your request is not to be disdained, most excellent Bassus. For it is a ‘delightful burden’, so to speak, and a ‘labour of love’ (as Euripides says), that, under the command of a friend, and most particularly you, by whom I am won over, we dare to speak in the manner of playing, and become for some time a deserter from the ranks of the judges.

As a judge or pleader in the courts, Hierocles would have been trained in oratory—the connection between the disciplines of rhetoric and the law is illustrated by the use of the title σχολαστικός (scholastikos) to denote an orator, a teacher of rhetoric, or a jurist.33 He would have been familiar with the convention of prefacing a technical treatise with a formal prooimion from the examples provided by legal texts; he also would have been familiar with the conventions which prescribed the use of literary rather than technical language for the preface.34 And he would presumably have been accustomed to looking up and citing the opinions of authorities, as he does in the body of the treatise. The phrase he uses to describe his duties, σπουδὴν περὶ ταύτας

31 Pelagonius, too, prefaced his treatise with a short rhetorical prooimion.
32 B1.9, CHG I pp. 3–4.
34 H. Hunger, Prooimion (Vienna, 1964), 26; Dagron, ‘Aux origines de la civilisation byzantine: Langue de culture et langue d’état’, 55.
Hierocles seems to echo a language of the chancery, already petrified in Hellenistic decrees. His profession presupposes an urban milieu, which would also have provided the cultural background that the style of his book reflects.

There is no specific indication of the date at which Hierocles composed his treatise. Apart from Apsyrtus, the most recent authors to whom he refers are the Quintilii, contemporaries of Herodes Atticus (second century AD). We may note that he refers to Apsyrtus impersonally, as an authority rather than as an acquaintance. Hierocles’ friend Bassus was long identified as the Cassianus Bassus, also a σχολαστικός, who compiled the Geoponica; Hierocles was (incorrectly) considered the compiler of the Hippiatria. Cassianus Bassus is generally held to have lived in the sixth century, though there is no firm evidence for this date. Hierocles calls Bassus ‘not unacquainted with literature’ (λόγων οίκς ἀμελήτης)—we may note the emphasis on λόγος rather than πείρα—and says to him furthermore that ‘you happen to have inherited the works of your forebears on horse-keeping’ (τὰ περὶ τῆς ἱπποτροφίας ἐκ προγόνων παρειληφθέον σπουδασματα τυγχάνεις)—the works of Simon and of Xenophon in particular are mentioned—which seems to imply, if not that Bassus kept horses, at least that he was acquainted with the literature on them. Rejecting the identification of Bassus with the compiler of the Geoponica, and pointing to Hierocles’ avoidance of hiatus in the prefaces, Oder assigned the text to the fourth or fifth century AD—a date which, though not based upon particularly solid evidence, does not seem unlikely.

Hierocles’ allusions to the pagan gods, the sacred games, and the monuments of Athens may be deliberately employed to create a classicizing illusion, reflecting antiquarian taste rather than contemporary reality, and are consequently of dubious value as evidence for his date or creed or place of origin.

35 For similar phrasing in inscriptions honouring judges, see L. Robert, ‘Note sur une inscription d’Erythrai’, CRAI (1926), 169–71.
39 B1.9, CHG I p. 4; on hippotrophia as a duty of curiales in Antioch, see P. Petit, Libanius et la vie municipale à Antioche au IVe siècle (Paris, 1955), 48.
40 Oder, ‘Beiträge III’, 33–5; CHG II p. xii.
It is nevertheless worth considering them. If the Olympic and Pythian games were indeed still being held at the time Hierocles wrote, his reference provides a *terminus ante quem* of AD 393, when they were abolished by Theodosius I.

He swears by Zeus, but this may be a rhetorical affectation. He invokes the appropriate deities Poseidon Hippeios, Asclepius, and Cheiron, perhaps more out of a desire to show off knowledge of Greek mythology than out of any kind of belief, although the phrase ‘Asclepius saviour of the human race’ (ὁ τοῦ τῶν ἀνθρώπων γένους σωτήρ Ἀσκληπιός) does not sound particularly Christian. References to the Eleusinion and the Olympieion at Athens need not imply any first-hand knowledge of that city, nor even that Hierocles was writing before the deconsecration of the temples; for they are mentioned in the context of anecdotes set in the fifth century BC. But it is not unlikely that a cultivated lawyer of the fourth century AD would still be a pagan. The pagan sorceresses Circe and Medea are invoked in a spell, but also, one suspects, under the influence of the conventions of magic, and of the Second Sophistic.

The name Hierocles is a pagan one, but continued to be used until fairly late: there are several instances in the correspondence of Libanius in the fourth century, the Neoplatonic philosopher, and the collector of jokes in the fifth, the author of the *Synecdemus* in the sixth.

The author of the veterinary manual was certainly well acquainted with the textbook rules of literary composition: in form, the prooimia follow a strictly conventional template. In his prefaces, Hierocles makes use of all the standard elements of rhetoric: myth, synkrisis, quotation, encomium. He writes as though he were declaiming, beginning with ἄλλα, using the verb λέγω, and

---

42 B.1.9, *CHG* I p. 4; cf. Varro, *RR* I 4–6, Themistius, θέους εἶ γεωργητέων, ed. H. Schenkl, vol. II (1971), 182–6 for similar wording of the invocation. Hierocles is almost certainly not referring here to the veterinary manual that went under Cheiron’s name, but rather to Cheiron the inventor of herbal medicine, as he is depicted in the Vienna Dioscorides.


45 One might see a candidate in Fl. Antoninus Hierocles, a native of Glicia, *consularis Syriæ* in 348, governor of Arabia in 343/4, and an acquaintance of Libanius. From Libanius’ letters it is known that this Hierocles was a barrister and a professor of rhetoric, who spent the end of his life in retirement on his estates. *PLRE* I. 431–2, O. Seeck, *Die Briefe des Libanus zeitlich geordnet* (Leipzig, 1906), 176–7.

46 Even if it was compiled by someone else, the *Philogelos*, with its jokes at the expense of lawyers and *scholastikoi*—often at a loss when faced with a horse—would seem to belong to a similar milieu. *Philogelos*, ed. R. D. Dawe (Munich and Leipzig, 2000), e.g. nos. 3, 4, 9, 10.


referring to his prooimia as a λόγος (contrasted at one point with ὑπόθεσις, the business of the treatise. He is not loth to use litotes, and the prooimion is full of alliteration and word-play.49 He punctuates his sentences with ἀτεχνώς and Atticizing particles: οἷς, μέντοι, γε ὅμως, οὕκων, ποῦ,50 and the rare γε μήν.51 He swears affectionately 'By Jove!' (νὴ Δία)!52 An effect of 'sweetness' (γλυκύτης) is achieved through the use of devices recommended by Hermogenes to create that style: mythological allusions, stories, exotic facts, the attribution of anthropomorphic characteristics to animals, and quotations of verse.53 The body of the treatise, consisting as it does in a paraphrase into higher style, also has something of the character of a rhetorical exercise.

In the first prooimion Hierocles combines his dedication with the topos of modesty, explaining that his treatise is a response to Bassus’ request. After quoting Euripides and Pindar in the course of presenting his apologies both for neglecting his business and for his boldness in writing, he states the subject of the book. An invocation to the appropriate gods follows.54

Come now, since this seems to you to be ‘more important than my business’ (as Pindar once said), I will, following your command, begin to speak: on one hand, about which diseases are wont to aict horses, and, on the other, about the cures for each disease. Let Poseidon Hippios and the saviour of the human race Asclepius (who cares about horses too, of course) be called upon to aid in our discussion! It is likewise fitting to mention Cheiron the Centaur, and those who spent time in Pelion: to appeal to you in writing this treatise is like calling ‘a horse into a meadow’, if one may take the proverb in its original sense.
He then further defines the scope of the work by paraleipsis, with allusion to the learning of his friend, and to illustrious writers on the subject from the Classical past. Hierocles declines to expound on the subjects with which, he says, his friend Bassus is already familiar: the nature of the horse, breeding, feeding, and upkeep. This list of subjects for discussion apropos of horses may have been drawn from Aristophanes of Byzantium or one of the agricultural manuals that Hierocles cites. Another topic that will not be covered is schooling: Hierocles’ phrasing suggests that he is familiar with Xenophon—though this is a ‘first page’ quotation. Hierocles also refers to Simon’s work in a way that suggests that he simply knows of it through Xenophon:

It would have been more interesting, of course, had Hierocles discussed his principal source, the treatise of Apsyrtus, or the other veterinary works he used; but mention of these more recent, technical authors would not have been appropriate in a piece of classicizing rhetoric. After mentioning the work of Simon and Xenophon, he seems to refer to the title of his own treatise in the phrase τὰ περὶ τῆς τῶν ἵππων θεραπείας καιμιώτατα. A synkrisis of human and veterinary medicine includes a smattering of medical theory and

Xenophon

συνεγραφεὶς μὲν οὖν καὶ Σῖμων περὶ ἵππων. ὥσπερ καὶ τὸν κατὰ τὸ Ἑλευσινόν Ἀθήνης ἵππων γαλακτίων ἀνέθηκε καὶ ἐν τῷ βάθρῳ τὰ έαυτοῦ ἑργα εξετάσσωμεν.

Hierocles

τὰ τὸ Σίμωνος ἀκούοντες τοῦ παλαιοῦ τούτος τῆς ἱππαίας αὐτοῦ τρόπους ἐν τῷ παρ᾽ Ἀθηναίων Ἑλευσινῶν γαράζαντος καὶ σημάζαντος ἐν τοῖς κυμάσιαι.

Simon, too, has written on horsemanship, he who dedicated the bronze horse at the Eleusinion in Athens and had his deeds depicted in relief on the base. You have heard of the works of the venerable Simon, who inscribed and explained his ways of horsemanship in the figures at the Eleusinion of the Athenians.

55 Cf. Aristophanes in the Bestiary of Constantine VII, ed. Lambros, II.1, also Varro, RR II.1.11–27.
56 Apsyrtus mentions Simon and Xenophon (B115.1, CHG I p. 372), but to Hierocles’ credit he seems to be quoting directly rather than via Aps.: ὅπως ἐν τις γνωσταῖσι τῶν ἄριστων ἵππων καὶ παρασκευασάσεις ἑλ ὀνομασίας καὶ διαγράφαλοι ν ἀλλά ψάλλο καθάρων ἰμπίσθηκα, καὶ τῶν ἀναβάτων μή χαλεποῦ εἴγερκεῖν, καὶ ταῖς τῶν ἐπιθυμήσεων ὑμᾶς ὑπακούον πρὸς ἂπαν, ἀβολοῦ εἰν. Parallels in Xenophon: choosing a horse: I–III; γαλειότητα πρὸς ἀνθρώπους ἀναγράφηκε ... τῶν χαλινόπεζων καὶ ἀναβάσεων ἀποκώλυες Η.Ι.Ι.8; ὀμαί, e.g. ποιμνίμος, κλαμίμος IX.10.
57 De τε εὐμ. I.1
58 B11.11, CHG I p. 4.
59 Ἀρησκλέους περὶ ἵππων θεραπείας is the lemma of the second prooimion in B, and (slightly distorted as ἰππων θεραπείας) the title of the second book of the reconstitution of Hierocles in R. The term καιριώτατα appears in the preface of Oribasius (ed. Raeder, I. 1, p. 4.).
of ethnography, both human and equine. Hierocles explains that veterinary science is not as highly developed as human medicine, but his superficial comparison of the two disciplines does not provide us with any insight about their relation to one another. He refers to doctors with dramatic hyperbaton and a cliché as ‘those who have with great precision gathered treatments for the bodies of humans, the children of doctors’ (οἱ μὲν οὖν τὰς ἐπὶ τὸις τῶν ἰατρῶν σύμμαχοι θεραπείας ἀκριβέστερον συνταξόμενοι παιδείς ἰατρῶν), and similarly uses the circumlocution ‘those who pay attention to the healing of horses’ (οἱ δὲ περὶ τῶν ἵππων ἰασίων εἰσενεγκάμενοι σπουδήν) instead of the technical term ἰππιατροῖ. Doctors who treat humans adjust their therapies to compensate for the varying proportions of humours in, for example, Scythians or Ethiopians. But the veterinary art, explains Hierocles, is less refined, and treatments are not adjusted according to the patient’s race. This is an excuse for Hierocles to name some breeds of horses: Arcadian, Cyrenaic, Iberian, Cappadocian, Thessalian, Moorish, and Nesaian. These names appear to have been selected from the longer catalogue transmitted in the Bestiary of Constantine VII under Aelian’s name, but attributed by Haupt to Timothy of Gaza. Timothy is not an original writer: the catalogue of breeds, which appears earlier in the Cynegetica of ps.-Oppian, must have circulated in florilegia or reference-books, as did for example the list of animal noises. The same catalogue of horse-breeds, but in alphabetical order, appears in the C recension of the Hippiatrica. We may note that the semi-legendary Persians of Nisa, to whom Hierocles gives special emphasis (οἱ βασιλεῖ τῶν Περσῶν περιπολούμενοι οὐ Νησαίοι) were a favourite topos. The first prooimion ends with a few facts about the lifespan of the horse and reference to famous instances of long-lived animals. Hierocles concludes

60 B.1.12, CHG I pp. 4–5
61 Lambros, II. 588–609.
63 CHG II pp. 121–4.
64 B.1.12, CHG I p. 5. The breed is first mentioned by Herodotus, 3.106 and 7.40; later by Philostratus, Vita Apollonii 1.31; Phlegon of Tralles 3.11; Stephanus Byzantius, s.v. Νησαίων πεδίων; Souda, s.v. ἵππος Νησαίος Adler, 1.578. Still proverbial in the 10th c.: Theodore of Cyzicus includes a Νησαίων ἵππος among a list of legendary treasures in a letter addressed to Constantine VII; I. Darrouzès, Epistoliers byzantins du Xe siècle (Paris, 1960), VIII.6, line 8.
65 B.1.13–14, CHG I pp. 5–6. Similar rhetorical devices in, e.g. Agathias’ prooimion to his History: a friend exhorted him to write, a protest that his usual occupation is different, quotations from the classics, ethnography, mention of the sacred games, definition of the subject at hand (history) through synkrisis with a related discipline (political science), reference to predecessors in the same field. R. Keydell (ed.), Agathiae Myrinaei historiarum libri quinque (Berlin, 1967), proem. 1–13.
Hierocles

with the explanation that the treatise will consist of descriptions of symptoms and prescriptions for treatment, and a reference to the cliched observation that animals are unable to describe their ailments in words.\(^66\)

The second prooimion begins with a maxim from Hesiod and a somewhat incongruous characterization of the second volume of the veterinary manual as an antistrophe in the manner of the lyric poets (αντιστροφον ατεχνώς τίνα κατά τοὺς τῶν μελῶν παιητάς ἀποτείνον βιβλίον ταυτηρὶ δευτέραν). Another reference to the title of the treatise may be embedded in the phrase ‘treatise on the healing of horses’ (τὸ περὶ τῆς ἰσπον βεραπείας σύγγραμμα). An encomium of the horse is followed with a hodgepodge of anecdotes illustrating the physical and moral characteristics of the animal.\(^67\)

tούτο γάρ, οὕτως, κάλλιστον καὶ πανταχῇ περιποίδαστον ζώον ἀνθρώπως ἱππός ἃν εἰκόνα εἶναι νομίζοιο. οὐδεποροῦντι μὲν ἐπελαφρών τῷ δεσπότῃ τοῖς πόνοις, πορεύοντι δὲ σεμνοτέραν ἀποφαίνοντι καὶ περιβλεπτοτέραν τὴν πομπήν, ἐν γε μήν τοῖς κατὰ πόλεμον ἀγώνισαν συγκινδυνεύοντι καὶ μετέχον τῶν ἔργων, ὡς ἔλειν μὲν τοὺς φεύγοντας τῶν πολέμων, διαδιάσασθαι δὲ τῶν φιλίων τοὺς συστηρίσας σεβαμένους. διότερ εἰκόνα πρὸς μὲν ἀνθρώπων ὀὕτως τετίμηται, ὡς Ὀλυμπιάδα τε καὶ Πυθική καὶ πανταγωγὸς τῶν ἀγώνων ὕππος ὧσπερ ἀνήραι, τάχους ὄμηλης προκεῖσθαι γέρα. παρὰ δὲ τοῖς θεοὶς τοσαύτης ἦξισται σπουδής, ὡς μὴ μόνον ὑποξεύσασθαι τοῖς θεοῖς αὐτῶν ἄρμασιν, ἀλλ’ ἥξις καὶ τῶν ἀστρῶν κατ’ οὐρανον αὐτετάχθαι χορῷ.

οὐκ ἀπαντεῖς μὲν οὐν ὡς ἄν τιν ὅς ἐξειναὶ εἰναι πρὸς τὴν τοῦ συγγράμματος πρόθεσιν τὸ καὶ τῶν ὑπὸ τοῦ πολισσόφου Ἀριστοτέλειος ἵστορηθέντων μνήμην ἐν μέρει ποιήσασθαι, ὡς οὐ στέρη ἱππός ἄλλα πιωμένη ἔχει, πιεψεῖμα τῇ τρίλοβῳ οὐκ ἔχουσα προσπεφυκών τῇ χολῆς, κεῖθαι γάρ αὐτὴν παρὰ τὸ ἐντερόν πολλῆν καὶ δυσώδη, καὶ ἔτι πρὸς τούτος ὡς ἱππόν καὶ ἡμίονον ἐστίν, ἐν ὁστείν εὐρέθη ἐν τῇ καρδίᾳ, καίτοι πολλοὶ τὰ τοιαῦτα ἵγνον, ὡσπερ Μίκων τῷ πολαίῳ, ὃς ῥετο ἱπποῦ καὶ τὸ κάτω βλέϕαρον ἔχειν τρίχας, ἀς καλοῦσιν Ἐλλήνες βλεφαρίδας, καθάπεται γονὸν αὐτῶν Σίμων τὴν ἄγοναι ταύτην αἰτίώμενος.

The horse truly ought, I believe, to be considered the finest animal and in every way the most desirable to mankind. He lightens the labours of his master while on the road; on parade he makes the procession more solemn and more splendid; while in contests of war he shares in the danger and takes part in the work, showing mercy to the fleeing enemy, and preserving those of the allies who seek safety. Therefore he is fittingly honoured by mankind, so that at the Olympic and Pythian games and all the games everywhere, there is glory to be won in contests of speed for horses just as for men. And by the gods the horse is so esteemed that not only are horses yoked to the divine chariots, but they are even arrayed in the heavens, amidst the chorus of stars.


\(^{67}\) B59, CHG I pp. 248–50.
It might not be considered out of place to mention as an introduction to the treatise some of the things that have been recounted by the philosopher Aristotle, such as: the horse does not have suet, but soft fat; and its three-lobed lung is not attached to the gall-bladder, for the latter (abundant and malodorous) is located by the gut; furthermore, a bone has been found in the heart of horses and mules. Indeed, these things are unknown to many people, like old Micon, who thought that the horse’s lower eyelid had on it those hairs which the Greeks call ‘eyelashes’. And Simon rebuked him, criticizing such ignorance.

Encomia of animals were standard rhetorical progymnasmata; indeed, Hierocles’ description of the horse as an ornament to parades and a companion in war are echoed in a fragmentary text labelled εγκόμιον ἐπιπον preserved on a papyrus of the second/third century AD, and identified by its editor as an autograph exercise. Hermogenes, in his description of the encomium, writes that

εγκόμιον ἐστιν ἐκθεσις τῶν προσώπων ἐνιαῖων... εγκωμιάζομεν δὲ καὶ πράγματα οἷον δικαιοσύνην καὶ ἁλογα ξωα οἷον ἐπιπον...

paraplihìsioi kai tā ἁλογα ξωα kattā tō ἕχωρον. καὶ γὰρ ἀπὸ τοῦ τόπου, ἐν ὧν γίνεται, εγκωμιάσεις. εἰς δὲ τήν τοῦ γένους χώραν ἔρεις, τίνι θεῶν ἀνάκειται, οἷον ἡ γλαυξ τῇ Ἀθηνῇ, ὁ ἐπιπος τῷ Ποσειδώνῳ. ὁμοίως δὲ ἔρεις, πῶς τρέφεται, παταπῶν τήν ψυχήν, παταπῶν τὸ σώμα, τίνα ἔργα ἔχει, ποῖο χρήσιμα, πόσος ὁ χρόνος τοῦ βίου...

Encomium is an exposition of virtuous attributes... We praise with encomia things such as justice and unreasoning animals such as the horse...

And unreasoning animals similarly, as far as possible. And you will praise them from the places in which they live. And you will say with respect to the species, to which gods it is peculiar, such as the owl to Athena, or the horse to Poseidon. Similarly you will say how it is nourished, what its spirit is like, what its body is like, what work it performs, where it is useful, what is the span of its life...

Indeed, in the two prooimia, which may be considered as one piece of writing, Hierocles covers all the topics prescribed above by Hermogenes.

Hierocles’ references to classical authors impressed the editors of the Teubner text of the Hippiatrica, who commended Hierocles for his

68 Cf. the topoi in the encomium of the ox in Columella VI, preface 6–7: references to ancient history and customs, to Athens and Attica and the association of the ox with the gods, the constellation that bears its name. On the constellation Hippos, see e.g. Aratus 205–24 and the comments of Kidd, op. cit. pp. 258–9.
69 P. Oxy. LXVIII. 4647. The text is fragmentary, but the similarity to Hierocles is nevertheless clear in ποιμένας κορμ[...] καὶ πανθήρ[...] ἐπος δ[...] ἀνθρώπους καὶ συντρατεύεις καὶ συνοπλέβεις [...] (fr. 2, 11. 3–6). I thank Prof. G. L. Huxley for bringing this text to my attention.
'ansehnliche Belesenheit'. But the literary culture displayed in Hierocles’ work represents no profound knowledge of the classics, but rather the ‘curiosité de l’érudit antique’ characterized by Marrou as ‘une collection de fiches ... l’esprit qui l’anime est celui d’un collectionneur, non d’un savant’. His allusions attest only to a conventional paideia, and some research in the sort of florilegia beloved of writers of the Second Sophistic. He admits himself that he has quarried titbits of animal lore from the Epitome by Aristophanes of Byzantium of Aristotle’s biological treatises. His quotations—even if he had actually read the texts from which they are drawn—figure in the collections of the paroemiographers. And the old stories he repeats are told by many other writers; they too may be drawn from a literary miscellany.

The poets whom Hierocles cites, Euripides, Pindar, and Hesiod, are among the most commonly quoted classical authors in Late Antiquity. And the verses that he quotes are quoted by many others too. This phenomenon has been identified in better writers than Hierocles: Lucian’s quotations, for example, tend to be first lines, endings, double-borrowings via other authors, or simply oft-repeated ‘tags’. Even though Hierocles’ allusions are to lines his readers may have recognized, he names the poets, which is not particularly subtle, unless he is presenting the verses as γνώμαι. The quotations all fall into the category of ‘appropriate for beginnings’. He does, however, intentionally misquote (κατὰ παραμβιάν), weaving verses into his sentences—which is more sophisticated than verbatim citation—as in his adaptation of Euripides, Bacchae 66. Following the pattern observed in Lucian, the words quoted

---

71 Oder, ‘Beiträge III’, 34; Oder–Hoppe, preface to CHG II, p. xii: ‘iurisconsultum liberalibus litteris non mediocriter tinctum’.
73 N. Zeegers-Vander Vorst, Les Citations des poètes grecs chez les apologistes grecs du IIe siècle (Louvain, 1972), 31–2; on sources direct and indirect, p. 45.
75 On periplóklês tōn poimēmatōn ἐν λόγῳ, see Hermogenes, peri γλυκότητος, ed. Rabe, pp. 336 ff.; also peri χρήσεως ἑπῶν ἐν πεζῷ λόγῳ (= Περὶ μεθὸν δευτήτητος 30), pp. 447–8. Also R. Seippel, De veterum scriptorum ratione auctores laudandi, diss. (Greifswald, 1903).
76 Ἀοίδας ἑπά γάς
ἱερὸν Τμίωδὸν ἀραιίσθαι θοάξω
Βρομίῳ πάνω ήκών,
καὶμᾶτῳ τ’ εὐκάματον, Βάκχoς
χιον εὐδομένα
by Hierocles are from the first choral ode of the play; Aelian and Plutarch cite the phrase as well. Hierocles also quotes Pindar’s *Isthmian* I.2, a near-first line, ‘Ἄσχολας ὑπέρτερον’, quoted by Plato, Plutarch, and others, was obviously a well-known phrase that circulated independently of its context.

He begins the preface to his second book with a reference to the proverb derived from Hesiod, *Op.* 40, πλέον ἦμιαν παντός. Here Hierocles treats the verse as a gnome, giving an interpretation of its implication:

‘Ἡσίοδος μὲν ἦμιαν τοῦ παντός φήσαι εὐαὶ τὴν ἀρχήν, προτρέπων, ὀμίας, καὶ διὰ τούτου τῶν ἀρίστων ἐπιτηθεμάτων ἀπεσθαί, ὡς τοὺς γε ἀρξαμένους ἴδη προηγουμένου τοῦ σπουδάσματος.’

Hesiod says ‘well begun is half done’, in this way encouraging one, I believe, to undertake the most noble endeavours, as though the task is already accomplished by those who have made a start.

In his apostrophe to Cheiron, Hierocles strings together two proverbial phrases, one of which alludes to the centaur’s appearance:

εὖ τελέσας ἄριστον παρακαλέσαι, εἶ τι δεῖ τὴν παρομίαν ἄφ᾽ Ἐστίας λαβεῖν, πρὸς τούτῳ τοῦ λόγου τὴν γραφήν.

To appeal to you in writing this treatise is like calling a horse into a meadow, if one may take the proverb in its original sense.

The reference to a horse in a meadow (‘like a fish to water’) was already proverbial, in a slightly different form, in Plato’s time. The form that Hierocles quotes continued to be used in the tenth century and in the Renaissance; it was considered to be derived from *Iliad* 5.222.80 Ἄφ᾽ Ἐστίας is also a
proverb, meaning ‘from the beginning’ since sacrifices were made first to Hestia, most senior of the Olympians.81

For facts about the anatomy and lifespan of the horse, Hierocles used the Epitome by Aristophanes of Byzantium of Aristotle’s biological works. Aristophanes’ text survives only in the form of excerpts in a Byzantine compilation, the Bestiary of Constantine VIII;82 but it was evidently a very popular handbook in Late Antiquity, favoured by rhetorical writers as a source of animal lore. Aelian used it extensively for his Natura animalium, as almost certainly did Basil of Caesarea for his Homilies on the Hexaëmeron; while Artemidorus and John Lydus quote Aristophanes by name.83 Hierocles makes no secret of the fact that he has Aristotle’s information at second hand, but cites the Epitome in full, naming both the grammarian and the philosopher as authorities:

Aristophanes of Byzantium, who made an epitome of [texts] on the nature of animals from the works of Aristotle the philosopher, says that the horse can live for fifty years and more.

After this initial double citation, Hierocles cites Aristophanes or Aristotle alone. Much of the information is presented in Hierocles’ prefaces as para
doxa: horses can live to the age of fifty, mares can be bred until thirty, the horse has fat rather than suet, horses and mules have a bone in their heart. The description of a three-lobed lung somehow associated with the gall-bladder is not in the text of Aristophanes, and (if it is not the result of scribal error) speaks for a certain lack of medical understanding on Hierocles’ part.85

---

81. Apostolius IV. 61 (CPG II p. 321), Gregory of Cyprus I. 1. 63 (CPG II p. 62); Macarius II. 67 (CPG II p. 149); Zenobius I. 40, CPG I p. 14; Souda s.v. (Adler, A 4590); Plato, Cratylus 401b–d and Euthyphro 3a.

82. Paris. suppl. gr. 495 (containing the first part of the compilation, removed from Athos by Mynas Minoiades) and Dionysiou 180 (second part of the compilation), ed. S. Lambros, Excerptorum Constantini de natura animalium libri duo (Supplementum Aristotelicum, I.1; Berlin 1885). There is one papyrus fragment containing part of the chapter on the dog: A. Roselli, ‘Un frammento dell’ Epitome περὶ ζῴων di Aristofane di Bizanzio. P. Lit. Lond. 164’, ZPE 33 (1979), 13–16.


The tale of the stallion who committed suicide after being deceived into incestuous relations with his dam is in Aristophanes of Byzantium (from Aristotle), but also in Varro, Pliny, Aelian, ps.-Oppian, and Timothy of Gaza. Morals drawn from the animal world were a favourite commonplace of the Second Sophistic: Hierocles repeats the story as testimony, he tells us, to the 'sagacity and self-control' (σοφίας καὶ σωφροσύνης) of the horse.

Hierocles repeats another story (which he attributes to Tarantinus) as an illustration of the advanced age which a horse may attain: an eighty-year-old mule, brought to work by the Athenians who were building 'the temple of Zeus near the Enneakrounos' (τὸν τοῦ Διὸς νεῶν κατασκευάζωντα Ἀθηναίους Ἐννεακρούνων πλησίον), that is, the Olympieion, was appointed leader of the teams and permitted to feed at will from the stalls of the grain-sellers. This anecdote was adduced by Leake as evidence for the location of the Peisistratid fountain-house, evidence rejected by Judeich, who points out that the anecdote is related by other ancient writers in the context of the construction of the Parthenon. Nevertheless, although Hierocles has garbled the story, in the location of the Enneakrounos he agrees with Thucydides, who locates the temple near the Ilissos river; and it is their testimony, rather than that of Pausanias (who places the fountain-house north of the Acropolis), that is now accepted.

Another story is included in Hierocles’ list of the anatomical peculiarities of the horse. Most people are ignorant, he says, of these peculiarities: even the great painter Micon (whose work was displayed in the Painted Stoa) was criticized by Simon (that is, the author of the work on horsemanship) for depicting a horse with lashes on its lower eyelids. In relating this anecdote...
Hierocles betrays his Roman point of view (or that of his source) by the phrase ‘which the Greeks call eyelashes’ (ἀξιαλούσιν Ἑλληνες βλεφαρίδας). He may have used a compilation along the lines of the Onomasticon of Pollux, in which the tale appears under the heading of ‘parts of the eye’ (μέρη ὅφθαλμον) rather than in the section on horses. The tale is told in Aelian as well.

Is it possible to identify any one of these authors as Hierocles’ source? Hierocles’ retellings of the stories are slightly different from the ones in Aelian and Timothy: Whereas Hierocles tells the story as an illustration of the longevity of equids, Aelian emphasizes the ‘diligence and eagerness to work’ (φιλότονον καὶ ἔθελουργὸν) of the mule, comparing it to an experienced craftsman and to a retired athlete fed at state expense at the Prytaneion. Hierocles probably found the stories in another miscellany.

All of the elements out of which Hierocles’ prefaces are constructed are also used by other Atticizing writers: Aelian, Plutarch, ps.-Oppian, Timothy of Gaza. Although none of these writers seems to be identifiable as Hierocles’ immediate source, they nevertheless provide the literary context to which his prooimia belong. Some stories may have been drawn from florilegia along the line of Pamphilus’ work as reconstructed by Wellmann, or the Stoic text postulated by Dickerman as the ultimate source of references in many authors to the moral qualities of the bee, the spider, the swallow, and the ant; however, it seems that these quotations and stories were simply part of common literary culture in Late Antiquity.

THE BODY OF THE TREATISE AND ITS SOURCES

Hierocles uses a different set of sources for the prooimia and for the body of his treatise. He seems only to have used written sources: if Hierocles himself had any experience in the stables, it is well concealed.

92 BS9.6, CHG I p. 249.
93 Pollux II. 69; Aelian, NA IV.50 = Bestiary, II. 617 says that the story was told both of Micon and of Apelles.
94 On handbooks as sources of material found in many authors, see Stemplinger, Das Plagiat, 222; on the eyelash anecdote, see M. Wellmann, ‘Pamphilos’, Hermes, 51 (1916), 49.
95 Especially Aelian (the same quotations from Euripides and Hesiod, the stories of Micon, of the mule and the stallion) and Timothy (references to the bone in the heart, lifespan, breeds; the stories of the mule and the stallion); Pliny also tells the two stories.
The principal source of Hierocles' treatise is the letter collection of Apsyrtus. Hierocles also names sources which are otherwise unknown: Hieronymus the Libyan,\(^98\) Stratonicus,\(^99\) Cleomenes the Libyan,\(^100\) and Gregorius.\(^101\) One recipe is attributed to Hippasius of Elis.\(^102\) Tarantinus is cited once again in the body of the text.\(^103\) Although Theomnastes is not named, four excerpts attributed to Hierocles are very close to passages in Theomnastes. One is inclined to attribute this similarity to shared dependence on Apsyrtus or another source, although there are echoes of phrases typical of Theomnastes in Hierocles' text.\(^104\)

When Hierocles presents the opinions of Apsyrtus and these other authorities, he scrupulously gives them credit in a manner reminiscent of citations in legal literature. One may draw a parallel between the verbs he uses when citing others and those used by the Latin jurists: \(\text{δοκεῖ} = \text{placet}; \text{δοκιμάζει} / \text{ἀποδοκιμάζει} = \text{probat/improbat}; \text{φησί} = \text{ait}.\)\(^105\) This is also the vocabulary of 'doxography', used to report the theories of ancient authorities.\(^106\)

In contrast to Apsyrtus and Theomnastes, who constantly refer to their own experience, Hierocles creates a distance between himself and the subject of his book, referring his reader to the authority of experts without pronouncing judgement on their opinions. This detachment from the theories and controversies of veterinary science is evident in instances where Apsyrtus praises or criticizes his sources, and Hierocles contents himself with reproducing the polemic in indirect discourse: 'Even though phlebotomy is approved by Eumelus, Apsyrtus rejects it' (\(\text{ei γὰρ καὶ Εὐμελὸς δοκεῖ φλεβοτομία, ἀλλὰ Ἀφυρτος ἀποδοκιμάζει}.\))\(^107\) He sets himself apart from 'experienced people' (\(\text{ἐμπειροί}: \text{The experienced call a certain disease marmaron}.\)\(^108\)

\(^98\) M40 = B2.12, CHG I p. 19; B20.6, CHG I p. 98; B26.1, CHG I p. 125; B26.9, CHG I p. 128; B34.7, CHG I p. 181; B76.1, CHG I p. 292; B77.1, CHG I p. 293.

\(^99\) B1.18, CHG I p. 7; B19.4, CHG I p. 95; M642 = B75.5, CHG I p. 288; M705 = B87.2, CHG I p. 314.

\(^100\) B23.1, CHG I pp. 120–1; M457 = B27.2, CHG I p. 140; B30.2, CHG I pp. 150–1.

