

DATES AND MEASURES: HISTORY AND SOME HIPPOCRATIC TEXTS

Robin Lane Fox and Andrew Meadows, New College Oxford.¹

One of Elizabeth Craik's major contributions has been to assemble and advance questions of the dating and location of texts now in our 'Hippocratic Corpus'. She has been rightly open to dates and locations which are not simply 'Coan, fifth or fourth century BC'. On mainly linguistic grounds she has proposed a west Greek origin for *On Places in Man*, though such an origin had hardly been conventional wisdom before her commentary. Her championing of *On Glands* as a Cnidian text and its fascinating awareness of lymph and lymph nodes, if not of the human lymph system, that silent internal wonder, is further supported by contributions to this volume.²

Part 1. Clues to Dating.

Historians nowadays use texts in the Hippocratic [Corpus](#) primarily as comparisons with the thinking and vocabulary of their beloved historians, Herodotus and Thucydides. In a fundamental article [Jacques Jouanna](#) has considered the nuances of particular passages in Herodotus which have been related rather too directly to Hippocratic authors' thinking. His readings are decisive arguments against any notion that Herodotus shared the outlook of such Hippocratic authors as the author of *Epidemics* books 1 and 3. He also considers the case for similar thinking in Thucydides, a more promising subject.³ Literary scholars, meanwhile, including

¹ New College, Oxford. OX1 3BN. Lane Fox takes responsibility for part 1 and most of part 3 of this paper, Meadows for part 2; however, in the spirit of the times, we have indulged in a certain amount of collusion.

² [Craik 1998](#); [Craik 2005](#).

³ [Jouanna 2005, pp. 3-28](#).

Deleted: c

Formatted: English (UK)

Deleted: (

Deleted:)

Deleted: (

Deleted:)

Deleted: (

Deleted:)

Formatted: English (UK)

Elizabeth Craik, have been relating the Athenian dramatists, especially Euripides ,to Hippocratic medical thinking. Again, this area is one in which overstatement has at times been in evidence.⁴

Deleted: -

Historians have been less concerned recently with clues to dating Hippocratic texts themselves. At the St Andrews conference, I presented an outline of my detailed case for dating *Epidemics* 1 and 3 to c. 470 BC, far earlier than scholars currently contemplate. I believe they are our earliest complete texts in Greek prose, a distinction that Craik has credited to *On Places in Man*. I have presented the arguments for this radical conclusion in my book, to appear in 2020. As they are presented there in a detailed manner, but adjusted to general historical readers, I will be supporting them in more specialised articles, setting out my answers to problems which they might otherwise seem to raise in the epigraphic record, particularly on Thasos, their author's main location. Here, I wish only to add some supporting points to my arguments, before turning to another vexed, but underappreciated, clue, important for the dating and authorship of parts, at least, of three other texts in the Corpus.

Anyone who works now on *Epidemics* 1 and 3 owes an enormous debt to the superb Budé edition by Jacques Jouanna, a philological masterpiece which has transformed the subject. In his preface he endorses the late fifth century dating of the books, one which I consider mistaken, and also makes a novel case for the author having lived and worked on Thasos for many more than the three, probably four, years whose seasons he describes there.⁵ For Jouanna, these years have been chosen for the differing nature of their weather-patterns, their *katastaseis* or constitutions ,what we might translate as 'set-ups'. To make his point he tabulates them as hot and dry (the

Deleted:

Deleted: (

Deleted:)

Deleted: (

Formatted: English (UK)

Deleted:)

Deleted: (

Deleted:)

⁴ Craik 2001, pp. 81-96; Kosak 2014.

⁵ Jouanna 2016, pp. cxxv-vi.

first one), cold and wet (the second one), cold and dry (the third one) and hot and wet (the fourth one). In his view they were not necessarily four years in sequence, the view taken by all previous scholars of the text. He suggests [that](#) they are ‘un choix d’années exemplaires correspondant à quatre types possibles d’années suivant la prédominance des qualités élémentaires et non pas nécessairement à quatre années qui se succèdent’.⁶ This new suggestion enlarges the range of years which can be assigned to the work’s contents, but I believe it to be mistaken. Neat though Jouanna’s characterisation of each of the years is, a reading of their weather-patterns calls it in question.

The third and fourth are good counter-examples. The third year, for Jouanna, is ‘une année froide et sèche’ and as he well notes, a similar characterisation of it was given by Galen in his commentary: ‘dry and cold predominated in the constitution’, Galen remarks.⁷ However, this year began before and during Arcturus in the autumn with many heavy rains. Until the setting of the Pleiads it was still not entirely dry: there were a few rains. In winter there were snowfalls. Around the spring equinox there were a few rains again. Summer was indeed dry, but it was hot and dry, not ‘dry and cold’, as Galen hastily summarised the year. There were ‘great heats,’ the author states, ‘not by gradual addition, but [continuous ones and violent too.](#)’⁸

A single characterisation of an entire year is always likely to be misleading and even ‘dry’ years may be relatively dry, not completely dry. However, the fourth year, too, resists such a reading. For Jouanna it is hot and wet. Nonetheless, for a short while around the spring equinox there were snows and cold, with consequences for the

⁶ Jouanna 2016, pp. cxxv and n.161.

⁷ Jouanna 2016, p. 194; Galen, *In Hippocr. Epid. 1 Comm.* 82.1-3 (ed. Wenkebach).

⁸ Hippocr. *Epid.* 1.13 (2.640 Littre); Jouanna 2016, pp. 190-194.

Commented [LTI]: I am adding Littré pagination when references to the HC are given. These will need checking.

Deleted: (

Deleted:)

Deleted: (

Deleted:)

Formatted: Font: Italic, Complex Script Font: Italic

Deleted: (

Deleted:)

public health as the author explicitly notes. From the time of the Dog star onwards there was a 'clear and hot summer with great stifling periods of heat.' Only in autumn did the frequent rains resume. The author then sums up the year as southerly, wet and mild. In fact, whole phases of it, as he has shown, were not so at all.⁹

Commented [LT2]: I think the reference to the Hippocratic text is incorrect here.

There is a further problem. When a year began, how would the author have known it was going to typify distinctive qualities, let alone the qualities he supposedly wanted to exemplify? He could not have known that, say, the third year was going to be cold and dry if he judged from its autumnal beginning. It began by being extremely wet. To find the four distinct types of year which, in Jouanna's view, the author wished to illustrate, he would have had to begin noting many more years, at least until their character turned out to be not the character he wanted. Meanwhile he would be noting personally and receiving from helpers many individual cases in these extra years. For his third year it seems clear, as Jouanna has well argued, that the author had twenty-four more named case-histories at his disposal than his text now happens to include: they have most probably been lost from the original text.¹⁰ However, the rather different notion that he had many more case-histories from other years but did not include them at all because their years turned out to be unsuitable for his weather-sampling is very difficult to credit.

Deleted: 24

I accept, therefore, that the four years are not picked as 'exemplaires' but that they run in a chronological sequence, the general view of scholars before Jouanna's edition. I also lay weight on a clue which has recently been considered too vague to help. One Hermocrates on Thasos is described in one of the text's first three years as

Deleted: (

Formatted: Highlight

Formatted: Italian, Highlight

Formatted: Italian

Deleted:)

Deleted: (

Deleted:)

Formatted: English (UK)

⁹ Hippocr. Epid. 3.2; Jouanna 2016, pp. 351-354.