\(^101\) M483 = B22.26, CHG I p. 111 and M1219 (indicated in the \(\piίναξ\) but lost from the end of the MS) = B130.183, CHG I p. 435.

\(^102\) M1148 = B130.160, CHG I pp. 430–1, recommended for cows as well.

\(^103\) B87.2, CHG I p. 314.

\(^104\) e.g. the guarantee ... \(\chiρῶ \chiακαστάφ φαρμάκων\) in Theomn. is echoed by Hierocles at the end of the recipe as: \(\text{ἐστι δὲ τῶν κανονικῶν καταχρησάτων ἄριστων}.\) Theomn. M255, CHG I p. 138; Hi, M955 = B96.20 f., CHG I p. 333. Cf. also Hi, M596, CHG II p. 75; Theomn. M585 = B66.3, CHG I pp. 259–60; Theomn. M100 = B97.8, CHG I p. 338, Hi, B97.5–6, CHG I p. 336.

\(^105\) On terminology used in quotations in legal writings, see A. M. Honoré, \textit{Gaius}, pp. xiv ff. and \textit{Tabulae laudatoriae}.

\(^106\) See Runia, 'What is doxography?' \(^107\) e.g. B10.5, CHG I p. 58.

\(^108\) B53.2, CHG I p. 238.
A similar detachment from veterinary practices is illustrated by Hierocles’ instructions for removing impacted faeces that are a symptom of ‘dry cholera’ (χολέρα ξηρά): whereas Eumelus and Apsyrtus recommend removing the obstruction by hand, Hierocles is content to let someone else perform the procedure: ‘and a slave, inserting his hand into the rectum, should remove the dung’ (καὶ παιδαρίου διὰ τῆς ἐδρας καθέντος τὴν χεῖρα ἐκκαθάραι τὰ κόπρια). In Hierocles’ chapter on leeches, Apsyrtus’ instructions to a decurion to be aware of the menace of leeches while the herd are being watered are altered:

Aps. ὀτι ποτιζομένων τῶν ἁγελῶν μάλιστα δεὶ παρατήρησιν ἐπὶ τοῖς ὀδαῖς ποιεῖσθαι φυλασσομένων τὰς βδέλλας. (Note that when the herds are being watered it is necessary to pay attention to keeping away leeches in the water.)

Hi. προσήκει δὲ καὶ τοῖς ταῖς ἁγέλαις ἐδεστηκότας προσέχειν τοῖς ὀδαῖς φυλασσομένων τὰς βδέλλας.110 (It is incumbent upon those who oversee the herds to take care that leeches are kept away from the water.)

A description of an incurable disease refers to a third party being blamed:

καλὸν δὲ γεγράθαι τὰ σημεῖα, ἵνα μῆτις τῶν νευριτικῶν δόξας ἑτέρῳ πάθει περιπεπωκέναι, καὶ μὴ δυνηθεῖσι θεραπεύσαι, καταγγειλθῇ.111

It is good that the symptoms be written out, lest anyone encounter another disease believing it to be neuritikos, and not being able to treat it, be judged unfavourably.

Hierocles and Apsyrtus

In Apsyrtus, Hierocles chose an authority whose work was evidently available to and highly esteemed by writers in different parts of the empire—the compiler of the Mulomedicina Chironis, Pelagonius, Theomnestus. Moreover, letter collections were a favourite genre of the Second Sophistic: Aelian and Alciphron, to mention only two examples, composed fictitious letters attributed to farmers, fishermen, and other unsophisticated characters. Hierocles might also have found Apsyrtus’ work attractive as a sort of extended ethopoia in the voice of a horse-doctor. But the setting of Apsyrtus’ letters, in


111 B83.2, CHG I p. 305; cf. Aps. M1 (printed as B1.2), CHG I p. 1, for a similar caution in the second person.

112 P. Rosenmeyer, Ancient Epistolary Fictions, 255 ff.
the army-camps and on the Danube frontier, and their references to Roman soldiers and functionaries were obviously distasteful to Hierocles, who removed all of Apsyrtus’ references to military life. He does not refer, in what is preserved of the Greek text, to the form of Apsyrtus’ text, nor to his reason for using it. Only once does Hierocles criticize a source—not for its content, but for its organization:

Συνέχει τινες τόν περὶ τῶν ὑπὸ ἐχέων ἢ σκορπίων ἢ φαλαγγίων ἢ μυγαλῶν δηχθέντων λόγων, ἤμεις δὲ καθ’ ἐκαστὸν εὐκρανῶς ἔροιμεν.¹¹³

Some people confused their accounts of horses bitten by snakes, scorpions, beetles, and shrew-mice: but we shall speak of each distinctly.

Hierocles’ source for the chapter on snakebite and scorpion- and spider-stings is Apsyrtus; but since excerpts from both texts are ‘shuffled’ together in the compilation it is difficult to tell whether indeed Hierocles’ presentation was clearer. References to other writers in remedies for bites and stings,¹¹⁴ as well as the presence of material not in Apsyrtus (remedies for horses stung by a stingray (τρυγών θαλάσσια), poisoned by wolfsbane (μυοφόνων), or hemlock (κώνειον), or bitten by caterpillars (κάμπαι)),¹¹⁵ suggest, moreover, that Hierocles used another source in the section on toxicology. Hierocles excuses his abbreviated discussion of castration by saying that Apsyrtus’ instructions will suffice:

ὅπως μὲν δεὶ ἐκτέμνειν ἵππον ἀποχρῶντος Ἀψυρτος διδάσκει, τοσοῦτον δὲ ἐνταῦθα εἶπεν ἄξιον . . .¹¹⁶

Apsyrtus gives sufficient instruction about how to geld a horse. It is, however, worth saying this much here . . .

He thus seems to imply that his own work is not intended to supplant that of Apsyrtus. But what are the differences between the two? Bearing in mind that much of Hierocles’ text is preserved only in the B recension, which on the whole has undergone a certain amount of reworking, we may make a few observations. First, the form of the treatise is entirely different: Hierocles dispensed with Apsyrtus’ device of the epistolary form, and organized his treatise into two books composed of short chapters on various maladies. Having omitted Apsyrtus’ epistolary greetings, as well as the useful element of erotapokrisis, Hierocles simply adapts the disclosure formula of the letters to introduce the subject of each chapter:

¹¹³ B86.2, CHG I p. 308.
¹¹⁴ Tarantinus and Stratonicus are quoted, in addition to Apsyrtus, on shrew-mouse bites, M705 = B97.2, CHG I p. 314.
¹¹⁵ B91, 92, 93, CHG I p. 322; M706 = B87.9, CHG I p. 317.
¹¹⁶ B99.4, CHG I p. 342.
It is useful to go through in detail and completely the subject of laminitis.

It is worth it to go through in detail and completely the subject of those who have ruptured one of the internal organs.

When a horse is suffering from colic, it is worth paying attention to the symptoms.

He occasionally indicates where he has abbreviated Apsyrtus' treatment of a subject:

In order that we not appear ignorant about any of these things, we shall speak briefly about gestation and about the destruction of the embryo.

Hierocles omits a certain amount of content: all Apsyrtus' etymologies of medical terms, anatomical discussions, references to travel or military life, as well as several entire chapters about cows and mules. Apsyrtus' references to the Sarmatians are retained—exotic barbarians being an acceptable feature of classicizing prose. He does not repeat Apsyrtus' prescriptions of popular magic, with their appeals to strange gods, though his text contains two incantations invoking characters from classical mythology. He adds to Apsyrtus' text from other authors; and although he cites the names of his sources, he reworks their texts so that the whole has a uniform style, unlike, for example, Theomnestrus, whose quotations from Agathotychus, Nephon, and others appear as blocks of text with separate lemmata, apparently copied verbatim from the sources.

Apsyrtus' text appears in the *Hippiatrica* conveniently justaposed with Hierocles' rendition of it: the two texts provide an interesting example of the same material presented in two different styles. Unfortunately most
of the longer passages in which Hierocles follows Apsyrtus are only known from the B recension, so it is impossible to gauge precisely how much Apsyrtus’ words have been altered by Hierocles, and how much by the overall rewriting of the text of B. Those passages present in M permit more accurate comparison. The accounts of ear infections in the two authors show that Hierocles stays close to his source:\(^{127}\)

Here we see that Hierocles repeats Apsyrtus’ instructions, but with passive imperatives, and eliminates two unusual words used by Apsyrtus in a technical sense, διπλοῖς ‘double mantle’ and κλαμβών ‘cropped or docked’. Similarly faithful renderings of Apsyrtus, with some loss of detail, may be seen in Hierocles’ discussions of diarrhoea (διάρροια),\(^{128}\) vomiting through the nose and mouth (χορδασφυός),\(^{129}\) and burns from lime (ἀσβεστός, κονία).\(^{130}\) The last illustrates the close resemblance of the two texts:

\(^{127}\) Aps. M115 = B17.1; Hi. M118 = B17.2, CHG I p. 91.


\(^{130}\) Aps. M684 = B65.1; Hi. M1162 = B65.2, CHG I p. 258.
Hierocles has shortened the passage, eliminating the mention of the horse and of its legs, as well as the technical terms /C"˛˛/C"3/C"˛˛Æ/C"37/C"39/C"˛" and /ÆP/C"˛˛C"39/C"36/C"0/C"˛˛C"39ı. He has also replaced the Latin loanword axungia with the equivalent /C"˛3/C"˛˛C"˘Ææ. In the instructions for treatment, he has replaced the in W nitive with a passive imperative. Yet he has not changed the text substantially, even replicating Apsyrtus’ aside ‘if you like’ to the reader.

Word substitutions effected in other places by Hierocles include: ρόδθενες ‘nostrils’ changed to μυκτήρ,131 οὐρά ‘tail’ becomes κέρκος but not consistently;132 Apsyrtus’ μαγαδαλα ‘pellets’ is replaced with μάζα,133 σισύραις ‘cloths’ with περιβολαίον,134 ῥαφίς ‘needle’ with βελόνη, the last in accordance with the recommendation of the Atticists.135 The word for cartwheel-track in a traditional cure recommended by Apsyrtus ‘it is also said that it helps to smear it with earth from a wheel-track mixed with vinegar’ (λέγεται δὲ καὶ τὴν

---

Hierocles to ‘the dust beneath the grinding of the wheels’ τῶν κοινορτῶν ὀν ὁ τὸν ὑπὸ τῇ τρίπει τῶν προχῶν. In some instances we are at pains to discern the logic behind Hierocles’ substitutions. Τελαμών, ‘bandage’, a perfectly classical word, is changed to ἄμµα. In one passage, Hierocles changes ‘it has a thin and mucous diarrhoea’ τιλήσει λεπτὸν καὶ μυζώοδες to ‘if you see it excreting a mucous substance’ ἐὰν ἵδης μυζώοδες ἄποσπατοῦντα, yet in the next excerpt, Apsyrtus’ τιλήσει is retained. The intention may simply be to paraphrase. In fact sometimes Hierocles changes very little, especially—and sensibly—if he is conveying instructions for a complicated procedure.

Apsyrtus often uses analogy as a technical device to describe the symptoms of disease. Hesper may well have treated the analogies he encountered in Apsyrtus or other sources as ornamental literary similes: he sometimes retains them, sometimes omits them, and sometimes alters them. The description of the symptoms of ὀπισθότονονς as ‘sitting like a dog’ (ἀνακαθίζει ὁς κύων) is repeated, the image of the horse choking as though it has swallowed a bone is also used in a different context, possibly related to a passage in Eumelus. The comparison of a nasal polyp (πολύτους) to a sea-polyp or octopus (πολύτους) is omitted, and the comparison to a mulberry, derived from a different context in the same passage of Apsyrtus, is used in its place. A comparison of the swelling of strangles (παρωτίς) to a walnut is not found in Apsyrtus, but may have dropped out of his text, since it is unlikely that Hierocles added first-hand medical observations of his own. A vivid comparison of the movement of a feverish horse to the swaying of a drunk (κατά μικρὸν δὲ ἐπιβαίνει παραθέρεια τὸ σῶμα, ὥσπερ οἱ διὰ ποτῶν πλείονα ἀκροβολακεῖς καὶ σφαλλόμενοι) is not present in Apsyrtus either—could it have been added by Hierocles?

140 e.g. treatment of wounds Aps. M207 = B47.1, CHG I pp. 221–2; Hi. B47.3, CHG I pp. 222–3.
141 Cf. Lloyd, Polarity and Analogy, pp. 172 ff.
142 Aps. M316 = B34.1, CHG I p. 177; Hi. B34.6, CHG I p. 181. This symptom is typical of colic (The Merck Veterinary Manual, 166), in which context the analogy is usually used today.
OTHER SOURCES

What can be deduced from the other names and remedies quoted by Hierocles? They were evidently written sources: Hierocles writes 'if the neck of a beast of burden is abraded it is good to use the treatment that we found among those of Cleomenes the Libyan' (ἐὰν αὐχήν ὑποζυγίου παρατριφθῇ καὶ ἐπαρθῇ, καλὸν χρῆσθαι τῇ θεραπείᾳ, ἤν ἐν τοῖς Κλεομένους τοῦ Λίβος εὑρομεν). The plural probably refers to a collection of remedies, evidently not just for horses but for ὑποζύγια, other beasts of burden such as oxen or mules, as well. The remedy attributed to Hippasius is recommended for cows as well. Did he consult each text independently, or already gathered in some sort of collection? In the prooimion to book I of his treatise, Hierocles mentions that he has consulted Tarantinus and the agricultural work (Γεωργίκα) of the Quintilli; both, as we have seen, figure among Anatolius' sources. Hierocles' list of treatments for the bite of a shrew-mouse (μυγαλῆ) includes references both to Stratonicus and to Tarantinus. Were they independent, or part of the same compilation? Hierocles' manner of citation is ambiguous: he names the authors separately, rather than explaining their relation to one another in a double citation; for example, Στρατόνικος ἐν τοῖς Ταραντίνου. Hierocles' treatments for μᾶλις (glanders) are not based on Apsyrtus (for this reason they are included in M). One of them is attributed to Hieronymus; it presents an interesting parallel to Pelagonius:

Hierocles

Εἰ δὲ ὑποζυγίτις ἐγῇ, ὡς Ιερώνυμος ὁ Λίβος φαίνει, ἀναπνεύσα τὸ Βρόμιον αὐτῶν καὶ πυώδως καὶ βῆττε καὶ ἰσχυρώτερο καὶ ἒργαντ πιθανὸν. αὐτῷ τόρο τοὺς κόμπος, πυώδη τινά .

ἔγχυματίζειν δὲ διὰ στάματος χυλὸν πτιασάτης εἰς βρόμιον δηθημένης, καθεφθείσης εἰς αὐτῇ μάλιστα μὲν κυνὸς σκυλακίων καλῶς καθαριζόμενον καὶ μεκαδισιμένο, εἰ δὲ μή, ὀρνιθός .

Pelagonius

... toto corpore concidit, naribus reddit umida et aquam multam bibit, tussit duri-... corium eius male olet .

catulus etiam lactans occiditur eiusque interiora purgantur atque ita aqua ad dimidium decoquitur adiecto nitro... gallo etiam occiso idem hoc fieri solet.

150 Hi. M40 = B2.12, CHG I p. 19, Pel. Lat. 204.
151 The reading of the Einsiedeln manuscript: see Corsetti, 'Un nouveau témoin,' p. 47.
152 The reading of the Einsiedeln manuscript: see Corsetti, 'Un nouveau témoin,' 45 and Adams, 'Notes on the Text, Language, and Content of Some New Fragments of Pelagonius,' 489 n. 7.
Hierocles

If it should be subcutaneous, as Hieronymus the Libyan says, its breath is through the nostrils, odorous and putrid, and it coughs and becomes thin, and putrid things burst forth all over the body... and drench through the mouth with a strained gruel of oats, cooking in this a puppy, well-cleaned and plucked; if not, a fowl...

the whole body falls apart, it discharges liquid through its nostrils and drinks much water, coughs harshly and snorts... its hide smells bad... or a suckling puppy should be killed and its inwards cleaned and boiled down in water by half, with natron added... this can is also made with a killed fowl.

In his chapter on ὀρθόπνοια, Hierocles cites Cleomenes, who is called 'the Libyan' in B: the passage is very close to Eumelus and Pelagonius. Hierocles does not include the sympathetic application of the animal's own blood recommended by Eumelus, nor the hellebore cure. He does, however, as in the passage quoted above, give instructions for using the blood of a puppy in a drench—a procedure, which, as we have seen, is consistently omitted by Eumelus, but present in Pelagonius.153 Hierocles is not following Apsyrtus, whose lists of symptoms and prescriptions are very different (although they do include a puppy).154

---


Comparison of the three authors shows that while Pelagonius seems, as usual, to be copying his source verbatim, Eumelus removes the reference to the puppy, and Hierocles, as is his habit, paraphrases (possibly without understanding his source entirely). But he seems to be following the same source, or a very similar one, as a small detail illustrates: where Eumelus calls for ‘Ethiopian cumin’ and Pelagonius ‘ground cumin’, Hierocles recommends ‘ground Ethiopian cumin’—probably what was specified in the source. Hierocles’ quotations from two different authors have parallels in continuous passages in Eumelus and Pelagonius: Hierocles probably found the texts of Hieronymus and Cleomenes gathered together in some sort of collection, which would also fit the pattern we have observed in his method of research.

One wonders whether Hieronymus and Cleomenes, whom Hierocles calls ‘Libyan’, could have been among the Greek sources added by Cassius Dionysius of Utica to his translation of Mago. Although their names do not appear in Varro’s list of fifty authors used by Cassius Dionysius, Varro did not include technical veterinary material in his treatise, and so might not have felt it necessary to give the names of all Cassius Dionysius’ sources for such material. A treatment for opisthotonos attributed to ἐφυοῦ by Hierocles appears in Pelagonius attributed to Eubulus, a name that does figure in Varro’s list.155

---

155 Hi. M325 = B34.10, CHG I p. 183; Pel. Lat. 271; cf. Varro, RR I.1.9.
Hierocles’ use of this source may explain the similarities between his text and that of Hippocrates, who also appears to draw upon the Diophanes–Cassius Dionysius tradition, as we shall see. Hierocles’ recommendations for the treatment of shagginess (δασούτης)\(^\text{156}\) and ‘prickly heat(?)’ (κεντρίτης)\(^\text{157}\) which are not drawn from Apsyrtus, call for sympathetic application of the horse’s own blood, a characteristic of the source common to Pelagonius and Eumelus.

In the body of the treatise are two more items that Hierocles seems to have drawn from Aristotle via Aristophanes or Diophanes. At the end of his paraphrase of Apsyrtus’ chapter on dysury, Hierocles adds ‘one ought to believe Aristotle, who says that only the horse is afflicted by the disease of dysury’ (δεί γε μὴν πείθεσθαι Ἀριστοτέλει, διὸ φησὶν ἵππῳ μόνῳ περπιπτέων τῷ τῆς δυσουρίας πάθει); in fact the quotation is closer to Aristophanes than to Aristotle.\(^\text{158}\) A reference to the fact that the oily smoke from a freshly extinguished lamp will cause a mare tomiscarry is not present in the fragments of Aristophanes (the end of Athous, Dionysiou 180 is damaged, so that the chapter on the horse is lacunose and incomplete); but the same item of information is in Aristotle, and repeated by Pliny and Aelian.\(^\text{159}\)

\(^{156}\) M748 = B94.2, CHG I p. 323.
\(^{157}\) C75, CHG II p. 213.
\(^{158}\) B33.15, CHG I p. 172; Arist. Byz. ed. Lambros, II.582; Arist. HA (VII) VIII 604b.
\(^{159}\) B15.2, CHG I p. 86; Aristotle, HA (VII) VIII 604b; Pliny, NH VII.43; Aelian, HA IX.54.
The two remedies of magical nature attributed to Hierocles (preserved only in M) are, in keeping with his taste, classicizing both in form and in content. The first is a *historiola*, prescribed against inflammation; Hierocles gives no practical instructions about whether the spell is to be written or recited.

**Αφλέγμαντον**

*Κύρκη καὶ Μήδεια ἐκαθέζοντο πρὸς ἀνατολὰς ἥλιον, ἐξήτων τὸ ἀφλέγμαντον ἐίτε ἀπὸ λίθου ἐίτε ἀπὸ ἔξουλον ἐίτε ἀπὸ κυνοδήκτου. τὸ γάρ ἔλκος ἀνηλιῶν ἔστω.*

**Anti-inflammatory**

Circe and Medea were sitting before the sunrise and seeking the anti-inflammatory, whether from stone or from wood or from one bitten by a dog. For the wound is sunless.

Circe was a daughter of Helios, and Medea was her niece: the connection of the horse with the sun-god is mentioned in Hierocles’ encomium, in Pelagionius’ preface, and in a spell in his treatise. Aelian, too, mentions Circe and Medea together as sorceresses (*φαρμακίδες*). But the formula *ἐίτε ἀπὸ λίθου ἐίτε ἀπὸ ἔξουλον* belongs to the vocabulary of magic. Another passage is apparently to be used against snake-bite:

\[
Δεινὸν ἐχίδνης δῆμχα καταχρισθὲν τιθυμάλλων παύεται. ὁ Χείρων, τούτο σε πῶς ἔλαβεν; οὐκ ἀφεῖς ὁ Κόιντος ἀνεύρετο τέσσαρα ταύτα γεντιανὴν, δάφνας, αμίραν, ἀριστολόχην.*

Fearsome bite of viper, anointed with spurge, is relieved.

O Cheiron, how did this elude you?

Not without wit did Quintus come up with these four things:

Gentian, bay-leaves, myrrh, birth-wort.

It has been pointed out that the two distichs appear to be unrelated; however, an excerpt in C attributed to Julius Africanus prescribes the same four herbs in case of snake-bite or scorpion-sting. The Quintilii were a source for Africanus: perhaps their treatise was Hierocles’ source for these *φυσικά*.

---


162 *HA* I.54 and II.14. 163 Cf. e.g. V102, *CHG* II p. 297.


A Latin translation of Hierocles is preserved in nine manuscripts; a version in Sicilian dialect, probably based on the Latin, exists in one copy (and possibly a second).\textsuperscript{167} The incipit which introduces the text in several of the manuscripts states that the treatise of Hierocles was translated from Greek into Latin for King Manfred of Sicily by Bartholomew of Messina.

Incipit liber Eraclei ad Bassum de curatione equorum in ordine perfecto habens capitula differentia translatus de greco in latinum a magistro Bartholomaeo de Messana in curia illustrissimi Maynfredi, serenissimi regis Siciliae, sciencie amatoris, de mandato suo.\textsuperscript{168}

Here begins the book of Eracleus [dedicated] to Bassus, on the curing of horses, having different chapters in perfect order, translated from Greek into Latin by master Bartholomew of Messina at the court of the most illustrious Manfred, most serene king of Sicily, lover of science, by his command.

There seems no reason to doubt the attribution of the translation to Bartholomew, since the incipit follows the formula with which he prefaced all of his known translations of Greek philosophical and medical texts.\textsuperscript{169} Virtually all that is known about Bartholomew is deduced from these incipits.\textsuperscript{170} He worked for Manfred, son of Frederick II Hohenstaufen, king of Sicily and Naples (1258–66), and is known for his translations of Aristotelian and pseudo-Aristotelian works: the \textit{Magna moralia}, \textit{Physiognomonica}, \textit{Mirabilium auscultationes}, and assorted medical texts, including the Hippocratic treatise

\begin{itemize}
\item \textsuperscript{168} For the same incipit in Bartholomew’s other translations, see R. Seligsohn, \textit{Die Übersetzung der ps.-aristotelischen Probleme durch Bartholomaeus von Messina} (Berlin, 1934), 9; R. Foerster, \textit{Scriptores physiognomonicci graeci et latini} (Leipzig, 1893; repr. 1994), 5 apparatus; W. Kley (ed.), \textit{Theophrasts Metaphysisches Bruchstück und die Schrift Περὶ σοφίας in der lateinischen Übersetzung des Bartholomaeus von Messina} (Würzburg, 1936), 3; Irigoin, ‘Manuscrits italiotes et traductions latines de traités scientifiques et techniques, 607–11.
\end{itemize}
Most of the editions of his translations are partial, and the translation of Hierocles has not yet been edited.\footnote{A.-M. Ieraci Bio, ‘La transmissione della letteratura medica greca nell’Italia meridionale fra X e XV secolo’, A. Garzya (ed.) Contributi alla cultura greca nell’Italia meridionale, Hellenica et Byzantina Neapolitana, 13 (Naples, 1989), 151 f.}

Since Bartholomew refers to Manfred as rex, the translation may be dated to the period of Manfred’s reign. Although overshadowed by the reputation of his father Frederick II, Manfred was also a patron of philosophy and the sciences. He is known to have sent a gift of manuscripts of the works of Aristotle to the university students of Paris, accompanied by a letter praising the skills of the men who had translated the texts from Greek into Latin:

\begin{quotation}
Volentes igitur, ut reverenda tantorum operum senilis auctoritas iuvenescat, ea per viros electos et utriusque lingue prolatione peritos instanter duximus verborum fideliter servata virginitate transferri.\footnote{Seligsohn, Die Übersetzung der ps.-aristotelischen Problematata, 6.}
\end{quotation}

Desiring, therefore, that the revered ancient authority of so many works be made young, we ordered that they immediately be translated by selected men, experienced in the use of both languages, with the purity of their words faithfully preserved.

And the incipits of the translations dedicated to him by Bartholomew of Messina describe Manfred as amator scientiae.

The presence of a veterinary manual among the other scientific works translated by Bartholomew is not surprising: the translations made from Greek and Arabic in the so-called Renaissance of the twelfth century were primarily of secular texts, scientific and philosophical works.\footnote{This interest in philosophy and science is reflected in the titles of the books available in Sicily listed by Henricus Aristippus in the preface to his translation of Plato’s Phaedo (possibly addressed to Robert of Cricklade, chancellor of Oxford in 1159, and prior of St Frideswide’s monastery); cf. C. H. Haskins, ‘Further Notes on the Sicilian Translators of the Twelfth Century’, Harvard Studies in Classical Philology, 23 (1912), 162–4; V. Rose, ‘Die Lücke im Diogenes Laertius und der alte Übersetzer’, Hermes, 1 (1886), 387 ff.; L. Minio-Paluello, Phaedo interprete Henrico Aristippo (London, 1950), 89–90.}

a similar Greek text. One answer may lie in Ruffo’s disgrace: he was imprisoned and blinded for treason against Manfred in 1256.\(^{176}\) The treatise of Hierocles may have been chosen because it was free of treacherous associations. But the homonymy of its author with the Neoplatonic philosopher, as well as his references to Aristotle and other classical authors, may also have contributed to the interest of his text.

Of course, Hierocles’ treatise may simply have been conveniently at hand in the royal library. Unfortunately, Bartholomew gives no indication of the source of the Greek manuscript from which his translation was made. It may have belonged to his patron: Manfred had connections with the Greek east through his own marriage and that of his sister Constance-Anna (his nephew by marriage was Theodore II Lascaris, emperor of Nicea, who had a strong interest in science and philosophy);\(^{177}\) he would have been able to ask for Greek manuscripts, or might have received them as gifts.\(^{178}\) Westerners were able to acquire manuscripts at Constantinople: Moses of Bergamo, the grammarian, poet, and translator who participated in the theological debate of 1136, laments, in a letter to his brother, the loss, in a fire, of his collection of Greek books, worth three pounds of gold.\(^{179}\) Burgundio of Pisa, who made Latin versions of Galen and the Geoponica, was also one of the translators at the debate in 1136; on his way back from Constantinople he stopped in Messina.\(^{180}\)

---


\(^{178}\) The preface to the anonymous translation of Ptolemy’s *Almagest* (executed in Sicily around 1160) states that the manuscript from which the translation was made had been brought to Palermo by Henry Aristippus as a gift from the Greek emperor; Eugenius of Palermo translated into Latin the prophecy of the Erythraean Sibyl from a copy ‘de aerario Manuelis imperatoris eductum’. See C. H. Haskins and D. P. Lockwood, ‘The Sicilian Translators of the 12th Century and the First Latin Version of Ptolemy’s Almagest’, *Harvard Studies in Classical Philology*, 21 (1910), 84 f.; Haskins, *Studies in the History of Mediaeval Science* (Cambridge, Mass., 1927), 191. Haskins identifies this embassy as having taken place in 1158, and notes that the choice of an astronomical text as a gift is in keeping with Manuel’s well-known interest in the study of the heavens. The manuscript brought by Aristippus has been identified as Marc. gr. 313; G. Derenzini, ‘All’origine della tradizione di opere scientifiche classiche: vicende di testi e di codici tra Bisanzio e Palermo’, *Physis*, 8 (1976), 99–100.


Bartholomew’s translations are *ad verbum*, according to the convention of his day. Roger Bacon, while praising the translations of Robert Grosseteste, alludes to Bartholomew contemptuously as ‘Manfred’s translator’:

alii vero qui infinita quasi converterunt in latinum, ut Gerardus Cremonensis, Michael Scotus, Alvredus Anglicus, Hermannus Alemanus et translator Meinfredi nuper a domino rege Carolo devicti, hi presumperunt innumerabilia transferre, sed nec scientias nec linguas sciverunt, etiam non latinum. nam in locis quasi innumerabilibus ponunt linguam maternam.

The others, who converted virtually infinite amounts into Latin, such as Gerard of Cremona, Michael the Scot, Alfred the Englishman, Herman the German, and that translator of Manfred’s (who was recently defeated by lord King Charles)—they presumed to translate innumerable things, but they knew neither sciences nor languages, not even Latin. For in virtually innumerable places they left in place the original language.

A translation *ad verbum* is, of course, more effective in ‘bringing the reader to the original’. For example, Bartholomew’s translation of the *Physiognomonica* is so close to the Greek that in many places his Latin does not make sense, yet for this reason it may be used to emend the Greek text. It has also been shown by L. Minio-Paluello that patterns in Bartholomew’s rendering of Greek particles in Latin are scrupulously consistent, so that an anonymous translation of the pseudo-Aristotelian treatise *De mundo* may be attributed to his hand. Hierocles’ use of particles is particularly striking in his prooimia. In these passages (from a quick glance at the manuscripts) we may discern a number of the renderings of particles identified by Minio-Paluello as typical of Bartholomew: δὲ/autem, ἐτολ/amplius, ὁ/igitur, τὸ/aut, τὲ omitted or as autem, οἱ/µέν...οἱ δὲ as illi quidem...qui autem. Some of Hierocles’ more exuberant particles are conveyed with unwieldy combinations in Latin (e.g. φέρε ὁ/igitur quoniam quidem) others such as γε µὴν are often omitted. We may perhaps see some evidence of patriotism in Bartholomew’s substitution of Sicilian horses for the Iberians in Hierocles’ list of breeds. And, with the omission of some of the references to Athenian topography and other rhetorical ornaments, greater emphasis is accorded to the quotations from Aristotle.

---

Although they are both clearly related to the Greek text of Hierocles, Bartholomew’s translation differs from the Italian text both in content and in organization. A glance at the contents of each text shows that although the majority of chapter-headings are common to both the Latin and the Italian, they appear in a completely different order in each version. In the Italian, the chapter-headings match those of the Greek RV recension, and are in the same order as the chapters of the B recension. The Latin bears a superficial resemblance to RV in that it consists of just over a hundred chapters (numbered differently in the various manuscripts) divided into two books of roughly the same length, each beginning with a prooimion. After the prooimion, book I begins with a chapter on fever—but there the similarity ends. The distribution of material within the books is different: in the Latin, book I is devoted primarily to the grave diseases, and book II to accidents, including sores, wounds, bites, and stings. In the Latin, the division between the two books occurs between the chapters De flegmone oculorum and De scaldature quae sit in dorso equi. The Latin translation contains a certain amount of material absent from RV, and does not contain the double chapters on scorpion-stings and hair-loss. At the end of book II are several chapters made up of recipes for various drugs, classified according to their action as caustic, emollient, etc.; these do not appear in RV or the Italian translation. Bartholomew’s text also contains a number of chapters that have no match in any of the existing Greek texts attributed to Hierocles, for example De elefantia, and De epilepsia, as well as the final chapter, entitled Disciplina Abscyrthi de probatione equorum.

What Greek text was the basis for Bartholomew’s translation? The translation pre-dates the R and V manuscripts, which both belong to the fourteenth century; furthermore, the text is not illustrated, nor does it appear in the company of the Epitome, although several copies of a Latin translation of the Epitome do exist. The other possibilities are that Bartholomew excerpted material from a manuscript of the Hippiatrica, or that he worked from a copy of Hierocles’ treatise preserved independently in another form. Would he have taken the initiative to piece together excerpts from the Hippiatrica? Or was he working from a damaged manuscript? The phrase in ordine perfecto in the incipit may refer to a rearrangement of the text. As we have seen, quite a few cross-references from Hierocles’ treatise are preserved in the Hippiatrica. Their evidence shows that a rearrangement of the chapters has definitely been effected in the Latin version. The placement of fever as the first subject seems

to contradict the evidence of M1039. The chapters on colic and diarrhoea, in that order in the Greek, are inverted. Snakes, scorpions, and spiders were treated in that order in the Greek; in the Latin, scorpions come first. The text of Bartholomew’s translations may hold more clues about the origin of RV than about the original text of Hierocles.

Hippocrates

The identity of the veterinary author Hippocrates, masked by the famous name, remains obscure,¹ and his text has received attention only as a spurious annexe to the Corpus Hippocraticum.² Yet Hippocrates speaks very directly to the reader, in an almost colloquial style. His treatise, in contrast to the artifice of Apsyrtus’ writing, the precision of Theomnestus, and the eloquence of Hierocles, provides evidence of veterinary language at the lower end of the literary scale. The contrast in style is particularly evident because in content, Hippocrates’ treatise is very similar to the other manuals in the Hippiatrica. Although he does not name any of his sources, it is clear that Hippocrates drew upon the Cassius Dionysius–Mago tradition, without depending, as far as one can tell, on any other known author as an intermediary.

HIPPOCRATES’ TEXT

124 excerpts are attributed to Hippocrates in the M recension.³ The text is presented as problematic in the Teubner edition, with many corrections of verb forms, conjectures of lacunae and additions of explanatory verbs or connective particles. But the treatise may simply have been written in an unpolished style. Hippocrates’ style was evidently repugnant to the editor of B, who not only included fewer than half of the excerpts known from M, but subjected them to thorough editing. The text of B is so different from that in

¹ Oder–Hoppe, CHG II pp. xi–xii; Björck, ‘Zum CHG’, 63.
² J. A. van der Linden, Magni Hippocratis Coi… Opera omnia, vol. II (Leiden, 1665); P. A. Valentini, Ἰπποκράτους ἰππιατρικά. Hippocratis veterinaria Latine et Italice (Rome, 1814), reprints van der Linden’s text; see Oder, ‘De hippiatricorum codice Cantabrigeni’, 59 n. 3.
M that the editors of the \textit{CHG} depart, in some cases, from their convention of giving readings from M in the apparatus to B, and print each text separately.\textsuperscript{4}

Other veterinary treatises were falsely attributed to the ‘father of medicine’, most notably the \textit{Epitome} in RV. Another veterinary treatise attributed to ‘Ipocras Indicus’, and translated from Arabic into Latin by Moses of Palermo, has parallels with the Greek texts, but is not discernibly related to the Hippocrates of the \textit{Hippiatrica}.\textsuperscript{5} Ibn al-‘Awwām refers repeatedly to ‘Hippocrates the veterinarian’ in the chapter on horses of his agricultural compilation;\textsuperscript{6} as Björck has shown, the citations have parallels in excerpts from Apsyrtus, Hierocles, and Theomnestus, as well as in the Latin ‘Ipocras Indicus’; and do not appear to be quoted from the Hippocrates of the \textit{Hippiatrica}.\textsuperscript{7}

\section*{CHARACTER OF THE TEXT}

Hippocrates writes in the first person, but does not make any allusion to himself. He seems to have been a practitioner, but says nothing of the context in which he practised. His patients are horses, mules, and other beasts of burden; the causes of their ill-health are described without specificity as running, exhaustion, or being ridden (δρόμος, κόπος, ἐλασία)\textsuperscript{8}. Two of Apsyrtus’ letters, one on eye problems and one on breeding are addressed to Ἰπποκράτης ἰππιατρός;\textsuperscript{9} but, as Oder has pointed out, there is no evidence that the two horse-doctors by the name of Hippocrates might be the same man.\textsuperscript{10}

Neither Hippocrates’ recommendations for breeding nor any of his seven eye-remedies contain any indication that he might have received the letter, or that he wrote to Apsyrtus asking a question. He does not mention

\begin{itemize}
\item περὶ ἱπποβίος M1126, \textit{CHG} II p. 112 = B120, \textit{CHG} I p. 380.
\item Tr. Clément-Mullet, ch. XXXVIII; cf. Wellmann, review of \textit{CHG} I, \textit{Gnomon}, 2 (1926), 238.
\item ’Γρεκακικής Πηδερεδκλλκάκας αἱ ἀρετοῖς ἀραβικής ἀρετοῖς’ 1–11.
\item Μ990 = B30.6, \textit{CHG} I p. 152; M1121, \textit{CHG} II p. 110; M1135 = B130.8, \textit{CHG} I p. 355.
\item περὶ διακοπῆς ὀφθαλμῶν, M349 = B12.1, \textit{CHG} I, p. 74; περὶ συλλήψεως, C10.11, \textit{CHG} II p. 143.
\item CHG II p. xi; Ihm, ‘Die Hippiatrica’, 314.
\end{itemize}
any places or people or events. Perhaps the most distinctive characteristic of his text is what the editors of the CHG described as sermonis barbaries. In his text may be discerned tendencies toward the language of the Epitome. He uses words rejected by the Atticists such as γογγύλη (‘turnip’), φύαι (‘loins’), and έλλύχιον (‘lamp-wick’). He uses conventional loanwords such as στάβλον (stabulum) and κάγκελλον, καγκέλλοειδή (can-cellum, grill; in the form of a grille) but his language is not characterized by frequent use of Latin words. Certain unusual words are found both in Hippocrates and in the Prognoseis kai iaseis: one may mention ζέα, used only in hippiatric texts to mean ‘palate’; and ιεστριβεόω, ‘walks on the tips of its feet’ which appears as ιεστριβεόει in the Prognoseis kai iaseis, on sprain (στρέμμα). Hippocrates does use throughout his text the technical medical terms ἐγχυματιζω, φλεβοτομίζω, φλεβότομον, as well as specialized verbs used in other medical writers: λειποθυμέω, κακοστομαχέω, χλωροφαγίζω. A preference for compound verbs may also be seen in his consistent use of λειστριβεόω rather than λειόω, χειροτριβεόω rather than τρίβω, προσποτλίζων, etc.

An excerpt in M preserves what appears to be the introduction to the treatise:

'Ἰπποκράτους περὶ νοσημάτων καὶ τέχνης ἐνδείξεις καὶ ἀσκήσεως ἱππων καὶ ἰμάδων χωρίς, δον ὄγρων τοῦ ἡγοῦ διαφέρει. τῶν νοσημάτων χωρίς γράφομεν ἰππόν, ὡστε εἰδέναι καὶ τὸν ἰδιώτην τὰ σημεία. δείξω δὲ καὶ ἀπὸ τῆς ἱατρικῆς περὶ ἱππων καὶ ὑποζηγίων ἰππῶν. Of Hippocrates, on diseases and science: symptoms and treatments: for horses and for mules separately, as much as the humid is different from the dry. We will write separately of all diseases, so that even a layman may know the symptoms. And I will show everything from the science of medicine about horses and all beasts of burden.

Ἀσκήσεως seems to refer here to medical practice rather than the training of horses, of which there is no mention in the text. Ἐνδείξεις καὶ ἀσκήσεως may

11 CHG II, ibid.
12 γογγύλη M1114, CHG II p. 109; φύαι M992 = B30.12, CHG I p. 153 (φύαι in M); έλλύχιον; M204 (altered in B100.6), CHG II p. 42; cf. Phrynichus 81, 268, 134.
13 M101 = B10.7, CHG I p. 60; M265, CHG II p. 52.
15 e.g. Hipp. M1126, CHG II p. 112; Prog. B1.21, CHG I p. 8.
18 M101 = B10.7, CHG I p. 60.
19 M373 = B11.19, CHG I p. 65; M1012 = B130.108; M1013 = B130.109; M1015 = B130.110, CHG I p. 421.
20 M1068, CHG II p. 104.
be the equivalent of προγνώσεις καὶ ἱάσεις. The reference to the layman, ἰδιώτης, seems to imply that Hippocrates intended his treatise to be accessible to all rather than limited to use by specialists. This low level of science is evident in a lack of attention to physiology, a paucity of references to surgery, and a certain amount of material of introductory nature. Hippocrates asserts that the diseases of the mule differ from those of the horse; Columella similarly explains that whereas most of the medicines mules require are also used for other animals, certain diseases are peculiar to mules alone.23

After the introduction, the treatise began with a discussion of ποδάγρα, lameness. The prominence accorded to podagra is paralleled in Aristotle's discussion of the diseases of the horse.24 But Hippocrates' account of the symptoms of the disease echo Columella rather than Aristotle:25

Hippocrates

Ἀρχή τῶν νοσημάτων ἡ ποδάγρα. πρῶτον τοῖς ἵπποις καὶ τοῖς ἄλλοις ὑποζυγίοις ἀπὸ ψυξίων καὶ δυσύφυριας ὅταν ἢ ἀπὸ μάχθων ἢ ἐλαξίων πολλῶν, ἢ ἐργαζόμενος θερμός γέννηται καὶ ψυχή ἐξαιτίας αἵ αἵ ὀδοὺ, ἢ ἀπὸ ψυχών ἢ ἀπὸ φλέγματος.

The beginning of sicknesses is podagra. It happens in horses and other beasts of burden from chill and dysury, when it has had many burdens or much riding, or when, hot from working, it becomes chilled suddenly, or from chill or from phlegm.

Hippocrates' chapter on bloodletting begins with one of the rare instances, in the Hippiatrica, of theoretical discussion.

Lowero et δέ τῶν ἵππων αἵμα αἵ φαίρειν καὶ ἐν αἷς ἁρωσι καὶ ἀπὸ ὅσων ἰδέων καὶ διαγνώσκειν τὰς φόσεις καὶ τὰς ἔξεις.

ὢ μὲν γὰρ ἐπὶ διακεῖωται, οἱ δὲ ἵσχυοι, οἱ δὲ νοσεροὶ, καὶ τὸ ἁίμα οὐκ ἦστι τὸ αὐτὸ ὀδὸς ὅμοιος τοῖς πάθεσι πάσιν, ἀλλὰ διαφέρει τοῖς χρώμασι πρὸς ἐκαστοῦ πάθος.

τὸ μὲν γὰρ ἀπὸ τῶν εἴ έχοντων ἱπποὺν αἵμα ἦστιν εὐκρατον καὶ πολύ καὶ χαλάσιν. ἀφαίρει τοῖνυν, ὥσπερ μὴ πάθος ἐπιστῇ, τὸ δὲ τῶν μαλακισμένων αἵμα ἦστε σοικίλων καὶ ἀφροδέστατον, τὸ δὲ τῶν κριτιώτων αἵμα ἦστε μελανώδες καὶ ἰξώδες . . .

23 VI.38.1. 24 HA (VII) VIII.604b. 25 M1068, CHG II p. 104; Col. VI.30.3.
Hippocrates

It is best to know when it is necessary to let blood from horses and in which seasons and from which veins, and to recognize its natures and conditions.

Some are in good shape, others are thin, or sickly; and their blood is not the same, nor is it similar in all diseases, but differs according to colour for each disease.

The blood of horses in good condition is well mixed and abundant and pale. Therefore let blood, lest a disease attack. The blood of weak ones is many-coloured and very foamy, and the blood of those with laminitis is darkish and sticky.

Hippocrates continues with some practical advice:

Since we have come to a discussion of this, well, we shall begin with how one ought to let [blood] from horses. One ought to use a tourniquet: place the tourniquet around the area around the neck and apply tension until the veins stand out. Do not insert the lancet too deep, since the blood will not be able to stop easily.

None of the other authors explain basic procedures in this way, evidently taking for granted a familiarity, on the part of their readers, with medical techniques. Another procedure described by Hippocrates is worthy of note, namely the use of the mandibles of ants to suture a wound:

Let ants take hold of the intestine and cut off the heads and let them stick, then suture and poultice with centaury.

This practice was reported in Smyrna c.1890, employed by a Greek barber to close a head wound.

---

27 M591, CHG II p. 75.  
28 'Mr. Miltiades D. Issigonis, a Greek gentleman from Smyrna, now residing in London... fell from his horse in Smyrna about six years ago, and received a severe but clean cut of an inch or rather more in length on the forehead above the right eye. In accordance with the custom of the country he went to a Greek barber to have the wound dressed, and the barber employed at least ten living ants to bite the two sides together. Pressing together the margins of the cut with the fingers of the left hand, he applied the insect by means of a pair of forceps held in the right hand. The mandibles of the ant were widely open for self-defense, and as the insect was carefully brought over the wound, it seized upon the raised surface, penetrated the skin on both sides, and remained tenaciously fixed while the operator severed the head from the thorax, so leaving the mandibles grasping the wound.' R. M. Middleton, 'On a Remarkable Use of Ants in Asia Minor', Journal of the Linnaean Society, 25 (1896), 405, quoted in E. W. Gudger, 'Stitching Wounds with the Mandibles of Ants and Beetles: A Minor Contribution to the History of Surgery', Journal of the American Medical Association, 84 (1925), 1861–4. The same recommendation for suturing intestines is found in the Sanskrit Sushruta Samhita; see the discussion in G. Majno, The Healing Hand: Man and Wound in the Ancient World (Cambridge, Mass., 1975), 304–9, with pl. 7.2.
The greatest emphasis, in Hippocrates’ text, is on conditions of the foot, the eyes, and the digestive system. As indicated in the preface, remedies for mules are given separately:

tὰ αὐτὰ ἡμίονοι οὐ πάσχει ἐπμω ὡστε ἄρρενι ὡστε θηλεία, ἀλλ’ ὡσπερ περὶ καὶ ξηρὰν [βέον]
esti τὸ σώμα καὶ αἱ μήτραι ἀποκέκλεινται ἀπὸ ξηρασίας σαρκὸς, τοσοῦτον <βέον> καὶ
tὰ νοσήματα περιμένουσιν.29

A mule does not suffer the same things as a horse, neither male nor female, but just as much as the body is dry and the wombs are closed up from dryness of flesh, so much more easily do they endure sicknesses.

The section on mules came after that on horses, since it contains a reference to

τομαὶ τὸς πρότερον εἰρημένας ἐν ταῖς τοῦ ἑπμων,30 ’the surgery mentioned earlier among those of the horse’. Some treatments are recommended for either horses or mules,31 or for any beast of burden.32 An aromatic remedy for cows (ἀρωματικὴ βοϊκῆ) is differentiated from one for horses (ἀρωματικὴ ἑπική).33 The latter is frequently called for in treatments.34 The cow remedy calls for six ingredients: costum, centaury, wormwood, orris-root, common celery, and saffron-residue (κόστος, κενταύριον, ἀβίνθιον, ἱρις, πέπηνον κοινόν, κροκόμαγμα); the horse remedy, on the other hand, is composed of seventeen, including a number of imported (more expensive) spices: cassia, cinnamon, ginger, costum, amomon, calamus, sweet rush blossom, saffron-residue, saffron, myrrh, cinnamon-wood, white pepper, opopanax, gentian, Illyrian orris-root, birthwort, and peony (κασία, κανάμωμον, ζίγγιβερ, κόστος, ἀμομον, κάλαμος ἀρωματικός, σχοινὸν ἄνθος, κροκόμαγμα, κρόκος, αἵμαρα τρογλίτης, ἠλοκινάμωμον, πέπηρε λευκόν, ὀποπάναξ, γεντιανή, ἵρις Ἴλυρική, ἀριστολοχεία, παινία).

A few cross-references exist in the excerpts: for example, ‘the symptoms that are written above’ (τοῖς ἐμπρόσθεν γεγραμμένοις σημείοις),35 ‘treat by binding fast, as for other cauteries’ (θεράπευε δὲ ὡς καὶ τὰ λοιπὰ καυτήρια ἀποδεσμεύων).36 An indication of the order of chapters is preserved in a reference to abrasion (παράτριμμα) of the fetlock, which must have been treated after sprains (στρέμματα): ‘poultice in the same manner as for sprains’ (κατάπλαττε τὸ αὐτῷ τρόπῳ (ὁ) καὶ τὰ στρέμματα).37 Several prescriptions

29 M1140, CHG II p. 113. 30 M1140, CHG II p. 114.
32 ἐπυπον ἡ ἀλλὰ τῶν ὑποζηγίων M908 = B77.4, CHG I p. 294; M1121, CHG II p. 110.
33 M1145, CHG II p. 114; M1143 = B130.156, CHG I p. 430.
34 M539 = B5.5, CHG I p. 42; M109 = B20.10, CHG I p. 100; M990 = B30.6, CHG I p. 152; cf. CHG II p. xi.
35 M1139, CHG II p. 113.
36 M908 = B77.4, CHG I p. 294.
37 M1120, CHG II p. 110.
call for the aromatic preparation (σκευασία ἀρωματική) without indication of where in the treatise the recipe for that preparation was located. (It is toward the end of both M and B.)

Series of excerpts are preserved for several subjects: wounds, eyes, tetanus, digestive ailments, bites, foot ailments, and the dyeing of a horse’s coat. ‘Sympathetic’ remedies are prescribed, but there are no magical remedies in what is preserved of the treatise, although a spell may have been lost from an excerpt which ends καὶ ἐξειπόεις... ‘and you should declare...’

The excerpts are consistent in structure. Subjects are introduced in simple conditional phrases:

έαν ἄραι θέλης μώλωτας... If you want to take away bruises...
έαν δὲ μὴ ἔσθη αἴσθη αἰτίας... If a horse does not feed...
έαν ἵππος τραχύς ἤ ἦμωνος... If a horse or a mule is shaggy...
έαν φάγῃ ὀλέβαρον ἵππος... If a horse eats hellebore...

The symptoms, σημεία, are not uniformly listed; aetiology is rarely indicated, though occasional reference is made to humoral theory, for example μαυρία or madness is attributed to bile. Instructions are nearly always given in the second person: ‘Look and you will find that the palate is swollen’ (ακόσιει καὶ εὐφήσεις τὴν ζέαν μετέωρον); ‘your mixture should be the size of a walnut’ (ἐστὶ δὲ σοι τὸ σύνθεμα αὐν καρύν τὸ μέγεθος).

Often—especially in the case of internal ailments—the symptoms are given, but the prognosis is described as hopeless, and no treatment is recommended.

ἡμέραν δὲ πλείων οὐ ζή (it will not live more than a day).
ὁ τοιοῦτος οὐ ζήσει πλείων ημέρας (such a one will not live more than a day).

These conditions are described as curable by the other authors in the Hippiastrica; Hippocrates’ relation to those authors is, however, not entirely clear.

---

38 M1143 = B130.156, CHG I p. 430.
39 M588, CHG II p. 74; cf. Heim, Incantamenta, p. 469.
40 M1124, M1126, M1136, M1137, CHG II pp. 112–13.
41 M311, CHG II p. 54.
42 M1126, CHG II p. 112; cf. Col. VI.14.2.
43 M109 = B20.10, CHG I p. 100.
44 Heart trouble, M429, CHG II p. 62; liver trouble, M547, CHG II p. 71.
Hippocrates does not mention any sources, or indeed any other names, in what we have of his treatise. Comparison of his text with the other works in the *Hippiatrica* reveals numerous parallels with Apsyrtus; for this reason, Björck places Hippocrates after Apsyrtus in date. On the other hand, Oder and Hoppe suggest that Hippocrates wrote before Apsyrtus, since he often recommends procedures that Apsyrtus condemns, for example, rubbing the bladder to relieve dysuria, the use of cautery for sprains of the knee and fetlock, the treatment of madness by shutting the horse in a dark and quiet place. He may, of course, have written after Apsyrtus, but without knowledge of his work. Hippocrates is not dependent upon Apsyrtus in these cases, but seems to draw from a common source. Hippocrates’ advice is often found in Eumelus and Pelagonius as well, as in the case of the cure for madness:

**Hippocrates**

Σκοτοποίησον εἷς τόν στόβλον καὶ ἅνα ἴσηκε, καὶ πορευΕτέος μὴ τοὺς μήτε δόξαντες μήτε ρημασμένοις μήτε φόβον ποιεῖται εἷς τόν τόπον

Darken the stable and let it be quiet, and let no one approach nor disturbance nor sound be made in the area.

**Eumelus**

Καὶ ἐν τόπῳ σκοτωνοτέρῳ κατάκλειστον ἐχε, μέχρις οὗ προφής ὁρεχή

And keep it confined in a very dark place until it develops an appetite for its feed.

**Pelagonius**

Primum omnium loco tenebroso stet et mollibus cibus recreandus

First of all let it stand in a shadowy place and let it be restored with soft foods.

**Apsyrtus**

Δέχεσαι δὲ καὶ ἐν ἴσηκεν ἁπφοι άν διπτόν οὐκ ἐποιεῖσθαι τοιούτους ἐπιτευνμένους σχάματος μάλλον καὶ διαφονοῦντας

It is said that they ought to be made to stand in quiet and in a dark place—having done this, we had them suffer more, and die.

45 κούλακιον (sic) Λυκόνον ἀφθαληκόν (M376, CHG II p. 58), which appears to cite a source, is the reading of Oder and Hoppe: the lemma in M reads λυκίον, and the entry in the table of contents of M is λύκειον. The plant λύκειον was widely used in ophthalmic remedies, cf. Diosc. I.100.

46 Zum CHG, p. 63.


49 CHG II p. XI.

These relationships may be explained by supposing that Hippocrates uses a source common to Eumelus and Pelagonius (and in several cases the *Mulo-medicina Chironis*), and also used, though in a more critical spirit, by Apsyrtus. There are a number of parallels between Hippocrates’ treatments for colic and dysury, and Apsyrtus’ long chapter on colic and dysury, a chapter in which Apsyrtus repeatedly refers to unnamed sources. Hippocrates twice recommends administering hoof-filings from the forelegs, the remedy attributed to Mago by Apsyrtus, which may indicate that his source is related to Diophanes–Cassius Dionysius. Other parallels link Hippocrates with the agricultural compilations as well: for instance, a treatment for leeches echoes Anatolius:

**Hippocrates**

Εἰάν βδέλλαν καταπίη, ὑππιάς ἐλαίου θερμῶν ἐγχυματίζει διά κέρατος.

If it should swallow a leech, make it lie supine and drench through a horn with warm oil.

**Anatolius in Geoponica XVI**

Εἰάν βδέλλαν καταπίη, ἀνακλήθην ὑππίων ἐλαίων θερμῶν μιγέν μετὰ οἴνου διά κέρατος ἐγχυμένων.

If it should swallow a leech, let warm oil mixed with wine be poured through a horn while it is reclining supine.

The treatment recommended by Hippocrates for twisted intestine (στρόφος) is also the same as that of Anatolius:

**Hippocrates**

Θεραπεύεται δὲ λουτρῷ θερμῷ καὶ σκεπάσμασι διὰ ἐπιβλημάτων οὐν ἐγχυματισμῶς δέδου διὰ τοῦ στόματος ἡ βοθωνίων συνιέμενον (ἀνεμένον ϑερμῷ συνιέμενον edd.) διὰ σµήρης γο. ε’ ἤγομένον οἴνων παλαίων κοτυλίας ἐξ ... It is treated with a warm bath and by covering it with blankets. Administer through the mouth or the nostrils drenches composed of 5 grams of myrrh united with 6 cotylae of old wine ...

**Anatolius**

Ὑπποι στροφούμενον ἵψη, ὑβατὶ θερμῷ λοίπας αὐτῶν καὶ συγκαλώς εἰμάτως, ἐπέτρε σµήρης δραχμάς ε’, οἴνου παλαίων κοτυλίας ε’ ... ἐγχυματίσων

You will cure a horse with a twisted intestine, bathing it with warm water and covering it up with blankets, next drench... with 5 drachmae of myrrh and 6 cotylae of old wine.

---

51 M59 = B33.3, CHG I p. 165.
52 M587 = B45.3, CHG I p. 217; M624, CHG II p. 78 = B126.3, CHG I p. 383; cf. Aps. M59 = B33.8, CHG I p. 168 (δυσσορία), as pointed out by Oder, CHG II p. XI.
53 Hipp. M529, CHG II p. 69; Geop. XVI.19.
Hippocrates’ remedy for καρκινομάτα (tumours, ‘karkinomata’), which calls for a sympathetic application of καρκίνους ποσαμίους (river-crabs, ‘karkinous’), is the same as that given by Hierocles, who attributes it to Hieronymus.55

Hippocrates

Τῶν δὲ καρκινωμῶταν ἀρίστη ἐστὶ καὶ ταχύτη ἢ διὰ τοῦ μαλάχιματος καὶ τοῦ κοινοῦ καὶ ρητίνης καὶ ξένου καὶ χαιρίνης. ταύτα πάντα ἔψησας, χρῶ θερμῶ τῷ βοηθήματι, ἐὰν ὁ τόπος ἐπιδέχεται εἰ δὲ μῆ, καταπλάσασα ξηρῶς ἡπτωσικόις καὶ τηρτικοῖς, ὁλὸν καρκίνους ποσαμίους καίσας καὶ τρίφας ἐπιτίθει μετὰ τρυγὸς ἔηρας φόρων τε πίτους φλοίων κεκομμένου καὶ κύσην κεκαυμένην καὶ κοινεύσει σέρμα καὶ σικιοῦ ἁγίου τὴν μίζαν, κόβας ὁμοί μεθ’ ὕδατος φυκροῦ καὶ ὅζους, κατάπλασε. εἰ δὲ (...), ὕδατι ψυχρῷ μη πρόσαγεν, ἀλλὰ περίπλους οἶνον. φαρμάκῳ δὲ χρῶ τρυγίαν λεικὴν καίσας καὶ μολύβδαν καὶ χαλκοῦ ἀψθος κεκομμένον καὶ λαβῶν πρὸς ταῦτα κοινὰς αἰσθήτου τοῖς ἁγάνες ἔηρος χρῶ. τὰ δὲ κόκλως ἑλαίῳ ἀπάλειφε, εἰ δὲ ἀποκροτύνεται ἀρόβοις καὶ μέλι ἄλειφε.

The best and fastest [treatment] for tumours is through the ointment and the hemlock and resin and mistletoe and galbanum. Boiling up all these, use the remedy hot, if the location permits. And if not, use desiccative, softening, and dissolving poultices, such as: burn and grind river-crabs and apply, mixing with dry wine-lees and cut-up pine-bark and burnt pumice and hemlock-seed and wild cucumber root cut up together with cold water and vinegar, and poultice. And if (…) do not put water on it, but wash around it with wine. And use this drug: burning white wine-lees with sulphuret of lead and vitriol cut up, and taking lime-powder in proportion to these, use these very dry things. And anoint them in a circle with oil. If they become hard, anoint with honey and vetch.

Hierocles

Τὰ καρκινῶματα φησὶ δεῖν Ἰερώνυμος τέμνειν, ἐὰν ὁ τόπος ἐπιδέχεται εἰ δὲ μῆ, καταπλάσασε καρκίνους ποσαμίους καύσασαν, καὶ μετὰ ἔηρας τρυγὸς τρίψαντα καὶ φυράσαντα ἐπιτίθεναι πίτους φλοίων κεκομμένου καὶ ἑνικεκομμένην καὶ κοινεύσει σέρμα καὶ σικιοῦ ἁγίου μίζαν κόβας μεθ’ ὕδατος ψυχροῦ καὶ ὅζους καταπλάσειν. εἰ δὲ μῆ, ἑκακωθη, ὤδωρ μὴ προσαγείν, ἀλλὰ πλάνειν οἶνον. φαρμάκῳ δὲ χρῆθαι μολύβδαν καὶ χάλκιαν κοινοῦ κεκομμένα, κοινὰς ἀψήφοι μίζαντα ἔξισες ἔηρας, ἐπιτίθεναι. τὰ δὲ κόκλως ἑλαίῳ ἐπαλείφειν.

Hieronymus says to excise tumours, if the location permits.

And if not, poultice with burnt river-crabs, and apply cut-up pine-bark, ground and mixed with dried wine-lees and cut-up iris and hemlock-seed, and root of wild cucumber, cut up and mixed with cold water and vinegar, and poultice. If it becomes infected, do not put water on it, but wash with wine. And use this drug: sulphuret of lead and vitriol cut up, mixed with an equal amount of dry lime-powder, and applied. And anoint them in a circle with oil.

56 The conjecture of Oder for ἡπτωσικοῖς.
We have seen that other excerpts identified by Hierocles as quotations from his ‘Libyan’ sources resemble passages common to Pelagonius and Eumelus, and are probably derived from an agricultural source. Further connections with this source, and with other ancient texts on medicine and natural history, may be seen in Hippocrates’ chapter on the bite of the shrew-mouse (μυγάλη).57

Hippocrates

Γίνεται δὲ ἐπὶ πολὺ τὸ δάκρυ τοῦ ἀστραπούς, ἐὰν κατακλῆθη, συναντᾶται ἡ μυγάλη εἰς τὰς λαγώνας, καὶ μεταξὺ καταλύεται αὐτοῦ παραμυθεία, διὰ τὸν τόπον οὗ γίνεται οἰδήμα. 

Columella

Nam et vipera et caecilia sape cum in pascuo bos improvisa supercubuit, lacessita onere morsum imprimit. Musque araneus, quem Graeci μυγάλην appellant, quamvis exiguissim dendibus non exiguum pestem molitur... caeciliae morsus tumorem suppuratio-nem mepotum; idem facit etiam muris aranei, sed illius sanatur noxa est ignea lamina... optimum ostendit iniuriam non adest, tumortque aranei linitur. vel si quaque morsus muris conteritur, eoque luit, nam animal ipsum intulit, suo corpore perniciem, quam aceto linas. mus cretaque cimolia ex sanatur noxa aranei, sed illius nemque molitur; idem tumorem suppuratio-caeciliae morsus pestem molitur... quamvis exiguis araneus, quem Graeci onere morsum supercubuit, lacessita pascuo bos improvidē caecilia saepe cum in

Apsyrtus

Μυγάλη δὲ ἐὰν δάκρυ, οἰδήματα γίνεται περὶ τὸν τόπον σκληρά, καὶ στένει μικρὸ διαλπών. βοηθεῖται δὲ κατακεντούμενος καὶ καταχρόμενος κράμβη τετριμέλει μετὰ ὄξους ἢ ἄφωροι (Ἀσαίωσι) ἢ κραμίοις μετὰ ὄξους ἢ σκορὸδος ὁμαίνει ἢ ἔρχεται τριβθείσῃ μετὰ ὄξους. λέγεται δὲ καὶ ἐκ τῆς ἀμαζωτροχίας γῆν φυσάσαντα τὸ δέξι καταχρέειν ὀψέλιμον. ἐὰν δὲ γενήται θήλεια ὄνον ἔγκυον ὀδύν διχθείαι ὑπὸ μυγάλης ἐγκύου, κάνινου ἢ ἕχει διαφωνῆσαι. ἐπιγίνεται γάρ πυρετὸς καὶ δαιμ. καὶ κυκλάμων δὲ κατακασάντα τὴν τέφρα δέξι μίζαντα τὸ αὐτὸ ποιεῖν. ὡστὶ καὶ αὐτὴν δὲ τὴν μυγάλην

Hierocles

Εὰν δὲ μυγάλη δάκρυ, τίμπραται τὸ ζῶον ἐλόν, καὶ οἱ ὀφθαλμοὶ δικρύων, ίχνον τε ἀποστάζει ἀπὸ τοῦ οἰδήματος. ... τῶν κοσμητῶν οὐν τὸν ὑπὸ τῇ τρίβῃ τῶν τροχῶν γινόμενον ὄξει χρημαί δεισάς, καὶ τὸν ἄρχεται τόπον νῦν, πρῶτον ἐπίχρει τῷ ἔτι. ἐν τοί δὲ, ἂν Ταρανίωνος, φαίνεται κορόδινα κόμαι ἐπιθέουν, ὑποθεμέναν τε ἐλάφου κέρας. φησι γε μὴ Ἀμφηρτος ἀμείνοι εἶ ἐπὶ τῶν θηριουμένων, ἀμα τις αἰσθάνεται, διακαίει τὸν τόπον. Ἑράτωνος δὲ ἐπὶ μυγάλης συμβολεύει κατασαλέατα τὰ μάλατα διωδήκοντα, καταβρέχειν δέξει καὶ ἄστι. τῇ δέ ἐξῆς ἴμμερες ροίζαντα εἰς ὀδωρ γυλικοῖ, κιμωλίαν δέξει

The bite happens for the most part in the stables. If it lies down, the shrew-mouse is trapped under its flanks. Meanwhile, when it [the horse] moves, disturbed, it bites the place, in which a swelling arises. It is treated in this way: taking 1 oxybaphon of ground nigella, administer with wine as a drench. Or pounding garlic and salt and cumin, the same amount of each, mix with urine and anoint. And pound earth from a wheel-track, or a shrew-mouse, and administer as a drench with a cotyle of wine. If you don’t have a shrew-mouse, anoint with diluted potter’s clay. Or boiling up celery-seed with wine, administer as drench with oil. Or score the swollen area sufficiently with a straight lancet. If more inflamm-
Columella’s use of the Greek word μυγαλή points to a Greek text as the ultimate source for the passage. Hippocrates and Apsyrtus echo Aristotle’s observation that the bite of a pregnant mouse is more dangerous because the blisters caused by its bite will burst: τὰ δὲ δήγματα τῆς μυγαλῆς καὶ τοῖς ἄλλοις ὑποξύγιοις χαλεπά γίνονται δὲ φλύκταιναι. χαλεπώτερον δὲ τὸ δήγμα ἐὰν κυούσα δάκη ἐκρήγγυνται γὰρ αἱ φλύκταιναι, εἰ δὲ μὴ, οὐ. Nicander’s explanation that the mouse dies beneath the wheels of a cart (μυγαλένην, τροχήσων ἐπιθνόσκουσαν ἀμάξις), clarifies the origin of the remedy in sympathetic magic. Pliny’s account is confused: a pregnant shrew-mouse will itself burst after it has bitten an animal; shrew-mice are preserved, enclosed in clay, for medicinal purposes; the earth from a wheel-track is used as a remedy since a mouse will not cross a wheel-track because of some sort of natural torpor that strikes it if it does so. Aelian’s version is that the shrew-mouse dies when trapped in a wheel-track; he too recommends the dust from the wheel-track, using the word ἀρματοτροχία. Apsyrtus’ recommendation of cabbage with vinegar also has a parallel in Geoponica XII, the chapter on remedies from garden plants, where it appears in the section on cabbage. Hierocles quotes Tarantinus, who is, as we recall, among Anatolius’ sources as well.

In this passage we see not only the relation of the veterinary writers to one another, but also their links to ancient texts on medicine, agriculture, and φυσικά in the broader sense of natural history and magic. The inclusion of
Hippocrates’ treatise in the *Hippiatrica* shows that the interest of the compiler was not limited to texts in a polished literary style. It is also evident that duplication of material was not a concern; on the contrary, the close relationship of the texts would have made it easier to gather into chapters an array of excerpts on the same subject.
The text of the *Hippiatrica* contains no clear indication of the circumstances in which it was compiled. When, where, or why; by whom, at whose command: all these questions are left unanswered. The compiler appears to have done his job discreetly, leaving no signature in the text—unless such a signature has been lost in the process of transmission. The earliest testimony to the existence of a hippiatric compilation is from the tenth century: an echo of the canon of authors exists in the names added to the lemmata of chapter XVI of the recension of the *Geoponica* dedicated to Constantine VII. A notice in the tenth-century *Fihrist* of al-Nadīm of a book on 'veterinary surgery, by the Greeks' may refer to a translation of the *Hippiatrica*. The *Hierakosophion* of Demetrius Pepagomenos, a work of the fifteenth century, refers obliquely to works on horse medicine.

This absence of specific evidence, combined with the prominence of the B recension both in the manuscript tradition and in the two printed editions, has led to a certain amount of confusion regarding the date at which the compilation was first assembled. The *Hippiatrica* was long identified as a product of the so-called encyclopaedism of the tenth century, no doubt because of its perceived kinship with the *Geoponica*. Not only do the agricultural and veterinary compilations both take the form of an excerpt collection, but they also have content in common: chapter XVI of the

---

1. In the article on Jean Ruel in C. G. Jörcher, *Allgemeines Gelehrten-Lexicon*, 3 (Leipzig, 1751), the *Hippiatrica* is ascribed, no doubt through a typographical error, to Dioscorides, whose work Ruel published: 'de la Ruelle, Johannes [sic]', p. 2296.
4. Άλλοι δὲ τῶν συμμέτοχων τα και τετραπόδων ἐπιμελέσαντο. Ιππων τὲ ἰθικοί καὶ βοῶν καὶ κονδών καὶ ἡμίσων, καὶ τῶν πρὸς μελαδίνας ἔπιστημάτων ἀρετῶν, ed. Hercher, p. 335.
Geoponica, which is devoted to the care and medical treatment of equids, is almost entirely drawn from Anatolius, and a number of excerpts from his text, as we have seen, are present both in the Geoponica and in the Hippiatrica. Moreover, Cassianus Bassus the scholastikos, compiler of the Geoponica, was identified with the Bassus to whom Hierocles dedicated his veterinary treatise. Hierocles, who, as a lawyer, would also have merited the title scholastikos, was thought to have compiled the Hippiatrica—a pleasing symmetry thus achieved by the attribution of similar literary productions to a pair of friends and colleagues with similar interests in animal husbandry and rural life.