¹⁰ Jouanna 2016, pp. L-LII.

lying sick 'by the new wall'.¹¹ Thanks to Herodotus and Thucydides, both of whom visited the island, the history of Thasos's city-wall is well known. In about 491 king Darius ordered it to be destroyed.¹² It was then rebuilt, a 'new wall' indeed, between 479, after Xerxes's defeat and retreat, and 465 when a strong wall existed around the city, enough to hold up the expert besieger Cimon and his Athenian troops until 463 BC. Then Thasos' walls were 'destroyed', as Thucydides specifies.¹³ They remained so, because in summer 411 Thasian oligarchs then set about building a wall again as Thucydides tells us.¹⁴ Careful archaeological study of the city-walls has not seriously qualified this sequence.¹⁵ The 'new wall' in the *Epidemics* is either the wall of 411 onwards, up and in place perhaps by 411/0 and certainly by 410/9, or the wall built after the Persians' defeat and retreat from Greece, at a time between 478 and, say, 466.

Deleted: ca.

In 1959 François Chamoux questioned the force of the word 'new' and in 2000, A.J. Graham endorsed this caution, citing as an example New College, Oxford, my own college, founded in 1379 but still called 'new' in 2000 when more than 620 years old.¹⁶ This particular argument needs to be dropped. New College was indeed called 'new' in 1379 and continues to be called so, but the word 'new' is enshrined in its official name and statutes, 'the New College of the blessed Virgin Mary' in Oxford. It was given this name, not (as often thought) because it was a new venture at the time of foundation, though indeed it was one, but to distinguish it from an existing

¹¹ Hippocr, *Epid.*, 3.1.2.

¹² Hdt. 6.46-47.

¹³ Thuc. 1.101.3.

¹⁴ Thuc. 8.64.2-3.

¹⁵ Grandjean 2011, esp. pp. 358-360 and 368-375.

¹⁶ Chamoux 1959, p. 362; Graham 2000, pp. 301-327, at 320.

- Deleted: ;
- Formatted: English (UK)
- Formatted: English (UK), Highlight
- Formatted: Highlight
- Formatted: English (UK), Highlight
- Formatted: English (UK)
- Deleted: (
- Deleted:)
- Deleted: (
- Deleted:)
- Deleted: (
- Deleted:)

college in Oxford of the Virgin Mary, Oriel college. It has retained the name because this alternative, and in some views lesser, college of the Virgin continues to exist and because the statutes give New College the name it continues to use.¹⁷

In antiquity the attribute 'new' could persist in a place-name when it had long become old, but reasons for this persistence vary. Cities named 'Neapolis' naturally continued to be called 'New City', as the name was officially given and made current in citizens' ethnics and so forth. To change this officially entrenched name as time passed would have been confusing and unnecessary. One such Neapolis was founded by Thasos, Neapolis in its mainland *peraea* by modern Kavalla, visible just across the water from Thasos's main settlement, Thasos city on the island's north-easterly coast. The 'new wall' in this Thasos city is not a comparable case. Unlike the name 'New College', no legal statutes enshrined its adjective 'new' and unlike the name Neapolis it was not officially given and diplomatically used. There is a second difference from the 'new' in New College. After the 'destruction' of 463, no coherent wall around the city existed. Indeed *Epidemics* 1 describes Philiscos as residing 'by the wall' in one of the text's first three years, but I suspect that the 'wall' here is also the 'new wall'. If not, it refers to a small length of wall left standing, probably by a gate, since the near-total demolition of the city wall in 491 or 463, as archaeologists have now shown to be possible.¹⁸ The important point is that on Thasos from ca.491 to 411 no proper city wall existed from which the 'new wall' needed to be continually distinguished. The previous wall (unlike Oriel College in Oxford) had been destroyed. Other instances of 'new' items persisting when very old have a similar rationale to 'New' Colleges. In Rome the Via Nova was so named to distinguish it from the existing Via Sacra and the name 'nova' persisted because the Via Sacra still existed. In Paris the Pont Neuf was built and named 'neuf' by 1607 to

¹⁷ Tyerman 2010, p. 33.

¹⁸ Hippocr. *Epid.* 1.27.1 (2.682 Littré).

Deleted: -

Formatted: Font: Italic, Complex Script Font: Italic

Deleted:

Deleted:

Deleted:

Deleted:

Deleted: '

Deleted: (

Deleted:)

distinguish it from other existing bridges over the Seine and as they persisted, so did its name. Eventually those older bridges were demolished but others replaced them and so the name Pont Neuf, after three centuries, was retained.¹⁹ In Britain the name 'New Labour' was a deliberate attempt to differentiate the Labour party from 'old Labour' but old Labour not only continued to exist: it re-emerged, relegating 'new Labour' to an inferior standing. The difference with Thasos' new wall in each case is clear. On Thasos, the new wall was called 'new' when built, although there was no coherent city-wall in existence from which it needed to be differentiated. It was called 'new' in the *Epidemics*' text because it was a recent new-build. Scholars have dated it to ca. 410 onwards, but I date it to a point between 478 and 466, as my book will explain in detail. The contents of *Epidemics* 1 and 3 span four years in sequence: I date them, for many other reasons, to ca. 471-467BC.

Enough of *Epidemics* 1 and 3. Now for at least three other Hippocratic texts. [On Diseases](#), [On the Nature of Women](#) and [On Superfetation](#) describe medical recipes by using Aeginetan measures. This fact about them was first noted, without further comment, by Carl Fredrich in 1899, in the context, however, of a discussion about distinctions between Coan and Cnidian texts, implying that he thought it relevant to them.²⁰ It was revived by [Hermann Grensemann](#) in 1975, repeated by [Antoine Thivel](#) in 1981 and summarised again by [Laurence Totelin](#) in 2007. Their words (translated where necessary) need to be presented carefully. Grensemann considered that Cnidus joined the 'Delian-Athenian' naval League after the Greek victory over the Persians in 480/79 and became a tribute-payer. This change is visible, he thinks, in Cnidian coins because the Aeginetan weight-standard is no longer valid there, as it had been until 480, but the Attic measure is valid instead. He says he mentions this because in the 'early levels' of the Cnidian 'Krankheitsbücher' there is reckoning

¹⁹ <https://en.wikipedia.org/wiki/Pont-Neuf>. Consulted 23.iv.19.

²⁰ Fredrich 1899, p. 11 n.1.

Commented [LT3]: Using the titles that Elizabeth uses. Which one of the *Diseases* text is this one? Presumably II VN, see below

Deleted:

Deleted:

Deleted: 6

Deleted:

Deleted: (

Deleted:)

both with Aeginetan and Attic weight-standards. In a note he mentions two texts from *Diseases II*, one from *On the Nature of Women* and two mentions in *On Diseases of Women I*.²¹ Unlike Fredrich, he does not note the reference in *On Superfetation*, but in another passage he remarks that the texts which use an Aeginetan measure are gynaecological texts, concerning women.²² By implication he is thinking of the Aeginetan references as dating parts of these texts as early as before 480, after which (he thinks) Attic weights and tribute to Athens came in to Cnidus.

Deleted:

Thivel summarises and spells out very well what Grensemann was meaning and endorses it as 'en effet, très plausible'.²³ Until 480, Thivel explains, coins on Cnidus were on the Aeginetan standard, but after 480, Attic and Aeginetan coins co-existed. He then refines what Grensemann had written in 1975. The Attic coins, he believes, prevailed in Cnidus, but only gradually, and they did not drive out the Aeginetan ones entirely until the end of the century. He then asks if *Diseases II* and *Superfetation*, which both mention Aeginetan measures, may be texts earlier than 480. He warns that these texts as we now have them are compilations of varying matter at varying dates. He still considers that their mentions of Aeginetan measures belong before 480 but that they are evidence only that 'the first versions' of these texts 'may very well have been written' so early. He warns that such measures do not date an entire chapter, let alone the entire book in question, even though he dates the measures originally to before 480.

Deleted:

Deleted:

²¹ Grensemann, 1975, p. 50 and n.7.

²² Grensemann, 1975, p. 193.

²³ Thivel, 1981, p. 94.

Deleted: (

Deleted:)

Deleted: (

Deleted:)

Deleted: (

Deleted:)

In 1994, [Lesley Dean-Jones](#) considered, citing Thivel, that Cnidian measures 'were used at Cnidos only up until 480BC when it entered the Delian League and reverted to Attic measures.'²⁴ In 1998, Ann Hanson also touched on the topic:

The weights and measures of Aegina were not only losing their dominance in the eastern Mediterranean after the defeat of Persia but the island itself was forced to adopt the Attic standard after being subsumed into the Athenian empire some years before mid-century.²⁵

Behind the words 'forced to adopt' must lie her awareness of the much-discussed decree on coins, weights and measures passed by the Athenians and intended to be observed by their allies.²⁶ In 2006 Totelin gave a cautious summary:

Until 480 Cnidus used weights and coins from Aegina. However, after the Greek victory over Persia, Cnidus became part of the Delian Confederacy dominated by Athens. From that time both Aeginetan and Attic coins were used in Cnidus. Some parts of the Cnidian treatises of the Hippocratic Corpus - or their model_ could have assumed written form before 480BC at Cnidus.²⁷

When did Cnidus join the Athenian alliance? Hanson's 'subsumed' may not be quite right. The Persian chorus in Aeschylus's *Persae* (472 BC) refers to Cnidus among a long list of places, including islands, which had been conquered by Darius but by implication have already been lost to Persia in the aftermath of Xerxes's defeat as he

²⁴ Dean-Jones 1994, p. 12n.39.

²⁵ Hanson 1998, pp. 71-94, esp.77.

²⁶ Osborne and Rhodes 2017, no. 155.

²⁷ Totelin 2006, p. 25.

Deleted: .'
Formatted: Indent: Before: 1.27 cm

Deleted: .'

Deleted: .'
Formatted: Indent: Before: 1.27 cm

Deleted: .'

Deleted: (

Deleted:)

Deleted: (

Deleted:)

Deleted: (

Deleted:)

Formatted: English (UK)

Deleted: (

Deleted:)

returns home.²⁸ At the battle of Mycale (July-August 479) Herodotus describes the Greek force as regarding the islands as 'prizes set before them.' Cnidus is likely to have joined the Greek alliance soon after the victory, voluntarily, however, but not by force. It was certainly a member by 469 when it served as a base for the Greek fleet before their major naval victory over the Persians' fleet at the Eurymedon river.²⁹

Deleted:

The statements by Hippocratic specialists about Aeginetan measures raise a whole host of related questions. Were Aeginetan measures distinctively in use in Cnidus? If used without any Attic ones, are they really a marker of a date for that part of the text before ca.480? What about the texts which also mention Attic measures in other passages? Is the Athenian decree about coinage, weights and measures relevant to this double usage? That decree is now a celebrated battle-ground, modern historians having dated it to the 440s: many of them have brought it down now to the 420s or even, fashionably, to 414BC. How, if at all, does it bear on the references to Aeginetan measures in our texts? When did Aeginetan measures disappear? Might they have lingered on into the early fourth century? Numismatists have had much to say in recent years which is relevant to these and other questions, but understandably enough, Hippocratic specialists have not kept up with it.

Deleted: '

Deleted: '

Deleted:

As a botanically-minded gardener, I add another question. *On the Nature of Women* prescribes an Aeginetan stater's weight of the leaves and flowers of *batrachion* in sweet wine and *On Diseases of Women* prescribes an Aeginetan drachm of the same flowers and leaves, also in sweet white wine.³⁰ Theophrastus does not happen to

Deleted: drachma

²⁸ Aesch. *Pers.* 892.

Formatted: English (UK)

²⁹ Hdt. 9.101; Plut. *Vit. Cim.* 12.2.

Formatted: English (UK)

³⁰ Hippocr. *Nat. Mul.* 32 (7.348 Littré) and *Mul.* 1.78 (8.182 Littré).

Deleted: 78

refer to *batrachion* but Dioscorides states it is 'wild *selinon*' of which there are various types, which he also surveys, as does Theophrastus.³¹ *Selinon*'s identity is a celebrated battlefield: in modern terms, is it parsley or celery? The answer, judging from Theophrastus and Dioscorides, is 'both'.³² Marshy *selinon* is modern *Apium graveolens*, or celery, which also grew at Selinus (in wet ground, therefore, no doubt by its nearby river: *Apium* is shown on Selinus's coins). This celery has the familiar fibrous stems which grow up to three feet and carry umbels of small white flowers. *Hippo-selinon* is *Smyrniolum olosatrum*, modern 'Alexanders' or 'horse parsley'. It grows up to four feet with even thicker stems than celery's. It has bigger leaves and bigger umbels of white flowers. *Oreo-selinon*, mountain *selinon*, is our parsley, little *Petroselinum crispum*, and is probably identical with Dioscorides's *petro-selinon*, rock *selinon*, which, he notes correctly, is well attested in Macedon. Parsley's leaves are vastly smaller than celery's or Alexanders' and its flowers are tiny too. Interestingly, Theophrastus already states that *hippo-selinon*, our Alexanders, is good in white wine to counter retention of urine and lithiasis. Mountain *selinon*, our parsley, he says, is given in very dry ('austere') wine for women's periods.³³

Parsley and *Apium graveolens* do indeed have purgative and other properties, evidence, yet again, of Greeks' remarkable awareness of the properties of plants among which they and their flocks lived, although they had no idea how to calibrate their use accurately. Parsley, *Apium* and even *Smyrniolum* have flowers, but a stater's weight, as usually interpreted, amounts to more than a kilogram. It would be a big quantity of flowers and leaves for someone to assemble and pound down, even of the two big-stemmed plants. Of our parsley it would be an enormous bundle. How

³¹ Dioscorides 2. 175; Theophr. *Hist.Pl.* 7.2.2.

³² Andrews 1949, pp. 91-94; Amigues 2003, pp. 120n.9-122n.22.

³³ Theophr. *Hist.Pl.* 7.6.3-4.