Eugen Oder himself established that the Geoponica was not produced for Constantine Porphyrogenitus, but is a Late Antique compilation re-edited in the tenth century; he also noted that Hierocles was not the compiler of the Hippiatrica, but one of the sources of the compilation. Oder’s work led Giorgio Pasquali to make the guarded suggestion that a revised view of the transmission of the Geoponica could shed light on that of the Hippiatrica. The suggestion has, however, gone unheeded: the editors of the Hippiatrica, in their introduction to the text, assigned the compilation only to a date before the production of Phillipps 1538, believed by them to be of the ninth century. Björck, having earlier suggested a date ‘am ehesten auf die byzantinische Zeit’, later proposed that A was compiled ‘dès le commencement de l’époque byzantine’, without giving either a specific date or the reasons for his change of mind. Doyen-Higuet cautiously emphasizes that there is no evidence for an early date. And the view that the Hippiatrica is a compilation of medieval date continues to appear in works on the history of veterinary medicine.

---


8 ’Beiträge III’, 27 ff.


10 CHG II p. vii, where the 10th-c. date proposed by Studemund and Cohn is rejected on the assumption that the Orneosophion dedicated to an emperor Michael, copied together with the Hippiatrica in b, once figured in B as well; and, furthermore, that the ‘emperor Michael’ ought to be identified with Michael III (r. 842–67).

11 ’Zum CHG’, 29; ’Apsyrtus’, 32.


13 Fischer, ’Probleme der Textgestaltung in der sogenannten Mulomedicina Chironis’, 256; ’A horse! a horse!’, 133.
That the splendid Phillipps 1538 is attributed to the imperial scriptorium of the tenth century, and that the *Hippiatrica* is consequently mentioned in discussions of the so-called Macedonian Renaissance, has further confused the issue. L. Cohn, who first associated the manuscript with Constantine VII, pointed out that the recensions in M and C differ from B and belong to different periods; whether earlier or later, however, he does not specify. J. Irigoin, who confirmed the tenth-century date and imperial provenance of B, does not speculate about the original date of the compilation. Doubts about whether the *Hippiatrica* was first produced for Constantine VII were also expressed by Rambaud and Dain in their studies on that emperor. Nevertheless one may read in standard works of reference that the *Hippiatrica* was ‘compiled on orders from Constantine VII Porphyrogenetos’.

B does not contain the text in its earliest form: the M recension, which is known only from Parisinus gr. 2322, and has not been edited in a particularly comprehensible way, appears to reflect an earlier archetype, one that reveals more clearly the method and intentions of the first compiler, and the character of his sources. Internal evidence—for the most part admittedly negative—suggests, as we shall see, that the compilation was first assembled in Late Antiquity. Without being able to fix a precise date, we may attribute A with some confidence to the fifth or sixth century, a period in which compilations of a similar nature, namely catenae and compilations of medical, legal, and historical texts, were being produced—and when hippodrome madness, and consequently interest in horses, was at its height. Comparison of the M and B recensions reveals that the *Hippiatrica* was subjected to a *κανναισμός* similar to that undergone by many other Late Antique texts in the tenth century; the fact that the text was felt to be in need of a facelift implies that it was not new at that time.

---

18 The view of M. Ihm, who recognized the importance of M, was that neither the M nor the B recension was made under Constantine VII, but that both belonged to an earlier period, ‘Die Hippiatrica’, 318.
19 See e.g. Cameron, *Porphyrius the Charioteer*. 
THE M RECENSION AND THE FIRST COMPILATION A

Both the structure of M, and the condition of the text of the sources, imply that, of all the surviving recensions of the *Hippiatrica*, M represents a stage closest to the original compilation A.\(^{20}\) The simple, consistent organization of M does not bear traces of reworking: the alphabetical order of authors is undisturbed; and each author is named only in the lemma of the first excerpt in each series of passages from his text. This economical system of attribution is based on the premise that the author of every excerpt is known; the system is dependent for accuracy upon the uniform repetition of the order of the authors, and also upon the correct placement of excerpts with no attribution in their lemmata. All excerpts are accounted for in this way, none are anonymous (although there are a few instances of ambiguity). Moreover, there seem to be no interpolations or additions to the seven sources, though there are accretions at the end of the text, namely metrological tables and a few recipes.

Comparison of the structure and content of the M, B, and CL recensions of the *Hippiatrica* permits us to draw some conclusions about the organization and sources of A. The fact that all the treatises used as sources form a coherent corpus points to an earlier period, when a large number of specialized books would have been available.\(^{21}\) Their texts do not appear to have been subjected to paraphrase: distinct styles are recognizable even in the short excerpts, which are not introduced with δτι, ἐκ τοῦ or any similar indication of abridgement or excerption.\(^{22}\) Nor is there evidence that any of the sources had previously been gathered into a compilation.\(^{23}\) This ‘freshness’ suggests that the treatises were compiled not long after they were written, when a

---

21 In contrast to the motley assortments of texts used as sources for Middle Byzantine compilations, e.g. the *De administrando imperio* and the Bestiary dedicated to Constantine VII, and the uneven use of sources in e.g. the *Souda*. Whereas in Late Antiquity the number of available books was felt to be overwhelming, in the 10th c. the scarcity of books is lamented; cf. I. Ševčenko, ‘Re-reading Constantine Porphyrogenitus’, in J. Shepard and S. Franklin (eds.), *Byzantine Diplomacy* (London, 1992), 189–93.
22 The Bestiary draws on two versions of Aelian, the full text and an epitome; excerpts from the full text are labelled ἐκ τοῦ παλάσιο. Excerpts in the Bestiary from Philostorgius’ *Ecclesiastical History* are prefaced with δτι.
23 K.-D. Fischer has observed that *Mulomedicina Chironis* II and III appear to be compiled of excerpts from Apsyrtus, Sotion, and Farnax; ‘Ancient Veterinary Medicine’, p. 200. Although thus related in form to the *Hippiatrica*, and also in content through use of Apsyrtus, the *Mulomedicina* was not a source for the Greek compilation. But could it have been a model for the *Hippiatrica*? The date and circumstances in which the *Mulomedicina* was compiled are even more obscure than those of the *Hippiatrica*; until they are elucidated, it is impossible to tell.
complete copy of each was available. Although none of these treatises can be dated with precision, they appear to belong, on the whole, to the third and fourth centuries AD. The names of the authors and those whom they cite are pagan; Constantinople is not mentioned, though more ancient cities are, and Christ is only mentioned, among diverse deities, in spells. There are no Slavic or Arabic loanwords in the source texts, nor is there reference to materia medica such as ambergris, nutmeg, or musk, whose use became common after Late Antiquity.

In organization, the M recension resembles a catena based upon Apsyrtus, into whose text are interwoven excerpts from the treatises of six related authors. Apsyrtus’ treatise, already divided up by subject into letters, formed a convenient starting-point for dossiers on each subject. The treatises of Theomnestus, Pelagonius, and Hierocles, which all draw heavily upon Apsyrtus, would have been easy to divide following suit. Eumelus was used by Apsyrtus, and Anatolius is also related to Apsyrtus through their use of the Mago–Diophanes tradition. Such use of one text as an armature appears to have been a standard device of compilation, and is not diagnostic of date.

That Apsyrtus is the foundation but not the focus of the compilation—the catena, to continue the analogy, does not serve to elucidate his text—is made

---

24 In what material form did these treatises circulate? The sources of the Hippiatrica appear to have been composed or compiled between the 3rd and 5th c. AD, the period when the codex began to overtake and replace the roll as the form in which books were produced. (The codex achieved parity with the roll c. AD 300: C. H. Roberts and T. C. Skeat, The Birth of the Codex, 37.) A papyrus fragment of one author, Anatolius, has recently been identified; his treatise, divided into twenty books, appears to have been published in the form of rolls. Hierocles’ treatise, divided into two books, was also presumably presented as two rolls.


26 From Late Antiquity: catenae of two or more authors using not a scriptural text but another commentary as an ‘axis’ (to use Devrese’s term); ‘Châines exégétiques grecques’, cols. 1092–3. In the Digest, the order of subjects is taken from that of the Praetorian Edict; O. Lenel, Edictum perpetuum (3rd edn., 1927; repr. 1956); cf. Honoré, Tribonian, 140. The backbone of the anonymous Periplus of the Euxine Sea is the periplus of Menippus; A. Diller, The Tradition of the Minor Greek Geographers (Lancaster, Pa., 1952; repr. Amsterdam, 1986), 102 ff. Chronological lists of rulers and patriarchs are used as the skeleton of chronicles, as W. Witakowski observes: The Syriac Chronicle of Pseudo-Dionysius of Tel-Mahrê: A Study in the History of Historiography (Studia Uppsala, 1987), 74. Medieval examples: the treatise of Apollodorus is the basis of the Poliorcetica of ‘Heron’, Siegrecraft, ed. D. F. Sullivan (Washington, DC, 2000), 1.25–40, pp. 27–8; while that of Aristophanes of Byzantium provides the subject-headings for the second book of the Bestiary of Constantine VII, whose title provides a clear description of the procedure: ‘Ἀριστοφάνου τῶν Ἀριστοτέλεως ἐπὶ ζῴων ἐπίτομή, ὑποτελείτων ἑκάστῳ ἡμερίῳ καὶ τῶν Άλλων καὶ Τιμοθίου καὶ ἑτέρων τιοι περί αὐτῶν εἰρημένων (Aristophanes’ Epitome of Aristotle’s On Animals, with, placed under [the heading of] each animal, the things said about them by Aelian, Timothy, and some others’), ed. Lambros, p. 1.
clear by the method of compilation of M. Toward the end of the text, each author in turn heads the series of excerpts. It thus appears that the intent of the original compiler was to exploit fully each of the seven texts. This intention is in contrast with the more usual desire of compilers to eliminate repetition and contradiction.\textsuperscript{28} We may infer that all of the seven authors were considered equal in authority by the compiler, and also perhaps that the veterinary literature available was not overwhelming in quantity.

As in other disciplines, the compilation of hippiatric texts resulted in the creation of a canon of authors.\textsuperscript{29} That they are seven—a ‘canonical’ number—and that all seven texts were presented in full may well indicate that the creation of a veterinary canon was the compiler’s deliberate intent.

Within the canon, individual authors function differently from the way they do alone. The combined effect of many voices drowns out individual differences: the opinion of a single author has less weight when it is contradicted by the opinions of three others in excerpts placed immediately afterward.\textsuperscript{30} This is the case, for example, with Apsyrtus’ opinion about treating madness, \textit{μανία}, by isolating the horse in a darkened stall (M307), adopted by Hierocles, but contradicted by Eumelus (M309), Hippocrates (M312), and Pelagonius (M313). In the \textit{Hippiatrica} the chronological relationships between authors are not made clear in the presentation of the texts, so that any notion of progress must be deduced by the reader from comparison of texts.\textsuperscript{31} In later recensions, as we shall see, a hierarchy is created by the order of presentation of the excerpts or by the comments of an editor.

This twofold organization—by subject and by author—does not give the encyclopaedia any sort of analytical structure, but is simply a combination of filing devices used to organize documents of different types.\textsuperscript{32} Assuming that the structure of the M recension is an accurate reflection of A, one may only conclude that the compiler had no desire to impose his identity on the compilation, but preferred instead to give prominence to the source

\textsuperscript{28} Cf. e.g. the statements in the prefaces of Oribasius, ed. Raeder, I.3; of Procopius of Gaza (catena on the \textit{Octateuch}), \textit{PG} 87.1, cols. 21–4; of the compilers of the \textit{Digest}, \textit{C. Deco auctore} 4; of Theodore Lector, ed. G. C. Hansen, \textit{Theodoros Anagnostes Kirchengeschichte}, 2nd edn. (Berlin, 1995), p. 1.

\textsuperscript{29} In the case of the law, texts not included in the compilation were rejected as non-authoritative by the so-called ‘Law of citations’, a constitution of Theodosius and Valentinian (426), \textit{Cod. Theod.} I.4.3; cf. Schulz, \textit{Roman Legal Science}, 281. In the case of the veterinary texts there was no formal condemnation of authors not included in the compilation; nevertheless inclusion seems to have contributed to the survival of texts.


\textsuperscript{31} The comments of the editor of L on the relation of Apsyrtus, Hierocles, and Tiberius are revealing of the confusion which may arise in this respect.

\textsuperscript{32} The poetic anthologies of Meleager, Philip, and Agathias provide examples of organization by subject, or in alphabetical order, or by regular alternation of authors: see A. Cameron, \textit{The Greek Anthology from Meleager to Planudes}, (Oxford, 1993) 19–43.
treatises.\textsuperscript{33} The decision to present excerpts from each author in alphabetical order according to the author’s name avoids the imposition of a hierarchy of importance and places emphasis on the authors, who are treated as distinct, recognizable authorities. The order is not absolute, but based on the first letter of the names only:\textsuperscript{34} although the first inversion, Αfolios before Ανατόλιος, may be explained by the importance of Apsyrtus’ text,\textsuperscript{35} there is no obvious reason for ‘Ἰπποκράτης to be placed before ‘Ἱεροκλῆς.

The order of subjects, in which no logical principle may be discerned, may well be derived from Apsyrtus’ treatise. The misplacement of a number of excerpts in the process of excerption confirms this view. For example, the greeting of Apsyrtus’ letter on διάρροια (diarrhoea) refers to a letter on κρυθήαις (laminitis) previously sent to the same person; the two letters follow one another in M, so that the excerpt on diarrhoea intrudes into the series on laminitis.\textsuperscript{36} One duplicated passage offers a clue about the method of excerption: the end of a passage from Eumelus appears once in its correct place and once prefaced to another Eumelus excerpt.\textsuperscript{37} It would thus appear that in this instance at least, excerpts were copied from a manuscript in which the passages to be included had been marked.\textsuperscript{38} Four other remedies are duplicated in full in different parts of the compilation, possibly as the result of carelessness on the compiler’s part; alternatively, the doublets may have been present already in the source treatises, since the excerpts in question are from Apsyrtus and Pelagonius, authors who themselves compiled material from different texts.\textsuperscript{39}

\textsuperscript{33} The sources are given prominence in the title of M, ‘Ἀφυρτός, Διοκλέως, Πελαγιών καὶ λαπτών κεφάλαια περὶ θεραπείας ἰππων’ ‘Chapters on the healing of horses from Apsyrtus, Diocles, Pelagonius, and others’ (fo. 1 r). The error (of transliteration?) Διοκλέως for ‘Ἱεροκλῆς implies that this title was not drawn from the text by the scribe of M; one may wonder whether it bears any relation to the original title—if one existed—of the compilation. On the term κεφάλαια, not used in this sense before the 5th c. AD, see Méhat, Étude sur les ‘Stromates’ de Clément d’Alexandrie, 119.

\textsuperscript{34} As was conventional, absolute order being restricted to lexicographical works: see L. W. Daly, Contributions to a History of Alphabetization in Antiquity and the Middle Ages (Brussels, 1967), 95.

\textsuperscript{35} In the alphabetical collections of the Apophthegmata Patrum, St Antony, the first monk, heads the list out of seniority, though his name is not the first in absolute alphabetical order; cf. J.-C. Guy, Recherches sur la tradition grecque des Apophthegmata Patrum (Brussels, 1962), 19.

\textsuperscript{36} M102 and 103, table of contents of M, CHG II p. 3.

\textsuperscript{37} Eum. M107 = B16. 4, CHG I p. 90 and M1027, CHG II p. 98. Oder explains the repetition by imagining that the passage was written in the margin between two columns of text; CHG II p. xxii. It is also possible that it was part of the main column of text, and simply copied twice.

\textsuperscript{38} The only manuscript of the History of Theophylact Simocatta has marginal notes which correspond to the ἐποθέσεως of the Constantinian Excerpta: it has been proposed that this was the copy used by the compilers. P. Schreiner, ‘Die Historikerhandschrift Vat. gr. 977: ein Handexemplar zur Vorbereitung des Konstantinischen Exzerponwerkens?’, JOB 37 (1987), 1–29.

\textsuperscript{39} Aps. M115 and 209; Pel. M615 and 721, 126 and 231, 146 and 966; see CHG II p. xxii, also Hoppe, ‘Pelagoniussstudien’, 39–40. On the other hand, it has been suggested by Fischer that the compiler of B used two versions of Pelagonius; ‘Two Notes on the Hippiatrica’, 371–5.
A number of displacements of individual excerpts and series in M may be interpreted as errors of ‘filing’ in A. The majority of these may be attributed to confusion of similar words in the lemmata, without reference to the text of the excerpt. For example, an excerpt with the lemma πρὸς βαυλσοίς intrudes into a series πρὸς βουλιμίαν; similarly, περὶ χωλέας ἐν γόνασιν appears among passages labelled περὶ χωλέας. These slips imply that the first compilation was assembled without great care, and possibly not by a veterinary practitioner, who might have been more attentive to the content of the excerpts.

It appears that even material present in the source texts but not of a specifically medical nature was included in the original compilation. M contains several prefaces, most prominently Apsyrtus’ dedication of his treatise to Asclepiades, but also a few lines which introduce his work or chapter on cows. Hippocrates’ preface is preserved at the end of M. M does not include Hierocles’ prooimia, which are featured prominently in the B, CL, and RV recensions; however, it is logical to assume that these were present in A and removed by the editor of M, rather than added by the editor of B from an independently surviving copy of the treatise. Anatolius’ compilation had a preface which is preserved in Arabic and echoed in Photius’ review; it may have been considered too general in nature to be included in the veterinary compilation. And there is no trace in any version of the Hippiatria of Pelagonius’ rhetorical dedication, preserved in Latin, or of the preface which appears in the Arabic translation of Theomnestus. The reuse of old prefaces is a feature of many compiled texts; other non-technical material from sources is included, for example, in Justinian’s Digest.

The anonymity of A (unless a preface is missing) might suggest that the compilation was a private project. The identity of the compiler remains a mystery, but it is not too difficult to imagine that in the late fifth or early sixth century, the age of hippodrome mania, of Porphyrius the charioteer, and of the great compilation projects under the quaestor Tribonian, someone with experience in excerpting technical texts, and perhaps also an interest in horses, might have undertaken such a task.

---

40 Listed by Oder and Hoppe, CHG II pp. xxii–xxiii.  
41 M916, CHG II p. 90.  
42 M1068, CHG II pp. 104–5.  
43 e.g. the De orthographia of Cassiodorus: V. Law, Grammar and Grammarians in the Early Middle Ages, p. 95 and n. 24, p. 117; the Periplus of the Euxine Sea: Diller, Minor Greek Geographers, 102 and 118; and, from the Middle Byzantine period, the fourth book of the Palatine Anthology: Cameron, The Greek Anthology, 149.  
44 Honoré, Tribonian, 252.
THE M RECENSION

Parisinus gr. 2322, the sole manuscript to contain the M recension, provides a terminus ante quem of the late tenth century for the text. The manuscript itself may well have been produced at Constantinople; its single band of decoration (Pl. 2) resembles the simpler types of palmettes in roundels in B. The use of gold, and the good quality of the parchment, indicate that the manuscript must have been an expensive book; annotations in the margins indicate that it was also used for practical reference.

It is probable that the M recension, based upon A, pre-dates the massive effort of reorganization of the B recension. Was the M recension produced in the context of transliteration? Technical manuals were among the first to be transliterated; interest in them may have been fuelled by technological rivalry with the Arabs, who at this time began to acquire, translate, and use Greek scientific texts. Since the only additions of the compiler are the lemmata, errors of transliteration in these would seem to be evidence that the compilation antedates the introduction of the minuscule script. Errors in the lemmata of M include ΚΟΛΟΥΜΕΝΟΥ for ΚΟΛΟΥΜΕΛΑΛΟΥ, ΣΠΑΔΟΝΤΑΣ for ΣΠΑΔΟΝΤΑΣ. The title of the compilation in M contains the error ΔΙΟΚΑΣΟΥΣ for ΙΣΡΟΚΑΣΟΥΣ (Pl. 1), unlikely to be the result of misreading a minuscule hand.

There are indications that the lemmata of the transliteration copy, the common ancestor of A and B, were in uncialis: an excerpt labelled ΚΑΤΑΣΚΥΦ ΚΑΥΣΤΗΡῖΟΣ is placed in a chapter on caustics, evidently (as Oder and Hoppe point out) having been misread as ΚΑΤΑΣΚΥΦ ΚΑΥΣΤΗΡῖΟΣ. Of course, the title and lemmata may well have been copied in uncial even after the text was transliterated; one may note that the lemmata in M are in a half-uncial.

Anatolius, the only source to be transmitted independently of the compilation in Greek, may be used as a test. Where the text of Anatolius in Geoponica XVI has ΧΥΑΙΚΌΣΝΤΑ, the reading of M is ΔΙΥΆΙΚΆΝΤĆĆ, apparently from a different transliteration. The latter appears to have been the basis for the change in B to διηθήθεντα.
Was there more than one transliteration of the hippiatric compilation? The presence of the same transliteration errors in M and in recensions derived from B indicate that both branches of transmission derive from a single transliteration. The error $AXC\text{\ae}I\text{\ae}TH$ for $MC\text{\ae}I\text{\ae}TH$ appears in M; the passage is not included in B, but does figure in the RV recension, which is derived from B. The correction $\chi\varepsilon\ell\omega\varsigma$ in L must be based upon the same erroneous transliteration.52

In what way, may we imagine, does M differ from A? The verbose lemmata of M, drawn, as Björck has shown, from the text of the excerpts, probably reflect those of A.53 Similarly, the text of the excerpts, apparently not subjected to editorial reworking, seems to have been taken over from A without change. A certain amount of content was omitted, namely the many passages of Hierocles that duplicate material in Apsyrtus.54 Excerpts from Apsyrtus are eliminated when Theomnestus gives a fuller account, namely in the series περὶ παραγωγῆς τραχήλου and περὶ πληγομονῆς καὶ ὀμότητος.55 The interests of the editor of M appear to have been practical rather than literary: Hierocles’ prooimia are omitted, (apart from one short fragment containing information about breeding);56 as are the passages in which he simply paraphrases Apsyrtus. A practical, rather than learned, character is also illustrated by the lack of attention to the Latin names of Apsyrtus’ addressees, which are sometimes omitted,57 and very often garbled in M. ’Αρματοκοργίτη Τομίτη may simply be the result of careless copying; the name is given in B as ’Αρτεμά τοῦ Τομεί.58 Δεγμίω κλαστικῶ in M appears as πλαστικῶ in B, the corrupt Δεγμίω evidently in a common ancestor.59 Although Theomnestus’ reminiscences are included, they constitute case-studies, and are therefore of medical interest. Even a list of synonyms given by Apsyrtus was deemed superfluous.60

There may have been more magical remedies present in A than in M, since the Latin text of Pelagonius includes spells not present in M. A prescription from Dioscorides for mange was added at the end of M.61 The conversion tables of measurements present in the M and B recensions represent a useful addition.

---

54 Cf. Ihm, ‘Die Hippiatrica’, 316. There are a few exceptions, e.g. M163 = B50.2 included instead of Aps. B50.1 to which it is very similar.
56 M1039, CHG I p. 6.
58 M438 = B54.1, CHG I p. 239.
59 M114 = B16.1, CHG I p. 88; Oder and Hoppe suggest that the name was originally Decimius Classicus.
60 B2.1, CHG I p. 13.
to the compilation. Were they present in A, or added at a later stage? In the pinax of M, one is numbered consecutively with the rest of the text, while the last is unnumbered. One of them is from the treatise on cosmetics attributed to Cleopatra, quoted in Galen and Aetius of Amida.

**THE B RECENSION AND CONSTANTINE PORPHYROGENITUS**

The principal manuscript of the B recension, Phillipps 1538 (Pls. 3–5), provides a tangible link of the *Hippiatrica* to the scriptorium of Constantine VII (r. 945–59). The nature of the text, too, fits the pattern of useful compilations re-edited or produced under the auspices of that emperor. Just as, in Late Antiquity, the emperor had promoted the practice and transmission of crafts (veterinary medicine among them), so too, in the Middle Byzantine period it was the duty of the emperor to promote the arts of war and peace. The legal compilations of the Middle Byzantine period refer to the great projects and emperors of Late Antiquity. And the preface of the *Geoponica*, which constitutes a keynote speech or programmatic statement for this activity, paints an Anastasis-like picture of Constantine VII rescuing rhetoric and philosophy from the yawning abyss of forgetfulness, and initiating a renewal of every science and craft.

Although the B recension lacks the dedicatory preface conventionally affixed to the Constantinian editions and compilations, it is not impossible, since several folia have been lost from the beginning of Phillipps 1538, that such a preface was once present. A number of other features of execution of

---

64 Ibid. I. 233–6.
67 *Geop.*, pp. 1–2: Πρώτα μὲν γὰρ φιλοσοφίαν τε καὶ ῥητορικὴν ὄρθ ἐπαφθήκειν καὶ πρὸς ἀγαθή βιοθεί τῆς λιθῆς καταδεδυκώσας εἰμηχάνως καὶ συνετῶς ἀναλυκόσα. τῆς κραταῖαν σοι χειρα ταύτης προσεπισίν. ἔπειτα δὲ καὶ πάσαν ἄλλην ἐπιστήμην τε καὶ τέχνην πρὸς καινομον ἐπανάγγειε.
the B recension also reflect the tastes and methods of the tenth-century editors; the most important of these being the polishing of the style of the text. The re-editing of the Hippiatrica was conducted in very similar manner to the metaphrasis of the Lives and Passions of saints, an imperial project carried out by a team working under the direction of Symeon the Logothete.69 The hallmarks of this process have been identified using texts which have been transmitted in both pre-metaphrastic and metaphrastic versions: allusions to specific places, events, and people were omitted, Latin loanwords (considered inelegant) were replaced with Greek equivalents, some new sources of information added, and a certain uniformity imposed on diverse texts through paraphrase into a higher style.70 It is telling that the Hippiatrica received a treatment accorded, in the tenth century, to texts from an earlier period. In contrast, the prefaces to compilations produced in the tenth century invariably state that for clarity’s sake colloquial speech, καθαμαλημένη καὶ ἀπλούστερα φράσεις, is used.71 The text of the B recension is still plain technical prose, but the alterations are significant, and are often not sufficiently taken into account.

The B recension has a more analytical organization than the simple twofold arrangement of M. Excerpts are gathered by subject into some 130 numbered chapters, each headed with a title, for example κεφάλαιον μὲ περὶ σπληνίδος: the subjects of the excerpts are now given more emphasis in the ordering of the text than are the names of the authors. These chapters are arranged in an order more coherent than that of M, beginning with grave or systemic diseases, then proceeding more or less a capite ad calcem, and ending with accidents, bites presumably listed the 132 chapter-headings in the B manuscript; 33 of these chapter headings survive on the two sides of fo. 1. Allowing for the fact that some chapters have long titles that might take up more than one line in the large script, and assuming that only 17 or so lines were filled on each page, there would still be space on the missing leaves for the 99 remaining chapter-headings, some blank space at the end of the table of contents—and for an elaborate headpiece and a prooimion. For comparison, the 10th-c. prooimion of the Geoponica takes up roughly 50 lines in the modern edition; that of the treatise περὶ δαιναίνης roughly 25 lines. Although several of the Renaissance copies of B have tables of contents, not one has a prooimion: if one was present, it apparently was lost before the copies were made. It seems less likely that the text of B was prefaced with illustrations, as suggested by Weitzmann, ‘Macedonian Renaissance’, 194–5, although it is true that dedication portraits are present in the later Italian hippiatric manuscripts which we shall consider below.

69 Praise of the project, including allusion to imperial sponsorship and to a team of co-workers, in the encomium of Symeon by Michael Psellus: Michaelis Pselli orationes hagiographicae, ed. E. A. Fisher (Stuttgart and Leipzig, 1994), 276–86.


71 De cerimoniis, proem., p. 5; De administrando imperio, 1, p. 48; Theophanes Chrysobalantes, Περὶ δαιναίνης in Cohn, ‘Bemerkungen’, 156; cf. also ‘Heron of Byzantium’, 1, ed. Sullivan, p. 28 (Wescher, p. 199).
and stings, and recipes for drugs divided into drenches and ointments. This organization is reminiscent of compilations on human medicine (such as that of Alexander of Tralles, produced in the sixth century), and may have been effected on their model. Within the subject headings, the regular alphabetical order of authors is disrupted. Apsyrtus is still first, but Hierocles’ text is placed immediately after that of Apsyrtus in some sixty chapters as though to emphasize the parallelism between them, and invite comparison of their content or style. Moreover, longer narrative passages are placed prominently at the beginning of each chapter, with shorter recipes appended at the end; this arrangement makes the text more readable, but passages of text by the same author may be separated. This reordering has a negative consequence for the identification of the excerpts: evidently no care was taken to relabel those passages that in M are identifiable only by their placement in a series of excerpts attributed (in the initial lemma) to a certain author—so that many of the recipes that appear toward the ends of the chapters in B are anonymous, simply labelled ἄλλο or εἰς τὸ αὐτό. Such loss of identity is especially noticeable in the case of Pelagonius, much of whose treatise consisted of lists of short prescriptions introduced simply with ἄλλο, ἄλλος in the Greek translation. Although in the chapters of B, there are traces of series from M, the thorough disruption of the consecutive numbering of M suggests that the excerpts were copied onto slips, or even cut apart and reshuffled, rather than being copied out in blocks. In the process of rearrangement, some excerpts oddly placed in M have been moved to a more logical context; doublets have also been eliminated.72 Other excerpts are misplaced through obvious misunderstandings, resulting, as in M, from confusion of similar words.73

B differs from M not only in the overall organization of the text, but also in content.74 Much more of Hierocles’ text is included, including the two prooimia. The first appears after Apsyrtus’ chapter on fever, and is identified as Ἰεροκλέως εἰς αὐτό προοίμιον.75 Hierocles’ second preface is placed roughly in the middle of the compilation (chapter 59), and labelled Ἰεροκλέως ἱππατείας Β’; however, there is no indication that the B recension was divided into two books. (That prooimia attracted the attention

---

72 For example, Apsyrtus’ chapter on diarrhoea is placed among other excerpts on that subject, whereas in M it had figured in a series of excerpts on laminitis: M102=B8.1–3, CHG I pp. 48–50; M103 = B35.1, CHG I p. 192; the doublet περὶ ἑλκοῦς ἐν ἁρτίῳ eliminated; M115 and 209; B17.1, CHG I p. 91.

73 B77.23: προσμονή of intestines misplaced in a series on swelling of legs; B56: ἵππατειῶν understood as τιμία, not τίλος; B57: κερκίς misunderstood as κέρκος.

74 These differences in content are not clearly represented in the Teubner edition. Omissions from B are printed partly as additions, in angle brackets, to the text of B in CHG I, partly in the apparatus to the text of B, and partly in CHG II as Hippiatrica Parisina.

75 B1.9, CHG I p. 3.
of the editors of B is confirmed by the title of chapter 129, περὶ ἄγχυμαισιμῶν σκευασίας. Προοίμιον Ἀφώτου.)

Two new sources, the treatise of Tiberius and a set of anonymous προγνώσεως καὶ ἰάσεως, are added to B. Tiberius is related to the agricultural writers: in the fragments of his text are numerous parallels with Anatolius and Africanus. His work included treatments for both horses and cows; though none of the latter appear in B, a list of them is appended to L, and some appear anonymously in RV. His name, and an allusion to 'denarii', suggest a Late Antique date. The προγνώσεως καὶ ἰάσεως are notable for their reliance upon cautery, and their avoidance of irrational remedies.

At the end of B are two recipes that call for materia medica introduced only after the Arab conquest: ambergris, galangal, etc. (Pl. 5) There seems to have been no attempt, though, to systematically incorporate innovations in pharmacology into the compilation.

Worthy of note is the excision of all passages of magical character—together with, for the sake of thoroughness, many excerpts which contain references to 'paradoxa' or 'Hellenes' (evidently understood as 'pagans'). (One superstitious remedy seems to have escaped the editor, namely, the recommendation by Apsyrtus and Pelagonius that a shrew-mouse encased in clay be used as an amulet against the bites of others.) Middle Byzantine legislation specifically retracted the concessions granted in the Theodosian Code for magic performed in the context of agriculture and of healing; the reflection, in the B recension, of this prohibition is further corroboration that the re-editing of the text was undertaken in an official milieu. Other omissions show that the editor's intention was to restrict the content of the compilation to horse-medicine: remedies designated specifically for cows are removed, as is a passage on the care of the foal.