Formatted: Font: Italic, Complex Script Font: Italic

Deleted:

Deleted:

Deleted:

Formatted: Font: Italic, Complex Script Font: Italic

Deleted: a

Formatted: Font: Italic, Complex Script Font: Italic

Deleted:

Formatted: Font: Italic, Complex Script Font: Italic

Formatted: Font: Italic, Complex Script Font: Italic

Formatted: Font: Italic, Complex Script Font: Italic

Formatted: Font: Italic, Complex Script Font: Italic

Formatted: Font: Italic, Complex Script Font: Italic

Formatted: Font: Italic, Complex Script Font: Italic

Formatted: Font: Italic, Complex Script Font: Italic

Formatted: Font: Italic, Complex Script Font: Italic

Deleted: a

Formatted: Font: Italic, Complex Script Font: Italic

Deleted: s

Deleted: (

Deleted:)

Deleted: (

Deleted:)

could a doctor or a reader of the Hippocratic texts mix such a pile with white wine? Is parsley, being so small, therefore excluded as *batrachion* and are only celery or the even bigger Alexanders at all likely? Or was this stater-weight being measured in some other way? These and my other questions I hand now to Andrew Meadows, an expert numismatist and historian who is well qualified to address them

Part 2. Weights and dates

As has been noted above, the question of the weight-standards stipulated in a small subset of texts in the Hippocratic Corpus has attracted the attention of scholars in the past.³⁴ Specifically, the Attic and Aeginetan, and only the Attic and Aeginetan, standards are both used. This use of weight-standards offers clear opportunities for discussion of chronology and source criticism. However, previous discussions have been hampered by a poor understanding of the use and spread of weight-standards in the fifth century, as well as the confusion surrounding the date and nature of the infamous Athenian Standards Decree, which may have sought to impose the use of Attic standards throughout the Athenian *arche*. This section re-examines what can be said on these matters in the light of recent progress in the fields of numismatics and epigraphy.

We may begin with a catalogue of the relevant passages and the terms used:

Χοῖνιξ, Χοῦς and Κοτύλη

The *choinix*, *chous*, *kotyle* and *fractions* thereof are used as measures of volume in the corpus, occurring on more than 250 occasions, and the terms are generally used

³⁴ FREDRICH 1899, p. 11; GRENEMANN 1975, p. 50; THIVEL 1981, p. 94. GRENEMANN's assumption was that the creation of the Delian League had led to the abandonment of the Aeginetan standard and the adoption of the Attic weight standard at *Cnidus* after 480 BC. This is, as we shall see, completely false.

Deleted: c

Deleted: 5th

Deleted:

Deleted:

Deleted: K

Deleted: o

without specification. However, two different standards are mentioned in nine works:

Attic <i>choinix</i> :	<i>Mul.</i> 1: 89 (8.212 Littré)	Formatted: Font: Not Italic, Complex Script Font: Italic
	<i>Mul.</i> 2: 195 (8.378 Littré)	Formatted: Font: Not Italic, Complex Script Font: Italic
Attic <i>hemichoon</i>	<i>Nat. Mul.</i> : 107 (8.422 Littré)	
	<i>Mul.</i> 2: 172 (8.352 Littré); 206 (8.398 and 400 Littré)	Formatted: Font: Not Italic, Complex Script Font: Italic Deleted: ; 206
Attic <i>kotyle</i> :	<i>Acut. (Sp.)</i> : 66 (2.520 Littré)	
	<i>Mul.</i> 1: 6 (8.30 Littré); 72 (8.152 Littré)	Deleted: ; 119
	<i>Mul.</i> 2: 118; 119 (8.260 Littré)	Formatted
	<i>Nat. Mul.</i> : 33 (7.370 Littré)	Formatted: Font: Not Italic, Complex Script Font: Italic,
	<i>Epid.</i> 7: 3 (5.370 and 372 Littré)	Formatted
	<i>Mul.</i> 3 (<i>Steril.</i>): 224 (8.432 Littré)	Commented [LT4]: I can't locate this occurrence. Is there a mistake in the reference? Formatted: Font: Not Italic, Complex Script Font: Italic, , Highlight
	<i>Nat. Pue.</i> : 18 (7.502 Littré)	Formatted: , Highlight Formatted: Highlight Formatted Formatted Formatted
Aeginetan <i>kotyle</i> :	<i>Morb.</i> 2: 64 (7.98 Littré)	Formatted: English (UK)
	<i>Nat. Mul.</i> : 33 (7.370 Littré)	Formatted: Font: Not Italic, Complex Script Font: Italic Deleted: ; 3 Formatted
Aeginetan <i>hemikotylion</i>	<i>Morb.</i> 2: 38 (7.54 Littré)	Formatted: Font: Not Italic, Complex Script Font: Italic, Formatted Formatted: Font: Italic, Complex Script Font: Italic, Formatted Formatted
<p>Δραχμή, τετρώβολος, ὀβολός, ἡμιωβέλιον</p> <p>The drachm as a unit of weight occurs 24 times in the corpus, the tetrobol once, the obol 41 times and the hemiobol 7 times, generally without specification. In five works the standard is specified:</p>		
Aeginetan drachm :	<i>Mul.</i> 1: 78 (8.182 Littré) 6.2g	Deleted: drachma Formatted: Font: Not Italic, Complex Script Font: Italic

Attic tetrobol: *Mul. 1:* 34 (8.82 Littré) 2.9g

Formatted: Font: Not Italic, Complex Script Font: Italic

Formatted: English (UK)

Attic obol: *Nat. Mul.:* 34 (7.372 Littré) 0.7g

Superf.: 43 (8.508 Littré)

Mul. 2: 195 (8.378 Littré)

Formatted: Font: Not Italic, Complex Script Font: Italic

Aeginetan obol: *Superf.:* 28 (8.492 Littré) 1g

Attic hemiobol: *Nat. Mul.:* 109 (7.426 Littré) 0.36g

Mul. 1: 101 (8.224 Littré); 105 (8.228 Littré)

Formatted: Font: Not Italic, Complex Script Font: Italic

In all these cases, it seems clear that a coin-standard is being used, not a commercial one, where the drachm and obol seem to have had no place. The coin-standard was obviously much better suited to the measurement of the small quantities required for medical purposes. The implications of this usage are discussed below.

Στατήρ

The word stater occurs just 4 times in the Corpus, in [two](#) works. In all of these [cases](#) it is qualified as Aeginetan, i.e. there is certainly no other type of stater specified:

Deleted: 2

Aeginetan stater: *Nat. Mul:* 32 (twice) (7.348 8.182 Littré) 12.4g

Mul 1: 78 (8.178 Littré); 84 (8.210 Littré)

Formatted: Font: Not Italic, Complex Script Font: Italic

It should be noted that in all four of these cases the weight being specified is for the amount of a certain powder that is to be dissolved in a cup of wine to be drunk by the patient. It must thus be a relatively small amount. In the field of commodity weights, it seems that 'stater' was the term used for [two](#) minas (200 *drachmai*).³⁵ On

Deleted: 2

Formatted: Font: Italic, Complex Script Font: Italic

³⁵ See LANG AND CROSBY, 1964, pp. 2-3.

the Aeginetan standard, where a drachm weighs c. 6.22g, this would amount to 1.24 kg. As has been noted above, this is clearly too much to be contemplated as the dose of parsley or celery described in two of these passages. The obvious alternative is to regard the word 'stater' as referring to a coin-weight, just as was observed in the case of the drachm and obol above: it is the context in which it is always used in the epigraphic texts of the fifth century BC.³⁶ In this case, the amount being specified would be 12.4g, which is a much more reasonable amount for the medical context. In the particular case of *batrachion*, either parsley or celery could be the plant to be weighed out, presumably after fine chopping.

Deleted: drachma

Deleted: 5th

Deleted:

In summary the use of the standards breaks down as follows:

Morb. 2 Aeginetan

Formatted: Font: Not Italic, Complex Script Font: Italic

Mul. 1 Attic and Aeginetan

Deleted: .

Nat. Mul. Attic and Aeginetan

Formatted: Font: Not Italic, Complex Script Font: Italic

Superf. Attic and Aeginetan

Deleted: .

Mul. 2 Attic

Formatted: Font: Not Italic, Complex Script Font: Italic

Mul. 3 (*Steril.*) Attic

Formatted: Font: Not Italic, Complex Script Font: Italic

Acut. (sp) Attic

Epid. 7 Attic

Formatted: Font: Not Italic, Complex Script Font: Italic

Nat. Pue. Attic

³⁶ The earliest attestation of Αιγινάϊος qualifying monetary terms comes in Thucydides' account (5.47.5) of the terms of the treaty between Athens, Argos, Mantinea and Elis of 420 BC, whence they are restored to IG I³ 83, ll. 23-4. Possibly earlier is the reference to στατεῖρας Αιγινάϊος in the Spartan War Fund list, IG V.1. 1, l. 11. Thereafter the term becomes common in Athenian, Delian and Delphic accounts.

In all of these cases, and indeed where the standard is not specified, the authors of the texts provided weights, we must presume, by reference to the standard that was in use in the place where they wrote, or where they assumed their audience to lie. Moreover, through the use of coin-weights to specify their quantities, they could take advantage of the existence of coins as objects of regularized weight in common use within those places. While we may imagine that the specialist medical practitioner may have owned a set of 'medical weights' with which to weigh out such small amounts, a non-specialist is unlikely to have had one. The use of coin-weights offered the obvious advantage that coins, potentially available to all, could be used as weights in the balance when weighing out small amounts. There are two important corollaries of this. One, which we have already noted, is that the standards cited or assumed must have been recognized and common in the place where they were recommended for use. The other is that coins of appropriate weight were thus in circulation and available for use.

What, then, can the pattern of specified and unspecified standards tell us about the place and date of composition of the works in which they are used? In the case of the Attic standard, the answer may be 'not much', and we must simply consider the last [five](#) of the works in the list above as potentially composed at any point after the Attic standard came to dominate beyond the confines of the Athenian *agora*. Considered purely linguistically, this factor might point towards a date at the end of the [fifth](#) century, when the word 'Attic' is first used to describe the weight standard used by Athens.³⁷ Previous considerations of this question have understandably focussed on the passage of the so-called Athenian standards-decree, which, it appears, sought to

³⁷ The earliest use outside the Hippocratic [Corpus](#) of the adjective ἀττικός to denote a standard does not come until the eighth book of Thucydides (8.29.1, cf. 8.45.2). Epigraphically, it seems not to be attested before the mid [fourth](#) century in Athens and at Delphi. The Athenians refer to νομισμασιν τοῖς [Ἀθηναίων ἢ] σταθομοῖς [ἢ μέτροις in the [fifth](#) century Standards Decree (IG I³ 1453E; OR 155).

Deleted:

Deleted:

Deleted: 5

Deleted: 5th

Deleted: c

Deleted: 4th

Deleted: 5th

impose the use of Athenian coins, weights and measures on the members of the Athenian alliance. A consensus among historians and epigraphists seems now to have developed that this decree is probably to be dated no earlier than the 420s BC, and a powerful argument has been made for associating it with the Athenian introduction of the *eikoste* (5% tax) in 414/3 BC (Thuc. 7.28.4).³⁸ It may be possible that this Athenian legislation was to a degree simply regularising an unofficial *status quo*, and it is demonstrably the case that some north Greek mints were producing coinage on the Attic weight-standard before this period. However, it remains difficult to assume that the Athenian standard could have had a very widespread presence before the 420s, and crucially that it should have been known as the 'Attic standard' in cities outside Athens, so that we could assume its use to have been specified in these terms in medical texts much before this date.³⁹ Indeed, we might question whether Attic weight obols or hemiobols were common outside Athens much before the 420s. In the case of *On Diseases of Women*, 1, 2 and 3, all of which stipulate the Attic standard, this chronology seems entirely consonant with the late fifth- or early fourth-century compilation dates that are generally assumed. The fact that the Aeginetan standard is also stipulated in *On Diseases of Women*, 1 would constitute an additional argument for seeing this text, at least, as one of layered chronological elements, as has been suggested by Grenseman.⁴⁰ For *On Regimen in Acute Diseases*, which uses the Attic standard only, the late fifth-century date proposed by Craik is similarly unproblematic.⁴¹ Much of *Epidemics* 7 can independently be dated to after

³⁸ For a recent overview of the scholarship see Osborne-Rhodes, 2017, commentary ad no. 155.

³⁹ 'Attic' was not, a priori, a natural or obvious name for the standard. It was in use in Euboea and Corinth, for example, independently of the Athenian tradition, with different denominational systems. In northern Greece both Mende and Acanthus, for example, both minted on the Attic/Euboic standard down through the middle part of the fifth-century.

⁴⁰ See the summary at Craik, 2015, pp. 204-206.

⁴¹ Craik, 2015, p. 6.

Deleted: Mul.

Deleted: 5th

Deleted: 4th

Deleted: Mul.

Deleted: Acut.

Deleted: 5th

Deleted: .

Deleted: be

Deleted: ,

Deleted: 5th

Deleted: (

Deleted:)

Deleted: (

Deleted:)

356 BC, via its reference to the siege of Daton, which took place in that year,⁴² at which point the use of the Attic standard is unproblematic. Perhaps the most interesting case is provided by On the Nature of the Child. If the date of the 420s that has been proposed for this text is correct, then this would constitute our first clear attestation of the use of the Attic standard, possibly in north Greece.⁴³ As we have seen, this seems entirely plausible within the context of the spread of the Athenian standard in the Athenian *arche*.

Deleted: 360

Deleted: an event of 356 BC

Deleted: Nat. Pue.

The use of the Attic standard seems thus to confirm the chronologies that have been proposed on other grounds for certain works, but perhaps offers little more. The designation of the Aeginetan standard is potentially more revealing. The significance of the term, as noted above, has drawn the attention of past scholars. This has been largely in the discussion of the dates of the works in which they are found, but it also has relevance for their place of composition.⁴⁴

Deleted:

Let us take the **latter** point first: what of place of production? The Aeginetan standard did spread beyond its island of origin, but this spread was limited, particularly at its full weight. Beyond the Peloponnese and central Greece, where a reduced version seems to have been adopted, the Aeginetan standard was adopted by some of the island communities of the Aegean, but these coinages did not continue past c. 480 BC. In Asia Minor, the only place where the standard was adopted at its full Aeginetan weight was at Cnidus.⁴⁵ Certainly, there is no sign of it

Formatted: Highlight

Commented [LT5]: Spelling altered for consistency.

Deleted: K

Deleted: o

⁴² For discussion see RIGSBY 2007, p. 111.

Deleted: (

⁴³ For the date and geographical connections see CRAIK 2015, p. 118.

Deleted:)

⁴⁴ Above nn.20-27.