In addition to alterations of content and organization, the text itself was given a minute overhaul. The lemmata of individual excerpts were standardized, for the most part in the form (author's name in genitive) περὶ οὗ πρός (subject), and made more succinct. A number of 'fossilized' vestiges of the

---

82 Aps. M694 = B87.1, CHG I p. 314; Pel. M707 = B87.6, CHG I p. 316.
83 Noailles-Dain, Les Novelles de Léon VI le Sage, Nov. 65, pp. 237–9: ἀποδέχεται δὲ πάλιν αὕτην ὡς σεμρήτων καὶ καρπῶν θεραπείαν... ἡμεῖς δὲ τὴν τοιαύτην μαγγανέαν ὀλθείραν μὲν ὑπάρχουσαν πενθόμεθα... εἰ τε ἔδη ἄλως τουαίτα φυλαθείς μαγγανεόμενος, εἶτε προβάσει τῆς τοῦ ἀόρατος θεραπείας, εἶτε ἀποτροπῆς τῆς τῶν καρπῶν βλάβης, τὴν ἑκάτην εἰπραττάθαι πωνήν... cf. note 65, p. 16 above.
85 M916, 917, 919, CHG II pp. 90–1. 86 M1065, CHG II p. 103.
87 Björck, 'Zum CHG, 23–4.
earlier forms of the treatises are likewise omitted, for example internal cross-references and addresses by Apsyrtus and Theomnestus to the dedicatees of their treatises.\textsuperscript{88} The compilation was further tidied up by the removal of traces of careless excerpting: the introduction to Apsyrtus’ discussion or book of treatments for cows, fragmentary in M, is eliminated from B, as are an epistolary greeting detached from the body of its letter, and a passage from Eumelus copied by mistake at the beginning of another excerpt.\textsuperscript{89} Finally, what may be considered a metaphrasis of the text was carried out, in accordance with the fashion of the time. The result, as in the case of the \textit{Lives} of saints, is that a certain amount of the flavour of the Late Antique language is lost, while the individual characters of the texts and their authors have been blurred. A number of words of Latin origin are purged and replaced with Greek equivalents, one of the most ubiquitous examples being the replacement of \textit{στάμπλων} with \textit{ιππόστασις}.\textsuperscript{90} Phrases recommending remedies, a feature most evident in the writing of Theomnestus and Pelagonius, are often omitted.\textsuperscript{91} Syntax is upgraded, for example with use of optatives\textsuperscript{92}, the addition of particles, and the abridgement of long paratactic sentences (often with the result of obscuring or altering their meaning). The editors also seem to have had a preference for the passive imperative, introducing it frequently into instructions for treatment, often apparently influenced by use of the form in Eumelus and Hierocles.\textsuperscript{93}

A real hierarchy may be discerned in the treatment of the various sources: some authors evidently passed muster, while others did not. Hierocles is not much changed; his style seems to have been the most favoured by the editor. Apsyrtus’ text underwent more alteration. On the level of content, all his magical remedies are omitted, as well as some passages referring very specifically to people and places.\textsuperscript{94} Although the Latin names and titles of Apsyrtus’
addresses are copied with care in B, more correctly than in M, evidently out of antiquarian interest, \(^95\) in contrast, banal words of Latin origin in his text are omitted. \(^96\) Some changes appear to be influenced by the style of Hierocles. \(^97\)

From Themnsmestus’ text were removed a number of concrete details, such as the mention of Carnuntum and the Julian Alps—evidently beyond the horizon of the editor. \(^98\) The text of Pelagonius was abridged in several places, and many of the Latin loanwords employed by the translator removed. \(^99\) From Eumelus’ text were removed long passages prescribing sympathetic application of the animal’s own blood, and a cure involving hellebore. The two versions of a treatment for thinness provide an example of the rewriting of his text: \(^100\)

---

**Eumelus in M**

*Tà de tov toioúnton sómata polelís téis tríphesou déontai pró to diá to tòiasitès mazléses pléiona tin tróphiés autón lamabánein orxen. kai prúton mé chr xoróxtaian, óste eín topical xhýría to òron stamblézetai. dióster kai to sómata kai tois ónuxi autón to autó symbálleita. chrh dé eis anávou kai kóxhaxi to chma kataspránvassai pró to tin tòos plódon sklhrwos. kathédoous dé autón óxhron úspostprnóstha. tó dé tróphi kai órobois mióprásan.*

---

**Eumelus in B**

*Tà de tov toioúnton sómata polelís téis tríphesou déontai pró to di’ autís pléiona tin orxen tin tróphiés lamabánein. chrh dé kai en topical xhýría autá istasthai toutó gár kai to sómata kai tois ónuxi autón symbálleita. prosmugynóstha de tis tróphi kai óroboz. kai kathédoousi de autóis óxhron úspostprnóstha.*

---


\(^96\) e.g. ἰομάδαρον (rosmarinum, rosemary) M573 = B36.5, CHG I p. 196 app.; ἀπονοοτήν (apii semen, celery seed) M63, CHG II p. 36; καστρόσιον (castrensis, of a camp) M94, CHG I p. 267 app.; γούττα (gutta, drop) M952 = B96.19, CHG I p. 333.


\(^98\) M319 added in text of B34, CHG I pp. 183–4. Another instance of contraction of geographical horizons: Cartaghe is changed to Chalcedon M33.8, CHG I p. 168 app. and 33.14, CHG I p. 172.

\(^99\) e.g. πρὸς τραχθῶς μάζων changed to περὶ ἐκβολῆς σπουδῶς M1128, B26.28, CHG I p. 135. Σταμβλίζω changed or omitted throughout; also omitted are e.g. τρακτόν M189 = B26.23, CHG I p. 133 app.; λάμβαν M673 = B114.11, CHG I p. 365 app.

\(^100\) M88, B68.4, CHG I p. 265.
Their bodies require much rubbing-down, so that through such massage they gain more appetite for their feed. And it is necessary to take care first that the animal is stabled in a dry place. For this benefits their body and their hooves equally. The ground should be covered over with wood or pebbles for the hardening of the feet. Let chaff be strewn under them when they lie down. And let vetch be mixed with the feed.

Hippocrates comes off worst of all with numerous excerpts omitted, and a thorough rewriting of those that were retained. Two excerpts from his chapter on a type of colic (περὶ εἰλεώδους) illustrate the way the text was polished:101

Hippocrates in M

Ἠλεώδης δὲ γίνεται, ὅταν χορτασθῇ, ἐστὶν δὲ κάκιστον τὸ πάθος ὅταν χορτασθῇ καὶ μὴ πέψῃ. γίνεται ἐν τῷ κόλῳ ὁπερ πλίθος . . . ἐὰν δὲ μὴ παρασκευάσῃ τὸ σφόνιομα, τὴν χεῖρα καθετέον λεκειασμένην καὶ ἐκκομίζειν τὰ ἐμφράγματα . . .

Ileodes occurs when it eats its fill. The disease is very bad when it eats its fill and does not digest. In the colon it becomes like a rock . . .

If the blockage is not eliminated, the hand should be inserted, greased, to take out the blockage . . .

Hippocrates in B

Εἰλεώδες γίνεται, ὅταν εἰς κόρων ἔμπληκτη ἔμομ καὶ μὴ πέψῃ. γίνεται ἐν τῷ κόλῳ ὁπερ πλίθος, καὶ ἐστὶ κάκιστον τὸ πάθος . . . ἐὰν δὲ μὴ ἀποσκευάσῃ τὰ ἐνοχλοῦντα περιτώματα, τὴν χεῖρα ποιήσαις λιπαράν, κάθες εἰς τὴν ἑδραν, καὶ ἐκκομίζει αὐτά . . .

Ileodes occurs when an animal fills itself to surfeit and does not digest. For in the colon it becomes like a rock, and the disease is very bad.

If the troublesome faeces are not eliminated, greasing your hand, insert it into the anus, and remove them.

THE C RECENSION

C and L are considered to be derived from the same lost ancestor, D. Although they share most of their content, they are different in character, and for this reason we shall consider them separately. The core of text in CL is that of the B recension. Oder and Hoppe point out, however, that C and L cannot be derived from the B codex itself, since both manuscripts contain the three chapters omitted, apparently by accident, from B.102 What was the archetype

101 M1124, CHG II p. 111 and B126.1, CHG I p. 382; M624, CHG II p. 78 and B126.3, CHG I p. 383; cf. also περὶ στρόφου M587 = B45.3, CHG I p. 217.

102 CHG II pp. xxiv-xxv.
of D? It is unlikely that Phillipps 1538 is the first copy of the B recension: it is difficult to imagine that the beautiful calligraphy was executed at the same time as the metaphrasis was being dictated. There probably existed a draft of the text from which the presentation manuscript was copied: it evidently contained the three chapters missing from the numbered series in B, but present in C.

Such a draft may have circulated more freely; it need not have circulated very far, since the nature of the texts added to C points to a date and place of compilation fairly close to that of B. The *Kestoi* of Julius Africanus were available in the tenth century to the editors who incorporated excerpts from them into the compilation of the military tacticians. One of the manuscripts of this collection, Florence, Laurentianus Plut. 55. 4, is a product of the imperial scriptorium, part of the same group as B. Indeed, three passages of Africanus appear both in the *Hippiatrica* and in the *Tactica*. Björck has already suggested that the borrowings from human medicine in C were drawn from a compilation rather than individually from Oribasius, Aëtius, and Paul of Aegina. We may observe that these same Late Antique medical manuals were used for the tenth-century compilation of Theophanes Chrysobalantes, another work dedicated to Constantine VII. In the *Epitome de curatione morborum* of Chrysobalantes, material from older medical encyclopaedias is paraphrased and presented anonymously, as it is for the most part in C. And indeed, a number of the anonymous additions to C may be found in Chrysobalantes as well. These passages appear in the same order in C as they do in Chrysobalantes, a result of the mechanical process of excerpting.

The list of horse-breeds in C was also used by the compiler of the Bestiary dedicated to Constantine VII. Whereas the list is alphabetized in C, in the Bestiary, the first breed described is the Libyan—an indication of the origin of the compiler of the list? Other excerpts in C may have come from the

104 Irigoin, 'Pour une étude des centres de copie byzantins II', 178–9. As in the case of B, bands of decoration have been removed.
105 Vieillefond I.6 ἔπινον τιθοσία, I.9 ἔπην μὴ πτοείσθαι, I.13 πρὸς ἡμίονων λακτίζουσαι. B84, CHG I pp. 381–2, appears in Africanus as well.
106 ‘Zum CHG’, 41.
108 e.g. C11.10 = Chrysobalantes ch. 87, p. 290; C12.2 = Chrys. ch. 123, p. 376; C33.3 = Chrys. ch. 132, p. 416.
109 Ed. Lambros, II. 588–609.
110 The Libyan breed is not described in complimentary terms, however; but cf. Aelian, *HA* III.2.
Bestiary, namely those which appear to be from Aelian but are either anonymous or attributed to another author.\(^{111}\)

The organization of C, with information on the choice and breeding of the horse first, followed by medical treatments, may well be modelled upon *Geoponica* XVI (i.e. Anatolius). That the two compilations were felt to be somehow related is attested by the addition to chapter XVI of the tenth-century recension of the *Geoponica*, of the names of authors from the *Hippiatrica*.

In the *Souda*, Simon of Athens is associated with veterinary medicine, but the statement on veins attributed to him is in fact a quotation from Vegetius that appears anonymously in C, after the excerpt from Simon.\(^{112}\) This misunderstanding indicates that the fragment of Simon’s text was already included in the *Hippiatrica* by the late tenth century (if we may assume that is when the *Souda* was compiled). The *Souda* also contains an incantation for donkeys with dysuria that appears in C.\(^{113}\) It has been established that the compilers of the *Souda* drew upon the encyclopaedia of statecraft or *Excerpta* compiled for Constantine VII, and also a version of the poetic encyclopaedia compiled by Constantine Cephalas, the precursor of the Palatine Anthology;\(^ {114}\) it is not surprising that they should have used a new edition of the veterinary compilation as well. It seems likely that the Apsyr tus entry in the *Souda* was compiled at this time too.

Shared source-material thus appears to link C with a number of tenth-century compilations—the *Tactica*, the medical manual of Chrysobalantes, the Bestiary, the *Souda*—not least of which is the B recension. The ‘recycling’ of sources in different compilations is characteristic of the Middle Byzantine period.\(^ {115}\) C was probably produced not long after B, by someone with access to the imperial library.\(^ {116}\) It is also typical of Middle Byzantine compilations

\(^{111}\) C10.1, anonymous, *CHG* II p. 140; C24.6, attributed to Africanus, *CHG* II p. 161 = Ael. XI.18, Bestiary. ed Lambros, II.620.

\(^{112}\) *Souda*, s.v. *πάλη* (Adler, T 987) and *Κίμων* (Adler, K 1621); Vegetius C93.24 = Veg. Lat. III.4.


\(^{114}\) C. de Boor, 'Suidas und die konstantinische Exzerptsammlung', *BZ* 21 (1912), 381–424 and *BZ* 23 (1914–19), 1–127; Cameron, *The Greek Anthology*, 22 n. 6.

\(^{115}\) Ševčenko, ‘Re-reading Constantine Porphyrogenitus’, 189–91: same sources used in the *De administrando imperio* and in Theophanes Continuatus, where they are paraphrased into higher style; Late Antique historians used only via the historical *Excerpta* for the DAI and the *Vita Basili*, etc.

\(^{116}\) Two other compilations of the 10th c., the *Tactica* of Leo VI and the *Book of Ceremonies*, seem to have been revised shortly after they were assembled: see A. Dain, 'Inventaire raisonné des cent manuscrits des “Constitutions tactiques” de Léon VI le Sage', *Scriptorium*, 1 (1946–7), 40–5; M. Featherstone, 'Further Remarks on the *De Cerimoniiis*', *BZ* 97 (2004), 113–21.
that the sources added to C are of Late Antique rather than medieval date.\textsuperscript{117} The only exception, namely the single contemporary source named in C, is the Patriarch Theophylact (Pl. 11), to whom two recipes are attributed.\textsuperscript{118} Son of the usurper Romanus Lecapenus, promoted to the patriarchal throne at the age of 16, Theophylact was notorious for his love of horses, which Gustave Schlumberger called ‘digne d’un grand seigneur anglais’.\textsuperscript{119} According to the twelfth-century historian Cedrenus, Theophylact maintained a stable of a thousand horses, fed them on almonds, dates, and pistachios, and left the cathedral of St Sophia in the middle of the liturgy to attend to the foaling of his favourite mare.\textsuperscript{120} Since there seems to be no cause to doubt any of the attributions in C, it follows that the recipes attributed to Theophylact should be genuine.\textsuperscript{121} His reputation as a churchman may not have been above reproach; as a horseman, however, he was an authority to be heeded. The two recipes are not only a more vivid legacy of this colourful character than the patriarchal documents issued under his name; but they also provide a further indication that C was produced in Constantinople. Theophylact was patriarch in 933–56 and died in 962; since he is not referred to in the lemmata as deceased, C may in theory have been produced at any time after he became patriarch in 933, but since it draws upon the B recension, probably belongs after 945 when Constantine VII (the patron of the B recension) assumed sole rule.

One may wonder why treatments borrowed from human medicine were added to the veterinary compilation: were there no more hippiatric treatises (old or new) available? Or were the medical texts just conveniently at hand? The additions are very diverse in character. A few short recipes include \textit{materia medica} such as camphor and sandalwood which became commonly

\textsuperscript{117} Cf. Lemerle, ‘L’encyclopédisme à Byzance’, 615.

\textsuperscript{118} \textit{Μετίστοιον νεφρικός} C21.5, \textit{CHG} II p. 158; \textit{περί σεωράματος} C80.22, \textit{CHG} II p. 221. The kidney remedy contains nutmeg (\textit{καρυόβιλλον}), which is not prescribed by the Late Antique veterinary writers.

\textsuperscript{119} \textit{Un empereur byzantin du dixième siècle: Nicéphore Phocas} (Paris, 1890), 15.

\textsuperscript{120} Ed. Bekker, II pp. 332–4; the scene is illustrated in the Madrid Skylitzes, fo. 137\textsuperscript{v}. Theophylact’s stable was near St Sophia, and was converted by Constantine VII into an old people’s home; Theophanes Continuatus, ed. Bekker, p. 449.

\textsuperscript{121} One wonders whether any of the anonymous excerpts in C may be ascribed to Theophylact; certainly a good candidate would be C10.3: ἀνὴρ μὴ δέναται γεννήσας ἵππος, γράψον ἐλκ τὰς δύο πλευρὰς αὐτῆς τῶν τεσσαρακοστῶν ἐβδομάδων φαλλών ἑως τὸν ἐκεί ὁδίνας ὡς τικτόσης, ‘If a mare is unable to give birth, inscribe on her two flanks Psalm 47 as far as “there, pain as of a woman in travail”’, \textit{CHG} II p. 141. Cedrenus’ disapproving remarks are also echoed in an anonymous recipe entitled \textit{ἀνίσθημα ἵππος}, which contains pine-nuts (designated by the late word \textit{κουκουνάρια}), almonds, raisins, dried figs, pistachios, dates, saffron, cloves, dried ginger, tragacanth, hyssop, marjoram, pepper, cinnamon (called \textit{τραφίδιον}), must, and sweet wine: C56.7, \textit{CHG} II p. 187.
used only after the Arab conquest.  

Whereas the text of B is confined almost exclusively to veterinary material, the C recension is more varied in nature. In the first place, it contains three descriptions of the points of the horse: those of Simon, Theomnestus, and the anonymous passage attributed by Oder to Anatolius, but which, as we have seen, probably comes from another agricultural manual of the same family, such as that of Tiberius, which was certainly used by the compilers of B, C, and L. The excerpt from Simon (Pl. 10) is the ultimate source of all the later descriptions of conformation. One wonders where the editors of C found Simon’s text. There is also much more material about breeding and the care of mare and foal, from Aristotle, Africanus, and Apsyrtus. Another excerpt from Aristotle adds information on feeding and watering. Fragments from Vegetius in Greek translation describe veins and bloodletting, and the ages attained by different breeds. Theomnestus’ instructions for grooming and training round out these non-veterinary elements, which give C the character of a general manual on horse-care.

In contrast to B, the C recension teems with magic and superstition. The most notable source of this sort of advice is Julius Africanus. In the excerpts from the Kestoi are eye of frog (as an amulet against eye problems), brain of dog (for fractures), and mystical pentagons of ἐφέσια γράμματα to be inscribed on the hoof. In fact, in terms both of content and of style, the father of Christian chronography fits in rather well among the hippiatric authors. His sources appear to have included agricultural manuals: he mentions the Quintilii, used by Hierocles and in the Geoponica as well. Africanus himself was used by Anatolius. Elements of Africanus’ sympathetic remedies are

---

122 Camphor (σαφόρα) and sandalwood (σάνδαλον) C58.5, CHG II pp. 192–3.
123 C10.1, CHG II p. 141 (via Aelian).
125 C10.5, CHG II pp. 141–2.
126 C10.10, CHG II p. 143 = Arist., HAV 545b; C75.1, CHG II pp. 214–15 = Arist., HAVII (VIII) 595b (interestingly, not from the Epitome of Aristophanes of Byzantium).
127 C10, CHG II pp. 140–6.
129 C7.1, CHG II p. 134; C94.24–6, CHG II p. 239. On the translation of Vegetius, see Ortoleva, La tradizione manoscritta della ‘Mulomedicina’, 61–8.
131 ὁφθαλμοὶ ἐδ’ ἐπιστήμην ἄννος ἀφερέθησαν καὶ περισσαθέντες ἐν λυμί, καὶ ἁρμακῆ, C8.9, CHG II p. 138; κυνὸς ἐγκέφαλος κάτηγμα πολοῆς ἤμερας ἦ’ ἐ’ ὧν ἄλλον ἐγχειρομένος καὶ ἐπιστήμην ἐ’ C62.2, CHG II p. 193 κύκλῳ ἀπλῆς ἅπετον = προπονήτου = ποδὸς εὐωνύμως εὐωνυμογραφία ἐγχάρακτα χαλικῷ ... ἡ γραφὴ δὲ κεῖται ἐν τῷ τῷ ὑποκεϊμένῳ πενταγώνῳ ... C81.10, CHG II p. 225.
132 Kestoi II.3.
similar to Apsyrtus’ magic, for example in the use of snakes. Africanus’ literary taste links him to Hierocles; both men seem to have used similar miscellanies as sources for horsy anecdotes and information, and Africanus’ text also presents parallels with Timothy of Gaza, ps.-Oppian, and Aelian. A remedy for dysury attributed to Africanus in C is found in Aelian; the passage is also present in the Bestiary of Constantine VII (from Aelian).

Excerpts from Africanus include descriptions of exotic practices such as that of branding horses with leopard-spots; this practice is alluded to in ps.-Oppian’s Cynegetica:

Without dyes, fire forges a different appearance in the coat, and counterfeits the markings of the horse. A fish-white horse (this is the name of a colour) is inscribed in this way: a round branding-iron, hollow inside, with its circumference curled into the letter O is red and applied, placing and raising it, to the horse which has been tied up.

If a horse’s urine is retained, let a maiden, loosing the girdle she is wearing, strike it in the face with the girdle, it will immediately urinate copiously, and the pain is relieved.

134 See Wellmann, ‘Pamphilos’, 50 ff., also C44.4, CHG II p. 177 with comments of Oder–Hoppe.
135 C24.6, CHG II p. 161; Ael. HA XI.18, Bestiary ed. Lambros II.620. In Aelian the remedy is associated with a passage on the vanity of mares, with an allusion to Sophocles’ Tyro, that also appears in C10.1.
The circle is black outside, and the original body remaining without counterfeits a leopard, when this is applied to the legs and the neck.

Africanus’ dark portrayal of the character of the horse (also included in the *Tactica*) forms a nice contrast with Hierocles’ fulsome encomium:137

Σπανίως, ὡς ἐν ἀνθρώπῳ, οὕτως δὲ καὶ ἐν ᾿Ιπποὶς εἰλικρινῆς ἐστιν ἀρετή, ἐγχύος τοῖς ἀγαθοῖς κακία, βάσκανος, ἵνα μὴ τὸ καλὸν καθαρὸν φανῇ . . . τραχείς, ἀλλ’ ἐρωτικοί, θηρευταί, ἀλλ’ στομίας, βαδισταὶ καὶ ὑβρισταί. τοῦ ἀναβάτας ἄλλοι οὐ δέχονται, οἱ δὲ ἀποσεῖονται. παρατρίβοντι ἐνιοὶ τοίχοι ἢ φυτοῖς.

Rarely, as amongst men, is there sincere virtue in horses. For alongside goodness there is vice, jealousy, so that the good does not show clear... they are rough, but passionate; hunters, but hard-mouthed; amblers and arrogant. Some do not accept their riders, others shake them off; while some rub against walls or plants.

A good deal of Africanus’ advice is in fact purely medical in nature; we have seen for example that his remedy for cough is very close to one recommended by Eumelus. Vieillefond has observed that long quotations from Africanus appear unaltered in C, while short passages tend to be summaries.138

**THE L RECENSION**

The L recension, published in a barely comprehensible form as notes and excerpts in eighteen pages of the Teubner edition, and dismissed as secondary in value to C,139 is nevertheless interesting evidence of a certain kind of medieval taste. BL Sloane 745 provides a *terminus ante quem* of the thirteenth century for this recension. The organization of the text in L bears witness to a substantial effort on the part of the editor to introduce a greater degree of structure into the collection of texts. His work displays an intensification of tendencies evident in the B recension: first, the prominence accorded to Hierocles in B is carried a step further, and Hierocles assumes first place in the hierarchy of authors (Pl. 12). The juxtaposition of Apsyrtus and Hierocles in B invites the reader to compare their texts; in L the editor has already made the comparison and reports on his view of their relationship. His comments reveal that where the texts of Apsyrtus and Hierocles were similar, the editor, no doubt influenced by the elegance of Hierocles’ text, preferred to eliminate Apsyrtus, the source, rather than Hierocles, the adaptor. Hierocles’ dependence upon Apsyrtus is not considered a fault (as it was by the editor of M), or perhaps it is simply misunderstood:

---

137 C81.8, *CHG* II pp. 224–5. Hierocles’ encomium figures in L, fo. 145v, but not in C.
138 *Les ’Cestes’,* 222.
139 *CHG* II p. xxvii.
The treatment is entirely similar and equivalent to [that of] Hierocles. Apsyrtus adds this:

The same interpretation has already been written in precisely similar terms by Hierocles as though in Apsyrtus' voice, as far as 'haemorrhaging' and the rest of the treatment is similar to the one already described by Hierocles. Apsyrtus and Tiberius, agreeing with Hierocles, read these things and passed them on in writing; we have omitted them on account of the repetition.

This sort of presentation represents the abandonment of the excerpt collection format in favour of a more analytical presentation of earlier material.

Another comment reveals the editor's opinion of the veterinary authors:

it has already been written by the other philosophers (Pl. 13).

The term φιλόσοφος 'philosopher' here is used in the 'popular' sense that it acquired in the Byzantine period, and simply denotes a sage or an educated man: in popular imagination, φιλόσοφοι and ῥήτορες, 'orators', were associated, as wise men. In addition to a taste for style over substance, the editor displays a lack of scruple in the attribution of excerpts. The largest number of false attributions are to Hierocles and Africanus. Hierocles was evidently considered by the editor of L not only an important veterinary authority, but also a 'philosopher'. Africanus was a figure of more widespread legendary reputation; there are also excerpts falsely ascribed to him in the Geoponica. In addition to Hierocles and Africanus (who are, after all, real sources of the text), the names

---

140 Fo. 114r. 141 Fo. 77r. 142 Fo. 103r. 143 One may compare, for example, the presentation of opinions in the so-called 'Anonymous Parisinus', a compilation of the Imperial period: Anonymi medici De morbis acutis et chroniis, ed. Ivan Garofalo (Leiden, New York, Cologne, 1997). 144 Fo. 85v. 145 On this use of the term see F. Dölger, 'Zur Bedeutung von φιλόσοφος und φιλοσοφία in byzantinischer Zeit', Byzanz und die europäische Staatenwelt (Ettal, 1953), 197-208. 146 'Africanus, au Moyen-Age, était devenu un personnage mystérieux . . . au cours des temps on lui a prêté bien d’autres œuvres, toutes apocryphes', Vieillefond, Les 'Cestes', 28, also pp. 69-70 on the Geoponica, pp. 218 ff. on L.
of a motley assortment of sages and sophists displace the names of the horse-doctors in the lemmata of L. A certain χωρικός to whom a remedy is attributed in C becomes Choricius the Sophist in L. The name of Herodotus is added to the lemma of an excerpt from Pelagonius which began simply ἄλλο. The Apollonius of C is transformed into Apollonius of Tyana, the first-century Neopythagorean ascetic who, like Vergil, was considered in the Middle Ages to have been a magician. Writings of an occult nature were attributed to Apollonius; moreover, he was believed to have endowed statues in Constantinople with apotropaic powers. The Patria of Constantinople credit him with the στοιχείωσις or ‘enchantment’ of various parts of the hippodrome; other writers attribute to him an image of a horse which calmed the unruliness of real horses and silenced their neighs. As he was associated with horses and the hippodrome, it might have been natural for the editor of L (working at the capital, where these legends were in the air) to identify the Apollonius of the text as the sage from Cappadocia, and add another famous name to his collection of ‘philosophers’.

THE RV RECISION

The oddly assorted texts which make up the RV recension represent in some sense a synthesis of trends which we have seen in the major recensions M, B, C, and L, with the vernacular Epitome. The selection of texts in RV provides a vivid illustration of the diglossia of the late Byzantine period: in both manuscripts, the treatise of Hierocles is followed by the Epitome, a juxtaposition of the most pretentious Greek veterinary manual with the one that is least pretentious. The two treatises are presented as a single work under a title which expresses both a taste for rhetoric and that for illustrious authorities from the past (along with an inability to spell their names):

147 C57.2 and app. for reading of L, CHG II p. 188.
148 M306 and app. for reading of L, CHG II p. 54.
151 e.g. a βιβλίον δοκτελεμάτων, ed. F. Boll, CCAG VII (Brussels, 1908), cod. 26, pp. 174–81. As Balīnās al-hākim, Apollonius is credited with the authorship of a work in Arabic on the anatomy and habits of animals, as well as an agricultural manual. See Sezgin, GAS III. 354–5.
Horse-medicine-wisdom of the wise orator Hierocles and Hypocrates and the wise Galin (sic).

Other developments, too, recall the character of L: in the excerpts from Apsyrtus, epistolary greetings are rewritten so that Roman soldiers become philosophers and kings. A number of magical and religious remedies enlist the aid of Christ and the saints; others invoke pagan philosophers and deities.

An innovation, in RV, is the presence of illustrations. The origins of the various elements of RV present a number of puzzles. In what context was the treatise of Hierocles reconstituted? Why was it copied together with the Epitome? When were the illustrations added to the two texts? What is the relation of the two treatises with the excerpts in the third part of RV? Connections to both Cyprus and South Italy may shed light on the mystery. The manuscripts, both belonging to the fourteenth century, provide a terminus ante quem for this recension.

THE RECONSTITUTION OF HIEROCLES

The reconstitution of Hierocles is made up of 121 excerpts divided into two books by a prooimion which, as in the B recension, is placed after the excerpt περὶ ὑστρυχίδων. The reconstitution of a treatise out of excerpts is not without parallel: for example, as we have mentioned, Hunayn ibn Ishāq's Arabic translation of the Hippocratic treatise On airs, waters, places was made by extracting the Hippocratic lemmata from Galen’s commentary on that text.154

Was the reconstitution of Hierocles made as part of the process of translation? In an Italian translation the reconstitution is associated with the Epitome as well. The Italian translation thus seems to have been made from a text related to RV, in which both the text of Hierocles and the Epitome were already associated and probably already illustrated. The translator’s note, if it refers to Hierocles and the Epitome, does not speak of a reconstitution. Moreover, Hierocles’ prooimia, and the author portrait that accompanies the prooimion to book II—prominent features of the reconstitution—are not present in the Italian manuscripts. That Latin translations of Hierocles and apparently of the

153 In V, fo. 5r.
*Epitome* as well were made by Bartholomew of Messina may explain the odd pairing of the two treatises in Greek and Latin manuscripts produced in the West. Only a complete collation of the text of the two translations with the Greek text of RV will provide an answer.

In the meantime, we may review the other possibilities for the origin of the reconstitution of Hierocles. Doyen-Higuet has observed that the composition of the text cannot be explained as the result of a skimming of excerpts of Hierocles from L, since numerous excerpts in the reconstitution are absent from L. It is also not made up of the Hierocles passages discarded from M, since much material is common to RV and M. On the other hand, the evidence of the B recension implies that a recension of the *Hippiatria* very close to A was subjected to decomposition and rearrangement in the tenth century. The texts of the seven authors, cut up or copied onto slips, were reorganized; to them were added excerpts from Tiberius. Since the reconstitution of Hierocles appears in both R and V in the company of excerpts from Apsyrtus and Tiberius—many of the last not used in B—one might imagine that RV is a by-product of the B recension, put together out of leftover materials, possibly at a later date. The text certainly represents another manifestation of the favourable view of Hierocles evident in the B and L recensions. In addition, the reconstitution of Hierocles is an attractive spin-off from the larger compilation; it may have been created as a presentation copy of the text. It is possible that illustrations were added to make a presentation copy more attractive; that the pictures are more decorative than informative lends some weight to this view. RV contains a portrait of Hierocles (Pl. 16), oddly placed in the middle of the treatise before the prooimion to the second book; perhaps another portrait or a dedication preceded the first book.

The presence of the *Epitome* along with the reconstitution of Hierocles in RV presents a paradox. The *Epitome* is more closely related to M than to B, and represents the opposite of the taste for rhetoric which one might see as the motivation for the reconstitution of Hierocles. Whereas the selection of excerpts from Apsyrtus and Tiberius was interpreted by Björck as an attempt to complement Hierocles’ text with additional information, the *Epitome* simply repeats much of the material in Hierocles in a plainer style. The two texts must have been produced to suit very different tastes or needs and united at a later date. Perhaps the contrast in style between the two texts

---


156 ‘Un manuel grec’, p. 40.

was not perceived, or not considered important by the person who ordered an illustrated copy of both.

THE EPITOME IN RV

The version of the Epitome in RV, according to Doyen-Higuet, does not represent the earliest form of the text. The excerpts in the third part of RV are, however, related to excerpts associated with the earliest version of the Epitome, present in three manuscripts, Vaticanus Ottobonianus gr. 338, Vaticanus gr. 1066, and Vaticanus gr. 114.\textsuperscript{158} In these three manuscripts, the Epitome is preceded by a poem on the points of the horse in dodecasyllabic verse attributed to Simon, Xenophon, and Apsyrtus.\textsuperscript{159}

Whereas the text of other versions of the Epitome is largely devoid of personal character, that in the RV recension includes a number of pithy asides. The practitioner should protect himself from the foul smells of certain materia medica:

\begin{verbatim}
άλλο εἰς χορδαφόν κόπρα ἀνθρώπινα καὶ οὐρον καὶ καπρίαν ἀμφότερα ταράξας ἐγχυματίζε, καὶ υγιαίνει αὐτίκα.

τούτο δὲ νόε, ὅτι τὸ πρῶτον εἴδος μόνον να τὸ ποιάσεις ποιάσαι τῇ μῆτῃ σου διατί εἶναι εὐώδες, καὶ σπόγγιας τὰ γένια σου νὰ μηθὲν μιρίζουσιν ἀπὸ τὸ καλὸν εἴδος.\textsuperscript{160}

Another for chordapsos. Drench with human and boar faeces and urine, having mixed them up all together, and it will immediately become healthy.\textsuperscript{158}

NB When you grasp the first thing, hold your nose, because it is fragrant! And sponge your beard so that it does not smell of the good stuff!

If treatment fails, the horse’s death ought to be commemorated with the ritual boiled wheat of an Orthodox memorial service:

\begin{verbatim}
ὅταν ἐμφραξίς γίνεται ἐν ἵππῳ ... κλύζε ... καὶ ἐὰν ἀρξηται λύσθαι ἢ κοιλία αὐτοῦ, συντόμως ἐλευθεροῖται, εἰ δὲ μή, διαφωνεῖ, τουτέστιν ψοφί. καὶ βράσαι τοῦ κόλυβα νὰ τὸ μνημονεύσεις.\textsuperscript{161}

When the horse has an impaction... give it an enema... and if its belly begins to be loosened, it will shortly be relieved; if not, it will die.

That is, it will croak: so boil up kolyva to remember it by!
\end{verbatim}

\textsuperscript{158} 'Un manual grec', 120 ff.
\textsuperscript{159} I hope, in the future, to publish this delightful text.
\textsuperscript{160} V54, CHG II pp. 287–8.
\textsuperscript{161} V51, CHG II 286–7. The last sentence is nearly a 12-syllable verse. On kolyva, see A. Scordino, 'I coliva nel typicon di Messina', Studi Meridionali, 3 (1970), 271–5.
Alternatively, one can make *boudin noir* from its blood:

> ὃταν ἀἷμα ἐξέρχεται διὰ τῶν ἔνων τοῦ ἵππου... ταχέως διαφωνεῖ, καὶ μόνον κοπίας. μάζωσι τὸ ἀἷμα αὐτοῦ καὶ ποῖσας λουκάνικα.\(^\text{162}\)

When blood comes out of the horse’s nostrils, it dies speedily.
You will only trouble yourself. Collect its blood and make sausages!

These interjections provide a amusing contrast to the formal elegance of Hierocles’ prooimion, with which RV begins. No doubt the witticisms were marginal notes in the archetype of RV which became incorporated into the text.