Deleted: (

⁴⁵ For an overview of the standard and its spread see Nicolet-Pierre 2000, pp. 16-35. The standard has been recognized at Teos and Kaunos, but at both places the coinages are significantly lighter than the

Deleted:)

at Kos where the fifth-century coinage, comprised of the famous *diskoboloi*, was produced at a unique weight of c. 16.61-16.65g, almost certainly to be regarded as a triple Persian siglos.⁴⁶ If a text refers to the Aeginetan standard when prescribing regular procedural measures, as some of the Hippocratic texts do, it is highly likely that that text, or the relevant elements of those texts, had their origin at Cnidus rather than Kos. As we have seen, this would apply to *On Diseases* 2, *On Diseases of Women* 1, *On the Nature of Women*, and *On Superfetation*. In the case of the first of these works, *On Diseases* 2, this provides potentially powerful confirmation that a lost Cnidian tradition underlies this and the apparently related *On Diseases* 3 and *On Internal Affections*.⁴⁷ The possible association between some *stratum* of *On the Nature of Women* and Euryphon of Cnidus is also potentially strengthened.⁴⁸ It is perhaps more of a surprise to find potential Cnidian associations in the other works that specify the Aeginetan standard: *On Diseases of Women* 1 (and perhaps, by association, *On Diseases* 2 and 3); the occurrence of the standard also in *On Superfetation*, adds to the list of similarities between this work and the *On Diseases of Women* treatises: it too may be a marker of place of composition.⁴⁹

It is to Cnidus that we must also look for chronological ramifications of the use of the Aeginetan standard. The fifth-century coinage was fully studied by Herbert Cahn in 1970. While the basic structure of the coinage that he established remains

Aeginetan standard, and are probably to be regarded as having been produced on an epichoric standard.

⁴⁶ The study of BARRON (1968) remains the authoritative treatment. See further STEFANAKI 2012, pp. 60-63, 184-188, ΣΕΙΡΑ III.

⁴⁷ For discussion see CRAIK 2015, pp. 179-80.

⁴⁸ For Euryphon as a possible source for *Nat. Mul.* and on its relationship to *Mul.* 1-3, see see CRAIK 2015, pp. 216-217. Check THIVEL, 1981, 93-99

⁴⁹ On the complex relationship between *Mul.* 1-3 and *Superf.* see CRAIK 2015, pp. 254-255.

- Deleted: K
- Deleted: o
- Deleted: *Morb.*
- Formatted: Font: Italic, Complex Script Font: Italic
- Deleted: *Mul.*
- Deleted: *Nat. Mul.*
- Deleted: .
- Formatted: Font: Italic, Complex Script Font: Italic
- Deleted: *Morb.*
- Deleted: K
- Formatted: Font: Italic, Complex Script Font: Italic
- Deleted: *Morb.*
- Deleted: *Nat. Mul.*
- Deleted: K
- Deleted: o
- Deleted: K
- Deleted: *Mul.*
- Formatted: Font: Italic, Complex Script Font: Italic
- Deleted: *Mul.*
- Deleted: and
- Deleted: .
- Deleted: *Mul.*
- Deleted: K
- Deleted: o
- Deleted:

secure, more recent hoard discoveries necessitate some alteration to his chronology. Cahn arranged the [fifth](#) century coinage as follows. It began with a relatively brief phase of production of ¼ drachms on the Milesian weight standard (his Series I), before moving to the Aeginetan weight standard with the [drachm](#) as the basic denomination. Production of this coinage continued through much of the [fifth](#) century (Cahn's Series II-VI), before it was replaced around the end of the century by first tridrachms on the combined Chian-Persian standard, and then a fine tetradrachm coinage on the Chian weight standard.⁵⁰ The period of production of Series II-VI is thus likely to circumscribe also the use of the Aeginetan standard at [Cnidus](#), and we might note in passing that the coinage of this period comprised drachms, hemidrachms and obols, which could have been combined to facilitate all of the Aeginetan weights stipulated by the Hippocratic texts. Cahn thought that this [coinage](#) began as early as 520 BC, but the evidence of the Asyut hoard demonstrated that his chronology for the early part of the Aeginetan weight coinage was considerably too high. His Series II had probably been recently struck before the hoard's deposit c. 475 BC.⁵¹ The slightly later and still unpublished 'decadrachm' hoard contained a single coin of Cahn's [third](#) series. This hoard was buried in the 460s, and so suggests a rough terminus for this series.⁵² Thereafter Cahn's dates were determined in part by his belief in the effects on the [Cnidian](#) coinage of the Athenian Standards Decree, which he took to have been passed in 449 BC. As we have noted, most scholars now would date the decree to the 420s at the earliest, and possibly as late as 414/3 BC. It is thus clear that this cannot be used to insert any sort of

⁵⁰ See ASHTON in ASHTON ET AL., 2002, p. 120, who suggests a start-date of c. 395 BC for the tetradrachms. The tridrachms, which bear the legend SYN, are most probably to be associated with Lysander's presence in the region and so belong within the last decade of the [fifth](#) century, c. 405 BC. For the chronology of these see MEADOWS 2011, pp. 285-92.

⁵¹ On the evidence of the Asyut hoard see PRICE AND WAGGONER 1975, pp. 90-1. The hoard is THOMPSON ET AL. 1973, no. 1644.

⁵² The hoard remains unpublished. For its contents see FRIED 1987.

Deleted: 5th

Commented [LT6]: Could you check for consistency in the naming of the drachm/drachma throughout the chapter

Deleted: 5th

Deleted: K

Deleted: o

Deleted:

Deleted: 3rd

Deleted: K

Deleted: ,

Deleted: 5th

Formatted: Small caps

Formatted: Small caps

Formatted: Justified, Space Before: 6 pt, Line spacing: 1.5 lines

Formatted: Small caps

Formatted: Font: Palatino Linotype

chronological break in around 449 as Cahn wished. How to redistribute the issues of this period between c. 475 and c. 405 BC when the standard switched to Persian-Chian remains unclear. There is certainly no need to assume a cessation of production, however. It remains uncertain whether the Athenian Standards Decree had any impact at [Cnidus](#) and, if so, whether that was in the 420s or the 410s.⁵³ We may summarise our current state of knowledge as follows:

	<i>CAHN 1970</i>	<i>New</i>
Cahn I	530-520	500-490
Cahn II	520-495	490-475
Cahn III	490-465	475-405?
Cahn IV	465-449	
Cahn V	449-411	
Cahn VI	411-394	

As will be clear, therefore, the use of the Aeginetan standard at [Cnidus](#) cannot offer us any firm *terminus ante quem* before the last two decades of the [fifth](#) century for the elements in the Hippocratic [Corpus](#) that use the Aeginetan standard as their specified system of weights and measures. However, although it is not at first sight obvious, this point potentially dovetails with the discussion of the Attic standard above. To the authors of the surviving texts, or of the texts on which these are based, it would surely have been obvious which standard they meant, if they were writing in a local context, and with a local audience in mind. Each ancient city most probably had an officially sanctioned weight standard for use in its market-place, if not for coinage. This standard was an epichoric affair and needed no further specification. It is surely only after the Athenian standard began to impinge upon the affairs of the Athenian *arche* that the potential for confusion arose, and it is probably in this

⁵³ See the discussion of FIGUEIRA, 1998, pp. 75-77.

Deleted: K

Deleted: o

Formatted: Small caps

Formatted: Font: Italic, Complex Script Font: Italic

Formatted: Indent: Before: 2.25 cm, Tab stops: 8.25 cm, Left

Formatted: Font: 11 pt, Italic, Complex Script Font: 11 pt, Italic

Formatted: Tab stops: 8.25 cm, Left

Formatted: English (UK)

Deleted: K

Deleted: o

Deleted: 5th

Deleted: c

Deleted: ,

context that we should place what seems to have been a fairly brief episode of precision in the description of standards. As we have seen above, there is little reason to think that the Attic standard came to be known as such much before the 420s BC, or that its use either spread or was enforced much before that date. At the same time, the Cnidian numismatic evidence suggests that it is unlikely that the Aeginetan standard remained in use at the city much past 405 BC. This pattern provides us with a period of c. 430-405 BC for the original drafting of the medical treatments that specify the Aeginetan standard, and a *terminus post quem* of the beginning of that same period for the compilation of the works that maintain that standard in their text, and also for those works that specify the Attic standard.

Deleted: K

Deleted: that

Part 3. Ways forward.

Aeginetan measures are indications of a Cnidian origin and a fifth-century date, probably no earlier than the 430s, but we leave it ultimately to textual specialists to decide whether they date only a part of a text, into which they have been inserted as older material, or most of a text, onto which later material has been grafted. In Lane Fox's view, *On Superfetation* (used in Galen's Glossary, though not in Erotian's list of Hippocrates's works) is a particularly promising candidate for more study. In 1994, Dean-Jones considered in passing that 'the use of Aeginetan measures in *Superf.* suggests that it could be even earlier than *Nat.Mul.*'⁵⁴ Its title derives from what is now the opening section, although the rest of the treatise is about other problems in pregnancy and childbirth. Perhaps this opening section has been added to an existing catalogue-text. The section is generally compared with the case-history of the wife of Gorgias in Larissa, a case of superfetation given in *Epidemics* 5. That work is agreed to have been composed in the fourth century, probably quite early in it,

Commented [VN7]: You refer at the beginning to your division of labour as in three parts, but Part 3 is not mentioned in a heading. I have added it here: check that gthis is correct.

Deleted: '

Deleted:

⁵⁴Dean-Jones 1994, p. 12.

Deleted: (

Deleted:)

though a closer dating is not possible.⁵⁵ Generally, scholars have assumed that the case of Gorgias's wife preceded the generalisation in [On Superfetation](#),¹ for which it is seen as the source, but that relative dating is not secure.⁵⁶ The case-history includes details which [On Superfetation](#),¹ does not, the woman's extreme thirst, her ulcer on a hip, and so forth, while [On Superfetation](#),¹ includes an evil smelling flux which the case history omits. It is just as plausible that the generalisation is earlier and that the case history then observed something similar, perhaps with an awareness of [On Superfetation](#)'s text. If so, this argument for dating the compilation of [On Superfetation](#) to the fourth century disappears.

Deleted: .

Deleted: .

Deleted: .

⁵⁵ Hippocr. *Epid.*5.11; Jouanna 2003, pp. xxx-xxxi.

⁵⁶ Jouanna 2003, 125, with more bibliography.

Deleted: (

Deleted:)

Deleted: (

Deleted:)

A. C. ANDREWS, *Celery and parsley as foods in the Greco-Roman period*, «Classical Philology», 44 1949, pp. 91-94.

Deleted: '...celery and parsley as foods in the Greco-Roman period'...«Classical Philology», 44 (...949, pp.) ... [1]

Formatted

SUZANNE AMIGUES, *Théophraste. Recherches sur les plantes Livres VII et VIII*, Paris, *Les Belle Lettres*, 2003.

Deleted: 1...1...et VII...1...1... Paris, Les Belle LettresBudé... [2]

RICHARD ASHTON, PHILIP KINNS, KORAY KONUK, ANDREW MEADOWS, *The Hecatomnus Hoard*, «Coin Hoards» 9 2001, pp. 95-158

Deleted: (...001) ... [3]

JOHN BARRON, *The fifth-century diskoboloi of Kos*, in *Essays in Greek coinage, presented to Stanley Robinson*, edited by G. K. Jenkins and C. M. Kraay, Oxford, *Clarendon Press*, 1968, pp. 75-89

Moved down [1]: in Jenkins, G. K., & Kraay, C. M. (eds),

Moved (insertion) [1]

Deleted: .

Deleted: in...Jenkins and C. M. , G. K., & ...raay, C. M. (eds)... [4]

HERBERT CAHN, *Knidos. Die Münzen des sechsten und des fünften Jahrhunderts v. Chr.* Berlin, *De Gruyter*, 1970

Formatted: Font: Not Italic, Complex Script Font: Italic

Formatted

Formatted

FRANÇOIS CHAMOIX, *L'île de Thasos et son histoire*, «Revue des Études Grecques» 72 1959, pp.348-362.

Deleted: '...'île de Thasos et son histoire' ... [6]

Formatted

Deleted: (...959,) ... [8]

ELIZABETH M. CRAIK, *Hippocrates. Places In Man*, Oxford, *Clarendon Press*, 1998.

Deleted: OUP... [9]

ELIZABETH M. CRAIK, *Medical reference in Euripides*, «Bulletin of the Institute of Classical Studies», 45, 2001, pp.81-96.

Deleted: '...medical reference in Euripides'... «Bulletin of the Institute of Classical Studies», 45, (...001,) ... [10]

ELIZABETH M. CRAIK, *The Hippocratic Treatise On Glands*, Leiden, Brill, 2009.

Deleted: -New York

ELIZABETH CRAIK, *The 'Hippocratic' Corpus: Content and Context*, London, *Routledge*, 2015

LESLEY A. DEAN-JONES, *Women's Bodies in Classical Greek Science*, Oxford, *Clarendon Press*, 1994.

Deleted: 1... Classical Greek Science, Oxford, Clarendon PressOUP... [11]

THOMAS FIGUEIRA, *The Power of Money: Coinage and Politics in the Athenian Empire*, Philadelphia, *University of Pennsylvania Press*, 1998

Deleted: p...wer of Mm...ney: Cc...inage and Pp ... [12]

CARL FREDRICH, *Hippocratische Untersuchungen*, in *Philologische Untersuchungen*, Heft 15, edd. A. Kiessling und U. von Wilamowitz-Moellendorf, Berlin, *Weidmannsche Buchhandlung*, 1899.

SALLIE FRIED, *The Decadrachm Hoard: an Introduction, in Coinage and Administration in the Athenian and Persian Empires: The Ninth Oxford Symposium on Coinage and Monetary History.*, edited by I. Carradice, Oxford, BAR International Series 343, 1987

Formatted: Font: Italic, Complex Script Font: Italic

Formatted: Font: Italic, Complex Script Font: Italic

Formatted: Font: Italic, Complex Script Font: Italic

ALEXANDER J. GRAHAM, *Thasos. The Topography of the Ancient City*, «ABSA» 95(2000), pp. 301-327.

Deleted: .

Deleted: '.

Deleted: '.

Deleted:)

YVES GRANDJEAN, *Le Rempart de Thasos, Études Thasiennes XXII*, Athènes, Paris, De Boccard, 2011.

Deleted: .

Deleted: -

Deleted:

HERMANN GRESEMANN, *Knidische Medizin, Teil 1*, Berlin, de Gruyter, 1975.

Deleted: -New York

ANN E. HANSON, *Talking Recipes in the Gynaecological Texts of the Hippocratic Corpus*, in *Parchments of Gender Deciphering the Bodies of Antiquity*, edited by M. Wyke, Oxford, Clarendon Press 1998, pp.71-94.

Deleted: '.

Deleted: '.

Deleted: .

JACQUES JOUANNA, *Hippocrates*, Baltimore, The Johns Hopkins University Press, 1999.