**OTHER TEXTS IN RV**

The contrast with Hierocles becomes more pronounced in the third part of RV. The collection of excerpts in the third part includes material from the *Epitome*, from Apsyrtus, and from Hierocles, and so might appear to be related to the first two parts of the recension, rather than being an accretion. Yet this third section is not illustrated, and furthermore contains material from sources unrelated to the *Hippiatrica*. The reconstitution of Hierocles and the *Epitome* appear in the company of magical remedies for horses and cows, selections of excerpts from Apsyrtus and Tiberius,\(^\text{163}\) and other excerpts attributed to Galen (many of which are found in other versions of the *Epitome*). In V, this section of the text is grandly but illiterately entitled (Pl. 19):

> Ἕτεραι ἤδεισος ὀφέλειμαι εἰς τὰς ἱατρίας τῶν ἰππων, ἐκ πολλῶν ὡς ὅρας ἀνθολογηθέντων ἐκ πολλῶν ἄλλα δεῖ καὶ ἐπιστήμων ἄνδρῶν φιλοσόφων [sic].\(^\text{164}\)

Other useful notices concerning the healing of horses, gathered (as you see) from numerous learned and wisdom-loving (*philosophon*) men.

The ‘philosophers’ advertised in this title appear in the garbled greetings of Apsyrtus’ letters:

> Ἀψυρτος Ἀριστοτέλη φίλη χαίρειν.\(^\text{165}\) (Apsyrtus to his friend Aristotle, greetings).

> Ἀψυρτος Δαμνάτω τῷ φιλοσόφῳ χαίρειν.\(^\text{166}\) (Apsyrtus to Damnatus the philosopher, greetings).

---

\(^{162}\) V56, *CHG II* p. 288. The last sentence is nearly a 15-syllable verse.

\(^{163}\) Tiberius is not named in the lemmata of these excerpts, but may be identified as their author by comparison with B, C, and especially the table of contents of Tiberius’ work on cows preserved at the end of the *pinax* of L. *CHG II* pp. 269–71; Björck, ‘Le Parisinus gr. 2244’, 513–15.

\(^{164}\) R fo. 145\(^5\).

\(^{165}\) R fo. 209\(^5\).

\(^{166}\) R fo. 176\(^6\) (letter addressed to Δαμνάτως Τομεύς, Damnatus of Tomi, in B18.4, *CHG I* p. 93).
One of Apsyrtus’ letters is attributed to Galen:

Φίλοι ἀριστος ὅ Γαληνός ὡς γράφει σπουδέως ἔχων ἐν τῇ ὑποτροφίᾳ καὶ ζητούντος τυνῶν .

As most excellent friend Galen writes, ‘Being skilled in horse-keeping, and asking certain people . . .’

In addition to philosophers, tyrants and kings appear in the greetings:

Βάρων τυράννων Αψυρτος φίλῳ βέλτιστῳ χαίρειν Πυθανομένου σου φίλε . . .

Varon of the tyrants, Apsyrtus to his most worthy friend, greetings. Since you asked, friend, . . .

This letter is addressed in M to Τυράννος (Τοράννος in B) Βάρων. Also worthy of note is the inversion of the antique order of the greeting, in accordance with medieval practice. The adaptation of Apsyrtus’ introduction to his collection of recipes for drugs shows the same inversion, and also the fact that Δέσποτα, used in Late Antiquity as a form of respectful address or simply to mean ‘sir’, was, in the medieval period, an imperial title:

Κέλερ στεφθόρω δεσπότη Αψυρτος χαίρειν Δέσποτα στεφθόρω Κέλερ Αψυρτα [sic]. φάσκω τάδε προσαγορέω σου γέρας. βουλομαί σε διά γραφῶν σωλυφθόγγων καὶ ρήσεων λεξικών. συμφωνεῖν ἀπαντούσης τῆς τῶν φαρμάκων βοηθείας.

To Celer, the crowned lord, Apsyrtus, greetings. Crowned lord Celer Apsyrt. I utter these things, I salute you with honours. I desire that you through many-toned writings and lexical utterances connect the aid of drugs that is demanded.

This degeneration of the text into pretentious gobbledygook is reminiscent of passages in the B recension of the Passion of St Catherine, a text that has also been associated with South Italy—and in which ancient philosophers and sages also feature. In RV, Apsyrtus’ letters begin to resemble the magical texts with which they are interspersed. Some of these are antique magical formulas in Christian guise; others are pseudo-literary:

---

167 R fo. 106v.
168 R fo. 207v.
169 M73 = B9.1, CHG I p. 53.
171 The title was used from the reign of Justinian I: R. Guillard, ‘Études sur l’histoire administrative de l’empire byzantin. Le despote, δεσπότης’, REB 17: 52–89.
174 V101, 102, 103, CHG II p. 297.
For pestilential disease of cattle.

A twelve-syllable verse in iambcs: Disease of cattle is the sickness of ruin.

Others invoke pagan sages, philosophers, and sorcerers:

"Thesale Thesale first coming from Thessaly and discovering herbs and powers. Thesale I have borne and I speak and I will come having an incantation, as of a lion, and of the god Orpheus and of Democritus and Circe…"

But in addition to providing evidence of popular taste, several of the spells may imply that RV was produced in a Latin-speaking area. A remedy for snakebite includes both an incantation (described as a γητεία) composed of pseudo-Latin and Semitic words, and a combination of Greek and Latin prayers:

"Caris, carita, rembutor, sel. Emmanuel. barake… With three Our Fathers and 3 Ave Marias.

A formula to be used against epilepsy, entitled, in transliteration, 'contra morbum caducam' (translated as 'perī ἀδελφικοῦ'), consists of the Greek Trisagion and an appeal, in transliterated Latin, to the Sicilian martyrs Agatha and Lucy, the bishops of Rome Linus and Cletus, the Apostles Peter and Paul, Cyprian (probably the bishop of Carthage rather than the magician Cyprian of Antioch)—all of whom are commemorated in the Latin Mass—as well as the Magi and St Donatus:

"V204, CHG II p. 313. Another invocation of the Magi against epilepsy in E. Stemplinger, Sympathieglauben und Sympathiekuren in Altertum und Neuzeit (Munich, 1919), 6, 83, and 89. See also F. Pradel, Griechische und Süditalienische Gebete, Beschworungen, und Rezepte des Mittelalters (Giessen, 1907), 14–33, and 35. The transliterated passages are reminiscent of the 'medical Latin' in Le Malade imaginaire.

175 CHG II pp. 300–1. Also marked στίχος are the metrical captions of some illustrations, e.g. fo. 134; cf. Lauxtermann, Byz. Poetry, 187.
176 V fo. 116.
177 V104, CHG II pp. 297–8. Another invocation of the Magi against epilepsy in E. Stemplinger, Sympathieglauben und Sympathiekuren in Altertum und Neuzeit (Munich, 1919), 6, 83, and 89. See also F. Pradel, Griechische und Süditalienische Gebete, Beschworungen, und Rezepte des Mittelalters (Giessen, 1907), 14–33, and 35. The transliterated passages are reminiscent of the 'medical Latin' in Le Malade imaginaire.
Another set of spells invokes the aid of diverse saints for whom cows are to be sacrificed, lamps lit, and genuflections performed for the protection of flocks and vines (Pl. 17). The unusual names of these saints, Exouthenios, Eulampios, Photios, and Andronikos, identify them as the Άγιοι ΄Αλαμάνωι. These 300 obscure personages are said to have been anchorites who fled the Holy Land after the Arab conquest (according to Leontios Makhairas) or the thirteenth-century reconquest (according to Étienne de Lusignan) and took refuge in Cyprus. There is even a reference to a Cypriot toponym in RV: ὁ Ἁγίος ᄀΑλέξανδρος ὑπὸ τοῦ ἄφιόυ must be the same as St Alexander ἐλς τὴν ᄀΑλεξανδροῦ in Leontios Makhairas. Tryphon and Tychon, better-known Cypriots, also appear in the list. The remedies are attributed to Hierocles (!) in a note at the end of the list in R.

Did this set of texts enter RV on a loose leaf of parchment, or was an ancestor of the two manuscripts in Cyprus? The practice of veterinary medicine in medieval Cyprus is attested by the dedicatory inscription, probably of the thirteenth century, on a fresco of St George in the church of Panagia Phorbiotissa, the 'Virgin of the Herds', at Asinou. The inscription names the donor twice, once in dodecasyllabic verse as Ἡπιατήρ εὐσεβὴς Ὑικηφόρος and a second time in prose as Ὑικηφόρος Καλληνᾶς, that is καλλιγάς 'farrier'. Ἡπιατήρ is reminiscent of the epigram on Sosandros in the Planudean Anthology, in which the term ἁκεστορία is applied to veterinary medicine. The thirteenth-century Assizes of Cyprus contain a section περὶ τῶν ἱατρῶν τῶν κτηνῶν; a farrier is referred to as μαρετζᾶς ἤγουν

180 R fo. 95r. The slightly abbreviated text of V is in CHG II pp. 311–12.
182 Cf. J. Goar, Euchologium sive rituale Graecorum (Venice, 1730), 554–5: Ἐὐχή τοῦ Ἁγίου μάρτυρος Τριφάντου, λεγομένη εἰς κάπως καὶ ἀμπελάνως, καὶ εἰς χωράφως; H. Usener, Der heilige Tychon (Leipzig and Berlin, 1907).
184 AP XVI. 271, ed. H. Beckby, 446. See above, p. 12.
Further evidence comes from an inventory of the possessions of Guy d’Ibelin, Latin bishop of Limassol, made shortly after his death in 1367. In this inventory is mentioned a payment to ‘un mareschau qui mega la bouche dou palefrain qui s’avoit brizé les dens, et pour oiniemens et son travail’. Also included in the inventory is a list of books: no. 32 is described as liber in papiro de medicina equorum (sic). The other books, works on theology and philosophy including logica Burlay and a liber phisicorum Burlay, appear to have been in Latin; presumably the veterinary manual was as well. But one wonders whether it might have been related to RV, or to the Latin translation of Hierocles.

THE ILLUSTRATIONS OF RV

The illustrations of RV, western in style, provide more evidence that the Greek texts were copied in a Latin milieu. The RV recension is endowed with one of the most extensive cycles of illustrations present in a Greek medical text. In the Paris and Leiden manuscripts, each excerpt is preceded by a single image, which usually takes up about half the page. (Two illustrations take up a full page in V, those depicting a kick from another horse and a fall from a cliff.) The relation of each image to the text it illustrates is not consistent. Some pictures depict the cause of a condition (an attack by a scorpion, consumption of chicken-droppings); in others, the symptoms (sprained neck, hair loss); and in others, the veterinarian’s treatment (administering a drench or an enema). A portrait of Hierocles appears at the beginning of his second book. In R, he is seated at an empty lectern, and gestures in the manner of an orator (Pl. 16). Behind him is an architectural frame. In V, he is depicted as an evangelist: seated, wearing a halo, and gesturing with a rod toward an

---


\(^{186}\) J. Richard, ‘Un évêque d’orient latin au XIVe siècle, Guy d’Ibelin O.P., évêque de Limassol et l’inventaire de ses biens, 1367’, BCH 74 (1950), 129. Guy had five horses and a number of mules; he also employed three falconers, Yany, Carsello, and Cochifos; as well as slaves named Dimitri le Turc and Dimitri le Grec.


\(^{188}\) Setting aside the pictures of plants, bottles of oil, snakes, etc. that accompany the texts of Dioscorides and Nicander, the only illustrated Greek medical manuals are the famous 10th-c. copy (Florence, Laur. Plut. 74.4) of Alexander of Citium’s commentary on the Hippocratic treatise on replacing dislocated joints, and Soranus’ treatise on bandaging in the same MS.
open book that floats before him. In R, the classicizing author-portrait is in a very different style from the rest of the figures, who are depicted in distinctively western attire, consisting of particoloured tunics (Pl. 15) and hats with a turned-up brim. In V, fantastical animals appear in the miniatures, occasionally administering treatments. These animals also testify to a western influence.

What is the origin of the illustrations in RV? Weitzmann (followed by Kádár and Degenhart and Schmitt) has argued that they are copied from a Late Antique model, presumably the original copy of Hierocles’ text. This hypothesis presents a number of difficulties. First, Björck demonstrated that the text of RV is derived from the hippiatric compilation rather than from independently preserved copies of Hierocles, Apsyrtus, and Tiberius. Moreover, no reference to pictures is to be found in the text either of the Epitome or of Hierocles (who seems to have been content to illustrate his treatise only with figures of speech). In other illustrated Greek practical manuals, the pictures or diagrams are more closely integrated with the text. S. Lazaris, who is at present writing a thesis on these illustrations, is of the opinion that the Epitome, being a practical text, was illustrated first, and provided a model for the illustration of the reconstitution of Hierocles. But none of the eleven other copies of the Epitome contain illustrations, nor is there any reference to figures in the text. Moreover, it seems unlikely that the author-portrait attached to the reconstitution of Hierocles could have been derived

189 Fo. 55r.
190 These elements of costume have been analysed by S. Lazaris, ‘L’illustration des traités hippiatriques byzantins’, 521–46, who concludes that they represent western influences on Byzantine miniaturists who were working from a Greek model.
193 For example, in Apollodorus’ Poliorcetica, the illustrations are mentioned in the preface and referred to throughout the treatises: σχήματα πολλά καὶ ποικίλα διέγραφα … τῷ σχῆμα ἑπίκεται, ὑπογράφαται, καταγράφαται. C. Wescher, Poliorcétique des grecs (Paris, 1867), 137, 158–60, 271, etc. The same is true in the commentary by Apollonius of Citium on the Hippocratic treatise on dislocations in Laur. Plut. 74. 4: τῶν δὲ ἕξι τρισομονδίων τῶν ἐμβόλων δὲ ὑπομηνύτων, ζωγραφίζει τὰ σχεδία γίνεται τὸ κατὰ μέρος εξηρθησάρως παραγωγῆς τοῖς ἀρθροῖς ὑπαθαλαμοφανῶς τὴν θέαν αὐτῶν παραγχωσάμεθα σου, ed. J. Kollesch and L. Kudlien, Corpus medicorum graecorum, 11.1.1 (Berlin, 1965), 14. In the poliorcetic manual of ‘Heron of Byzantium’, the medieval editor altered the illustrations of his antique sources, but he mentions this fact, and his illustrations are both labelled and related to the instructions in the text. D. F. Sullivan, Siegecraft: Two Tenth-Century Instructional Manuals by ‘Heron of Byzantium’, (Washington, DC, 2000), p. 26 and Sullivan’s comments, pp. 8 ff.
from the *Epitome*, an anonymous text which goes under the names of not one but two ancient authorities.

A consideration that has been consistently overlooked is that the pictures are a uniting feature of the otherwise incongruous juxtaposition of Hierocles with the *Epitome*. Since neither of the two texts appears to have been illustrated in its original form, it seems probable that the pictures were introduced when the two texts were put together to form an edition. Yet the third section of RV, whose composition from the *disiecta membra* of A and B seems to hold clues about the formation of the edition, is unillustrated.

Were the pictures created on the basis of the text, or were they borrowed from another illustrated hippiatric treatise? Their correspondence to the text in many cases is close enough to make one imagine that they were based upon reading of the excerpts: for example, the swimming horse depicted in R fo. 5v illustrates one part of Hierocles’ instructions for treating sore withers and shoulders, κατανυσάθεσθαι ἐστὶ θερμῶ καὶ ποιζέσθαι. (Pl. 14) But there are also cases in which the link between text and image is tenuous at best. A notable lack of detail—the horses are shown without halters, the horse-doctor is often shown simply holding a horn in the nostril of the horse without pouring in a drench (Pl. 15)—seems to imply that there is some distance between R and V and the archetype of the illustrations.

Given their distinctly western style, and the connections in the text of RV to Sicily and Cyprus, it is possible that the manuscripts are copies—executed in the local idiom—of an illustrated Greek manuscript. The best-known Greek text with illustrations in western style is the Madrid Scylitzes; it has been suggested that the illustrations of the text have their origin in a presentation copy made for an emperor at Constantinople, a copy of which was sent to Sicily, where in turn it was copied by artists of the Norman court in the hybrid local style.

It may be more likely, though, that the illustrations of the *Hippiatrica* were introduced in the West. Whereas R and V have no relatives among Greek medical manuscripts, there is a large family of illustrated Italian manuscripts of veterinary texts. Particularly worthy of note is Berlin, Kupferstichkabinett 78 C 15, attributed by Degenhart and Schmitt to Naples, c.1290, and containing an Italian translation of Giordano Ruffo’s Latin text with a full cycle of illustrations. The illustrations of the Berlin manuscript are more

---

195 B26.17, CHG I p. 130; cf. instructions for λοιφῶν ἀθαλάττηρ, M909 = B77.2, CHG I p. 293.
196 As has been noted by Doyen-Higuët, ‘Contribution à l’étude des manuscrits illustrés’, 100.
197 One is reminded of Pliny’s observation about the practice of illustrating technical treatises: ratione blandissima, sed qua nihil paene aliud quam difficultas rei intellegatur, NH XXV.8 (a reference to Crateus).
199 A number of these are described and illustrated in L. Cianti and L. Brunori-Cianti, *La pratica della mascalcia nei codici medievali di Mascalcia* (Bologna, 1993).
precise and informative than are the rather crude illustrations of R and V; they depict the restraint of the horse during medical treatment, with attention to tack and to the instruments of the horse-doctor. These illustrations, placed in the lower margin of each page, are related in style to those in a manuscript of the *De arte venandi cum avibus* of Frederick II.\(^{200}\) It is also possible that, in polyglot Sicily, models could have been furnished by an illustrated Arab treatise on veterinary medicine such as that of Aḥmad ibn al-Ḥasan ibn al-Aḥnaf, of which three illustrated thirteenth-century copies are known,\(^ {201}\) or on horsemanship (*furūṣiyā*), of which there are many illustrated examples.\(^ {202}\) That the illustrators of Arabic hippiatric texts had Greek models before them is taken for granted by those who have examined the miniatures.\(^ {203}\) It may be relevant, however, that analysis of an extensive cycle of miniatures accompanying an Arabic translation of Dioscorides shows that illustrations of Arabic literary texts furnished more immediate models for the copious—but often purely decorative—pictures in the medical manuscript.\(^ {204}\)

The evidence of the illustrated Italian translation may shed light on the enigmatic pairing of Hierocles and the *Epitome*. The text exists in three manuscripts of the fifteenth century: New York, Pierpont Morgan Library 735, London, Additional 15097,\(^ {205}\) and Modena a. J. 3. 13 (ital. 464). The illustrations have been analysed by B. Degenhart and A. Schmitt, who conclude that the New York and London manuscripts are closely related to one another and to the illustrated manuscripts of Giordano Russo; the Modena manuscript has pen-and-ink drawings in a different style.\(^ {206}\)

The contents of the Italian manuscripts consist of the following texts:

1. A translation of the treatise of Giordano Russo into Italian made by the Roman Lorenzo Russo,\(^ {207}\) but attributed in a certain Boniface of Calabria.

---


\(^{204}\) Buchthal, 'Early Islamic Miniatures', 20 ff.

\(^{205}\) London, Add. 15098 is a later copy of 15097.


\(^{207}\) On the relation between these texts, G. de Gregorio, 'Notizia di un trattato di mascalcia in dialetto siciliano del secolo XIV', *Romania*, 33 (1904), 368–86.
2. A liturgical calendar containing references to the feast-days of saints associated with Sicily, including Cataldo and Agatha.

3. An Italian translation of the two books of Hierocles plus the *Epitome*, presented as a single work and numbered consecutively in 152 chapters. The contents and order of the chapters are the same as in RV, including the passages from Apsyrtus, περὶ σκορπίων, περὶ φθορᾶς τριχών. The chapters are divided at the same point into two books; however, there is no trace of Hierocles’ prooimia. The portrait of Hierocles that figures in RV is likewise absent from the Italian manuscripts. Instead, they begin with eight full-page illustrations, including a dedicatory portrait of an anonymous horseman.

A translator’s note provides ambiguous evidence. The note is placed after the first treatise, that is the Ruffo–Rusio text, and seems to refer to it:

Finito ene lo libro de missere Bonifacio et translatato de grammatica e de lettera greca in latina per frate mastro Antonio de Pera mastro in tologia in sciencia greca et altre scientie de l’ordine deli predicaturi ... Questo missere Bonifacio fo medico de utriusque artis scilicet de cerugia e de fisica valentissimo et sufficientissimo philosopho et a nigremantisco et archemista chiamato Mastro Bonifacio e fo gentilissimo e rechissimo homo de l’alta grecia de Calabria ...

E cossi lo dicto mastro frate Antonio ave translatato questo presentito libro de quella profonda e chiusa sciencia grammaticha grecha in volgata lettera e grammaticha et in lengua ytalica et latina.

Finished is the book of lord Boniface, and translated from Greek grammar and letters into Latin by the monk, master Antonio da Pera of the Order of Preachers, master in theology, in the knowledge of Greek, and other sciences. This lord Boniface was a doctor of both arts, namely surgery and physic, a mighty and capable philosopher, and as a necromancer and alchemist called Master Boniface; he was a most gentle and rich man of the greater Greece of Calabria.

And thus the said monk, master Antonio, translated the present book from that profound and obscure science of Greek grammar into the common alphabet and grammar and into the Italian and Latin tongue.

The translator, Antonio da Pera, was evidently a Dominican friar; his name might suggest that he was part of the Genoese community at Galata, an origin that would explain his knowledge of Greek. Boniface of Calabria is otherwise unknown. Although da Pera states in his note that Charles of Anjou bestowed upon Boniface the fief of Gerace, there is no corroborating evidence in the property registers of the area. The manner in which da Pera refers to

---

208 Morgan Lib. M735, fo. 48r.
Boniface does not suggest personal acquaintance. According to Degenhart and Schmitt, the ‘treatise of Boniface’ was a Greek translation of Lorenzo Rusio’s adaptation of Giordano Ruffo, which da Pera then translated into Italian. In order to avoid the multiplication beyond necessity of translations, one might interpret the translator’s note as a reference to the RV texts, and imagine that Boniface was perhaps simply the possessor of a collection of works on veterinary medicine in different languages.

The Greek text from which the translation was made was evidently related to RV, with its combination of Hierocles and the Epitome. It is not difficult to understand why the translator eliminated Hierocles’ prooimia, for these are hopelessly distorted by misspellings in RV (Pl. 18). The same goes for the omission of the texts in the third part of RV. There are a number of interlinear and marginal notes in Italian in V which might be related to the process of translation; however, Doyen-Higuet has concluded that they have no obvious connection to the Italian text. The content and style of the illustrations of the Italian version confirm the link with the illustrated Greek manuscripts. Some of the pictures resemble one another closely (Pls. 14 and 24); others are mirror-images, which might result from the method of copying. The Italian manuscripts show more detail in the illustrations than do R and V: for example the jugs containing medicines, which rarely appear in the Greek manuscripts, are consistently depicted. Perhaps the archetype of R and V had its origin in a collection of Greek texts assembled for translation. One may note that in the Italian translation, without the prooimia of Hierocles, and with the addition of the illustrations, the reconstitution and the Epitome are less incongruously paired.

210 Corpus der italienischen Zeichnungen, p. 399, and the diagram p. 405.
211 As has been suggested by S. Lazaris, ‘Contribution à l’étude de l’hippiatrie grecque et de sa transmission à l’Occident’, 152. See also Cianti and Brunori Cianti, La pratica della mascalcia, 95–6.
213 Cf. G. Cavallo, ‘La trasmissione scritta della cultura greca antica in Calabria e in Sicilia tra i secoli x–xv’, Scrittura e Civilta’, 4 (1980), 224: a Greek manuscript (Cambridge, University Library IL.5.44) of Aristotle’s Magna moralia, a text translated by Bartholomew of Messina, has a colophon stating that the copy was made at the monastery of S. Salvatore in Messina in 1279. Another Greek text translated by Bartholomew, the commentary by John of Alexandria on the Hippocratic Epidemics book VI, was excerpted and copied into the margins of Vat. gr. 300, a manuscript containing a Greek translation of the Zād al-musāfīr of Ibn al-Jazzar, written in the same hand as the Madrid Skylitzes, and thus presumably produced in the circle of the Sicilian court. Cf. also P. Canart, ‘Le livre grec en Italie méridionale sous les règnes normands et souabes: aspects matériels et sociaux’, Scrittura e Civilta’, 2 (1978), 149; A. Grabar, Les manuscrits grecs enluminés de provenance italienne (Paris, 1972), 81.
Conclusions

A number of tendencies may be discerned in the evolution of what we may call the major recensions of the Hippiatrica, M, B, C, and L. The first is in the presentation of the excerpts. In M, the identities of the authors are distinct and prominent: indeed, the text is arranged according to their names. Excerpts from the source treatises are transcribed, as far as one can tell, without alteration, and no anonymous excerpts figure in the compilation. In B, the reordering of the compilation gives more weight to the subjects of the excerpts. Many excerpts have lost their identifying lemmata, and anonymous sources are also introduced. In C, the individual source-treatises are no longer treated as sovereign entities, and excerpts from different authors are run together without scruple. These phenomena are not peculiar to the transmission of the hippiatric texts: very similar trends have been identified in the presentation of the individual sayings of the fathers—another type of short didactic text—in successive recensions of the Apophthegmata Patrum. The later recensions of the Hippiatrica show a progressive loss of interest in the identities of the Late Antique authors, and an introduction, at the same time, of exotic and spurious authorities, reflecting the tastes of the age. The phenomenon of the sage, philosopher, or saint who collaborates or competes in the domain of the physician has also been observed in accounts of healing in hagiographical texts. And the same cast of characters whose names appear in L—sophists, sages, Apollonius of Tyana—appears in the Parastaseis syntomoi chronikai and the Patria of Constantinople (texts of the eighth and tenth century, respectively).


3 Idem, Constantinople imaginaire, 103 ff. on Apollonius; on the other ‘philosophers’, see pp. 123–5.
At the same time, these recensions of the compilation provide an illustration of what has been called the ‘tyranny of high style’ influencing even the transmission of technical texts. The editor of M had little tolerance for non-technical material, and a particularly dim view of Hierocles’ elegant adaptation of Apsyrtus. In B, the greater amount of Hierocles’ text that is present, and the juxtaposition of Hierocles with Apsyrtus, are evidence of a different sensibility, confirmed by the stylistic reworking of the entire text of the compilation. Hierocles’ classicizing prooimia are literary spolia reused as ornaments, in the antiquarian spirit of the Middle Byzantine period. In L, preference is accorded to Hierocles over Apsyrtus; the reconstitution of Hierocles in RV represents the logical conclusion of this process. Even in C, the addition of excerpts from Julius Africanus—with little or no reworking—reveals a certain taste for decorative prose. Yet the Cambridge manuscript, copied on diverse and partly reused materials, and laboriously adapted for reference by the addition of interlinear glosses and leather tabs, is a reminder that practical value is a factor in the transmission of technical texts as well. Whereas the evolution of the major recensions of the compilation shows that the texts were adapted to conform to literary tastes, the existence of the vernacular Epitome, with its extensive manuscript tradition and fluid text, shows, on a different level, how the texts were drastically altered in order to remain useful in the stables.

The identification of a textual transmission on two levels leads naturally to the question of how much the Late Antique veterinary compilation was actually used. It is difficult to estimate the extent to which veterinary science was learned and practised with reference to texts, rather than through hands-on experience; Varro’s recommendation that the chief herdsman have at hand a list of veterinary treatments from Mago’s work on agriculture has repeatedly been cited as evidence in this context. Could the average horse-doctor read and write? The low status conventionally attributed to the horse-doctor in Late Antiquity

---

6 M. R. James attributes these to the 15th c.: The Western Manuscripts in the Library of Emmanuel College, p. 149.
is belied by the high level of education of the Greek hippiatric authors Anatolelius, Apsyrtus, Theomnestus, and Hierocles. The picture is even less clear after Late Antiquity, because of the paucity of references to horse-doctors and to the practice of veterinary medicine. That no new veterinary manuals appear to have been composed in Greek after Late Antiquity may speak as much for a lack of demand for textbooks as for the success of the hippiatric compilation. One may point to the decline of the hippodrome, once a vast equine industry, as a factor; the scale of the public post, another institution that required horse-doc tors, was also reduced as the boundaries of the empire contracted; a general decline of literacy no doubt played a role as well.

What was the status of horse-medicine in the Middle Byzantine period? At the Council held at Constantinople in 870, the Patriarch Ignatius contemptuously dismisses those who had brought false witness against him as 'needle-makers, stablehands, horse-doctors, and the like' (βελονάθες, σταυλισταί, ἵπποιστροι καὶ ἐτεροὶ ἡμώοι). Nevertheless, that the voluminous Hippia trica was transliterated into minuscule around this time shows that horse-medicine was considered interesting: the M recension indicates that it was also considered useful—and indeed the M manuscript bears annotations to that effect. The revision of the compilation in the tenth century took place under the auspices of Constantine VII Porphyrogenitus within the context of an imperial renewal, including the re-editing of old compilations and the assembling of new ones on their model. The view of horse-medicine as a sordid discipline is at odds with the opulence of the B manuscript and the methods of the B recension. These may simply represent symbolic imperial interest in the sciences: one wonders how effective the new edition of the Hippia trica could possibly have been in reviving veterinary medicine by making texts accessible to practitioners. Whereas Late Antique practical manuals of military engineering were updated in the tenth century with a certain amount of reference to the needs of medieval users, such as explanation of obsolete terminology, the Hippia trica was given a stylistic polishing, as though it were a literary text like the Lives of saints subjected to a similar reworking at that time. This upgrading of style would seem counter-productive: one might have expected a simplification if the text were really intended for practical use. Moreover, there is no attempt to incorporate into the texts innovations in horse-care, such as the use of the iron horseshoe; or in pharmacology, such

---

10 J. D. Mansi, Sacrorum Conciliorum nova et amplissima collectio XVI (Venice, 1771), 395
12 See the treatise on imperial expeditions appended to De Cer., ed. Haldon, p. 102; Ibn Akhī Ḥizām (9th c.), quoted in Ibn al-Awwām, XXXII.20, p. 908. On horse-shoes in the medieval
as the *materia medica* of eastern origin known in the tenth century to Ibn Juljul, and described in the eleventh by Symeon Seth. (The *Geoponica*, similarly, does not reflect innovations in agriculture which had taken place in the Muslim world, such as the introduction of the aubergine.) Many other products of the patronage of Constantine VII were compilations made with practical intent but antiquarian in character, which do not seem to have circulated far outside of the imperial scriptorium: one may name for example the *Excerpta, De cerimoniis*, the Bestiary, and the collections of military tacticians. One might suspect that the B recension of the *Hippiatrica*, in the Middle Ages, had a similarly limited circulation.

Certainly the practice of veterinary medicine continued; but it is impossible to know the extent to which veterinary practitioners used the texts we have been considering. The treatise on imperial military expeditions appended to the *Book of Ceremonies* refers to the branding and castration of cavalry-horses; to wine and vinegar being brought along on campaign for the treatment of the horses; to containers with all sorts of remedies for men and beasts; but the list of books—mainly practical manuals—to be packed for reference in the field contains no mention of hippiatric texts. The obituary notice of Odo of Stigand the younger (1036–62), a Norman knight, recounts how he went to the East, learned Greek, served the emperors Isaac Comnenus and Constantine Ducas, and 'became an expert in the healing of men, horses and birds'. Horses and falcons, of course, figured prominently among courtly preoccupations in this period from Sicily to the Levant. But did Odo acquire his skill from experience or from books? We are reduced to pondering the cliché of πείρα vs. λόγος.

No doubt there were manuscripts of the *Hippiatrica* used by Byzantine horse-doctors that have not survived. But the evidence of those copies which


16 Irigoin, ‘Pour une étude des centres de copie byzantins’, 179.

17 *De cer.*, pp. 459–60, 468; list of books p. 467.

do survive confirms that the Late Antique texts were difficult to understand, and required a certain amount of adaptation in order to be of practical value.\textsuperscript{19} Yet high style continued to be valued too: it is telling that the fourteenth-century manuscripts of the RV recension contain the most classifying hippiatric treatise, that of Hierocles, copied together with the \textit{Epitome} and a glossary of unfamiliar or obsolete medical terms.

\textsuperscript{19} We may note that the \textit{Hippiatrica} was read by medical writers: a recipe for the \textit{Ambla mula} ointment is included in the 14th-c. \textit{Dynameron} of Nicholas Myrepsus, 34.10. In the 15th c., Demetrius Pepagomenos seems to have been familiar with the \textit{Hippiatrica}, since he refers in the preface of his \textit{Hierakosophion} to works on horse-medicine, and gives in the text a recipe for a 'hippiatric ointment', ed. Hercher, p. 499; \textit{CHG} II p. 337.
This page intentionally left blank
Bibliography

Ancient Sources

ARISTOPHANES OF BYZANTIUM: Aristophanis Byzantii fragmenta, ed. W. J. Slater (Berlin and New York, 1986); see Bestiary of Constantine VII
Bestiary of Constantine VII: Excerptorum Constantini de natura animalium libri duo Aristophanis Historiae animalium epitome subjunctis Aelianii Timothei aliorumque eclogis (Supplementum Aristotelicum I, 1), ed. S. P. Lambros (Berlin, 1885).
CEDRENUSS: Georgius Cedrens, ed. I. Bekker (Bonn, 1838–9).
CODEX THEODOSIANUS, ed. T. Mommsen and P. M. Meyer (Berlin, 1905).
De cerimonis: De Cerimonis aulae byzantinae, ed. J. J. Reiske (Bonn, 1829).
DEM ET R I O S: Demetrii Phalerei qui dicitur De elocutione libellus ed. L. Radermacher (Leipzig, 1901).
De thematibus: Costantino Porfrogenito De thematibus, ed. A. Pertusi (Vatican, 1952).
EURIPIDES, Bacchae, ed. E. C. Kopff (Leipzig, 1982).


Philogelos, ed. R. D. Dawe (Munich and Leipzig, 2000).

Scriptores physiognomonici graeci et latini, ed. R. Foerster (Leipzig, 1893; repr. 1994).
Theophanes Chrysobalantes (Nonnos): J. S. Bernard, Theophanis Nonni Epitome de curatione morborum Graece ac Latine (Gotha and Amsterdam, 1794–5).
Theophanes Continuatus: Theophanis continuatus, Ioannes Cameniata, Symeon Magister, Georgius Monachus, ed. I. Bekker, Corpus scriptorum historiae byzantinae, 33 (Bonn, 1838).

Secondary sources

—— Pelagonius and Latin Veterinary Terminology in the Roman Empire (Leiden, 1995).
Audollent, A., Defixionum Tabellae (Paris, 1904).


Becher, W., *De Lucii Junii Moderati Columellae vita et scriptis* (Leipzig, 1897).


—— *La Bibliothèque Vaticane de Sixte IV à Pie XI: Recherches sur l’histoire des collections des manuscrits* (Studi e Testi, 272; Vatican City, 1973).