Deleted: -London

Deleted:

JACQUES JOUANNA, *Hippocrate. Oeuvres Complètes, Épidémies V et VI*, Paris, Les Belles Lettres, 2003.

Deleted: Budé

JACQUES JOUANNA, *Cause and Crisis: historians and medical writers of the classical period*, in *Hippocrates in Context: papers read at the XIth International Hippocratic Colloquium, University of Newcastle upon Tyne, 27-31 August 2002*, edited by Philip J. van der Eijk, Leiden, Brill, pp. 3-28.

Deleted: '.

Deleted: -

Deleted: '.

Deleted: .

Deleted: n-New York

JACQUES JOUANNA, *Hippocrate, Tome IV 1er partie. Épidémies I et III*, Paris, Les Belles Lettres, 2016.

Formatted

Deleted: 1

Deleted: 111

Deleted: Budé

JENNIFER C. KOSAK, *Heroic Measures: Hippocratic medicine in the making of Euripidean tragedy*, Leiden, Brill, 2014.

Deleted: -New York

MABEL LANG AND MARGARET CROSBY, *The Athenian Agora 10. Weights, Measures and Tokens*. Princeton, NJ, The American School of Classical Studies at Athens, 1964.

Commented [LT8]: Can you check this?

C. LIENAU, *Hippokrates über Nachempfangnis, Geburtshilfe und Schwangerschaftsleiden*, Corpus Medicorum Graecorum 1.2.2. Berlin, 1973.

ANDREW MEADOWS, *The Chian Revolution: Changing Patterns of Hoarding in 4th-Century BC Western Asia Minor*, *Nomisma: La circulation monétaire dans le monde grec*, edited by Th. Faucher, M.-Chr. Marcellesi and O. Picard, *BCH suppl.* 53, 2011, pp. 273-295

HÉLÈNE NICOLET-PIERRE, *Métrologie des monnaies grecques. La Grèce centrale et l'Égée aux époques archaïque et classique, VIe - IVe siècles*. «*Annali. Istituto Italiano di Numismatica*», 47, 2000, pp. 11-76.

ROBIN OSBORNE AND PETER RHODES, *Greek Historical Inscriptions: 478-404 BC*. Oxford, *Oxford University Press*, 2017.

MARTIN PRICE AND NANCY WAGGONER, *Archaic Greek Silver Coinage. The Asyut Hoard*. London, V.C. Vecchi and Sons, 1975

KENT RIGSBY, *The Foundation of Damos*, «*Historia*», 56, 2007, pp. 111-13

VASSILIKI STEFANAKI, *Κώς*, Athens, *Tameio Archaïologikōn Porōn kai Apallotriōseōn*, 2012

ANTOINE THIVEL, *Cnide et Cos? Essai sur les doctrines médicales dans la "collection hippocratique"*, Paris, *Les Belles Lettres*, 1981

MARGARET THOMPSON, OTTO MØRKHOLM AND COLIN M. KRAAY (eds), *An Inventory of Greek Coin Hoards*, New York, *The American Numismatic Society*, 1973

LAURENCE M.V. TOTELIN, *Hippocratic Recipes. Oral and Written Transmission of Pharmacological Knowledge in Fifth- and Fourth-Century Greece*, Leiden, Brill, 2007.

CHRISTOPHER TYERMAN, *New College*, London, Third Millennium Publishing, 2010.

Deleted: r

Deleted: c

Deleted: p

Deleted: h

Deleted: c

Moved down [2]: IN Th. Faucher, M.-Chr. Marcellesi and O. Picard (eds),

Moved (insertion) [2]

Deleted: in

Formatted: English (UK)

Formatted: English (UK)

Deleted: (eds)

Formatted: English (UK)

Deleted: .

Formatted: Complex Script Font: Not Italic, Small caps

Formatted: Font: Italic, Complex Script Font: Not Italic

Deleted: :

Formatted: Small caps

Formatted: Small caps

Formatted: Font: Italic, Complex Script Font: Italic

Deleted: -Boston

Deleted: 6

Page 24: [1] Deleted

Laurence Totelin

08/07/2020 13:36:00

Page 24: [1] Deleted

Laurence Totelin

08/07/2020 13:36:00

Page 24: [1] Deleted

Laurence Totelin

08/07/2020 13:36:00

Page 24: [1] Deleted

Laurence Totelin

08/07/2020 13:36:00

Page 24: [2] Deleted

Laurence Totelin

08/07/2020 13:38:00

Page 24: [2] Deleted

Laurence Totelin

08/07/2020 13:38:00

Page 24: [2] Deleted

Laurence Totelin

08/07/2020 13:38:00

Page 24: [2] Deleted

Laurence Totelin

08/07/2020 13:38:00

Page 24: [2] Deleted

Laurence Totelin

08/07/2020 13:38:00

Page 24: [2] Deleted

Laurence Totelin

08/07/2020 13:38:00

Page 24: [3] Deleted

Laurence Totelin

08/07/2020 13:40:00

Page 24: [3] Deleted

Laurence Totelin

08/07/2020 13:40:00

Page 24: [4] Deleted Laurence Totelin 08/07/2020 13:41:00



Page 24: [4] Deleted Laurence Totelin 08/07/2020 13:41:00



Page 24: [4] Deleted Laurence Totelin 08/07/2020 13:41:00



Page 24: [4] Deleted Laurence Totelin 08/07/2020 13:41:00



Page 24: [5] Formatted Laurence Totelin 08/07/2020 13:42:00

Font: Not Italic, Complex Script Font: Italic

Page 24: [5] Formatted Laurence Totelin 08/07/2020 13:42:00

Font: Not Italic, Complex Script Font: Italic

Page 24: [6] Deleted Laurence Totelin 08/07/2020 13:44:00



Page 24: [6] Deleted Laurence Totelin 08/07/2020 13:44:00



Page 24: [7] Formatted Laurence Totelin 08/07/2020 13:44:00

Formatted

Page 24: [7] Formatted Laurence Totelin 08/07/2020 13:44:00

Formatted

Page 24: [8] Deleted Laurence Totelin 08/07/2020 13:45:00



Page 24: [8] Deleted Laurence Totelin 08/07/2020 13:45:00



Page 24: [9] Deleted Laurence Totelin 08/07/2020 13:45:00



Page 24: [9] Deleted Laurence Totelin 08/07/2020 13:45:00



▲
Page 24: [10] Deleted

Laurence Totelin

08/07/2020 13:45:00
←

▲
Page 24: [10] Deleted

Laurence Totelin

08/07/2020 13:45:00
←

▲
Page 24: [10] Deleted

Laurence Totelin

08/07/2020 13:45:00
←

▲
Page 24: [10] Deleted

Laurence Totelin

08/07/2020 13:45:00
←

▲
Page 24: [11] Deleted

Laurence Totelin

08/07/2020 13:47:00
←

▲
Page 24: [11] Deleted

Laurence Totelin

08/07/2020 13:47:00
←

▲
Page 24: [12] Deleted

Laurence Totelin

08/07/2020 13:47:00
←

▲
Page 24: [12] Deleted

Laurence Totelin

08/07/2020 13:47:00
←

▲
Page 24: [12] Deleted

Laurence Totelin

08/07/2020 13:47:00
←

▲
Page 24: [12] Deleted

Laurence Totelin

08/07/2020 13:47:00
←