—— 'Apsyrtus, Julius Africanus, et l’hippiatrique grecque', *Uppsala Universitets Årsskrift* (1944. 4).


—— *Isaac Vossius and his Circle: His Life until his Farewell to Queen Christina of Sweden, 1618–1655* (Groningen, 2000).


Brandsma, F., *Dorotheus and his Digest Translation* (Groningen, 1996).


Brockelmann, C., ‘Die armenische Übersetzung der Geoponika, Byzantinische Zeit-

Brunori Cianti, L., ‘Testo e immagine nei codici di mascalca italiani dal XIII al XV
IV Congresso di Storia della Miniatura ‘Il codice miniato laico: rapporto tra testo e


Buchthal, H., ‘Early Islamic Miniatures from Baghdaß’, Journal of the Walters Art

of Biblical Literature, 52 (1933), 55–65.


Canart, P., ‘Le livre grec en Italie méridionale sous les régnes normands et souabes:
—— ‘Démétrius Damilas, alias le “librarius florentinus”’, Rivista di studi bizantini e
neoeolennici, ns 14–16 (xxvi–xxvii), 281–347.
—— and Prato G., ‘Les recueils organisés par Jean Chortasmenos et le problème de
ses autographes’, in H. Hunger (ed.), Studien zum Patriarchatsregister von Konstan-
tinopel, I (Vienna, 1981), 115–78.

Cataldi-Palaü, A., ‘Les copistes de Guillaume Pellicier, évêque de Montpellier
(1490–1567)’, Scrittura e Civiltà, 10 (1986), 199–237.
—— ‘Les vicissitudes de la collection de manuscrits grecs de Guillaume Pellicier’,
Scriptorium, 40 (1986), 32–53.
—— Gian Francesco d’Asola e le tipografie Aldine: La vita, le edizione, e le biblioteca
dell’Asolano (Genoa, 1998).

Cavallo, G., ‘La trasmissione scritta della cultura greca antica in Calabria e in Sicilia

Chadwick, H., ‘Some Ancient Anthologies and Florilegia, Pagan and Christian’,
Studies in Ancient Christianity (Aldershot, 2006), Study XIX (an adaptation of the
author’s article ‘Florilegium’, in Reallexikon für Antike und Christentum, VII (Stutt-

Ciggaar, K., ‘Byzantine Marginalia to the Norman Conquest’, Anglo-Norman Studies,

Clark, J., The Medieval Horse and its Equipment c.1150–c.1450 (Medieval Finds from


Clement, P., ‘Korinthes, veterinary’, in S. M. Burstein and L. A. Okin (eds.), Panhel-
lenica: Essays in Ancient History and Historiography in Honor of Truesdell Sparhawk

Cohn, L., ‘Bemerkungen zu den konstantinischen Sammelwerken’, Byzantinische
Zeitschrift, 9 (1900), 154–60.
Cribiore, R., Gymnastics of the Mind: Greek Education in Hellenistic and Roman Egypt (Princeton, 2001).
Cumont, F., ‘Le sage Bothros ou le phylarque Arétas?’, Revue de philologie, de littérature et d’histoire anciennes, 2nd ser., 50 (1926), 13–33.
Daly, L. W., Contributions to a History of Alphabetization in Antiquity and the Middle Ages (Collection Latomus, 90; Brussels, 1967).


Bibliography

Bibliography

—— and Najock, D., In Pelagonii Artem Veterinariam Concordantiae (Hildesheim, 1983).
Foerster, R., De antiquitatibus et libris manuscriptis Constantinoisotapolitanis commentatio (Rostock, 1877).
Gamillscheg, E., and Härlfinger, D., Repertorium der griechischen Kopisten 800–1600 (Vienna, 1981–).
Giunta, F., Bizantini e bizantinismo nella Sicilia Normanna (Palermo, 1974).
Bibliography

Gregorio, G., 'Notizia di un trattato di mascalcia in dialetto siciliano del secolo XIV', Romania, 33 (1904), 368–86.


—— Recherches sur la tradition grecque des Apophthegmata Patrum (Subsidia hagiographica, 36) (Brussel, 1962).


—— Studies on the History of the Sarmatians (Budapest, 1950).

—— Studies in the History and Language of the Sarmatians (Széged, 1970).


Hempel, O., De Varronis rerum rusticarum auctoribus questiones selectae, diss. (Leipzig, 1908).

Bibliography


HOLMBERG, E. J., Zur Geschichte des cursus publicus (Uppsala, 1933).


HUNGER, H., Prooimion, Wiener Byzantinische Studien, 7; Vienna, 1964).


—— Pelagonii Artis Veterinariae quae extant (Leipzig, 1892).


KRAUS, P. G., *Die Quellen des Columella in dem Liber de arboribus* (Eichsfeld, 1907).


LAMPROS, S. P., ‘Ὁ ἀρχιστάτος κεχρυσμένος κώδικες τοῦ Ἀντωνίου Δαμιλά’, *Νέος Ἐλληνομύθων*, 12 (1915), 480.


—— *Polarity and Analogy: Two Types of Argumentation in Early Greek Thought* (Cambridge, 1966).


MAGIE, D., *De romanorum iuris publici sacri vocabulis sollemnibus in graecum sermonem conversis* (Leipzig, 1905).


—— ‘Byzantine Literature as a Distorting Mirror’ (Oxford, 1975) (repr. in *Byzantium and its Image* (London, 1984), Study IV.


Bibliography


Müller, K. K., ‘Neue Mittheilungen über Janos Laskaris und die Mediceische Bibliothek’, *Centralblatt für Bibliothekswesen*, I (1884), 333–412.


—— *Anecdota Cantabrigiensia*, Wissenschaftliche Beilage zum Jahresbericht des Friedrichswerderschen Gymnasiums zu Berlin (Berlin, 1896).


—— ‘Catalogue des manuscrits grecs de Guillaume Pelicier, évêque de Montpellier, ambassadeur de François Ier à Venise’ (Paris, 1886); repr. from *Bibliothèque de l’École des Chartes*, 46 (1885), 45–83 and 594–624.
—— Catalogues des manuscrits grecs de Fontainebleau sous François Ier et Henri II (Paris, 1889).
—— 'Catalogue des manuscrits grecs d’Antoine Éparque (1538)', repr. from Bibliothèque de l’École des Chartes, 53 (1892) (Paris, 1892).
Pinto, O., Storia della biblioteca Corsiniana e della biblioteca dell’Accademia dei Lincei (Florence, 1956).
Pradel, F., Griechische und süditalienische Gebete, Beschworungen, und Rezepte des Mittelalters (Giessen, 1907).

Ramsay, W. M., The Historical Geography of Asia Minor (London, 1890).


Reitzenstein, R., De scriptorum rei rusticae qui intercedunt inter Catonem et Columelam libris deperditis, diss. (Berlin, 1884).


Rieck, W., ‘Eugen Oder †’, Veterinärhistorische Mitteilungen, 6 (1926), 21–4.


Rydbeck, L., Fachprosa, Vermeintliche Volkssprache, und NT (Uppsala, 1967).

Bibliography

Schmid, W., Der Atticismus in seinen Hauptvertretern von Dionysius von Halikarnass bis auf den zweiten Philostrat (Stuttgart, 1887–96).


Seippel, R., De veterum scriptorum ratione auctores laudandi, diss. (Greifswald, 1903).


Shelton, J. C., Greek Ostraca in the Ashmolean Museum (Florence, 1988).


—— Untersuchungen zur Überlieferung der Schriften des Theophanes Chrysobelantes (sog. Theophanes Nonnos) (Bonn, 1987).

Speranza, F., Scriptorum romanorum de re rustica reliquiae (Biblioteca di Helikon, Testi e studi, 8; Messina, 1974).


Stemplinger, E., Das Plagiat in der Griechischen Literatur (Leipzig and Berlin, 1912).

—— Sympathieglauben und Sympathiekuren in Altertum und Neuzeit (Munich, 1919).


Strömberg, R., Griechische Wortstudien: Untersuchungen zur Benennung von Tieren, Pflanzen, Körperteilen, und Krankheiten (Göteborg, 1944).

Stubbings, F., A Brief History of Emmanuel College Library (Cambridge, 1981).


Bibliography


USENER, H., Der heilige Tychon (Leipzig and Berlin, 1907).


VISCIDI, F., I prestiti latini nel greco antico e bizantino (Padua, 1944).


—— ‘Some Notes on Cavalry-Horses in the Roman Army’, in J. M. C. Toynbee, Animals in Roman Life and Art, 335–43.

WEBER, K. F., De Latinis scriptis quae Graeci ad linguam suam transtulerunt (Cassel, 1852).

WEISS, E., De Columella et Varrone rerum rusticarum scriptoribus (Breslau, 1911).


WENGER, L., Die Quellen des römischen Rechts (Vienna, 1953).


Bibliography


WITAKOWSKI, W., The Syriac Chronicle of Pseudo-Dionysius of Tel-Mahre: A Study in the History of Historiography (Studia Semitica Upsaliensia, 9, Uppsala, 1987).


ZIEMANN, F., De epistularum graecarum formulis sollemnibus quaestiones selectae (Halle, 1910).

ZILLIACUS, H., Zum Kampf der Weltsprachen im oströmischen Reich (Helsingfors, 1935).


Index of Greek and Latin words

άβλαναθάλημα 148
άκροβαμμένος, άκροβαμματίζω 247
άμιγματροχά, άμιγματροχά 233, 254
άξογγιον/ axungia 232
άφαξιάς 174

βασκοσάνη 146, 152
βουλσούς 142
βούττιον 187

γλούσο παιδικός 176
γούλα 180

διαφωνέω (to die) 101, 123, 286
dηροθρωμένον 96

diligens/ επιμελής 176–7
dιπλούς 231

ἐγχυματίζων, ἐγχυματισμός 116–17,
130, 137, 145, 163, 203, 234, 236,
247, passim

"Ελληνες, Ἑλληνικός 150, 272
ἐργάζομαι 120

farciminal/ φαλκίνα 143
flemina/ φλημέλια 143

ζέα 247, 251

ἰδιώτης, ἰδιώτερον 114, 202, 248
ἰππιατρική 11–12
ἰππιατρός 6–8, passim
ἰπποστασία, ἱππόστασις 139, 273
ἰπποτροφία, ἱπποτρόφος 127, 132

καφόρα 279
κεφάλαια 20, 265
κλαμβών 231
κονδύτων 187
κουκουνάρα 278
κυμβαλίζων, κυμβαλίωθης 196

λόγος/λογιστήνα 128, 190, 209, 300
λοίμβου 142

μᾶλς 105, 136, 143, 146, 200, 202, 212,
234, passim
mulomedicus 7, 9–10, 160

ὅπος Κυρηναῖκος 175 silphium 176

πείρα, ἐμπείρία 13, 128, 190, 202–3,
209, 300 apopiras 176

περίστατα, περιστάτω 81, 93, 120–1,
147–8, 151, 165

poeia/ προσποτίζων, προπό
tisma 103, 111, 117, 173–4, 178,
passim

quadrigarius/ κονδριγάριον 9, 159, 178

sánvalon 279

stabulum/ στάβλον 114, 139, 142, 178–9,
187–8, 247, 273, passim

σύλλιθος 173
συμμετρία 197

συναγωγή 60–1, 75–6

suffragina/ σουφράγια 143

suspirium/ σουφπέριον 107, 143–4, 235

tripodare/ τρίπηθος 173
trittenion 278

φιλόκαλος, φιλοκάλων 94, 199

filocalus 176

φιλόθεος 282, 287

φιλόστοργος 84

φυσικόν 79, 80, 81, 120–1, 123, 124, 146

veternarius 7

χιαστώς/ decusatim 115
χορδαφός 181, 231


General Index

Abraxas 125, 148
Aelian, Claudius 60–1, 82, 237, 257, 262, 277, 280
material in common with
Hierocles 225–6, 237–8, 257
list of breeds attributed to in
Bestiary 40, 219
aetiology:
absence of in Anatolius 84
in Eumelus 116, 118
in Apsyrtus 130, 135
in Theomnestus 186, 205
in Hippocrates 251
Aëtius of Amida 38, 41, 269, 276
affection for horses 152, 187–8, 190
Africanus, see Julius Africanus
Agathotychus 201
Alamanoi, Hagioi, see Cypriot saints
Alexander of Tralles 16, 148, 179–80
Alexandria 134, 144
alphabetical order 59, 262, 265
Alps 13, 125, 186–7, 274
amulets 81, 93, 116, 120–1, 146–8, 179–80
see also magic; shrew-mouse
analogy in medical writing 233
Anatolius of Berytus 6, 13, 40, 71–97, 260, 266, 267, passim
Arabic translation of Anatolius 68, 74, 75
Syriac translation of Anatolius 67, 73–5, 83
and Apsyrtus 138, 141
and Hippocrates 253
and Palladius 75
and Theomnestus 192
animal noises 219
annotations in manuscripts:
in B 24, 29
in C 39–40, 298
in I 34
in M 20, 267, 299
in V 46, 296
anthologies, poetic 60, 264, 277
Antioch 133
Antonio da Pera 295–6
ants, used as sutures 249
Apollonius of Tyana 43, 283, 297
Apophthegmata Patrum 297
Apostolos, Arsenios (Aristoboulos) 30, 35
Apsyrtus, brother of Medea 68, 124
Apsyrtus of Clazomenae 13, 56,
122–55, passim
and Anatolius 138, 141
and Columella 117, 141, 143–4
and Eumelus 98, 100–2, 117, 138–41
and Hierocles 208, 227–33
and Theomnestus 125–6, 185–6, 202–5
and Pelagonius 122–3, 156, 159–69
foundation of M recension 263–6
relation to agricultural writers 138–41, 153
see also Mulomedicina Chironis
Apuleius 82
Arabic translations see Anatolius,
Theomnestus
Aratus 208–9
archaizing hand in R 45
Armenian treatment 202
aroma-therapy 159
Arzygius 158, 161
Asclepiades of Clazomenae 123, 127
Asclepius 216, 217
Astyrius 158, 161
Astrampsychus 5
Aristotle 4, 38, 239–40, 248
and Cassius Dionysius 77–8, 84,
87–8, 138
Aristotle (cont.)
and Hierocles 220–2, 224, 237, 242
and Hippocrates 257
in C recension 279
Aristophanes of Byzantium 84, 97, 263
and Hierocles 218, 222, 224, 237
Asinius Pollio of Tralles 6
Athens 3–4, 215, 216
Atticists 216, 217, 226, 247
Auxanon 141–2
B recension of Hippiatrica 23–38, 269–75
in Teubner edition 53
see also MS Berlin, Phill. 1538
balneum, treatment in 159, 236–7
Barozzi, Francesco 32
Barberini, Cardinal Francesco 35
Barsanouphios and John, Sts 17
Bartholomew of Messina 211, 239–44, 285
Bassus, friend of Hierocles 214–5, 217, 218, 260
bedding 139, 274–5
Bestiary of Constantine VII 40, 97, 224, 276–7
list of horse breeds in 40, 137, 219, 276
bile 99–100, 102, 118
bites and stings 229, 251
Bithynia 78, 127
bloodletting:
in Anatolius 92
in Apsyrtus 131
in Eumelus 101, 108
in Hierocles 227
in Hippocrates 248–9
in Pelagonius 173
in Vegetius 279
in C recension 279
technical terms for 174
Björck, Gudmund 56, 57, 125, 260, passim
Bridges, John 42
boils 120
Boniface of Calabria 294–6
borphor syllables in spells 149
Bourdelot, Pierre Michon 47
branding 300
branding with leopard-spots 97, 280–1
breeding of horses:
in Anatolius 83–8, 94–7
in Apsyrtus 141, 246
in Eumelus 117
in Hierocles 211, 230
in C recension 279
see also foals and foaling;
mule-breeding
breeds of horses 40, 94, 97, 137, 192, 219, 276, 279
Budé, Guillaume 49, 50
Burgundio of Pisa 75, 241
burns 231–2
Bussemaker, Ulco Cats 52
C recension of the Hippiatrica 38–41, 275–81
in Teubner edition 53
see also MS Cambridge, Emmanuel Coll. 251
calendars 127, 171, 188
canon 264
Du Cange, Charles Du Fresne 55
Cantacuzenus, Michael, library of 25
Cappadocia 134
Carnuntum 125, 186–7, 274
Carthage 134, 274
Casaubon, Isaac 39–40, 47, 55
Casolla, Henricus 42
Cassianus Bassus 6, 72, 82, 83, 215, 260
Cassius, source of Theomnestus 70, 108, 117, 186, 195, 201
Cassius Dionysius of Utica 5–6, 54, 56, 69–70, 71–97
and Anatolius 71–97
and Apsyrtus 137–8
and Aristotle 84, 138
and Columella 5–6, 77–8, 168
and Eumelus 106–15
Chortasmenos, Ioannes 28
Christian elements in magic 263
in Apsyrtus 125, 148, 150
in RV recension 284, 288–9
Christina, queen of Sweden 47
Christodoulos 22
Chrysobalantes, Theophanes (Nonnus) 276
Chrysostom, St John 41
Circe 216, 238, 289
Citations 68–9, 136–42, 185, 227, 230
Clazomenae 126–7, 133, 134
Clement of Alexandria 60–1, 82
Cleodamas of Achnai 5
Cleomenes the Libyan 227, 234–6
Cleopatra, treatise on measures 23, 269
Clermont, Jesuit college of 25, 26, 31–2
code-switching 175
codex vs. roll 61, 263
Codex Gregorius and Codex
Hermogenianus 61, 62
Codex Theodosianus 61, see also law
colic 130, 138, 139, 164, 190, 193, 230, 244, 253, 275
see also digestive disorders
Colines, Simon de 49
Collatio legum Mosaicarum et
Romanarum 62
Columella:
and Anatolius 71, 84, 86, 87, 90, 91, 95
and Apsyrtus 141
and Eumelus 70, 100–20
and Hippocrates 248, 255–7
and Mago 5, 6, 70
and Pelagonius 66, 70, 162–9, 172
and Vegetius 10
Greek words used by 90, 172, 176, 257
literary character of De re rustica 208
used by Ruel in translating
Hippiatrica 59
comfrey 201–2
compilatio 60
compilations, see excerpt-collections
General Index

conformation of horse 83, 85–6, 94, 96, 137, 162, 192, 194–7
marginal note about in B 29
of other animals 83–4, 141
in C recension 279
poem about 286
Constantine I, emperor 7, 123–6
Constantine VII Porphyrogenitus 25, 83, 260, 261, 269–78, 299–300
Constantinople 25, 134, 263, 267
Corinth 134
Corfu 33
Corsican practice for silencing horses 36, 49, 51
Corsini, Bartolomeo 37
Cosmas and Damian, Sts 289–90
cough 69
in Africanus 92–3, 112–13, 281
in Anatolius 92–3, 112–13
in Columella 92–3, 112–13
in Eumelus 115, 120
in Theomnestus 190, 193–4, 200
cows, see cattle
Craterus 64
Crete 30–2
Cypriot saints 290
Cyprus, practice of veterinary medicine in 290–1
cysts 213
curse-tablets 146, 151
D recension of the Hippiatrica 38, 275–6
see also C recension; L recension
Daklozasos, Petros 32
Dalmatia 158–9
Damilas, Antonios 30, 31
Danube 123–4, 127, 134, 229
Daremberg, Charles 21, 52, 54
d’Asola, Gian Francesco 30–1, 49
dedications of treatises:
of Apsyrtus to Asclepiades 123, 127, 162, 266, 273
of Hierocles to Bassus 214–15
of Pelagonius to Arzygius 161–2, 170
of Theomnestus to Quintus/Ignatius 185, 190–1, 273
Democritus-Bolus:
and Anatolius 75–6, 78–9, 82, 83
and Apsyrtus 137, 140
in incantation 289
Devaris, Matthais 20–1, 33, 36–8, 45–6
diarrhoea 85, 111–12, 131, 231, 233, 244, 265
diglossia 283, 285–6
d’tbelin, Guy 291
dentition 141, 162
Digest of Justinian 63, 67, 266
translation into Greek 170–1
digestive disorders 69, 139, 212, 251
Diodorus on weights and measures 29
Dioscorides, Pedanius 121, 154, 201
excerpts from in Hippiatrica 22, 27, 268
manuscripts of 64–5
‘disclosure formula’ in letters 135, 161, 178, 229–30
dock, amuletic use of plant 120–1
dodecasyllabic verse 289
donkeys 87–8, 141, 149, 277
drenching, technical terms for 173–4
Drosinos, Demetrius 46
drug-recipes, lists of 271
in Apsyrtus 130–1, 145–6
in Hierocles 211, 213, 243
in Pelagonius 163, 271
in Theomnestus 185, 193–4
Duval, Claude Naulot 31
dyeing of coat 251
dysury:
in Anatolius 85
in Apsyrtus 135, 137–8, 146, 150–1, 152, 154
in Hierocles 212, 237
in Hippocrates 248, 252, 253
in Pelagonius 165, 168
in Theomnestus 182, 193, 203–4
General Index

incantation against 277
magical cures for 146, 150–1, 280

ear-infection 144, 231
Eleusinion at Athens 216, 218
encomia of horse:
  in Hierocles 216, 220–1, 238, 281
  in Pelagonius 162
  in Ruel edition 50
  in Grynaeus edition 51
encyclopaedias 59, see also excerpt-collections
‘encyclopaedism’ of tenth century 259, 261, 269, 277–8, 299–300
enema 92, 144
Enneakrounos 225
Epheus 133–4
epilepsy 243, 289
epistolography 66
  in Apsyrtus 128–36, 287–8
  imitated by Pelagonius 159–63
  not used by Hierocles 229
Epitome of Hippiatrica 12, 18, 44–7, 56–7
attributed to Hippocrates 246
  in RV recension 54, 283, 285–7
erotapokrisis 128, 130, 160, 229
Eubulus 159, 168, 236–7
Eumelus 13, 98–121, passim
  and Apsyrtus 69, 100–2, 138–44
  and Columella 99–120
  and Hierocles 235–6
  and Pelagonius 69, 103–20
  and Varro 103–4
Euripides 217, 222
evil eye 146, 151–2
excerpt-collections 59–65, 259–62
experience:
  in Apsyrtus 128, 152–5
  in Hierocles 226–7
  in Pelagonius 159, 174–6
  in Theomnester 181, 186, 190, 201, 202
eyes, ailments of 69, 120, 206, 213, 246, 251, 279
faeces, impacted 228, 275, 286
Farnese, Cardinal Alexander 37–8
Featherstone, Henry 32
Federigo, duke of Urbino 29
feed and feeding:
  in Anatolius 89
  in Apsyrtus 138–9, 141–2
  in Eumelus 111, 252, 274–5
  in Hierocles 236
  in Theomnester 188, 190, 192, 202–3
  in Pelagonius 252
  by Patriarch Theophylact 278
fever 89, 127, 162, 193, 233, 243
Florentinus 82
florilegia 59–61
  use of by Hierocles 222, 226
foals and foaling 85, 94, 154, 230, 237, 272, 279
foot 143, 192, 195–6, 250, 251
  cleaning 199
  see also hoof; lameness
François I, king of France 25, 49, 50
fumigation 139, 154, 168
Gale, Roger 40
Galen 13, 64, 81, 145, 209, 269
  false attributions to 288
Geoponica 6, 67–8, 257, 259
  and Anatolius 71–97
  and Apsyrtus 140
  and Eumelus 109–13, 115–18, 121
  false attributions to hippiatric authors in 73, 123, 170, 211, 259, 277
lost MS of Geop. XVI 73
Needham’s edition of 40, 47, 55, 215, 260
  Oder’s work on 56
George Synkellos 80
Giordano Ruffo 240–1, 293–4
glanders
  in Apsyrtus 101, 130, 136, 143, 146, 150
  in Eumelus 101, 104–7, 178
glanders (cont.)
in Hierocles 212, 234–5, 244
in Pelagonius 104–7
in Theomnestus 193, 200–1, 202, 206

haemorrhage 287
hair-loss, remedy for 144–5, 243
heart, ailments of 108, 138–9
Helios 147, 238
hellebore 29, 30, 106, 141, 169, 251, 274
Helen 102
Heron, William, earl of Pembroke 32
Hermogenes 221
Hesiod 222, 223
Hestia 223–4
Hierocles 13, 208–44, passim
and Anatolius 234
and Apsyrtus 208, 218, 227–33
and Eumelus 235–6
and Theomnestus 227
and Pelagonius 234–7
portrait of 291–2, 295
reconstitution of 44, 284–7
see also Latin translation of Hierocles;
Italian translation of Hierocles
Hieron 102, 109, 168
Hieronymus the Libyan 106, 227, 234–6, 254
Hippaios of Thebes 100, 201
Hippasius of Elis 227
hippiatroi, see horse-doctors
Hippocrates of Cos 11–12, 288
Hippocrates, horse-doctor 13, 68, 245–58, passim
and agricultural writers 70, 237, 253, 255
and Apsyrtus 252–3, 255–7
and Columella 255–7
and Eulmus 252–3
and Hierocles 237, 255–7
and Pelagonius 252–3
Hippocrates, addressee of Apsyrtus 246
hippodrome 8–9, 151, 159, 171, 261, 266
Homer, in C recension 279
hoof, treatments for 109, 146, 150
Hoppe, Karl 52–3, 55–6, 104, 169–70, passim
horse-doctors 3–12, 298–300, passim
legislation concerning 7–8
inscriptions relating to 7–8
horoscopes of 9
joke about 9
poem about 12, 290
horseshoe 299
human medicine 144
humours 118, 205–6, 219, 251
Hunayn ibn Ishaq 182–4, 284
Iao 148, 150
Ibn al-Awwam 246
Ibn al-Nadim 4, 259
illustrations in manuscripts 44–5, 46, 285, 291–6
imitation of literary form 69, 122, 160
imitation of style 66, 22, 166
imperial scriptorium 24, 269, 276
instruments, medical 144
intestine, twisted 135, 138, 164–5, 253
see also digestive disorders
Ipocras Indicus 246
Isis and Serapis, temple of at Hiera
Sykamina 100
Italian translation of B recension 37
see also MS Parisinus ital. 58
Italian translation of Hierocles and
Epitome 67, 284, 294–6
Jahweh 125, 148, see also Iao
Jesus 150, see also Christian elements
in magic
John Chrysostom, St 41
Julius Africanus 16, 56, 60
in manuscripts of *Hippiatrica* 41, 43, 54, 276, 279–81
and Anatolius 71, 75–6, 79–82, 92–4
and Eumelus 112–13, 119
and Hierocles 238

Kallipolis 134
kicking 199
Kokolos, Nikolaos 31
*kolyva* 286
Kontoleon, Christopher 36
Kuhn, T. S. 15

L recension of *Hippiatrica* 41–4, 281–3
in Teubner edition 53–4, 281
see also MS BL Sloane 745
lame ness 135, 147, 248
laminitis 131, 138, 230, 265
Laodiceia 133–4
Lascaris, Janus 20–1, 33–7, 49–50
Latin, see loanwords; ‘medical Latin’; translation
Latin in spells 289–90
Laud, Archbishop William 32
law, Roman, transmission of 61–3, 264, 269
see also *Digest* of Justinian; rescripts; translation
lawyers’ activities 214–5
leeches 85, 141, 228, 253
legions 124, 133

lemmata:
in M recension 22, 67, 268
in B recension 26–7, 181, 270–2
in C recension 41
in L recension 43, 243
in Oribasius 62
in catenae 63
in Dioscorides MSS 64–5
in Pelagonius 271
Leo X, Pope 20, 21, 36, 50
Licinius, emperor 13, 125, 185
lifespan 219, 224, 279

loanwords, Latin in Greek 66
in Apsyrtus 133, 142–4
in Eumelus 114
in Hierocles 232
in Hippocrates 247
in Pelagonius 178–9
in Theomnesteus 188
purged from B recension 270–5
loanwords, Greek in Latin 113–14, 167, 172, 174
‘lost Latin veterinary writer’ 104–9, 166
Lucian 222–3

M recension 19–23, 68, 267–9
in Teubner edition 53
see also MS Paris, gr. 2322
madness 140, 251, 252, 264
Magi 289–90
magic 16–17, 54, 81
at hippodromes 146, 151
in agricultural context 16, 146, 272
in Africanus 80, 279–80
in Anatolius 80–3, 93
in Apsyrtus 124–5, 130, 146–52
in Eumelus 106, 119–21, 274
in Hierocles 216, 230, 238
in Pelagonius 159, 160, 169, 179–80
not present in Hippocrates 251
not present in Theomnesteus 181, 185–6
in C recension 277, 279
in M recension 268
in RV recension 284, 287
purged from B recension 272–3
legislation concerning 16, 83, 272
punishment for practising 185–6
sympathetic 79, 83, 119, 140, 150–1, 169, 237, 251, 254, 274
Mago of Carthage 50, 54, 69–70, 298
transmission of text 5–6, 13
and Anatolius 71–97
and Apsyrtus 136–8, 168
and Eumelus 106–15
and Hierocles 236–7
General Index

Mago of Carthage (cont.)
and Hippocrates 245, 253
and Pelagonius 168
and Theomnestus 192
see also Cassius Dionysius;
Diophanes
Malagina 127
Manfred, king of Sicily 211, 239,
241, 242
mange 85, 193, 202, 206, 268
manuscripts:
Athos, Dionysiou 180 40, 237
Berlin, Phill. 1538 23–7, 28–9, 52–3,
260, 261, 269–75
Phill. 1539 29, 31–2
Phill. 1523 50
Cambridge, Emmanuel Coll. 251
39–41
Trinity Coll. O.9.16 40
Einsiedeln, Stiftsbibliothek 305
(504) 102, 157, 162, 171
Escorial 1.4.22 73
Florence, Laur. Plut. 59.32 72–3
Laur. Plut. 75.6 29, 33–5, 53
Riccardianus 1179 156, 171
Hannover, k. Bibliothek XLII, 1845 34
Istanbul, Koprulu 959 182
Leiden, Voss. misc. 40 40
Voss. gr. Q 50 44–5, 46–7
Voss. lat. O 11 47
London, BL Additional 5108 29,
35–6, 49, 51
Additional 14662 73–5
Additional 15097 294
Additional 15098 294
Sloane 745 29, 41–4, 281
Sloane 3972 B 42
Harley 5694 42
Harley 5760 35
Meshed, Rida 5762 75
Modena a. J. 3 13 294
Naples, Bibl.naz. lat. 2 157
Borbonicus III.d.26 29, 37–8, 53
New York, Morgan Lib. 652 64
Morgan 735 294
Oxford, Barocci 164 29, 32–3, 53
Bodley 540 (Pococke 360) 182
Paris, ar. 2810 182
gr. 1995 12
gr. 2091 12, 55
gr. 2313 72
gr. 2322 19–23, 261, 267–9
gr. 2244 44–6, 52–3
gr. 2245 29, 30–2, 49
suppl. gr. 495 224
suppl. gr. 573 52
suppl. gr. 580 52
suppl. gr. 588 52
ital. 58 35, 37
Rome, Corsini 43.D.32 29, 35,
36–7, 49
Teheran, Milli 796 75
Vatican, gr. 114 123, 286
gr. 1066 123, 286
gr. 1412 20
gr. 1414 20
Barb. gr. 212 35
Ottob. gr. 338 123, 286
Urb. gr. 80 27–9
Vienna, Österreichische
Nationalbibliothek
med. gr. 1 28, 64
philol. gr. 284 123
Vind. hist. gr. 98 25
Washington, National Library of
Medicine A90 182
Marck, Jan van der 42
marginal notes, see annotations in
manuscripts
marsh-mallow 126, 154–5
massage 89, 103–4, 111, 139,
274–5
Massé, Jean 51
materia medica, imported 27, 250, 263,
272, 278, 299–300
Medea 124, 216, 238
‘medical Latin’ 66, 172
medical theory 15, 218–19, 249,
see also humours
General Index

de’ Medici, Catherine 21, 46

de’ Medici, Lorenzo 21, 33–4

Meerman, Gerard 26, 32

Meles river 126, 154–5, 268

Melissa 40

Meliteniotes 12

metaphrasis 53, 69, 270–5, 298–9

Meursius (Jan van Meurs) 55

Metrodorus of Pelinna 6

Micon 220–1, 225

military ranks and titulature 133, 273–4

military tactics, treatises on 276, 277

Miller, Emmanuel 21

mimesis, see imitation

minuscule bouleêtre 24

Morelius (Guillaume Morel) 55

Moses of Bergamo 241

Moses of Palermo 246

mouth, infection of 213

mule-breeding 87–8

mules 133, 143, 230, 247–8, 250

Mulomedicina Chironis 10–11, 57, 67–8, 98, 169, 253

translation of Apsyrtus in 122, 165

myrepsoi, see pigmentarii

mythological origin of horse-medicine 12

nasal polyps 154, 180, 233

nausea 91, 110

Needham, Peter 40, 47, 55, 215, 260

Nephon 201

Nicae 127

Nicander 208, 209, 257

Nicomedes 123–4, 127

Nicopolis 185, 188

nosebleed 91, 110

nostril, left or right specified 119, 143, 169

Oder, Eugen 52–3, 55–6, 260, passim

Odo of Stigand 300

Olympieion at Athens 216, 225

Olympic games 216, 220

ps.-Oppian 97, 209, 219, 225, 226, 280

Oribasius of Pergamon:

in Hippiatrica 38, 41, 276

medical compilations 61–2, 77

Orneosophion 24, 30

Orpheus, in incantation 289

palimpsest 39

palingenesia 68

Palladius 6, 71, 75, 85, 86

Pamphilus 76, 81, 82, 83

papyri:

Anatolius excerpt in 72, 91

evidence about horse-doctors in 7

P. Vind. G 40302 72, 91

see also Philinna papyrus; rolls

Parastaseis syntomoi chronikai and Patria of Constantinople 283, 297

paroemiographers 222–4

particles, Greek, used by Hierocles 217, 242

translated by Bartholomew of Messina 242

used by translator of Pelagonius 173

Pasquali, Giorgio 260

Paul of Aegina 38, 41, 276

Pelagonius 10, 13, 157–80, passim

and Columella 162–7

and Eumelus 69, 166–9

and Apsyrtus 69, 163–9

Pepagomenos, Demetrius 259, 301

pharmacology 15

in Anatolius 91

in Apsyrtus 145–6, 154–5

in Eumelus 119

in Hippocrates 250

in Theomnestus 193–4

see also materia medica

Philinna papyrus 149–50

Phillipps, Sir Thomas 26, 32

‘philosophers’ 282, 287–8, 297

Phorbiotissa, church at Asinou 290

Photius, Bibliotheca 75–6, 80, 83, 93

pigmentarii 159
General Index

Pindar 217, 222–3
plagiarism 69, 208
Plato 96
Pliny 5, 82, 86, 106, 225, 237, 257
Plutarch 223, 226
pneumonia 85, 119
points of the horse, see conformation
poisoning 117–18, 229
Politian 33–4, 96, 115, 156, 169
Pollux 226
Polycleitus 197
Porphyrius the charioteer 266
Poseidon 149–50, 216, 217
postal service 9
Price-Edict of Diocletian 7
Priscian 171
Porphyrius of Gaza 63
Prognoseis kai iaseis 14, 27, 272
prooimia 181, 266, 269, 271–2
of Pelagonius 161–2, 266
of Hierocles 210, 211–12, 214–26,
266, 268, 271, 298
in manuscripts 27, 29, 41, 43, 45, 46,
284
proverbs 222–4, see also
paroemiographers
Prousa 123–4, 127
puppy, used in remedies 118, 141, 202,
235–6
rescripts 129
rupture of internal organs 230
Quintilii, agricultural manual of:
and Anatolius 80, 81–2, 92, 97
and Hierocles 215, 234, 238
and Julius Africanus 279
raceshorses 159–61, 171, 190, see also
hippodrome
respiratory ailments 99, 118–19, 189,
190, 193, 235–6
see also cough, glanders
RV recension of Hippiatrica 44–7,
210–11, 243–4
in Teubner edition 54
see also MS Parisinus gr. 2244; MS
Lugdunensis Voss. gr. Q 50
Ridolfi, Cardinal Niccolò 21, 36, 37, 46
Rigault, Nicolas 55
Roger Bacon 242
roll, papyrus or parchment 129,
see also codex
Rossi, Niccolò 36–7
Ruel, Jean 49–50, 51, 56, 166
Rufus, Jordanus, see Giordano Ruffo
Rusio, Lorenzo 294–6
S. Giovanni a Carbonara, monastery
of 42
salt-treatment 189, 194
Sarmatians 124, 125, 126, 153–5, 168,
230
scholastikoi 72, 214–15, 260
scholia, composite 63–5
scorpions and spiders, stings of 131,
229, 238, 244
Second Sophistic 128–9, 214, 216, 222,
225, 228
Seripando, Antonio and Girolamo 42
shrew-mouse, bite of 82, 140, 255–7
used as amulet 146, 166–7, 255–7, 272
snakebite 131, 229, 244
incantations against 238, 289
Sicilian dialect translation of
Hierocles 211
Sicilian saints 289–90, 295
Sicily 211, 239, 242, 294–5
see also Bartholomew of Messina;
Manfred
silphium 108, 175–6
Simon of Athens 3, 12, 13, 195,
in manuscripts 38, 41, 42, 277, 279
in printed editions 4, 54
and Apsyrtus 136–8
and Cassius Dionysius 86
and Hierocles 215, 218, 220–1, 225
and the Souda 277
and Theomnestus 195–7
Simon of Genoa 211
Sirmond, Jacques 31
Sloane, Sir Hans 42
Smyrna 126, 127
Sol 162, 179, see also Helios
Sophocles 279
Sosandros, mythical inventor of horse-medicine 11–12, 290
Souda, relation to Hippiatrica 4, 123–7, 277
spices 159, 250
sprains 204–5, 250, 252
strangles 114, 144, 153, 154, 233
Stratonicus 227, 234
Strozzi, Carlo di Tommaso 35
Strozzi, Piero 21, 46
stud-farms, imperial, see Villa Hermogenis and Villa Palmatii
surgery 144, 153
swimming 173, 293
Symeon Metaphrastes 270
Symeon Seth 45, 300
symmetria 197
synkrisis 59, 216, 271, 281
Syriac, translation into, see Anatolius
Tarantinus 82, 227, 234, 257
tetanos 167, 174, 185–6, 190, 200, 207, 233, 237
Teuthris 43
Thebes 100, 201
Theomnestus 13, 56, 181–207, passim
date 125–6, 185–6
and Apsyrtus 69, 125, 185, 202–5
and Cassius Dionysius 70, 181, 186
and Hierocles 227
Arabic translation of 56, 67–8, 182–5, 266
and Xenophon 181, 194–201
Theophrastus 77–8, 106
Theophylact, patriarch of Constantinople 13, 38, 278
thinness 91, 110–11, 140, 162, 202–3, 274
Tiberius 272
and agricultural writers 97, 279
treatise on cows 43
in B recension 13, 27, 272
in C recension 41
in L recension 43, 282
in RV recension 45, 47, 285, 287
Timothy of Gaza 40, 82, 97, 219, 225, 226
titles of compilations 60
titles of Hippiatrica in manuscripts 1, 20, 40, 265, 282–4, 287
in editions 1, 49, 50–1
titles of source-treatises 76–7, 218, 220
Tomis 134
Tramezzino, Michele 51
Tribonian 63, 266
translations:
from Latin into Greek 105–8, 113–15, 133
translation into Greek of Pelagonius 67, 157, 169–80
translation of Latin legal texts into Greek 170–1
from Greek into Latin 105, 107–8
translation of Apsyrtus into Latin 122, 165
translation of Hierocles into Latin 67–8, 211, 239–44
see also Arabic; Italian; Sicilian; Syriac transliteration into minuscule 24, 267–8, 299
tumours 212, 254
Typho-Seth 149
Ugaritic veterinary texts 3
Valens 75–6, 82
Varro:
encyclopaedia of 59
work on agriculture 172, 208, 225
and Mago 6–7, 87–8, 91
and Anatolius 70, 71, 83, 84–91, 95
and other veterinary authors 103, 109, 225
Varro: (cont.)
used by Ruel in translating
Hippiatrica 59

Vegetius 4, 122
date 9
criticism of other authors 9–10, 158, 165, 209
Greek translation of 279
amateur status 160, 208–9
and Pelagonius 157–8, 171

Venice 25, 30

Vergèce, Ange 31

Villa Hermogenis and Villa Palmatii 8

Voss, Isaac 47

Walder, Johann 50

Wanley, Humfry 42

weights and measures 54, 66, 114, 159
modius castrensis 142, 159
holke 175–6

General Index

tables of in MSS 23, 27, 33, 37, 262, 268–9
tail 212
tonsils 212
vomiting (chordapsos) 181, 231, 286
warts 213
wounds 69, 99, 153, 243, 251
de Witt, Jan 42
worms 99–100

Xenophon 3–4, 13, 195
and Apsyrtus 136–7
and Cassius Dionysius 77–8, 86, 138, 194
and Hierocles 215, 218
and Theomnesteem 181, 194–201

Zechendorfer, Gregor 52
Zobelus, John 51
## Index of passages cited

### Aelian
*Natura animalium*
- I.54: 238
- II.14: 238
- II.37: 257
- III.2: 198, 272
- III.13: 223
- III.47: 225
- IV.7: 225
- IV.50: 4, 226
- VI.49: 225
- IX.54: 237
- XI.18: 277, 280
- XI.31: 100

in Bestiary of Constantine VII
- II.465 = NA III.47: 225
- II.620 = NA XI.18: 277, 280

### Alexander of Tralles (ed. Puschmann)
- VIII.2 (II. 375–7): 16, 179
- XI.2 (II. 475): 16
- XII (II. 579): 16
- XII (II. 583): 148

### Anthologia Palatina (Planudea)
- AP IV.1–3: 60
- AP XVI.271: 12, 290
- AP XVI.274: 60

### Apollodorus
*Bibliotheca* I.133–4

### Aristophanes of Byzantium
in Bestiary of Constantine VII (ed. Lambros)
- I.1: 84
- II.1: 218
- II.54–584: 224
- II.579: 84
- II.582: 237

### Aristotle
*Historia animalium*
- V 545b: 279
- VI 575b–577b: 4
- VI 577b–578a
- VI 577b: 88
- VI (VIII) 595b: 279
- VIII (IX) 604a–b: 4, 138
- VIII (IX) 604b: 237, 248, 257
- VIII (IX) 611a: 84, 93
- VIII (IX) 631a: 225

### Athenaeus
- 14.649d: 81

### Barsanouphios and John of Gaza
*Apokriseis* (ed. Schoinas (Volos, 1960))
- 753: 17

### CIG
- 1953: 8
- 5117: 100

### Celsus
*De medicina*
- proem. 9: 15
- proem. 65: 7, 15

*De agricultura* (frags. ed. Marx (CML I))
- XXVI = Columella VI.12.5: 107
- XXVIII–XXX = Pel. Lat. 185, 31, 287: 165

### Cicero
*De oratore*
- I.69: 209
- I.249: 5

### Codex Theodosianus
- Praef.-Nov. Theod. I.1: 61
- VIII.5.31: 9
### Index of passages cited

<table>
<thead>
<tr>
<th>Columnella</th>
<th>De re rustica</th>
</tr>
</thead>
<tbody>
<tr>
<td>XV.10.1: 8</td>
<td>VI.38.4: 92</td>
</tr>
<tr>
<td>IX.16.3: 16, 83</td>
<td>VII.5.17: 79</td>
</tr>
<tr>
<td>IX.16.11: 151</td>
<td>XI.3.2: 79</td>
</tr>
<tr>
<td></td>
<td>XI.3.64: 79</td>
</tr>
<tr>
<td></td>
<td>XII.46.5: 257</td>
</tr>
</tbody>
</table>

**Columella**

*De re rustica*

- I pref. 32: 11
- I.1.7–14: 78, 79
- I.3.8: 212
- I.8.6: 120
- VI. pref. 6–7: 221
- VI.1.1–2: 86
- VI.5.1: 117–8
- VI.5.3–4: 106
- VI.5.5: 107
- VI.6.1–3: 139
- VI.6.1: 92
- VI.6.5: 204
- VI.10.1–2: 112
- VI.10.1: 92
- VI.12.5: 107
- VI.14: 106
- VI.14.6: 107
- VI.15.1: 109
- VI.17.5–6: 255–6
- VI.17.6: 120, 166–7
- VI.18.12: 141
- VI.26.1–4: 90
- VI.27.1: 164–5
- VI.27.12: 96
- VI.28: 79
- VI.29.2–3: 95, 162
- VI.29.5: 162
- VI.30.1: 91, 110–1
- VI.30.3: 103, 163–4, 248
- VI.30.8–9: 99, 102, 118, 253
- VI.31.1: 92, 112
- VI.33.1: 120
- VI.33.2: 91, 110
- VI.34.1: 91, 110
- VI.34.3: 79
- VI.37.8: 87
- VI.38.1–3: 143, 248
- VI.38.2: 119

**Constantine Porphyrogenitus**

*Bestiary (ed. Lambros)*

- II, title: 263
- II.588–609 (list of horse breeds): 40, 219, 276

*Defixionum Tabellae (ed. Audollent)*

- 307, 382: 151

**Diogenes Laertius**

- proim. 2: 5
- IX.48: 78

**Dioscorides**

*De materia medica*

- I.20: 268
- II.114: 121
- III.37: 114
- III. 146: 154

**Euripides**

*Bacchae 66: 222

**Eustathius**

*Commentarii ad Homeri Iliadem*

- 819.50–4: 9
- 541.19–31: 223

**Firmicius Maternus**

*Mathesis*

- VIII.13.3, VIII.17.13: 9

**Galen (ed. Kühn)**

*De sectis*

- I.65: 128
### Index of passages cited

<table>
<thead>
<tr>
<th>De alimentorum facultatibus</th>
<th>XVII.13: 117–8</th>
</tr>
</thead>
<tbody>
<tr>
<td>VIII.453–4: 128</td>
<td>XVII.13.3: 116</td>
</tr>
<tr>
<td>VIII.584: 209</td>
<td>XVII.14.1: 140, 220</td>
</tr>
<tr>
<td>De simplicium medicamentorum temperamentis ac facultatibus</td>
<td>XVII.17: 92</td>
</tr>
<tr>
<td>XI.792: 81</td>
<td>XVII.17.3: 92</td>
</tr>
<tr>
<td>XI.793: 209</td>
<td>XVII.19: 92, 204</td>
</tr>
<tr>
<td>De compositione medicamentorum secundum locos</td>
<td>XVII.21: 92, 112, 176</td>
</tr>
<tr>
<td>XII.188: 13, 128</td>
<td>XVII.24: 92</td>
</tr>
<tr>
<td>Geoponica</td>
<td>XVIII.3.6: 92</td>
</tr>
<tr>
<td>proim.: 83, 269</td>
<td>XVIII.15: 92</td>
</tr>
<tr>
<td>I pref.: 76, 83</td>
<td>XVIII.17.3: 92</td>
</tr>
<tr>
<td>I.14: 72, 83</td>
<td></td>
</tr>
<tr>
<td>V.26.10: 176</td>
<td></td>
</tr>
<tr>
<td>IX.14: 82</td>
<td></td>
</tr>
<tr>
<td>XII.17.14: 257</td>
<td></td>
</tr>
<tr>
<td>XII.38: 121</td>
<td></td>
</tr>
<tr>
<td>XIII.17: 141</td>
<td></td>
</tr>
<tr>
<td>XVI.1.1–2: 85</td>
<td></td>
</tr>
<tr>
<td>XVI.1.7–17: 85</td>
<td></td>
</tr>
<tr>
<td>XVI.1.8–10: 94</td>
<td></td>
</tr>
<tr>
<td>XVI.1: 96</td>
<td></td>
</tr>
<tr>
<td>XVI.3: 110–1</td>
<td></td>
</tr>
<tr>
<td>XVI.3.1: 91, 140</td>
<td></td>
</tr>
<tr>
<td>XVI.3.6: 93</td>
<td></td>
</tr>
<tr>
<td>XVI.4: 88–9</td>
<td></td>
</tr>
<tr>
<td>XVI.4.5: 91, 110</td>
<td></td>
</tr>
<tr>
<td>XVI.6: 87</td>
<td></td>
</tr>
<tr>
<td>XVI.8: 111–2</td>
<td></td>
</tr>
<tr>
<td>XVI.1.10: 198</td>
<td></td>
</tr>
<tr>
<td>XVI.11: 92</td>
<td></td>
</tr>
<tr>
<td>XVI.12: 140</td>
<td></td>
</tr>
<tr>
<td>XVI.13: 204</td>
<td></td>
</tr>
<tr>
<td>XVI.18: 92</td>
<td></td>
</tr>
<tr>
<td>XVI.19: 85, 141, 253</td>
<td></td>
</tr>
<tr>
<td>XVI.21: 94</td>
<td></td>
</tr>
<tr>
<td>XVI.22: 82, 225</td>
<td></td>
</tr>
<tr>
<td>XVII: 86</td>
<td></td>
</tr>
<tr>
<td>XVII.1–2: 109</td>
<td></td>
</tr>
<tr>
<td>XVII.1.17: 93</td>
<td></td>
</tr>
<tr>
<td>XVII.6: 79</td>
<td></td>
</tr>
<tr>
<td>XVII.8.2–3: 90</td>
<td></td>
</tr>
<tr>
<td>Geoponica</td>
<td></td>
</tr>
<tr>
<td>proim.: 83, 269</td>
<td></td>
</tr>
<tr>
<td>I pref.: 76, 83</td>
<td></td>
</tr>
<tr>
<td>I.14: 72, 83</td>
<td></td>
</tr>
<tr>
<td>V.26.10: 176</td>
<td></td>
</tr>
<tr>
<td>IX.14: 82</td>
<td></td>
</tr>
<tr>
<td>XII.17.14: 257</td>
<td></td>
</tr>
<tr>
<td>XII.38: 121</td>
<td></td>
</tr>
<tr>
<td>XIII.17: 141</td>
<td></td>
</tr>
<tr>
<td>XVI.1.1–2: 85</td>
<td></td>
</tr>
<tr>
<td>XVI.1.7–17: 85</td>
<td></td>
</tr>
<tr>
<td>XVI.1.8–10: 94</td>
<td></td>
</tr>
<tr>
<td>XVI.1: 96</td>
<td></td>
</tr>
<tr>
<td>XVI.3: 110–1</td>
<td></td>
</tr>
<tr>
<td>XVI.3.1: 91, 140</td>
<td></td>
</tr>
<tr>
<td>XVI.3.6: 93</td>
<td></td>
</tr>
<tr>
<td>XVI.4: 88–9</td>
<td></td>
</tr>
<tr>
<td>XVI.4.5: 91, 110</td>
<td></td>
</tr>
<tr>
<td>XVI.6: 87</td>
<td></td>
</tr>
<tr>
<td>XVI.8: 111–2</td>
<td></td>
</tr>
<tr>
<td>XVI.1.10: 198</td>
<td></td>
</tr>
<tr>
<td>XVI.11: 92</td>
<td></td>
</tr>
<tr>
<td>XVI.12: 140</td>
<td></td>
</tr>
<tr>
<td>XVI.13: 204</td>
<td></td>
</tr>
<tr>
<td>XVI.18: 92</td>
<td></td>
</tr>
<tr>
<td>XVI.19: 85, 141, 253</td>
<td></td>
</tr>
<tr>
<td>XVI.21: 94</td>
<td></td>
</tr>
<tr>
<td>XVI.22: 82, 225</td>
<td></td>
</tr>
<tr>
<td>XVII: 86</td>
<td></td>
</tr>
<tr>
<td>XVII.1–2: 109</td>
<td></td>
</tr>
<tr>
<td>XVII.1.17: 93</td>
<td></td>
</tr>
<tr>
<td>XVII.6: 79</td>
<td></td>
</tr>
<tr>
<td>XVII.8.2–3: 90</td>
<td></td>
</tr>
</tbody>
</table>

---

**George Cedrenus**  
(ed. Bekker)  
I.213: 11  
II.332–4: 278

**George Synkellos**  
*Chronographia AM 5715: 80*  
*Gnomologium Vaticanum*  
54: 9

**Heim, Incantamenta magica**  
12: 160  
43: 150  
44: 120  
45: 152  
47: 149  
57: 179–80  
65: 149  
75: 150  
90: 151  
103: 277  
106: 238  
113: 179  
208: 149  
212: 151  
213: 147  
214: 148  
241: 150

**Hermogenes**  
*Περὶ ὀξεῶν*  
II.4: 217
Index of passages cited

*Progynasmata*

7: 221

*Herodian* (ed. Lentz)

I p. 229: 6

*Hesiod*

*Opera et dies* 40: 223

*Hippiatrica*

M recension (*Hippiatrica Parisina*)

title: 20, 265

index 1067 ff: 22

index 1213, 1215: 268

M1: 127, 209

M1 = B1.1: 123, 128

M1 = B1.2: 272

M1 = B1.3: 233

M3 = B1.23: 88–9, 91, 110, 267

M4 = B21.4: 102

M13 = B2.7–8: 100, 101, 138, 223

M17–26: 146

M19: 150

M21: 142

M22: 149

M23: 149

M29: 101

M29–30: 104–5, 114, 268

M30: 235

M31 = B2.18: 206

M33: 100, 190, 193, 201, 207, 274

M34–5 = B2.23–4: 201

M35: 207

M40 = B2.12: 106, 234

M41 = B4.1: 163–4, 173, 178

M46 = B4.6: 179

M52 = B2.5: 106

M53: 267

M56: 173, 174


M62: 151

M67 = B96.27: 267

M71 = B96: 132, 143, 252, 268

M73 = B9: 131, 288

M74 = B10.3: 101, 138

M75 = B87.2: 233

M80 = B14.2: 141

M82–4 = B14.7–9: 84, 85

M83 = B14.8: 84, 95–6

M84 = B14.9: 87, 176

M86: 131

M88 = B68.4: 110–1, 140, 274

M89 = B68.5: 190, 202–3, 273

M91 = B68.6: 174, 178

M92 = B14.9: 94

M98 = B44.1: 135

M99 = B97: 135

M100 = B97.8: 188, 190

M101: 248–9

M102 = B8.1: 131, 265, 270

M103 = B35.1: 131, 141, 231, 265, 270

M105 = B20.1–2: 144, 153, 154

M107 = B16.4: 99, 114, 153, 265, 273

M109 = B20.20: 250, 251

M114 = B16.2: 144, 233, 268

M115 = B17.1: 231, 265, 270

M118 = B17.2: 231

M121 = B24.3: 204, 268

M124 = B52: 143

M125 = B51: 143

M126: 265

M127 = B52.8: 99

M131 = B52.12: 173

M146: 265

M149 = B98.2: 190, 268

M150 = B71: 144, 153

M156: 238

M163 = B50.2: 268

M170 = B10.1: 100, 101, 127, 131, 138

M173: 267

M174 = B74.1: 233

M183 = B26.6: 185, 183

M187 = B36.21: 173

M196 = B38.10: 159
Index of passages cited

M201–2: 150
M202: 150
M206: 180
M209: 265
M225: 126, 154, 268
M231: 145
M237: 145
M250: 114
M256
¼
B26.39: 201
M262: 191
M273 = B28.3: 213
M274 = B60: 213
M291 = B69.1–2: 176, 202
M298 = B69.16: 191, 193, 202, 206
M306: 283
M307 = B101.1: 140, 252, 264
M309 = B101.6: 115, 140, 252
M311: 140, 251
M312 = B101.8: 252
M313 = B101.9: 140
M316 = B34.5: 152, 174–5, 176, 233
M319 = B34.12–14: 186–8, 207, 274
M325 = B34.10: 236
M330 = B34.26: 172, 178
M343 = B82.8: 213
M349 = B12.1: 246
M363 = B11.35: 120
M376: 252
M381 = B11.39: 206
M412 = B11.44: 179
M422: 120
M425 = B29.1–2: 138–9
M427 = B29.8: 108, 114, 138–9, 201
M428 = B29.6: 108
M429: 251
M433 = B62.4: 173, 174, 178
M436 = B42.7: 177
M437 = B53.1: 133
M438 = B54.1: 268
M440: 147
M443: 110
M456 = B27.1: 235
M457 = B27.3: 235
M458 = B22.1: 177

M460: 11, 116
M469: 112
M470 = B22.7: 112
M470: 120
M471: 112
M473: 190, 193, 194, 207
M475: 207
M496 = B22.34: 173, 177
M522 = B21.1: 268
M523 = B22.54: 172
M526 = B88.1: 141, 228
M527 = B88.4: 82, 141
M529: 85, 253
M530 = B88.2: 228
M532: 154
M536 = B6.4: 115, 174, 223
M537 = B7.6–8: 116, 176, 189, 190,
193, 207, 273
M538 = B5.4: 201
M539 = B5.5: 250
M540 = B7.2: 142
M545 = B32.3: 201
M547: 251
M552 = B21.2: 154, 233
M556 = B62.5: 177
M558 = B67.1: 167
M559: 142
M566 = B67.3: 176
M569 = B46: 152
M571 = B36.1: 135
M574 = B36.6: 143
M576 = B45.5: 253
M580–1 = B66.7–8: 99
M582 = B31.4: 193
M586 = B66.5: 202
M587 = B45.3: 253, 275
M588: 251
M591: 249
M592 = B31.1: 212, 230
M593 = B37.2: 231
M596: 230
M612: 171
M615: 265
M617 = B95.1: 141
Index of passages cited

Hippiatrica (cont.)
M619 = B62.4: 202
M621: 85, 111–2
M624 = B126.3: 253, 275
M626 = B102: 133
M633 = B75.1: 144
M638–41 = B75.9–12: 118
M638 = B75.9: 99, 102
M641: 99
M642 = B75.3: 228
M656 = B103.17: 179
M662 = B104.1–4: 130, 133
M666 = B107.3: 103
M681 = B107.3: 103
M684 = B108.1: 140
M691: 11, 238
M692 = B86.3: 178, 179, 238
M694 = B87.1: 140, 146, 166–7, 233, 255–6, 272
M700 = B87.4: 255–6
M705 = B87.2: 82, 229, 234, 255–6
M706 = B87.9: 229
M707 = B87.6: 272
M709 = B89.1: 117–8
M710 = B55: 145
M712: 145
M716 = B55.5: 173
M721: 265
M724: 99
M734 = B41.4: 194
M736 = B37: 126, 127, 231
M741 = B89.1: 233
M743 = B89.4: 117–8
M744 = B89.3: 233
M745 = B90.1: 233
M746 = B90.2: 233
M748 = B94.2: 237
M751 = B72: 153
M759 = B129.1–2: 130, 133, 141, 145, 146, 163–4, 202, 288
M802 = B129.40: 172
M805 = B129.43: 178
M824 ff. = B130.1–53: 9
M824 = B130.133: 152
M835 = B130.13: 142
M839: 142
M881 = B113.1: 135
M896 = B116.1: 133, 153, 200
M897 = B117.14: 252
M908 = B77.4: 250
M909 = B77.1: 213
M916: 137, 266, 272, 273
M917: 272
M919: 272
M924 = B130.68: 213
M926: 265
M968: 114, 142
M978: 152
M982–3 = B130.98–9: 9
M990 = B30.6: 250
M995: 178
M1003: 178
M1011: 126, 134, 272
M1025: 116
M1026: 142, 147
M1027: 265, 272
M1028: 145
M1036–7 = B15.5–6: 117
M1039 = B1.13–4: 211–12, 268
M1042: 142
M1044: 142
M1046: 142
M1052 ff = B130.126 ff: 145
M1053 = B15.5–6: 84, 85
M1062 = B130.134: 142, 159
M1065: 84, 85, 272
M1066: 91, 110–1, 140
M1068: 247–8, 266
M1094: 99, 118–9
M1096 = B27.5: 106–7
M1099 = B27.6: 106–7
Index of passages cited

M1105 = B35.2: 231
M1111: 207
M1120: 250
M1121: 250
M1122 = B126: 252
M1124: 275
M1126: 251
M1136: 250, 251
M1137: 251
M1139: 250
M1140: 250
M1143 = B130.156: 250, 251
M1145: 250
M1148 = B130.160: 234
M1151 = B130.163: 238
M1154 = B59.1: 212
M1162 = B65.2: 231–2

B recension (Hippiatrca Berolinensia)
B1.9: 214–7, 270
B1.11: 218
B1.13: 82, 224
B1.15: 223
B1.24: 11
B2.1–6: 130, 133, 136
B2.1: 106, 143, 212
B2.10: 212
B5.1: 233
B6.4: 233
B7.4: 179
B8.4: 230
B9.3–4: 139
B10.5: 227
B12: 219
B12.6: 213
B15.1: 230
B15.2: 237
B16.3: 223
B17.1: 270
B18: 212
B21.3: 223, 268
B24: 144, 204, 268
B26.17: 293
B33.1: 212

B33.12: 212
B33.15: 237
B34.6: 233
B34.22: 174–5
B34.23: 173
B34.24: 173
B50.1: 268
B53.2: 227
B56: 270
B57: 270
B59: 220
B59.6: 224
B69.24: 268
B69.25–6: 98
B74.3: 233
B76.1: 254
B77.23: 270
B83.2: 228
B84: 230, 276
B86.2: 229
B91–3: 229
B97.7: 213
B98: 139, 268
B99.4: 229
B114: 127
B115: 130, 137, 153, 218

C recension (Hippiatrca Cantabrigiensia)
C7.1: 279
C8.9: 279
C10.1: 277, 279, 280
C10.3: 278
C10.5: 279
C10.10: 279
C10.11: 246
C11.10: 276
C12.2: 276
C13.3: 272
C16.3: 279
C18.1: 235
C21.5: 278
C22.2: 85, 111
C24.3: 283
C24.5: 277
Index of passages cited

C recension (cont.)

C24.6: 277, 280
C24.7: 203
C33.3: 276
C33.4: 135, 268
C44: 94
C44.4: 280
C44.5: 280
C49.1–6: 130, 133
C56.7: 278
C57.2: 283
C58.5: 279
C71: 238
C75: 237
C78.1: 279
C80: 130, 133
C80.22: 278
C81.8: 281
C81.10: 279
C93.1–11: 95, 195, 196
C93.2: 197
C93.3: 195
C93.12–17: 182, 191–2, 194
C93.14–16: 196, 197
C93.17: 198
C93.18–22: 182, 192, 194, 200
C93.18: 191, 194, 200
C93.19: 198–9
C93.20: 199
C94.24–6: 279

RV recension (Excerpta Lugdunensia)

titles: 45, 284, 287
V51: 286
V54: 286
V56: 287
V101–3: 288
V102: 238
V104: 289
V128: 289
V196–9: 290
V204: 289

Excerpta Anatoliana in C

1–12: 94
L6 = C81.8: 276, 281
L6 = C81.10: 279
I.9: 276
I.12: 112, 119, 280
I.13: 276
II.3.5: 80, 279
II.10: 93
III.2 = C8.9: 279

‘Timothy of Gaza’ (list of horse breeds) in C

1–19: 40, 97, 219, 276
41: 86
42: 6

Mago of Carthage fragments (ed. Speranza)

L recension (Hippiatrica Londinensis)

L99.9: 116
London, BL, MS Sloane 745: 282
43: 90
Index of passages cited

44: 87
53: 107
54: 186, 201
55: 108, 186, 201
56: 186, 201
57: 137, 168, 253
63: 6
65: 257

1.2–3: 162
2: 162, 177
4: 103, 161, 163, 173
17: 159, 173
18: 179
22.3: 107
24.2: 174
25: 159
26: 160
30: 140
43: 173
71: 179
89: 177

Meliteniotes (ed. Miller, Notices et extraits, 19.2 (1862))
1343–4, p. 71: 12

Mulomedicina Chironis
157: 122
205: 16
266–7: 122
497:16
952: 16
974: 16, 116

New York, Morgan Library, MS 735: 295

Nicander
Theriaca 816: 257

Oribasius
Synagogai Iatrikai
I.1: 62, 218, 264
II.1: 62

PGM
XX: 150

P. Mich.
VIII.182: 152

P. Oxy.
XIV.1772: 152
LXVIII.4647: 221

Pelagonius (Latin text ed. K.-D. Fischer)
ep. ded. 1–2: 162
ep. ded. 1: 159

204–8: 104–5
204.4: 119, 174
208: 106
211: 159
216: 159, 161, 178
254: 109
267: 177
268: 174–5
269.2: 173, 176
270: 167
271: 159, 236
280: 166–7
283: 178, 179
294: 172
302: 178
307: 110, 111
<table>
<thead>
<tr>
<th>Pelagonius (cont.)</th>
<th>Pliny the Elder</th>
</tr>
</thead>
<tbody>
<tr>
<td>308.1: 177</td>
<td>Naturalis historia</td>
</tr>
<tr>
<td>313: 114</td>
<td>VII.7.43: 237</td>
</tr>
<tr>
<td>329: 176</td>
<td>VIII.156: 225</td>
</tr>
<tr>
<td>347–8: 176</td>
<td>VIII.171: 87</td>
</tr>
<tr>
<td>363: 160</td>
<td>VIII.175: 225</td>
</tr>
<tr>
<td>364: 172</td>
<td>XVIII.162: 86</td>
</tr>
<tr>
<td>367: 178</td>
<td>XXIV.98: 153</td>
</tr>
<tr>
<td>369: 159</td>
<td>XXIV.160: 79</td>
</tr>
<tr>
<td>383: 172</td>
<td>XXIX.17: 114</td>
</tr>
<tr>
<td>405: 252</td>
<td>XXIX.89: 257</td>
</tr>
<tr>
<td>437: 120</td>
<td></td>
</tr>
<tr>
<td>442: 179</td>
<td>Procopius of Gaza</td>
</tr>
<tr>
<td>453: 178</td>
<td>Catena in Octateuchum</td>
</tr>
<tr>
<td>464–5: 159</td>
<td>PG 87.1, cols. 21–4: 60, 264</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pelagonius (in Einsiedeln, Stiftsbib. MS 305 (504))</th>
<th>Proverbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>E529 bis: 102</td>
<td>Apostolius</td>
</tr>
<tr>
<td>E204: 234</td>
<td>III.97: 223</td>
</tr>
<tr>
<td></td>
<td>IV.61: 224</td>
</tr>
<tr>
<td></td>
<td>V.35: 223</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>O. Florida (ed. Bagnall)</th>
<th>Diogenianus</th>
</tr>
</thead>
<tbody>
<tr>
<td>15: 151</td>
<td>I.65: 223</td>
</tr>
<tr>
<td></td>
<td>I.83: 223</td>
</tr>
<tr>
<td></td>
<td>II.96: 223</td>
</tr>
<tr>
<td></td>
<td>II.97: 223</td>
</tr>
<tr>
<td></td>
<td>II.33: 223</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ps.-Oppian</th>
<th>Gregory of Cyprus, cod. Leidensis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cynegetica</td>
<td></td>
</tr>
<tr>
<td>I.168–204: 97</td>
<td></td>
</tr>
<tr>
<td>I.236–69: 225</td>
<td></td>
</tr>
<tr>
<td>I.324–48: 97</td>
<td></td>
</tr>
<tr>
<td>I.324–7: 280</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Philostratus</th>
<th>Gregory of Cyprus, cod. Mosquensis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitae Sophistarum II. 559, 582: 81</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Photius</th>
<th>Macarius</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bibliotheca</td>
<td>III.78: 223</td>
</tr>
<tr>
<td>cod. 34: 80</td>
<td>II.47: 223</td>
</tr>
<tr>
<td>cod. 163: 75–6, 83</td>
<td>II.67: 224</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pindar</th>
<th>Zenobius</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isthmia I.2: 217, 223</td>
<td>I.40: 224</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Plato</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Phaedrus 253d: 96</td>
<td></td>
</tr>
</tbody>
</table>
## Index of passages cited

**Simon of Athens** (ed. Widdra)
1–11 = C93: 4
1–10 = C93.1–10: 95, 194–7
2 = C93.2: 196, 197

**Souda**
A 1115: 277
A 4251: 5
A 4590: 224
A 4647: 80
A 4739: 123–4
B 481–2: 79
E 563: 201
I 574: 223
K 1621: 4
M 1419: 277
II 141: 81
T 987: 4, 277
X 267: 11

**Theophanes Chrysobalantes** (ed. Bernard)
87, p. 290; 123, p. 376; 132, p. 416: 276

**Timothy of Gaza**
*Excerpta ex libris de animalibus* (ed. Haupt, *Hermes*, 3 (1869))
27.1: 97
27.9: 225
30.2: 225
39.4–5: 257

**Varro**
*Rerum rusticarum libri*
I.1.4–6: 216
I.1.8–11: 77–8, 79
I.1.8: 138

**Vegetius**
*Digestorum artis mulomedicinae libri*
prologus 1–4: 10, 107, 158
III.4: 277

**Greek translation of Vegetius in C**
C7.1: 279
C94.24–6: 4, 279

**Vergil**
*Georgics* III.79 ff: 95

**Xenophon**
*De re equestri*
I–III: 218
I.1: 4, 95, 195, 198, 218
I.2: 196
II.1: 200
II.3: 198
III.10: 218

**Vettius**
*Georgics* III.79 ff: 95